

Scottish Diabetes Survey 2012

Scottish Diabetes Survey Monitoring Group

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Foreword

The Scottish Diabetes Survey 2012 data reflects many aspects of the quality of diabetes care across the whole of Scotland.

The information in this Survey is a powerful tool for the diabetes community. The diabetes Managed Clinical Network in each NHS Board in particular, will find it useful in helping identify what is needed to further improve the quality of diabetes care.

Research is also a key aspect of informing high quality diabetes care. The data collected will continue to be used for epidemiological research providing key information to help develop and plan services and improve outcomes for people living with diabetes across Scotland. Throughout 2011/2012 alone we have used these data to improve our understanding of the epidemiology of cardiovascular disease in Type 1 Diabetes, changes in amputation rates for those with diabetes and diabetic retinopathy in our population.

The quality and the completeness of the data included within the Survey continues to improve. Most of the data contained in the Survey is extracted from our national award-winning diabetes IT system SCI-DC. Progress is gradually being made in the introduction of an updated version (SCI-Diabetes). Data on SCI-Diabetes can also be viewed by GP practices and hospitals 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.

This year, the Survey now includes graphs that will enable each Board to quickly review their performance in comparison to 2011. As in last year’s report, the Survey includes charts that will enable each NHS Board to review their information in comparison to the Scottish average. 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 recorded and are accessing retinopathy screening.
- There is an increase in the percentage of people with type 1 and type 2 diabetes with good blood pressure.

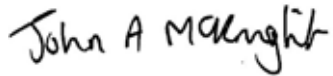
The Survey also identifies a number of ongoing challenges for NHS Scotland:

- The number of people with diabetes continues to increase by around 10,000 each year, presenting greater organisational and resource pressures.
- The Survey reports that 39.3% of people with type 1 diabetes have poor glycaemic control.
- While the overall screening for retinopathy has slightly improved, screening for retinopathy is better for people with type 2 diabetes, than for people with type 1 diabetes. Almost one in five people with type 1 diabetes do not have a record of eye screening within the last 15 months.
- There remains significant variation between different NHS Boards in the collection of Survey data and the outcomes achieved.

NHS Boards will wish to address these issues through their diabetes Managed Clinical Networks where appropriate.

We have also led an international comparison of Type 1 diabetes control that will be presented to the European Association for the Study of Diabetes to share learning and improve understanding with a view to improve services.

The Survey will also assist the Scottish Diabetes Group to drive forward progress with the Scottish Diabetes Action Plan. We therefore expect to build on the messages the Survey gives us to further improve the quality of diabetes care in Scotland and help ensure that people with diabetes in Scotland receive world class safe and effective and person centred care.



John A McKnight

Chairman

Scottish Diabetes Survey Monitoring Group

Executive Summary

This report presents the results of the 2012 Scottish Diabetes Survey. The survey¹ 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 2012, we report that:

- There were 258,570 people diagnosed with diabetes in Scotland recorded on local diabetes registers at the end of 2012. This represents 4.9% of the population;
- Crude prevalence of diabetes ranged from 4.16% to 5.74% across NHS Boards (Table 1);
- 88.2% (227,967) of all people registered with diabetes had type 2 diabetes (Table 11);
- 11.2% of all registered people had type 1 diabetes. The number of people registered with type 1 diabetes increased from 26,294 in 2006 to 28,849 in 2013;
- 0.68% (1,754) were recorded as having “other” types of diabetes, including maturity onset diabetes of the young (MODY) and those with unknown diabetes type (Table 11);
- 38% of patients with a recorded BMI and type 1 diabetes and 31.6% of those with a recorded BMI and type 2 diabetes were overweight (BMI 25-30kg/m²), while 25.5% of those with type 1 and 55.5% of those with type 2 were obese (BMI 30kg/m² or above, tables 17 and 18);
- 87.1% (type 1) and 92.8% (type 2) had an HbA_{1c} recorded in the previous 15 months. Of these, 21.5% and 59.7% had a result < 58mmol/mol (7.5%), the target reported in previous surveys (tables 19, 21 and 22);
- 85.2% of those with type 1 and 94.6% of those with type 2 diabetes had their blood pressure recorded in the previous 15 months. Of these, 47.6% and 32.6% respectively had a systolic BP measurement of ≤ 130/80 mmHg (tables 30, 33 and 35);
- Cholesterol was recorded in 90.6% of patients within the previous 15 months, and the target of ≤ 5 mmol/l was achieved in 69.7% of those with type 1 and 80.5% of those with type 2 diabetes (tables 39, 40 and 41);
- 23.8% (type 1) and 18.8% (type 2) were current smokers (tables 44 and 45);
- 1,049 (3.6%) of those with type 1 and 23,024 (10.1%) of those with type 2 diabetes have had a myocardial infarction and survived, and 2.5% and 7.2% respectively have undergone cardiac revascularisation (tables 47 and 49);
- 337 (1.2%) of those with type 1 and 1,167 (0.5%) of those with type 2 diabetes have a record of having end stage renal failure (Table 58);
- 86.1% of people with diabetes had had eye screening in the previous 15 months (Table 59);
- 55.9% of patients with type 1 diabetes and 71.8% of those with type 2 had their foot pulses checked in the previous 15 months (Table 62);
- 313 (1.1%) of those with type 1 and 1,541 (0.7%) of those with type 2 diabetes have a record of having had a lower limb amputation (Table 66).

1 Full details of the 2012 survey questions are available at <http://www.sci-diabetes.scot.nhs.uk/wp-content/uploads/2013/06/ScottishDiabetesSurvey2012GuidelinesFINAL.pdf>

Prevalence

At the end of 2012 there were 258,570 people with known diabetes in Scotland recorded on local diabetes registers, which represents a crude prevalence of 4.92% of the population. In the 2011 Scottish Diabetes Survey, 247,278 people (4.74%) 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

Variation between health 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 1. Crude and age-adjusted prevalence of diabetes (all types), 2012, Scotland, by NHS Board, ranked by age adjusted prevalence.

NHS Board	Population	Number on diabetes register at end of 2012	Crude prevalence	Age adjusted prevalence
Western Isles	26,080	1,259	4.83%	4.14%
Highland	311,960	15,130	4.85%	4.31%
Orkney	20,160	996	4.94%	4.39%
Shetland	22,500	1,024	4.55%	4.44%
Borders	113,150	5,831	5.15%	4.49%
Lothian	848,727	35,288	4.16%	4.58%
Grampian	555,280	25,275	4.55%	4.62%
Dumfries & Galloway	148,060	8,484	5.73%	4.78%
Tayside	405,721	20,843	5.14%	4.81%
Forth Valley	295,541	14,850	5.02%	5.05%
Fife	367,292	19,097	5.20%	5.06%
Greater Glasgow & Clyde	1,210,254	59,121	4.89%	5.20%
Ayrshire & Arran	366,890	21,073	5.74%	5.26%
Lanarkshire	563,185	30,299	5.38%	5.46%
Scotland	5,254,800	258,570	4.92%	

Table 2. Crude prevalence of diabetes for patients aged 65 and over (all types), 2012, Scotland, by NHS Board, ranked by prevalence.

NHS Board	Aged >=65 (n)	Aged >=65 with Diabetes	Prevalence in those aged >=65
Western Isles	5,731	696	12.1%
Shetland	3,855	509	13.2%
Highland	62,246	8,325	13.4%
Orkney	4,053	567	14.0%
Lothian	126,006	17,719	14.1%
Dumfries & Galloway	33,450	4,825	14.4%
Grampian	90,309	13,134	14.5%
Borders	23,277	3,392	14.6%
Tayside	78,157	11,579	14.8%
Fife	65,580	10,128	15.4%
Greater Glasgow & Clyde	187,350	28,920	15.4%
Ayrshire & Arran	71,351	11,039	15.5%
Forth Valley	49,469	7,663	15.5%
Lanarkshire	91,553	14,953	16.3%
Scotland	892,387	133,449	15.0%

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 (formerly GRO(S)). Because of publication dates surveys have in each case used population figures for the previous year - so that the 2012 survey uses diabetes data from 2012 but population estimates from 2011. 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. For example, the crude (unadjusted) prevalence of diabetes in Dumfries & Galloway is 16.5% 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.

Table 1 and figures 1 and 2 show both crude and age-adjusted figures for the prevalence of diabetes of all types in 2012. 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 1. Crude diabetes prevalence (all types) by NHS Health Board, Scotland, 2012. Vertical capped lines show 95% confidence intervals.

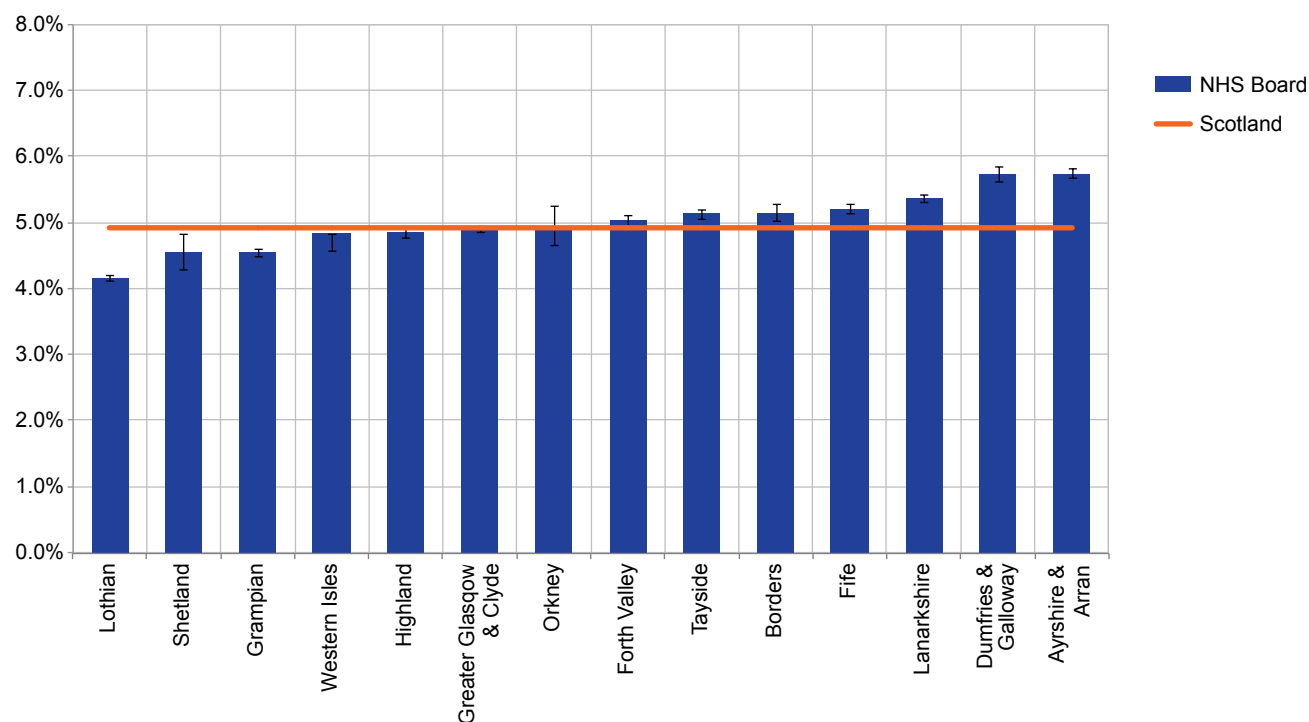


Figure 2. Age-adjusted diabetes prevalence (all types) by NHS Health Board, Scotland, 2012, ranked by prevalence. Vertical capped lines show 95% confidence intervals.

