Scottish Diabetes Survey 2015

Scottish Diabetes Survey Monitoring Group

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Foreword

The Scottish Diabetes Survey 2015 describes many aspects of diabetes care across the whole of Scotland.

This information is useful for the Managed Clinical Networks in each NHS Board to help identify what is needed to further improve the quality of diabetes care.

Most of the data contained in the Survey is extracted from our national award- winning diabetes IT system SCI-Diabetes. As such it represents a very comprehensive snapshot of diabetes in Scotland at a single point of time. The information however is dynamic as it is constantly being checked and updated as required. It is important to understand this when reading the Survey to avoid over interpretation of some elements of the data.

Data on SCI-Diabetes can also be viewed by GP practices, hospital teams and now, through our "My Diabetes My Way" website (http://www.mydiabetesmyway.scot.nhs.uk), people who have registered can review their own data to support them self manage their diabetes. More than 10,000 people have registered for this facility.

One aim of the 2014 Diabetes Improvement Plan is to enable more dynamic and local use of the information available within SCI-Diabetes. We have put in place a mechanism to automatically provide quarterly feedback to NHS Boards of important aspects of diabetes care. A sample of these reports is described in this survey. The newly formed data advisory group will also help design future information requirements to support quality improvement developments in diabetes care and outcomes across Scotland.

As in previous years, the Survey shows an ongoing increase in the prevalence of diabetes without a definite increase in the incidence of Type 2 Diabetes. The Survey also illustrates some significant improvements in diabetes care:

More people than ever before have had an HbA1c measurement and retinopathy screening.

In the 2013 survey foreword I mentioned plans to improve control of Type 1 Diabetes in Scotland. We have held a number of meetings to develop improvements.

We have exceeded the initial target for insulin pump therapy for children and adults with Type 1 diabetes. 31.2 % (919) of under eighteens are now using this therapy as are 7.1 % (1948) of adults.

Smoking rates in those with Type 2 diabetes continue to decrease, but more work is clearly required both in these people and more particularly in those with Type 1 diabetes.

The Survey also identifies a number of ongoing challenges for NHS Scotland:

We need to continue to develop and improve care for those with Type 1 diabetes if we are to achieve outcomes comparable to those of other countries.

The increasing prevalence of diabetes continues to create significant strain on current services.

There continues to be significant variation between different NHS Boards in the collection of Survey data and the outcomes achieved.

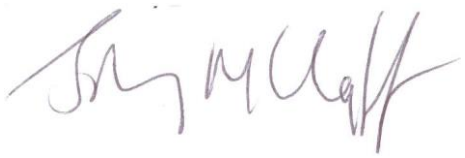
Measurement of some core diabetes information in those with Type 2 diabetes has decreased slightly.

The change of the Quality Outcomes Framework for primary care could potentially have a negative effect in the next few years. We hope however that the quarterly reporting system will have a positive influence.

NHS Boards will wish to monitor and address any issues identified through their Managed Clinical Networks where appropriate.

The information in SCI-Diabetes is also used to for epidemiological research to help develop and plan services and improve outcomes for people living with diabetes across Scotland and internationally.

The Survey will also assist the Scottish Diabetes Group in understanding progress with the Diabetes Improvement Plan. We therefore expect to build on the messages the Survey gives us to further improve the quality of diabetes care in Scotland.



John A McKnight
Chairman
Scottish Diabetes Data Group

Executive Summary

This report presents the results of the 2015 Scottish Diabetes Survey. The survey collates information submitted by all 14 NHS Boards and provides data on the number of people with diabetes, the effects on their health, and the progress being made to improve the delivery and outcomes of care for diabetes. In this survey, we report separately on those with Type 1 and Type 2 diabetes.

In this Scottish Diabetes Survey 2015, we report that:

- There were 284,122 people diagnosed with diabetes in Scotland recorded on local diabetes registers at the end of 2015. This represents 5.3% of the population (Table 1);
- Crude prevalence of diabetes ranged from 4.5% to 6.1% across NHS Boards (Table 1);
- 88.3% (250,881) of all people registered with diabetes had Type 2 diabetes (Table 15);
- 10.7% of all registered people had Type 1 diabetes. The number of people registered with Type 1 diabetes increased from 26,294 in 2006 to 30,356 in 2015 (Table 15);
- 1.0% (2,885) were recorded as having “other” types of diabetes, including maturity onset diabetes of the young (MODY) and those with unknown diabetes type (Table 15);
- 37.2% of patients with a recorded BMI and Type 1 diabetes and 31.5% of those with a recorded BMI and Type 2 diabetes were overweight (BMI 25-29.9kg/m^2), while 25.4% of those with Type 1 and 55.7% of those with Type 2 were obese (BMI 30kg/m^2 or above, Table 22 and Table 23);
- 90.9% (Type 1) and 93.9% (Type 2) had an HbA_{1c} recorded in the previous 15 months. Of these, 22.1% and 57.8% had a result < 58mmol/mol (7.5%), the target reported in previous surveys (Table 25, Table 26 and Table 27);
- 86.6% of those with Type 1 and 93.5% of those with Type 2 diabetes had their blood pressure recorded in the previous 15 months. Of these, 46.0% and 33.1% respectively had a systolic BP measurement of < 130/80 mmHg (Table 35, Table 38 and Table 40);
- Cholesterol was recorded in 88.7% of patients within the previous 15 months, and the target of ≤ 5 mmol/l was achieved in 70.3% of those with Type 1 and 79.7% of those with Type 2 diabetes (Table 44, Table 45 and Table 46);
- 23.9% (Type 1) and 17.5% (Type 2) were current smokers (Table 49 and Table 50);
- 1,063 (3.5%) of those with Type 1 and 24,440 (9.7%) of those with Type 2 diabetes have had a myocardial infarction and survived, and 2.6% and 7.4% respectively have undergone cardiac revascularisation (Table 52 and Table 54);

- 447 (1.5%) of those with Type 1 and 1,436 (0.6%) of those with Type 2 diabetes have a record of having end stage renal failure (Table 61);
- 85.7% of people with Type 1 or Type 2 diabetes had eye screening in the previous 15 months (Table 62);
- 61.2% of patients with Type 1 diabetes and 77.8% of those with Type 2 had their foot scores recorded in the previous 15 months (Table 67 and Table 68);
- 352 (1.2%) of those with Type 1 and 1740 (0.7%) of those with Type 2 diabetes have a record of having had a major lower limb amputation (Table 71).

Prevalence

At the end of 2015 there were 284,122 people with known diabetes in Scotland recorded on local diabetes registers, which represents a crude prevalence of 5.3% of the population. In the 2014 Scottish Diabetes Survey, 276,430 people (5.2%) were known to have diabetes. The increase in reported prevalence depends on a number of factors, including:

- demographic change - diabetes is more prevalent in older people so the increasing number of older people each year increases the prevalence of diabetes
- an increase in the incidence of Type 1 diabetes - we know that there has been a steady increase in the incidence of diabetes in Scottish children over the last 40 years.
- better survival, partly because of improved control of blood glucose, blood pressure and cholesterol level
- possibly better detection of diabetes in people with type 2 diabetes, many of whom have no symptoms

Table 1. Crude and age-adjusted prevalence of diabetes (all types), by NHS Board, ranked by age adjusted prevalence.

NHS Board	Population	Number on the diabetes register at the end of the year	Crude prevalence	Age-adjusted prevalence
Western Isles	27,250	1,382	5.1%	4.3%
Highland	320,760	16,601	5.2%	4.6%
Shetland	23,230	1,097	4.7%	4.7%
Orkney	21,590	1,136	5.3%	4.7%
Borders	114,030	6,467	5.7%	4.8%
Lothian	858,090	38,822	4.5%	5.0%
Grampian	584,240	27,925	4.8%	5.0%
Dumfries and Galloway	149,940	9,142	6.1%	5.1%
Tayside	413,800	22,644	5.5%	5.2%
Forth Valley	300,410	16,257	5.4%	5.4%
Fife	367,260	20,937	5.7%	5.5%
Ayrshire and Arran	371,110	22,820	6.1%	5.6%
Greater Glasgow and Clyde	1,142,580	61,457	5.4%	5.7%
Lanarkshire	653,310	37,435	5.7%	5.8%
Scotland	**5,347,600**	**284,122**	**5.3%**	**5.3%**

Variation between NHS Boards also depends on deprivation, the age and the ethnic distribution of the population of each Board. However the broad similarity of reported prevalence, compared to some previous years, gives confidence in the completeness of recording. The increased prevalence in recent years is likely to be real rather than because of better reporting.

Table 2. Crude prevalence of diabetes for patients aged 65 and over (all types), by NHS Board, ranked by prevalence.

NHS Board	Age >= 65 (n)	Age >= 65 with Diabetes	Prevalence in those aged >= 65
Western Isles	6,446	796	12.3%
Shetland	4,232	566	13.4%
Highland	69,127	9,284	13.4%
Orkney	4,717	657	13.9%
Borders	26,331	3,805	14.5%
Lothian	136,048	19,798	14.6%
Dumfries and Galloway	35,765	5,270	14.7%
Grampian	99,049	14,787	14.9%
Tayside	83,945	12,832	15.3%
Ayrshire and Arran	78,071	12,186	15.6%
Forth Valley	54,166	8,548	15.8%
Fife	71,063	11,339	16.0%
Greater Glasgow and Clyde	187,029	29,897	16.0%
Lanarkshire	112,400	18,722	16.7%
Scotland	**968,389**	**148,487**	**15.3%**

Age-adjusted prevalence is based on direct age/sex standardisation using the Scottish population as the reference population structure. Population figures are based on mid-year population estimates published by National Records of Scotland. Because of publication dates, surveys have in each case used population figures for the previous year - so that the 2015 survey uses diabetes data from 2015 but mid-year population estimates from 2014. This will lead to a very small overestimate of diabetes prevalence.

Differences in prevalence are due to a number of factors. One is age - Type 2 diabetes is more common in older age groups so the age structure of an area will affect the crude prevalence. A health board area with an older population will have a higher crude

prevalence; e.g. the crude (unadjusted) prevalence of diabetes in Dumfries & Galloway is above the Scottish average; however when the figure is adjusted for the age of the population, the Dumfries & Galloway prevalence is actually lower than the Scottish average. Other reasons for differences in observed prevalence are given at the start of this section.

Figure 1. Crude diabetes prevalence (all types) by NHS Health Board. Vertical capped lines show 95% confidence intervals.

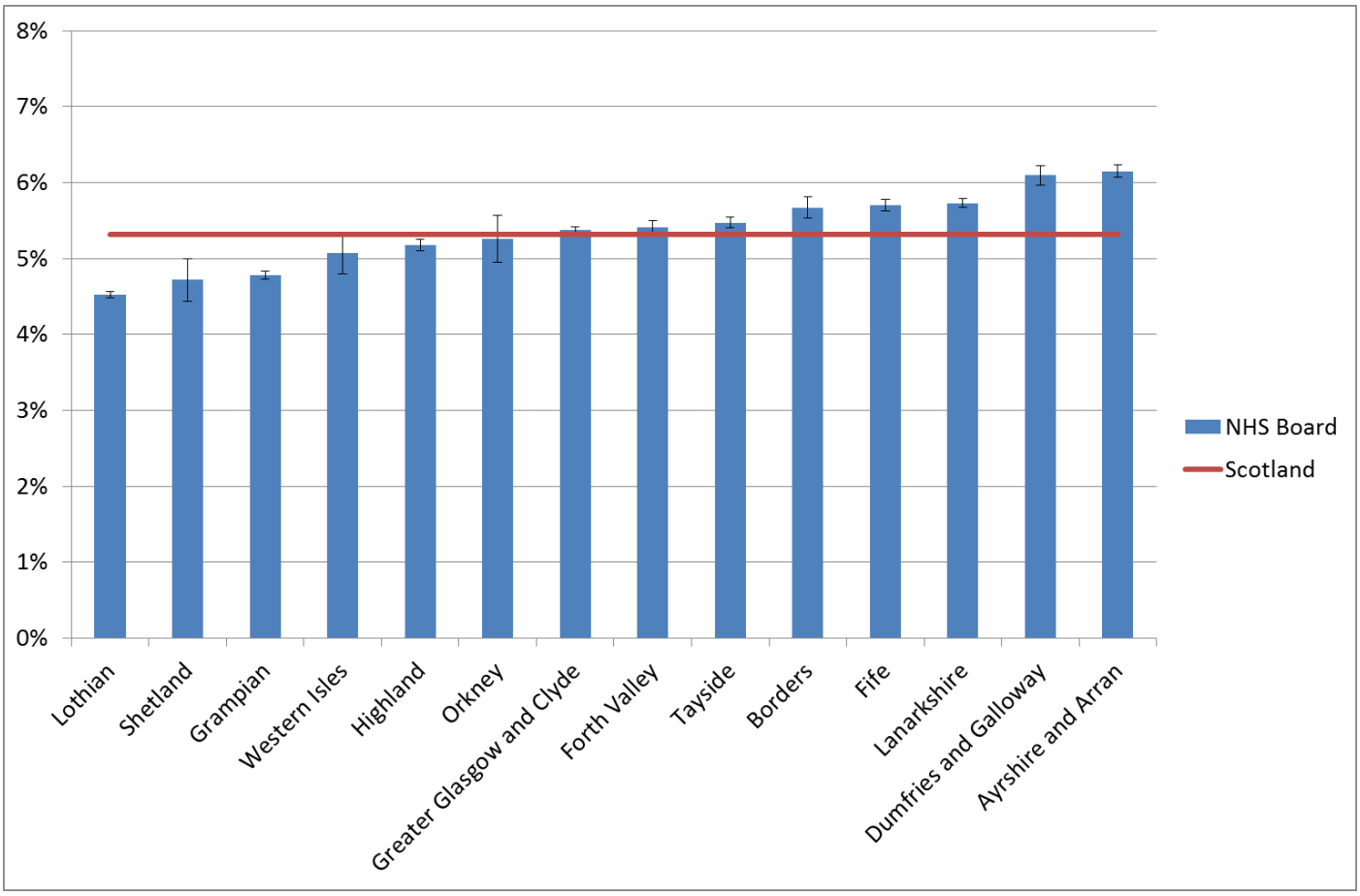


Figure 2. Age-adjusted diabetes prevalence (all types) by NHS Health Board, ranked by prevalence. Vertical lines show 95% confidence intervals.

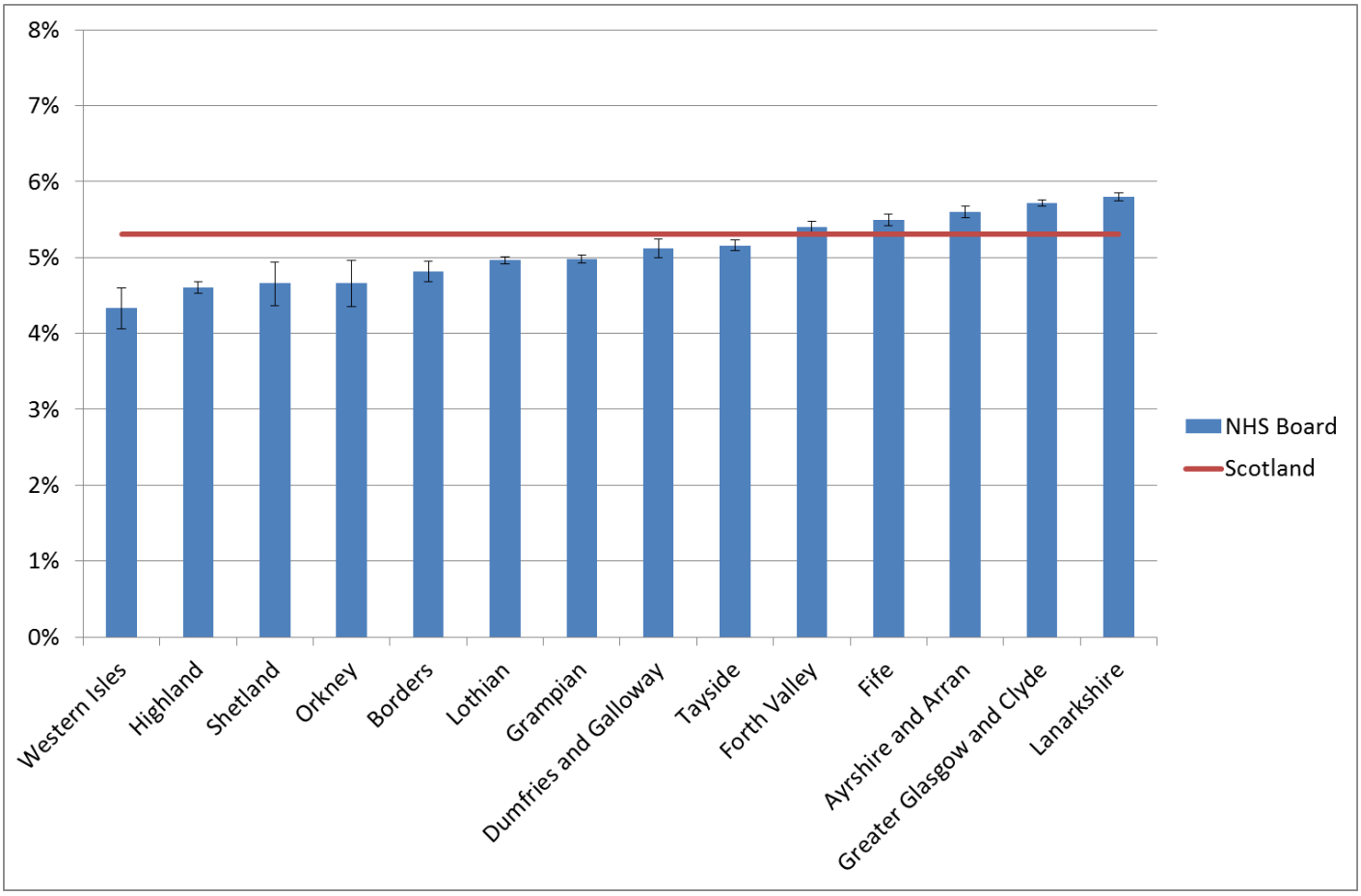


Table 1 and Figures 1 and 2 show both crude and age-adjusted figures for the prevalence of diabetes of all types in 2015. The age-adjusted figures take account of the fact that the average age differs between boards and that older populations have higher diabetes prevalence. Table 2 shows that the prevalence of diabetes is particularly high among those aged 65 and over.

Figure 3. Number of people with diabetes (all types) in each NHS Health Board.

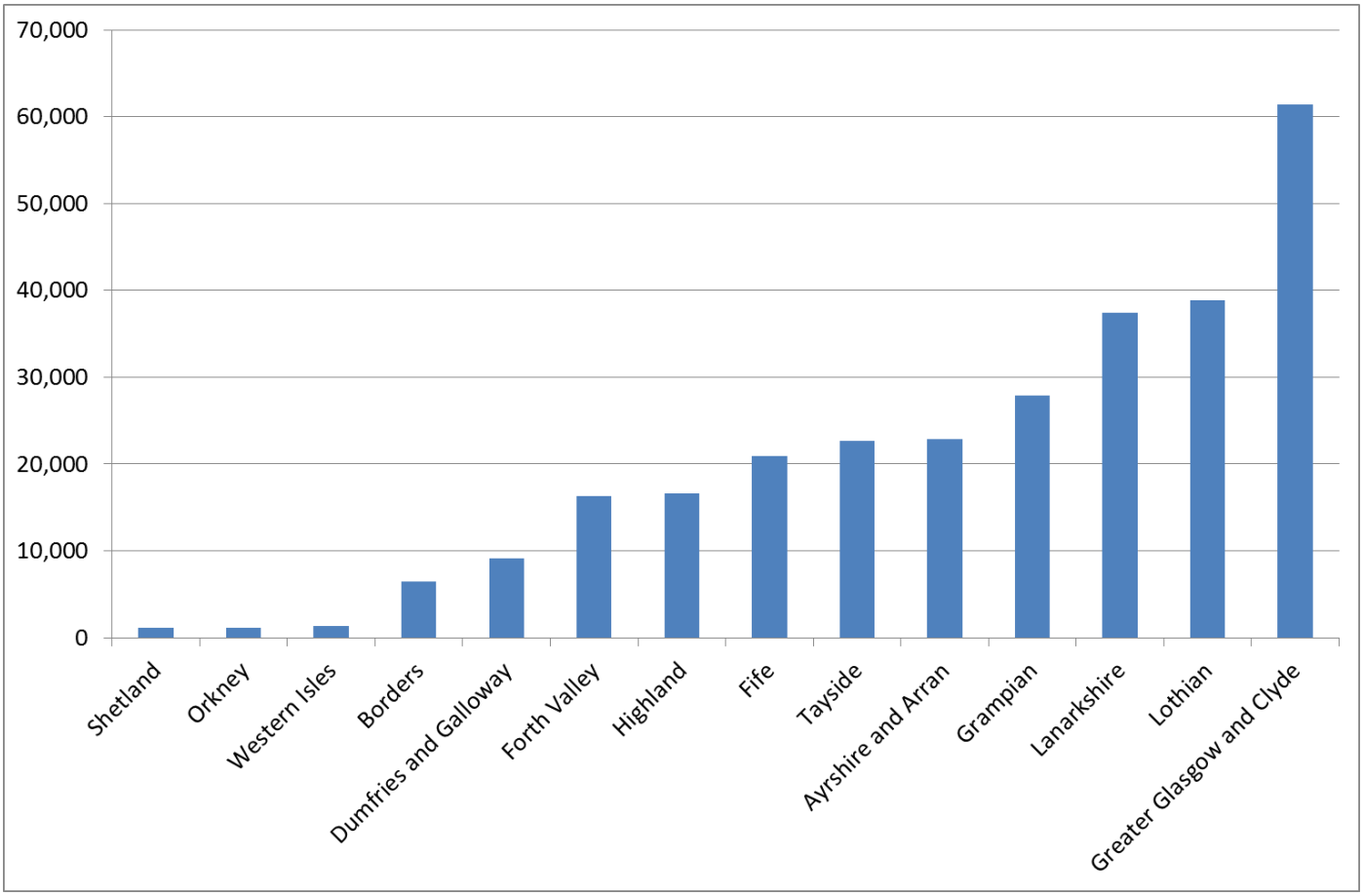


Figure 4. Number of people recorded with diabetes (all types).

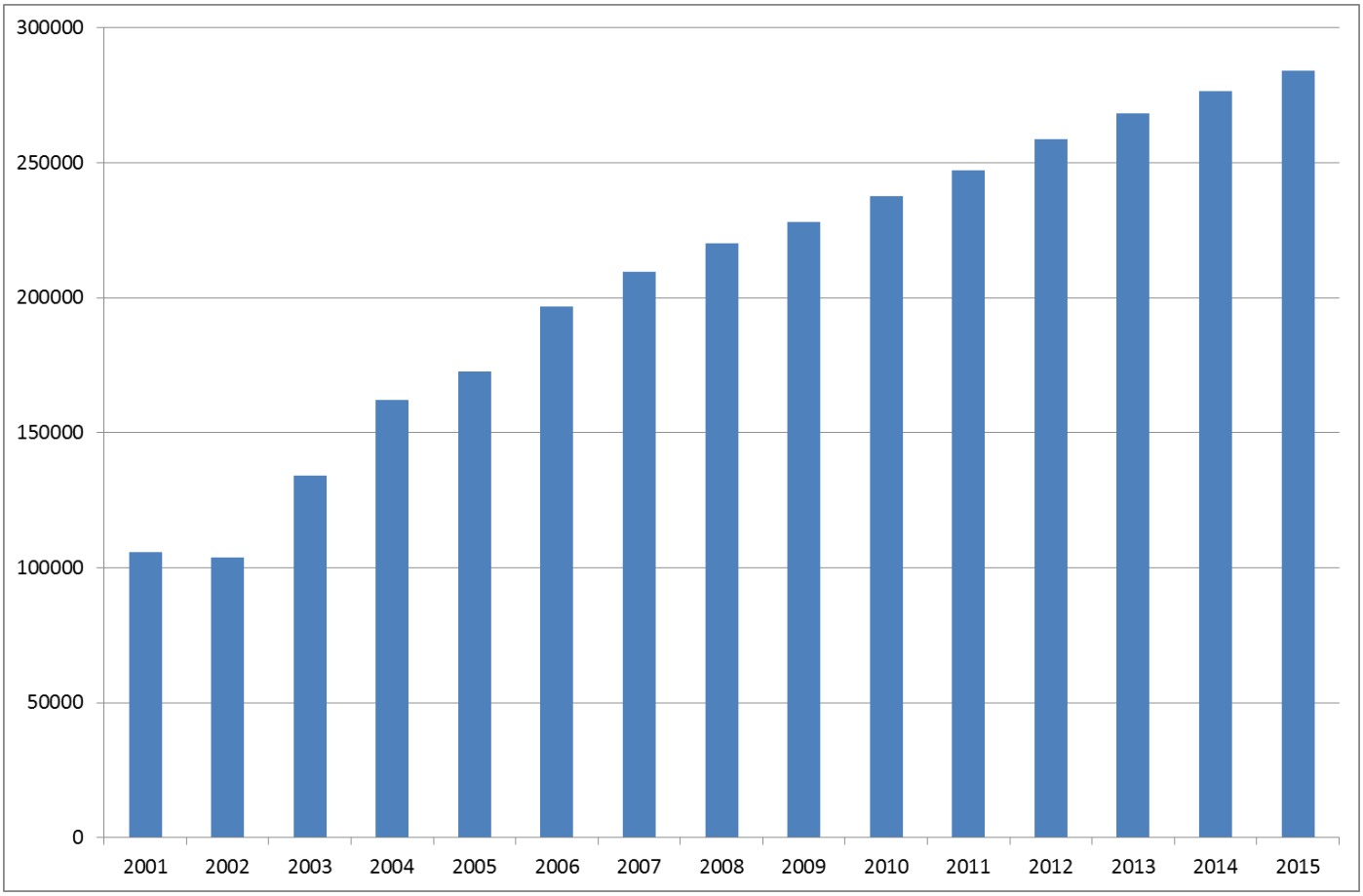


Table 3. Number of people with diabetes, crude prevalence of diabetes and changes in numbers/proportions.

Survey	Diabetes register	Crude prevalence	Increase	(%) Increase	Absolute increase
2015	284,122	5.31%	7,692	2.78%	0.12%
2014	276,430	5.19%	8,276	3.09%	0.14%
2013	268,154	5.05%	9,584	3.71%	0.13%
2012	258,570	4.92%	11,292	4.57%	0.18%
2011	247,278	4.74%	9,810	4.13%	0.16%
2010	237,468	4.57%	9,464	4.15%	0.16%
2009	228,004	4.41%	8,041	3.66%	0.14%
2008	219,963	4.28%	10,257	4.89%	0.18%
2007	209,706	4.10%	12,905	6.56%	0.24%

Incidence

Crude incidence figures have been calculated retrospectively using SCI-Diabetes data and therefore may be slightly affected by factors such as post-survey patient migration and on-going validation of diabetes classification.

Table 4. Type 1 diabetes: number of new cases and incidence rate (per 100,000 population per year) by age.

Age	2009		2010		2011		2012		2013		2014		2015		
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Population	Cases	Rate
0 to 4	148	27	145	26	166	29	66	22	51	17	56	19	292,230	73	25
5 to 9							137	50	88	32	105	37	288,585	114	40
10 to 14	258	41	268	43	244	40	152	54	125	44	140	51	271,862	120	44
15 to 19							110	35	104	33	116	37	310,853	98	32
20 to 29	168	24	177	25	205	29	172	24	159	22	159	22	723,789	160	22
30 to 39	145	22	127	20	129	20	118	18	111	17	110	17	658,384	125	19
40 to 49	92	12	93	12	114	14	96	12	82	10	86	11	764,513	95	12
50 to 59	71	11	69	10	63	9	66	9	74	10	58	8	753,194	75	10
60 to 69	44	8	50	9	37	6	43	7	36	6	26	4	621,324	22	4
Over 69	28	5	29	5	15	2	18	3	18	3	27	4	662,866	16	2
Total	**954**	**18**	**958**	**18**	**973**	**19**	**978**	**19**	**848**	**16**	**883**	**17**	**5,347,600**	**898**	**17**

Table 5. Type 1 diabetes: incidence rate (per 100,000 population per year) by age.

Age range	2007	2008	2009	2010	2011	2012	2013	2014	2015
<10	22	24	27	26	29	36	24	28	32
10-19	44	42	41	43	40	44	38	43	37
20-29	26	24	24	25	29	24	22	22	22
30-39	24	21	22	20	20	18	17	17	19
40-49	19	16	12	12	14	12	10	11	12
50-59	10	8	11	10	9	9	10	8	10
60-69	6	10	8	9	6	7	6	4	4
>=70	6	4	5	5	2	3	3	4	2
Total	**20**	**19**	**18**	**18**	**19**	**19**	**16**	**17**	**17**

Table 6. Type 2 diabetes: number of new cases and incidence rate (per 100,000 population per year) by age.

Age	2009		2010		2011		2012		2013		2014		2015		
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Population	Cases	Rate
Under 10	2	0	0	0	0	0	0	0	1	0	0	0	580,815	0	0
10 to 19	22	4	18	3	10	2	21	3	8	1	19	3	582,715	20	3
20 to 29	164	24	166	24	163	23	208	29	178	25	197	27	723,789	165	23
30 to 39	797	120	755	116	730	113	939	146	810	124	756	115	658,384	834	127
40 to 49	2,667	335	2,555	321	2,552	322	2,733	347	2,570	323	2,467	315	764,513	2,432	318
50 to 59	4,411	653	4,787	629	4,106	595	4,567	650	4,387	606	4,210	570	753,194	4,451	591
60 to 69	5,286	944	4,870	851	4,741	814	4,943	833	5,013	826	4,513	734	621,324	4,677	753
Over 69	5,286	867	4,925	799	4,667	747	4,596	729	4,876	762	4,217	649	662,866	4,472	675
Total	**18,627**	**360**	**17,576**	**338**	**16,969**	**325**	**18,007**	**343**	**17,853**	**336**	**16,379**	**307**	**5,347,600**	**17,051**	**319**

Table 7. Type 2 diabetes: incidence rate (per 100,000 population per year) by age.

Age range	2007	2008	2009	2010	2011	2012	2013	2014	2015
<10	0	0	0	0	0	0	0	0	0
10-19	4	3	4	3	2	3	1	3	3
20-29	23	24	24	24	23	29	25	27	23
30-39	101	127	120	116	113	146	124	115	127
40-49	304	310	335	321	322	347	323	315	318
50-59	608	628	653	629	595	650	606	570	591
60-69	955	917	944	851	814	833	826	734	753
>=70	835	874	867	799	747	729	762	649	675
Total	**339**	**350**	**360**	**338**	**325**	**343**	**336**	**307**	**319**

Table 8. Type 1 diabetes: number of new cases and crude incidence rate for all ages (cases per 100,000 population per year) by NHS Board, ranked by rate in the last year.

NHS Board	2009		2010		2011		2012		2013		2014		2015	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Orkney	2	10	4	20	5	25	3	15	0	0	0	0	2	9
Fife	56	16	53	15	80	22	63	17	47	13	52	14	50	14
Dumfries and Galloway	29	20	26	18	20	13	20	14	21	14	20	13	23	15
Highland	69	22	53	17	74	24	49	16	62	19	54	17	50	16
Lothian	136	17	155	19	136	16	153	18	152	18	147	17	136	16
Tayside	57	14	71	18	58	14	73	18	65	16	59	14	67	16
Borders	16	14	20	18	17	15	20	18	16	14	12	11	19	17
Lanarkshire	127	23	103	18	110	20	110	20	88	15	93	14	110	17
Greater Glasgow and Clyde	218	18	205	17	221	18	228	19	187	15	193	17	194	17
Ayrshire and Arran	70	19	69	19	68	19	79	22	64	17	73	20	67	18
Forth Valley	50	17	64	22	61	21	70	24	52	17	56	19	55	18
Grampian	115	21	123	23	117	21	90	17	88	15	111	19	111	19
Western Isles	4	15	6	23	3	11	9	35	5	18	8	29	7	26
Shetland	5	23	6	27	3	13	4	18	1	4	5	22	7	30
Scotland	**954**	**18**	**958**	**18**	**973**	**19**	**978**	**19**	**848**	**16**	**883**	**17**	**898**	**17**

Table 9. Type 1 diabetes: crude incidence rate of new cases for all ages (cases per 100,000 population per year) by NHS Board, ranked by rate in the last year.

NHS Board	2007	2008	2009	2010	2011	2012	2013	2014	2015
Orkney	15	30	10	20	25	15	0	0	9
Fife	22	17	15	15	22	17	13	14	14
Dumfries and Galloway	16	16	20	18	13	14	14	13	15
Highland	14	21	22	17	24	16	19	17	16
Lothian	23	18	17	19	16	18	18	17	16
Tayside	18	19	14	18	14	18	16	14	16
Borders	19	17	14	18	15	18	14	11	17
Lanarkshire	25	19	23	18	20	20	15	14	17
Greater Glasgow and Clyde	21	18	18	17	18	19	15	17	17
Ayrshire and Arran	21	20	19	19	19	22	17	20	18
Forth Valley	17	21	17	22	21	24	17	19	18
Grampian	15	19	21	23	21	17	15	19	19
Western Isles	15	19	15	23	11	35	18	29	26
Shetland	14	18	23	27	13	18	4	22	30
Scotland	**20**	**19**	**18**	**18**	**19**	**19**	**16**	**17**	**17**

Table 10. Type 2 diabetes: number of new cases and crude incidence rate for all ages (cases per 100,000 population per year) by NHS Board, ranked by rate in the last year.

NHS Board	2009		2010		2011		2012		2013		2014		2015	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Lothian	2,211	270	1,988	241	2,191	262	2,271	268	2,303	273	2,096	247	2,067	241
Highland	1,136	367	1,122	361	1,010	325	1,035	332	1,023	320	826	257	908	283
Grampian	2,063	382	1,721	316	1,596	290	1,866	336	1,995	348	1,710	295	1,706	292
Fife	1,315	363	1,296	357	1,235	338	1,363	371	1,397	381	1,367	373	1,074	292
Orkney	67	337	59	296	85	423	61	303	91	423	67	311	70	324
Forth Valley	970	334	973	334	876	299	1,051	356	981	328	844	282	986	328
Shetland	74	337	75	338	82	366	51	227	51	220	76	328	77	331
Western Isles	96	366	101	386	71	271	75	288	90	327	80	292	91	334
Dumfries and Galloway	669	450	589	397	573	387	563	380	514	341	482	321	506	337
Tayside	1,614	407	1,670	418	1,544	383	1,440	355	1,352	328	1,314	319	1,411	341
Borders	411	366	428	380	384	340	448	396	385	339	382	335	397	348
Greater Glasgow and Clyde	4,039	338	3,952	330	3,801	316	4,131	341	4,159	342	3,807	335	4,022	352
Lanarkshire	2,302	410	2,081	370	1,976	351	2,083	370	2,197	384	2,041	313	2,379	364
Ayrshire and Arran	1,660	425	1,521	414	1,545	421	1,570	428	1,315	352	1,287	346	1,357	366
Scotland	**18,627**	**360**	**17,576**	**338**	**16,969**	**325**	**18,008**	**343**	**17,853**	**336**	**16,379**	**307**	**17,051**	**319**

Table 11. Type 2 diabetes: crude incidence rate for all ages (cases per 100,000 population per year) by NHS Board, ranked by rate in the last year.

NHS Board	2007	2008	2009	2010	2011	2012	2013	2014	2015
Lothian	310	281	270	241	262	268	273	247	241
Highland	335	348	367	361	325	332	320	257	283
Grampian	329	336	382	316	290	336	348	295	292
Fife	352	363	363	357	338	371	381	373	292
Orkney	369	388	337	296	423	303	423	311	324
Forth Valley	320	330	334	334	299	356	328	282	328
Shetland	238	287	337	338	366	227	220	328	331
Western Isles	323	327	366	386	271	288	327	292	334
Dumfries and Galloway	359	378	450	397	387	380	341	321	337
Tayside	350	380	407	418	383	355	328	319	341
Borders	380	384	366	380	340	396	339	335	348
Greater Glasgow and Clyde	322	348	338	330	316	341	342	335	352
Lanarkshire	382	371	410	370	351	370	384	313	364
Ayrshire and Arran	390	445	452	414	421	428	352	346	366
Scotland	**339**	**350**	**360**	**338**	**325**	**343**	**336**	**307**	**319**

Undiagnosed Diabetes

Type 2 diabetes develops gradually and people can have the condition with no symptoms. As a result, many people have undiagnosed type 2 diabetes. The Association of Public Health Observatories diabetes prevalence model for Scotland (see http://www.yhpho.org.uk/default.aspx?RID=81090 for more details) provides estimates of the proportions of people with undiagnosed diabetes for each health board area for 2015. The estimate is produced by extrapolating numbers of cases from population surveys, and as these extrapolations cannot take account of all relevant factors they should be treated with caution as rough indications of the total number of people with diabetes. The model is also currently being updated. The estimated number of people of 16+ years of age with undiagnosed diabetes in Scotland in 2015 obtained by subtracting numbers of people with diagnosed diabetes identified in the Survey from the model estimates is 30,559 or 0.7% of the whole population or just under 10% of all people with diabetes (diagnosed and

undiagnosed combined). Although the estimates are available for each Health Board they are not presented because there has been a change in area boundaries and small numbers make the estimates unreliable.

Duration of Diabetes

The date of diagnosis was recorded for almost 100% of patients, of whom 6.3% have had diabetes for less than one year and 11.6% have a record of having had diabetes for 20 years or more (although it should be noted that not all dates of diagnosis are accurate especially for those with long-standing diabetes).

Table 12. Duration of diabetes (years since diagnosis) by type of diabetes.

Duration (Years)	Type 1 diabetes		Type 2 diabetes		T1 and T2 diabetes	
	Number of patients	**Percentage**	**Number of patients**	**Percentage**	**Total numbers**	**Total percentage**
<1	895	2.9%	16,879	6.7%	17,774	6.3%
1 to 4	3,665	12.1%	66,357	26.5%	70,022	24.9%
5 to 9	4,367	14.4%	71,092	28.3%	75,459	26.8%
10 to 14	4,225	13.9%	51,848	20.7%	56,073	19.9%
15 to 19	3,953	13.0%	25,297	10.1%	29,250	10.4%
20 to 24	3,320	10.9%	10,292	4.1%	13,612	4.8%
25 to 29	2,698	8.9%	4,087	1.6%	6,785	2.4%
30 to 34	2,197	7.2%	1,524	0.6%	3,721	1.3%
34 to 39	1,825	6.0%	499	0.2%	2,324	0.8%
40 to 44	1,206	4.0%	254	0.1%	1,460	0.5%
45 to 49	772	2.5%	128	0.1%	900	0.3%
>=50	1,224	4.0%	2,550	1.0%	3,774	1.3%
Total	**30,347**	**100.0%**	**250,807**	**100.0%**	**281,154**	**100.0%**

Note: Excludes patients where date of diagnosis not known (Type 1 = 9; Type 2 =75).

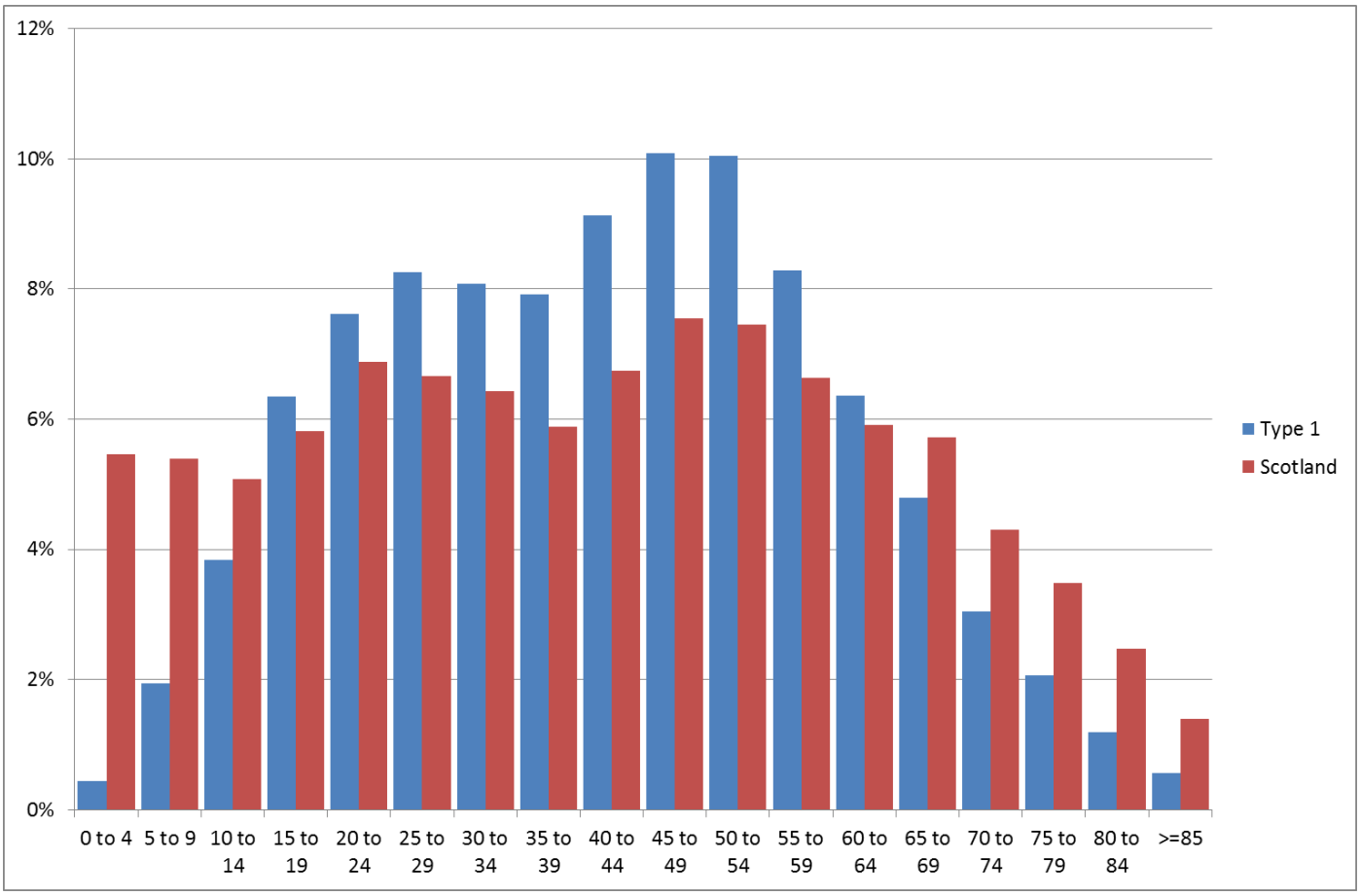
Sex

A greater proportion of those with diagnosed diabetes are male; 56.1% (17,035) of those with Type 1 diabetes and 55.8% (140,101) of those with Type 2 diabetes. This proportion has remained approximately stable since the survey started in 2001.

