

The impact of medication adherence in Gloucestershire

Analysis of medication non-compliance for patients with dementia, epilepsy, Parkinson's disease, and senility

This analysis has been funded by Evondos

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FOR HEALTHCARE LEADERS
HSJ

Wilmington
Healthcare

Introduction

Aims of this report

- **To show the burden of poor medication adherence on the NHS in Gloucestershire** by highlighting the burden to the NHS on hospital admissions due to medication non-adherence in patients aged >65 diagnosed with:
 - dementia
 - epilepsy
 - Parkinson's disease
 - senility.

To demonstrate this impact, we queried cost and bed-days in Hospital Episode Statistics (HES) data* for patients diagnosed with these conditions over the past 5 years (April 2019–March 2024)

In HES data, **non-adherent** is defined as **non-compliant**: hospitalisation coded with a history of non-compliance with medical treatment and regimen

*The HES disclaimer is available in [Appendix 1](#).

One Gloucestershire ICS: Snapshot of health system

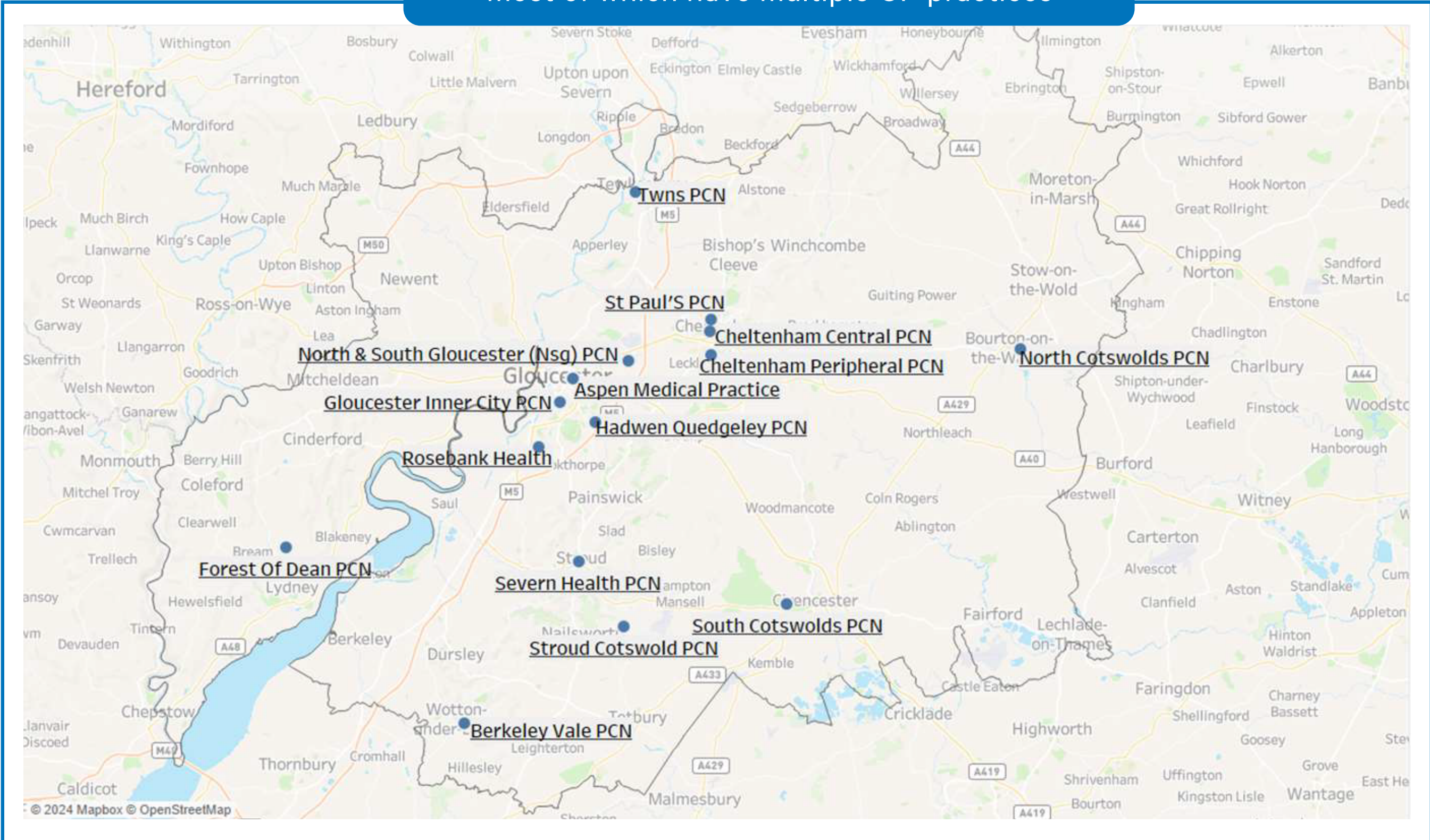
Population¹
640,650

Population aged >65 years¹
139,420

Patients aged >65 years admitted to hospital with dementia, epilepsy, Parkinson's disease or senility (2019/20–2023/24):
11,380*

Patients admitted with a history of poor medicines adherence:
265

15 primary care networks (PCNs), most of which have multiple GP practices



1. Lower layer Super Output Area population estimates (supporting information). Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/lowersuperoutputareamidyearpopulationestimates> (Accessed June 2024)

*Patient value has been calculated summing two rounded values and therefore may vary from true value by no more than 5.

Findings

One Gloucestershire ICS: Overall burden of combined diseases

- **11,380 patients** aged >65 years were admitted to hospital with dementia, epilepsy, Parkinson’s disease or senility
 - **265 patients** were coded as ‘Personal history of **non-compliance** with medical treatment and regimen’
 - **11,115 patients** not coded with this personal history were therefore considered **compliant**.

If all of the 265 non-compliant patients became compliant, this could result in:

Cost savings of £1,415,450

(Cost of non-compliant patients minus the number of non-compliant patients multiplied by the cost per compliant patient)

= £3,451,975 – (265 x £7,685)

Bed-day savings of 5,293 days

[Total number of non-compliant patient bed-days minus (number of compliant per patient bed-days multiplied by the number of non-compliant patients)]

10,952 – [265 x (237,358 / 11,115)]

All patients with dementia, epilepsy, Parkinson’s disease or senility admitted to hospital (2019/20–2023/24)

Compliance status	Patients	Spells	Spells per patient	Cost (£)	Cost per patient (£)	Bed-days	MLOS per spell (days)	Cost per spell (£)
Compliant	11,115	19,595	1.8	85,417,115	7,685	237,358	12.1	4,360
Non-compliant	265	770	2.9	3,451,975	13,075	10,952	14.2	4,485
% Difference			61%		70%		17%	2.9%

A spell is a hospital admission and includes all activities associated with that admission

- Although non-compliant patients represent only 2.3% of all patients, they had a more severe hospitalisation pattern compared with compliant patients:

Spells per patient
61% higher
 for non-compliant patients
 (2.9 vs 1.8)

MLOS
17% higher
 for non-compliant patients
 (14.2 days vs 12.1 days)

Cost per patient
70% higher
 for non-compliant patients
 (£13,075 vs £7,685)

One Gloucestershire ICS: Overall burden of combined diseases

Burden of dementia, epilepsy, Parkinson's disease and senility combined – PCN-level analysis