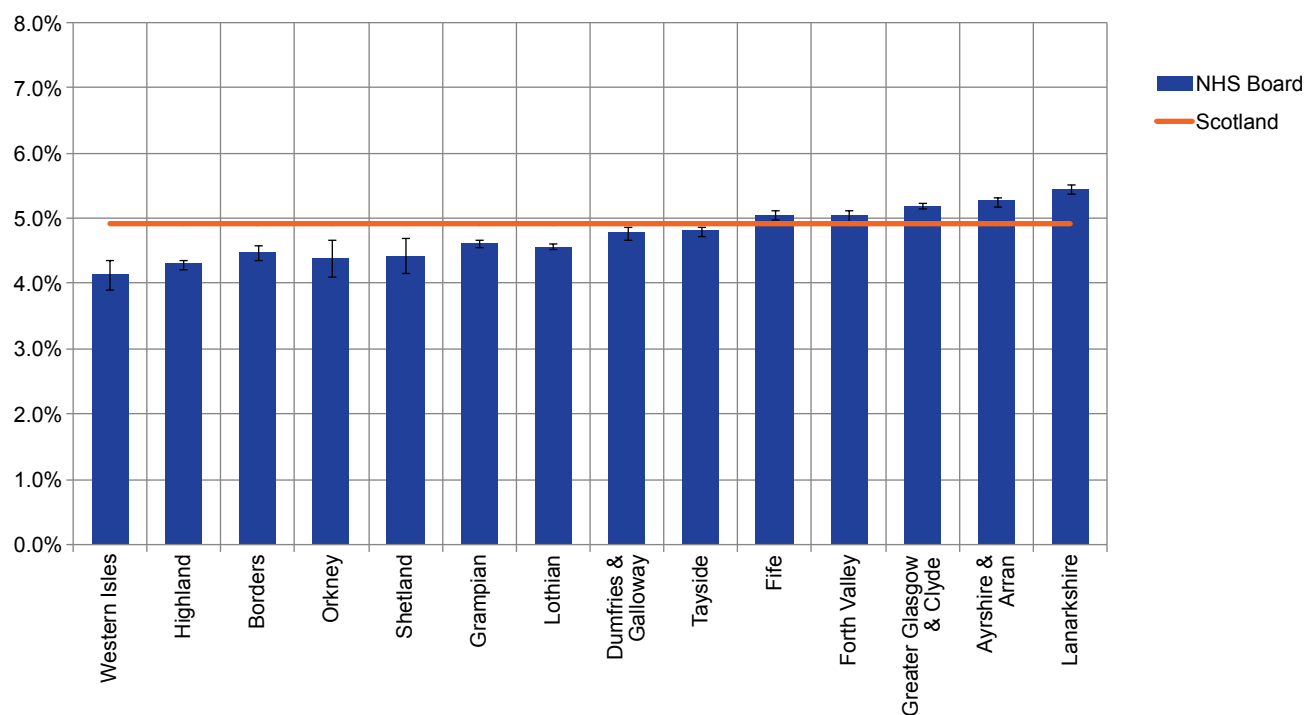


Figure 3. Number of people with all types of diabetes in each NHS Health Board in 2012.

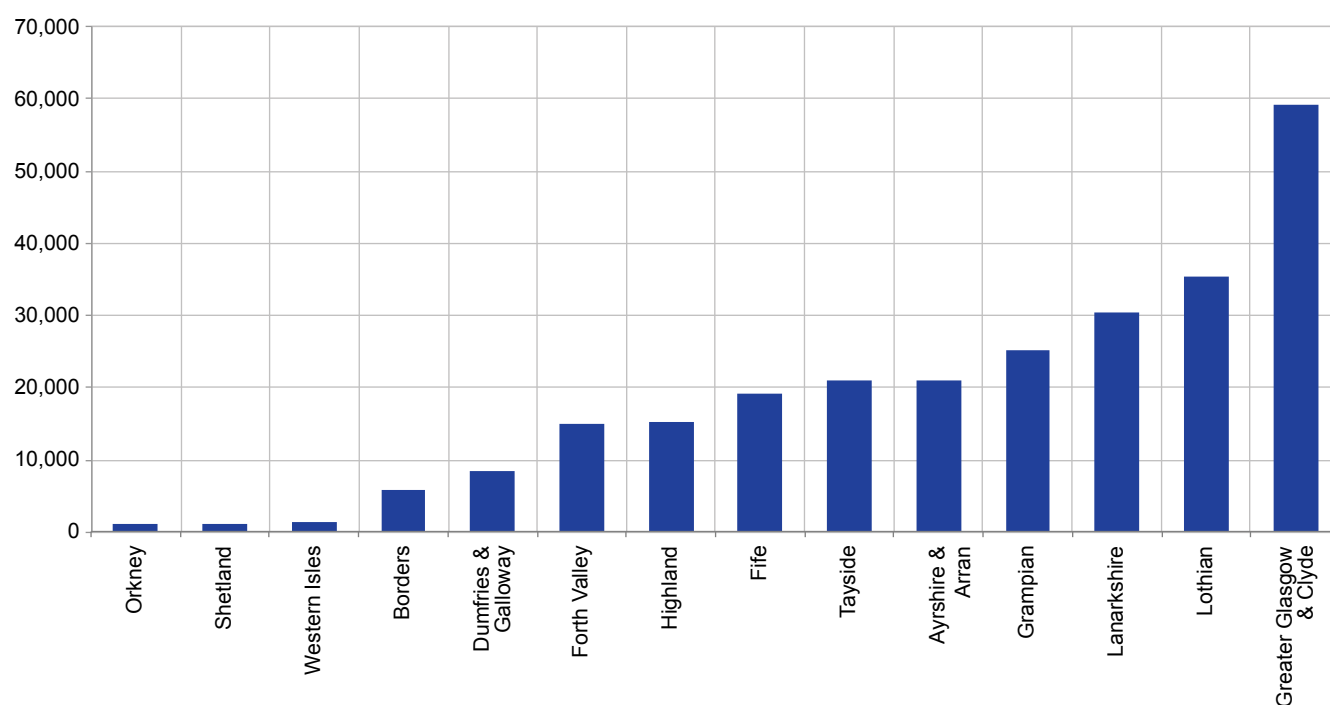


Figure 4. Number of people recorded with diabetes (all types), Scotland 2001 – 2012.

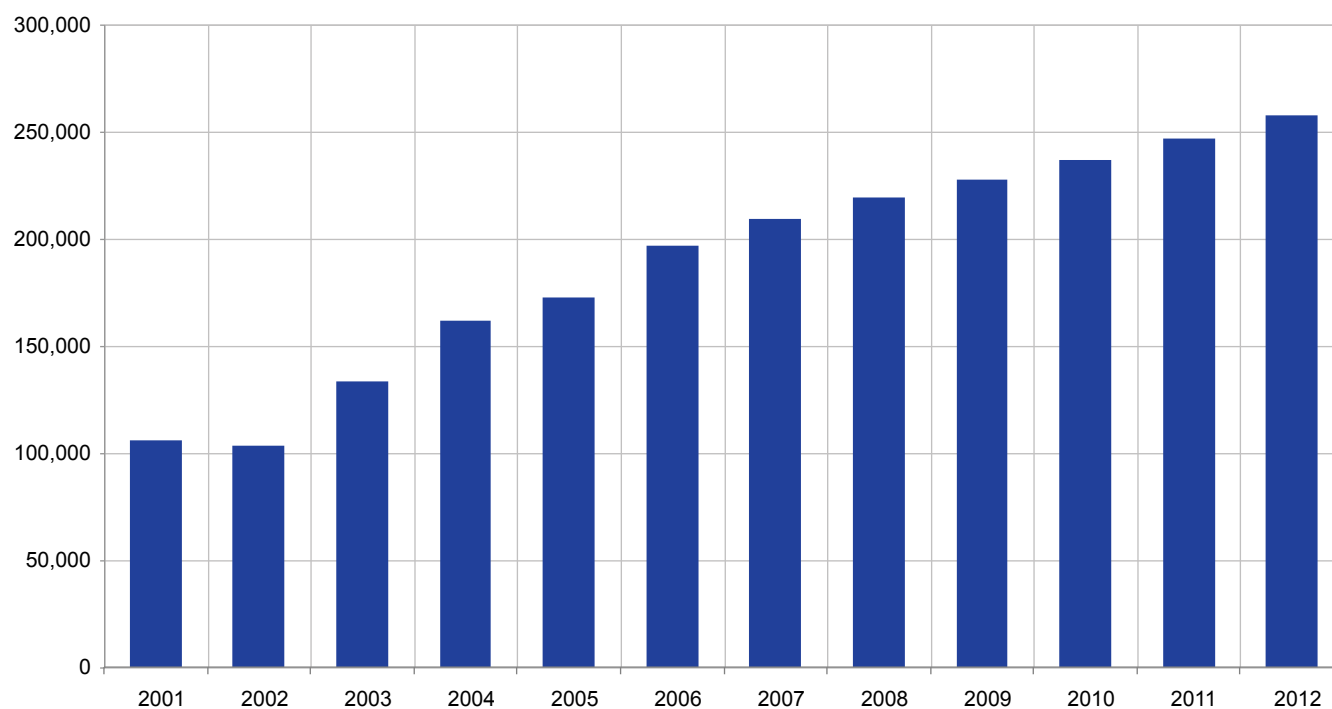


Table 3. Number of people with diabetes, crude prevalence of diabetes and changes in numbers/proportions, compared to previous years (2007-2012).

Survey	Diabetes register	Crude prevalence	Increase	(%) Increase	Absolute increase
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%

Note: SCI-DC achieved complete coverage of Health Board areas in 2006.

Between 2001 and 2006, the increase in numbers was partly due to improved recording as SCI-DC was being implemented. The increase observed since 2007 is more likely to reflect a real increase in numbers.

Table 4. Type 1 diabetes: number of new cases and incidence rate (per 100,000 population per year) of by age, Scotland 2009-2012.

Age	2009		2010		2011		2012		
	Cases	Rate	Cases	Rate	Cases	Rate	Population	Cases	Rate
0-4	148	27	145	26	166	29	297,741	66	22
5-9	258	41	268	43	244	40	273,374	137	50
10-14	168	24	177	25	205	29	282,776	152	54
15-19	145	22	127	20	129	20	317,880	110	35
20-29	92	12	93	12	114	14	725,571	172	24
30-39	71	11	69	10	63	9	643,811	96	18
40-49	44	8	50	9	37	6	787,195	66	12
50-59	28	5	29	5	15	2	702,078	43	7
60-69	28	5	29	5	15	2	593,520	18	3
≥70	954	18	958	18	973	19	630,854	978	19
Total	954	18	958	18	973	19	5,254,800	978	19

Note: These are crude incidence figures that have been calculated retrospectively using SCI-DC data and therefore may be slightly affected by factors such as post-survey patient migration and on-going validation of diabetes classification. See also the note on population estimates after Table 1.

Table 5. Type 2 diabetes: number of new cases and incidence rate (per 100,000 population per year) by age, Scotland 2009-2012.