Age

Type 2 diabetes is more common in older people; 52.3% (148,487) of all people with diabetes recorded in the survey are aged 65 years or older (Table 2). Figures 5 and 6 show the age distribution of people with Type 1 and Type 2 diabetes compared with that of the general population; the possibility that Type 2 diabetes is developing in people at a younger age is currently under investigation. This may have long-term implications for the NHS, because they will have diabetes for long enough to develop complications such as renal failure.

Figure 5. Type 1 diabetes: age distribution of people recorded compared with age distribution of general population).



The difference between the age distributions is likely to relate to two factors. The first is the increasing incidence of Type 1 diabetes in young people and the second is the recognised decrease of life expectancy of those with Type 1 diabetes. A recent study of the Scottish Type 1 diabetes population has shown that life expectancy, while reduced is improved compared to older studies.

Figure 6. Type 2 diabetes: age distribution of people recorded compared with age distribution of general population.

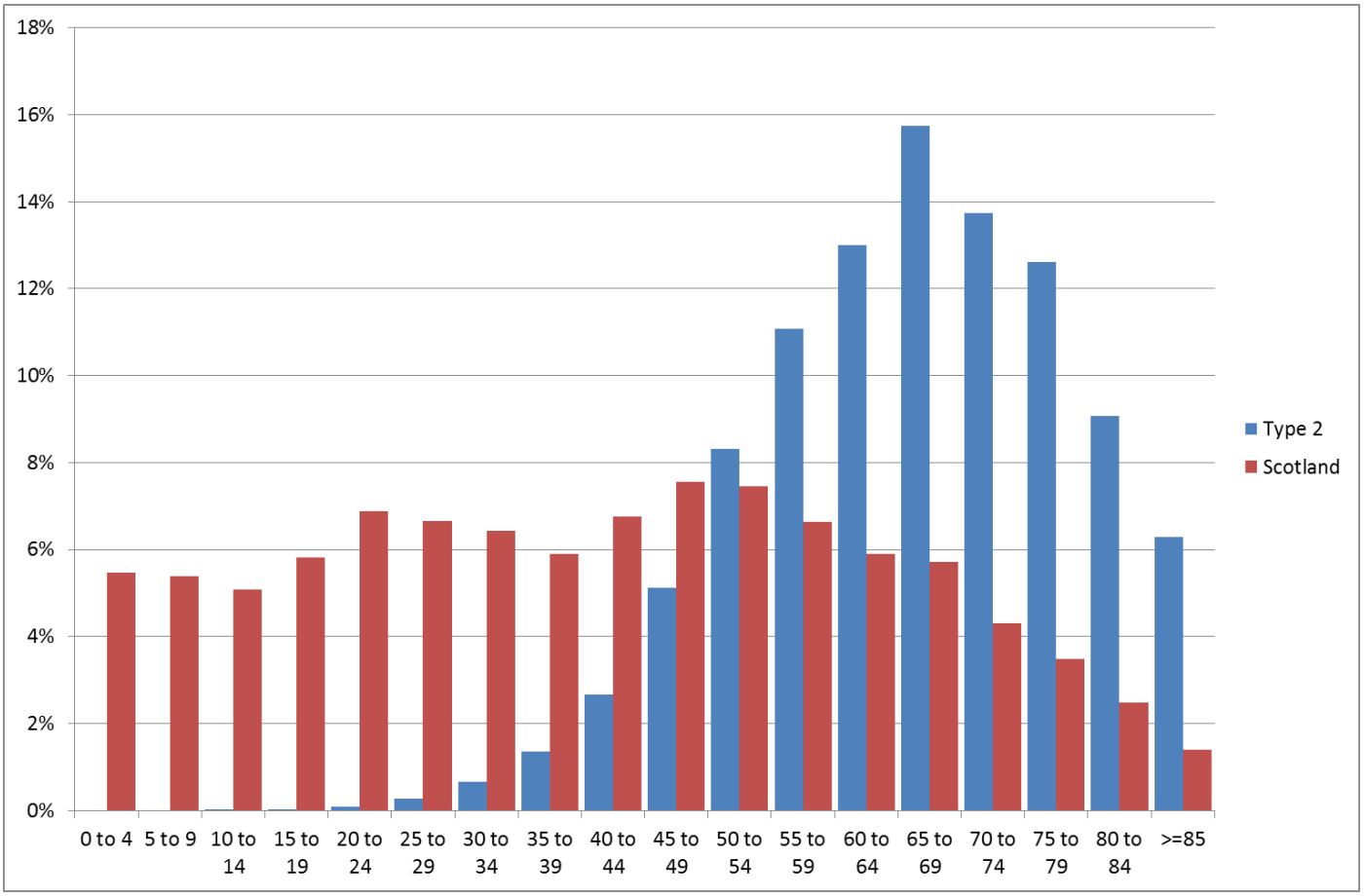


Table 13. Age group of people recorded with Type 1 or Type 2 diabetes, percentage in each age group and cumulative percentage in each age group, by diabetes type.

Age	Type 1 diabetes			Type 2 diabetes		
	Number	Percentage	Cumulative Percentage	Number	Percentage	Cumulative Percentage
0 to 4	133	0.4%	0.4%	0	0.0%	0.0%
5 to 9	589	1.9%	2.4%	0	0.0%	0.0%
10 to 14	1,163	3.8%	6.2%	10	0.0%	0.0%
15 to 19	1,927	6.4%	12.6%	53	0.0%	0.0%
20 to 24	2,309	7.6%	20.2%	225	0.1%	0.1%
25 to 29	2,505	8.3%	28.4%	668	0.3%	0.4%
30 to 34	2,450	8.1%	36.5%	1,672	0.7%	1.0%
35 to 39	2,399	7.9%	44.4%	3,385	1.3%	2.4%
40 to 44	2,770	9.1%	53.6%	6,684	2.7%	5.1%
45 to 49	3,059	10.1%	63.6%	12,821	5.1%	10.2%
50 to 54	3,046	10.0%	73.7%	20,865	8.3%	18.5%
55 to 59	2,512	8.3%	82.0%	27,802	11.1%	29.6%
60 to 64	1,929	6.4%	88.3%	32,584	13.0%	42.6%
65 to 69	1,453	4.8%	93.1%	39,457	15.7%	58.3%
70 to 74	925	3.0%	96.2%	34,425	13.7%	72.0%
75 to 79	626	2.1%	98.2%	31,609	12.6%	84.6%
80 to 84	363	1.2%	99.4%	22,772	9.1%	93.7%
>=85	171	0.6%	100.0%	15,745	6.3%	100.0%
Scotland	**30,329**	**100.0%**	**100.0%**	**250,777**	**100.0%**	**100.0%**

Mortality

Table 14. The number and crude percentage of the diabetes population (all diabetes types) who have died within the last year, by NHS Board, ranked by mortality.

NHS Board	Deaths	
	Total	**% of population**
Western Isles	46	3.2%
Lothian	1,358	3.4%
Lanarkshire	1,356	3.5%
Orkney	42	3.6%
Fife	789	3.6%
Grampian	1,057	3.7%
Highland	637	3.7%
Greater Glasgow and Clyde	2,436	3.8%
Ayrshire and Arran	908	3.8%
Forth Valley	655	3.9%
Tayside	931	4.0%
Dumfries and Galloway	378	4.0%
Borders	286	4.3%
Shetland	58	5.0%
Scotland	**10,937**	**3.7%**

Note: These data were calculated from all people with diabetes who died in the prior year expressed as a percentage of all people with diabetes still alive at the end of the year plus those who died during the year. This does not take account of the fact that as people die during the year the size of the population that remains and is still at risk of death becomes very slightly smaller. As a result these figures slightly underestimate the true mortality risk. Note that comparisons between NHS Boards do not take into account important differences in age structure which result in higher mortality in boards with older populations.

Type of Diabetes

The majority of registered patients have Type 2 diabetes (250,881 or 88.3%). The proportion of people with diabetes who have a record of Type 1 diabetes has fallen from 18.2% in 2002 to 10.7% in 2015, probably largely due to more complete recording of data from people with Type 1 diabetes than Type 2 diabetes in earlier years. However, the absolute number of patients with Type 1 diabetes continues to increase (22,597 in 2003; 29,261 in 2013 and 30,356 in 2015). This reflects the rising incidence of Type 1 diabetes in children and better survival over the last 40 years.

Other types of diabetes include Maturity Onset Diabetes of the Young (MODY), gestational diabetes and secondary diabetes. The remainder of this report focuses on Type 1 and Type 2 diabetes and excludes other types.

Figure 7 Proportions of diabetes population by type

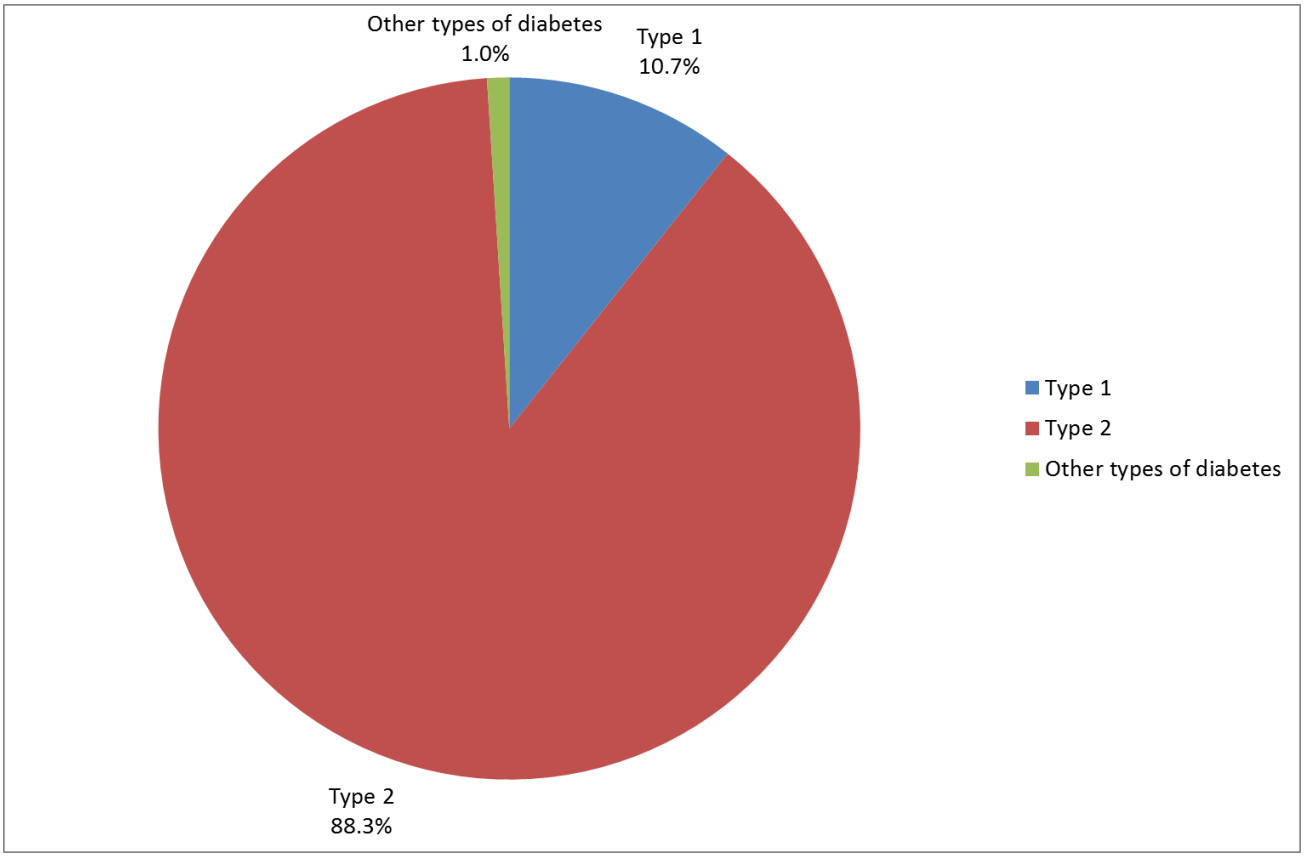


Table 15. Number of people with diabetes and the distribution of diabetes type, by NHS board, ranked by the percentage with Type 2 diabetes.

NHS Board	Type 1		Type 2		Other types of diabetes	Total
	n	%	n	%		
Western Isles	190	13.7%	1,185	85.7%	7	1,382
Lothian	4,605	11.9%	33,580	86.5%	637	38,822
Highland	1,939	11.7%	14,391	86.7%	271	16,601
Grampian	3,322	11.9%	24,433	87.5%	170	27,925
Forth Valley	1,789	11.0%	14,313	88.0%	155	16,257
Lanarkshire	4,067	10.9%	33,002	88.2%	366	37,435
Shetland	127	11.6%	968	88.2%	2	1,097
Borders	664	10.3%	5,726	88.5%	77	6,467
Greater Glasgow and Clyde	6,244	10.2%	54,515	88.7%	698	61,457
Dumfries and Galloway	923	10.1%	8,155	89.2%	64	9,142
Orkney	116	10.2%	1,015	89.3%	5	1,136
Fife	2,073	9.9%	18,742	89.5%	122	20,937
Ayrshire and Arran	2,253	9.9%	20,483	89.8%	84	22,820
Tayside	2,044	9.0%	20,373	90.0%	227	22,644
Scotland	**30,356**	**10.7%**	**250,881**	**88.3%**	**2,885**	**284,122**

Note: Percentages (of the total diabetes population) have been calculated for Type 1 and Type 2 diabetes only.

The net slight drop in the number of people with Type 1 and Type 2 diabetes in the Greater Glasgow and Clyde Health Board since the 2014 survey (6,404 and 54,757 people respectively in 2014 to 6,244 and 54,515 in 2015, See Table 15) is likely mostly due to the change in boundaries moving patients from it to the Lanarkshire Health Board (http://www.nhslanarkshire.org.uk/Involved/consultation/boundaries/Pages/default.aspx) during 2014. During the same period the number of people in the Lanarkshire Health Board with Type 1 and Type 2 diabetes rose quickly (from 3,758 and 29,925 people respectively in 2014 to 4,067 and 33,002 in 2015 respectively).

Ethnicity

Information on ethnic group was available for 81.4% of the registered population with Type 1 and Type 2 diabetes (Table 19). The completeness of this information fell from 37% in 2002 to 24.4% in 2006, increased to 33.3% in 2007, 77.7% in 2012 and to 81.4% in 2015. Type 2 diabetes is much more common in South Asian than White ethnic groups, and tends to present at an earlier age.

Table 16. Type 1 diabetes: completeness of recording of ethnic group by NHS board, ranked by decreasing completeness.

NHS Board	Ethnic group identified	
	Number	**Percentage**
Dumfries and Galloway	896	97.1%
Shetland	121	95.3%
Forth Valley	1,684	94.1%
Lothian	4,266	92.6%
Borders	615	92.6%
Greater Glasgow and Clyde	5,756	92.2%
Fife	1,884	90.9%
Lanarkshire	3,535	86.9%
Highland	1,564	80.7%
Tayside	1,634	79.9%
Orkney	91	78.4%
Grampian	2,266	68.2%
Western Isles	128	67.4%
Ayrshire and Arran	1,493	66.3%
Scotland	**25,933**	**85.4%**

Table 17. Type 2 diabetes: completeness of recording of ethnic group by NHS board, ranked by decreasing completeness.

NHS Board	Ethnic group identified	
	Number	**Percentage**
Dumfries and Galloway	7,925	97.2%
Shetland	932	96.3%
Greater Glasgow and Clyde	51,427	94.3%
Borders	5,212	91.0%
Lanarkshire	28,725	87.0%
Forth Valley	12,343	86.2%
Lothian	28,636	85.3%
Fife	15,644	83.5%
Highland	11,380	79.1%
Orkney	769	75.8%
Tayside	14,043	68.9%
Grampian	14,944	61.2%
Ayrshire and Arran	10,520	51.4%
Western Isles	560	47.3%
Scotland	**203,060**	**80.9%**

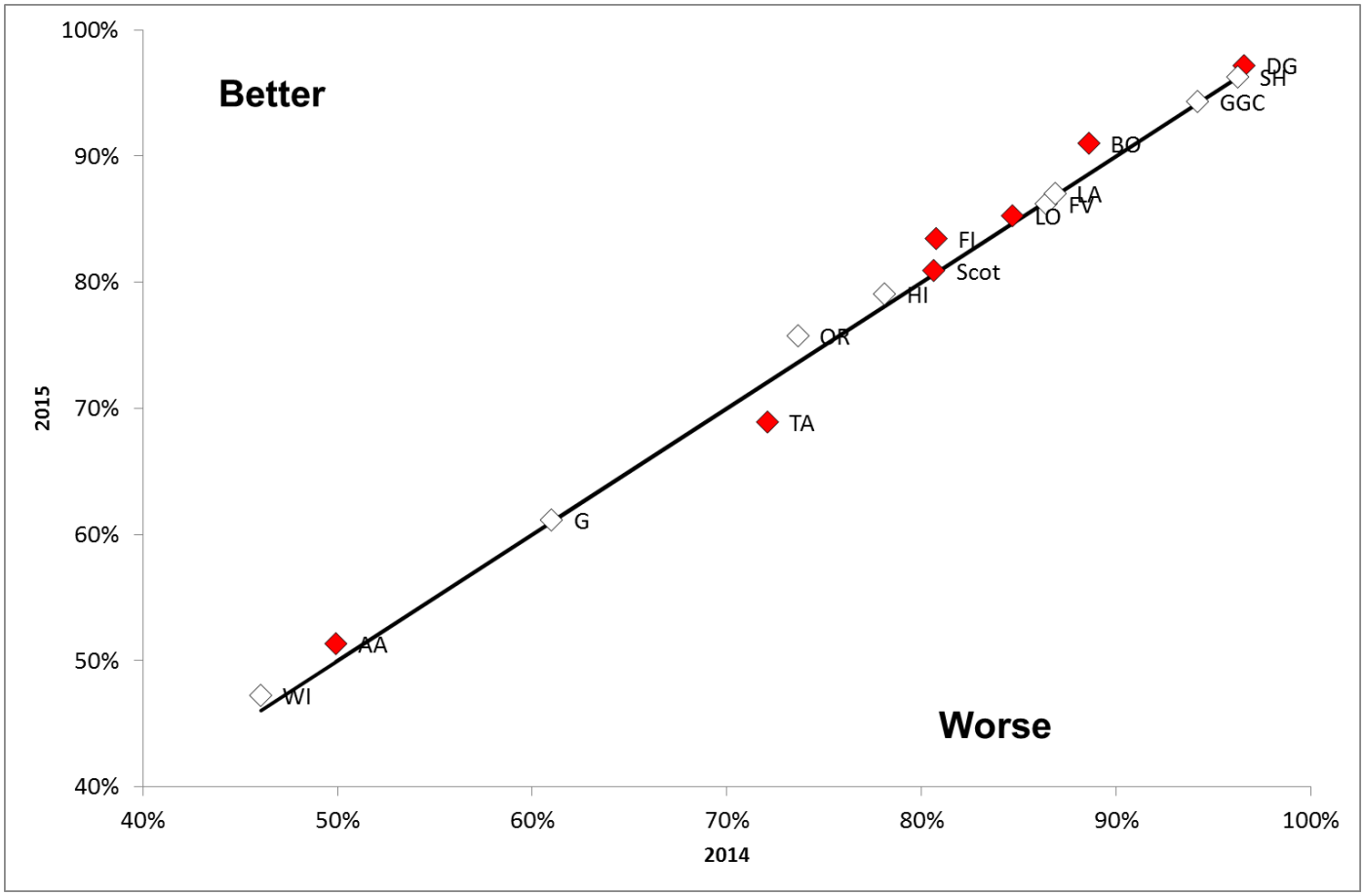
Table 18. Recorded ethnic group for Type 1, Type 2 and Type 1 and Type 2 combined.

Ethnic group	Type 1		Type 2		Type 1 and 2	
	Number	Percent	Number	Percent	Number	Percent
A - White	24,759	81.6%	186,487	74.3%	211,246	75.1%
B - Mixed or multiple ethnic groups	598	2.0%	6,195	2.5%	6,793	2.4%
C - Asian, Asian Scottish or Asian British	320	1.1%	8,231	3.3%	8,551	3.0%
D - African, Caribbean or Black	114	0.4%	904	0.4%	1,018	0.4%
E - Other ethnic group	142	0.5%	1,243	0.5%	1,385	0.5%
Not recorded / Not known	4,423	14.6%	47,822	19.1%	52,245	18.6%

Table 19. Completeness of recording of ethnic group for people with diabetes (Type 1 and Type 2 combined).

Year	Number identified	Percentage identified
2015	228,993	81.4%
2014	222,041	81.1%
2013	210,682	79.2%
2012	199,587	77.7%
2011	190,397	77.5%
2010	164,370	69.6%
2009	126,997	56.0%
2008	94,925	43.2%
2007	69,875	33.3%
2006	48,035	24.4%
2005	42,164	25.0%
2004	44,695	30.6%
2003	49,614	37.0%
2002	32,036	30.9%

Figure 8. Completeness of recording of ethnic group from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 4% change between 2014 and 2015.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Body Mass Index

Body Mass Index (BMI) was recorded for 86.5% of patients with Type 1 or Type 2 diabetes in the previous 15 months (Table 21). This is a slight decrease from 87.7% from 2014 and 88.7% recorded in 2013. Of those with a record of BMI (Tables 22 and 23), 32.0% were overweight (BMI 25-29.9kg/m^2) and 52.8% were obese (BMI 30kg/m^2 or over).

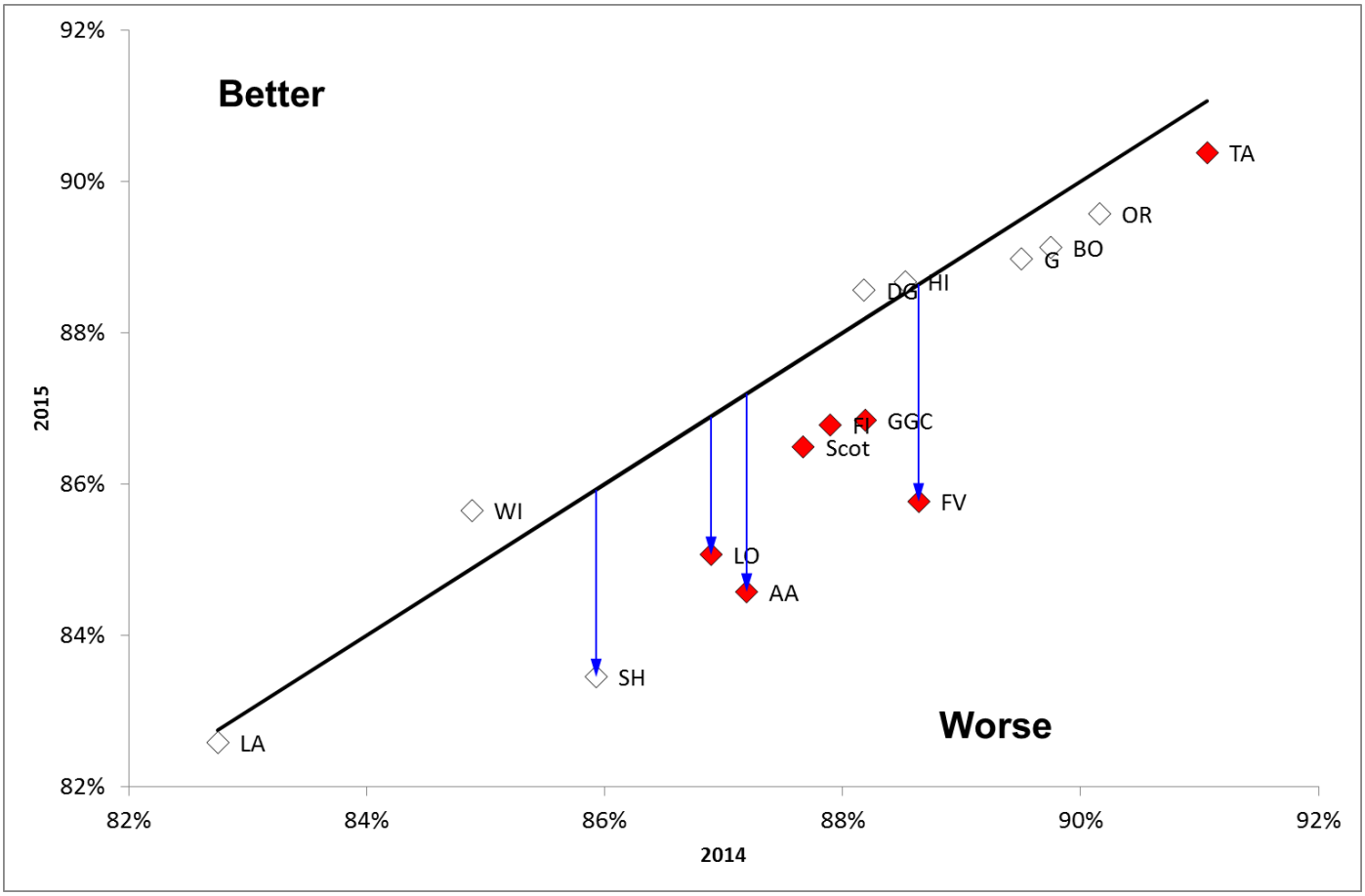
Despite Type 2 diabetes being more prevalent in obese patients, 12.2% of those with Type 2 diabetes had normal weight (BMI 18.5-24.9kg/m^2), 31.5% were overweight (BMI 25-29.9 kg/m^2) and 55.7% were obese (BMI 30kg/m^2 or over).

Table 20. Proportion of people with diabetes who had a record of BMI within the previous 15 months, by NHS Board and diabetes type, ranked by decreasing completeness for Type 2 diabetes.

NHS Board	Type 1 diabetes BMI percentage recorded	Type 2 diabetes BMI percentage recorded	Total recorded	Total not recorded
Tayside	89.5%	90.5%	20,083	2,138
Orkney	84.1%	90.1%	1,005	117
Highland	82.8%	89.4%	14,279	1,824
Borders	89.9%	89.0%	5,632	687
Grampian	88.9%	89.0%	24,402	3,023
Dumfries and Galloway	90.3%	88.4%	7,954	1,027
Greater Glasgow and Clyde	83.2%	87.2%	52,271	7,918
Western Isles	77.0%	86.9%	1,164	195
Fife	86.2%	86.8%	17,891	2,725
Forth Valley	84.0%	86.0%	13,635	2,262
Ayrshire and Arran	80.3%	85.0%	18,996	3,464
Shetland	71.9%	84.8%	903	179
Lothian	88.3%	84.7%	32,174	5,646
Lanarkshire	79.6%	82.9%	30,170	6,361
Scotland	**84.9%**	**86.7%**	**240,559**	**37,566**

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (Type 1 n = 2977, Type 2 n = 135)

Figure 9. Proportion of people who had a record of BMI from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 1.5% change between 2014 and 2015.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 21. Proportion of people with Type 1 or Type 2 diabetes with a record of BMI in the previous 15 months.

Year	BMI recorded
2015	86.5%
2014	87.7%
2013	88.7%
2012	89.2%
2011	88.7%
2010	82.0%
2009	89.7%
2008	87.4%
2007	85.3%
2006	84.8%
2005	69.1%
2004	66.1%
2003	58.9%
2002	52.3%
2001	39.8%

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3112)

Table 22. Type 1 diabetes: percentage of people with a record of BMI in the last 15 months who are in each BMI category (by NHS board), ranked in increasing order by percentage with BMI >= 40kg/m^2

NHS Board	BMI (kg/m^2)						Total recorded	Not recorded
	<18.5	18.5-24.9	25-29.9	30-34.9	35-39.9	≥40		
Shetland	0.0%	34.1%	35.4%	20.7%	9.8%	0.0%	82	32
Western Isles	2.2%	41.0%	37.3%	14.9%	3.7%	0.7%	134	40
Orkney	0.0%	37.8%	31.1%	20.0%	10.0%	1.1%	90	17
Fife	1.3%	33.2%	38.8%	18.3%	6.7%	1.7%	1,624	260
Greater Glasgow and Clyde	2.3%	37.4%	36.9%	16.8%	4.5%	2.0%	4,733	956
Forth Valley	1.7%	36.1%	36.9%	17.2%	6.0%	2.1%	1,335	255
Highland	1.5%	34.0%	39.5%	17.7%	5.0%	2.3%	1,421	295
Tayside	1.6%	35.0%	38.9%	17.6%	4.6%	2.4%	1,658	194
Lanarkshire	2.4%	34.2%	35.5%	19.5%	6.0%	2.4%	2,868	734
Lothian	2.0%	38.0%	36.0%	16.1%	5.3%	2.6%	3,753	495
Ayrshire and Arran	1.7%	33.4%	36.8%	18.3%	7.1%	2.8%	1,589	391
Dumfries and Galloway	0.8%	35.7%	36.2%	19.0%	5.5%	2.8%	751	81
Grampian	1.2%	35.6%	38.5%	16.4%	5.3%	3.1%	2,662	333
Borders	0.6%	28.4%	38.8%	20.9%	7.6%	3.7%	536	60
Scotland	**1.8%**	**35.6%**	**37.2%**	**17.5%**	**5.5%**	**2.4%**	**23,236**	**4,143**

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 2977).

Table 23. Type 2 diabetes: percentage of people with a record of BMI in the last 15 months who are in each BMI category (by NHS board), ranked by percentage with BMI >= 40kg/m^2

NHS Board	BMI (kg/m^2)						Total recorded	Not recorded
	<18.5	18.5-24.9	25-29.9	30-34.9	35-39.9	≥40		
Western Isles	0.2%	11.6%	32.3%	29.9%	16.7%	9.3%	1,030	155
Greater Glasgow and Clyde	0.7%	13.5%	32.7%	28.8%	14.6%	9.7%	47,538	6,962
Grampian	0.5%	12.1%	32.2%	29.9%	15.4%	9.9%	21,740	2,690
Tayside	0.6%	12.0%	31.6%	29.9%	15.9%	10.0%	18,425	1,944
Highland	0.4%	11.9%	32.2%	30.7%	14.8%	10.0%	12,858	1,529
Borders	0.5%	12.5%	32.0%	29.0%	15.8%	10.2%	5,096	627
Ayrshire and Arran	0.6%	12.3%	31.3%	29.6%	15.6%	10.6%	17,407	3,073
Dumfries and Galloway	0.5%	11.7%	31.4%	30.2%	15.5%	10.7%	7,203	946
Lanarkshire	0.5%	11.9%	30.6%	30.2%	16.0%	10.7%	27,302	5,627
Lothian	0.6%	12.1%	30.8%	29.7%	15.8%	10.9%	28,421	5,151
Orkney	0.3%	9.6%	31.3%	32.6%	14.9%	11.4%	915	100
Forth Valley	0.4%	11.3%	30.3%	30.0%	16.4%	11.5%	12,300	2,007
Fife	0.6%	11.1%	30.1%	28.8%	17.1%	12.4%	16,267	2,465
Shetland	0.5%	10.2%	26.2%	31.7%	17.9%	13.5%	821	147
Scotland	**0.6%**	**12.2%**	**31.5%**	**29.6%**	**15.6%**	**10.5%**	**217,323**	**33,423**

Note: Excludes children under 18 years of age or who have no recorded date of birth (n = 135).

Glycaemic Control

93.5% of patients with Type 1 or Type 2 diabetes had an HbA_{1c} recorded in the previous 15 months (Table 24). In 54.1% of patients with a recorded result, HbA_{1c} was less than 58mmol/mol (7.5%), suggesting reasonable control of diabetes (Tables 26 and 27). While all laboratories in Scotland are using a standardised (IFCC aligned) HbA_{1c} assay, there are some slight differences in actual results between laboratories and some concern remains about the comparability of results between laboratories. This should be considered when comparing results from different health board areas. It should be noted that HbA_{1c} is higher in the winter with an average variability of around 6mmol/mol (0.5%). This is described in more detail in Appendix 3.

Table 24. Percentage of people with diabetes (Type 1 and Type 2 combined) with a record of HbA_{1c} in previous 15 months.

Year	Recorded within previous 15 months
2015	93.5%
2014	94.0%
2013	93.3%
2012	92.1%
2011	91.1%
2010	91.4%
2009	89.5%
2008	89.8%
2007	88.7%
2006	87.0%
2005	84.0%
2004	73.6%

Figure 10. Percentage of patients with diabetes with a recording of HbA1c within the previous 15 months by NHS Board and diabetes type (horizontal lines show figures for Scotland as a whole and bars are ranked by figures for Type 2 diabetes).

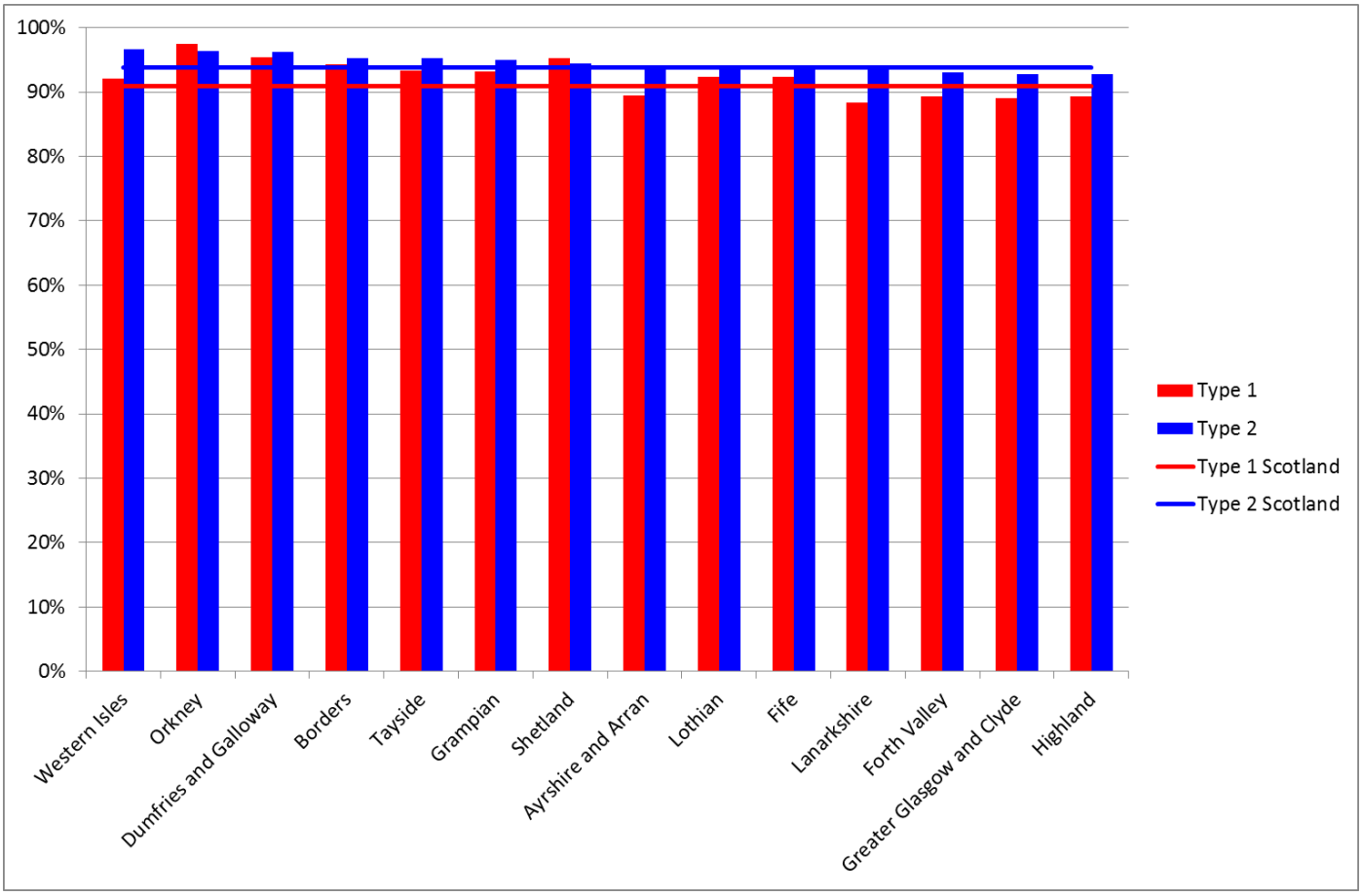
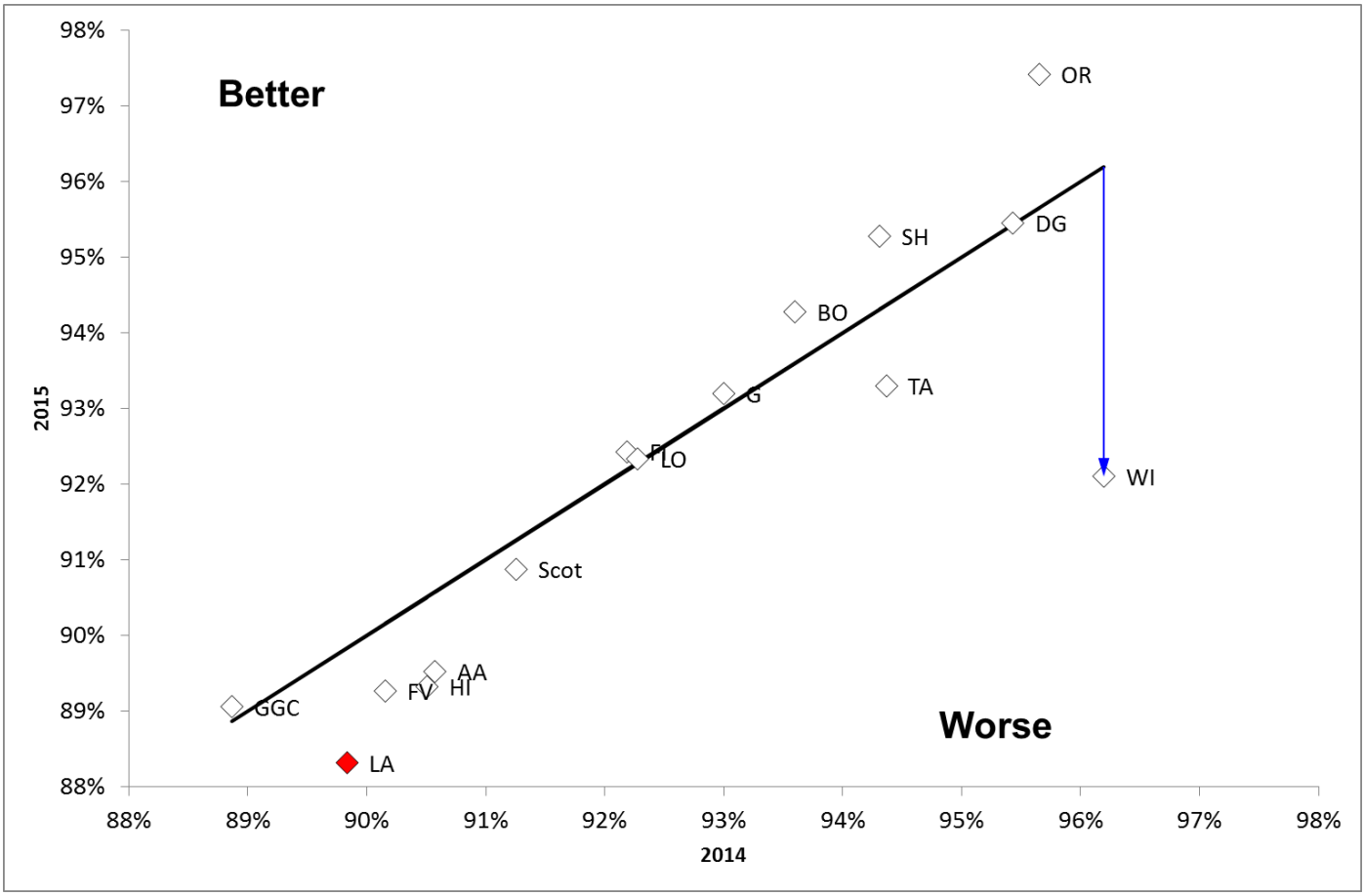
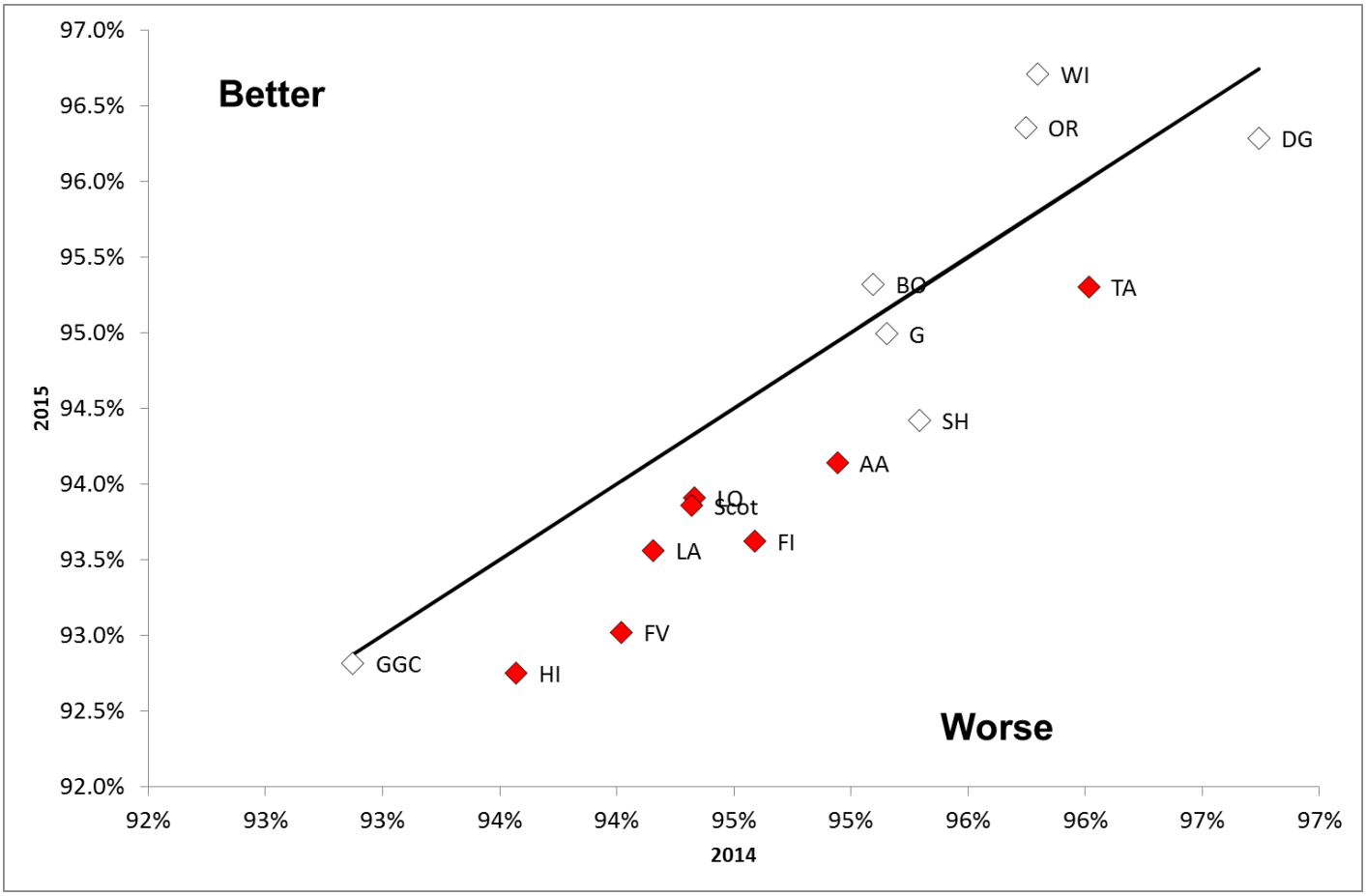


Figure 11. Proportion of people with Type 1 diabetes who had a record of HbA1c from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 3.5% change over that period.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Figure 12. Proportion of people with Type 2 diabetes who had a record of HbA1c from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 1.5% change over that period.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 25. Percentage of people with diabetes who had a record of HbA_{1c} within the previous 15 months, by diabetes type and NHS board, ranked by decreasing percentage of people with Type 2 diabetes.