Organisation name	Compliance status	Patients	Spells	Spells per patient	Cost (£)	Cost per patient (£)	Total bed-days	MLOS per spell	Cost per spell (£)	Non-compliant patients* %	Excess cost per non-compliant patient	Excess spells per non-compliant patient	Excess MLOS per non-compliant patient
Aspen PCN	Compliant	570	955	1.7	4,065,084	7,120	11,776	12.3	4,260				
	Non-compliant	15	65	3.7	279,155	16,420	828	13.1	4,430	2.6%	9,300	2.0	0.8
Berkeley Vale PCN	Compliant	675	1,115	1.7	5,048,035	7,480	13,698	12.3	4,525				
	Non-compliant	20	60	3.3	328,714	17,300	857	13.8	5,300	2.9%	9,820	1.6	1.5
Cheltenham Central PCN	Compliant	730	1,225	1.7	5,263,872	7,200	13,706	11.2	4,295				
	Non-compliant	20	35	1.6	170,765	8,130	613	18.0	5,020	2.7%	930	-0.1	6.8
Cheltenham Peripheral PCN	Compliant	1,055	1,835	1.7	7,585,248	7,175	20,658	11.3	4,140				
	Non-compliant	20	50	2.2	230,521	10,480	833	17.0	4,705	1.9%	3,305	0.5	5.7
Forest Of Dean PCN	Compliant	1,055	1,770	1.7	7,724,171	7,310	22,091	12.5	4,365				
	Non-compliant	20	60	3.0	265,702	12,650	1,063	17.1	4,285	1.9%	5,340	1.3	4.6
Gloucester Inner City PCN	Compliant	495	880	1.8	3,775,804	7,660	11,012	12.5	4,295				
	Non-compliant	20	70	3.2	236,619	11,270	737	10.8	3,480	3.9%	3,610	1.4	-1.7
Hadwen Quedgeley PCN	Compliant	305	475	1.6	2,104,357	6,920	5,981	12.6	4,450				
	Non-compliant	10	40	3.7	159,650	14,515	441	10.8	3,895	3.2%	7,595	2.1	-1.8
N & S Gloucester (NSG) PCN	Compliant	1,035	1,790	1.7	7,940,344	7,665	22,899	12.8	4,435				
	Non-compliant	30	65	2.3	326,176	11,245	913	13.8	4,940	2.8%	3,580	0.6	1
North Cotswolds PCN	Compliant	635	1,100	1.7	4,842,329	7,600	12,530	11.4	4,400				
	Non-compliant	25	60	2.6	246,641	10,725	705	11.8	4,110	3.8%	3,125	0.9	0.4
Rosebank PCN	Compliant	450	795	1.8	3,336,114	7,445	9,639	12.1	4,190				
	Non-compliant	10	20	2.2	45,415	5,045	178	8.9	2,270	2.2%	-2,400	0.4	-3.2
Severn Health PCN	Compliant	500	815	1.6	3,690,110	7,380	10,243	12.6	4,535				
	Non-compliant	15	25	1.9	139,979	10,770	489	19.6	5,600	2.9%	3,390	0.3	7
South Cotswolds PCN	Compliant	1,150	1,835	1.6	7,625,155	6,625	20,301	11.1	4,150				
	Non-compliant	30	65	2.2	279,770	9,645	800	12.5	4,370	2.5%	3,020	0.6	1.4
St Paul'S PCN	Compliant	900	1,660	1.8	7,197,793	7,990	19,675	11.9	4,340				
	Non-compliant	20	50	2.9	197,266	10,960	499	9.6	3,795	2.2%	2,970	1.1	-2.3
Stroud Cotswold PCN	Compliant	640	980	1.5	4,715,335	7,355	13,739	14.0	4,815				
	Non-compliant	15	40	2.9	169,605	12,115	732	18.3	4,240	2.3%	4,760	1.4	4.3
Twms PCN	Compliant	775	1,255	1.6	5,793,560	7,475	16,704	13.3	4,615				
	Non-compliant	15	35	2.6	200,696	14,335	761	21.1	5,575	1.9%	6,860	1.0	7.8

A spell is a hospital admission and includes all activities associated with that admission

*Percentages are calculated using a denominator summed from two rounded values and therefore may slightly deviate from the true value.

One Gloucestershire ICS: Burden by disease – data summary

Of the four conditions in this analysis, patients with **dementia** had:

- The highest number of non-compliant patients
- The highest total costs for spells had by non-compliant patients.

Patients with dementia, epilepsy, Parkinson’s disease, or senility admitted to hospital (2019/20–2023/24)

Compliance status	Patients	Spells	Spells per patient	Cost (£)	Cost per patient (£)	Bed-days	MLOS per spell (days)	Cost per spell (£)	
Dementia									
Compliant	7,585	13,370	1.8	58,363,376	7,695	164,827	12.3	4,365	
Non-compliant	170	445	2.6	2,006,169	11,665	6,241	14.0	4,490	
% Difference			44%		52%		14%	2.9%	
Epilepsy									
Compliant	1,365	2,795	2.0	10,783,997	7,900	26,636	9.5	3,860	
Non-compliant	45	190	4.2	720,426	16,010	2,173	11.4	3,790	
% Difference			110%		103%		20%	-1.8%	
Parkinson’s disease									
Compliant	1,375	2,765	2	12,033,107	8,760	33,006	11.9	4,350	
Non-compliant	55	185	3.3	850,559	15,465	2,800	15.2	4,625	
% Difference			65%		77%		28%	6.3%	
Senility									
Compliant	2,585	2,875	1.1	15,119,903	5,850	44,921	15.6	5,265	
Non-compliant	65	75	1.1	450,958	7,045	1,665	22.8	6,180	
% Difference			0%		20%		46%	17.4%	

A spell is a hospital admission and includes all activities associated with that admission