Age	2009		2010		2011		2012		
	Cases	Rate	Cases	Rate	Cases	Rate	Population	Cases	Rate
<10	2	0	0	0	0	0	571,115	0	0
10-19	22	4	18	3	10	2	600,656	21	3
20-29	164	24	166	24	163	23	725,571	208	29
30-39	797	120	755	116	730	113	643,811	939	146
40-49	2,667	335	2,555	321	2,552	322	787,195	2,733	347
50-59	4,411	653	4,287	629	4,106	595	702,078	4,567	650
60-69	5,286	944	4,870	851	4,741	814	593,520	4,943	833
≥70	5,278	867	4,925	799	4,667	747	630,854	4,596	729
Total	18,627	360	17,576	338	16,969	325	5,254,800	18,007	343

Note: These are crude incidence figures that have been calculated retrospectively using SCI-DC data and therefore may be slightly affected by factors such as post-survey patient migration and on-going validation of diabetes classification. See also the note on population estimates after Table 1.

Table 6. Type 1 diabetes: number of new cases of and crude incidence rate for all ages (cases per 100,000 population per year) by NHS Board, 2009-2012, ranked by rate in 2012.

Age	2009		2010		2011		2012	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Dumfries & Galloway	29	20	26	18	20	13	20	14
Orkney	2	10	4	20	5	25	3	15
Highland	69	22	53	17	74	24	49	16
Grampian	115	21	123	23	117	21	90	17
Fife	56	16	53	15	80	22	63	17
Shetland	5	23	6	27	3	13	4	18
Borders	16	14	20	18	17	15	20	18
Lothian	136	17	155	19	136	16	153	18
Tayside	57	14	71	18	58	14	73	18
Greater Glasgow & Clyde	218	18	205	17	221	18	228	19
Lanarkshire	127	23	103	18	110	20	110	20
Ayrshire & Arran	70	19	69	19	68	19	79	22
Forth Valley	50	17	64	22	61	21	70	24
Western Isles	4	15	6	23	3	11	9	35
Scotland	954	18	958	18	973	19	978	19

Note: These are crude incidence figures that have been calculated retrospectively using SCI-DC data and therefore may be slightly affected by factors such as post-survey patient migration and on-going validation of diabetes classification. See also the note on population estimates after Table 1.

Table 7. Type 2 diabetes: number of new cases and crude incidence rate for all ages (cases per 100,000 population per year) by NHS Board, 2009-2012, ranked by rate in 2012.

Age	2009		2010		2011		2012	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Shetland	74	337	75	338	82	366	51	227
Lothian	2,211	270	1,988	241	2,191	262	2,271	268
Western Isles	96	366	101	386	71	271	75	288
Orkney	67	337	59	296	85	423	61	303
Highland	1,136	367	1,122	361	1,010	325	1,035	332
Greater Glasgow & Clyde	4,039	338	3,952	330	3,801	316	4,131	341
Grampian	2,063	382	1,721	316	1,596	290	1,866	336
Tayside	1,614	407	1,670	418	1,544	383	1,440	355
Forth Valley	970	334	973	334	876	299	1,051	356
Lanarkshire	2,302	410	2,081	370	1,976	351	2,083	370
Dumfries & Galloway	669	450	589	397	573	387	563	380
Fife	1,315	363	1,296	357	1,235	338	1,363	371
Borders	411	366	428	380	384	340	448	396
Ayrshire & Arran	1,660	425	1,521	414	1,545	421	1,570	428
Scotland	18,627	360	17,576	338	16,969	325	18,008	343

Note: These crude incidence figures have been calculated retrospectively using SCI-Diabetes data and present the number of patients in each health board within the relevant year regardless of subsequent mortality or migration off the CHI system. The results, therefore, may differ from the values displayed in the Duration of Diabetes <1 year table which is limited to patients who were alive and actively registered to a practice in each health board at the time of data extraction.

Undiagnosed diabetes

Estimates of undiagnosed diabetes in Scotland were included in the 2011 Scottish Diabetes Survey. These were based on the Association of Public Health Observatories (APHO) prevalence model. However the model does not provide updated figures for 2012, so the previously published estimates shown in the 2011 survey report should be used. More details are available at:

<http://www.scotpho.org.uk/health-wellbeing-and-disease/diabetes/data/undiagnosed-diabetes>

Duration of Diabetes

The date of diagnosis was recorded for almost 100% of patients, of which 7% have had diabetes for less than one year and 9.6% have had diabetes for 20 years or more.

Table 8. Duration of diabetes (years since diagnosis) by type of diabetes, Scotland, 2012.

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	910	3.2%	16,983	7.5%	17,893	7.0%
1-4	3,649	12.7%	66,987	29.4%	70,636	27.5%
5-9	4,482	15.6%	68,940	30.3%	73,422	28.6%
10-14	4,579	15.9%	43,925	19.3%	48,504	18.9%
15-19	3,698	12.8%	17,954	7.9%	21,652	8.4%
20-24	3,198	11.1%	7,813	3.4%	11,011	4.3%
25-29	2,453	8.5%	3,064	1.3%	5,517	2.2%
30-34	2,098	7.3%	1,071	0.5%	3,169	1.2%
35-39	1,522	5.3%	447	0.2%	1,969	0.8%
40-44	1,026	3.6%	225	0.1%	1,251	0.5%
45-49	581	2.0%	117	0.1%	698	0.3%
≥50	605	2.1%	152	0.1%	757	0.3%
Total	28,801	100.0%	227,678	100.0%	256,479	100.0%

Note: Excludes patients where date of diagnosis not known (Type 1 = 48; Type 2 = 289).

Sex

A greater proportion of those with diagnosed diabetes are men; 56.2% compared with 43.8% in those with type 1 diabetes and 55.3% compared with 44.7% in those with type 2 diabetes. This ratio is relatively unchanged from 2001.

Age

Type 2 diabetes is more common in older people; 132,870 (51.8%) of all the people reported in the survey are aged 65 years or older. Figures 5 and 6 show the age distribution of people with 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 (right side) compared with age distribution of general population (left side), Scotland, 2012.

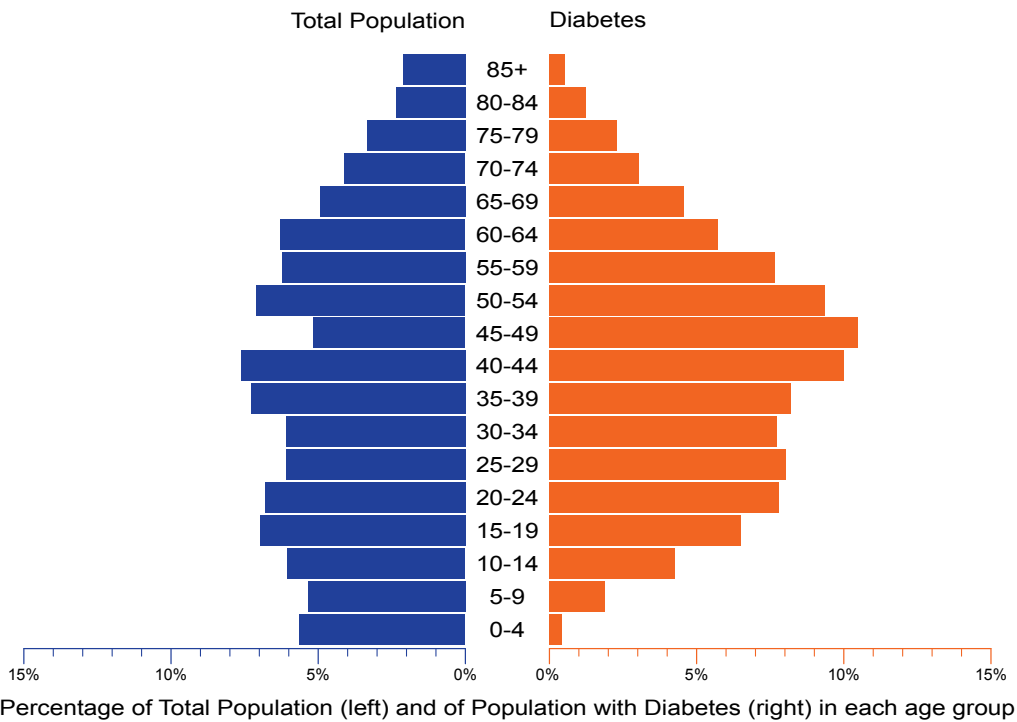


Figure 6. Type 2 diabetes: age distribution of people recorded (right side) compared with age distribution of general population (left side), Scotland, 2012.

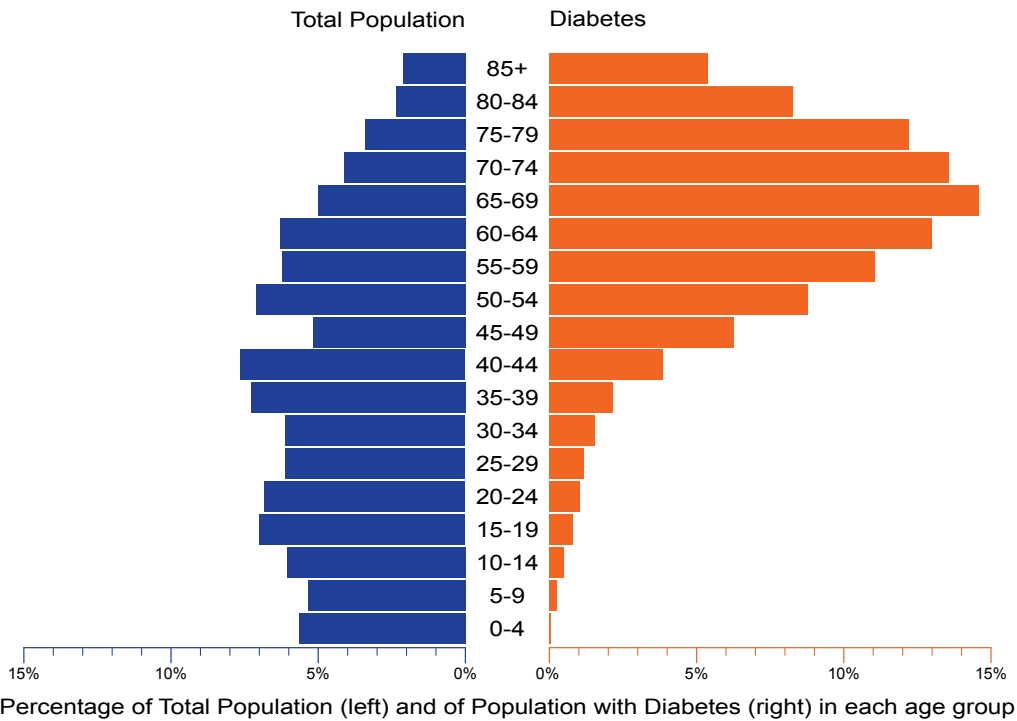


Table 9. Age group of people recorded with type 1 or type 2 diabetes, percentage in each age group and cumulative percentage in each age group, by diabetes type.

Age	Type 1 diabetes			Type 2 diabetes		
	Number	Percentage	Cumulative Percentage	Number	Percentage	Cumulative Percentage
0-4	114	0.4%	0.4%	0	0.0%	0.0%
5-9	543	1.9%	2.3%	3	0.0%	0.0%
10-14	1,235	4.3%	6.6%	12	0.0%	0.0%
15-19	1,873	6.5%	13.1%	47	0.0%	0.0%
20-24	2,258	7.8%	20.9%	229	0.1%	0.1%
25-29	2,312	8.0%	28.9%	576	0.3%	0.4%
30-34	2,234	7.8%	36.7%	1,558	0.7%	1.1%
35-39	2,379	8.3%	44.9%	2,943	1.3%	2.4%
40-44	2,889	10.0%	54.9%	6,677	2.9%	5.3%
45-49	3,024	10.5%	65.4%	12,287	5.4%	10.7%
50-54	2,711	9.4%	74.8%	18,851	8.3%	19.0%
55-59	2,223	7.7%	82.6%	24,899	10.9%	29.9%
60-64	1,666	5.8%	88.3%	30,280	13.3%	43.2%
65-69	1,318	4.6%	92.9%	34,666	15.2%	58.4%
70-74	873	3.0%	95.9%	32,485	14.3%	72.6%
75-79	660	2.3%	98.2%	29,309	12.9%	85.5%
80-84	361	1.3%	99.5%	19,930	8.7%	94.2%
≥85	150	0.5%	100.0%	13,118	5.8%	100.0%
Scotland	28,823	100.0%	100.0%	227,870	100.0%	100.0%

Mortality

Table 10. The percentage of the diabetes population (all diabetes types) who have died within the last year, by NHS Board, Scotland 2012, ranked by mortality.