NHS Board	Type 1 diabetes			Type 2 diabetes			Total recorded
	Recorded within previous 15 months		Not recorded	Recorded within previous 15 months		Not recorded	
	Number	Percentage		Number	Percentage		
Western Isles	175	92.1%	15	1,146	96.7%	39	1,321
Orkney	113	97.4%	3	978	96.4%	37	1,091
Dumfries and Galloway	881	95.4%	42	7,852	96.3%	303	8,733
Borders	626	94.3%	38	5,458	95.3%	268	6,084
Tayside	1,907	93.3%	137	19,416	95.3%	957	21,323
Grampian	3,096	93.2%	226	23,210	95.0%	1,223	26,306
Shetland	121	95.3%	6	914	94.4%	54	1,035
Ayrshire and Arran	2,017	89.5%	236	19,283	94.1%	1,200	21,300
Lothian	4,252	92.3%	353	31,535	93.9%	2,045	35,787
Fife	1,916	92.4%	157	17,547	93.6%	1,195	19,463
Lanarkshire	3,592	88.3%	475	30,877	93.6%	2,125	34,469
Forth Valley	1,597	89.3%	192	13,314	93.0%	999	14,911
Greater Glasgow and Clyde	5,561	89.1%	683	50,599	92.8%	3,916	56,160
Highland	1,732	89.3%	207	13,348	92.8%	1,043	15,080
Scotland	**27,586**	**90.9%**	**2,770**	**235,477**	**93.9%**	**15,404**	**263,063**

Figure 13. Type 1 diabetes: percentage of people in each HbA_{1c} category for HbA_{1c} recorded in the previous 15 months, by NHS Board, ranked by percentage with HbA_{1c} over 75 mmol/mol (9%).

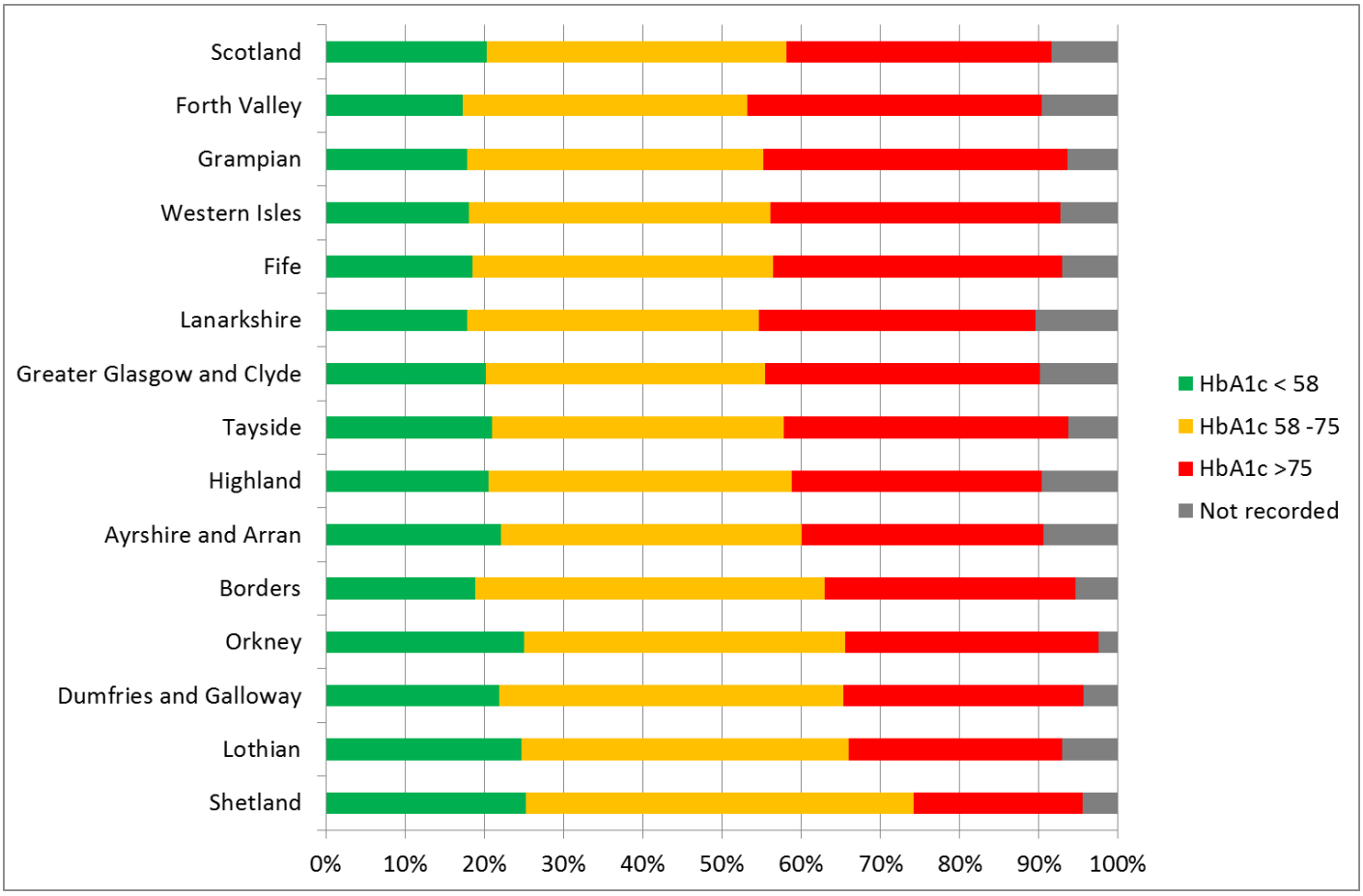


Figure 14. Type 2 diabetes: percentage of people in each HbA_{1c} category for HbA_{1c} recorded in the previous 15 months, by NHS Board, ranked by percentage with HbA_{1c} over 75mmol/mol (9%).

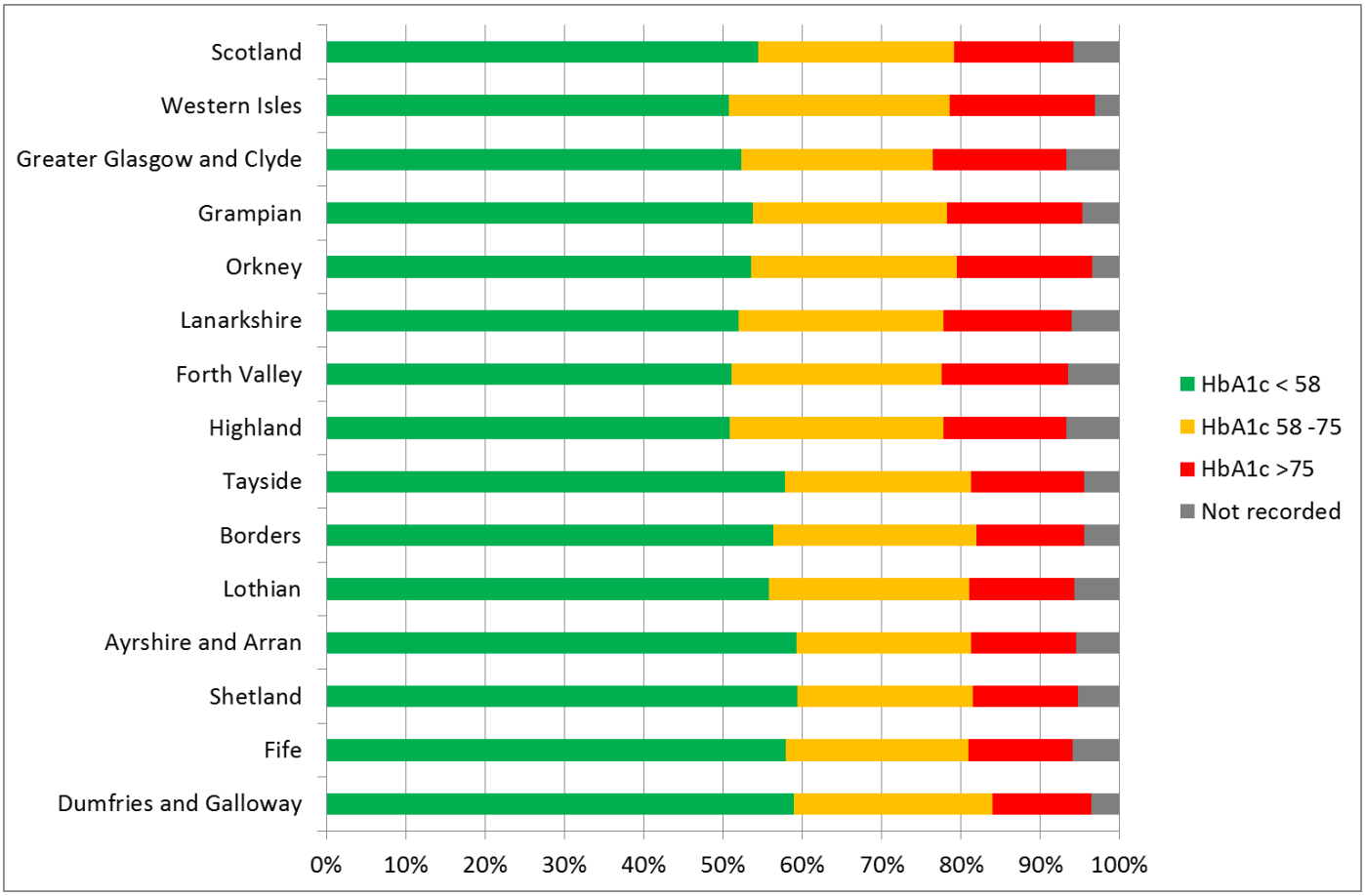


Table 26. Type 1 diabetes: HbA_{1c} category as a percentage of patients with HbA_{1c} recorded in previous 15 months, by NHS Board, ranked by percentage with HbA_{1c} over 75mmol/mol (9%).

NHS Board	HbA_{1c}< 58 mmol/mol (7.5%)		HbA_{1c} 58 -75 mmol/mol (7.5 - 9.0%)		HbA_{1c}>75 mmol/mol (9%)		Total record-ed	Not record-ed
Shetland	32	26.4%	62	51.2%	27	22.3%	121	6
Lothian	1,130	26.6%	1,889	44.4%	1,233	29.0%	4,252	353
Dumfries and Galloway	201	22.8%	401	45.5%	279	31.7%	881	42
Orkney	29	25.7%	47	41.6%	37	32.7%	113	3
Borders	125	20.0%	292	46.6%	209	33.4%	626	38
Ayrshire and Arran	492	24.4%	846	41.9%	679	33.7%	2,017	236
Highland	393	22.7%	735	42.4%	604	34.9%	1,732	207
Tayside	426	22.3%	750	39.3%	731	38.3%	1,907	137
Greater Glasgow and Clyde	1,245	22.4%	2,177	39.1%	2,139	38.5%	5,561	683
Lanarkshire	714	19.9%	1,480	41.2%	1,398	38.9%	3,592	475
Fife	382	19.9%	781	40.8%	753	39.3%	1,916	157
Western Isles	34	19.4%	72	41.1%	69	39.4%	175	15
Grampian	590	19.1%	1,234	39.9%	1,272	41.1%	3,096	226
Forth Valley	306	19.2%	634	39.7%	657	41.1%	1,597	192
Scotland	**6,099**	**22.1%**	**11,400**	**41.3%**	**10,087**	**36.6%**	**27,586**	**2,770**

Table 27. Type 2 diabetes: HbA_{1c} category as percentage of patients with HbA_{1c} recorded in previous 15 months, by NHS Board, ranked by percentage with HbA_{1c} over 75mmol/mol (9%).

NHS Board	HbA1c< 58 mmol/mol (7.5%)		HbA1c 58 -75 mmol/mol (7.5 - 9.0%)		HbA1c>75 mmol/mol (9%)		Total recorded	Not recorded
Dumfries and Galloway	4,794	61.1%	2,047	26.1%	1,011	12.9%	7,852	303
Fife	10,808	61.6%	4,298	24.5%	2,441	13.9%	17,547	1,195
Shetland	573	62.7%	213	23.3%	128	14.0%	914	54
Ayrshire and Arran	12,097	62.7%	4,480	23.2%	2,706	14.0%	19,283	1,200
Lothian	18,661	59.2%	8,446	26.8%	4,428	14.0%	31,535	2,045
Borders	3,221	59.0%	1,463	26.8%	774	14.2%	5,458	268
Tayside	11,747	60.5%	4,781	24.6%	2,888	14.9%	19,416	957
Highland	7,269	54.5%	3,872	29.0%	2,207	16.5%	13,348	1,043
Forth Valley	7,270	54.6%	3,782	28.4%	2,262	17.0%	13,314	999
Lanarkshire	17,079	55.3%	8,468	27.4%	5,330	17.3%	30,877	2,125
Orkney	542	55.4%	263	26.9%	173	17.7%	978	37
Grampian	13,097	56.4%	5,971	25.7%	4,142	17.8%	23,210	1,223
Greater Glasgow and Clyde	28,373	56.1%	13,096	25.9%	9,130	18.0%	50,599	3,916
Western Isles	601	52.4%	329	28.7%	216	18.8%	1,146	39
Scotland	**136,132**	**57.8%**	**61,509**	**26.1%**	**37,836**	**16.1%**	**235,477**	**15,404**

Table 28. Type 1 diabetes: number and percentage of people with a record of HbA_{1c} in each HbA_{1c} category.

Year	HbA_{1c}< 58 (7.5%)		HbA_{1c} 58-75 (7.5-9.0%)		HbA_{1c}>75 (9.0%)		Total recorded	Not recorded
	Number	Percentage	Number	Percentage	Number	Percentage		
2015	6,099	22.1%	11,400	41.3%	10,087	36.6%	27,586	2,770
2014	6,375	23.4%	11,107	40.8%	9,714	35.7%	27,196	2,606
2013	5,578	21.5%	10,595	40.8%	9,788	37.1%	25,961	3,300
2012	5,407	21.5%	9,830	39.1%	9,881	39.3%	25,118	3,731
2011	5,345	22.0%	9,893	40.7%	9,071	37.3%	24,309	3,963
2010	5,337	21.8%	9,754	39.9%	9,375	38.3%	24,466	3,444
2009	5,194	21.8%	9,556	40.1%	9,096	38.1%	23,846	3,521

Table 29. Type 2 diabetes: number and percentage of people with a record of HbA_{1c} in each HbA_{1c} category.

Year	HbA_{1c}< 58 (7.5%)		HbA_{1c} 58-75 (7.5-9.0%)		HbA_{1c}>75 (9.0%)		Total recorded	Not recorded
	Number	Percentage	Number	Percentage	Number	Percentage		
2015	136,132	57.8%	61,509	26.1%	37,836	16.1%	235,477	15,405
2014	141,426	61.4%	54,780	23.8%	33,981	14.8%	230,187	13,863
2013	135,767	61.1%	53,972	24.3%	32,426	14.6%	222,165	14,440
2012	126,141	59.7%	52,547	24.8%	32,775	15.5%	211,463	16,504
2011	123,974	62.1%	46,475	23.3%	29,177	14.6%	199,626	17,888
2010	122,563	64.0%	42,603	22.3%	26,264	13.7%	191,430	16,849
2009	114,281	63.8%	40,537	22.6%	24,234	13.5%	179,052	20,212

Table 30. Type 1 diabetes: HbA_{1c} category as percent of all those with HbA_{1c} recorded in the previous 15 months (HbA_{1c} in mmol/mol), by NHS Board, ranked by percentage with HbA_{1c} over 75mmol/mol.

NHS Board	HbA1c <53	HbA1c 53-57	HbA1c 58-63	HbA1c 64-68	HbA1c 69-75	HbA1c >75	Total recorded	Not recorded
Shetland	12.4%	14.0%	22.3%	17.4%	11.6%	22.3%	121	6
Lothian	14.7%	11.9%	17.1%	14.1%	13.2%	29.0%	4,252	353
Dumfries and Galloway	13.5%	9.3%	16.1%	14.0%	15.4%	31.7%	881	42
Orkney	12.4%	13.3%	16.8%	11.5%	13.3%	32.7%	113	3
Borders	10.5%	9.4%	17.4%	15.2%	14.1%	33.4%	626	38
Ayrshire and Arran	13.0%	11.4%	14.4%	15.4%	12.2%	33.7%	2,017	236
Highland	11.8%	10.9%	15.8%	14.4%	12.2%	34.9%	1,732	207
Tayside	11.8%	10.5%	11.5%	14.5%	13.4%	38.3%	1,907	137
Greater Glasgow and Clyde	13.0%	9.4%	14.1%	12.7%	12.3%	38.5%	5,561	683
Lanarkshire	11.3%	8.6%	13.7%	13.2%	14.3%	38.9%	3,592	475
Fife	12.0%	7.9%	13.1%	13.7%	13.9%	39.3%	1,916	157
Western Isles	11.4%	8.0%	9.7%	15.4%	16.0%	39.4%	175	15
Grampian	9.8%	9.3%	12.9%	14.5%	12.5%	41.1%	3,096	226
Forth Valley	11.1%	8.0%	12.4%	13.2%	14.1%	41.1%	1,597	192
Scotland	**12.3%**	**9.8%**	**14.3%**	**13.8%**	**13.2%**	**36.6%**	**27,586**	**2,770**

Table 31. Type 2 diabetes: HbA_{1c} category as percent of all those with HbA_{1c} recorded in the previous 15 months (HbA_{1c} in mmol/mol), by NHS Board, 2014, ranked by percentage with HbA_{1c} over 75 mmol/mol (9%).

NHS Board	HbA1c<53	HbA1c 53-57	HbA1c 58-63	HbA1c 64-68	HbA1c 69-75	HbA1c >75	Total recorded	Not recorded
Dumfries and Galloway	45.7%	15.4%	12.4%	7.4%	6.3%	12.9%	7,852	303
Fife	45.7%	15.9%	11.8%	6.9%	5.8%	13.9%	17,547	1,195
Shetland	49.2%	13.5%	11.1%	5.6%	6.7%	14.0%	914	54
Ayrshire and Arran	47.3%	15.4%	10.5%	7.5%	5.3%	14.0%	19,283	1,200
Lothian	44.6%	14.6%	13.4%	7.1%	6.2%	14.0%	31,535	2,045
Borders	42.9%	16.1%	13.1%	7.4%	6.2%	14.2%	5,458	268
Tayside	43.7%	16.8%	11.2%	7.7%	5.7%	14.9%	19,416	957
Highland	38.7%	15.7%	14.0%	8.1%	6.9%	16.5%	13,348	1,043
Forth Valley	39.1%	15.5%	13.5%	8.1%	6.7%	17.0%	13,314	999
Lanarkshire	40.4%	14.9%	13.2%	7.6%	6.6%	17.3%	30,877	2,125
Orkney	41.5%	13.9%	12.3%	8.1%	6.5%	17.7%	978	37
Grampian	40.4%	16.0%	11.8%	7.9%	6.0%	17.8%	23,210	1,223
Greater Glasgow and Clyde	41.9%	14.2%	12.0%	7.4%	6.6%	18.0%	50,599	3,916
Western Isles	38.4%	14.0%	12.1%	7.9%	8.7%	18.8%	1,146	39
Scotland	**42.6%**	**15.2%**	**12.4%**	**7.5%**	**6.3%**	**16.1%**	**235,477**	**15,404**

Table 32. Mean HbA_{1c} (mmol/mol) recorded in the previous 15 months, by NHS Board, for people with Type 1 diabetes by age and for Type 2 diabetes (all ages combined), ranked by mean HbA_{1c} for those with Type 2 diabetes.

NHS Board	Type 1 diabetes; age in years											Type 2 diabetes
	0-4	5-9	10-14	15-19	20-24	25-29	30-39	40-49	50-59	60-79	>79	All ages
Ayrshire and Arran	63	64	68	74	82	74	70	71	70	66	66	57
Dumfries and Galloway	68	64	65	78	77	75	71	72	69	64	64	57
Shetland	0	70	55	83	82	67	66	65	62	63	0	57
Borders	61	69	65	71	81	76	72	74	71	67	69	58
Fife	67	61	68	78	79	76	72	73	73	69	70	58
Lothian	69	61	65	74	74	70	68	69	68	65	66	58
Tayside	61	64	67	77	76	75	74	73	70	68	66	58
Orkney	0	58	77	79	83	85	68	64	70	62	71	59
Forth Valley	62	67	71	83	81	73	74	75	71	68	70	60
Grampian	59	62	69	80	79	74	73	72	72	71	78	60
Greater Glasgow and Clyde	66	61	65	76	80	74	71	73	72	69	71	60
Highland	59	60	62	75	77	73	72	72	72	67	70	60
Lanarkshire	63	65	68	80	78	75	73	73	72	70	69	60
Western Isles	66	62	64	70	79	77	74	79	66	69	53	61

Table 33. Numbers and percentages of patients with Type 1 diabetes using insulin pumps by age group and NHS Board, December 2015.

Region	Aged under 18			Aged 18 or over			All ages		
	Patients (n)	**On Pump (n)**	**On Pump (%)**	**Patients (n)**	**On Pump (n)**	**On Pump (%)**	**Patients (n)**	**On Pump (n)**	**On Pump (%)**
Ayrshire & Arran	273	89	32.6%	1,980	114	5.8%	2,253	203	9.0%
Borders	66	28	42.4%	596	62	10.4%	662	90	13.6%
Dumfries & Galloway	91	27	29.7%	832	100	12.0%	923	127	13.8%
Fife	189	55	29.1%	1,884	176	9.3%	2,073	231	11.1%
Forth Valley	198	52	26.3%	1,590	96	6.0%	1,788	148	8.3%
Grampian	327	78	23.9%	2,995	169	5.6%	3,322	247	7.4%
Greater Glasgow & Clyde	552	186	33.7%	5,689	343	6.0%	6,241	529	8.5%
Highland	222	64	28.8%	1,716	112	6.5%	1,938	176	9.1%
Lanarkshire	446	126	28.3%	3,602	228	6.3%	4,048	354	8.7%
Lothian	357	122	34.2%	4,248	378	8.9%	4,605	500	10.9%
Orkney	9	6	66.7%	107	7	6.5%	116	13	11.2%
Shetland	13	3	23.1%	114	5	4.4%	127	8	6.3%
Tayside	191	78	40.8%	1,852	153	8.3%	2,043	231	11.3%
Western Isles	16	5	31.3%	174	5	2.9%	190	10	5.3%
Scotland	**2,950**	**919**	**31.2%**	**27,379**	**1,948**	**7.1%**	**30,329**	**2,867**	**9.5%**

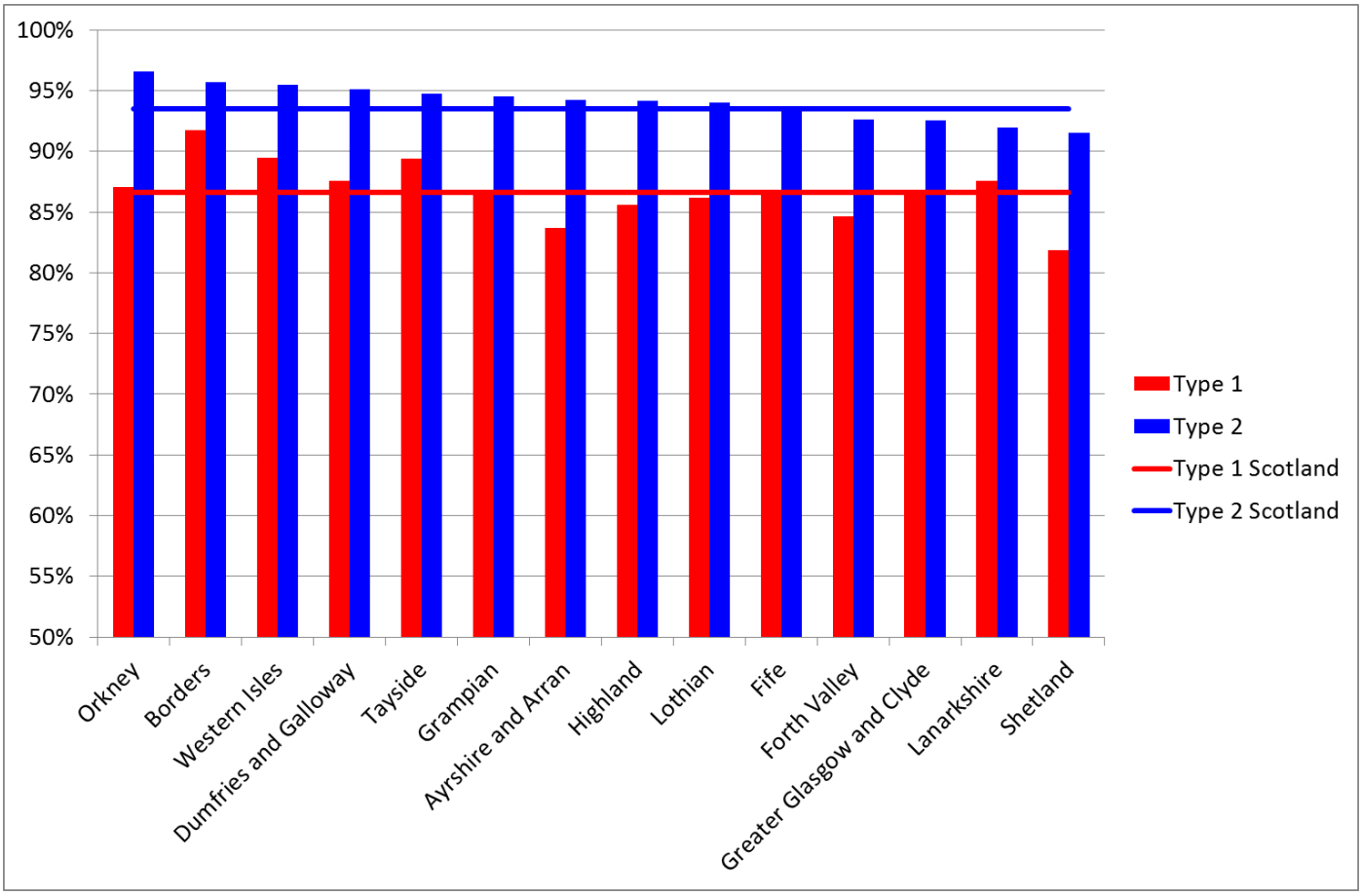
Cardiovascular Risk

Diabetes is associated with an increased risk of cardiovascular disease and it is therefore important to address cardiovascular risk factors such as high blood pressure (BP), raised cholesterol and smoking.

Blood Pressure

92.8% of people with Type 1 or Type 2 diabetes had their BP recorded within the previous 15 months (Table 34), of which 78.5% had a systolic BP less than or equal to 140mmHg (Tables 37 and 38), suggesting reasonable control of blood pressure. Figures by NHS Board and diabetes type are shown in Figure 16 and 17.

Figure 15. Percentage of people with diabetes (by diabetes type) with a recording of BP in the previous 15 months, by NHS Board (horizontal lines show levels for Scotland as a whole); ranked by figures for Type 2 (Note that Y axis is interrupted at 50%).



There has been little recent change in the completeness of blood pressure recording in Type 1 (Table 37) or Type 2 diabetes (Table 38). However, the proportion with a systolic blood pressure of 140mmHg or greater has fallen (Table 41) reflecting better blood pressure control overall. Figures for blood pressure control by NHS Board are shown in Figures 16 and 17

(Table 37 and Table 38) for Type 1 diabetes and in Figures 18 and 19 (Table 39 and Table 40) for Type 2 diabetes.

Table 34. Percentage of people with diabetes with a recording of BP in the previous 15 months, by NHS Board and diabetes type, ranked by figures for Type 2 diabetes.

NHS Board	Recorded within previous 15 months			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	101	87.1%	980	96.6%
Borders	609	91.7%	5,478	95.7%
Western Isles	170	89.5%	1,131	95.4%
Dumfries and Galloway	808	87.5%	7,756	95.1%
Tayside	1,827	89.4%	19,306	94.8%
Grampian	2,874	86.5%	23,091	94.5%
Ayrshire and Arran	1,885	83.7%	19,304	94.2%
Highland	1,659	85.6%	13,553	94.2%
Lothian	3,969	86.2%	31,569	94.0%
Fife	1,793	86.5%	17,527	93.5%
Forth Valley	1,514	84.6%	13,258	92.6%
Greater Glasgow and Clyde	5,423	86.9%	50,446	92.5%
Lanarkshire	3,562	87.6%	30,346	92.0%
Shetland	104	81.9%	886	91.5%
Scotland	**26,298**	**86.6%**	**234,631**	**93.5%**

Note: The numbers in this table relate to all ages.

Table 35. Percentage of people with Type 1 diabetes with BP recorded within the previous 15 months.

Year	Type 1 population	BP Recorded (n)	BP (%)
2015	30,356	26,298	86.6%
2014	29,802	26,201	87.9%
2013	29,261	25,395	86.8%
2012	28,849	24,574	85.2%
2011	28,272	24,165	85.5%
2010	27,910	23,977	85.9%
2009	27,367	23,568	86.1%

Table 36. Percentage of people with Type 2 diabetes with a BP recorded within the previous 15 months.

Year	Type 2 population	BP Recorded (n)	BP (%)
2015	250,881	234,631	93.5%
2014	244,050	230,710	94.5%
2013	236,605	224,420	94.9%
2012	227,967	215,702	94.6%
2011	217,514	204,782	94.1%
2010	208,279	196,638	94.4%
2009	199,264	189,289	95.0%

Figure 16. Type 1 diabetes : percentage of people with most recent systolic blood pressure (SBP) <= 140 mmHg in the last 15 months by NHS Board. Horizontal line indicates level for Scotland as a whole.

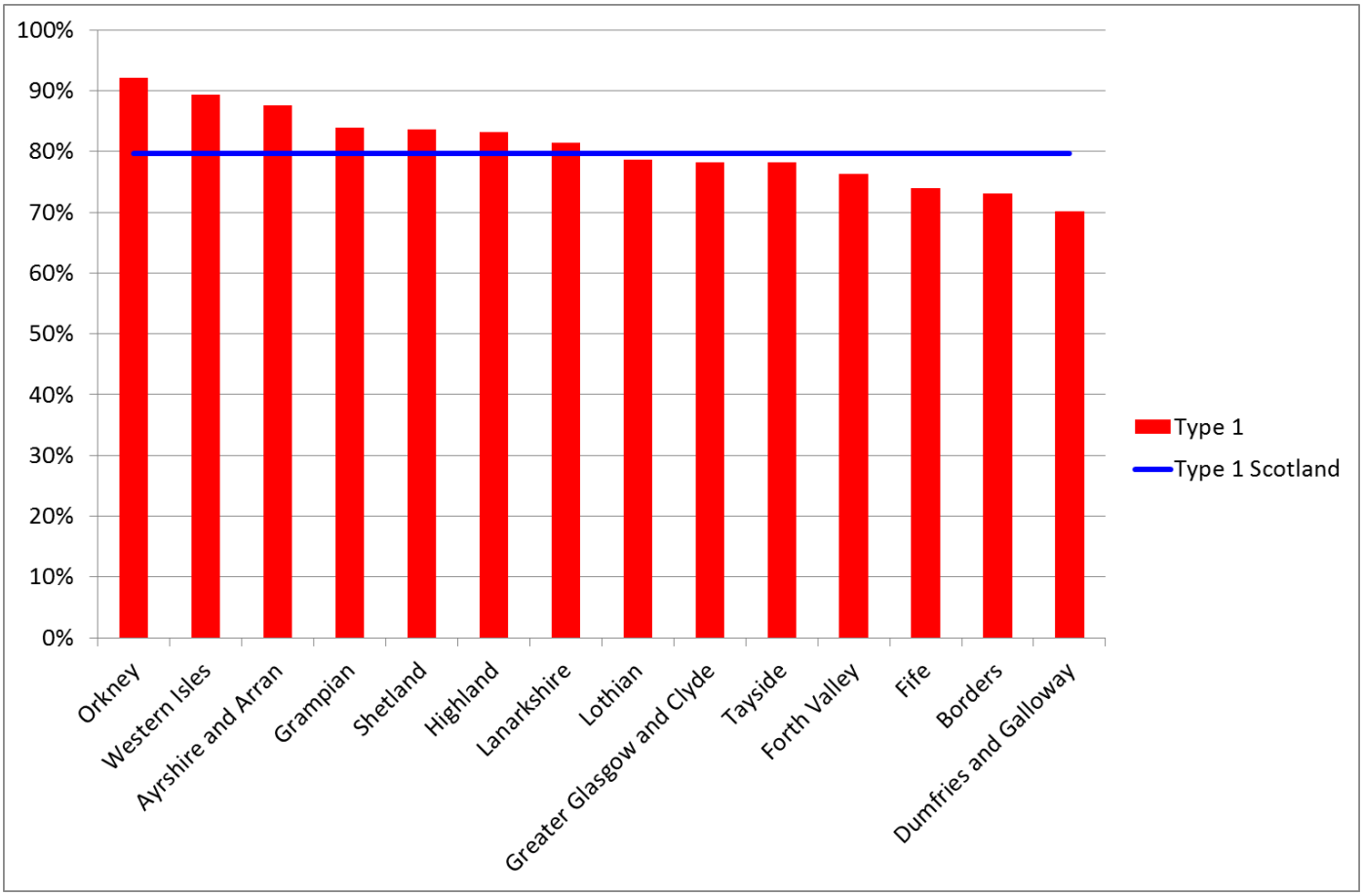


Figure 17. Type 1 diabetes :percentage of people with most recent blood pressure in the last 15 months < 130 mmHg (systolic) and <= 80mmHg (diastolic), by NHS Board. Horizontal line indicates level for Scotland as a whole.

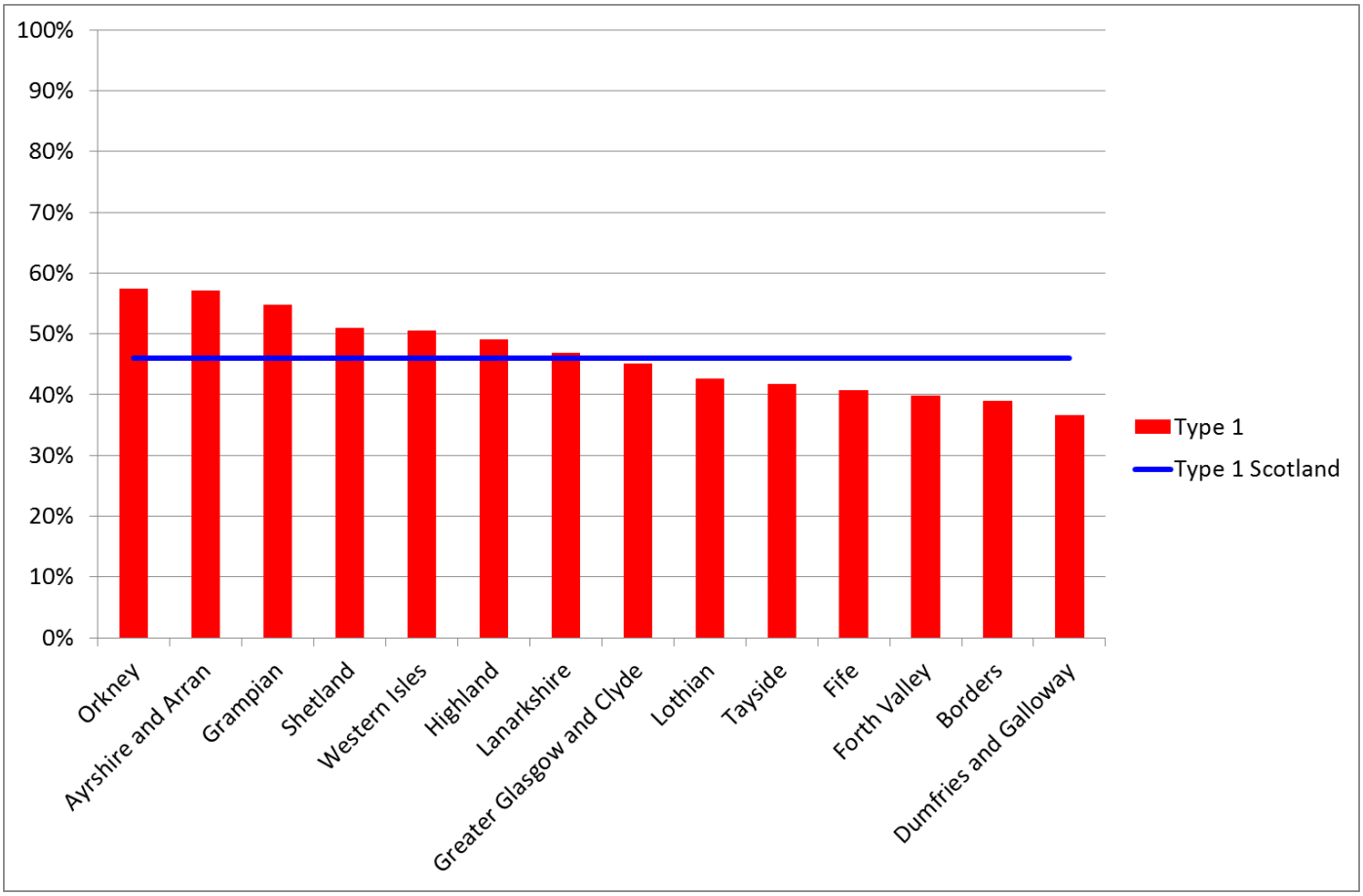


Figure 18. Type 2 diabetes: percentage of people with most recent systolic blood pressure (SBP) <= 140 mmHg in the last 15 months by NHS Board. Horizontal line indicates level for Scotland as a whole.

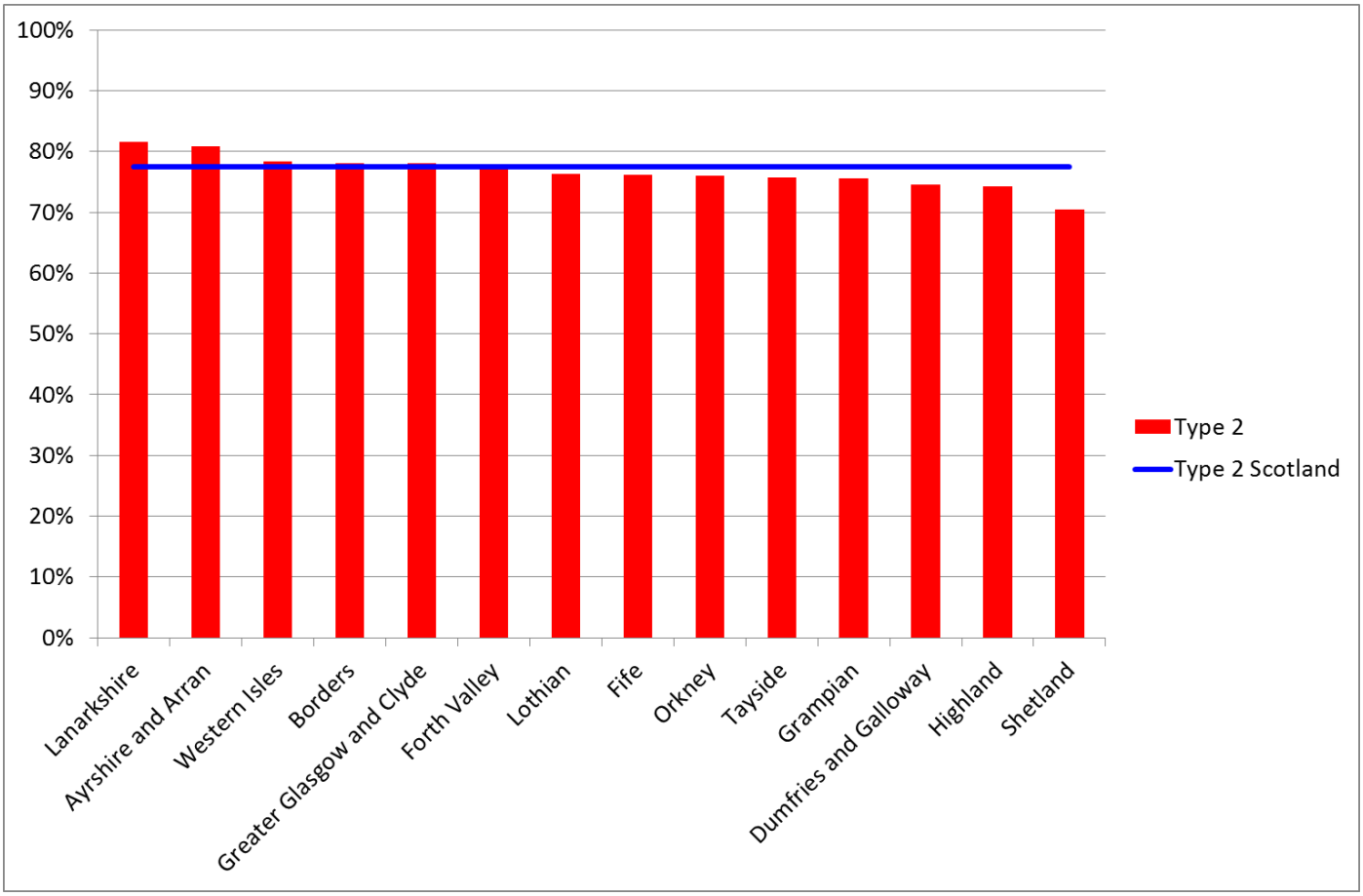


Figure 19. Type 2 diabetes: percentage of people with most recent blood pressure in the last 15 months < 130 mmHg (systolic) and <= 80mmHg (diastolic), by NHS Board. Horizontal line indicates level for Scotland as a whole.