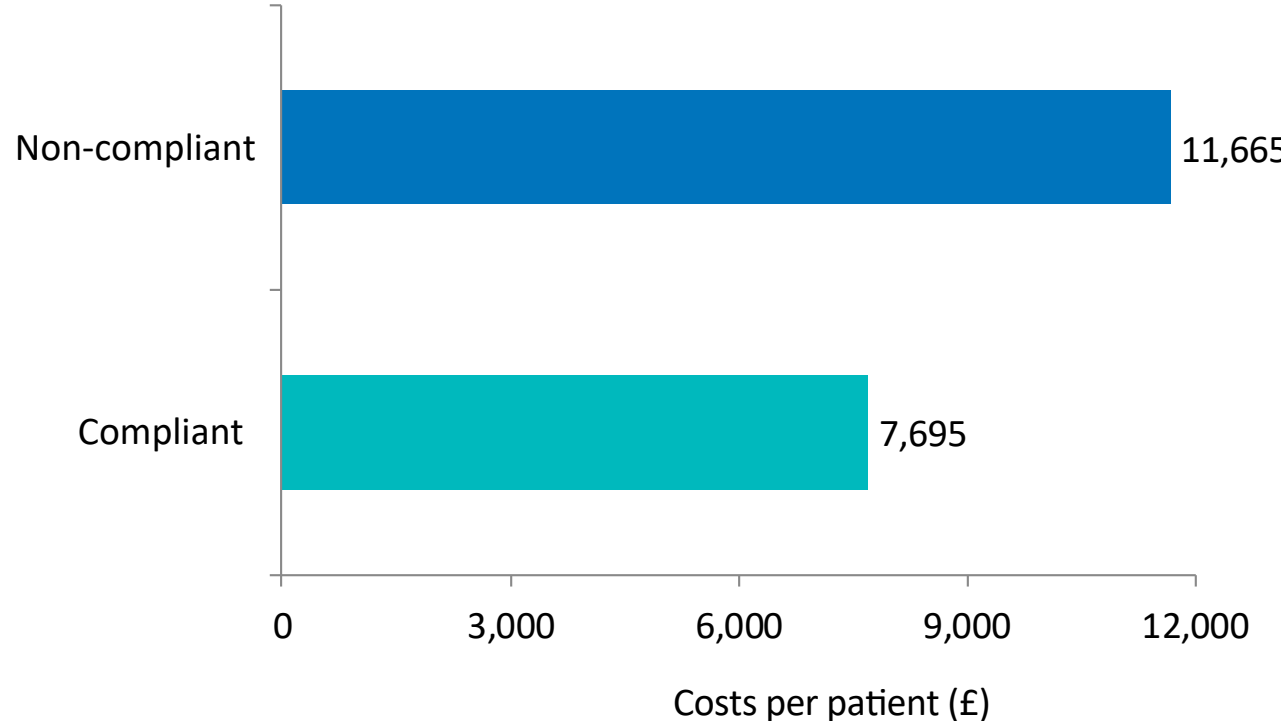
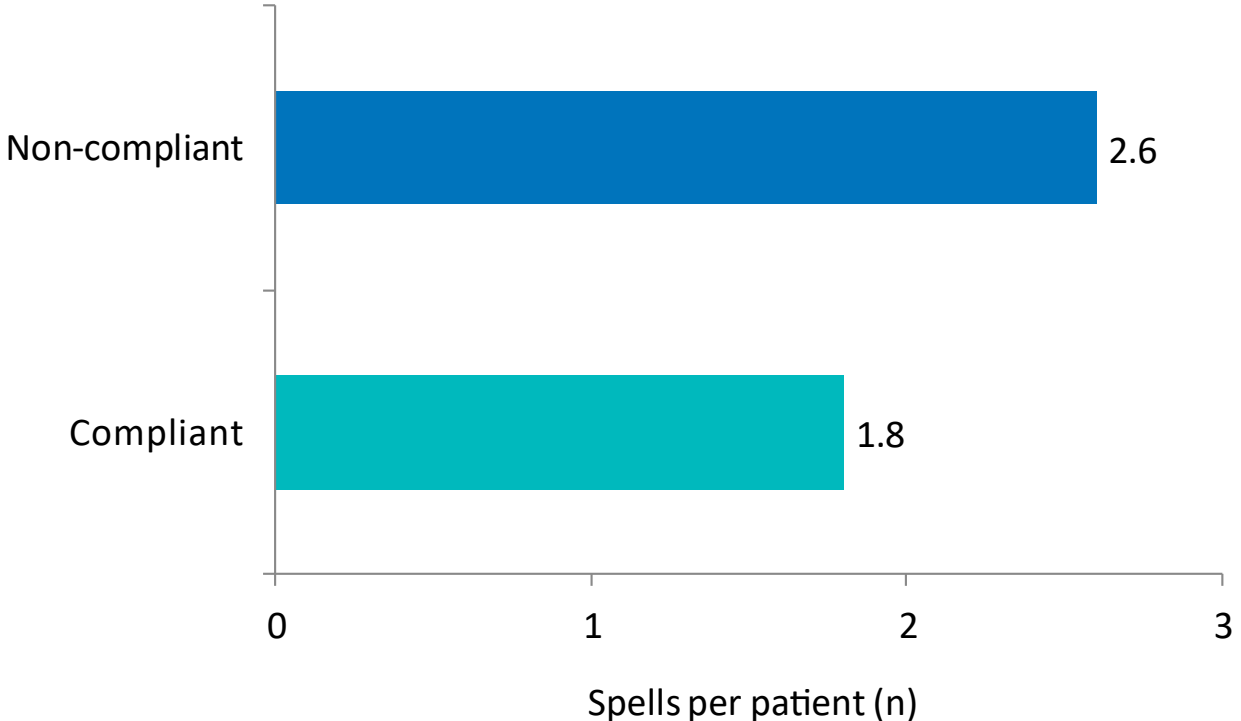
One Gloucestershire ICS: Burden of dementia

During the study period,

- 7,585 compliant patients with dementia were admitted in 13,370 spells
- 170 non-compliant patients were admitted in 445 spells

Compared with compliant patients with **dementia**, non-compliant patients had:

- nearly one and a half times as many spells per patient
- over 50% higher cost per patient



Spells per patient
44% higher
 for non-compliant patients
 (2.6 vs 1.8)

Cost per patient
52% higher
 for non-compliant patients
 (£11,665 vs £7,695)

MLOS per spell
14% higher
 for non-compliant patients
 (14.0 days vs 12.3 days)

Cost per spell
2.9% higher
 for non-compliant patients
 (£4,490 vs £4,365)

A spell is a hospital admission and includes all activities associated with that admission

One Gloucestershire ICS: Burden of dementia

Burden of dementia – PCN level analysis

	Cost savings			Bed-day savings		
	Non-compliant cost	Estimated cost if compliant	Cost savings	Non-compliant bed days	Estimated bed days if compliant	Reduced bed days
Aspen PCN	£131,260	£86,588	£44,672	394	240	154
Berkeley Vale PCN	£137,510	£90,711	£46,799	264	161	103
Cheltenham Central PCN	£67,826	£44,742	£23,084	230	140	90
Cheltenham Peripheral PCN	£78,996	£52,111	£26,885	237	144	93
Forest Of Dean PCN	£180,099	£118,805	£61,294	699	425	274
Gloucester Inner City PCN	£178,948	£118,046	£60,902	565	344	221
Hadwen Quedgeley PCN	£59,328	£39,137	£20,191	107	65	42
N & S Gloucester (NSG) PCN	£213,055	£140,545	£72,510	584	355	229
North Cotswolds PCN	£179,435	£118,367	£61,068	511	311	200
Rosebank PCN	£37,332	£24,627	£12,705	141	86	55
Severn Health PCN	£91,755	£60,528	£31,227	359	218	141
South Cotswolds PCN	£125,316	£82,667	£42,649	344	209	135
St Paul'S PCN	£133,350	£87,966	£45,384	304	185	119
Stroud Cotswold PCN	£111,015	£73,233	£37,782	503	306	197
Twins PCN	£144,094	£95,054	£49,040	655	398	257
	£1,869,319	£1,233,126	£636,193	5,897	3,587	2,310

Since patient counts are not available for many individual PCNs, Gloucestershire ICS-level ratios have been applied at PCN level to calculate an estimated potential cost saving and bed-days saving if non-compliant patient numbers were reduced.

For cost:

ICS non-compliant cost per patient = £11,665

ICS compliant cost per patient = £7,695

Therefore, each PCN's non-compliant cost can be reduced by:

$$1 - (£7,695/£11,665) = 34.0\% \text{ reduction}$$

For bed-days:

ICS non-compliant spells per patient = 2.6

ICS compliant spells per patient = 1.8

ICS non-compliant MLOS = 14

ICS compliant MLOS = 12.3

Therefore, each PCN's non-compliant cost is reduced by:

$$1 - (1.8/2.6) \times (12.3/14) = 39.2\% \text{ reduction}$$

A spell is a hospital admission and includes all activities associated with that admission

- Aggregated potential cost savings in a best-case scenario where non-compliant patients with dementia become compliant is estimated at ~£636,000.
- Aggregated potential reduction in bed-days in a best-case scenario where non-compliant patients become compliant is estimated at 2,310 bed-days.