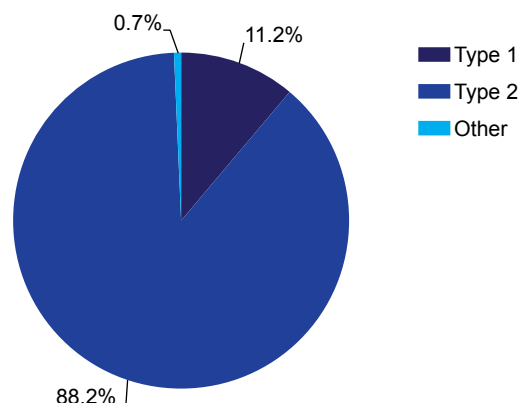
NHS Board	Deaths	
	Total	% of population
Shetland	30	2.8%
Highland	521	3.3%
Lothian	1,229	3.4%
Fife	665	3.4%
Lanarkshire	1,089	3.5%
Borders	211	3.5%
Grampian	940	3.6%
Ayrshire & Arran	795	3.6%
Greater Glasgow & Clyde	2,249	3.7%
Tayside	813	3.8%
Forth Valley	581	3.8%
Dumfries & Galloway	342	3.9%
Orkney	42	4.0%
Western Isles	58	4.4%
Scotland	9,565	3.6%

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 had type 2 diabetes (227,967 or 88.2%). The proportion of people with diabetes who have type 1 diabetes has fallen from 18.2% in 2002 to 11.2% in 2012, probably largely due to relatively 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; 28,849 in 2012). This reflects the rising incidence of type 1 diabetes in children over the last 40 years. We know from a series of studies of incidence that it has been rising by 2-3% a year since 1968.

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 11. Numbers of people with diabetes and the distribution of diabetes type, by NHS board, Scotland 2012, ranked by the percentage with type 2 diabetes.**

NHS Board	Type 1		Type 2		Other types of diabetes	Total
	Number	Percentage	Number	Percentage		
Western Isles	185	14.7%	1,070	85.0%	4	1,259
Shetland	128	12.5%	881	86.0%	15	1,024
Lothian	4,282	12.1%	30,735	87.1%	271	35,288
Highland	1,793	11.9%	13,190	87.2%	147	15,130
Grampian	3,129	12.4%	22,037	87.2%	109	25,275
Lanarkshire	3,585	11.8%	26,527	87.6%	187	30,299
Orkney	119	11.9%	877	88.1%	0	996
Forth Valley	1,648	11.1%	13,091	88.2%	111	14,850
Greater Glasgow & Clyde	6,366	10.8%	52,236	88.4%	519	59,121
Borders	626	10.7%	5,160	88.5%	45	5,831
Dumfries & Galloway	889	10.5%	7,528	88.7%	67	8,484
Fife	1,986	10.4%	17,030	89.2%	81	19,097
Ayrshire & Arran	2,212	10.5%	18,799	89.2%	62	21,073
Tayside	1,901	9.1%	18,806	90.2%	136	20,843
Scotland	28,849	11.2%	227,967	88.2%	1,754	258,570

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

Ethnicity

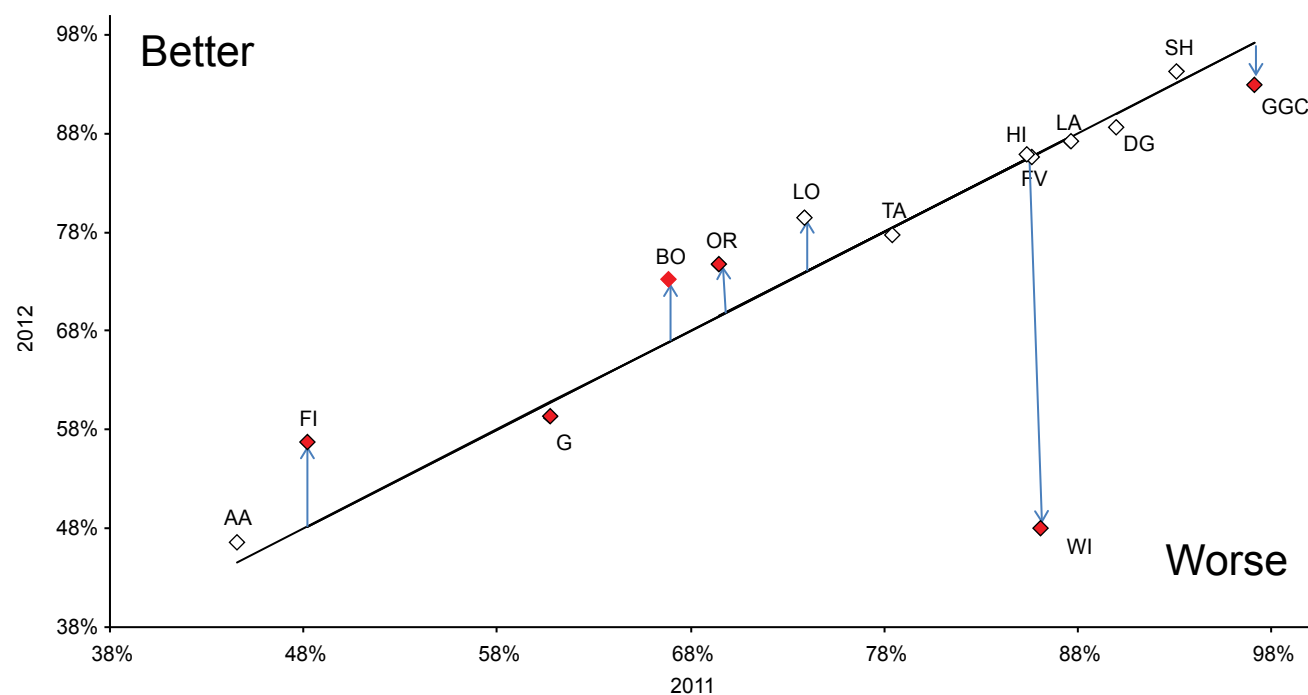
Information on ethnic group was available for 77.7% of the registered diabetic population. The completeness of this information fell from 37% in 2002 to 24.4% in 2006, increased to 33.3% in 2007 and again to 77.5% in 2011. Type 2 diabetes is much more common in South Asian than White ethnic groups and tends to present at an earlier age.

Table 12. Type 1 diabetes: completeness of recording of ethnic group by NHS board, Scotland, 2012, ranked by completeness.

NHS Board	Ethnic group identified	
	Number	Percentage
Dumfries & Galloway	810	91.1%
Greater Glasgow & Clyde	5,791	91.0%
Shetland	116	90.6%
Forth Valley	1,486	90.2%
Lothian	3,772	88.1%
Lanarkshire	3,062	85.4%
Fife	1,690	85.1%
Highland	1,519	84.7%
Tayside	1,546	81.3%
Orkney	90	75.6%
Western Isles	128	69.2%
Borders	428	68.4%
Grampian	1,954	62.4%
Ayrshire & Arran	1,266	57.2%
Scotland	23,658	82.0%

Table 13. Type 2 diabetes: completeness of recording of ethnic group by NHS board, Scotland, 2012, ranked by completeness.

NHS Board	Ethnic group identified	
	Number	Percentage
Shetland	834	94.7%
Greater Glasgow & Clyde	48,663	93.2%
Dumfries & Galloway	6,646	88.3%
Lanarkshire	23,161	87.3%
Highland	11,341	86.0%
Forth Valley	11,150	85.2%
Lothian	24,095	78.4%
Tayside	14,544	77.3%
Orkney	654	74.6%
Borders	3,801	73.7%
Grampian	12,958	58.8%
Fife	9,085	53.3%
Ayrshire & Arran	8,523	45.3%
Western Isles	474	44.3%
Scotland	175,929	77.2%

Figure 8. Completeness of recording of ethnic group from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 4% change between 2011 and 2012.

Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 14. Completeness of recording of ethnic group, 2002-2012 (type 1 and type 2 combined).

Year	Number identified	Percentage identified
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%

Body Mass Index

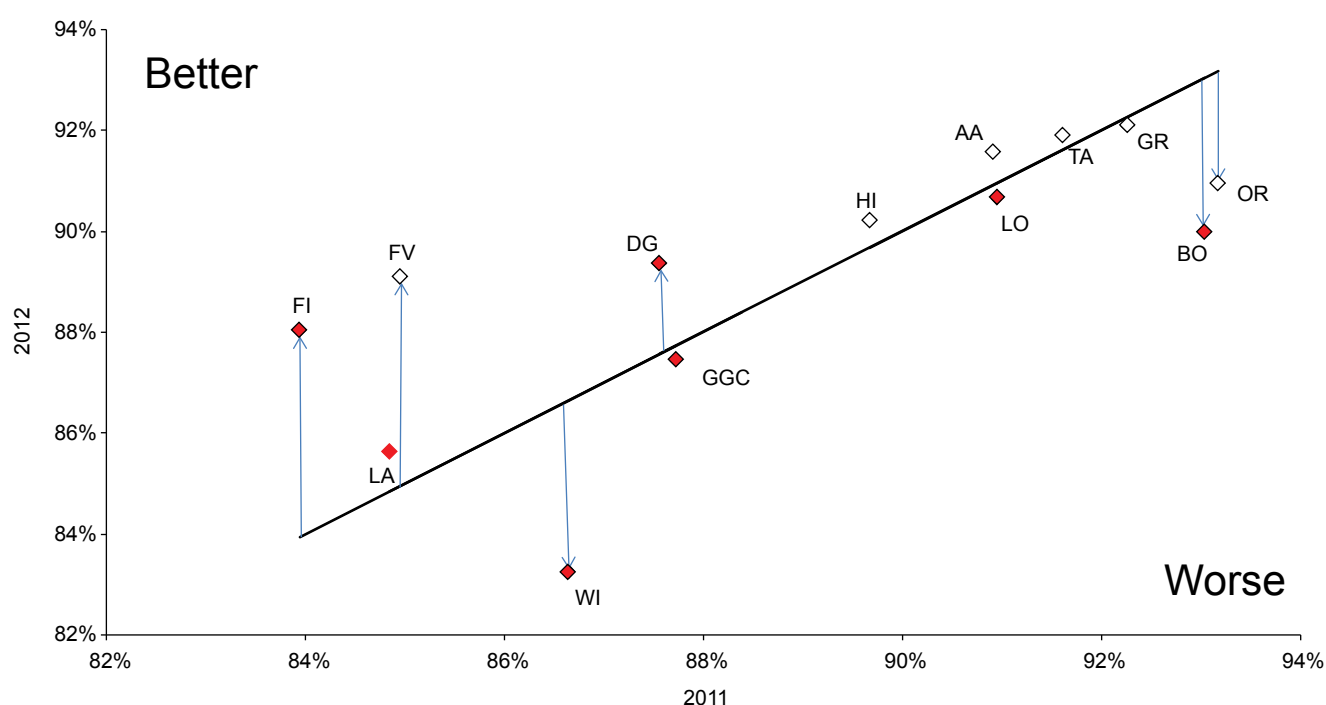
Body Mass Index (BMI) was recorded for 89.2% of patients with type 1 or type 2 diabetes in the previous 15 months. This is an increase from 88.7% recorded in 2011 but a slight decrease from the 89.7% recorded in 2009. Of the 89.2% with a record of BMI, 32.3% were overweight (BMI 25-29.9kg/m²) and 52.5% were obese (BMI 30kg/m² or over).