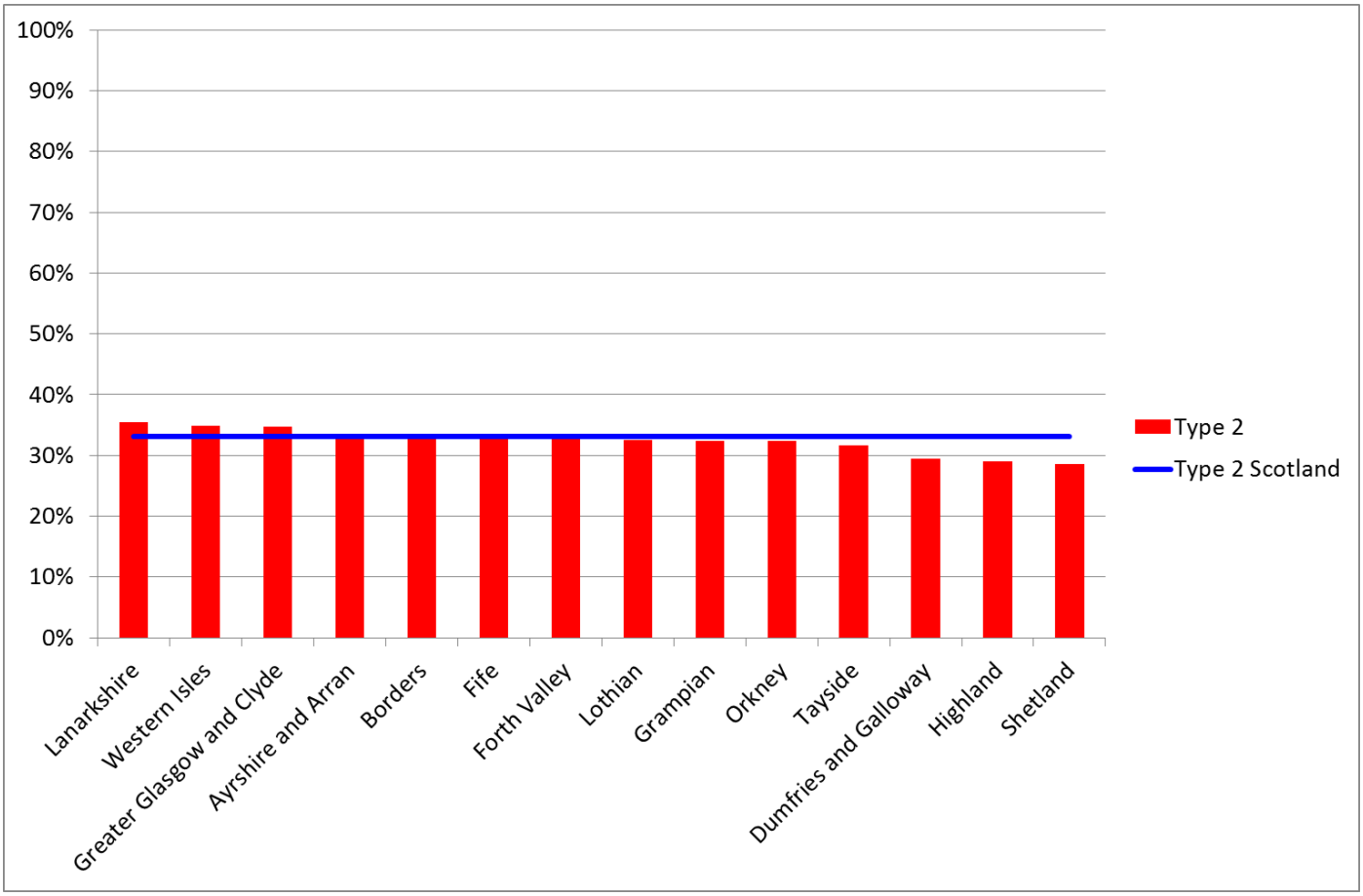
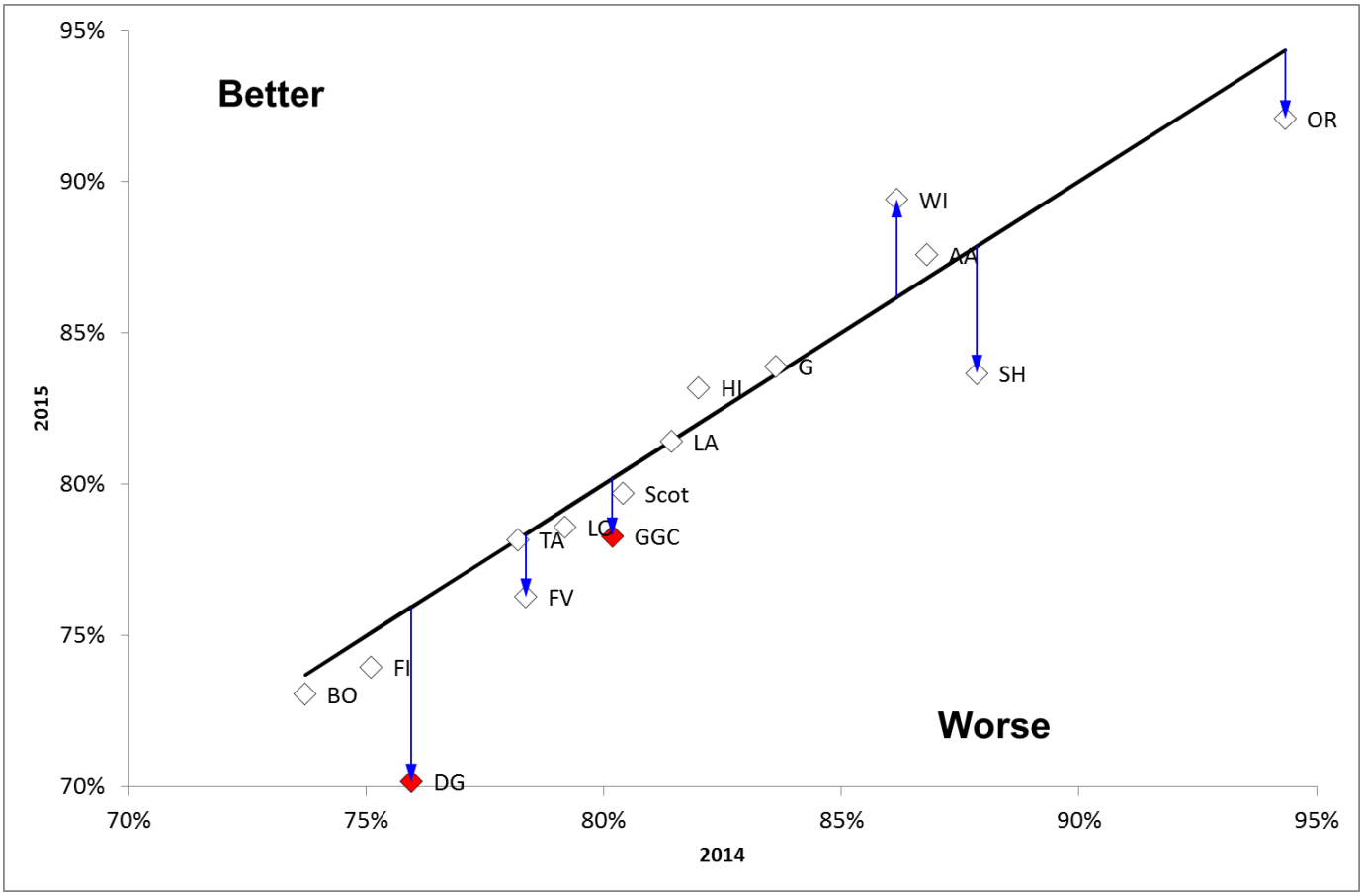


Table 37. Type 1 diabetes : percentage of people with systolic blood pressure (SBP) <= 140 mmHg by NHS Board, ranked by percentage > 140 mmHg.

NHS Board	Systolic BP ≤ 140		Systolic BP > 140		Total recorded	Not recorded	
	n	%	n	%		n	%
Orkney	93	92.1%	8	7.9%	101	15	12.9%
Western Isles	152	89.4%	18	10.6%	170	20	10.5%
Ayrshire and Arran	1,651	87.6%	234	12.4%	1,885	368	16.3%
Grampian	2,411	83.9%	463	16.1%	2,874	448	13.5%
Shetland	87	83.7%	17	16.3%	104	23	18.1%
Highland	1,380	83.2%	279	16.8%	1,659	280	14.4%
Lanarkshire	2,900	81.4%	662	18.6%	3,562	505	12.4%
Lothian	3,119	78.6%	850	21.4%	3,969	636	13.8%
Greater Glasgow and Clyde	4,245	78.3%	1,178	21.7%	5,423	821	13.1%
Tayside	1,428	78.2%	399	21.8%	1,827	217	10.6%
Forth Valley	1,155	76.3%	359	23.7%	1,514	275	15.4%
Fife	1,326	74.0%	467	26.0%	1,793	280	13.5%
Borders	445	73.1%	164	26.9%	609	55	8.3%
Dumfries and Galloway	567	70.2%	241	29.8%	808	115	12.5%
Scotland	**20,959**	**79.7%**	**5,339**	**20.3%**	**26,298**	**4,058**	**13.4%**

Note: Restricted to most recent value recorded in the previous 15 months – those recorded longer ago than that were classed as missing (not recorded).

Figure 20. Type 1 diabetes: percentage of people with SBP <= 140mmHg from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 2.5% change over that period.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 38. Type 1 diabetes: percentage of people with systolic blood pressure (SBP) < 130 mmHg AND diastolic blood pressure (DBP) <= 80mmHg, by NHS Board (denominator those with recording of SBP and DBP within the previous 15 months), ranked by percentage >= 130/80.

NHS Board	BP ≤ 130/80		BP > 130/80		Total recorded	Not recorded	
	n	%	n	%		n	%
Orkney	58	57.4%	43	42.6%	101	15	12.9%
Ayrshire and Arran	1,077	57.1%	808	42.9%	1,885	368	16.3%
Grampian	1,574	54.8%	1,300	45.2%	2,874	448	13.5%
Shetland	53	51.0%	51	49.0%	104	23	18.1%
Western Isles	86	50.6%	84	49.4%	170	20	10.5%
Highland	815	49.1%	844	50.9%	1,659	280	14.4%
Lanarkshire	1,668	46.8%	1,894	53.2%	3,562	505	12.4%
Greater Glasgow and Clyde	2,449	45.2%	2,974	54.8%	5,423	821	13.1%
Lothian	1,694	42.7%	2,275	57.3%	3,969	636	13.8%
Tayside	762	41.7%	1,065	58.3%	1,827	217	10.6%
Fife	730	40.7%	1,063	59.3%	1,793	280	13.5%
Forth Valley	603	39.8%	911	60.2%	1,514	275	15.4%
Borders	237	38.9%	372	61.1%	609	55	8.3%
Dumfries and Galloway	296	36.6%	512	63.4%	808	115	12.5%
Scotland	**12,102**	**46.0%**	**14,196**	**54.0%**	**26,298**	**4,058**	**13.4%**

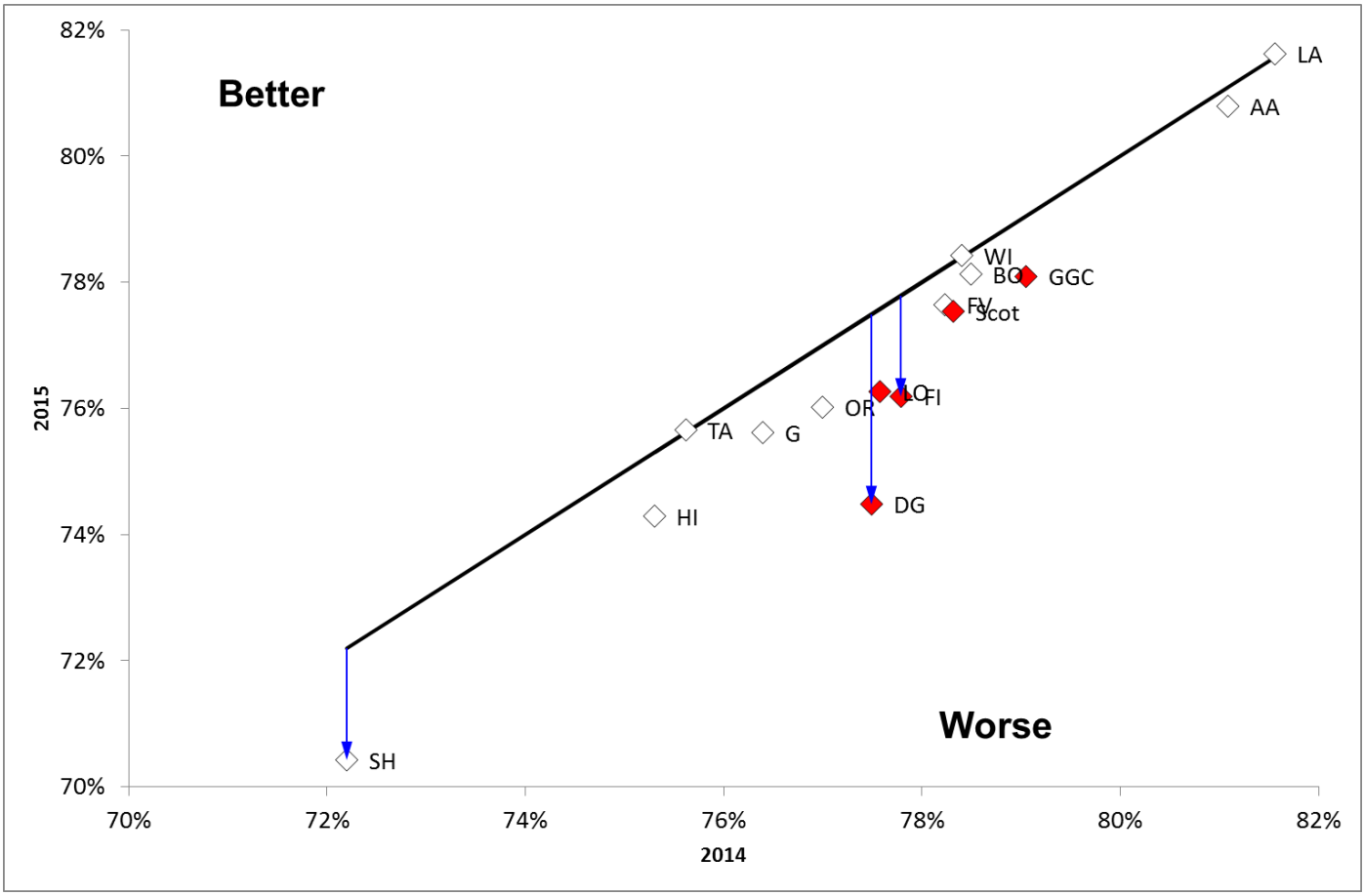
Note: Restricted to most recent value recorded in the previous 15 months – those recorded longer ago than that were classed as missing (not recorded).

Table 39. Type 2 diabetes: percentage of people with systolic blood pressure (SBP) <= 140 mmHg by NHS Board, ranked by percentage > 140 mmHg.

NHS Board	BP ≤ 140		BP > 140		Total recorded	Not recorded	
	n	%	n	%		n	%
Lanarkshire	24,769	81.6%	5,577	18.4%	30,346	2,656	8.0%
Ayrshire and Arran	15,596	80.8%	3,708	19.2%	19,304	1,179	5.8%
Western Isles	887	78.4%	244	21.6%	1,131	54	4.6%
Borders	4,280	78.1%	1,198	21.9%	5,478	248	4.3%
Greater Glasgow and Clyde	39,394	78.1%	11,052	21.9%	50,446	4,069	7.5%
Forth Valley	10,294	77.6%	2,964	22.4%	13,258	1,055	7.4%
Lothian	24,077	76.3%	7,492	23.7%	31,569	2,011	6.0%
Fife	13,354	76.2%	4,173	23.8%	17,527	1,215	6.5%
Orkney	745	76.0%	235	24.0%	980	35	3.4%
Tayside	14,607	75.7%	4,699	24.3%	19,306	1,067	5.2%
Grampian	17,461	75.6%	5,630	24.4%	23,091	1,342	5.5%
Dumfries and Galloway	5,777	74.5%	1,979	25.5%	7,756	399	4.9%
Highland	10,069	74.3%	3,484	25.7%	13,553	838	5.8%
Shetland	624	70.4%	262	29.6%	886	82	8.5%
Scotland	**181,934**	**77.5%**	**52,697**	**22.5%**	**234,631**	**16,250**	**6.5%**

Note: Restricted to most recent value recorded in the previous 15 months – those recorded longer ago than that were classed as missing (not recorded).

Figure 21. Type 2 diabetes: percentage of people with SBP <= 140mmHg from 2014 to 2015: Arrows showing the direction of change have been added for all boards with more than 2.5% change over that period.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 40. Type 2 diabetes: percentage of people with systolic blood pressure (SBP) < 130 mmHg AND diastolic blood pressure (DBP) <= 80mmHg, by NHS Board (denominator those with recording of SBP and DBP within the previous 15 months), ranked by percentage >= 130/80.

NHS Board	BP ≤ 130/80		BP > 130/80		Total recorded	Not recorded	
	n	%	n	%		n	%
Lanarkshire	10,748	35.4%	19,598	64.6%	30,346	2,656	8.0%
Western Isles	395	34.9%	736	65.1%	1,131	54	4.6%
Greater Glasgow and Clyde	17,519	34.7%	32,927	65.3%	50,446	4,069	7.5%
Ayrshire and Arran	6,454	33.4%	12,850	66.6%	19,304	1,179	5.8%
Borders	1,816	33.2%	3,662	66.8%	5,478	248	4.3%
Fife	5,805	33.1%	11,722	66.9%	17,527	1,215	6.5%
Forth Valley	4,330	32.7%	8,928	67.3%	13,258	1,055	7.4%
Lothian	10,245	32.5%	21,324	67.5%	31,569	2,011	6.0%
Grampian	7,487	32.4%	15,604	67.6%	23,091	1,342	5.5%
Orkney	317	32.3%	663	67.7%	980	35	3.4%
Tayside	6,096	31.6%	13,210	68.4%	19,306	1,067	5.2%
Dumfries and Galloway	2,280	29.4%	5,476	70.6%	7,756	399	4.9%
Highland	3,932	29.0%	9,621	71.0%	13,553	838	5.8%
Shetland	253	28.6%	633	71.4%	886	82	8.5%
Scotland	**77,677**	**33.1%**	**156,954**	**66.9%**	**234,631**	**16,250**	**6.5%**

Note. Restricted to most recent value recorded in the previous 15 months – those recorded longer ago than that were classed as missing (not recorded)

Table 41. Percentage of people with diabetes (Type 1 and Type 2 combined) with systolic blood pressure (SBP) <= 140 mmHg.

Year	Total	Systolic BP ≤ 140	Systolic BP > 140	Not recorded
2015	281,237	77.8%	22.2%	7.2%
2014	273,852	78.5%	21.5%	6.2%
2013	256,866	78.6%	21.4%	6.0%
2012	256,816	77.5%	22.5%	6.4%
2011	228,948	76.0%	24.0%	6.9%
2010	220,615	74.9%	25.1%	6.6%
2009	212,857	75.1%	24.9%	6.1%
2008	199,650	73.3%	26.7%	9.2%
2007	204,166	73.0%	27.0%	2.6%
2006	188,424	71.1%	28.9%	4.3%
2005	155,269	69.2%	30.8%	7.9%

Note: From 2008 onwards, there was a requirement that BP should be in previous 15 months. In 2005 to 2007, older results could be included if there was no recent result.

Table 42. Type 1 diabetes: Mean BP (mmHg) recorded in previous 15 months in people aged < 40 years, by NHS Board, ranked by mean systolic BP.

NHS Board	Mean systolic BP	Mean diastolic BP
Orkney	116	73
Ayrshire and Arran	118	70
Grampian	120	72
Highland	121	73
Shetland	121	74
Western Isles	121	73
Greater Glasgow and Clyde	123	74
Lanarkshire	123	73
Lothian	124	76
Forth Valley	125	73
Tayside	125	76
Borders	126	72
Dumfries and Galloway	126	75
Fife	127	76

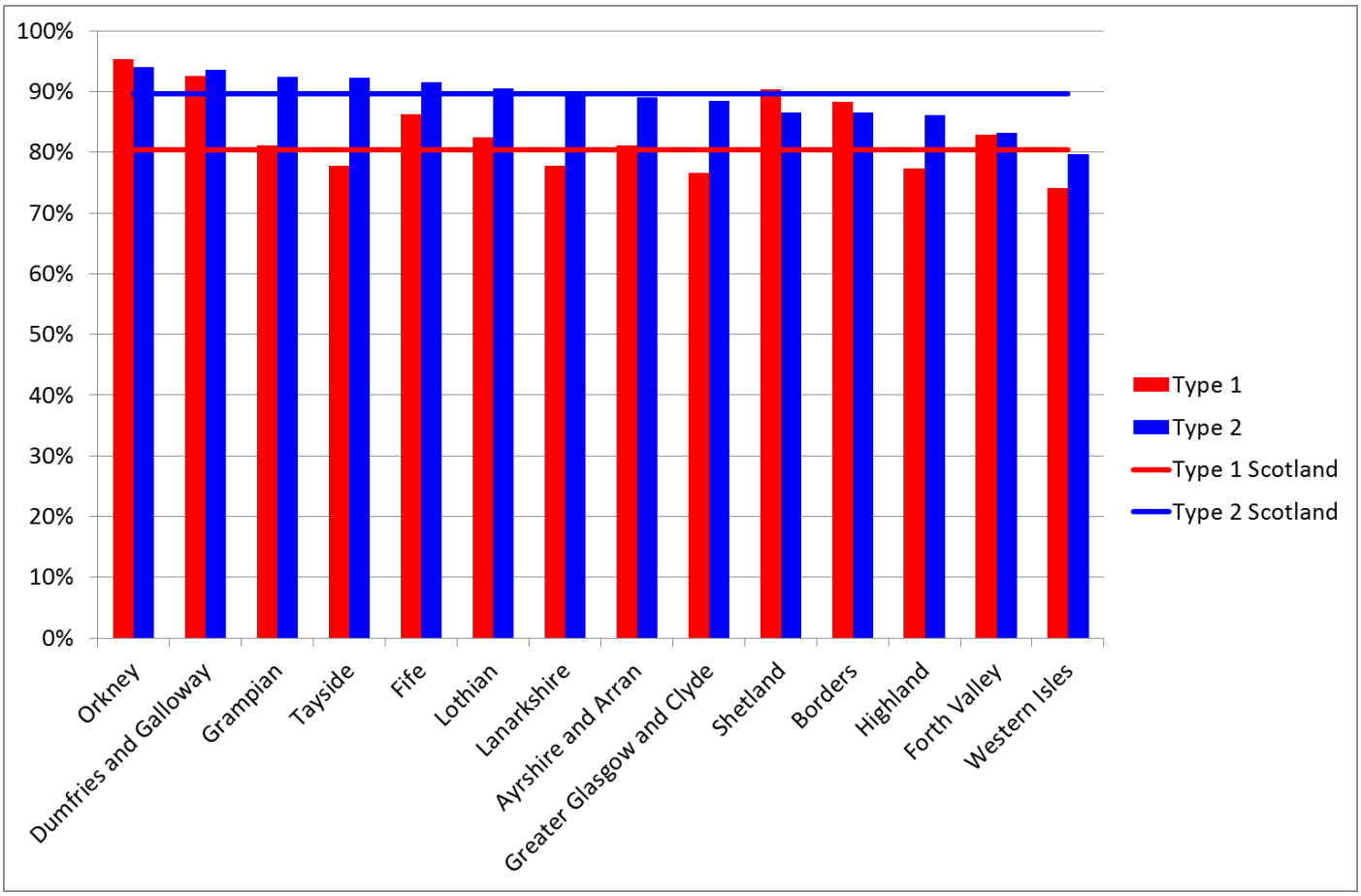
Table 43. Type 2 diabetes: mean BP recorded in previous 15 months in people aged 50-59 years, by NHS Board, ranked by mean systolic BP.

NHS Board	Mean systolic BP	Mean diastolic BP
Ayrshire and Arran	132	78
Borders	132	78
Fife	132	79
Forth Valley	132	78
Grampian	132	79
Greater Glasgow and Clyde	132	78
Lanarkshire	132	77
Lothian	132	80
Orkney	132	78
Tayside	132	79
Dumfries and Galloway	133	79
Highland	133	79
Western Isles	133	79
Shetland	134	80

Total Cholesterol

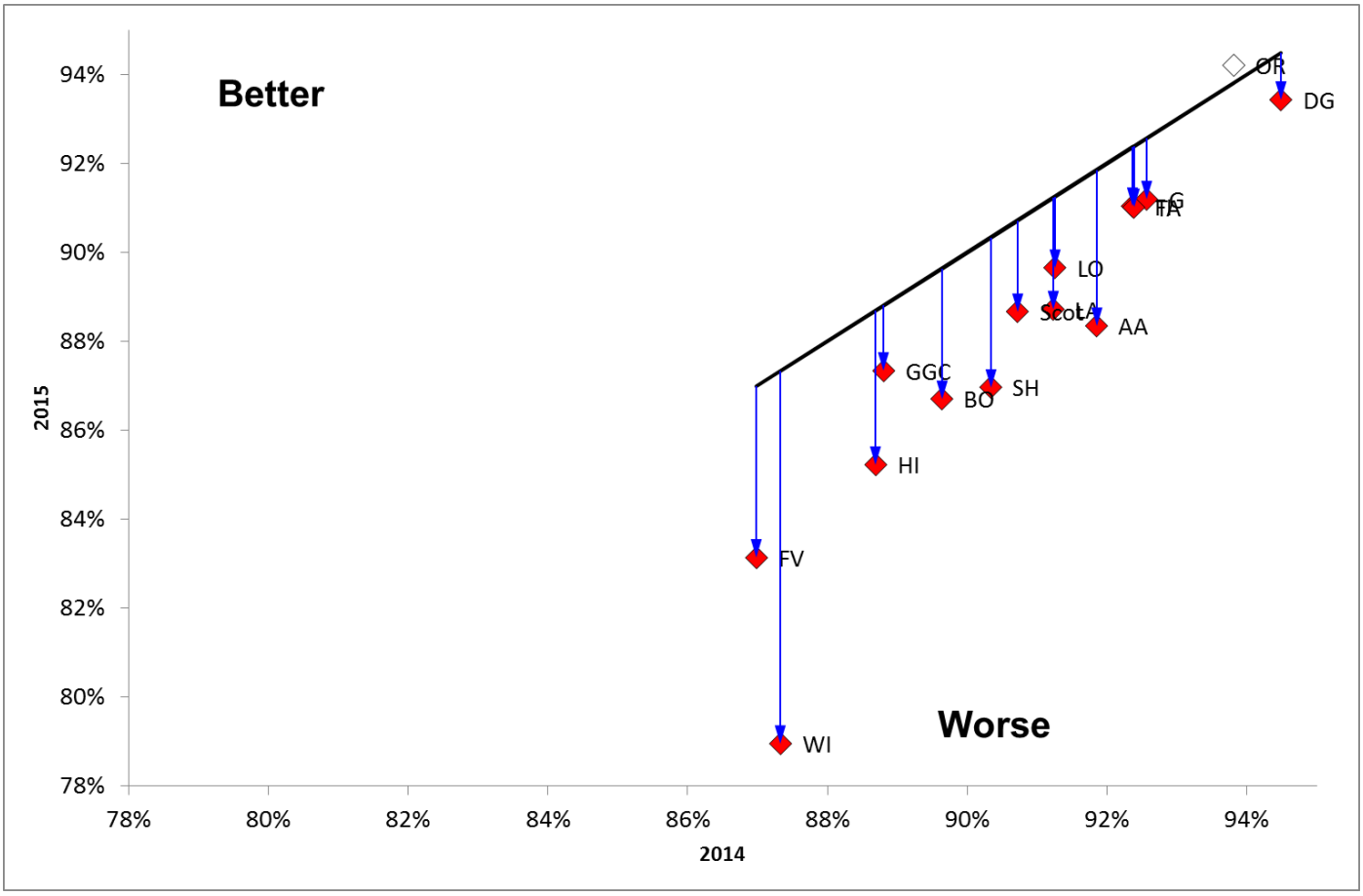
Cholesterol level was recorded in 88.7% of people with Type 1 or Type 2 diabetes within the previous 15 months (Table 44). Total cholesterol was less than or equal to 5.0mmol/l in 78.9% of patients with a recorded result (Tables 45 and 46).

Figure 22. Percentage of people with diabetes with a record of cholesterol within the previous 15 months by diabetes type and NHS Board. Horizontal lines indicate figures for Scotland as a whole.



Note: Excludes children under 18 years or who have no recorded date of birth (Type1 n = 2977, Type 2 n = 135).

Figure 23. Percentage of people with diabetes (Type 1 and Type 2 combined) with a record of cholesterol within the previous 15 months from 2014 to 2015. Arrows showing the direction of change have been added for all boards with more than 1% change over that period.



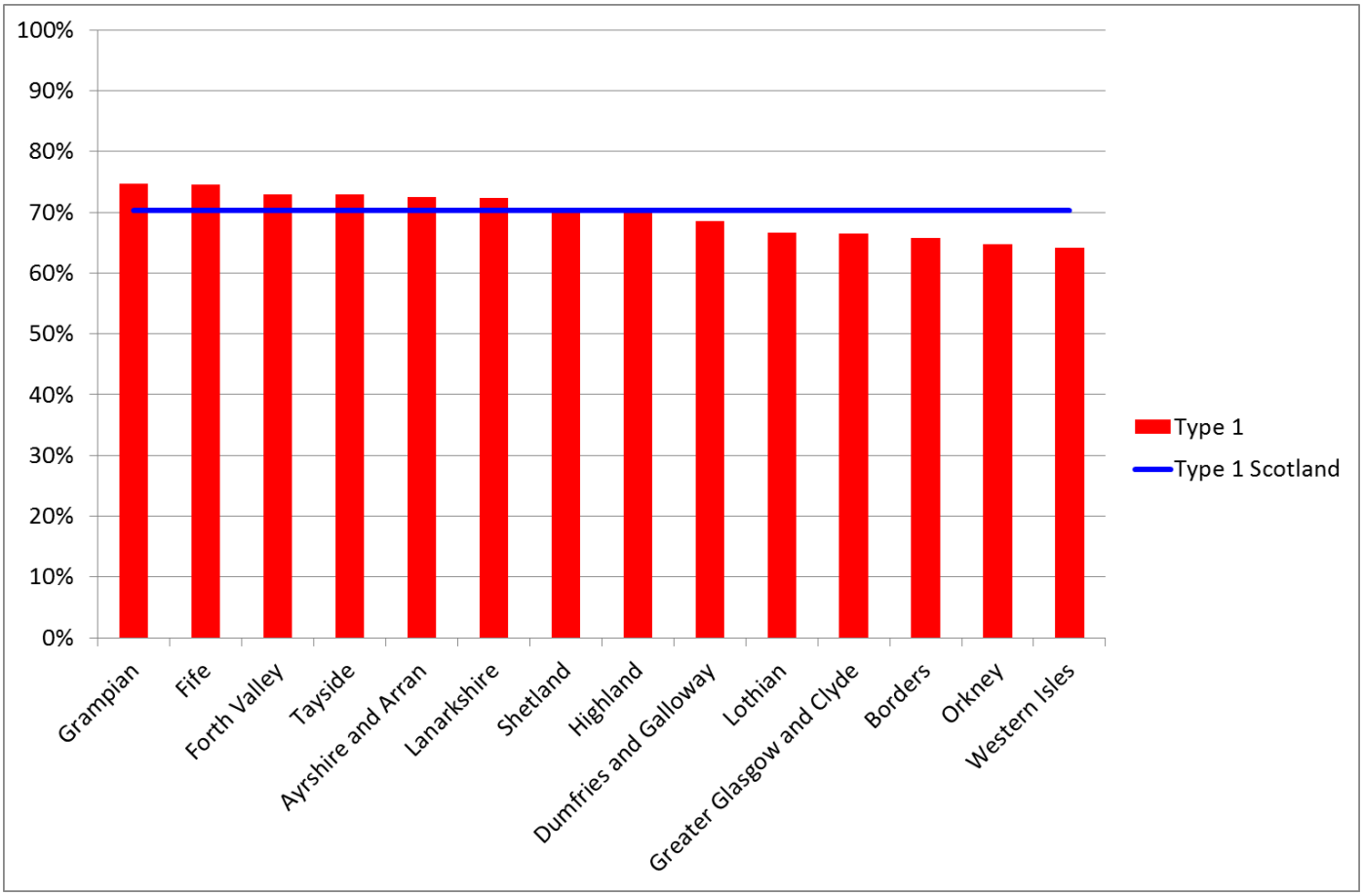
Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 44. Percentage of people with diabetes (Type 1 and Type 2 combined) with a record of cholesterol within the previous 15 months.

Year	Recorded within previous 15 months
2015	88.7%
2014	90.7%
2013	91.0%
2012	90.6%
2011	89.2%
2010	89.6%
2009	86.5%
2008	90.1%
2007	88.4%
2006	85.5%
2005	79.2%
2004	69.0%
2003	40.2%
2002	60.5%

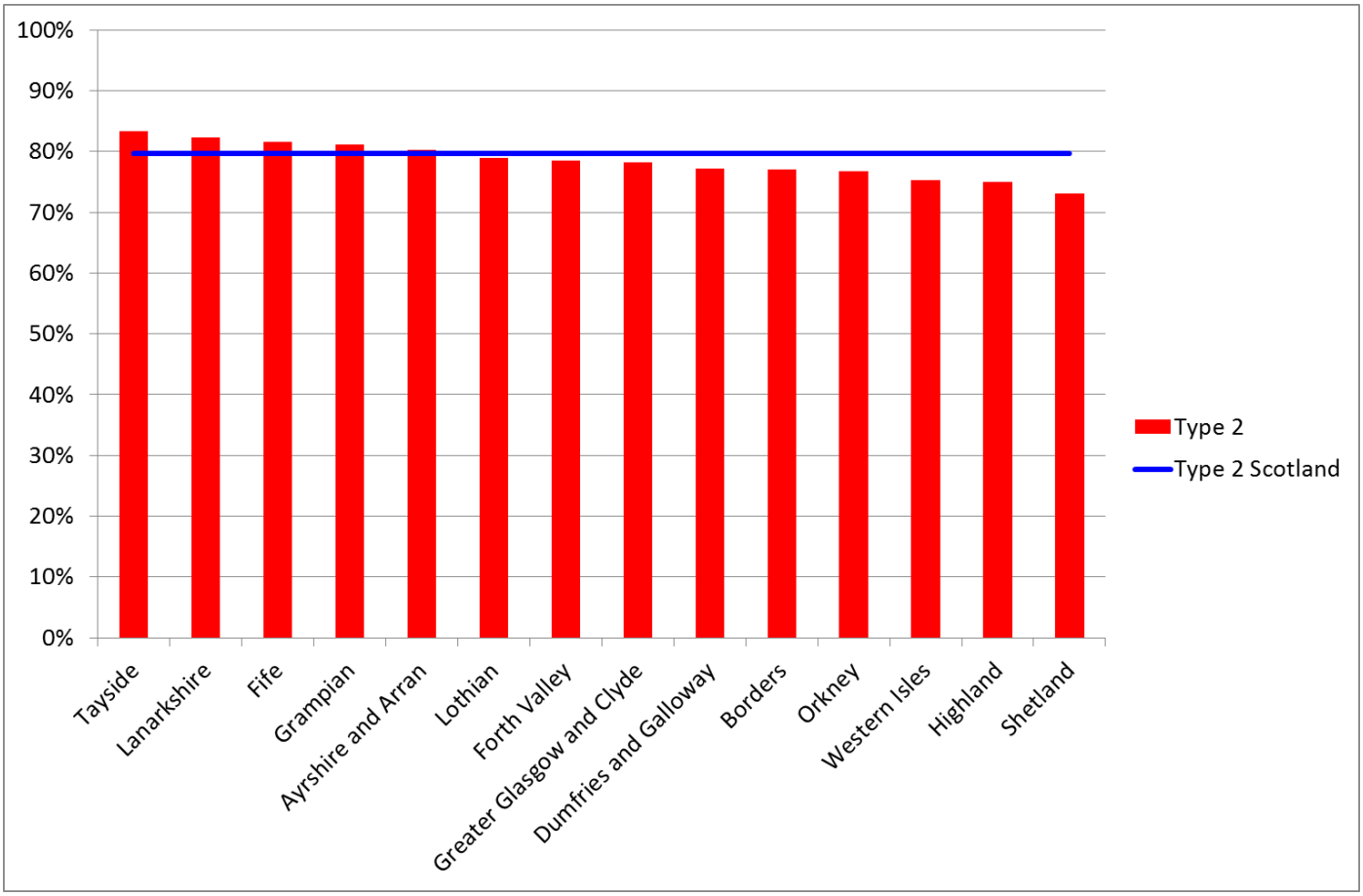
Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (type1 n = 2977, Type 2 n = 135).

Figure 24. Type 1 diabetes: percentage of people with cholesterol <=5mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months). Horizontal line indicates level for Scotland as a whole.



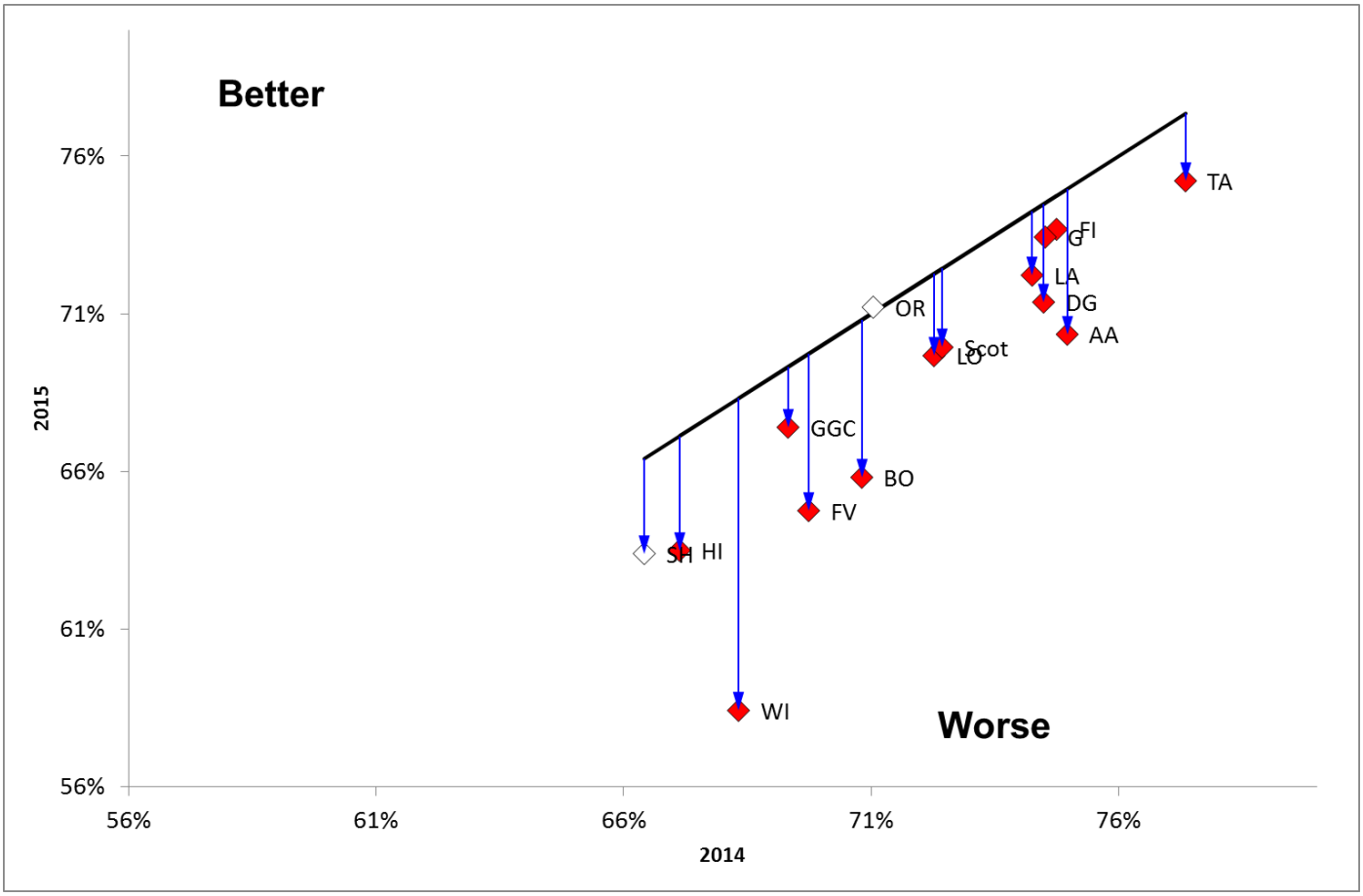
Note: Excludes children under 18 years (n=2977)

Figure 25. Type 2 diabetes: percentage of people with cholesterol <=5mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months). Horizontal line indicates level for Scotland as a whole.



Note: Excludes children under 18 years or who have no recorded date of birth (n= 135).

Figure 26. Percentage of people with diabetes (Type 1 and Type 2 combined) with cholesterol <=5 mmol/l within the previous 15 months from 2014 to 2015: Arrows been added for all boards with more than 1.5% change over that period.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2014 and 2015.

Table 45. Type 1 diabetes: percentage of people with cholesterol <=5mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months), ranked by percentage of people with cholesterol <=5mmol/l.

NHS Board	Total recorded	Total cholesterol ≤ 5	Not recorded
Grampian	2,428	74.7%	18.9%
Fife	1,626	74.5%	13.7%
Forth Valley	1,319	73.0%	17.0%
Tayside	1,439	73.0%	22.3%
Ayrshire and Arran	1,606	72.5%	18.9%
Lanarkshire	2,802	72.4%	22.2%
Shetland	103	70.8%	9.6%
Highland	1,326	70.3%	22.7%
Dumfries and Galloway	770	68.6%	7.5%
Lothian	3,503	66.6%	17.5%
Greater Glasgow and Clyde	4,354	66.5%	23.5%
Borders	526	65.8%	11.7%
Orkney	102	64.7%	4.7%
Western Isles	129	64.2%	25.9%
Scotland	**22,033**	**70.3%**	**19.5%**

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 2977).

Table 46. Type 2 diabetes: percentage of people with cholesterol ≤5mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months), ranked by percentage of people with cholesterol <=5mmol/l.

NHS Board	Total recorded	Total cholesterol ≤ 5	Not recorded
Tayside	18,785	83.4%	7.8%
Lanarkshire	29,608	82.3%	10.1%
Fife	17,143	81.5%	8.5%
Grampian	22,582	81.1%	7.6%
Ayrshire and Arran	18,237	80.3%	11.0%
Lothian	30,405	79.0%	9.4%
Forth Valley	11,897	78.4%	16.8%
Greater Glasgow and Clyde	48,214	78.1%	11.5%
Dumfries and Galloway	7,621	77.2%	6.5%
Borders	4,953	77.0%	13.5%
Orkney	955	76.7%	5.9%
Western Isles	944	75.3%	20.3%
Highland	12,398	75.0%	13.8%
Shetland	838	73.1%	13.4%
Scotland	**224,580**	**79.7%**	**10.4%**

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 135).