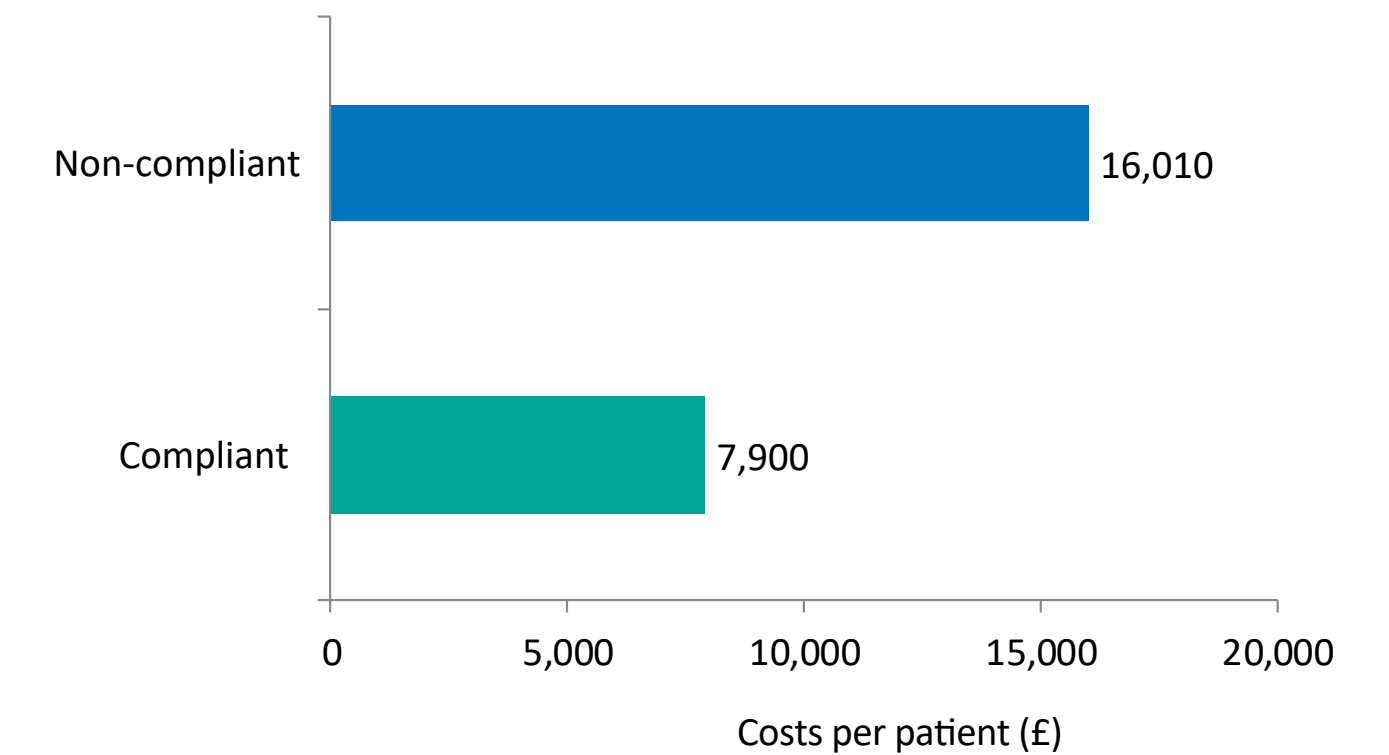
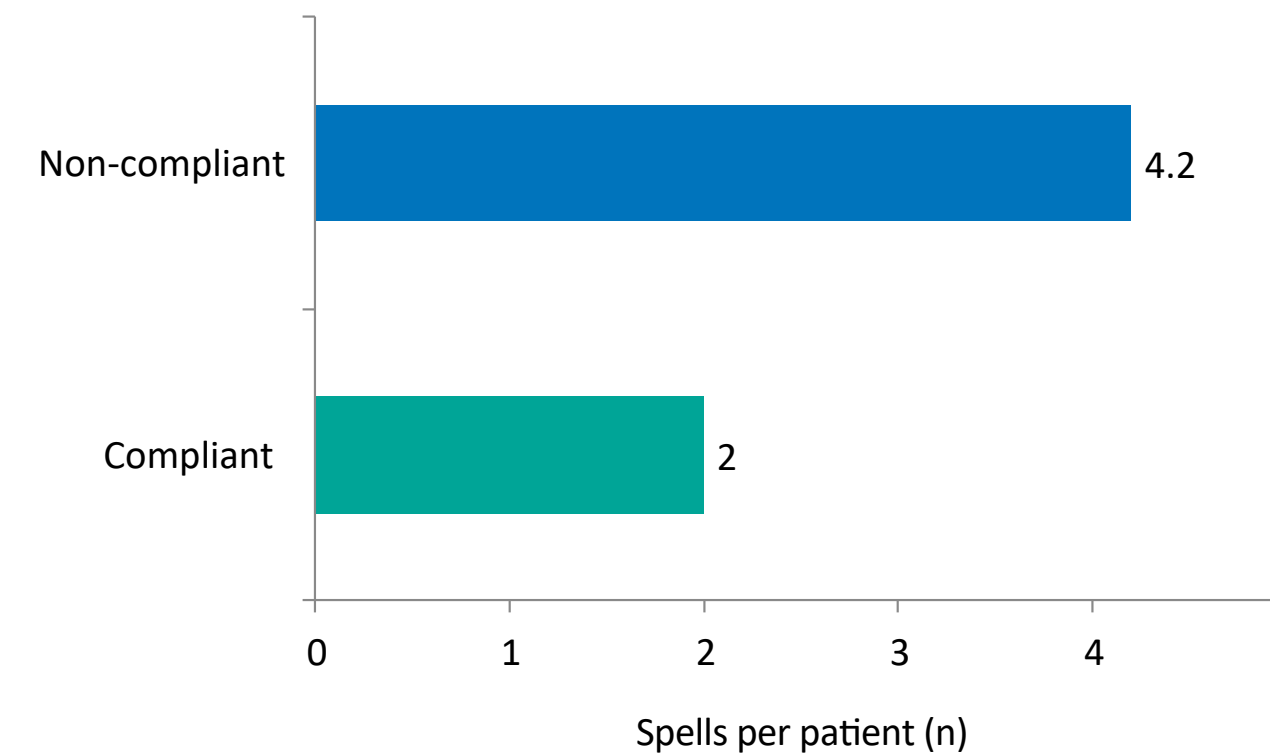
One Gloucestershire ICS: Burden of epilepsy

During the study period,

- 1,365 compliant patients with epilepsy were admitted in 2,795 spells
- 45 non-compliant patients were admitted in 190 spells

Compared with compliant patients with **epilepsy**, non-compliant patients had:

- more than double the number of spells
- more than twice the cost per patient



Spells per patient

110% higher
for non-compliant patients

(4.2 vs 2.0)

Cost per patient

103% higher
for non-compliant patients

(£16,010 vs £7,900)

MLOS per spell

20% higher
for non-compliant patients

(11.4 days vs 9.5 days)

Cost per spell

1.8% lower
for non-compliant patients

(£3,790 vs £3,860)

A spell is a hospital admission and includes all activities associated with that admission

One Gloucestershire ICS: Burden of epilepsy

Burden of epilepsy – PCN level analysis

	Cost savings			Bed-day savings		
	Non-compliant cost	Estimated cost if compliant	Cost savings	Non-compliant bed days	Estimated bed days if compliant	Reduced bed days
Aspen PCN	£122,199	£60,298	£61,901	344	137	207
Berkeley Vale PCN	£159,864	£78,884	£80,980	342	136	206
Cheltenham Central PCN	£11,723	£5,785	£5,938	22	9	13
Cheltenham Peripheral PCN	£17,526	£8,648	£8,878	39	15	24
Forest Of Dean PCN	£50,270	£24,805	£25,465	241	96	145
Gloucester Inner City PCN	£100,602	£49,641	£50,961	319	127	192
Hadwen Quedgeley PCN	£29,020	£14,320	£14,700	113	45	68
N & S Gloucester (NSG) PCN	£73,109	36,075	£37,034	248	98	150
North Cotswolds PCN	£22,750	£11,226	£11,524	26	10	16
Rosebank PCN	£14,588	£7,198	£7,390	59	23	36
Severn Health PCN	£32,194	£15,886	£16,308	187	74	113
South Cotswolds PCN	£39,840	£19,659	£20,181	106	42	64
St Paul'S PCN						
Stroud Cotswold PCN						
Twns PCN	£34,963	£17,252	£17,711	79	31	48
	£708,648	£349,676	£358,972	2,125	843	1,282

Since patient counts are not available for many individual PCNs, Gloucestershire ICS-level ratios have been applied at PCN level to calculate an estimated potential cost and bed-days saving if non-compliant patient numbers were reduced.