Despite type 2 diabetes being more prevalent in obese patients, 12.3% of those with type 2 diabetes had normal weight (BMI 18.5-24.9kg/m²) and 31.6% were overweight (BMI 25-29.9 kg/m²).

Table 15. Proportion of people with diabetes who had a record of BMI within the previous 15 months, by NHS Board and diabetes type, 2012, ranked by completeness for type 2.

NHS Board	Type 1 diabetes BMI percentage recorded	Type 2 diabetes BMI percentage recorded	Total recorded	Total not recorded
Grampian	90.8%	92.3%	22,863	1,965
Tayside	88.9%	92.2%	18,841	1,659
Lothian	91.4%	91.6%	31,739	2,922
Ayrshire & Arran	85.9%	91.1%	18,810	1,942
Orkney	89.4%	91.1%	892	89
Highland	87.8%	90.5%	13,339	1,445
Borders	90.0%	90.0%	5,136	572
Dumfries & Galloway	88.2%	89.5%	7,447	887
Forth Valley	88.5%	89.1%	12,953	1,589
Fife	87.1%	88.1%	16,552	2,251
Greater Glasgow & Clyde	85.1%	87.7%	50,675	7,276
Lanarkshire	77.2%	86.7%	25,359	4,250
Western Isles	75.2%	84.5%	1,028	207
Shetland	73.7%	67.2%	676	319
Scotland	86.6%	89.5%	226,310	27,373

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3133).

Figure 9. Proportion of people who had a record of BMI from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 1.5% change between 2011 and 2012.

Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 16. Proportion of people with diabetes (types 1 and 2 combined) with a record of BMI in the previous 15 months, Scotland 2001 – 2012.

Year	BMI recorded
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 = 3133).

Table 17. 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), 2012, ranked by % with BMI ≥40.

NHS Board	BMI (kg/m ²)						Total recorded	Not known
	<18.5	18.5-24.9	25-29.9	30-34.9	35-39.9	≥40		
Highland	1.5%	31.8%	39.8%	18.8%	6.2%	1.9%	1,401	194
Tayside	1.5%	35.2%	38.8%	18.3%	4.2%	2.1%	1,510	189
Grampian	1.3%	35.6%	39.5%	15.9%	5.5%	2.1%	2,536	258
Forth Valley	3.5%	36.2%	35.2%	17.2%	5.7%	2.2%	1,287	168
Lanarkshire	2.0%	34.0%	36.7%	17.7%	7.2%	2.4%	2,436	721
Western Isles	0.8%	36.3%	37.1%	22.6%	0.8%	2.4%	124	41
Lothian	2.4%	36.0%	37.7%	16.1%	5.3%	2.4%	3,592	337
Fife	1.6%	33.1%	37.9%	18.4%	6.5%	2.5%	1,553	230
Greater Glasgow & Clyde	2.1%	35.3%	38.2%	16.9%	4.8%	2.7%	4,880	857
Ayrshire & Arran	2.2%	33.1%	37.5%	17.5%	6.8%	2.9%	1,681	275
Orkney	0.0%	36.6%	40.9%	8.6%	10.8%	3.2%	93	11
Dumfries & Galloway	1.1%	33.4%	37.4%	19.2%	5.5%	3.4%	713	95
Borders	1.2%	26.8%	40.4%	19.3%	8.2%	4.0%	497	55
Shetland	1.2%	23.8%	34.5%	28.6%	7.1%	4.8%	84	30
Scotland	2.0%	34.5%	38.0%	17.3%	5.7%	2.5%	22,387	3,461

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3,001).

Table 18. Type 2 diabetes: proportion of people who are in each BMI category (by NHS board), 2012, ranked by % with BMI ≥ 40 .

NHS Board	BMI (kg/m ²)						Total recorded	Not known
	<18.5	18.5-24.9	25-29.9	30-34.9	35-39.9	≥ 40		
Western Isles	0.7%	10.8%	31.9%	29.8%	18.5%	8.4%	904	166
Grampian	0.5%	12.4%	32.5%	30.0%	14.9%	9.8%	20,327	1,707
Tayside	0.6%	12.2%	31.7%	30.1%	15.5%	9.8%	17,331	1,470
Highland	0.5%	12.0%	33.2%	29.7%	14.7%	9.9%	11,938	1,251
Dumfries & Galloway	0.7%	11.6%	32.1%	29.7%	15.7%	10.2%	6,734	792
Greater Glasgow & Clyde	0.6%	13.5%	32.2%	29.1%	14.5%	10.2%	45,795	6,419
Lanarkshire	0.5%	12.0%	30.8%	30.1%	16.2%	10.3%	22,923	3,529
Ayrshire & Arran	0.6%	12.6%	31.9%	29.6%	14.8%	10.5%	17,129	1,667
Borders	0.8%	11.8%	31.7%	29.2%	16.1%	10.5%	4,639	517
Lothian	0.6%	12.3%	30.9%	29.6%	16.0%	10.6%	28,147	2,585
Forth Valley	0.7%	11.2%	30.4%	29.9%	16.6%	11.2%	11,666	1,421
Orkney	0.4%	8.9%	31.0%	32.2%	16.0%	11.5%	799	78
Fife	0.5%	11.0%	30.7%	28.8%	17.1%	11.9%	14,999	2,021
Shetland	0.3%	9.5%	30.1%	25.7%	22.0%	12.5%	592	289
Scotland	0.6%	12.3%	31.6%	29.6%	15.5%	10.4%	203,923	23,912

Note: Excludes children under 12 years of age (n = 132).

Glycaemic Control

92.1% of patients had an HbA_{1c} recorded in the previous 15 months (table 20). In 55.6% of patients with a recorded result, HbA_{1c} was less than 58mmol/mol (7.5%), suggesting reasonable control of diabetes. 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.

Figure 10. Percentage of patients with diabetes with a recording of HbA1c within the previous 15 months by NHS Board and diabetes type, Scotland, 2012 (horizontal lines show figures for Scotland as a whole and bars are ranked by figures for type 2 diabetes).

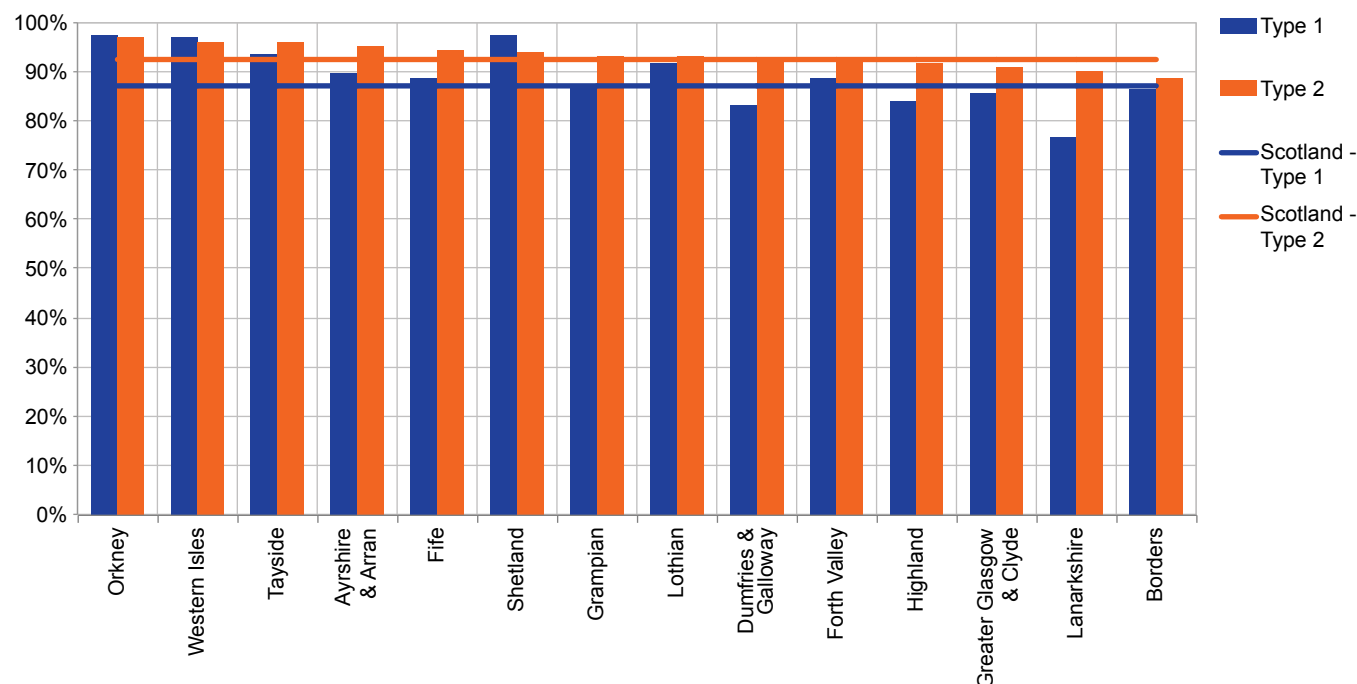
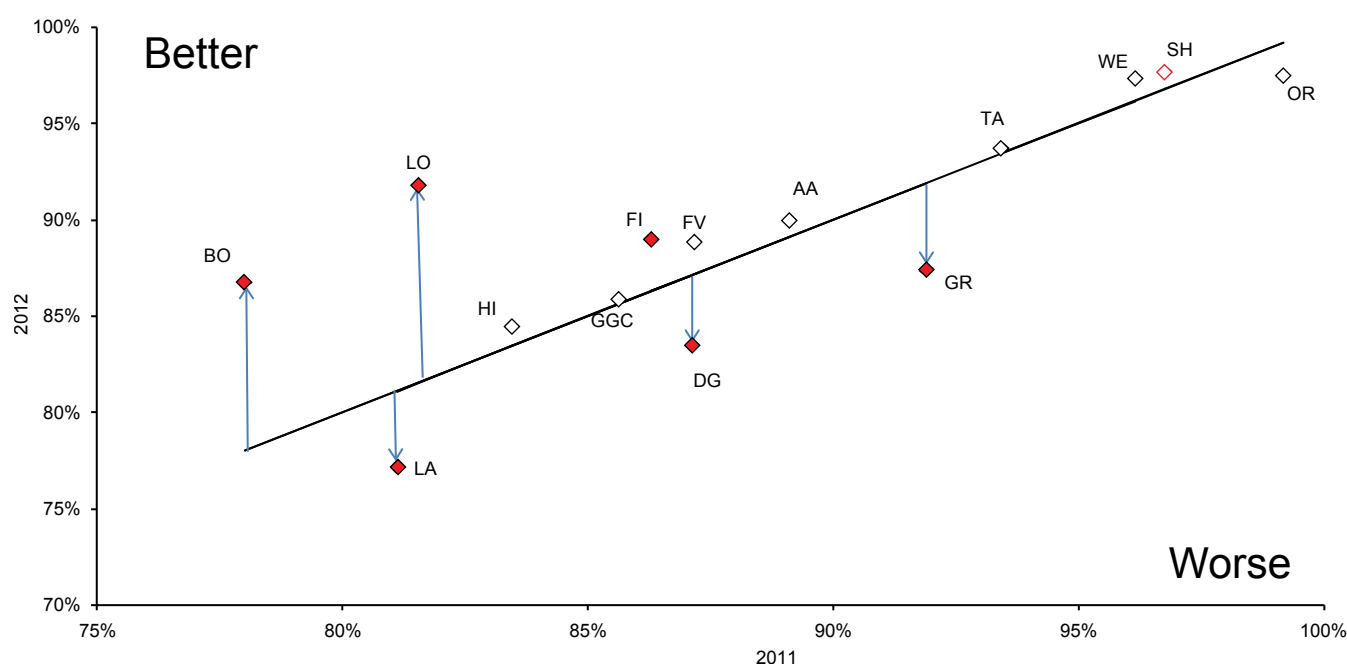
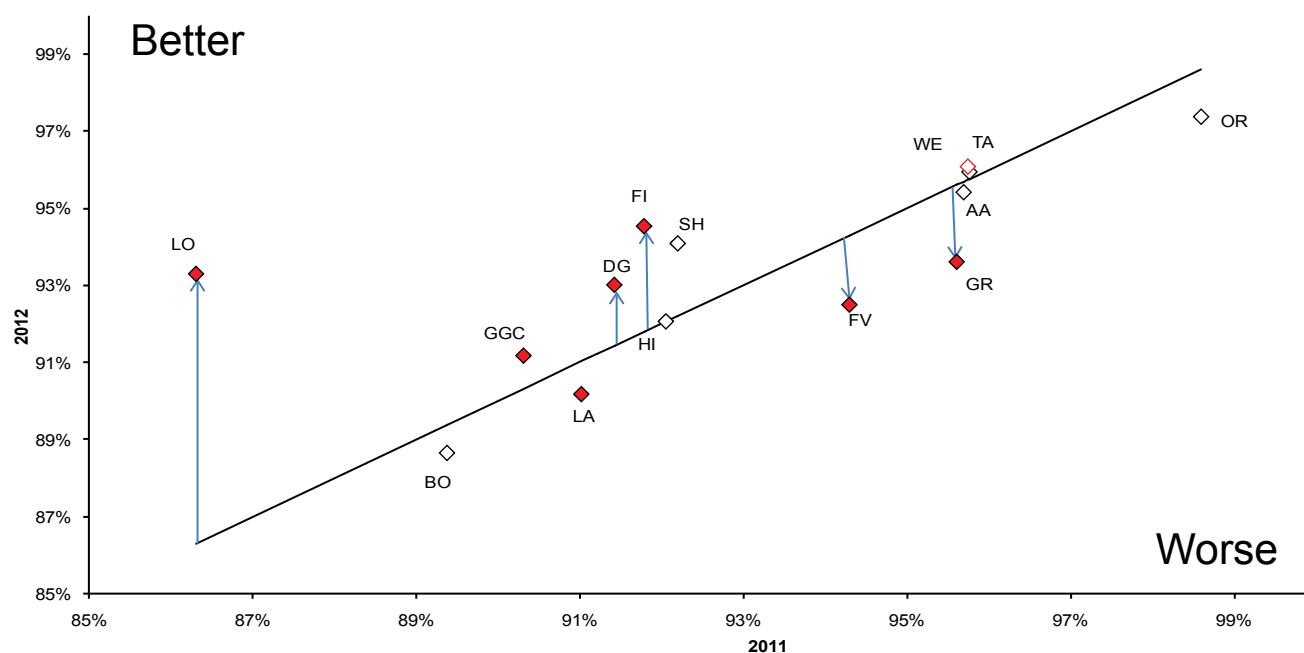