Table 47. Percentage of people with diabetes (Type 1 and Type 2 combined) with cholesterol ≤ 5mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months).

Year	Cholesterol ≤ 5		Cholesterol > 5		Not recorded		Total
	Number	%	Number	%	Number	%	
2015	194,520	78.9%	52,093	21.1%	31,512	11.3%	278,125
2014	196,091	79.8%	49,502	20.2%	25,132	9.3%	270,725
2013	191,130	79.9%	47,970	20.1%	23,654	9.0%	262,754
2012	182,643	79.5%	47,145	20.5%	23,895	9.4%	253,683
2011	174,832	79.8%	44,364	20.2%	25,604	10.4%	245,786
2010	169,367	80.4%	41,391	19.6%	24,440	10.4%	235,198
2009	157,434	80.7%	37,650	19.3%	30,551	13.5%	225,635
2008	157,938	80.1%	39,107	19.9%	21,858	10.0%	218,903
2007	159,843	79.8%	40,552	20.2%	8,257	4.0%	208,652
2006	143,999	78.9%	38,614	21.1%	13,104	6.7%	195,717
2005	113,542	75.1%	37,631	24.9%	16,680	9.9%	167,853

Note: From 2008 onwards, there was a requirement that cholesterol should be in previous 15 months. In 2005 to 2007, older results could be included if there was no recent result. Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3112).

Table 48. Type 2 diabetes: mean total cholesterol recorded in previous 15 months in people aged 50-59 years, by NHS Board, ranked by mean cholesterol.

NHS Board	Mean total cholesterol (mmol/l)
Tayside	4.1
Lanarkshire	4.2
Fife	4.2
Grampian	4.2
Ayrshire and Arran	4.2
Forth Valley	4.3
Orkney	4.3
Lothian	4.3
Greater Glasgow and Clyde	4.3
Western Isles	4.3
Dumfries and Galloway	4.4
Borders	4.4
Highland	4.4
Shetland	4.5

Smoking Status

Smoking status was recorded for 81.2% of the diabetic population (Table 51). Tables 49, 50 and 51 show those with a recorded smoking status in the last 15 months. 18.1% reported that they currently smoke (23.9% Type 1 and 17.5% Type 2). Figure 27 and Figure 28 graphically shows the percentages of the smoking status, including those without a recording, using the diabetic population as the denominator.

Figure 27. Type 1 diabetes: smoking status as a percentage of all those with Type 1 diabetes, by NHS Health Board.

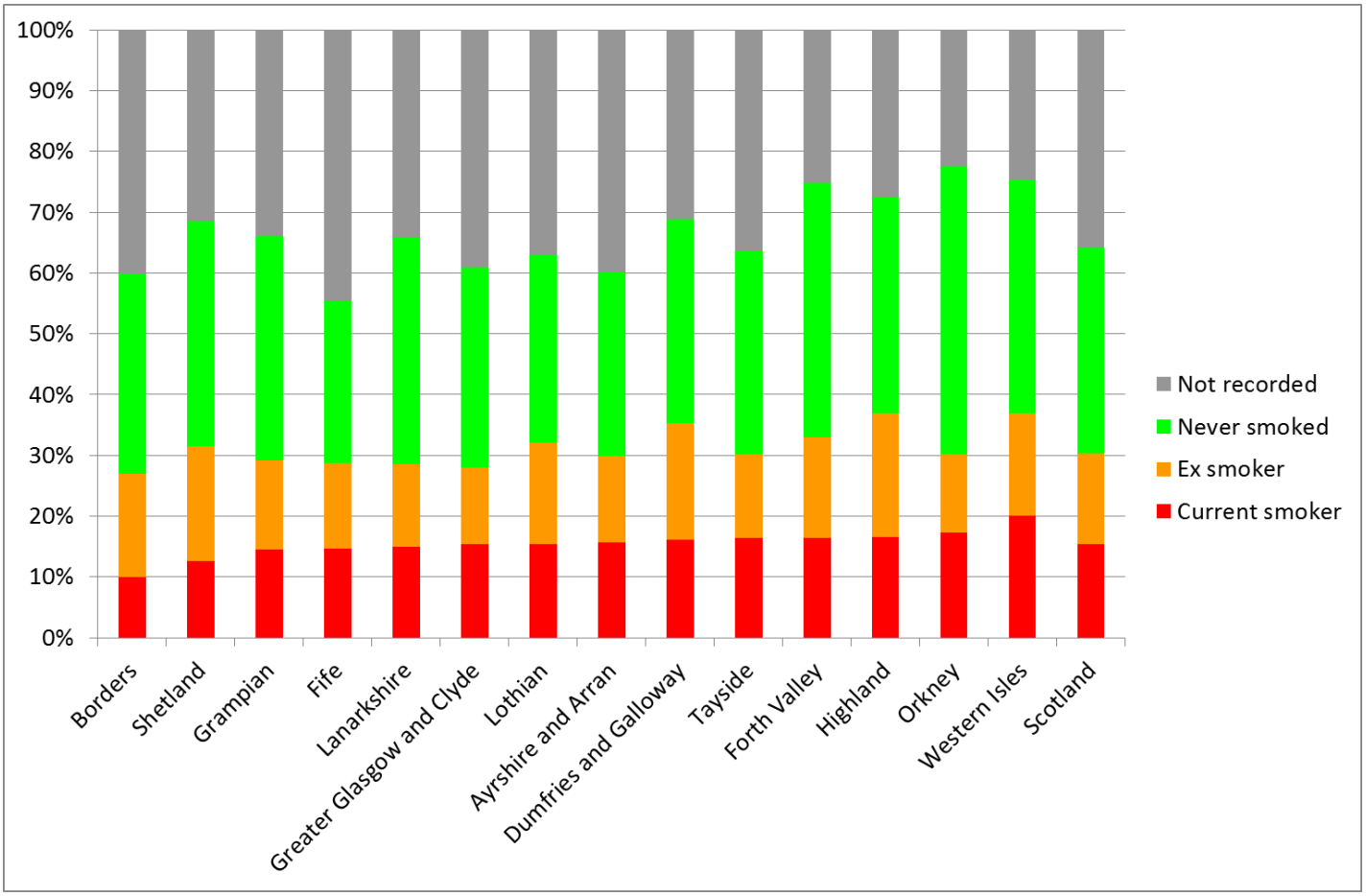


Figure 28. Type 2 diabetes: smoking status as a percentage of all those with Type 2 diabetes, by NHS Health Board.

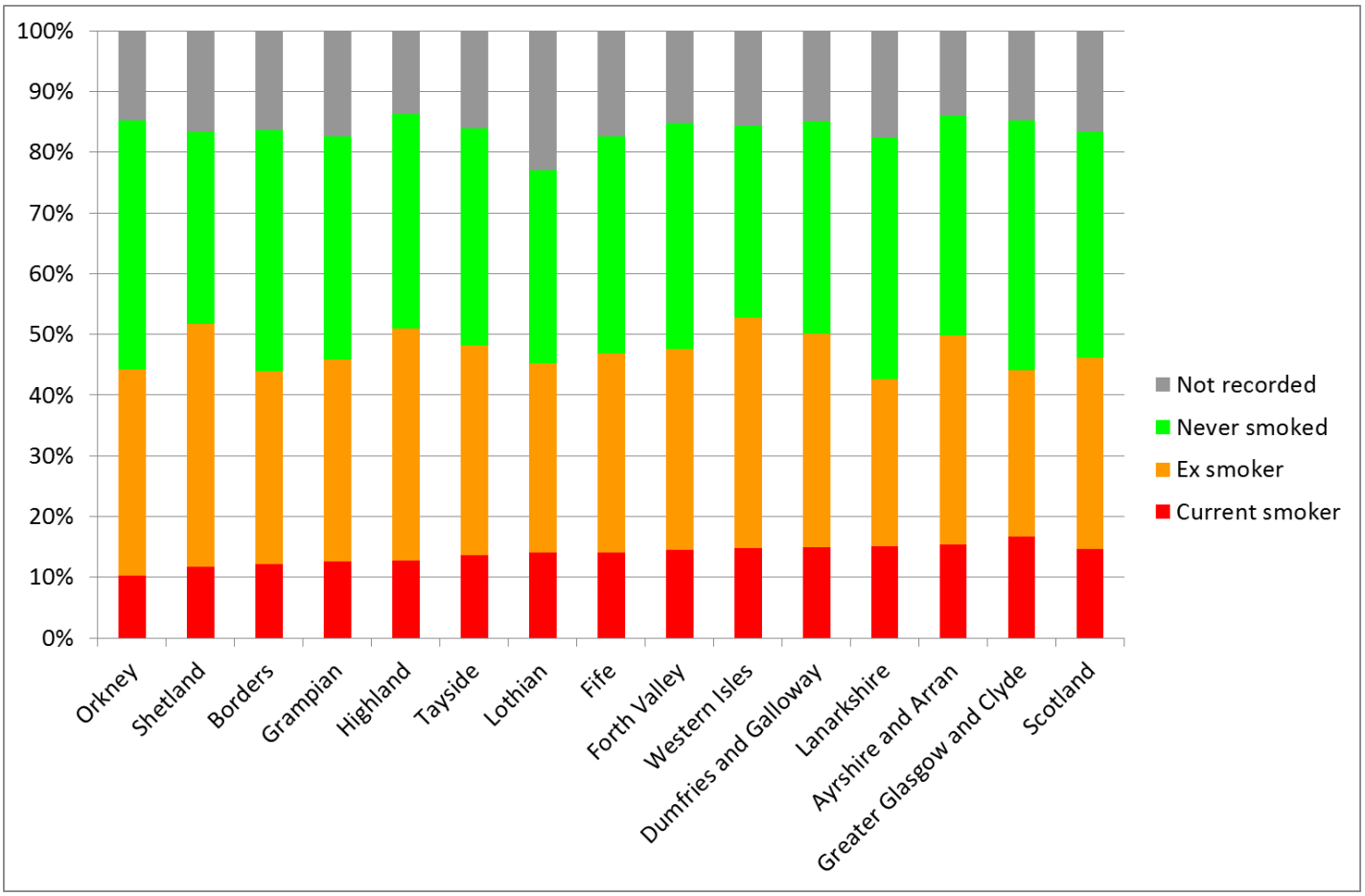


Table 49. Type 1 diabetes: Percentage of people who were recorded as current, ex- or never-smokers, by NHS Board (denominator those with recording of smoking status); ranked by percentage who are current smokers.

NHS Board	No with known status	Current smoker	Ex-smoker	Never smoked	% recorded
Borders	398	16.6%	28.4%	55.0%	59.9%
Shetland	87	18.4%	27.6%	54.0%	68.5%
Forth Valley	1,340	21.9%	22.2%	56.0%	74.9%
Grampian	2,193	22.1%	22.1%	55.8%	66.0%
Orkney	90	22.2%	16.7%	61.1%	77.6%
Lanarkshire	2,680	22.7%	20.7%	56.6%	65.9%
Highland	1,405	22.8%	28.1%	49.1%	72.5%
Dumfries and Galloway	635	23.5%	27.9%	48.7%	68.8%
Lothian	2,900	24.5%	26.4%	49.1%	63.0%
Greater Glasgow and Clyde	3,808	25.3%	20.7%	54.1%	61.0%
Tayside	1,298	25.7%	21.8%	52.5%	63.5%
Ayrshire and Arran	1,355	26.1%	23.5%	50.4%	60.1%
Fife	1,147	26.4%	25.5%	48.1%	55.3%
Western Isles	143	26.6%	22.4%	51.0%	75.3%
Scotland	**19,479**	**23.9%**	**23.3%**	**52.8%**	**64.2%**

Table 50. Type 2 diabetes: Percentage of people who were recorded as current, ex- or never-smokers, by NHS Board (denominator those with recording of smoking status); ranked by percentage who are current smokers.

NHS Board	No with known status	Current smoker	Ex-smoker	Never smoked	% recorded
Orkney	865	12.0%	39.9%	48.1%	85.2%
Shetland	806	14.0%	48.0%	38.0%	83.3%
Borders	4,788	14.6%	37.9%	47.5%	83.6%
Highland	12,416	14.7%	44.3%	41.0%	86.3%
Grampian	20,174	15.2%	40.2%	44.5%	82.6%
Tayside	17,103	16.2%	41.2%	42.6%	83.9%
Fife	15,493	17.1%	39.6%	43.3%	82.7%
Forth Valley	12,139	17.1%	39.0%	43.9%	84.8%
Western Isles	1,000	17.6%	44.9%	37.5%	84.4%
Dumfries and Galloway	6,943	17.6%	41.3%	41.1%	85.1%
Ayrshire and Arran	17,617	17.8%	40.1%	42.1%	86.0%
Lothian	25,851	18.3%	40.5%	41.2%	77.0%
Lanarkshire	27,207	18.3%	33.4%	48.3%	82.4%
Greater Glasgow and Clyde	46,501	19.6%	32.1%	48.3%	85.3%
Scotland	**208,903**	**17.5%**	**37.8%**	**44.7%**	**83.3%**

Table 51. Percentage of people with diabetes (Type 1 and Type 2 combined) who were recorded as current, ex- or never-smokers (denominator those with record of smoking status).

Year	Current smoker	Ex-smoker	Never smoked	Not recorded
2015	18.1%	36.6%	45.4%	18.8%
2014	18.8%	36.3%	45.0%	15.4%
2013	18.7%	34.9%	46.5%	1.5%
2012	19.3%	35.2%	45.5%	4.7%
2011	19.3%	34.4%	46.4%	0.8%
2010	19.3%	35.1%	45.7%	1.0%
2009	19.5%	35.5%	45.0%	1.1%
2008	19.6%	35.6%	44.8%	1.8%
2007	20.0%	35.2%	44.9%	3.3%
2006	20.3%	35.2%	44.6%	6.3%
2005	21.4%	32.9%	45.7%	8.9%

Complications of Diabetes

The main complications of diabetes include those due to large vessel (arterial) disease:

- myocardial infarction (MI) – the commonest cause of death in people with diabetes;
- stroke – the risk is increased compared to people without diabetes;
- peripheral vascular disease, which can lead to amputations;

And those due to small vessel disease (microangiopathy);

- renal disease, which can lead to end-stage renal failure requiring dialysis;
- retinopathy – diabetes has been the commonest cause of blindness in people of working age;

Diabetes also leads to poorer outcomes in pregnancy, but this survey does not include pregnancy outcomes.

The purpose of retinopathy screening is to detect changes early and intervene to prevent further deterioration. In this section, the data presented include both screening performance and recording of prevalent complications.

Myocardial Infarction

25,503 (9.1%) of registered patients have a record of a previous MI (Table 52). Others will have had an MI but not survived. There have been improvements in recording, increased use of procedures and better survival following an MI in recent years.

Table 52. Percentage of people with diabetes recorded as having had a previous myocardial infarction (MI), by diabetes type and NHS board, ranked from low to high by percentage among people with Type 2 diabetes.

NHS Board	Recorded as having had an MI			
	Type 1		Type 2	
	Number	Percentage	Number	Percentage
Shetland	5	3.9%	69	7.1%
Orkney	4	3.4%	84	8.3%
Western Isles	6	3.2%	103	8.7%
Dumfries and Galloway	37	4.0%	711	8.7%
Grampian	114	3.4%	2,211	9.0%
Borders	28	4.2%	531	9.3%
Fife	82	4.0%	1,757	9.4%
Lothian	130	2.8%	3,220	9.6%
Forth Valley	56	3.1%	1,374	9.6%
Tayside	70	3.4%	2,029	10.0%
Ayrshire and Arran	88	3.9%	2,040	10.0%
Lanarkshire	164	4.0%	3,308	10.0%
Greater Glasgow and Clyde	214	3.4%	5,512	10.1%
Highland	65	3.4%	1,491	10.4%
Scotland	**1,063**	**3.5%**	**24,440**	**9.7%**

Table 53. Percentage of people with diabetes (Type 1 and Type 2 combined) who are recorded as having had a previous myocardial infarction (MI).

Year	Myocardial infarction
2015	9.1%
2014	9.2%
2013	9.3%
2012	9.4%
2011	9.5%
2010	9.1%
2009	9.5%
2008	9.5%
2007	9.5%
2006	9.4%
2005	8.6%
2004	7.3%
2003	7.7%
2002	8.1%
2001	6.7%

Note: This table shows the percentage of people with diabetes who have ever had a record of a heart attack and survived.

Cardiac Revascularisation

19,361 (6.9%) people included in the survey have a record of having undergone cardiac revascularisation (Table 54), including coronary artery bypass graft (CABG) and percutaneous transluminal coronary angioplasty (PTCA).

Table 54. Percentage of people with diabetes who have a record of cardiac revascularisation by NHS Board and diabetes type, ranked from low to high by percentage among people with Type 2 diabetes.

NHS Board	Recorded as having undergone cardiac revascularisation			
	Type 1		Type 2	
	Number	Percentage	Number	Percentage
Shetland	4	3.1%	51	5.3%
Fife	51	2.5%	1,158	6.2%
Dumfries and Galloway	32	3.5%	535	6.6%
Forth Valley	39	2.2%	963	6.7%
Ayrshire and Arran	53	2.4%	1,455	7.1%
Tayside	58	2.8%	1,454	7.1%
Borders	18	2.7%	417	7.3%
Western Isles	5	2.6%	87	7.3%
Orkney	3	2.6%	75	7.4%
Lanarkshire	122	3.0%	2,514	7.6%
Lothian	106	2.3%	2,579	7.7%
Greater Glasgow and Clyde	159	2.5%	4,203	7.7%
Highland	54	2.8%	1,129	7.8%
Grampian	97	2.9%	1,940	7.9%
Scotland	**801**	**2.6%**	**18,560**	**7.4%**

Table 55. Percentage of people with diabetes recorded as having ever had cardiac revascularisation.

Year of Survey	Cardiac Revascularisation
2015	6.9%
2014	6.9%
2013	6.8%
2012	6.7%
2011	6.6%
2010	6.4%
2009	6.3%
2008	6.1%
2007	5.9%
2006	5.5%
2005	4.9%
2004	3.9%
2003	2.8%
2002	3.7%
2001	2.1%

Stroke

13,931 (5.0%) people with diabetes were recorded as having ever had a cerebrovascular accident (stroke), an increase in numbers, but a similar percentage to that in previous surveys (4.9% in 2014, 5.0% in 2013, 4.9% in 2012 and 2011, 5.0% in 2010 and 5.1% in each year between 2006 and 2011).

Table 56. Percentage of people with diabetes who were recorded as ever having had a stroke, by NHS Board and diabetes type, ranked from low to high by percentage among people with Type 2 diabetes.

NHS Board	Recorded as having had a stroke			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	3	2.6%	28	2.8%
Shetland	1	0.8%	41	4.2%
Western Isles	8	4.2%	54	4.6%
Grampian	57	1.7%	1,138	4.7%
Dumfries and Galloway	15	1.6%	384	4.7%
Lanarkshire	83	2.0%	1,640	5.0%
Forth Valley	36	2.0%	738	5.2%
Highland	42	2.2%	746	5.2%
Tayside	43	2.1%	1,071	5.3%
Fife	47	2.3%	988	5.3%
Ayrshire and Arran	53	2.4%	1,117	5.5%
Greater Glasgow and Clyde	134	2.1%	3,048	5.6%
Lothian	92	2.0%	1,948	5.8%
Borders	20	3.0%	356	6.2%
Scotland	**634**	**2.1%**	**13,297**	**5.3%**

Kidney Disease

Serum Creatinine

Serum creatinine was recorded in the previous 15 months for 93.7% (263,556) of patients aged over 11 years of age (Table 57).

Table 57. Percentage of people with diabetes who have a record of serum creatinine within the previous 15 months, by NHS board and diabetes type, ranked from low to high by percentage among people with Type 2 diabetes.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Orkney	110	96.5%	993	97.8%	1,103
Dumfries and Galloway	827	93.9%	7,932	97.3%	8,759
Borders	601	93.9%	5,555	97.0%	6,156
Western Isles	167	90.8%	1,140	96.2%	1,307
Shetland	113	94.2%	931	96.2%	1,044
Tayside	1,724	87.0%	19,530	95.9%	21,254
Grampian	2,795	87.5%	23,411	95.8%	26,206
Lothian	3,974	88.9%	32,102	95.6%	36,076
Fife	1,830	91.4%	17,879	95.4%	19,709
Lanarkshire	3,349	86.4%	31,369	95.2%	34,718
Greater Glasgow and Clyde	5,254	86.8%	51,686	94.8%	56,940
Forth Valley	1,553	90.8%	13,548	94.7%	15,101
Ayrshire and Arran	1,814	84.6%	19,309	94.3%	21,123
Highland	1,404	75.6%	12,656	88.0%	14,060
Scotland	**25,515**	**87.3%**	**238,041**	**94.9%**	**263,556**

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (type1 n = 1129, Type 2 n = 105).

Table 58. Percentage of people with diabetes (Type 1 and Type 2 combined) who had a record of serum creatinine within the previous 15 months.

Year	Recorded within previous 15 months	Total eligible population
2015	94.1%	280,003
2014	94.4%	272,651
2013	93.3%	264,695
2012	92.6%	255,640
2011	91.2%	244,800
2010	90.8%	235,198
2009	90.0%	225,635
2008	90.3%	218,903
2007	88.6%	208,652
2006	86.1%	195,717
2005	82.3%	171,899
2004	69.2%	149,353
2003	42.5%	133,889

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (n=1234). Figures prior to 2009 reported on those with all types of diabetes mellitus. The figures for 2009 and onwards report only on those with Type 1 and Type 2 diabetes.

Urinary Microalbuminuria

Table 59 shows information on the recording of microalbuminuria.

Table 59. Number and percentage of people with diabetes who have a record of estimated urinary microalbumin value available on SCI-DC within the previous 15 months, by NHS board and diabetes type, ranked from high to low by percentage among people with Type 2 diabetes.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Tayside	1,311	66.1%	16,266	79.8%	17,577
Orkney	74	64.9%	801	78.9%	875
Grampian	2,174	68.0%	19,132	78.3%	21,306
Dumfries and Galloway	631	71.6%	6,306	77.4%	6,937
Western Isles	103	56.0%	910	76.8%	1,013
Lothian	3,308	74.0%	25,734	76.6%	29,042
Highland	1,087	58.6%	10,781	74.9%	11,868
Fife	1,473	73.5%	14,025	74.9%	15,498
Forth Valley	1,115	65.2%	10,458	73.1%	11,573
Greater Glasgow and Clyde	3,695	61.1%	39,153	71.8%	42,848
Ayrshire and Arran	1,005	46.9%	13,472	65.8%	14,477
Lanarkshire	1,882	48.6%	20,349	61.8%	22,231
Shetland	90	75.0%	587	60.6%	677
Borders	232	36.3%	177	3.1%	409
Scotland	**18,180**	**62.2%**	**178,151**	**71.0%**	**196,331**

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (type1 n = 1129, Type 2 n = 105). In some cases, urinary microalbumin was estimated from albumin/creatinine ratio (ACR).

Table 60. Number and percentage of people with diabetes who have a record of estimated glomerular filtration rate (eGFR) available on SCI-Diabetes within the previous 15 months, by NHS board and diabetes type, ranked by descending percentage of people with Type 2 diabetes.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Dumfries and Galloway	795	95.6%	7,927	97.3%	8,722
Shetland	110	96.5%	931	96.2%	1,041
Tayside	1,603	86.6%	19,526	95.9%	21,129
Grampian	2,669	89.1%	23,386	95.7%	26,055
Fife	1,713	90.9%	17,801	95.0%	19,514
Greater Glasgow and Clyde	4,959	87.2%	51,666	94.8%	56,625
Western Isles	145	83.3%	1,123	94.8%	1,268
Forth Valley	1,433	90.1%	13,541	94.6%	14,974
Lothian	3,791	89.2%	31,691	94.4%	35,482
Orkney	93	86.9%	954	94.0%	1,047
Lanarkshire	3,097	86.0%	30,810	93.6%	33,907
Highland	1,450	84.5%	13,440	93.4%	14,890
Borders	524	87.9%	5,124	89.5%	5,648
Ayrshire and Arran	392	19.8%	5,866	28.6%	6,258
Scotland	**22,774**	**83.2%**	**223,786**	**89.2%**	**246,560**

End Stage Renal Failure

End stage renal failure implies a need for renal dialysis or transplantation and may occur as a consequence of diabetic nephropathy or from other causes of kidney disease.

Table 61. Percentage of people with diabetes recorded as having end stage renal failure, by NHS board and diabetes type, ranked by percentage of people with Type 2 diabetes.

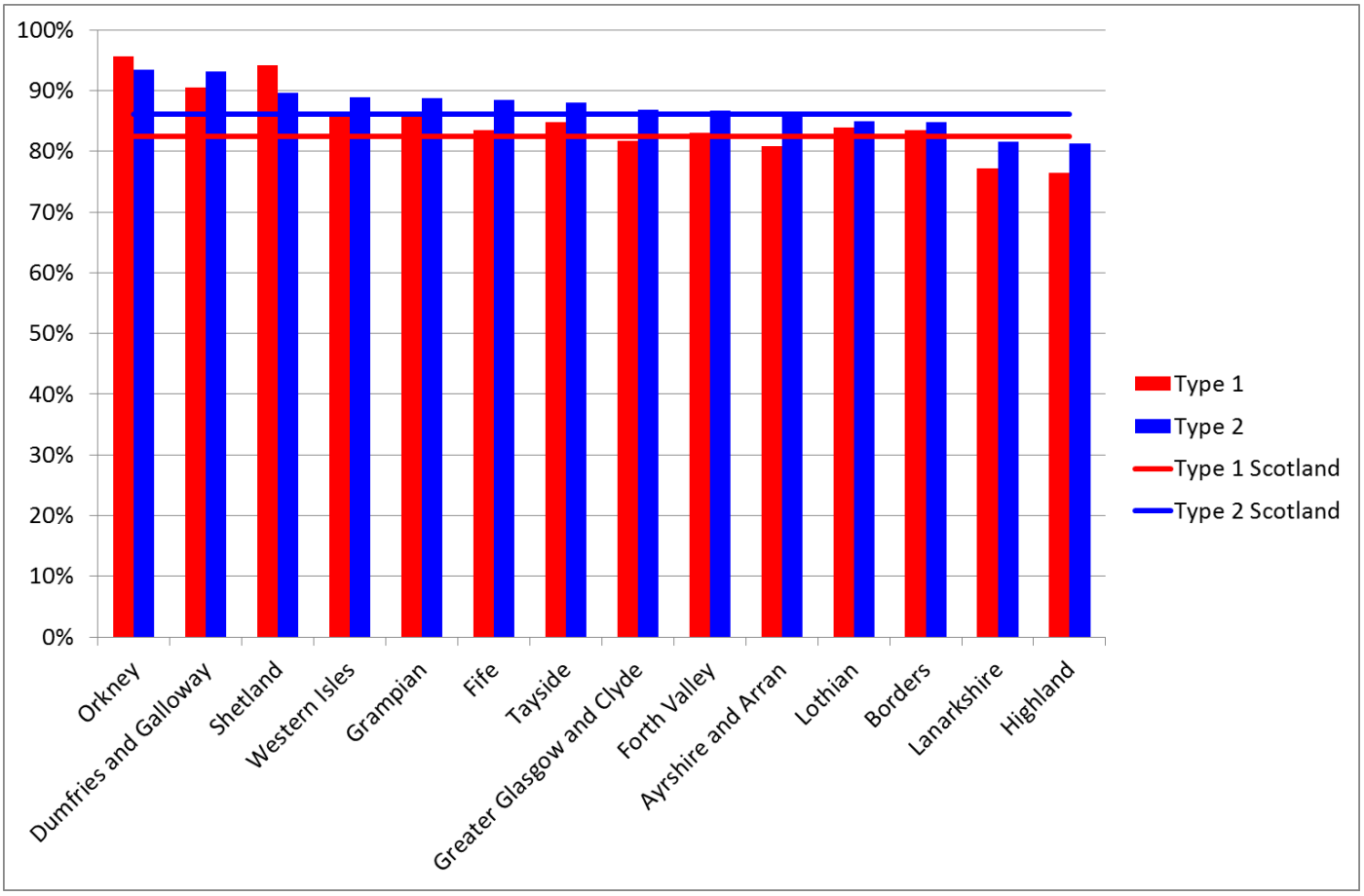
NHS Board	Recorded as having end stage renal failure			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	2	1.7%	3	0.3%
Ayrshire and Arran	41	1.8%	84	0.4%
Borders	14	2.1%	24	0.4%
Lanarkshire	61	1.5%	161	0.5%
Forth Valley	29	1.6%	72	0.5%
Shetland	1	0.8%	5	0.5%
Fife	27	1.3%	99	0.5%
Highland	27	1.4%	77	0.5%
Grampian	51	1.5%	135	0.6%
Dumfries and Galloway	17	1.8%	49	0.6%
Tayside	33	1.6%	123	0.6%
Greater Glasgow and Clyde	92	1.5%	360	0.7%
Lothian	50	1.1%	235	0.7%
Western Isles	2	1.1%	9	0.8%
Scotland	**447**	**1.5%**	**1,436**	**0.6%**

Diabetic Eye Disease

Diabetic Retinal Screening

84.5% of patients eligible for screening had a record of eye screening through the retinal screening service recorded on SCI-Diabetes in the previous 15 months, including those attending ophthalmology services (Table 63).

Figure 29. Percentage of people with diabetes with a record of diabetic retinopathy screening within the previous 15 months through retinal screening service, including those attending ophthalmology clinics and those suspended, by NHS Board and diabetes type, ranked from high to low by percentage among people with Type 2 diabetes..



Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (type1 n = 2977, Type 2 n = 135).

Table 62 shows the number and proportion of patients of appropriate age (≥12 years) who were either screened, were getting eye-care via specialist services or were deliberately (for clinical or social reasons) suspended from screening as a proportion of the total number of patients who had a record of date of birth and were over 12 years of age.

Table 62. Number and percentage of people with diabetes of appropriate age (≥12 years) who were either recorded as having had diabetic retinopathy screening within the previous 15 months, were attending specialist ophthalmology clinics or were appropriately suspended from screening as a proportion of the total number of patients who had a record of date of birth and were over 12 years of age; by NHS Board and diabetes type, ranked by descending percentage of people with Type 2 diabetes.

NHS Board	Type 1 diabetes		Type 2 diabetes		All (Type 1 and Type 2)		Not recorded
	Number	%	Number	%	Number	%	
Orkney	109	95.6%	948	93.4%	1,057	93.6%	72
Dumfries and Galloway	797	90.5%	7,593	93.2%	8,390	92.9%	641
Shetland	113	94.2%	867	89.6%	980	90.1%	108
Western Isles	159	86.4%	1,054	88.9%	1,213	88.6%	156
Grampian	2,753	86.2%	21,688	88.8%	24,441	88.5%	3,187
Fife	1,672	83.5%	16,560	88.4%	18,232	87.9%	2,505
Tayside	1,680	84.8%	17,925	88.0%	19,605	87.7%	2,750
Greater Glasgow and Clyde	4,947	81.8%	47,307	86.8%	52,254	86.3%	8,300
Forth Valley	1,422	83.1%	12,402	86.7%	13,824	86.3%	2,197
Ayrshire and Arran	1,734	80.8%	17,703	86.4%	19,437	85.9%	3,190
Lothian	3,751	83.9%	28,536	85.0%	32,287	84.9%	5,758
Borders	534	83.4%	4,854	84.8%	5,388	84.7%	976
Lanarkshire	2,992	77.2%	26,858	81.5%	29,850	81.1%	6,961
Highland	1,418	76.4%	11,700	81.3%	13,118	80.8%	3,126
Scotland	**24,081**	**82.4%**	**215,995**	**86.1%**	**240,076**	**85.7%**	**39,927**

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (Type 1 n = 1129, Type 2 n = 105)

Table 63. Numbers of patients eligible for retinopathy screening, numbers screened and percentages of those who had a record of screening (Type 1 and Type 2 combined), ranked from high to low by percentage of screened patients.

NHS Board	Eligible for screening	Screened	Percentage screened
Orkney	1,035	963	93.0%
Dumfries and Galloway	8,245	7,604	92.2%
Shetland	1,013	905	89.3%
Grampian	26,144	22,957	87.8%
Western Isles	1,226	1,070	87.3%
Fife	18,822	16,317	86.7%
Tayside	19,582	16,832	86.0%
Forth Valley	15,490	13,293	85.8%
Greater Glasgow and Clyde	55,451	47,151	85.0%
Ayrshire and Arran	21,191	18,001	84.9%
Lothian	35,042	29,284	83.6%
Borders	5,591	4,615	82.5%
Lanarkshire	33,601	26,640	79.3%
Highland	14,853	11,727	79.0%
Scotland	**257,286**	**217,359**	**84.5%**

Table 64 Number (and prevalence per 10,000 people with Type 1 diabetes) who are recorded as blind, ranked from low to high by prevalence of blindness caused by diabetes.

NHS Board	Diabetic cause		Non-diabetic cause		Not specified		Total		Total on register
	n	Prevalence	n	Prevalence	n	Prevalence	n	Prevalence	
Borders	0	0.00	0	0.00	1	15.06	1	15.06	664
Dumfries and Galloway	0	0.00	0	0.00	6	65.01	6	65.01	923
Highland	0	0.00	0	0.00	8	41.26	8	41.26	1,939
Lothian	0	0.00	0	0.00	18	39.09	18	39.09	4,605
Orkney	0	0.00	0	0.00	0	0.00	0	0.00	116
Shetland	0	0.00	0	0.00	0	0.00	0	0.00	127
Western Isles	0	0.00	0	0.00	0	0.00	0	0.00	190
Lanarkshire	1	2.46	0	0.00	33	81.14	34	83.60	4,067
Grampian	1	3.01	0	0.00	17	51.17	18	54.18	3,322
Ayrshire and Arran	1	4.44	0	0.00	18	79.89	19	84.33	2,253
Forth Valley	1	5.59	0	0.00	6	33.54	7	39.13	1,789
Greater Glasgow and Clyde	5	8.01	0	0.00	29	46.44	34	54.45	6,244
Tayside	4	19.57	0	0.00	10	48.92	14	68.49	2,044
Fife	5	24.12	0	0.00	6	28.94	11	53.06	2,073
Scotland	**18**	**5.93**	**0**	**0.00**	**152**	**50.07**	**170**	**56.00**	**30,356**

Table 65 Number (and prevalence per 10,000 people with Type 2 diabetes) who are recorded as blind, ranked by diabetic cause prevalence.

NHS Board	Diabetic cause		Non-diabetic cause		Not specified		Total		Total on register
	n	Prevalence	n	Prevalence	n	Prevalence	n	Prevalence	
Borders	0	0.00	0	0.00	32	55.89	32	55.89	5,726
Dumfries and Galloway	0	0.00	0	0.00	50	61.31	50	61.31	8,155
Grampian	0	0.00	1	0.41	200	81.86	201	82.27	24,433
Lanarkshire	0	0.00	1	0.30	263	79.69	264	80.00	33,002
Lothian	0	0.00	0	0.00	207	61.64	207	61.64	33,580
Orkney	0	0.00	0	0.00	5	49.26	5	49.26	1,015
Shetland	0	0.00	0	0.00	7	72.31	7	72.31	968
Western Isles	0	0.00	0	0.00	3	25.32	3	25.32	1,185
Ayrshire and Arran	1	0.49	1	0.49	99	48.33	101	49.31	20,483
Highland	1	0.69	0	0.00	94	65.32	95	66.01	14,391
Forth Valley	1	0.70	4	2.79	67	46.81	72	50.30	14,313
Greater Glasgow and Clyde	5	0.92	10	1.83	323	59.25	338	62.00	54,515
Tayside	2	0.98	9	4.42	98	48.10	109	53.50	20,373
Fife	3	1.60	1	0.53	141	75.23	145	77.37	18,742
Scotland	**13**	**0.52**	**27**	**1.08**	**1,589**	**63.34**	**1,629**	**64.93**	**250,881**

Table 66. Percentage of people with diabetes (Type 1 and Type 2 combined) who were recorded as having had eye-screening, ophthalmology care or an appropriate suspension from screening (depending on methodology at the time of the report).

Year	Recorded within previous 15 months
2015	85.8%
2014	86.5%
2013	86.8%
2012	86.1%
2011	85.6%
2010	85.1%
2009	80.6%
2008	71.9%
2007	83.6%
2006	70.8%
2005	67.7%
2004	60.4%
2003	40.4%
2002	60.3%
2001	42.2%

Note: Excludes children under 12 years or patients who have no date of birth recorded (Type 1 n = 1129, Type 2 n = 105). 2008 data is taken only from digital imaging via Diabetes Retinopathy Screening. For 2002 to 2007, data from any form of screening was acceptable.

Foot Complications

Table 67. Type 1 diabetes: percentage of people with active foot disease, high, moderate or low foot risk score recorded in the previous 15 months, by NHS board, ranked by percentage having active foot disease.

NHS Board	Recorded as having active foot disease		Recorded as having high foot risk score		Recorded as having moderate foot risk score		Recorded as having low foot risk score		Foot risk score recorded	
	n	%	n	%	n	%	n	%	n	%
Orkney	0	0.0%	3	3.8%	13	16.5%	63	79.7%	79	68.1%
Western Isles	1	0.8%	21	16.2%	32	24.6%	76	58.5%	130	68.4%
Shetland	1	0.9%	1	0.9%	4	3.6%	105	94.6%	111	87.4%
Grampian	23	1.1%	77	3.8%	154	7.7%	1,749	87.3%	2,003	60.3%
Highland	16	1.2%	95	7.3%	135	10.3%	1,060	81.2%	1,306	67.4%
Forth Valley	17	1.4%	78	6.5%	139	11.5%	975	80.6%	1,209	67.6%
Lothian	42	1.4%	153	5.2%	280	9.6%	2,442	83.7%	2,917	63.3%
Borders	7	1.6%	45	10.4%	41	9.5%	338	78.4%	431	64.9%
Dumfries and Galloway	12	1.8%	51	7.7%	77	11.6%	525	78.9%	665	72.0%
Tayside	24	1.8%	102	7.8%	143	10.9%	1,047	79.6%	1,316	64.4%
Ayrshire and Arran	27	2.0%	69	5.0%	90	6.5%	1,196	86.5%	1,382	61.3%
Fife	21	2.0%	80	7.6%	170	16.1%	788	74.4%	1,059	51.1%
Lanarkshire	57	2.4%	159	6.8%	224	9.6%	1,902	81.2%	2,342	57.6%
Greater Glasgow and Clyde	116	3.2%	266	7.3%	350	9.6%	2,909	79.9%	3,641	58.3%
Scotland	**364**	**2.0%**	**1,200**	**6.5%**	**1,852**	**10.0%**	**15,175**	**81.6%**	**18,591**	**61.2%**

Table 68. Type 2 diabetes: percentage of people with active foot disease, high, moderate or low foot risk score recorded in the previous 15 months, by NHS board, ranked by percentage having active foot disease.

NHS Board	Recorded as having active foot disease		Recorded as having high foot risk score		Recorded as having moderate foot risk score		Recorded as having low foot risk score		Foot risk score recorded	
	n	%	n	%	n	%	n	%	n	%
Grampian	83	0.4%	640	3.3%	3,014	15.4%	15,800	80.9%	19,537	80.0%
Forth Valley	48	0.4%	426	3.8%	1,989	18.0%	8,607	77.8%	11,070	77.3%
Ayrshire and Arran	105	0.6%	470	2.8%	1,579	9.6%	14,339	86.9%	16,493	80.5%
Borders	30	0.7%	239	5.4%	516	11.7%	3,620	82.2%	4,405	76.9%
Lothian	214	0.8%	1,403	5.2%	4,586	17.1%	20,552	76.8%	26,755	79.7%
Tayside	146	0.9%	1,092	6.5%	3,213	19.1%	12,392	73.6%	16,843	82.7%
Orkney	7	0.9%	101	13.0%	204	26.3%	465	59.8%	777	76.6%
Fife	124	0.9%	1,055	7.7%	3,537	25.8%	9,003	65.6%	13,719	73.2%
Highland	123	1.0%	873	7.3%	1,857	15.6%	9,034	76.0%	11,887	82.6%
Dumfries and Galloway	82	1.2%	330	4.9%	1,058	15.6%	5,301	78.3%	6,771	83.0%
Lanarkshire	334	1.4%	1,146	4.8%	3,281	13.7%	19,187	80.1%	23,948	72.6%
Shetland	12	1.5%	30	3.6%	106	12.8%	678	82.1%	826	85.3%
Greater Glasgow and Clyde	602	1.5%	2,165	5.3%	7,264	17.6%	31,137	75.6%	41,168	75.5%
Western Isles	16	1.7%	170	17.8%	303	31.7%	466	48.8%	955	80.6%
Scotland	**1,926**	**1.0%**	**10,140**	**5.2%**	**32,507**	**16.7%**	**150,581**	**77.2%**	**195,154**	**77.8%**

Foot Ulceration

13,440 (4.8 %) people with Type 1 or Type 2 diabetes were reported to have had a foot ulcer (Table 69). The increasing percentages from 2011 to 2012 for foot ulcers, as shown in Table 70, are likely to be due to better recording rather than a real increase in the risk of foot ulcer.

Table 69. Percentage of people with diabetes with a record of ever having had a foot ulcer, by NHS board and diabetes type, ranked by ascending percentage of people with Type 2 diabetes.

NHS Board	Recorded as ever having had a foot ulcer			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Grampian	114	3.4%	413	1.7%
Ayrshire and Arran	118	5.2%	440	2.1%
Borders	47	7.1%	155	2.7%
Shetland	2	1.6%	27	2.8%
Dumfries and Galloway	54	5.9%	247	3.0%
Forth Valley	183	10.2%	484	3.4%
Tayside	141	6.9%	692	3.4%
Orkney	2	1.7%	36	3.5%
Fife	132	6.4%	743	4.0%
Highland	104	5.4%	586	4.1%
Greater Glasgow and Clyde	572	9.2%	2,451	4.5%
Western Isles	11	5.8%	62	5.2%
Lothian	337	7.3%	1,843	5.5%
Lanarkshire	720	17.7%	2,724	8.3%
Scotland	**2,537**	**8.4%**	**10,903**	**4.3%**

Table 70. Percentage of people with diabetes (Type 1 and Type 2 combined) who had a record of ever having had a foot ulcer.

Year	Recorded as ever having had a foot ulcer
2015	4.8%
2014	4.9%
2013	5.2%
2012	5.1%
2011	4.3%
2010	4.4%
2009	4.3%
2008	4.6%
2007	4.7%
2006	5.0%
(a) 2005	3.9%
2004	2.2%
2003	1.5%
2002	1.4%
2001	1.0%

(a) Excludes NHS Borders and NHS Lanarkshire.

Lower Limb Amputation

There were 2,092 (0.7%) patients recorded as having a major lower limb amputation (Table 71).