For cost:

ICS non-compliant cost per patient = £16,010

ICS compliant cost per patient = £7,900

Therefore, each PCN's non-compliant cost can be reduced by:

$$1 - (£7,900/£16,010) = 50.7\% \text{ reduction}$$

For bed-days:

ICS non-compliant Spells per Patient = 4.2

ICS compliant Spells per Patient = 2

ICS non-compliant MLOS = 11.4

ICS compliant MLOS = 9.5

Therefore, each PCN's non-compliant cost is reduced by:

$$1 - (2/4.2) \times (9.5/11.4) = 60.3\% \text{ reduction}$$

A spell is a hospital admission and includes all activities associated with that admission

- Aggregated potential cost savings in a best-case scenario where non-compliant patients with epilepsy become compliant is estimated at ~£360,000.
- Aggregated potential reduction in bed-days in a best-case scenario where non-compliant patients become compliant is estimated at 1,282.
- St Paul's and Stroud Cotswold PCNs are greyed out due no data being available.

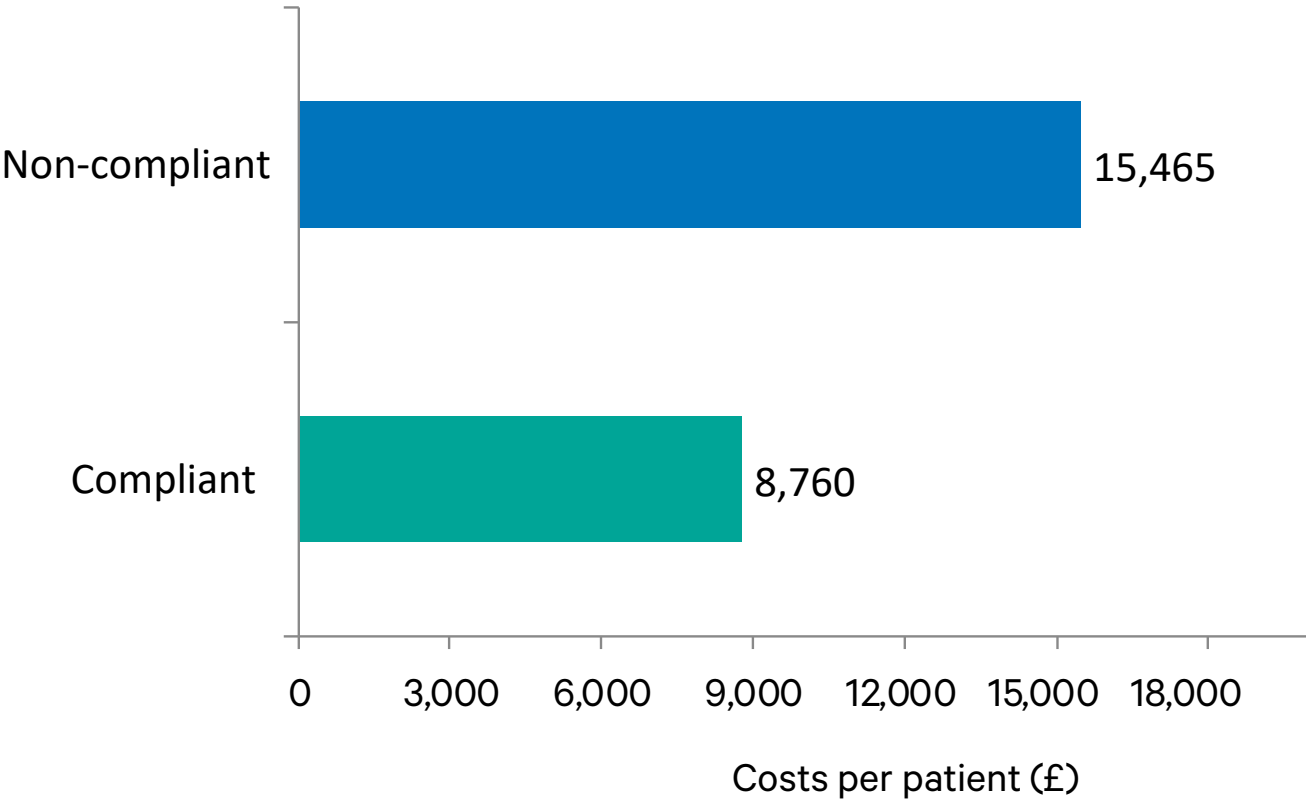
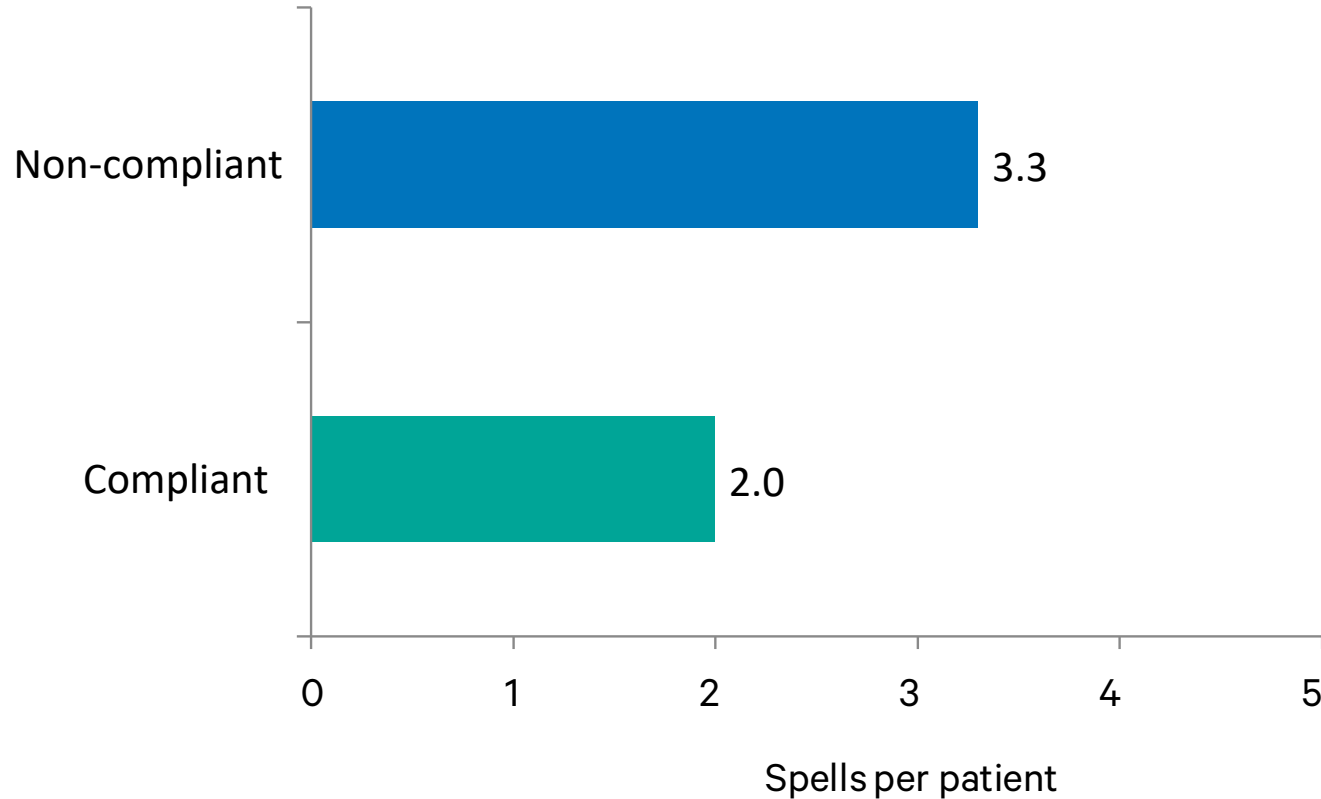
One Gloucestershire ICS: Burden of Parkinson's disease