Figure 11. Proportion of people with type 1 diabetes who had a record of HbA1c from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 3.5% change between 2011 and 2012



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Figure 12. Proportion of people with type 2 diabetes who had a record of HbA1c from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 1.5% change between 2011 and 2012



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 19. Percentage of people with diabetes who had a record of HbA_{1c} within the previous 15 months, by diabetes type and NHS board, 2012, ranked by figures for type 2.

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		
Orkney	116	97.5%	3	854	97.4%	23	970
Western Isles	180	97.3%	5	1,028	96.1%	42	1,208
Tayside	1781	93.7%	120	18,044	95.9%	762	19,825
Ayrshire & Arran	1,990	90.0%	222	17,937	95.4%	862	19,927
Fife	1,767	89.0%	219	16,097	94.5%	933	17,864
Shetland	125	97.7%	3	829	94.1%	52	954
Grampian	2,734	87.4%	395	20,623	93.6%	1,414	23,357
Lothian	3,930	91.8%	352	28,675	93.3%	2,060	32,605
Dumfries & Galloway	742	83.5%	147	7,001	93.0%	527	7,743
Forth Valley	1,464	88.8%	184	12,110	92.5%	981	13,574
Highland	1514	84.4%	279	12141	92.0%	1,049	13,655
Greater Glasgow & Clyde	5467	85.9%	899	47629	91.2%	4,607	53,096
Lanarkshire	2,765	77.1%	820	23,921	90.2%	2,606	26,686
Borders	543	86.7%	83	4,574	88.6%	586	5,117
Scotland	25,118	87.1%	3,731	211,463	92.8%	16,504	236,581

Table 20. Percentage of people with diabetes (type 1 and type 2 combined) with a record of HbA_{1c} in previous 15 months, Scotland, 2004-2012.

Year	Recorded within previous 15 months
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 13. Type 1 diabetes: percentage of people in each HbA_{1c} category for HbA_{1c} recorded in the previous 15 months, by NHS Board, 2012, ranked by proportion with HbA_{1c} over 75 mmol/mol (9%).

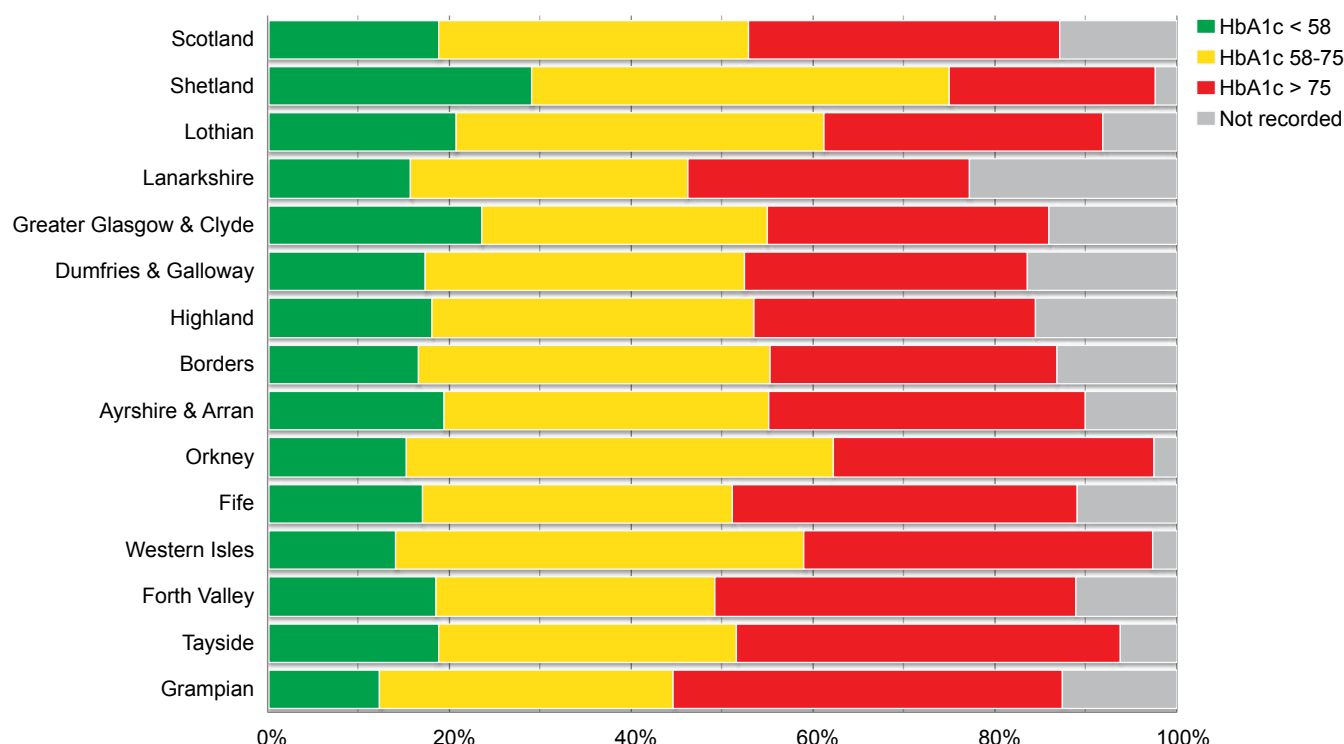


Figure 14. Type 2 diabetes: percentage of people in each HbA_{1c} category for HbA_{1c} recorded in the previous 15 months, ranked by percentage with HbA_{1c} over 75mmol/mol (9%).

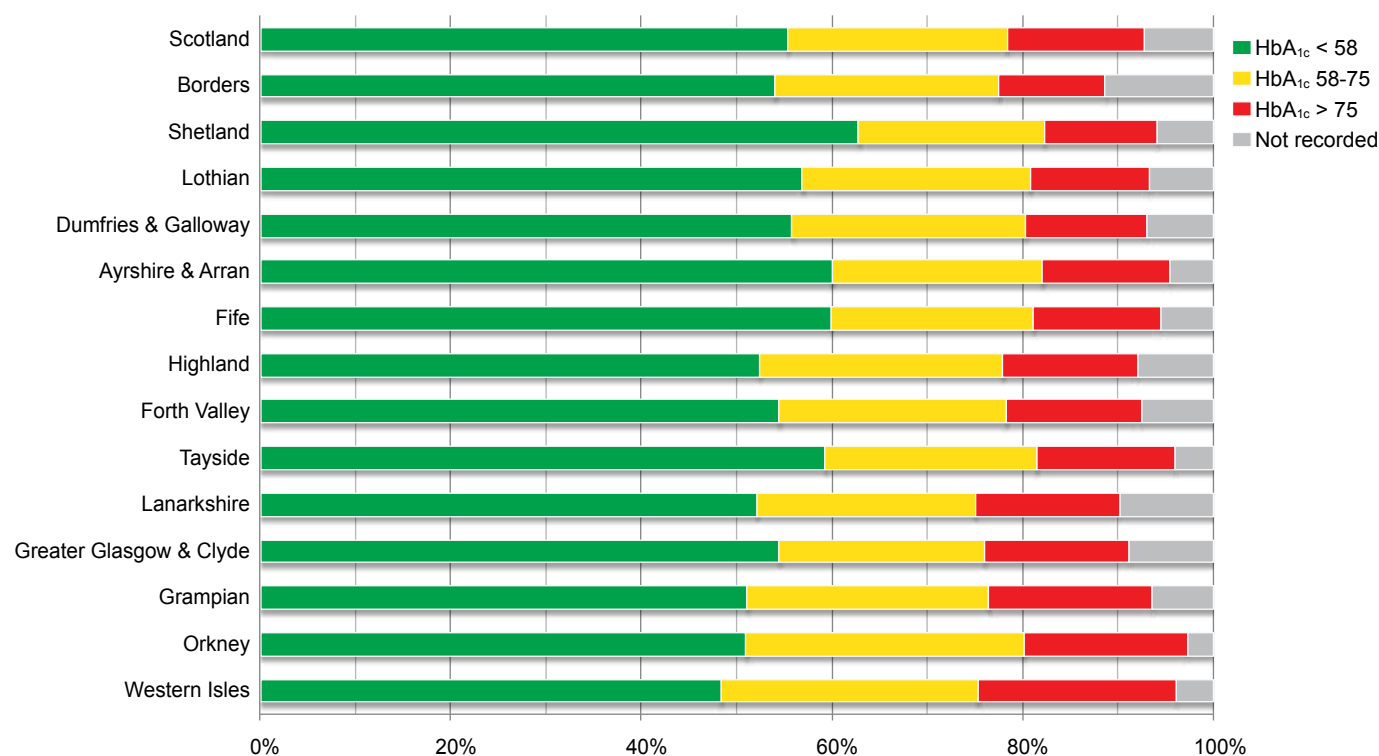


Table 21. Type 1 diabetes: HbA_{1c} category as a percentage of patients with HbA_{1c} recorded in previous 15 months, by NHS Board, ranked by proportion with HbA_{1c} over 75mmol/mol (9%).