Table 71. Percentage of people with diabetes with a record of ever having had a major lower limb amputation, by NHS board and diabetes type, ranked by ascending percentage of people with Type 2 diabetes.

NHS Board	Recorded as ever having had a lower limb amputation			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Borders	8	1.2%	30	0.5%
Lanarkshire	35	0.9%	193	0.6%
Lothian	35	0.8%	198	0.6%
Grampian	34	1.0%	156	0.6%
Ayrshire and Arran	26	1.2%	131	0.6%
Forth Valley	24	1.3%	96	0.7%
Tayside	26	1.3%	143	0.7%
Greater Glasgow and Clyde	75	1.2%	399	0.7%
Orkney	1	0.9%	8	0.8%
Shetland	1	0.8%	8	0.8%
Fife	34	1.6%	157	0.8%
Highland	33	1.7%	129	0.9%
Western Isles	2	1.1%	11	0.9%
Dumfries and Galloway	18	2.0%	81	1.0%
Scotland	**352**	**1.2%**	**1,740**	**0.7%**

Table 72. Number and percentage of people with diabetes (Type 1 and Type 2 combined) who had a record of ever having had a major lower limb amputation.

Year	Lower limb amputation	
	Number	Percentage
2015	2,092	0.7%
2014	2,111	0.8%
2013	2,064	0.8%
2012	1,854	0.7%
2011	1,359	0.6%
2010	1,250	0.5%
2009	1,132	0.5%
2008	1,051	0.5%
2007	950	0.5%
2006	868	0.4%
(a) 2005	774	0.5%
2004	845	0.6%
2003	1,014	0.8%
2002	996	1.0%

(a) excludes NHS Borders and NHS Lanarkshire.

Other Statistics

My Diabetes My Way

"My Diabetes My Way" (www.mydiabetesmyway.scot.nhs.uk) is the NHS Scotland interactive diabetes website that helps to support people who have diabetes and their carers. The table below shows the number of people who had registered to access their own clinical information using the website by the end of 2015. Records access is a key objective of the Scottish Diabetes Improvement Plan.

Table 73. Numbers of people with diabetes registered to access their clinical information using the "My Diabetes My Way" website by NHS Board.

NHS Board	Type 1	Type 2	Total
Ayrshire and Arran	342	601	943
Borders	53	72	125
Dumfries and Galloway	122	203	325
Fife	333	824	1,157
Forth Valley	553	781	1,334
Grampian	273	370	643
Greater Glasgow and Clyde	1,442	2,429	3,871
Highland	275	377	652
Lanarkshire	1,084	1,223	2,307
Lothian	1,607	2,220	3,827
Orkney	28	19	47
Shetland	28	63	91
Tayside	293	1,245	1,538
Western Isles	23	51	74
Scotland	**6,456**	**10,478**	**16,934**

Note: The above figures show the number of patients who had registered to access their diabetes data at the end of 2015. Registration may be initiated by the patient via the My Diabetes My Way website, or by a clinician using SCI-Diabetes. Following registration, a patient must provide their consent to proceed and verify their email address. At this stage, a username and password are emailed to the patient.

At the end of 2015, 7,463 patients had accessed their results using this service. During the final 3 months of 2015, a total of 3,164 (42.4% of active users) had logged in, showing good levels of continued engagement. Healthcare providers across NHS Scotland are encouraged to raise awareness of My Diabetes My Way services amongst their patient cohorts. Further information and awareness materials may be requested by emailing the My Diabetes My Way project team on mydiabetesmyway@nhs.net.

Scottish Diabetes Research Network (SDRN) Research Register

The SDRN research register allows people with diabetes to indicate their interest in taking part in research on diabetes in Scotland, including clinical trials. The table below shows the numbers who had joined the register by the end of 2013. It should be noted that many other people with diabetes who are not necessarily on this registry also take part in research.

Table 74. Numbers of people with diabetes who had joined the SDRN diabetes research register by the end of 2015, by NHS Board, Scotland.

NHS Board	Type 1	Type 2	Total
Ayrshire and Arran	11	16	27
Borders	5	18	23
Dumfries and Galloway	134	632	766
Fife	147	265	412
Forth Valley	69	150	219
Grampian	152	617	769
Greater Glasgow and Clyde	467	841	1,308
Highland	475	882	1,357
Lanarkshire	158	572	730
Lothian	898	1,697	2,595
Orkney	0	0	0
Shetland	3	0	3
Tayside	342	1,591	1,933
Western Isles	2	0	2
Scotland	**2,863**	**7,281**	**10,144**

Care Processes

Quarterly reports of processes and outcomes of care are now being reported back to each NHS board. There are 12 measures within this. The report from the end of 2015 is described below.

The processes and outcomes described in this report represent work in progress and need to be considered as such. These measures are likely to be edited within the next year to after review of the results and improved understanding of the strengths and weaknesses of the measures and their impact on clinical care.

Table 75. Applicability of Care Processes

Diagnosis and Age category	Care processes applicable
Type 1 and Other Age 0-11	Processes 1 and 2
Type 1 and Other Age 12-17	Processes 1 to 6
Type 1 Age 18+, Type 2 and Other Age 18+	All 9 Processes
Diagnosis and Age category	Care processes applicable

Other = any other frank diabetes type not included elsewhere.

Care Process 1

Percentage of people with diabetes who receive all 9 processes of care measurements for diabetes in the prior 15 months – adjusted for and presented in defined age ranges.

Methodology

Included population = all patients with diabetes are included.

Care processes

1. HbA1c
2. Weight (BMI)
3. Blood Pressure
4. Smoking Status
5. Retinopathy Screening*
6. Urinary Albumin Test**
7. Creatinine
8. Total Cholesterol
9. Foot risk

*Retinopathy Screening = Latest DRS Screening Status is "Attended - Successfully Screened" or "Attended -Unsuccessfully Screened". Note – If the patient has been suspended from eye screening this is counted as having received this "process of care".

**Urinary Albumin test = any of the following: Albumin-Creatinine Ratio (ACR), Microalbumin Concentration, Protein-Creatinine Ratio (PCR) or Total Urinary Protein.

Notes

Where no data is shown in the bar-chart, this could indicate that no patients were found that met the inclusion criteria or it could indicate that of those that did meet the criteria, none had the required number of processes.

Figure 30. Care process 1 Type 1 and Other Age 0-11 by Region

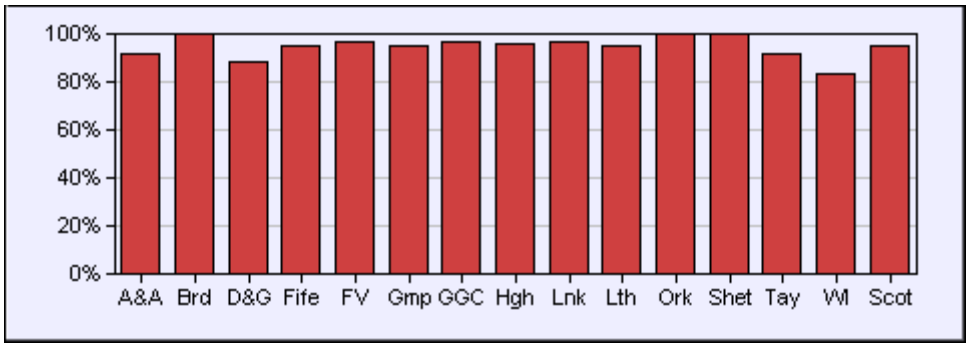


Figure 31. Care Process 1 Type 1 and Other Age 12-17 by Region

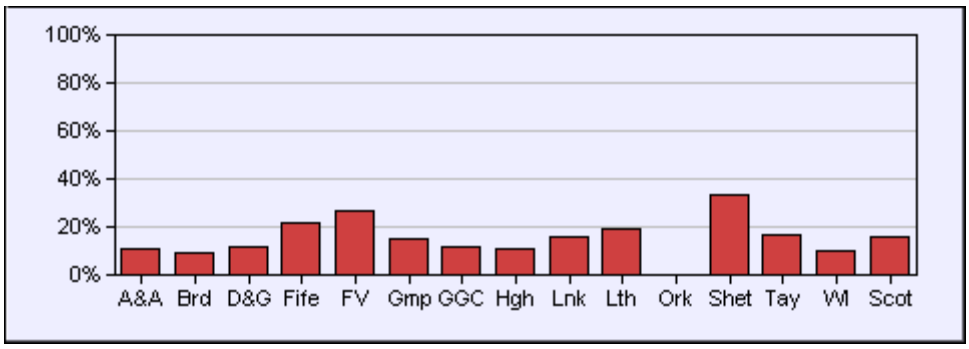


Figure 32. Care Process 1 Type 1 Age 18+ by Region

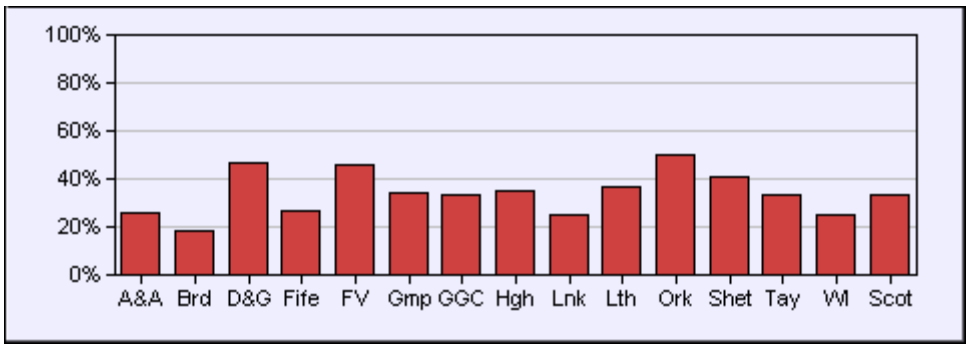
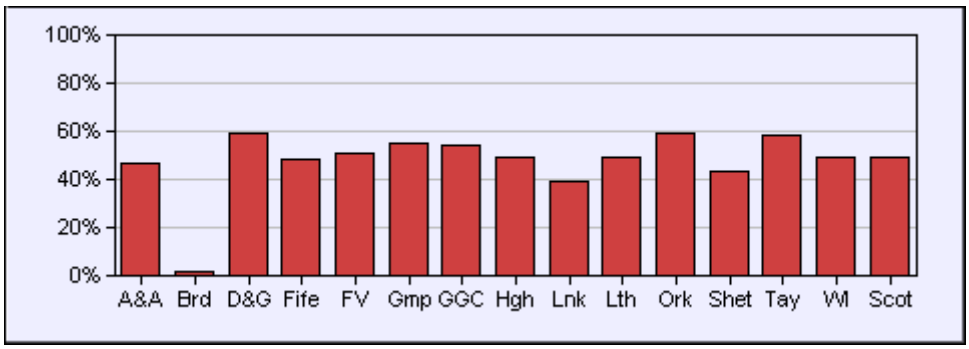


Figure 33. Care Process 1 Type 2 and Other Age 18+ by Region



Care Process 2

Percentage of people with diabetes with an HbA1c <58 mmol/mol at 1 year post diagnosis - presented in defined age ranges.

Methodology

Included population = patients with a duration of diabetes between 1 and 2 years on the date of the quarterly report are included.

Numerator = number of patients in each age/type cohort whose latest HbA1c was <58 mmol/mol.

Denominator = the total number of patients in each age/type cohort.

Notes

Where no data is shown in the bar-chart, this could indicate that no patients were found that met the inclusion criteria or that none of those who did meet the inclusion criteria had an anniversary HbA1c <58 mmol/mol.

"HbA1c at 1 year post diagnosis" is the HbA1c result closest to the date of their 1st anniversary after diagnosis - plus or minus up to 90 days (3 months).

Figure 34. Care Process 2 Type 1 and Other Age 0-5 by Region

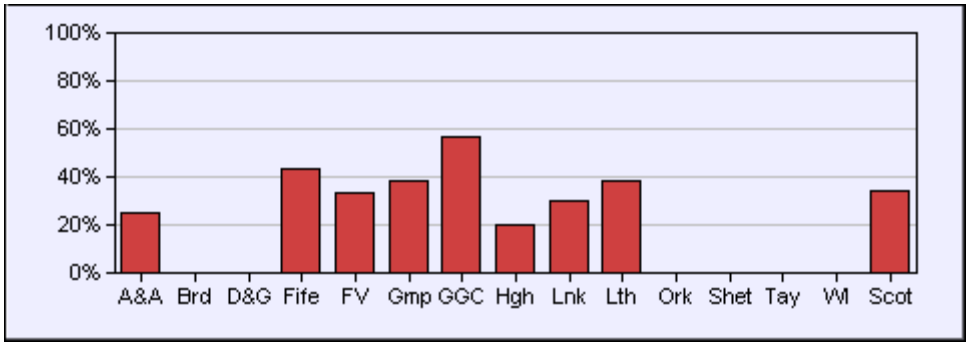


Figure 35. Care Process 2 Type 1 and Other Age 6-11 by Region

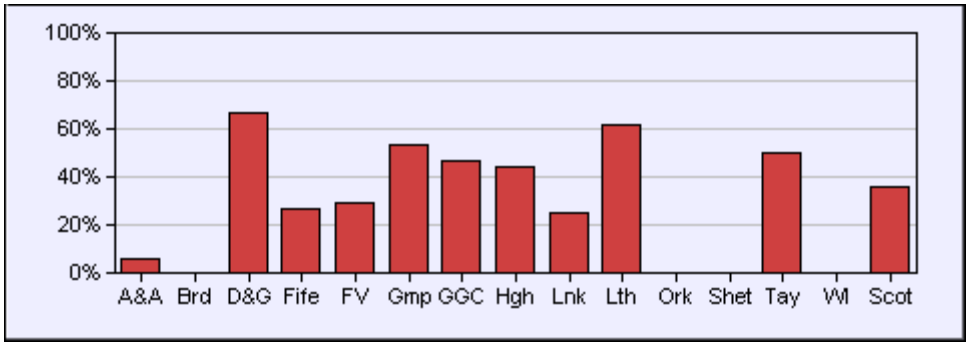


Figure 36. Care Process 2 Type 1 and Other Age 12-17 by Region

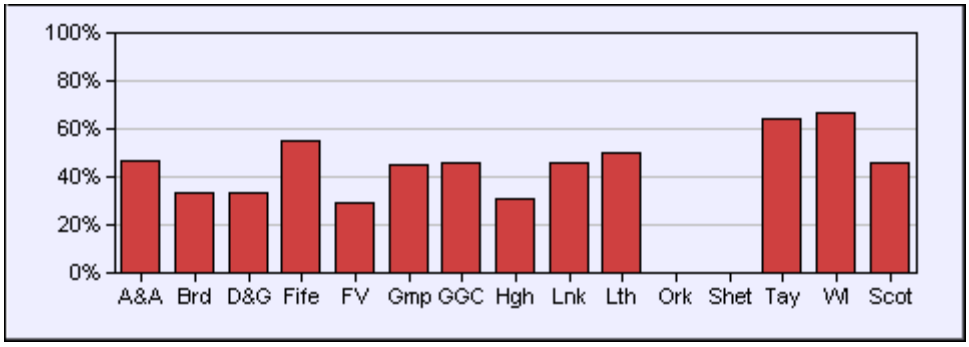


Figure 37. Care Process 2 Type 1 Age 18+ by Region

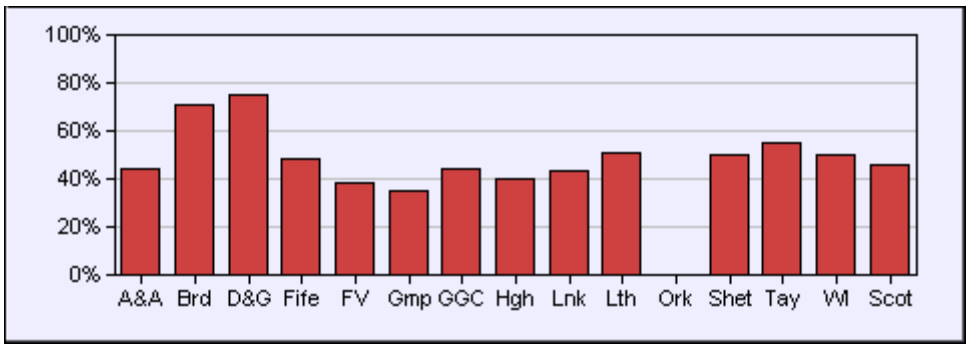
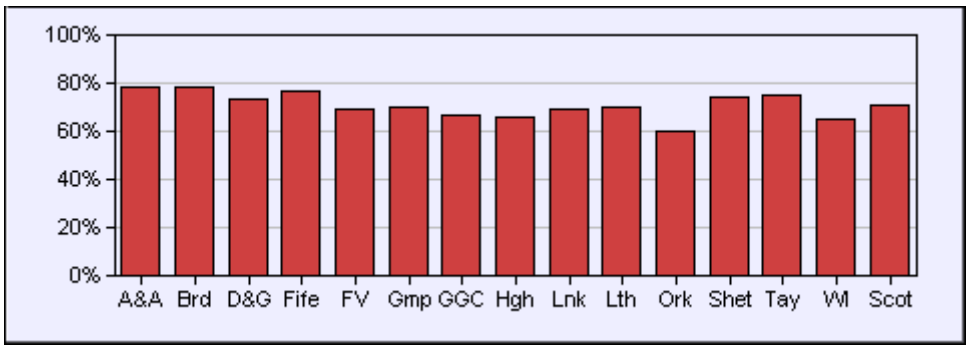


Figure 38. Care Process 2 Type 2 and Other Age 18+ by Region



Care Process 3

Percentage of people with diabetes with good and poor control (HbA1c <58 mmol/mol and >75 mmol/mol) - presented in defined age ranges.

Methodology

Included population = all patients with diabetes are included.

Numerator 1 = patients in each age/type cohort whose latest HbA1c in the prior 15 months was <18 mmol/mol or >75 mmol/mol
Denominator 1 = the number of tested patients in each age/type cohort – those with an HbA1c result in the prior 15 months.

Numerator 2 = "Not Recorded" patients – those who have no HbA1c recorded in the prior 15 months
Denominator 2 = the total number of patients in each age/type cohort (both tested and untested).

Notes

Where no data is shown in the bar-chart, this could indicate that no patients were found in that age-range or that the latest HbA1c of those who were found was not <58 nor >75 (i.e. was in the 58-75 range).

Figure 39. Care Process 3 Type 1 and Other Age 0-5 by Region

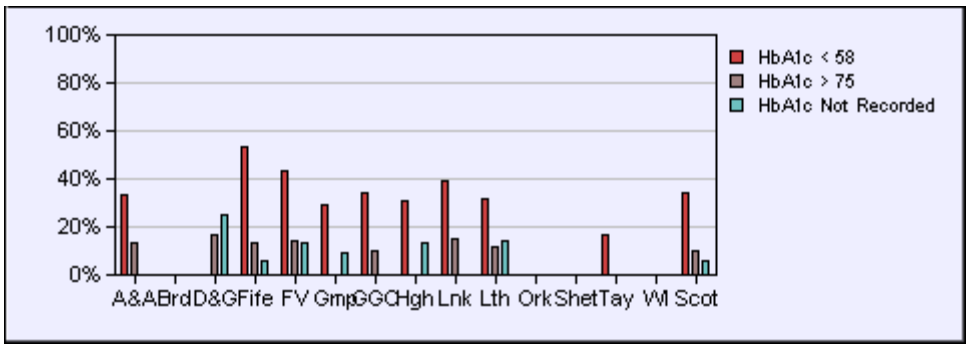


Figure 40. Care Process 3 Type 1 and Other Age 6-11 by Region

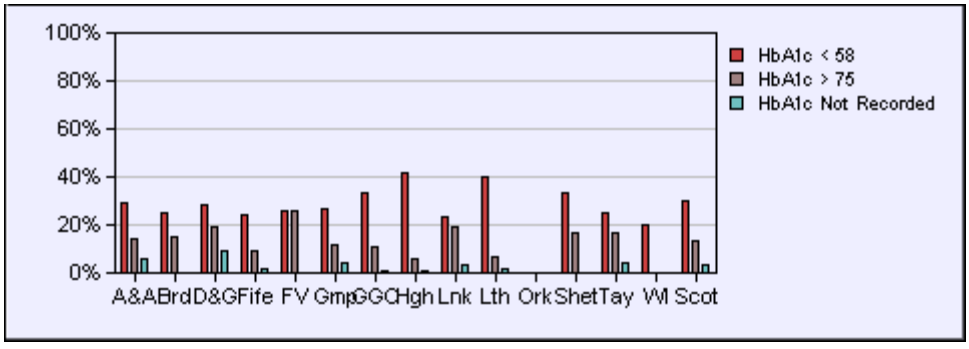


Figure 41. Care Process 3 Type 1 and Other Age 12-17 by Region

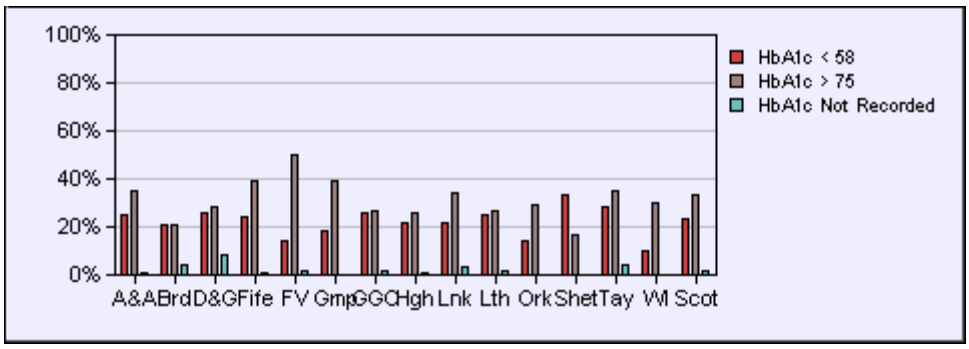


Figure 42. Care Process 3 Type 1 Age 18+ by Region

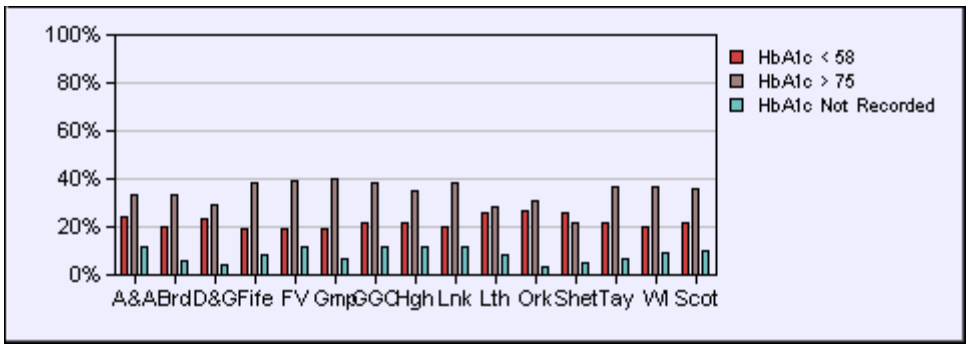
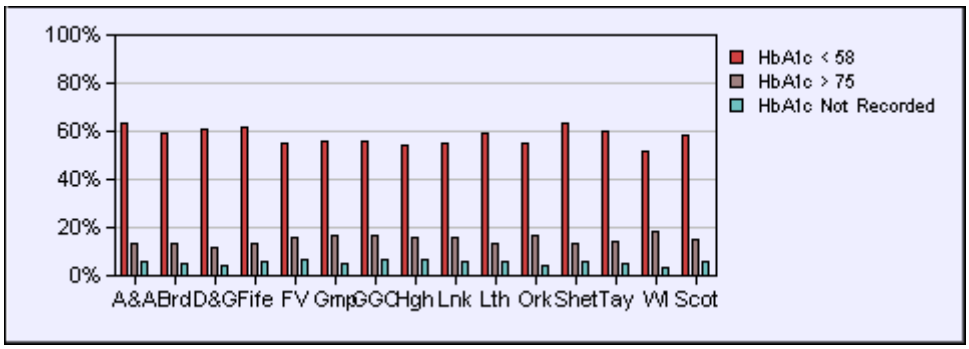


Figure 43. Care Process 3 Type 2 and Other Age 18+ by Region



Care Process 4

Percentage of people with diabetes who have a smoking status of “Current Smoker” recorded in the prior 15 months - presented in defined age ranges.

Methodology

Included population = patients aged 12 or over are included.

Numerator = patients in each age/type cohort whose latest smoking status in the prior 15 months was “Current Smoker”

Denominator = the total number of patients in each age/type cohort who had a smoking status recorded in the prior 15 months.

Notes

Where no data is shown in the bar-chart, this could indicate that no patients were found in that age-range or that no patients in that age-range were recorded as “Current Smokers” in the prior 15 months.

Figure 44. Care Process 4 Type 1 and Other Age 12-17 by Region

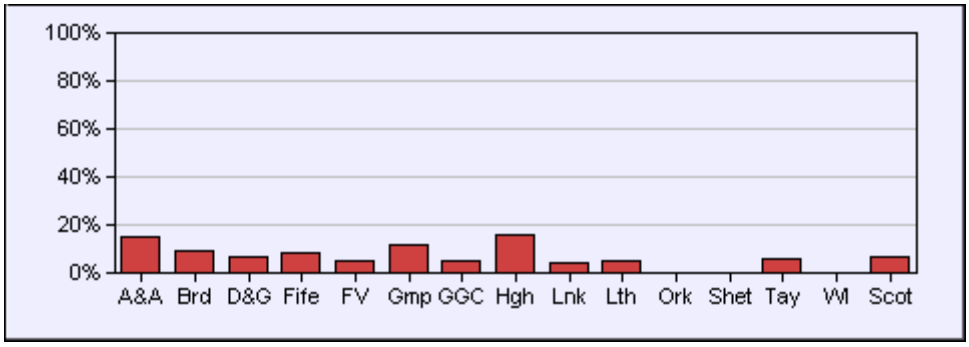


Figure 45. Care Process 4 Type 1 Age 18+ by Region

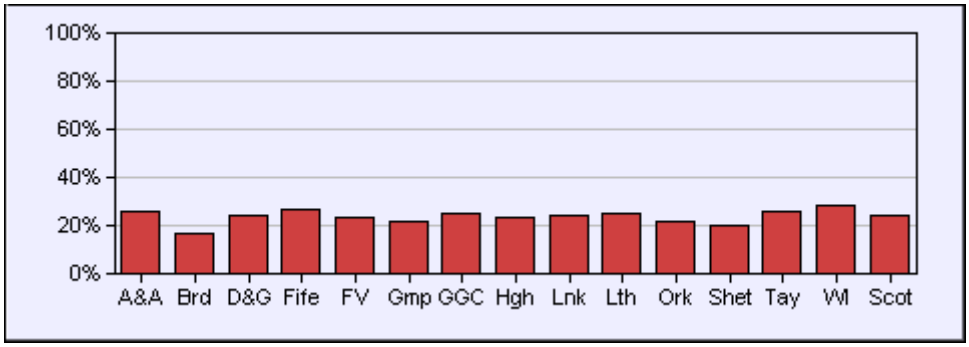
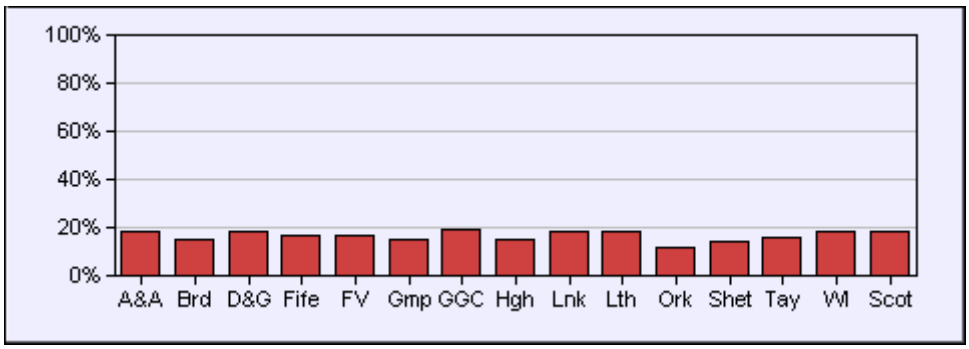


Figure 46. Care Process 4 Type 2 and Other Age 18+ by Region



Care Process 5

Percentage of people with diabetes aged 50 to 70 with a total cholesterol <5mmol/l AND a systolic blood pressure <140 mmHg in the prior 15 months

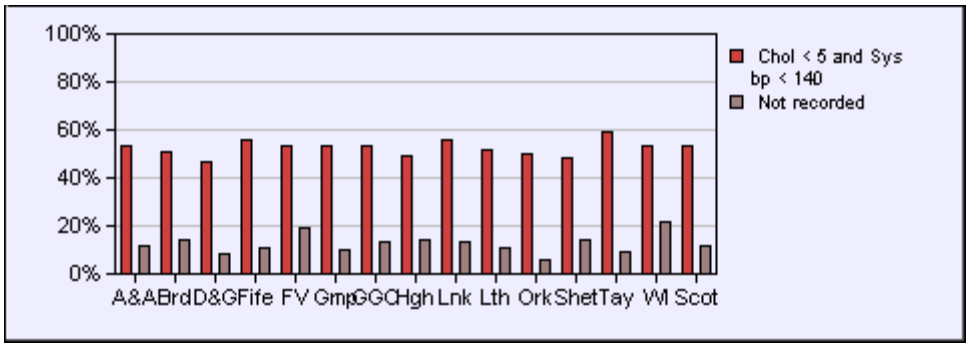
Methodology

Included population = patients aged >=50 and <70 years are included.

Numerator 1 = the number of patients aged 50-70 years whose latest cholesterol was <5mmol AND whose latest SBP was <140
Denominator 1 = the total number of patients aged 50-70 years who had both a cholesterol value and a SBP result recorded in the prior 15 months.

Numerator 2 = “Not Recorded” - the number of patients aged 50-70 years who did NOT have both a cholesterol and a SBP result recorded in the prior 15 months.
Denominator 2 = the total cohort of patients with diabetes aged 50-70 years.

Figure 47. Care Process 5 Age 50-70 by Region



Care Process 6

Percentage of people with diabetes with of new foot ulcers (recorded in the prior year) - presented in defined age ranges.

Methodology

Included population = all patients with diabetes are included.

Numerator = number of patients in each age/type cohort with a new foot ulcer recorded on the SCI-Diabetes Ulcer Management screen

Denominator = the total number of patients in each age/type cohort.

Notes

Results are limited to patients with a new foot ulcer (within 12 months prior to the audit report date) recorded via the Ulcer Management screens and thus may not be a truly comprehensive representation of foot ulcer incidence.

Figure 48. Care Process 6 Type 1 and Other Age 0-17 by Region

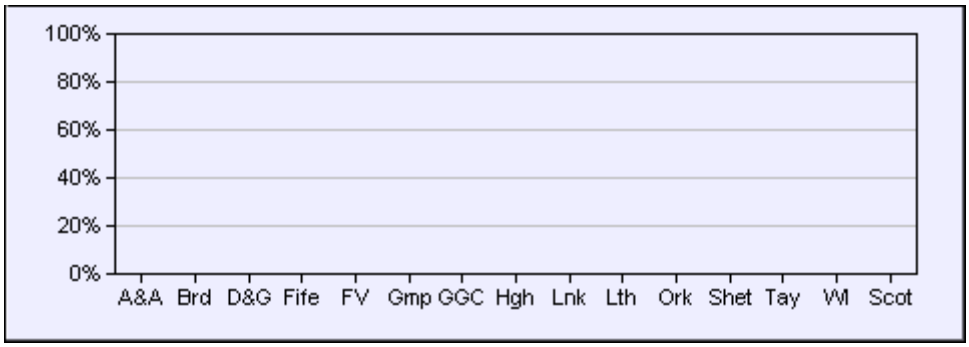


Figure 49. Care Process 6 Type 1 Age 18+ by Region

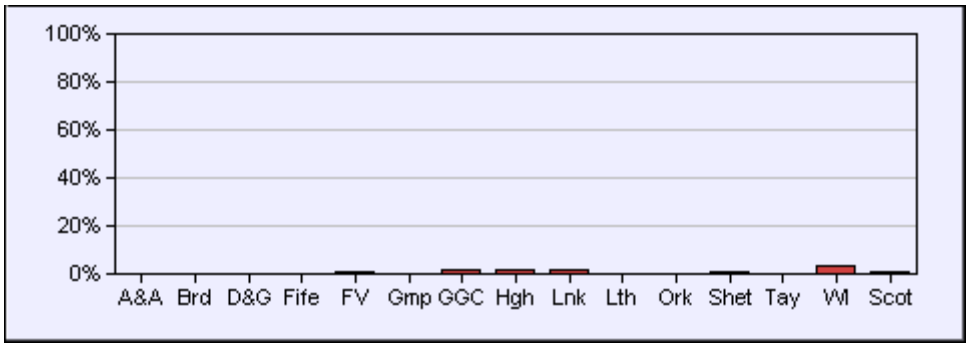
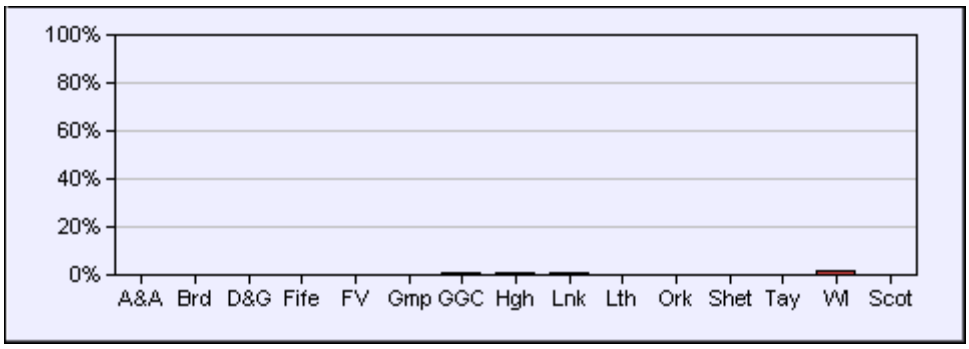


Figure 50. Care Process 6 Type 2 and Other Age 18+ by Region



Care Process 7

Percentage of people with diabetes eligible for diabetic retinopathy screening (DRS) who were screened within last 15 months - presented in defined age ranges.

Methodology

Included population = all patients aged 12 or over who have not been suspended from eye-screening (excepting those flagged as “"Temporarily Unavailable" who are still considered eligible) are included.

Numerator = number of eligible patients in each age/type cohort who had a DRS screening attendance recorded in the prior 15 months

Denominator = the total number of DRS eligible patients in each age/type cohort

Notes

DRS attendance = "Attended - Successfully Screened" or "Attended - Unsuccessfully Screened". Both are considered actual screenings.

Figure 51. Care Process 7 Type 1 and Other Age 12-17 by Region

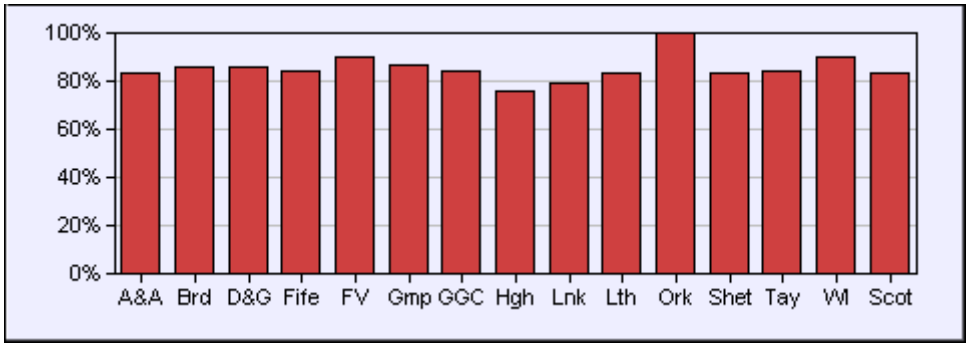


Figure 52. Care Process 7 Type 1 Age 18+ by Region

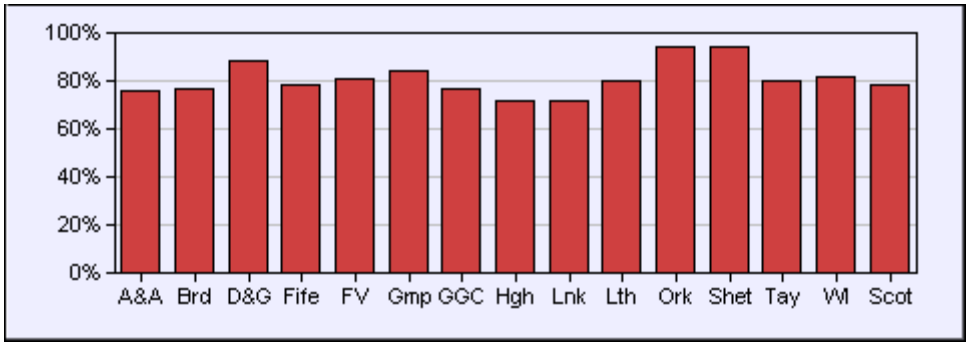
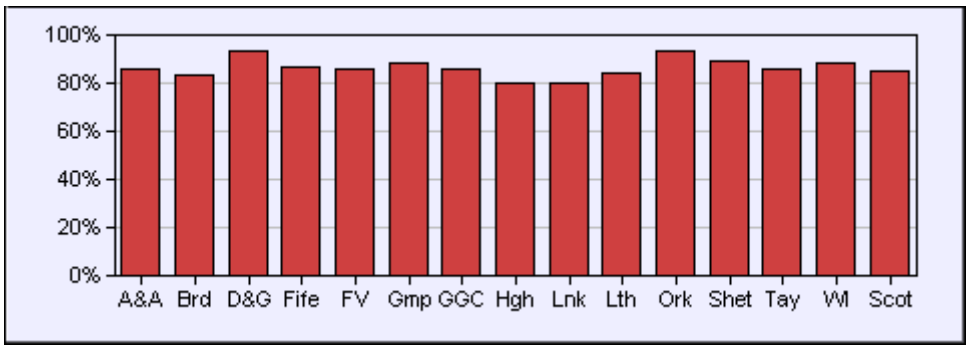


Figure 53. Care Process 7 Type 2 and Other Age 18+ by Region



Care Process 8

Percentage of people with diabetes reaching end stage renal disease (ESRD) or requiring renal replacement therapy (RRT) - presented in defined age ranges.

Methodology

Included population = all patients with diabetes are included.

Numerator = number of patients in each age/type cohort identified as having ESRF or requiring RRT

Denominator = the total number of patients in each age/type cohort.

Notes

ESRF/RRT is where any of the following is true:
•Data item "End Stage Renal Failure Date" is populated with any value
•Data item "Renal Replacement Therapy" is populated with any value
•Either serum creatinine was chronically greater than 500 µmol/l or eGFR was less than 15 (stage 5 renal failure) on two occasions at least three months (93 days) apart within the previous 15 months (method from Scottish Diabetes Survey).

Figure 54. Care Process 8 Type 1 and Other Age 0-17 by Region

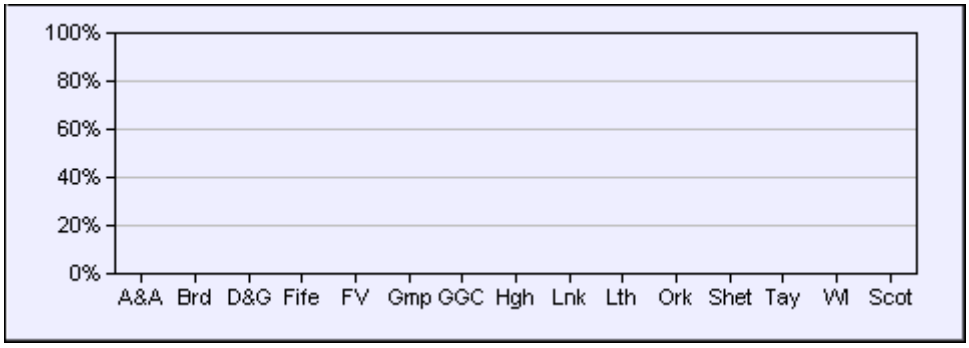


Figure 55. Care Process 8 Type 1 Age 18+ by Region

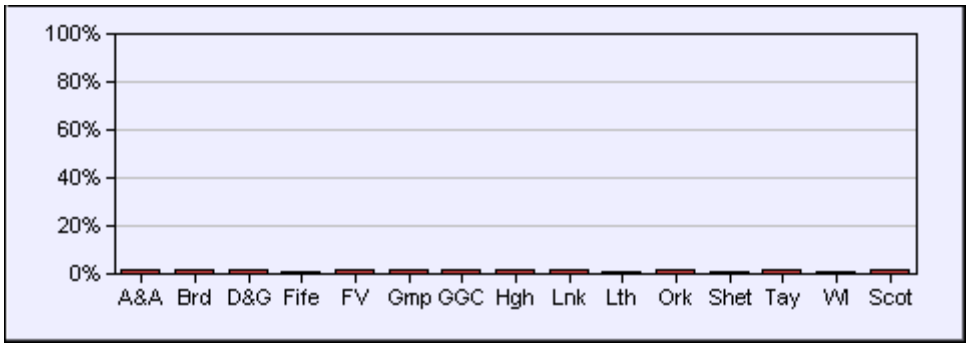
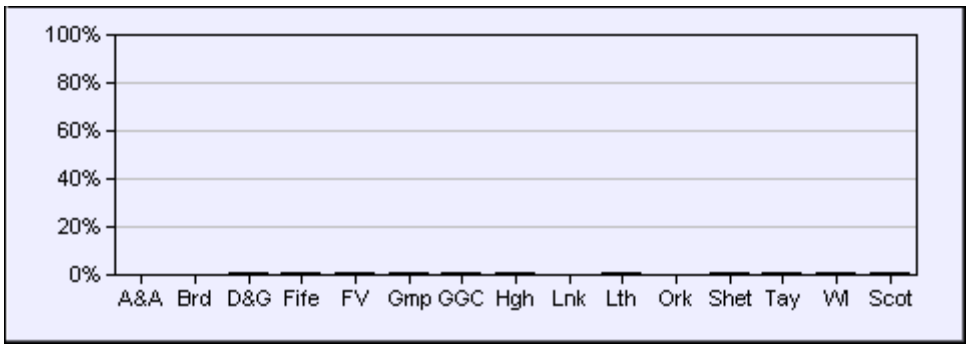


Figure 56. Care Process 8 Type 2 and Other Age 18+ by Region



Care Process 9

Percentage of people with diabetes using CSII (Insulin Pump) therapy - presented in defined age ranges.

Methodology

Included population = all patients with Type 1 diabetes are included.

Numerator = number of Type 1 patients in each age cohort identified as “Using an Insulin Pump Therapy Device”

Denominator = the total number of Type 1 patients in each age cohort.