During the study period,

- 1,375 compliant patients with Parkinson's disease were admitted in 2,765 spells
- 55 non-compliant patients were admitted in 185 spells

Compared with compliant patients with **Parkinson's disease**, non-compliant patients had:

- 65% more spells per patient and
- 77% higher costs per patient



Spells per patient
65% higher
 for non-compliant patients
 (3.3 vs 2.0)

Cost per patient
77% higher
 for non-compliant patients
 (£15,465 vs £8,760)

MLOS per spell
28% higher
 for non-compliant patients
 (15.2 days vs 11.9 days)

Cost per spell
6.3% higher
 for non-compliant patients
 (£4,625 vs £4,350)

A spell is a hospital admission and includes all activities associated with that admission

One Gloucestershire ICS: Burden of Parkinson's disease

Burden of Parkinson's disease – PCN level analysis

	Cost savings			Bed-day savings		
	Non-compliant cost	Estimated cost if compliant	Cost savings	Non-compliant bed days	Estimated bed days if compliant	Reduced bed days
Aspen PCN	£59,751	£33,845	£25,906	235	112	123
Berkeley Vale PCN	£29,106	£16,487	£12,619	222	105	117
Cheltenham Central PCN	£63,170	£35,782	£27,388	249	118	131
Cheltenham Peripheral PCN	£94,792	£53,694	£41,098	301	143	158
Forest Of Dean PCN	£83,442	£47,265	£36,177	309	147	162
Gloucester Inner City PCN	£34,780	£19,701	£15,079	76	36	40
Hadwen Quedgeley PCN	£78,796	£44,633	£34,163	243	115	128
N & S Gloucester (NSG) PCN	£62,911	£35,635	£27,276	88	42	46
North Cotswolds PCN	£39,841	£22,568	£17,273	127	60	67
Rosebank PCN						
Severn Health PCN	£26,495	£15,008	£11,487	48	23	25
South Cotswolds PCN	£68,933	£39,046	£29,887	159	75	84
St Paul'S PCN	£71,867	£40,708	£31,159	218	103	115
Stroud Cotswold PCN	£86,334	£48,903	£37,431	382	181	201
Twins PCN	£29,278	£16,584	£12,694	63	30	33
	£829,496	£469,860	£359,636	2,720	1,290	1,430

Since patient counts are not available for many individual PCNs, Gloucestershire ICS-level ratios have been applied at PCN level to calculate an estimated potential cost and bed-days saving if non-compliant patient numbers were reduced.

For cost:

ICS non-compliant cost per patient = £15,465

ICS compliant cost per patient = £8,760

Therefore, each PCN's non-compliant cost can be reduced by:

$$1 - (£8,760/£15,465) = 43.4\% \text{ reduction}$$

For bed-days:

ICS non-compliant spells per patient = 3.3

ICS compliant spells per patient = 2

ICS non-compliant MLOS = 15.2

ICS compliant MLOS = 11.9

Therefore, each PCN's non-compliant cost is reduced by:

$$1 - (2/3.3) \times (11.9/15.2) = 52.6\% \text{ reduction}$$

A spell is a hospital admission and includes all activities associated with that admission

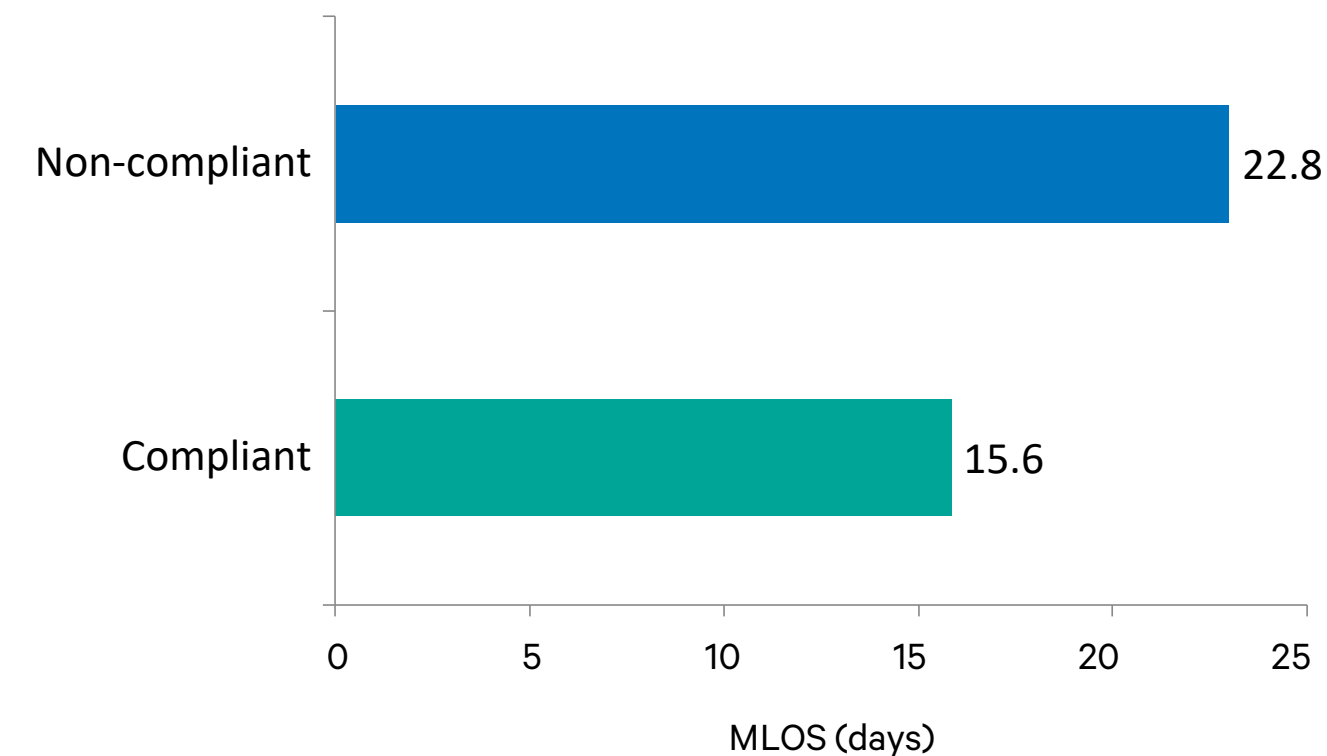
- Aggregated potential cost savings in a best-case scenario where non-compliant patients with Parkinson's disease become compliant is estimated at ~£360,000.
- Aggregated potential reduction in bed-days in a best-case scenario where non-compliant patients become compliant is estimated at 1,430.
- Rosebank PCN is greyed-out due to no data being available.