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 recorded	Not recorded
Shetland	37	29.6%	59	47.2%	29	23.2%	125	3
Lothian	883	22.5%	1,737	44.2%	1,310	33.3%	3,930	352
Greater Glasgow & Clyde	1,491	27.3%	2,004	36.7%	1,972	36.1%	5,467	899
Orkney	18	15.5%	56	48.3%	42	36.2%	116	3
Borders	103	19.0%	243	44.8%	197	36.3%	543	83
Highland	324	21.4%	633	41.8%	557	36.8%	1,514	279
Dumfries & Galloway	154	20.8%	312	42.0%	276	37.2%	742	147
Ayrshire & Arran	428	21.5%	789	39.6%	773	38.8%	1,990	222
Western Isles	26	14.4%	83	46.1%	71	39.4%	180	5
Lanarkshire	563	20.4%	1,093	39.5%	1,109	40.1%	2,765	820
Fife	336	19.0%	679	38.4%	752	42.6%	1,767	219
Forth Valley	304	20.8%	506	34.6%	654	44.7%	1,464	184
Tayside	356	20.0%	624	35.0%	801	45.0%	1,781	120
Grampian	384	14.0%	1,012	37.0%	1,338	48.9%	2,734	395
Scotland	5,407	21.5%	9,830	39.1%	9,881	39.3%	25,118	3,731

Table 22. Type 2 diabetes: HbA_{1c} category as percentage of patients with HbA_{1c} recorded in previous 15 months, by NHS Board, ranked by proportion 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 recorded	Not recorded
Borders	2,787	60.9%	1,214	26.5%	573	12.5%	4,574	586
Shetland	553	66.7%	172	20.7%	104	12.5%	829	52
Lothian	17,484	61.0%	7,355	25.6%	3,836	13.4%	28,675	2060
Dumfries & Galloway	4,201	60.0%	1,844	26.3%	956	13.7%	7,001	527
Ayrshire & Arran	11,282	62.9%	4,148	23.1%	2,507	14.0%	17,937	862
Fife	10,195	63.3%	3,622	22.5%	2,280	14.2%	16,097	933
Tayside	11,145	61.8%	4,183	23.2%	2,716	15.1%	18,044	762
Highland	6,913	56.9%	3,368	27.7%	1,860	15.3%	12,141	1049
Forth Valley	7,124	58.8%	3,124	25.8%	1,862	15.4%	12,110	981
Greater Glasgow & Clyde	28,420	59.7%	11,280	23.7%	7,929	16.6%	47,629	4607
Lanarkshire	13,814	57.7%	6,102	25.5%	4,005	16.7%	23,921	2606
Orkney	447	52.3%	256	30.0%	151	17.7%	854	23
Grampian	11,259	54.6%	5,590	27.1%	3,774	18.3%	20,623	1414
Western Isles	517	50.3%	289	28.1%	222	21.6%	1,028	42
Scotland	126,141	59.7%	52,547	24.8%	32,775	15.5%	211,463	16,504

Table 23. Type 1 diabetes: number and percentage of people with a record of HbA_{1c} in each HbA_{1c} category, Scotland, 2009-2012.

Year	HbA _{1c} < 58 (7.5%)		HbA _{1c} 58-75 (7.5-9.0%)		HbA _{1c} >75 (9.0%)		Total recorded	Not known
	Number	Percentage	Number	Percentage	Number	Percentage		
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 24. Type 2 diabetes: number and percentage of people with a record of HbA_{1c} in each HbA_{1c} category, Scotland, 2009-2012.

Year	HbA _{1c} < 58 (7.5%)		HbA _{1c} 58-75 (7.5-9.0%)		HbA _{1c} >75 (9.0%)		Total recorded	Not known
	Number	Percentage	Number	Percentage	Number	Percentage		
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 25. 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, 2011, ranked by proportion with HbA_{1c} over 75mmol/mol.

NHS Board	HbA _{1c} <53	HbA _{1c} 53-57	HbA _{1c} 58-63	HbA _{1c} 64-68	HbA _{1c} 69-75	HbA _{1c} >75	Total recorded	Not recorded
Shetland	12.8%	16.8%	14.4%	15.2%	17.6%	23.2%	125	3
Lothian	13.2%	9.3%	15.8%	13.2%	15.2%	33.3%	3,930	352
Greater Glasgow & Clyde	19.2%	8.1%	12.4%	11.5%	12.8%	36.1%	5,467	899
Orkney	8.6%	6.9%	17.2%	10.3%	20.7%	36.2%	116	3
Borders	13.4%	5.5%	12.5%	16.4%	15.8%	36.3%	543	83
Highland	11.6%	9.8%	13.8%	12.8%	15.2%	36.8%	1,514	279
Dumfries & Galloway	11.3%	9.4%	12.1%	13.2%	16.7%	37.2%	742	147
Ayrshire & Arran	12.6%	8.9%	12.3%	13.8%	13.6%	38.8%	1,990	222
Western Isles	7.8%	6.7%	16.1%	14.4%	15.6%	39.4%	180	5
Lanarkshire	12.2%	8.2%	13.5%	11.5%	14.5%	40.1%	2,765	820
Fife	10.2%	8.8%	11.4%	14.6%	12.5%	42.6%	1,767	219
Forth Valley	12.5%	8.3%	12.4%	10.3%	11.8%	44.7%	1,464	184
Tayside	10.5%	9.5%	9.8%	12.7%	12.5%	45.0%	1,781	120
Grampian	6.8%	7.3%	11.4%	12.6%	13.0%	48.9%	2,734	395
Scotland	13.0%	8.5%	12.8%	12.6%	13.8%	39.3%	25,118	3,731

Table 26. 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, 2011, ranked by proportion with HbA_{1c} over 75 mmol/mol (9%).

NHS Board	HbA _{1c} <53	HbA _{1c} 53-57	HbA _{1c} 58-63	HbA _{1c} 64-68	HbA _{1c} 69-75	HbA _{1c} >75	Total recorded	Not recorded
Borders	43.1%	17.8%	13.5%	7.5%	5.6%	12.5%	4,574	586
Shetland	52.8%	13.9%	9.4%	6.3%	5.1%	12.6%	829	52
Lothian	45.9%	15.1%	12.5%	7.0%	6.2%	13.4%	28,675	2,060
Dumfries & Galloway	45.9%	14.1%	13.4%	7.1%	5.9%	13.7%	7,001	527
Ayrshire & Arran	46.9%	16.1%	11.0%	6.9%	5.2%	14.0%	17,937	862
Fife	46.8%	16.5%	10.2%	7.2%	5.1%	14.2%	16,097	933
Tayside	45.9%	15.9%	11.1%	7.1%	5.0%	15.1%	18,044	762
Highland	40.2%	16.7%	13.7%	7.7%	6.4%	15.3%	12,141	1,049
Forth Valley	43.5%	15.4%	12.5%	7.1%	6.2%	15.4%	12,110	981
Greater Glasgow & Clyde	45.8%	13.9%	11.3%	6.4%	6.0%	16.7%	47,629	4,607
Lanarkshire	42.7%	15.1%	12.2%	6.9%	6.4%	16.7%	23,921	2,606
Orkney	36.4%	15.9%	12.9%	9.1%	8.0%	17.7%	854	23
Grampian	37.1%	17.5%	12.4%	8.9%	5.8%	18.3%	20,623	1,414
Western Isles	35.4%	14.9%	13.6%	7.9%	6.6%	21.6%	1,028	42
Scotland	44.2%	15.4%	11.9%	7.1%	5.9%	15.5%	211,463	16,504

Table 27. 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
Shetland	74	71	65	83	52	65	68	70	62	60	-	56
Ayrshire & Arran	72	68	76	77	79	72	70	71	70	67	66	57
Fife	73	69	74	80	78	74	72	74	73	70	66	57
Lothian	65	65	71	79	74	71	68	70	69	65	68	57
Borders	-	79	67	78	76	71	72	72	71	65	64	58
Dumfries & Galloway	-	72	67	81	82	78	72	72	71	65	68	58
Forth Valley	70	62	72	81	85	78	75	71	71	65	63	58
Greater Glasgow & Clyde	57	59	63	70	72	69	65	69	65	64	65	58
Tayside	69	68	73	82	84	80	74	72	73	68	59	58
Highland	74	58	68	76	82	76	74	71	70	65	66	59
Lanarkshire	72	67	72	80	79	75	70	71	70	68	65	59
Orkney	64	76	81	91	88	74	70	70	72	63	72	60
Grampian	81	78	81	87	81	76	74	75	75	72	82	61
Western Isles	56	73	63	85	82	81	71	75	70	65	79	62

Table 28. Numbers (and percentages) of people aged under 18 with type 1 diabetes on insulin pumps by age and NHS Board, December 2012.

NHS Board	Type 1 population	Number of patients	Percentage
Ayrshire & Arran	257	39	15.2%
Borders	70	22	31.4%
Dumfries & Galloway	80	10	12.5%
Fife	200	33	16.5%
Forth Valley	176	25	14.2%
Grampian	326	38	11.7%
Greater Glasgow & Clyde	635	72	11.3%
Highland	232	6	2.6%
Lanarkshire	399	15	3.8%
Lothian	378	59	15.6%
Orkney	15	3	20.0%
Shetland	14	2	14.3%
Tayside	203	63	31.0%
Western Isles	20	0	0.0%
Scotland	3,005	387	12.9%

Note: These figures are those provided by MCNs to the Scottish Government in December 2012.

Table 29. Numbers (and percentages) of people aged over 18 with type 1 diabetes on insulin pumps by age and NHS Board, December 2012.

NHS Board	Type 1 population	Number of patients	Percentage
Ayrshire & Arran	1,973	42	2.1%
Borders	541	36	6.7%
Dumfries & Galloway	893	26	2.9%
Fife	1,769	110	6.2%
Forth Valley	1,449	55	3.8%
Grampian	2,779	58	2.1%
Greater Glasgow & Clyde	5,648	88	1.6%
Highland	1,585	40	2.5%
Lanarkshire	3,145	61	1.9%
Lothian	3,799	195	5.1%
Orkney	103	3	2.9%
Shetland	110	3	2.7%
Tayside	1,691	78	4.6%
Western Isles	166	2	1.2%
Scotland	25,651	797	3.1%

Note: These figures are those provided by MCNs to the Scottish Government in December 2012.

Cardiovascular Risk

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

Blood Pressure

93.6% of people with diabetes had their BP recorded within the previous 15 months, of which 77.5% had a systolic BP less than or equal to 140mmHg, suggesting reasonable control of blood pressure. However, this target level is under review.