Figure 57. Care Process 9 Type 1 Age 0-17 by Region

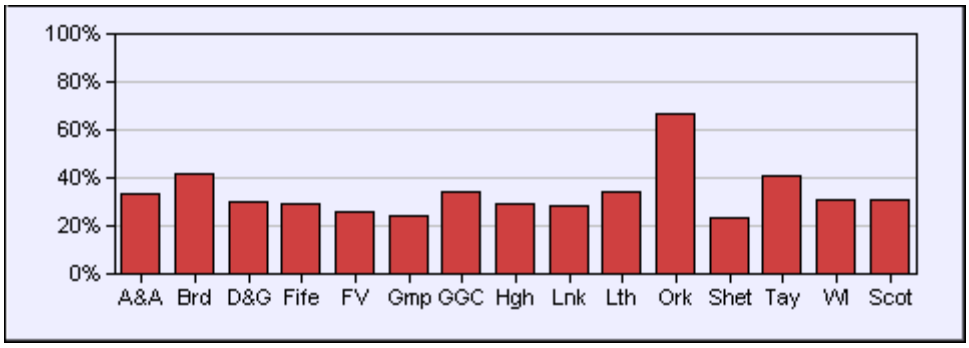
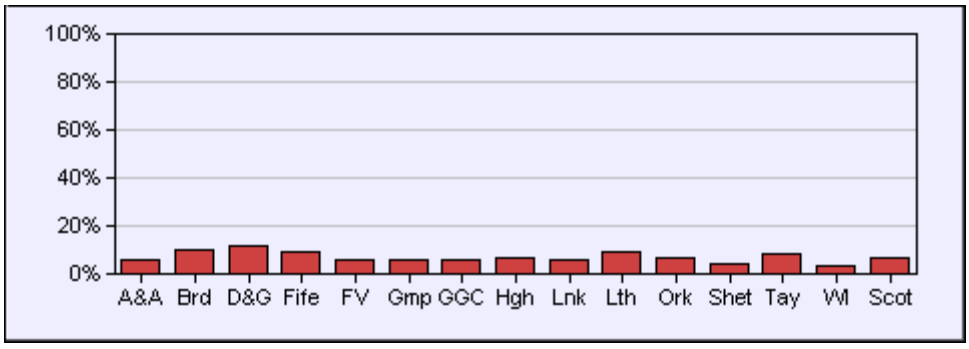


Figure 58. Care Process 9 Type 1 Age 18+ by Region



Care Process 10

Percentage of people with diabetes with a BMI >= 30 who have lost >= 5% body weight in the last year - presented in defined age ranges.

Methodology

Included population = patients who had a BMI >=30 recorded any time in the prior 15 months who also have a weight that precedes their latest weight (which must be recorded in the prior year) by 12 months (+/- 90 days) are included.

Numerator = number of patients in each age/type cohort whose latest weight shows a >=5% reduction since their weight a year ago.

Denominator = the total number of patients in each age/type cohort who meet the required inclusion criteria (see above).

Notes

Patients where their weight has reduced by 5% or more in the last year as determined by:

- Weight "now" is current weight recorded any time within the last year.
- Weight "one year ago" is the weight record closest to Weight "now" - 12 months within the time window of +/- 90 days (3 months).
- Patient meets the criteria if Weight "now" <= (Weight "one year ago" - 5%).
- Only if both values can be determined will the calculation take place.

Figure 59. Care Process 10 Type 1 and Other Age 0-17 by Region

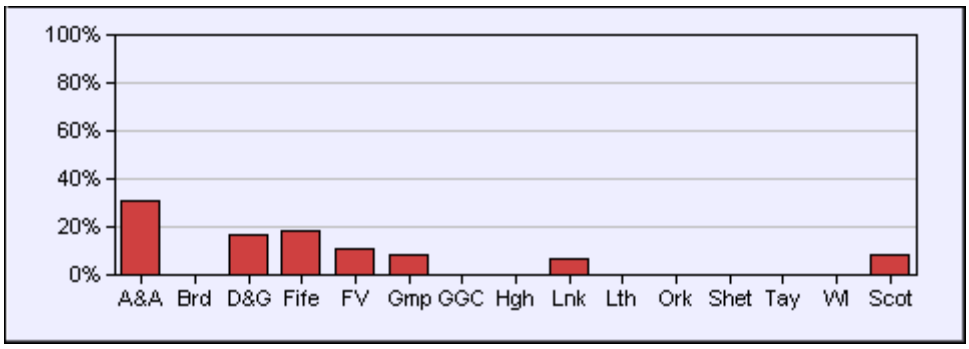


Figure 60. Care Process 10 Type 1 Age 18+ by Region

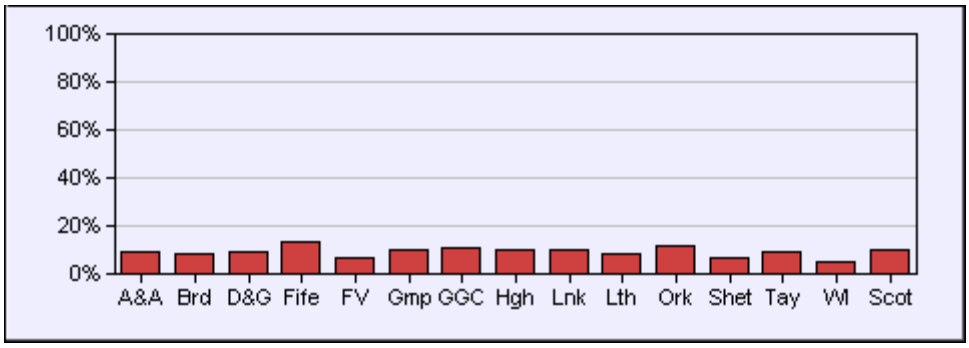
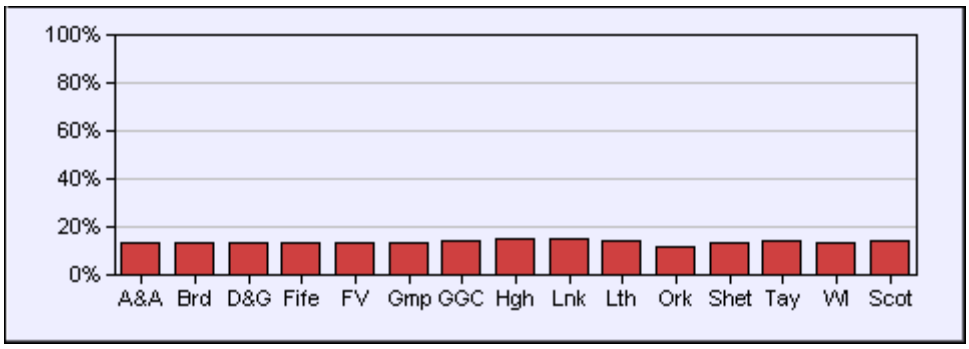


Figure 61. Care Process 10 Type 2 and Other Age 18+ by Region



Care Process 11

Percentage of people with diabetes who have attended Level 3 structured education - presented in defined age ranges.

Methodology

Included population = all patients with diabetes are included.

Numerator = number of patients in each age/type cohort who have at least one "Level 3" education record with "Education Status" = "Participated". The record may have been recorded at any time.

Denominator = the total number of patients in each age/type cohort.

Notes

An "Education Status" of "Participated" can only be recorded manually in SCI-Diabetes.

Figure 62. Care Process 11 Type 1 and Other Age 10-17 by Region

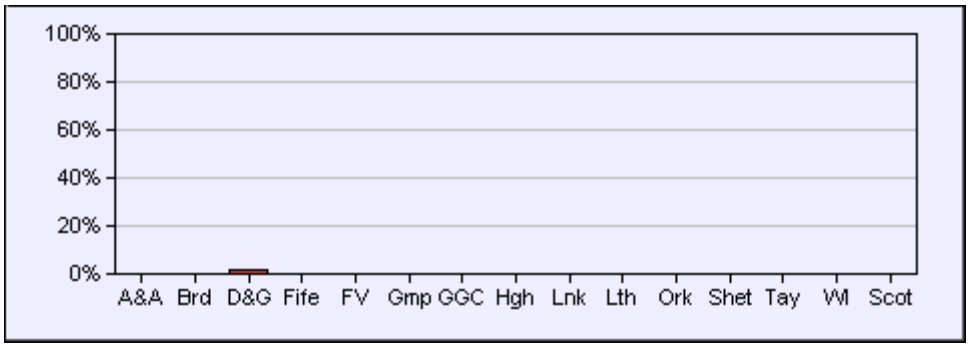


Figure 63. Care Process 11 Type 1 Age 18+ by Region

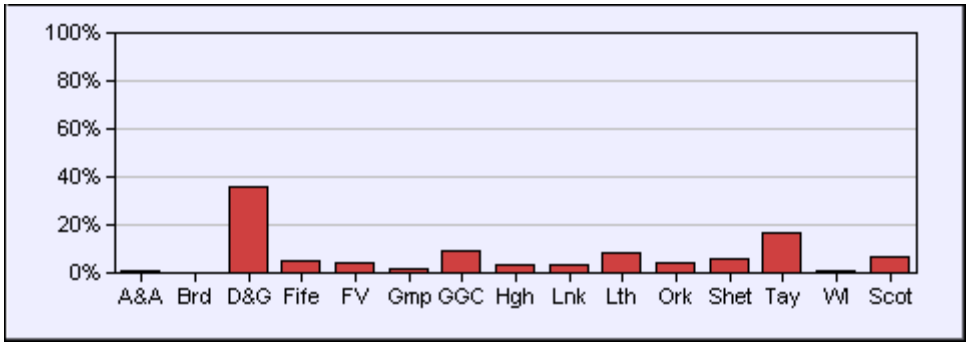
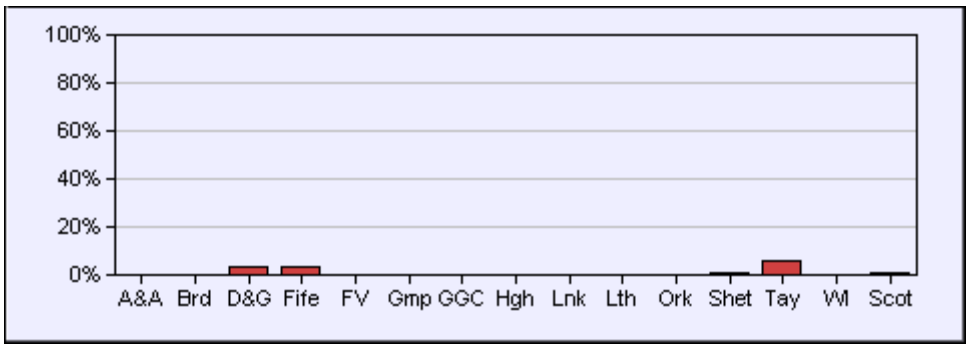


Figure 64. Care Process 11 Type 2 and Other Age 18+ by Region



Care Process 12

Percentage of people with diabetes who are disengaged from diabetes care, i.e. no HbA1c and no retinal screening in the preceding 15 months - presented in defined age ranges.

Methodology

Included population = patients with diabetes aged 12 or over who have a duration of diabetes >= 1 year are included.

Numerator = the total number of patients in each age/type cohort who have no record of HbA1c and no record of retinal screening in the prior 15 months.

Denominator = the total number of patients in each age/type cohort who have a duration of diabetes >= 1 year

Notes

Patients currently suspended from eye-screening or who are under the care of Ophthalmology are considered to be "engaged" with service (as per the Scottish Diabetes Survey).

Figure 65. Care Process 12 Type 1 and Other Age 12-17 by Region

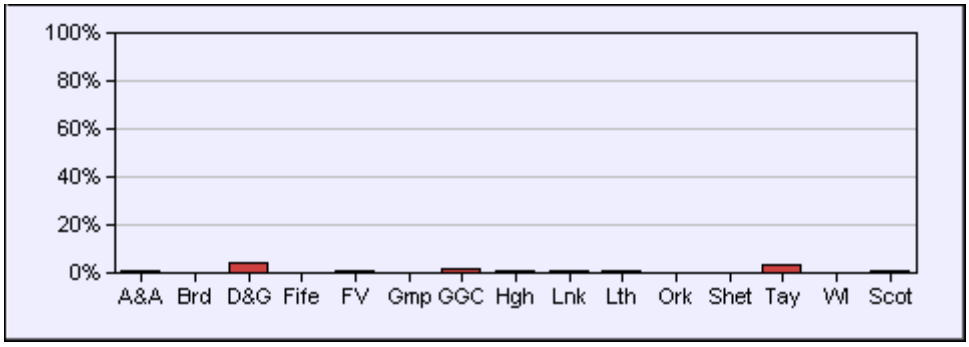


Figure 66. Care Process 12 Type 1 Age 18+ by Region

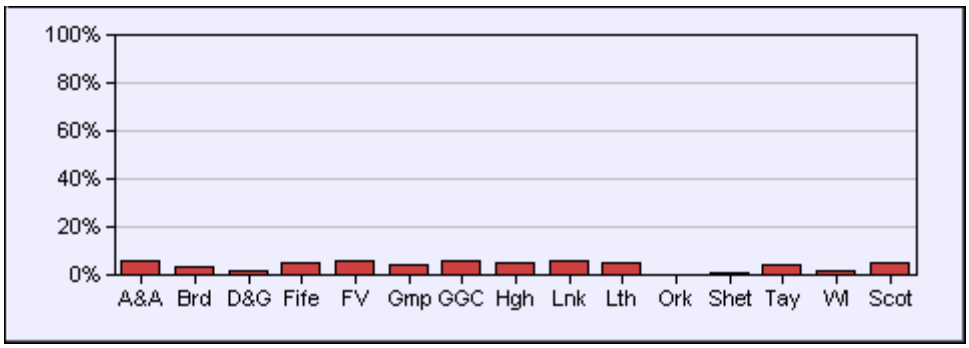
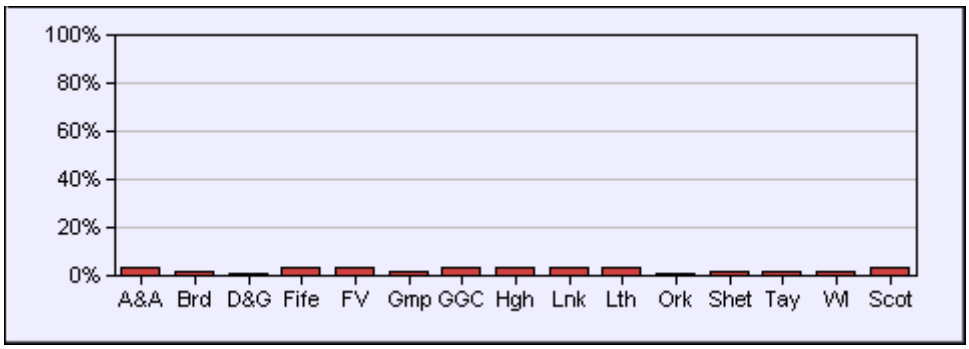


Figure 67. Care Process 12 Type 2 and Other Age 18+ by Region



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Mr Michael Bluett
Prof Helen Colhoun
Dr Scott Cunningham
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Dr Mark Houliston
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Dr William Simpson
Prof Sarah Wild
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The final version was approved by the Scottish Diabetes Data Group on 17 June 2016.

The following were present at this meeting:
Diane Smith A&A
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Sandeep Thekkepat
Charles Flach - SCI-DC
William Urquhart - SCI-DC
Steve Birnie -
Fraser Gibb - Lothian
Brian Kennon - GGC
Alistair Emslie-Smith -SCI-DC/NHS Tayside
John McKnight - Lothian - Chair

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Appendix 1: SCI-Diabetes Data Sources

SCI-Diabetes is NHS Scotland's diabetes patient management system. It is used in every health board and holds data on all people with diabetes living in Scotland. Its purpose is to ensure that patients receive the best possible care for their diabetes by providing authorised members of the healthcare team with the information they require to effectively manage their patients.

Security and Confidentiality

SCI-Diabetes is available to members of the NHS Scotland healthcare team within the confines of the NHS intranet. SCI-Diabetes can only be accessed via a secure connection and data are never shared with any unauthorised third-parties. Diabetes Managed Clinical Networks have been set up in all NHS Scotland health boards and they have the responsibility for managing access to SCI-Diabetes.

Data Sources

SCI-Diabetes is used directly by many professionals, but it also receives data from a variety of data sources in order to maintain its shared electronic record for diabetes. A breakdown of the main sources at February 2016 is as follows:

- Community Health Index (master patient index)
- All ~1,000 general practices across Scotland (EMIS, Vision)
- 42 hospitals (direct data entry on SCI-Diabetes)
- 13 regions linking to local laboratory data (SCI Store – see below)
- National Diabetic Retinopathy Screening (DRS) System (Soarian)
- Inpatient Management: 3 regions linking to local patient administration system for admission, discharge and transfer data (TOPAS, eOASIS, TrakCare)

Registration onto the system can be initiated via the primary and secondary care feeds, registration onto the DRS system or web patient administration forms. As part of the DRS registration process, primary care users are expected to review their SCI-Diabetes lists periodically to ensure that all patients eligible for screening are held.

The current SCI Store and Inpatient Management Implementation matrices are shown below.

Table 76. Progress towards links from SCI Store to SCI-Diabetes.

Region	Implementation Requested	Status	Comments
Ayrshire and Arran	Yes	Live	
Borders	Yes	Live	
Dumfries and Galloway	Yes	Live	
Fife	Yes	Live	
Fife/Tayside	Yes	Live	
Forth Valley	Yes	Live	
Grampian	Yes	Live	
Greater Glasgow and Clyde	Yes	Live	
Highland	Yes	Not scheduled	Argyll & Bute data to be obtained from GGC Store. No progress on Highland store link
Lanarkshire	Yes	Live	
Lothian	Yes	Live	
Orkney	Yes	Live	
Shetland	Yes	Live	
Tayside	Yes	Live	
Western Isles	Yes	Live	

Table 77. Progress towards links from Patient Administration Systems to SCI-Diabetes.

Region	Implementation Requested	Status	Comments
Ayrshire and Arran	Yes	Not scheduled	TrakCare
Borders	Yes	Not scheduled	TrakCare
Dumfries and Galloway	No	Not scheduled	TOPAS
Fife	Yes	Live	eOasis/Tiara
Forth Valley	No	Not scheduled	eWard
Grampian	No	Not scheduled	TrakCare
Greater Glasgow and Clyde	Yes	Not scheduled	TrakCare
Highland	Yes	Live	Main pilot site for TrakCare
Lanarkshire	Yes	Not scheduled	TrakCare
Lothian	Yes	Not scheduled	TrakCare
Orkney	No	Not scheduled	
Shetland	No	Not scheduled	
Tayside	Yes	Live	TOPAS
Western Isles	No	Not scheduled	Cortix

In addition to incoming feeds, SCI-Diabetes data are also transferred to external systems:

- National Diabetic Retinopathy Screening: to maintain the call-recall system
- My Diabetes My Way: patients accessing their own information
- SCI-Diabetes Audit Server: for regional and national reporting
- Back-Population of over 95% of GP systems: in support of a single-point of data entry

The SCI-Diabetes team are currently addressing several strategic objectives, of which will begin implementation in 2016. These include the enhanced management and collaborations with:

- Scottish Ambulance Service (due mid-2016)
- Ward-based connected blood glucose meters (Roche and Abbott)
- WinScribe: supporting letter management
- Electronic Document Transfer Systems: supporting paperless working
- Clinical Portals: allowing access to diabetes data for wider clinical teams

More information about the SCI-DC programme and SCI-Diabetes is available at:
http://www.sci-diabetes.scot.nhs.uk/

The full details of the questions and definitions used in data collection for the 2015 Scottish Diabetes Survey are available on this website.

Appendix 2: Comparison with England/ Wales

This section provides a comparison of the results of this survey with the 2014-15 National Diabetes Audit (NDA) for England and Wales. Please note that the definitions and cut-off values for blood pressure are not exactly the same so the figures may not be directly comparable.

Diabetes Prevalence

The 2015 Scottish Diabetes survey reports that 5.3% of the whole population had diabetes (284,122 people), compared to 4.9% (approximately 1.9 million people) identified from 57% of general practices and 99 specialist services in England and Wales that participated in the National Diabetes Audit for 2014-15 (NDA) [1].

1 **National Diabetes Audit 2014-2015 for England and Wales.**
Available from http://www.hscic.gov.uk/catalogue/PUB19900

Table 79. Comparison of distribution of key risk factors between Scotland and England/Wales by type of diabetes.

	Type 1		Type 2	
	Scottish Diabetes Survey 2015	England and Wales NDA 2014-5	Scottish Diabetes Survey 2015	England and Wales NDA 2014-5
HbA1c < 58mmol/mol (7.5%),	23.4%	29.9%	61.4%	66.1%
BP < 130/80	46.0%			
BP < 140/80		76.4%	77.5%	74.2%
Total cholesterol ≤5 mmol/l	70.3%	71.3%	79.7%	77.5%

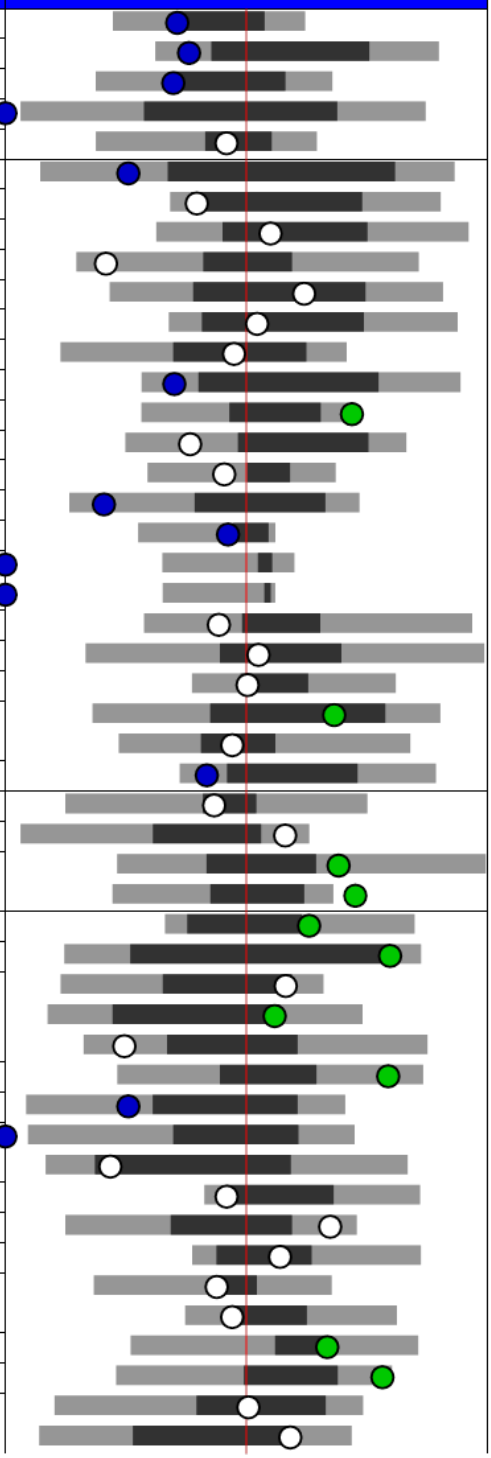
Appendix 3: Variability of HbA1c

In Scotland laboratory services are provided by 14 separately funded Health Boards from multiple sites. A range of technologies is used in those various sites, including ion exchange, affinity chromatography and immunoassay, and historically these assays have not shown good agreement, even though all systems have been similarly calibrated against IFCC standards since 2011. At the start of 2015, methods-specific bias (consistent deviation from all-method mean values) observed in the UK National External Quality Assurance Scheme (NEQAS) still suggested that a between-board difference of up to 8% might be expected, which could give the appearance of significant differences in glycaemic control between boards. The between method agreement has been improving, but 2015 data will be influenced, both by these historical differences between methods, and by a change of method adopted by many Scottish laboratories during the course of that year.

Appendix 4: Health Board Performance

Diabetes Health Board Spine Chart (Ayrshire and Arran) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	2253	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	20483	5.0	sr2	4.7
	Crude prevalence of T1 diabetes	2253	0.6	%	0.6
	Crude prevalence of T2 diabetes	20483	5.5	%	4.7
	Crude mortality rate for all people with diabetes	908	3.8	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	18996	84.6	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	2017	89.5	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	19283	94.1	%	93.9
	% of diabetes pop (T1) with recorded BP	1885	83.7	%	86.6
	% of diabetes pop (T2) with recorded BP	19304	94.2	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	1606	81.1	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	18237	89.0	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	1355	60.1	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	17617	86.0	%	83.3
	% of diabetes pop (T1) with recorded creatinine	1814	84.6	%	87.3
	% of diabetes pop (T2) with recorded creatinine	19309	94.3	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1005	46.9	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	13472	65.8	%	71.0
	% of diabetes pop (T1) with recorded eGFR	392	19.8	%	83.2
	% of diabetes pop (T2) with recorded eGFR	5866	28.6	%	89.2
	% of diabetes pop (T1) with recorded eye screen	1724	80.7	%	82.3
	% of diabetes pop (T2) with recorded eye screen	17538	86.3	%	86.0
	% of diabetes pop (T1) with recorded foot risk	1382	61.3	%	61.2
	% of diabetes pop (T2) with recorded foot risk	16493	80.5	%	77.8
Smoking	% of diabetes pop (T1) current smokers	353	15.7	%	15.3
	% of diabetes pop (T2) current smokers	3140	15.3	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	447	22.6	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	9720	47.5	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	1651	73.3	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	15596	76.1	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	679	30.1	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	2706	13.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	442	22.3	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	3600	17.6	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	41	1.8	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	84	0.4	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	1249	58.2	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	6222	30.4	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	88	3.9	%	3.5
	% of diabetes pop (T2) with previous MI	2040	10.0	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	53	2.4	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	1455	7.1	%	7.4
	% of diabetes pop (T1) with previous stroke	53	2.4	%	2.1
	% of diabetes pop (T2) with previous stroke	1117	5.5	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	118	5.2	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	440	2.1	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	26	1.2	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	131	0.6	%	0.7



Spine chart key: % percent
sr2=age-sex standardised rate per 100 population

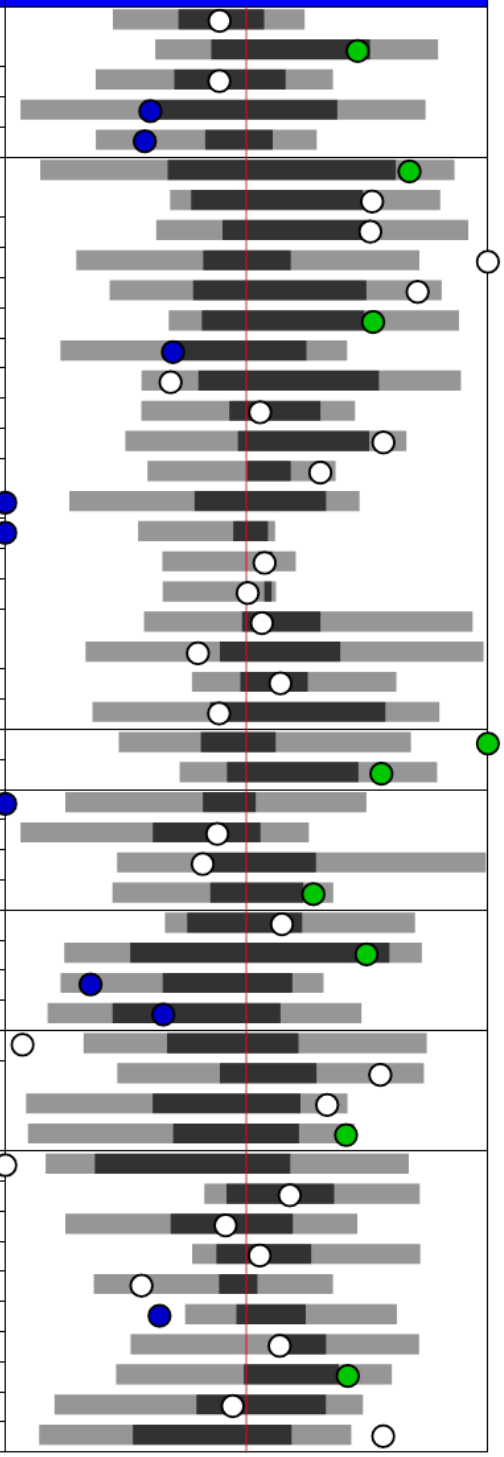
Spine chart key:
- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average

'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Borders) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	664	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	5726	4.2	sr2	4.7
	Crude prevalence of T1 diabetes	664	0.6	%	0.6
	Crude prevalence of T2 diabetes	5726	5.0	%	4.7
	Crude mortality rate for all people with diabetes	286	4.3	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	5632	89.1	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	626	94.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	5458	95.3	%	93.9
	% of diabetes pop (T1) with recorded BP	609	91.7	%	86.6
	% of diabetes pop (T2) with recorded BP	5478	95.7	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	526	88.3	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	4953	86.5	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	398	59.9	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	4788	83.6	%	83.3
	% of diabetes pop (T1) with recorded creatinine	601	93.9	%	87.3
	% of diabetes pop (T2) with recorded creatinine	5555	97.0	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	232	36.2	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	177	3.1	%	71.0
	% of diabetes pop (T1) with recorded eGFR	524	87.9	%	83.2
	% of diabetes pop (T2) with recorded eGFR	5124	89.5	%	89.2
	% of diabetes pop (T1) with recorded eye screen	522	83.1	%	82.3
	% of diabetes pop (T2) with recorded eye screen	4743	84.5	%	86.0
	% of diabetes pop (T1) with recorded foot risk	431	64.9	%	61.2
	% of diabetes pop (T2) with recorded foot risk	4405	76.9	%	77.8
Smoking	% of diabetes pop (T1) current smokers	66	9.9	%	15.3
	% of diabetes pop (T2) current smokers	697	12.2	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	173	29.0	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	2800	48.9	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	445	67.0	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	4280	74.7	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	209	31.5	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	774	13.5	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	180	30.2	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	1140	19.9	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	14	2.1	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	24	0.4	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	301	47.0	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	1040	18.2	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	28	4.2	%	3.5
	% of diabetes pop (T2) with previous MI	531	9.3	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	18	2.7	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	417	7.3	%	7.4
	% of diabetes pop (T1) with previous stroke	20	3.0	%	2.1
	% of diabetes pop (T2) with previous stroke	356	6.2	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	47	7.1	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	155	2.7	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	8	1.2	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	30	0.5	%	0.7



Spine chart key: % percent
sr2=age-sex standardised rate per 100 population

Spine chart key:
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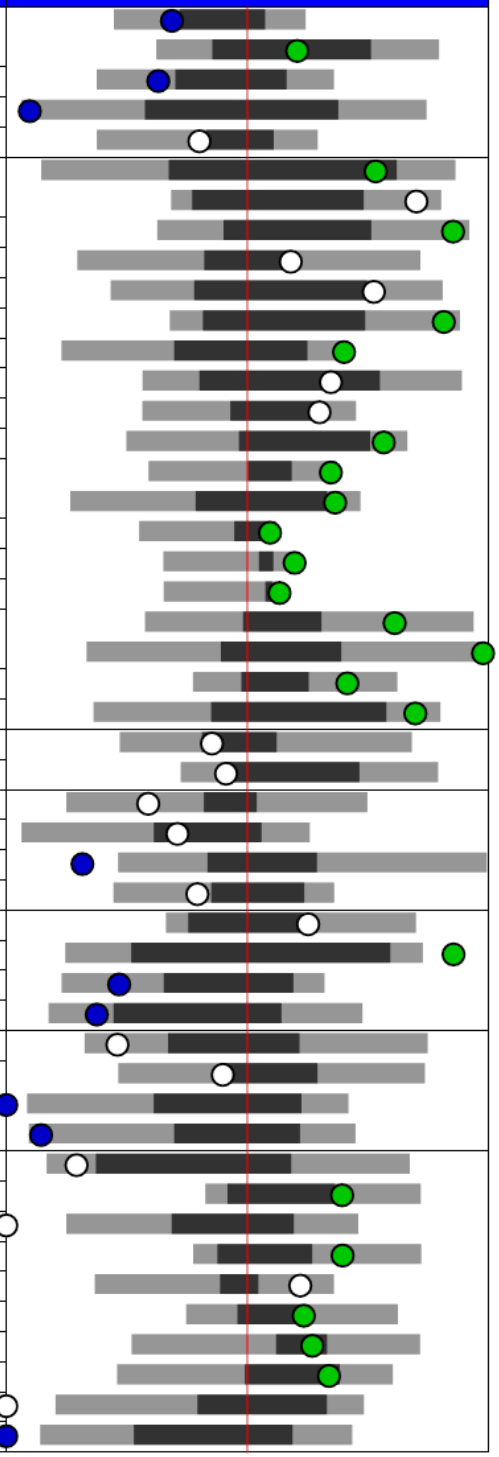
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Dumfries and Galloway) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	923	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	8155	4.5	sr2	4.7
	Crude prevalence of T1 diabetes	923	0.6	%	0.6
	Crude prevalence of T2 diabetes	8155	5.4	%	4.7
	Crude mortality rate for all people with diabetes	378	4.0	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	7954	88.6	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	881	95.4	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	7852	96.3	%	93.9
	% of diabetes pop (T1) with recorded BP	808	87.5	%	86.6
	% of diabetes pop (T2) with recorded BP	7756	95.1	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	770	92.5	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	7621	93.5	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	635	68.8	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	6943	85.1	%	83.3
	% of diabetes pop (T1) with recorded creatinine	827	93.9	%	87.3
	% of diabetes pop (T2) with recorded creatinine	7932	97.3	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	631	71.6	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	6306	77.4	%	71.0
	% of diabetes pop (T1) with recorded eGFR	795	95.6	%	83.2
	% of diabetes pop (T2) with recorded eGFR	7927	97.3	%	89.2
	% of diabetes pop (T1) with recorded eye screen	787	90.4	%	82.3
	% of diabetes pop (T2) with recorded eye screen	7478	93.1	%	86.0
	% of diabetes pop (T1) with recorded foot risk	665	72.0	%	61.2
	% of diabetes pop (T2) with recorded foot risk	6771	83.0	%	77.8
Smoking	% of diabetes pop (T1) current smokers	149	16.1	%	15.3
	% of diabetes pop (T2) current smokers	1223	15.0	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	205	24.6	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	4059	49.8	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	567	61.4	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	5777	70.8	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	279	30.2	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	1011	12.4	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	242	29.1	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	1739	21.3	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	17	1.8	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	49	0.6	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	574	65.2	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	2374	29.1	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	37	4.0	%	3.5
	% of diabetes pop (T2) with previous MI	711	8.7	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	32	3.5	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	535	6.6	%	7.4
	% of diabetes pop (T1) with previous stroke	15	1.6	%	2.1
	% of diabetes pop (T2) with previous stroke	384	4.7	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	54	5.9	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	247	3.0	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	18	2.0	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	81	1.0	%	0.7



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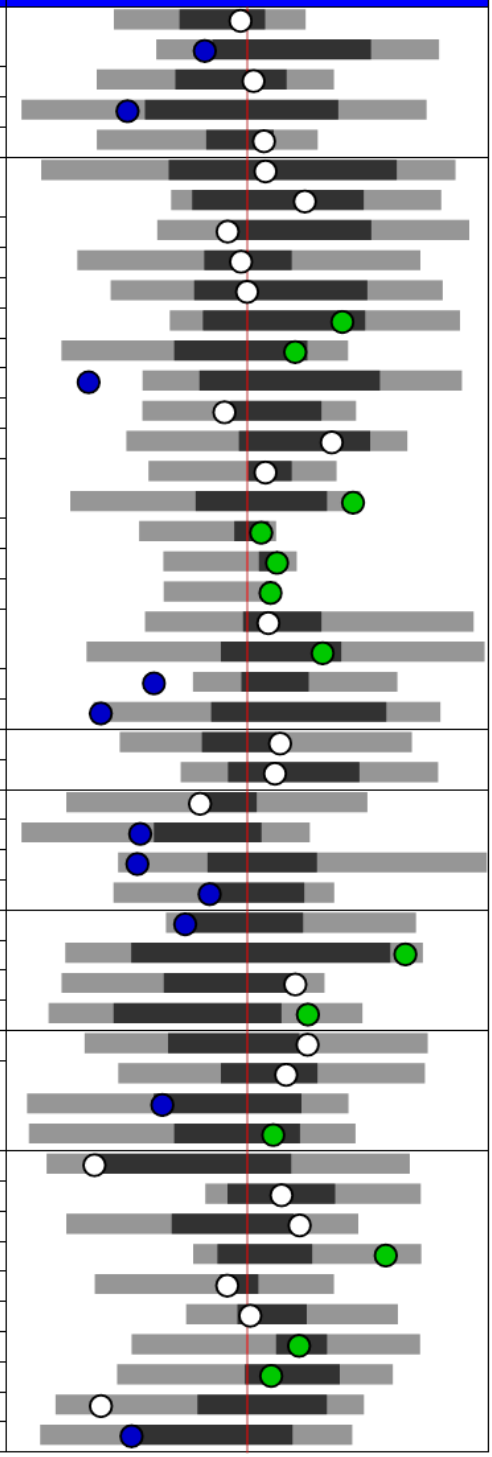
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Fife) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	2073	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	18742	4.9	sr2	4.7
	Crude prevalence of T1 diabetes	2073	0.6	%	0.6
	Crude prevalence of T2 diabetes	18742	5.1	%	4.7
	Crude mortality rate for all people with diabetes	789	3.6	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	17891	86.8	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	1916	92.4	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	17547	93.6	%	93.9
	% of diabetes pop (T1) with recorded BP	1793	86.5	%	86.6
	% of diabetes pop (T2) with recorded BP	17527	93.5	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	1626	86.3	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	17143	91.5	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	1147	55.3	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	15493	82.7	%	83.3
	% of diabetes pop (T1) with recorded creatinine	1830	91.4	%	87.3
	% of diabetes pop (T2) with recorded creatinine	17879	95.4	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1473	73.5	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	14025	74.9	%	71.0
	% of diabetes pop (T1) with recorded eGFR	1713	90.9	%	83.2
	% of diabetes pop (T2) with recorded eGFR	17801	95.0	%	89.2
	% of diabetes pop (T1) with recorded eye screen	1666	83.4	%	82.3
	% of diabetes pop (T2) with recorded eye screen	16295	88.2	%	86.0
	% of diabetes pop (T1) with recorded foot risk	1059	51.1	%	61.2
	% of diabetes pop (T2) with recorded foot risk	13719	73.2	%	77.8
Smoking	% of diabetes pop (T1) current smokers	303	14.6	%	15.3
	% of diabetes pop (T2) current smokers	2645	14.1	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	434	23.0	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	9481	50.6	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	1326	64.0	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	13354	71.3	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	753	36.3	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	2441	13.0	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	414	22.0	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	3165	16.9	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	27	1.3	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	99	0.5	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	1129	56.4	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	3899	20.8	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	82	4.0	%	3.5
	% of diabetes pop (T2) with previous MI	1757	9.4	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	51	2.5	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	1158	6.2	%	7.4
	% of diabetes pop (T1) with previous stroke	47	2.3	%	2.1
	% of diabetes pop (T2) with previous stroke	988	5.3	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	132	6.4	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	743	4.0	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	34	1.6	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	157	0.8	%	0.7



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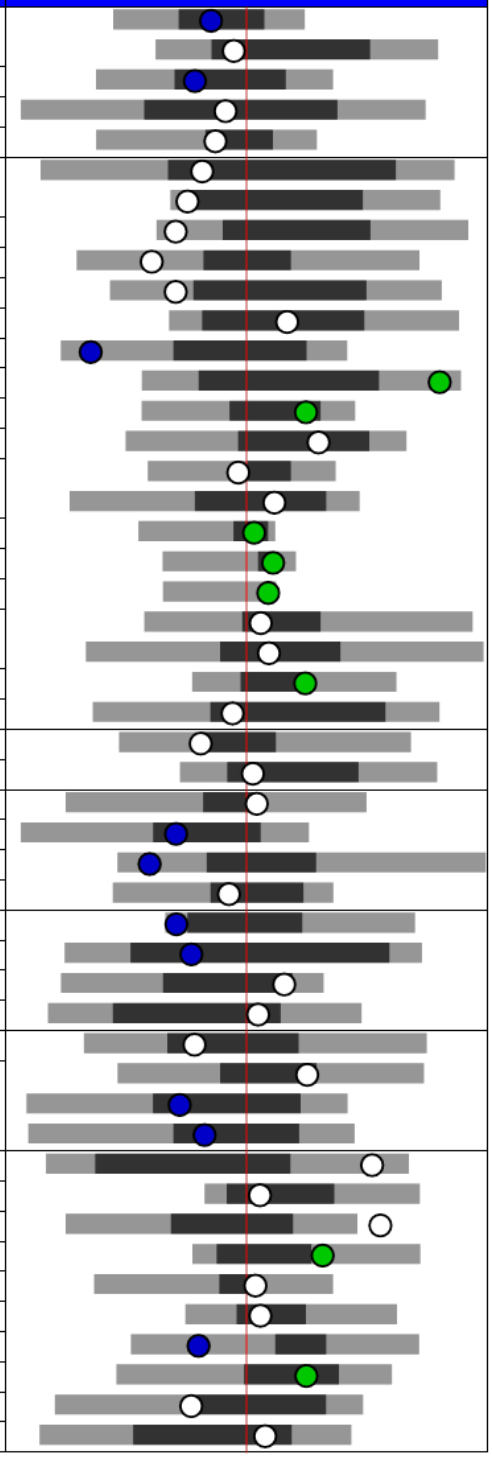
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Forth Valley) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	1789	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	14313	4.8	sr2	4.7
	Crude prevalence of T1 diabetes	1789	0.6	%	0.6
	Crude prevalence of T2 diabetes	14313	4.8	%	4.7
	Crude mortality rate for all people with diabetes	655	3.9	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	13635	85.8	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	1597	89.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	13314	93.0	%	93.9
	% of diabetes pop (T1) with recorded BP	1514	84.6	%	86.6
	% of diabetes pop (T2) with recorded BP	13258	92.6	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	1319	83.0	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	11897	83.2	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	1340	74.9	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	12139	84.8	%	83.3
	% of diabetes pop (T1) with recorded creatinine	1553	90.8	%	87.3
	% of diabetes pop (T2) with recorded creatinine	13548	94.7	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1115	65.2	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	10458	73.1	%	71.0
	% of diabetes pop (T1) with recorded eGFR	1433	90.1	%	83.2
	% of diabetes pop (T2) with recorded eGFR	13541	94.6	%	89.2
	% of diabetes pop (T1) with recorded eye screen	1416	83.0	%	82.3
	% of diabetes pop (T2) with recorded eye screen	12369	86.6	%	86.0
	% of diabetes pop (T1) with recorded foot risk	1209	67.6	%	61.2
	% of diabetes pop (T2) with recorded foot risk	11070	77.3	%	77.8
Smoking	% of diabetes pop (T1) current smokers	293	16.4	%	15.3
	% of diabetes pop (T2) current smokers	2075	14.5	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	338	21.3	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	7128	49.8	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	1155	64.6	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	10294	71.9	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	657	36.7	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	2262	15.8	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	356	22.4	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	2565	17.9	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	29	1.6	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	72	0.5	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	947	55.3	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	3326	23.2	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	56	3.1	%	3.5
	% of diabetes pop (T2) with previous MI	1374	9.6	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	39	2.2	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	963	6.7	%	7.4
	% of diabetes pop (T1) with previous stroke	36	2.0	%	2.1
	% of diabetes pop (T2) with previous stroke	738	5.2	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	183	10.2	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	484	3.4	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	24	1.3	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	96	0.7	%	0.7