One Gloucestershire ICS: Burden of senility

During the study period,

- 2,585 compliant patients with senility were admitted in 2,875 spells
- 65 non-compliant patients were admitted in 75 spells

Compared with compliant patients with **senility**, non-compliant patients had an average stay 7 days longer



Spells per patient

identical
for non-compliant patients

(1.1 vs 1.1)



Cost per patient

20% higher
for non-compliant patients

(£7,045 vs £5,850)

MLOS per spell

46% higher
for non-compliant patients

(22.8 days vs 15.6 days)

Cost per spell

17.4% higher
for non-compliant patients

(£6,180 vs £5,265)

A spell is a hospital admission and includes all activities associated with that admission

One Gloucestershire ICS: Burden of senility

Burden of senility – PCN level analysis

	Cost savings			Bed-day savings		
	Non-compliant cost	Estimated cost if compliant	Cost savings	Non-compliant bed days	Estimated bed days if compliant	Reduced bed days
Aspen PCN	£16,658	£13,832	£2,826	38	26	12
Berkeley Vale PCN	£25,357	£21,056	£4,301	102	70	32
Cheltenham Central PCN	£39,605	£32,887	£6,718	123	84	39
Cheltenham Peripheral PCN	£92,404	£76,730	£15,674	429	294	135
Forest Of Dean PCN	£9,666	£8,026	£1,640	35	24	11
Gloucester Inner City PCN	£23,034	£19,127	£3,907	91	62	29
Hadwen Quedgeley PCN	£2,805	£2,329	£476	9	6	3
N & S Gloucester (NSG) PCN	£20,915	£17,367	£3,548	68	47	21
North Cotswolds PCN	£37,322	£30,991	£6,331	174	119	55
Rosebank PCN	£5,757	£4,780	£977	33	23	10
Severn Health PCN	£5,446	£4,522	£924	7	5	2
South Cotswolds PCN	£97,655	£81,090	£16,565	348	238	110
St Paul'S PCN	£29,179	£24,230	£4,949	65	44	21
Stroud Cotswold PCN	£8,963	£7,443	£1,520	53	36	17
Twins PCN	£29,912	£24,838	£5,074	58	40	18
	£4,44,678	£3,69,250	£75,428	1,633	1,118	515

- The estimated cost savings and reduction in bed days is small relative to the other three conditions.

Since patient counts are not available for many individual PCNs, Gloucestershire ICS-level ratios have been applied at PCN level to calculate an estimated potential cost and bed-day saving if non-compliant patient numbers were reduced.

For cost:

ICS non-compliant cost per patient = £7,045

ICS compliant cost per patient = £5,850

Therefore, each PCN's non-compliant patient costs can be reduced by:

$$1 - (£5,850/£7,045) = 17.0\%$$

For bed-days:

ICS non-compliant spells per patient = 1.1

ICS compliant spells per patient = 1.1

ICS non-compliant MLOS = 22.8

ICS compliant MLOS = 15.6

Therefore, each PCN's non-compliant bed cost is reduced by:

$$1 - (1.1/1.1) \times (15.6/22.8) = 31.6\% \text{ reduction}$$

A spell is a hospital admission and includes all activities associated with that admission

One Gloucestershire ICS: Burden by rurality

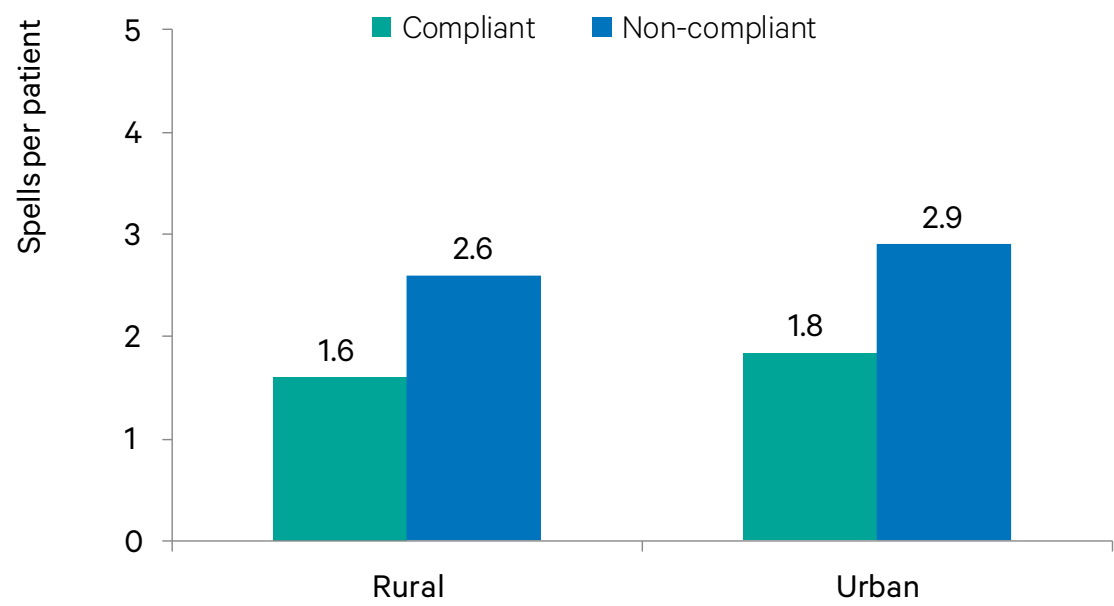
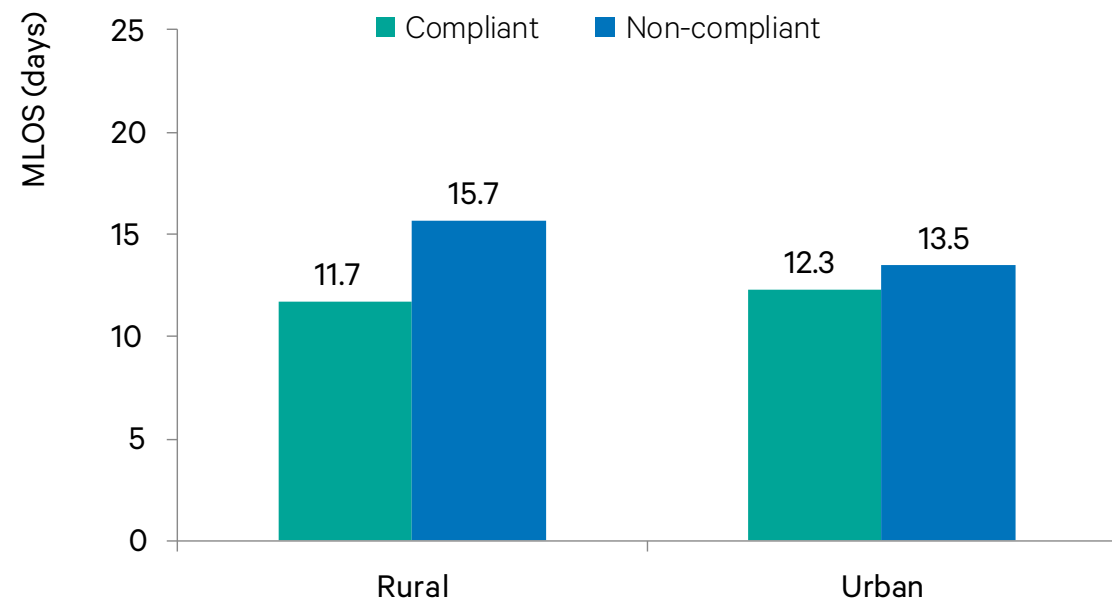
• Although urban areas tend to have younger populations, the population aged >65 years in One Gloucestershire ICS is concentrated in urban areas like Gloucester and Cheltenham.

Compliance status	Rurality	Spells	Patients	Spells per patient	Cost (£)	Cost per patient (£)	Bed-days	MLOS	Cost per spell
Compliant	Rural	5,895	3,585	1.6	25,831,968	7,205	69,246	11.7	4,380
	Urban	13,675	7,745	1.8	59,453,631	7,675	167,791	12.3	4,345
Non-compliant	Rural	245	95	2.6	1,143,949	12,170	3,810	15.7	4,710
	Urban	525	180	2.9	2,285,969	12,630	7,093	13.5	4,365

• Compared with compliant patients, non-compliant patients in rural and urban areas had:

- longer MLOS
- more spells per patient

• Excess mean length of stay for non-compliant patients is 4 times higher for patients in rural compared with urban areas



Rurality	% Non-compliant*
Rural	2.6%
Urban	2.3%

Non-compliant excess		
% of non-compliant cost*	Cost per percent (£)	MLOS per patient (days)
33%	4,965	4.0
67%	4,955	1.2

*Percentages are calculated using a denominator summed from two rounded values and therefore may slightly deviate from the true value.