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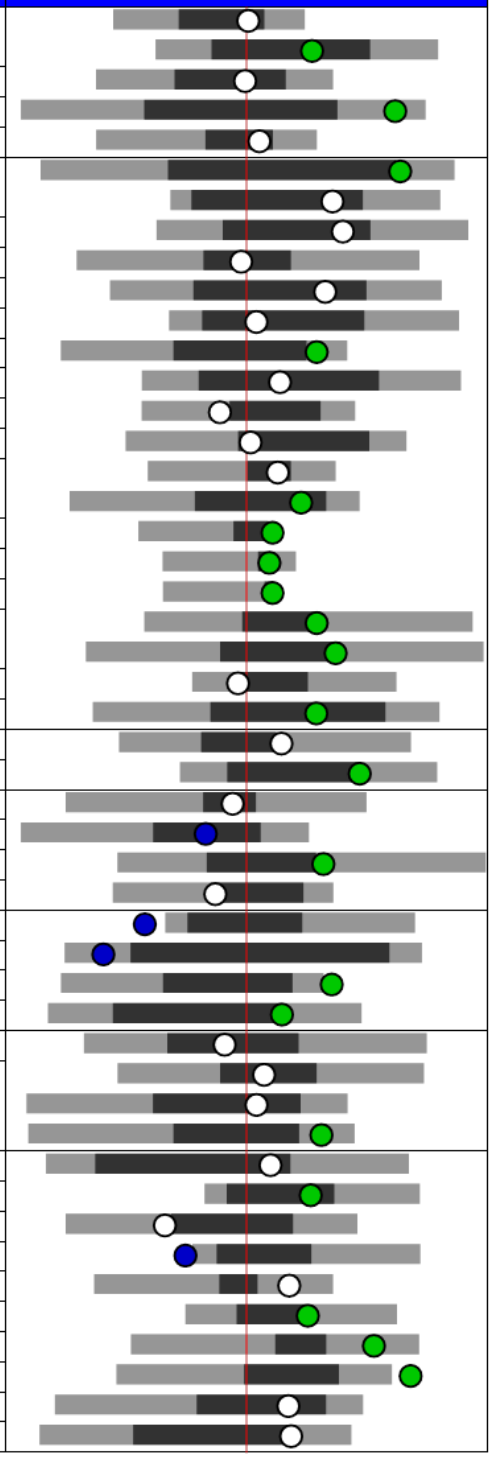
5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Grampian) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	3322	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	24433	4.4	sr2	4.7
	Crude prevalence of T1 diabetes	3322	0.6	%	0.6
	Crude prevalence of T2 diabetes	24433	4.2	%	4.7
	Crude mortality rate for all people with diabetes	1057	3.7	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	24402	89.0	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	3096	93.2	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	23210	95.0	%	93.9
	% of diabetes pop (T1) with recorded BP	2874	86.5	%	86.6
	% of diabetes pop (T2) with recorded BP	23091	94.5	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	2428	81.1	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	22582	92.4	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	2193	66.0	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	20174	82.6	%	83.3
	% of diabetes pop (T1) with recorded creatinine	2795	87.5	%	87.3
	% of diabetes pop (T2) with recorded creatinine	23411	95.8	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	2174	68.0	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	19132	78.3	%	71.0
	% of diabetes pop (T1) with recorded eGFR	2669	89.1	%	83.2
	% of diabetes pop (T2) with recorded eGFR	23386	95.7	%	89.2
	% of diabetes pop (T1) with recorded eye screen	2743	86.1	%	82.3
	% of diabetes pop (T2) with recorded eye screen	21439	88.6	%	86.0
	% of diabetes pop (T1) with recorded foot risk	2003	60.3	%	61.2
	% of diabetes pop (T2) with recorded foot risk	19537	80.0	%	77.8
Smoking	% of diabetes pop (T1) current smokers	484	14.6	%	15.3
	% of diabetes pop (T2) current smokers	3070	12.6	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	659	22.0	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	12015	49.2	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	2411	72.6	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	17461	71.5	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	1272	38.3	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	4142	17.0	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	613	20.5	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	4257	17.4	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	51	1.5	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	135	0.6	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	1630	51.0	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	4656	19.1	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	114	3.4	%	3.5
	% of diabetes pop (T2) with previous MI	2211	9.0	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	97	2.9	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	1940	7.9	%	7.4
	% of diabetes pop (T1) with previous stroke	57	1.7	%	2.1
	% of diabetes pop (T2) with previous stroke	1138	4.7	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	114	3.4	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	413	1.7	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	34	1.0	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	156	0.6	%	0.7



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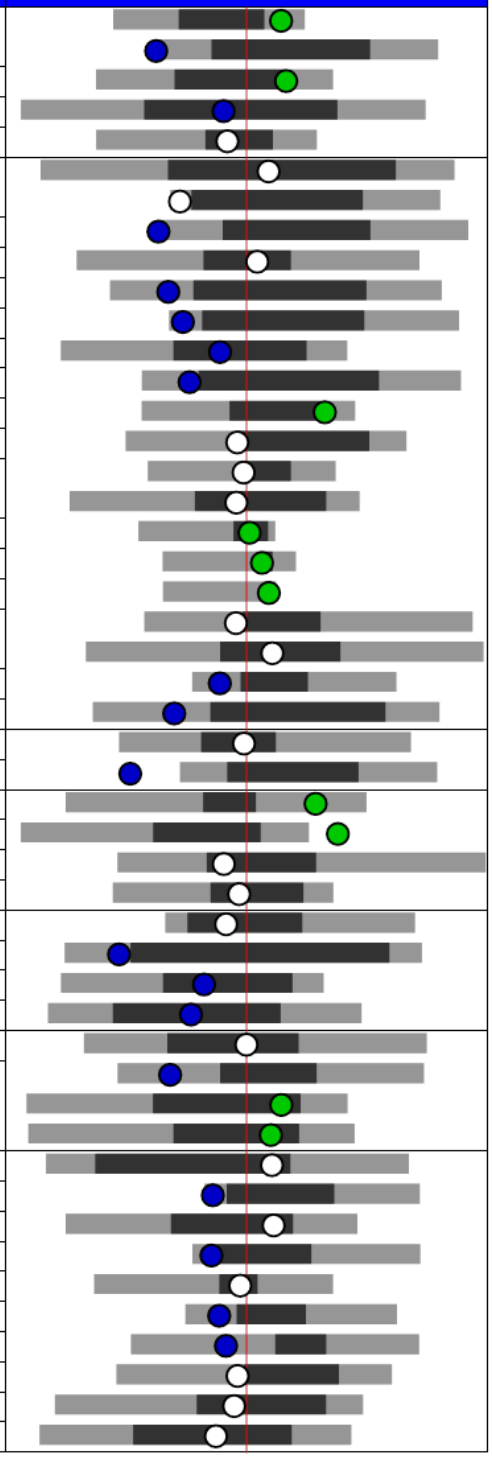
5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Greater Glasgow and Clyde) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	6244	0.5	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	54515	5.1	sr2	4.7
	Crude prevalence of T1 diabetes	6244	0.5	%	0.6
	Crude prevalence of T2 diabetes	54515	4.8	%	4.7
	Crude mortality rate for all people with diabetes	2436	3.8	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	52271	86.8	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	5561	89.1	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	50599	92.8	%	93.9
	% of diabetes pop (T1) with recorded BP	5423	86.9	%	86.6
	% of diabetes pop (T2) with recorded BP	50446	92.5	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	4354	76.5	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	48214	88.5	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	3808	61.0	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	46501	85.3	%	83.3
	% of diabetes pop (T1) with recorded creatinine	5254	86.8	%	87.3
	% of diabetes pop (T2) with recorded creatinine	51686	94.8	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	3695	61.1	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	39153	71.8	%	71.0
	% of diabetes pop (T1) with recorded eGFR	4959	87.2	%	83.2
	% of diabetes pop (T2) with recorded eGFR	51666	94.8	%	89.2
	% of diabetes pop (T1) with recorded eye screen	4921	81.7	%	82.3
	% of diabetes pop (T2) with recorded eye screen	47073	86.7	%	86.0
	% of diabetes pop (T1) with recorded foot risk	3641	58.3	%	61.2
	% of diabetes pop (T2) with recorded foot risk	41168	75.5	%	77.8
Smoking	% of diabetes pop (T1) current smokers	962	15.4	%	15.3
	% of diabetes pop (T2) current smokers	9113	16.7	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	1106	19.4	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	25245	46.3	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	4245	68.0	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	39394	72.3	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	2139	34.3	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	9130	16.7	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	1458	25.6	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	10540	19.3	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	92	1.5	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	360	0.7	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	3002	49.6	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	11374	20.9	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	214	3.4	%	3.5
	% of diabetes pop (T2) with previous MI	5512	10.1	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	159	2.5	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	4203	7.7	%	7.4
	% of diabetes pop (T1) with previous stroke	134	2.1	%	2.1
	% of diabetes pop (T2) with previous stroke	3048	5.6	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	572	9.2	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	2451	4.5	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	75	1.2	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	399	0.7	%	0.7



Spine chart key: % percent
sr2=age-sex standardised rate per 100 population

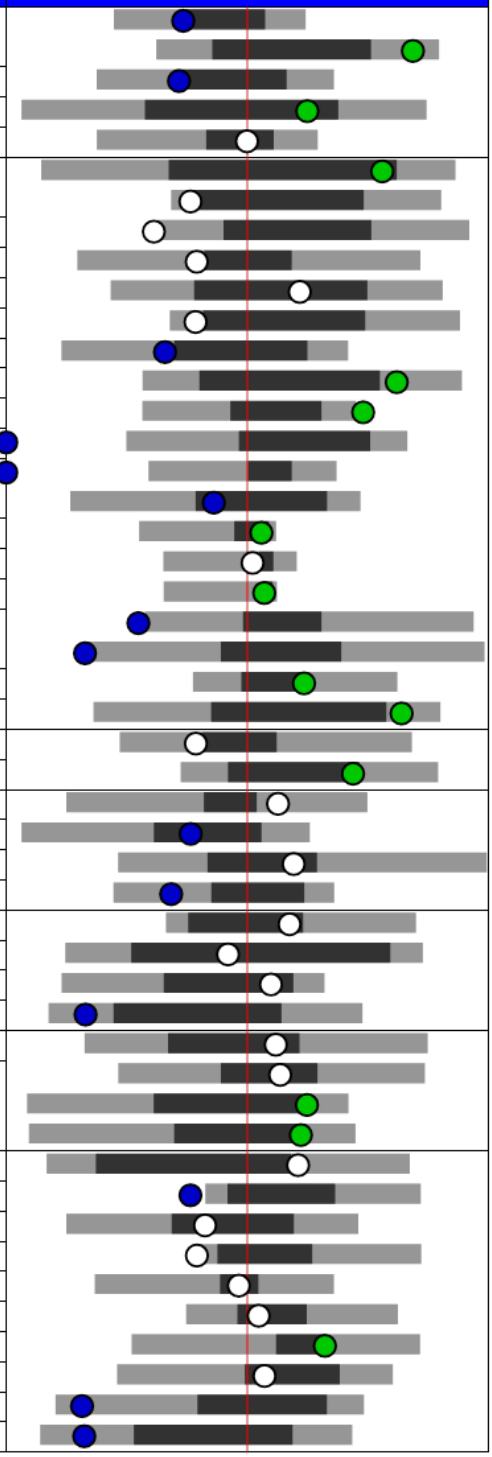
Spine chart key:
- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average

'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Highland) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	1939	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	14391	3.9	sr2	4.7
	Crude prevalence of T1 diabetes	1939	0.6	%	0.6
	Crude prevalence of T2 diabetes	14391	4.5	%	4.7
	Crude mortality rate for all people with diabetes	637	3.7	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	14279	88.7	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	1732	89.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	13348	92.8	%	93.9
	% of diabetes pop (T1) with recorded BP	1659	85.6	%	86.6
	% of diabetes pop (T2) with recorded BP	13553	94.2	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	1326	77.3	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	12398	86.2	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	1405	72.5	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	12416	86.3	%	83.3
	% of diabetes pop (T1) with recorded creatinine	1404	75.6	%	87.3
	% of diabetes pop (T2) with recorded creatinine	12656	88.0	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1087	58.6	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	10781	74.9	%	71.0
	% of diabetes pop (T1) with recorded eGFR	1450	84.5	%	83.2
	% of diabetes pop (T2) with recorded eGFR	13440	93.4	%	89.2
	% of diabetes pop (T1) with recorded eye screen	1409	76.3	%	82.3
	% of diabetes pop (T2) with recorded eye screen	11506	81.1	%	86.0
	% of diabetes pop (T1) with recorded foot risk	1306	67.4	%	61.2
	% of diabetes pop (T2) with recorded foot risk	11887	82.6	%	77.8
Smoking	% of diabetes pop (T1) current smokers	320	16.5	%	15.3
	% of diabetes pop (T2) current smokers	1828	12.7	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	354	20.6	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	7125	49.5	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	1380	71.2	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	10069	70.0	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	604	31.2	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	2207	15.3	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	394	23.0	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	3104	21.6	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	27	1.4	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	77	0.5	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	895	48.2	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	2852	19.8	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	65	3.4	%	3.5
	% of diabetes pop (T2) with previous MI	1491	10.4	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	54	2.8	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	1129	7.8	%	7.4
	% of diabetes pop (T1) with previous stroke	42	2.2	%	2.1
	% of diabetes pop (T2) with previous stroke	746	5.2	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	104	5.4	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	586	4.1	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	33	1.7	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	129	0.9	%	0.7



Spine chart key: % percent
sr2=age-sex standardised rate per 100 population

Spine chart key:
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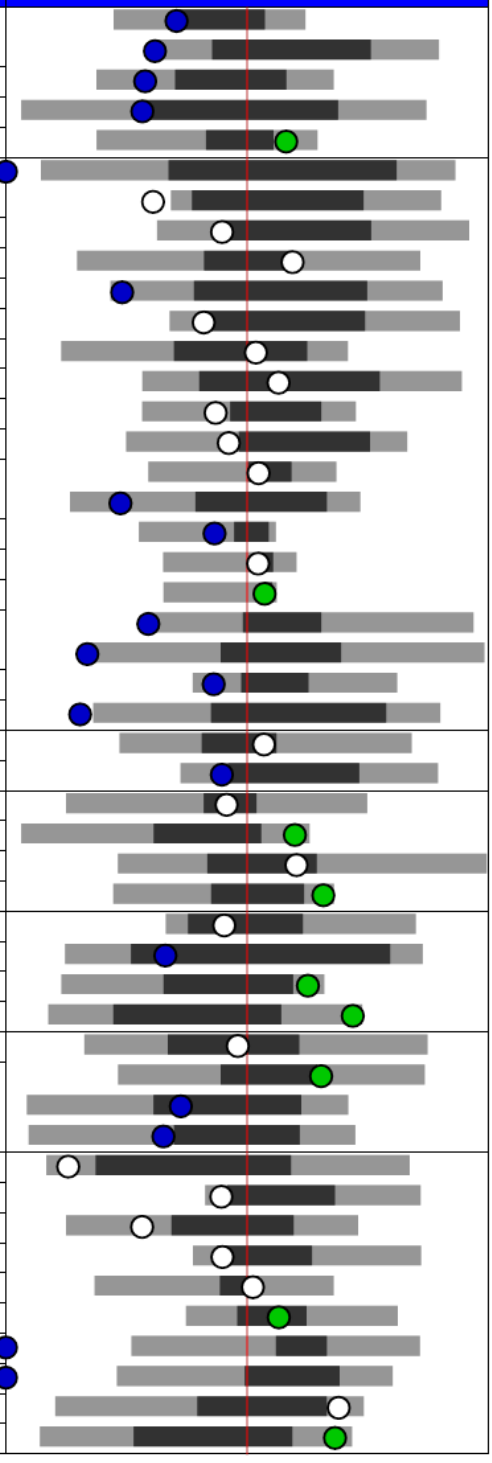
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Lanarkshire) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	4067	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	33002	5.1	sr2	4.7
	Crude prevalence of T1 diabetes	4067	0.6	%	0.6
	Crude prevalence of T2 diabetes	33002	5.1	%	4.7
	Crude mortality rate for all people with diabetes	1356	3.5	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	30170	82.6	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	3592	88.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	30877	93.6	%	93.9
	% of diabetes pop (T1) with recorded BP	3562	87.6	%	86.6
	% of diabetes pop (T2) with recorded BP	30346	92.0	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	2802	77.8	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	29608	89.9	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	2680	65.9	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	27207	82.4	%	83.3
	% of diabetes pop (T1) with recorded creatinine	3349	86.4	%	87.3
	% of diabetes pop (T2) with recorded creatinine	31369	95.2	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1882	48.6	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	20349	61.8	%	71.0
	% of diabetes pop (T1) with recorded eGFR	3097	86.0	%	83.2
	% of diabetes pop (T2) with recorded eGFR	30810	93.6	%	89.2
	% of diabetes pop (T1) with recorded eye screen	2934	76.8	%	82.3
	% of diabetes pop (T2) with recorded eye screen	26153	81.1	%	86.0
	% of diabetes pop (T1) with recorded foot risk	2342	57.6	%	61.2
	% of diabetes pop (T2) with recorded foot risk	23948	72.6	%	77.8
Smoking	% of diabetes pop (T1) current smokers	609	15.0	%	15.3
	% of diabetes pop (T2) current smokers	4973	15.1	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	800	22.2	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	15564	47.3	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	2900	71.3	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	24769	75.1	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	1398	34.4	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	5330	16.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	773	21.5	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	5252	15.9	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	61	1.5	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	161	0.5	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	2144	55.3	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	8147	24.7	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	164	4.0	%	3.5
	% of diabetes pop (T2) with previous MI	3308	10.0	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	122	3.0	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	2514	7.6	%	7.4
	% of diabetes pop (T1) with previous stroke	83	2.0	%	2.1
	% of diabetes pop (T2) with previous stroke	1640	5.0	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	720	17.7	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	2724	8.3	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	35	0.9	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	193	0.6	%	0.7



Spine chart key: % percent
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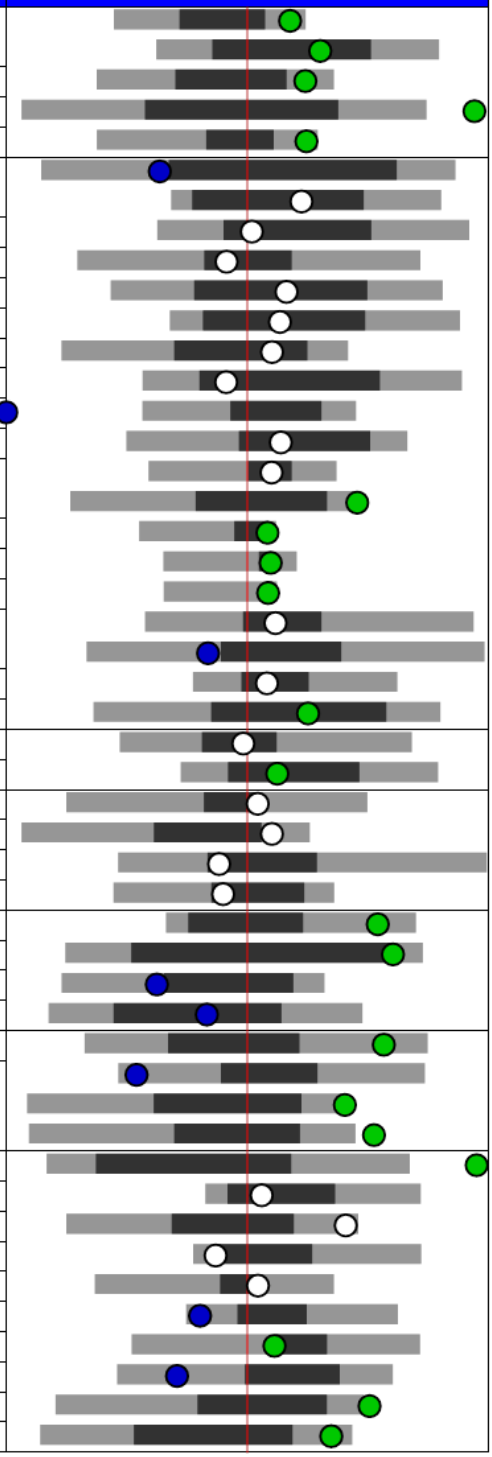
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Lothian) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	4605	0.5	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	33580	4.3	sr2	4.7
	Crude prevalence of T1 diabetes	4605	0.5	%	0.6
	Crude prevalence of T2 diabetes	33580	3.9	%	4.7
	Crude mortality rate for all people with diabetes	1358	3.4	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	32174	85.1	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	4252	92.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	31535	93.9	%	93.9
	% of diabetes pop (T1) with recorded BP	3969	86.2	%	86.6
	% of diabetes pop (T2) with recorded BP	31569	94.0	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	3503	82.5	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	30405	90.6	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	2900	63.0	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	25851	77.0	%	83.3
	% of diabetes pop (T1) with recorded creatinine	3974	88.9	%	87.3
	% of diabetes pop (T2) with recorded creatinine	32102	95.6	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	3308	74.0	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	25734	76.6	%	71.0
	% of diabetes pop (T1) with recorded eGFR	3791	89.2	%	83.2
	% of diabetes pop (T2) with recorded eGFR	31691	94.4	%	89.2
	% of diabetes pop (T1) with recorded eye screen	3723	83.8	%	82.3
	% of diabetes pop (T2) with recorded eye screen	28058	84.8	%	86.0
	% of diabetes pop (T1) with recorded foot risk	2917	63.3	%	61.2
	% of diabetes pop (T2) with recorded foot risk	26755	79.7	%	77.8
Smoking	% of diabetes pop (T1) current smokers	711	15.4	%	15.3
	% of diabetes pop (T2) current smokers	4725	14.1	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	903	21.3	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	16036	47.8	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	3119	67.7	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	24077	71.7	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	1233	26.8	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	4428	13.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	1171	27.6	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	6386	19.0	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	50	1.1	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	235	0.7	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	2060	46.1	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	5777	17.2	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	130	2.8	%	3.5
	% of diabetes pop (T2) with previous MI	3220	9.6	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	106	2.3	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	2579	7.7	%	7.4
	% of diabetes pop (T1) with previous stroke	92	2.0	%	2.1
	% of diabetes pop (T2) with previous stroke	1948	5.8	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	337	7.3	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	1843	5.5	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	35	0.8	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	198	0.6	%	0.7



Spine chart key: % percent
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Spine chart key:
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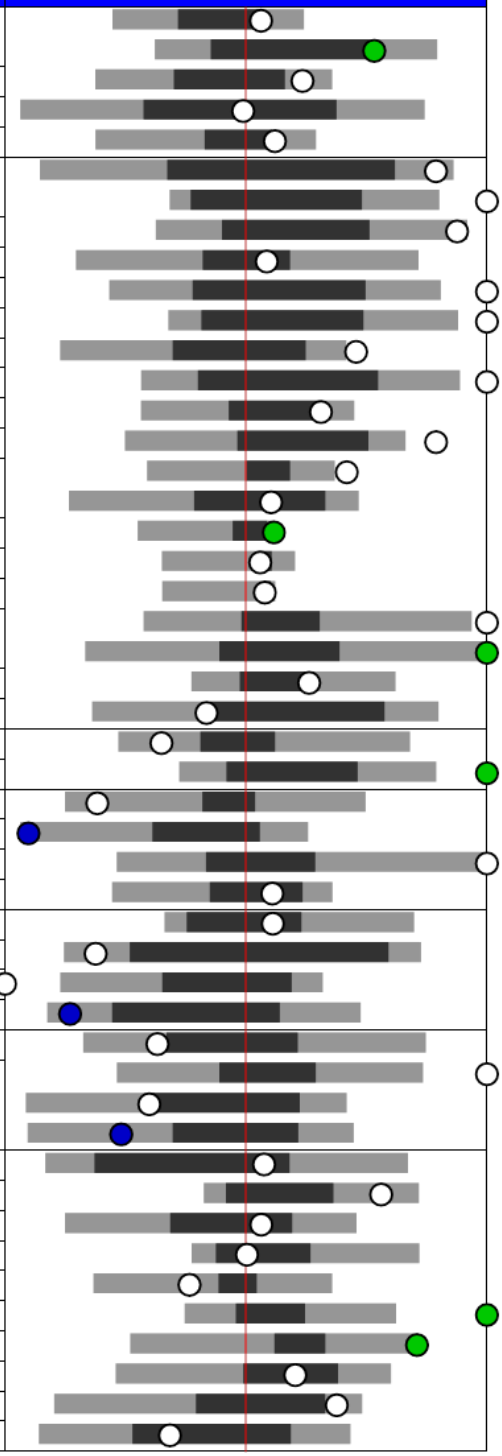
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Orkney) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	116	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	1015	4.1	sr2	4.7
	Crude prevalence of T1 diabetes	116	0.5	%	0.6
	Crude prevalence of T2 diabetes	1015	4.7	%	4.7
	Crude mortality rate for all people with diabetes	42	3.6	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	1005	89.6	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	113	97.4	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	978	96.4	%	93.9
	% of diabetes pop (T1) with recorded BP	101	87.1	%	86.6
	% of diabetes pop (T2) with recorded BP	980	96.6	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	102	95.3	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	955	94.1	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	90	77.6	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	865	85.2	%	83.3
	% of diabetes pop (T1) with recorded creatinine	110	96.5	%	87.3
	% of diabetes pop (T2) with recorded creatinine	993	97.8	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	74	64.9	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	801	78.9	%	71.0
	% of diabetes pop (T1) with recorded eGFR	93	86.9	%	83.2
	% of diabetes pop (T2) with recorded eGFR	954	94.0	%	89.2
	% of diabetes pop (T1) with recorded eye screen	107	95.5	%	82.3
	% of diabetes pop (T2) with recorded eye screen	925	93.2	%	86.0
	% of diabetes pop (T1) with recorded foot risk	79	68.1	%	61.2
	% of diabetes pop (T2) with recorded foot risk	777	76.6	%	77.8
Smoking	% of diabetes pop (T1) current smokers	20	17.2	%	15.3
	% of diabetes pop (T2) current smokers	104	10.2	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	28	26.2	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	538	53.0	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	93	80.2	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	745	73.4	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	37	31.9	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	173	17.0	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	36	33.6	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	222	21.9	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	2	1.7	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	3	0.3	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	65	57.0	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	266	26.2	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	4	3.4	%	3.5
	% of diabetes pop (T2) with previous MI	84	8.3	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	3	2.6	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	75	7.4	%	7.4
	% of diabetes pop (T1) with previous stroke	3	2.6	%	2.1
	% of diabetes pop (T2) with previous stroke	28	2.8	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	2	1.7	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	36	3.5	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	1	0.9	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	8	0.8	%	0.7



Spine chart key: % percent
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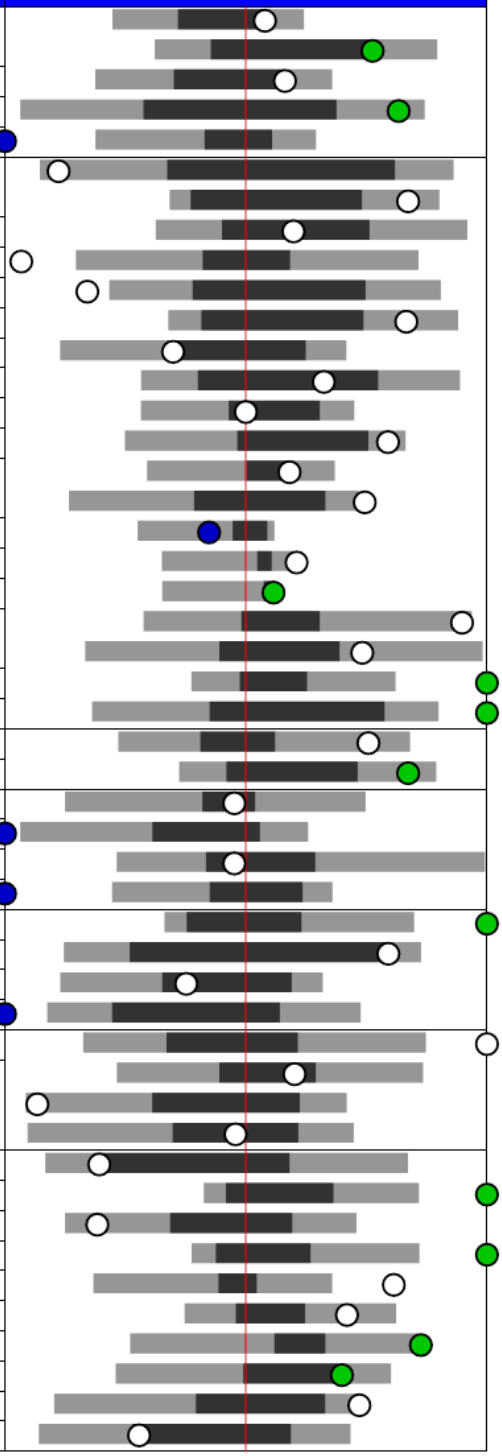
Diabetes Health Board Spine Chart (Shetland) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	127	0.6	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	968	4.1	sr2	4.7
	Crude prevalence of T1 diabetes	127	0.5	%	0.6
	Crude prevalence of T2 diabetes	968	4.2	%	4.7
	Crude mortality rate for all people with diabetes	58	5.0	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	903	83.5	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	121	95.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	914	94.4	%	93.9
	% of diabetes pop (T1) with recorded BP	104	81.9	%	86.6
	% of diabetes pop (T2) with recorded BP	886	91.5	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	103	90.4	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	838	86.6	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	87	68.5	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	806	83.3	%	83.3
	% of diabetes pop (T1) with recorded creatinine	113	94.2	%	87.3
	% of diabetes pop (T2) with recorded creatinine	931	96.2	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	90	75.0	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	587	60.6	%	71.0
	% of diabetes pop (T1) with recorded eGFR	110	96.5	%	83.2
	% of diabetes pop (T2) with recorded eGFR	931	96.2	%	89.2
	% of diabetes pop (T1) with recorded eye screen	113	94.2	%	82.3
	% of diabetes pop (T2) with recorded eye screen	859	89.5	%	86.0
	% of diabetes pop (T1) with recorded foot risk	111	87.4	%	61.2
	% of diabetes pop (T2) with recorded foot risk	826	85.3	%	77.8
Smoking	% of diabetes pop (T1) current smokers	16	12.6	%	15.3
	% of diabetes pop (T2) current smokers	113	11.7	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	25	21.9	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	518	53.5	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	87	68.5	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	624	64.5	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	27	21.3	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	128	13.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	30	26.3	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	225	23.2	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	1	0.8	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	5	0.5	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	76	63.3	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	214	22.1	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	5	3.9	%	3.5
	% of diabetes pop (T2) with previous MI	69	7.1	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	4	3.1	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	51	5.3	%	7.4
	% of diabetes pop (T1) with previous stroke	1	0.8	%	2.1
	% of diabetes pop (T2) with previous stroke	41	4.2	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	2	1.6	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	27	2.8	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	1	0.8	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	8	0.8	%	0.7



Spine chart key: % percent
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Spine chart key:
- Statistically significantly 'worse' than National average
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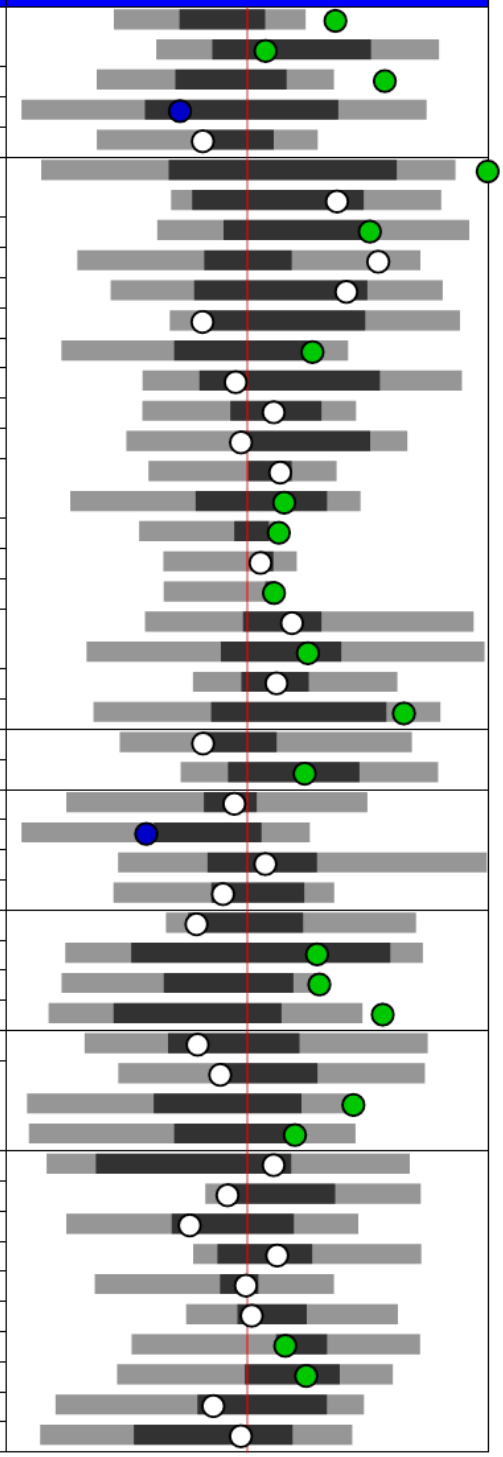
'Worse' Area ← Scotland Average → 'Better 'Area'

5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Tayside) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	2044	0.5	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	20373	4.6	sr2	4.7
	Crude prevalence of T1 diabetes	2044	0.5	%	0.6
	Crude prevalence of T2 diabetes	20373	4.9	%	4.7
	Crude mortality rate for all people with diabetes	931	4.0	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	20083	90.4	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	1907	93.3	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	19416	95.3	%	93.9
	% of diabetes pop (T1) with recorded BP	1827	89.4	%	86.6
	% of diabetes pop (T2) with recorded BP	19306	94.8	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	1439	77.7	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	18785	92.2	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	1298	63.5	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	17103	83.9	%	83.3
	% of diabetes pop (T1) with recorded creatinine	1724	87.0	%	87.3
	% of diabetes pop (T2) with recorded creatinine	19530	95.9	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	1311	66.1	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	16266	79.8	%	71.0
	% of diabetes pop (T1) with recorded eGFR	1603	86.6	%	83.2
	% of diabetes pop (T2) with recorded eGFR	19526	95.9	%	89.2
	% of diabetes pop (T1) with recorded eye screen	1674	84.7	%	82.3
	% of diabetes pop (T2) with recorded eye screen	17597	87.8	%	86.0
	% of diabetes pop (T1) with recorded foot risk	1316	64.4	%	61.2
	% of diabetes pop (T2) with recorded foot risk	16843	82.7	%	77.8
Smoking	% of diabetes pop (T1) current smokers	334	16.3	%	15.3
	% of diabetes pop (T2) current smokers	2766	13.6	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	407	22.0	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	10283	50.5	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	1428	69.9	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	14607	71.7	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	731	35.8	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	2888	14.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	389	21.0	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	3121	15.3	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	33	1.6	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	123	0.6	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	904	45.6	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	4082	20.0	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	70	3.4	%	3.5
	% of diabetes pop (T2) with previous MI	2029	10.0	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	58	2.8	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	1454	7.1	%	7.4
	% of diabetes pop (T1) with previous stroke	43	2.1	%	2.1
	% of diabetes pop (T2) with previous stroke	1071	5.3	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	141	6.9	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	692	3.4	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	26	1.3	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	143	0.7	%	0.7



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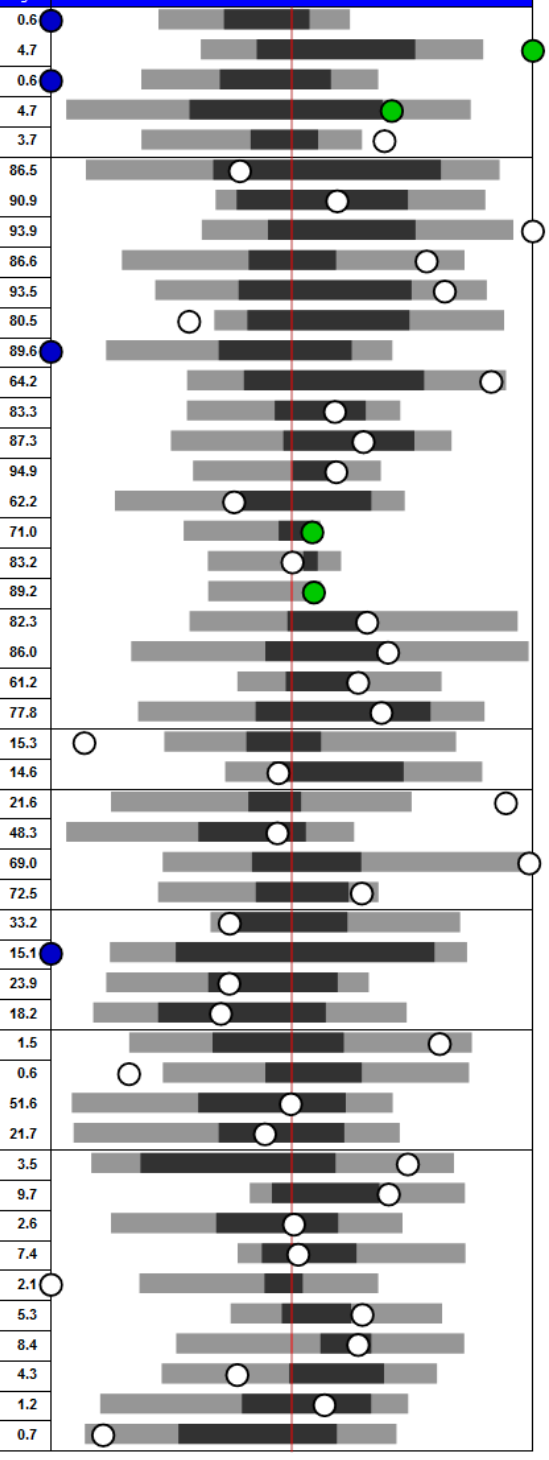
5th percentile 25th percentile 75th percentile 95th percentile

Diabetes Health Board Spine Chart (Western Isles) 2015

Domain	Indicator	Number	Measure	Type	National average
Prevalence, incidence and mortality	Age/sex standardised prevalence of T1 diabetes	190	0.7	sr2	0.6
	Age/sex standardised prevalence of T2 diabetes	1185	3.6	sr2	4.7
	Crude prevalence of T1 diabetes	190	0.7	%	0.6
	Crude prevalence of T2 diabetes	1185	4.3	%	4.7
	Crude mortality rate for all people with diabetes	46	3.2	%	3.7
Quality of Recording	% of diabetes pop with recorded BMI	1164	85.7	%	86.5
	% of diabetes pop (T1) with recorded HbA1c	175	92.1	%	90.9
	% of diabetes pop (T2) with recorded HbA1c	1146	96.7	%	93.9
	% of diabetes pop (T1) with recorded BP	170	89.5	%	86.6
	% of diabetes pop (T2) with recorded BP	1131	95.4	%	93.5
	% of diabetes pop (T1) with recorded cholesterol	129	74.1	%	80.5
	% of diabetes pop (T2) with recorded cholesterol	944	79.7	%	89.6
	% of diabetes pop (T1) with a recorded smoking status	143	75.3	%	64.2
	% of diabetes pop (T2) with a recorded smoking status	1000	84.4	%	83.3
	% of diabetes pop (T1) with recorded creatinine	167	90.8	%	87.3
	% of diabetes pop (T2) with recorded creatinine	1140	96.2	%	94.9
	% of diabetes pop (T1) with recorded microalbumin	103	56.0	%	62.2
	% of diabetes pop (T2) with recorded microalbumim	910	76.8	%	71.0
	% of diabetes pop (T1) with recorded eGFR	145	83.3	%	83.2
	% of diabetes pop (T2) with recorded eGFR	1123	94.8	%	89.2
	% of diabetes pop (T1) with recorded eye screen	159	86.4	%	82.3
	% of diabetes pop (T2) with recorded eye screen	1046	88.9	%	86.0
	% of diabetes pop (T1) with recorded foot risk	130	68.4	%	61.2
	% of diabetes pop (T2) with recorded foot risk	955	80.6	%	77.8
Smoking	% of diabetes pop (T1) current smokers	38	20.0	%	15.3
	% of diabetes pop (T2) current smokers	176	14.9	%	14.6
Obesity & hypertension	% of diabetes pop (T1) obese (BMI >= 30)	26	14.9	%	21.6
	% of diabetes pop (T2) obese (BMI >= 30)	576	48.6	%	48.3
	% of diabetes pop (T1) with SBP <= 140mmHg	152	80.0	%	69.0
	% of diabetes pop (T2) with SBP <= 140mmHg	887	74.9	%	72.5
Metabolic complications	% of diabetes pop (T1) with HbA1c > 75mmol/mol	69	36.3	%	33.2
	% of diabetes pop (T2) with HbA1c > 75mmol/mol	216	18.2	%	15.1
	% of diabetes pop (T1) with cholesterol > 5mmol	46	26.4	%	23.9
	% of diabetes pop (T2) with cholesterol > 5mmol	233	19.7	%	18.2
Microvascular complications	% of diabetes pop (T1) with end-stage renal failure	2	1.1	%	1.5
	% of diabetes pop (T2) with end-stage renal failure	9	0.8	%	0.6
	% of diabetes pop (T1) with diabetic retinopathy	95	51.6	%	51.6
	% of diabetes pop (T2) with diabetic retinopathy	269	22.7	%	21.7
Macrovascular complications	% of diabetes pop (T1) with previous MI	6	3.2	%	3.5
	% of diabetes pop (T2) with previous MI	103	8.7	%	9.7
	% of diabetes pop (T1) with previous cardiac revascularisation	5	2.6	%	2.6
	% of diabetes pop (T2) with previous cardiac revascularisation	87	7.3	%	7.4
	% of diabetes pop (T1) with previous stroke	8	4.2	%	2.1
	% of diabetes pop (T2) with previous stroke	54	4.6	%	5.3
	% of diabetes pop (T1) with previous foot ulcer	11	5.8	%	8.4
	% of diabetes pop (T2) with previous foot ulcer	62	5.2	%	4.3
	% of diabetes pop (T1) with previous lower limb amputation	2	1.1	%	1.2
	% of diabetes pop (T2) with previous lower limb amputation	11	0.9	%	0.7



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