A spell is a hospital admission and includes all activities associated with that admission

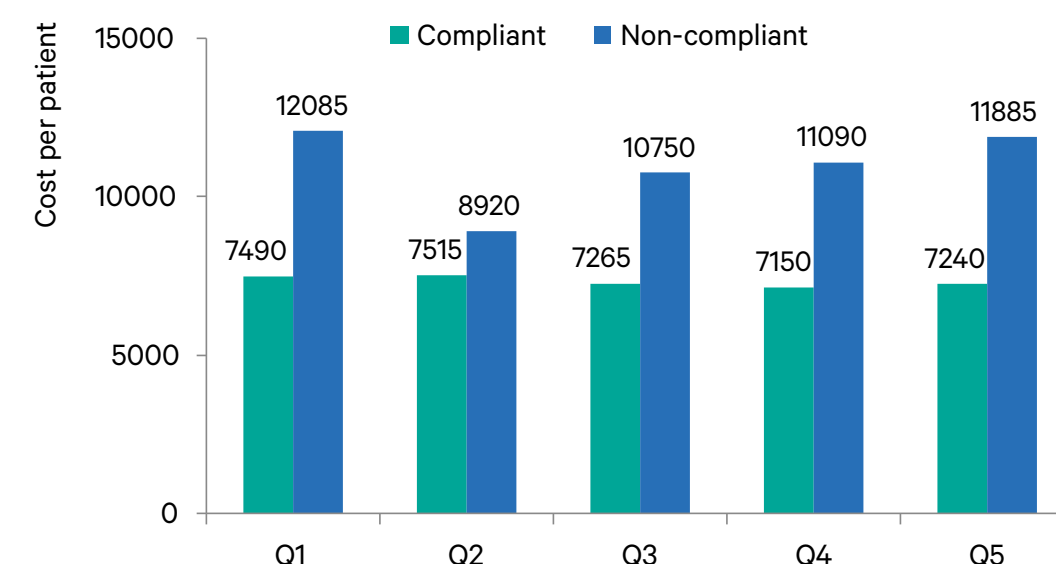
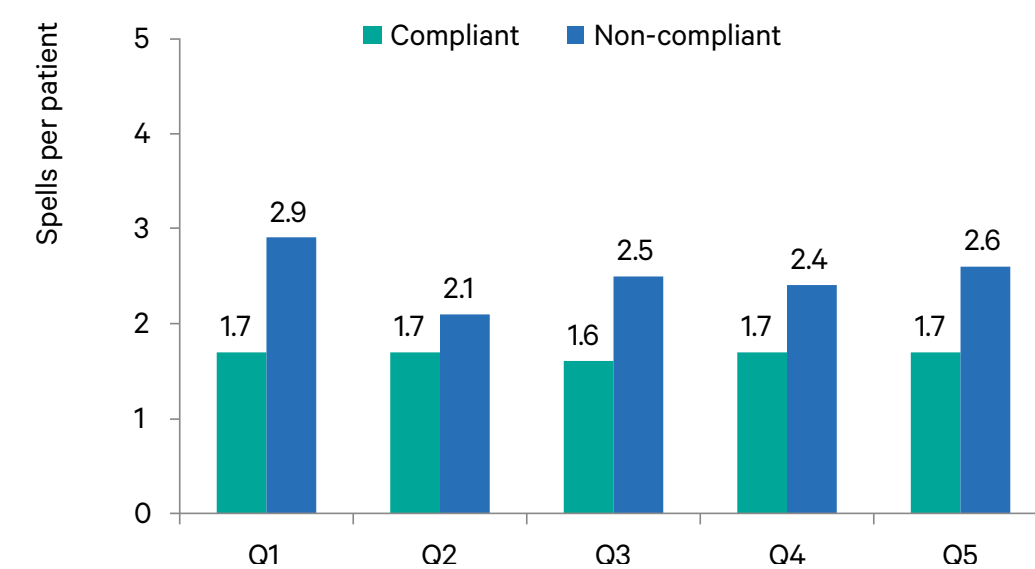
One Gloucestershire ICS: Burden by deprivation

- Although One Gloucestershire ICS does not have many areas of high deprivation (low IMD quintile), many people aged >65 years live in areas of low deprivation.

Compliance	Deprivation quintile	Spells	Patients	Spells per patient	Cost (£)	Cost per patient (£)	Bed-days	MLOS	Cost per spell (£)
Compliant	Quintile 1 - most deprived	1,565	900	1.7	6,754,207	7,490	20,292	13	4,315
	Quintile 2	2,185	1,310	1.7	9,837,114	7,515	27,893	12.8	4,505
	Quintile 3	4,325	2,625	1.6	19,075,760	7,265	52,703	12.2	4,410
	Quintile 4	5,035	3,020	1.7	21,581,318	7,150	59,738	11.9	4,285
	Quintile 5 - least deprived	6,465	3,870	1.7	28,033,374	7,240	76,404	11.8	4,335
Non-compliant	Quintile 1 - most deprived	80	30	2.9	338,445	12,085	1,113	13.6	4,125
	Quintile 2	75	35	2.1	321,135	8,920	1,094	14.6	4,280
	Quintile 3	165	65	2.5	720,104	10,750	2,474	14.8	4,310
	Quintile 4	195	80	2.4	909,200	11,090	2,845	14.4	4,615
	Quintile 5 - least deprived	245	95	2.6	1,141,034	11,885	3,377	13.7	4,640

- Compared with compliant patients, non-compliant patients in all areas of deprivation have:

- more spells per patient
- higher costs per patient



A spell is a hospital admission and includes all activities associated with that admission

- One third of the cost for non-compliant patients is for the least deprived quintile.

IMD quintile	% Non-compliant*	Non-compliant excess		
		% of non-compliant cost*	Cost/patient (£)	MLOS per patient (days)
Quintile 1 - most deprived	3.2%	10%	4,595	0.6
Quintile 2	2.6%	9%	1,405	1.8
Quintile 3	2.4%	21%	3,485	2.6
Quintile 4	2.6%	27%	3,940	2.5
Quintile 5 - least deprived	2.4%	33%	4,645	1.9

*Percentages are calculated using a denominator summed from two rounded values and therefore may slightly deviate from the true value.

Appendix

Appendix 1: HES disclaimer

1. This work uses data provided by patients and collected by the NHS as part of their care and support. Secondary care data is taken from the English Hospital Episode Statistics (HES) database produced by NHS England, Copyright © 2024, NHS England. Re-used with the permission of NHS England. All rights reserved.
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 - 2.1.1. Data should always be released at a high enough level of aggregation to prevent others being able to 'recognise' a particular individual. To protect the privacy and confidentiality of individuals, Wilmington Healthcare have applied suppression to the HES data - '*' or '-1' represents a figure between 1 and 7. All other potentially identifiable figures (e.g. patient numbers, spell counts) have been rounded to the nearest 5.
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 - 2.6.1. Relating HES data outputs to the use of commercially available products. An example being the prescribing of pharmaceutical products.
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3. 2023/24 HES data are provisional and may be incomplete or contain errors for which no adjustments have yet been made. Counts produced from provisional data are likely to be lower than those generated for the same period in the final dataset. This shortfall will be most pronounced in the final month of the latest period, e.g. September from the April to September extract. It is also probable that clinical data are not complete, which may in particular affect the last two months of any given period. There may also be errors due to coding inconsistencies that have not yet been investigated and corrected.
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