There has been little recent change in the completeness of blood pressure recording (table 31). However, the proportion with a systolic blood pressure of 140mmHg or greater has fallen (table 37) reflecting better blood pressure control overall.

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%).

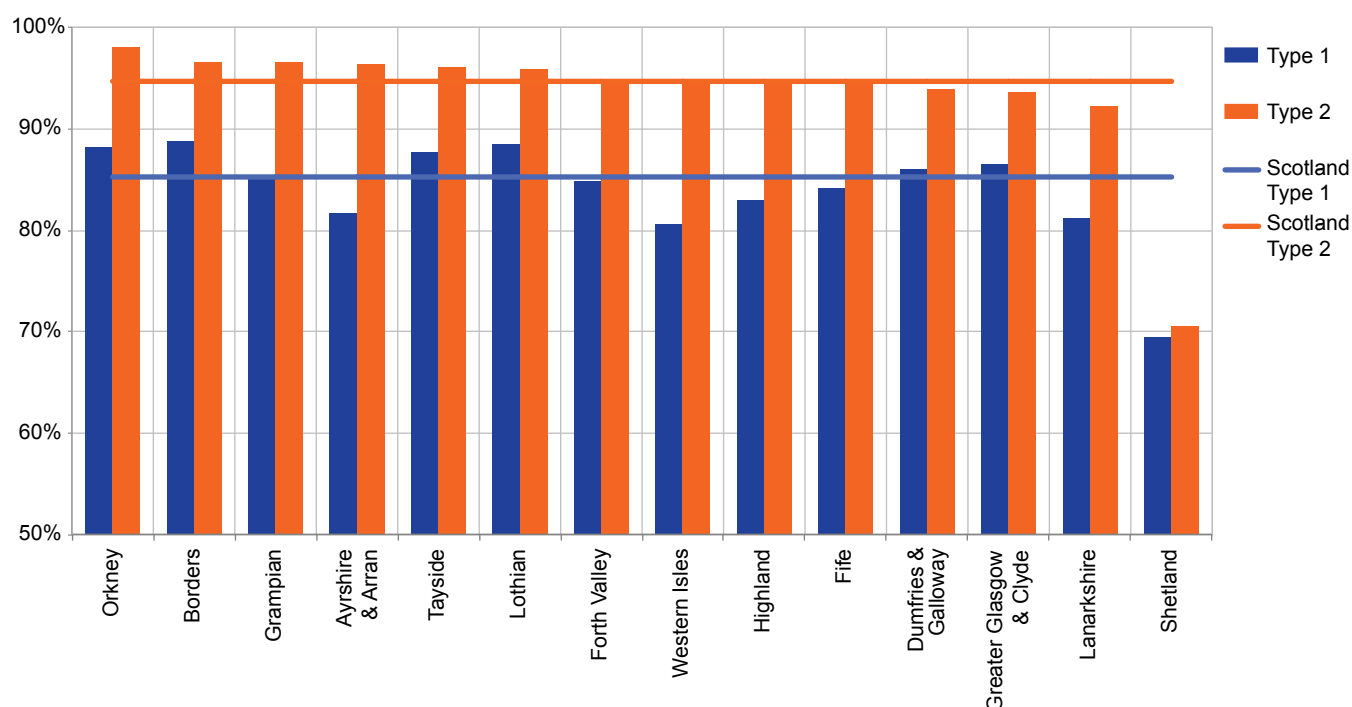


Table 30. Percentage of people with diabetes with a recording of BP in the previous 15 months, by NHS Board and diabetes type, ranked by figures for type 2 diabetes.

NHS Board	Recorded within previous 15 months			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	105	88.2%	860	98.1%
Borders	556	88.8%	4,982	96.6%
Grampian	2,674	85.5%	21,266	96.5%
Ayrshire & Arran	1,808	81.7%	18,106	96.3%
Tayside	1,666	87.6%	18,056	96.0%
Lothian	3,789	88.5%	29,487	95.9%
Forth Valley	1,396	84.7%	12,417	94.9%
Western Isles	149	80.5%	1,012	94.6%
Highland	1,488	83.0%	12,462	94.5%
Fife	1,671	84.1%	16,072	94.4%
Dumfries & Galloway	764	85.9%	7,070	93.9%
Greater Glasgow & Clyde	5,509	86.5%	48,849	93.5%
Lanarkshire	2,910	81.2%	24,441	92.1%
Shetland	89	69.5%	622	70.6%
Scotland	24,574	85.2%	215,702	94.6%

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

Table 31. Percentage of people with Type 1 or Type 2 diabetes with a record of BP within the previous 15 months, Scotland, 2009-2012.

Type 1			
Year	Type 1 population	BP Recorded (n)	BP (%)
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%

Type 2			
Year	Type 2 population	BP Recorded (n)	BP (%)
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.

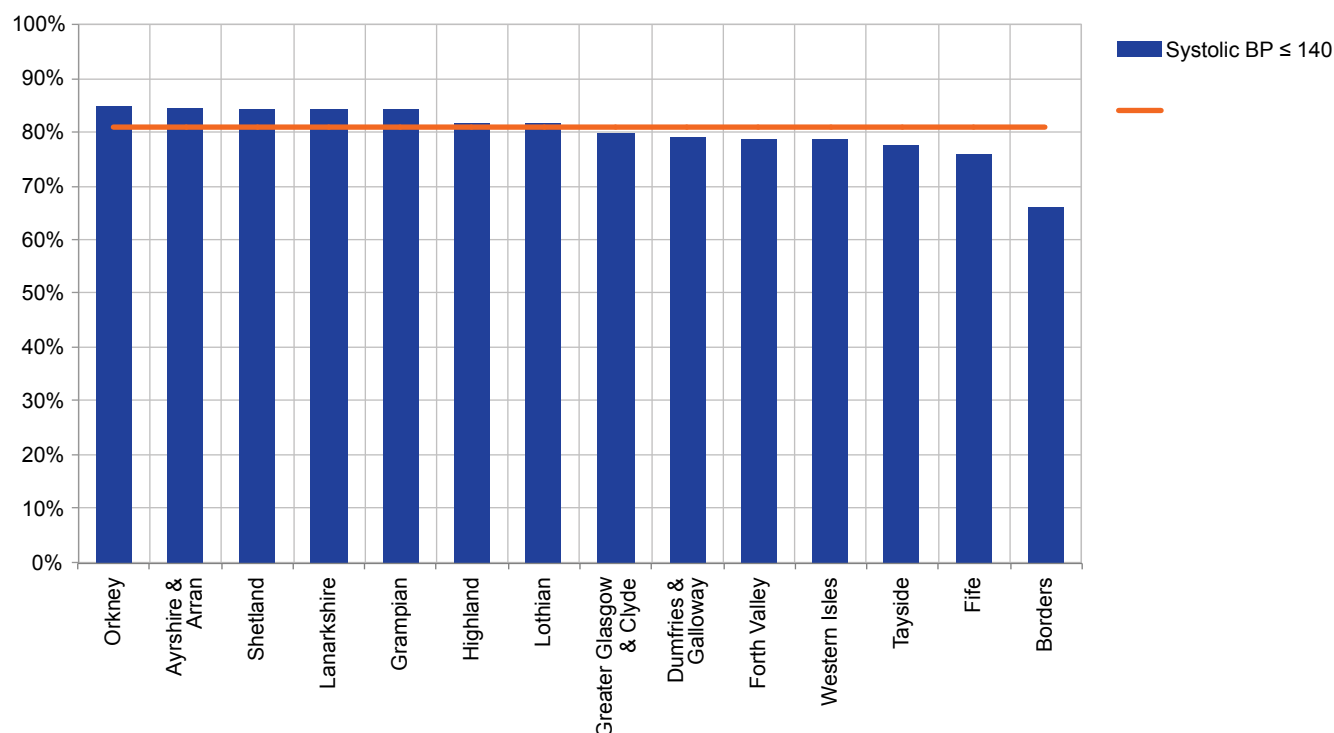


Figure 17. Type 1 diabetes :percentage of people with most recent blood pressure in the last 15 months < 130 mmHg (systolic) and <80mmHg (diastolic), by NHS Board. Horizontal line indicates level for Scotland as a whole.

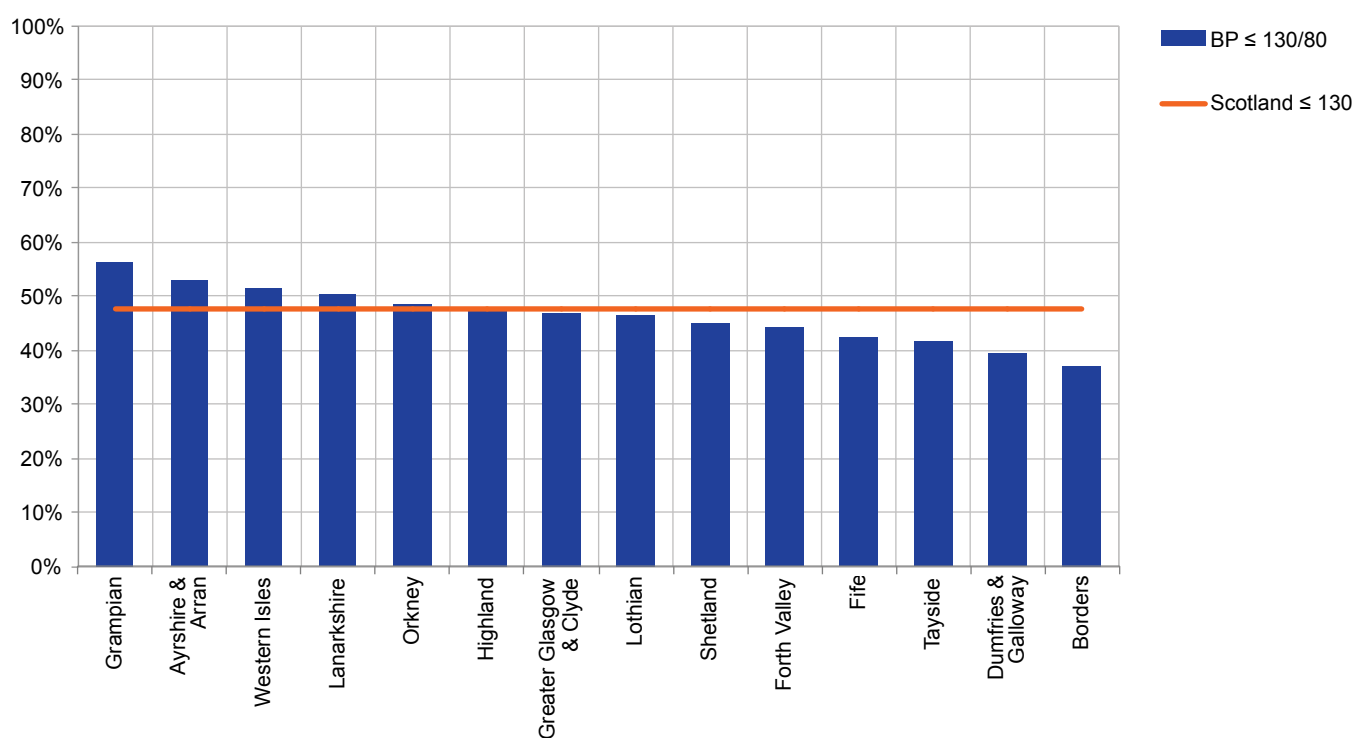


Figure 18. Type 2 diabetes: percentage of people with most recent systolic blood pressure (SBP) < 140 mmHg in the last 15 months by NHS Board. Horizontal line indicates level for Scotland as a whole.

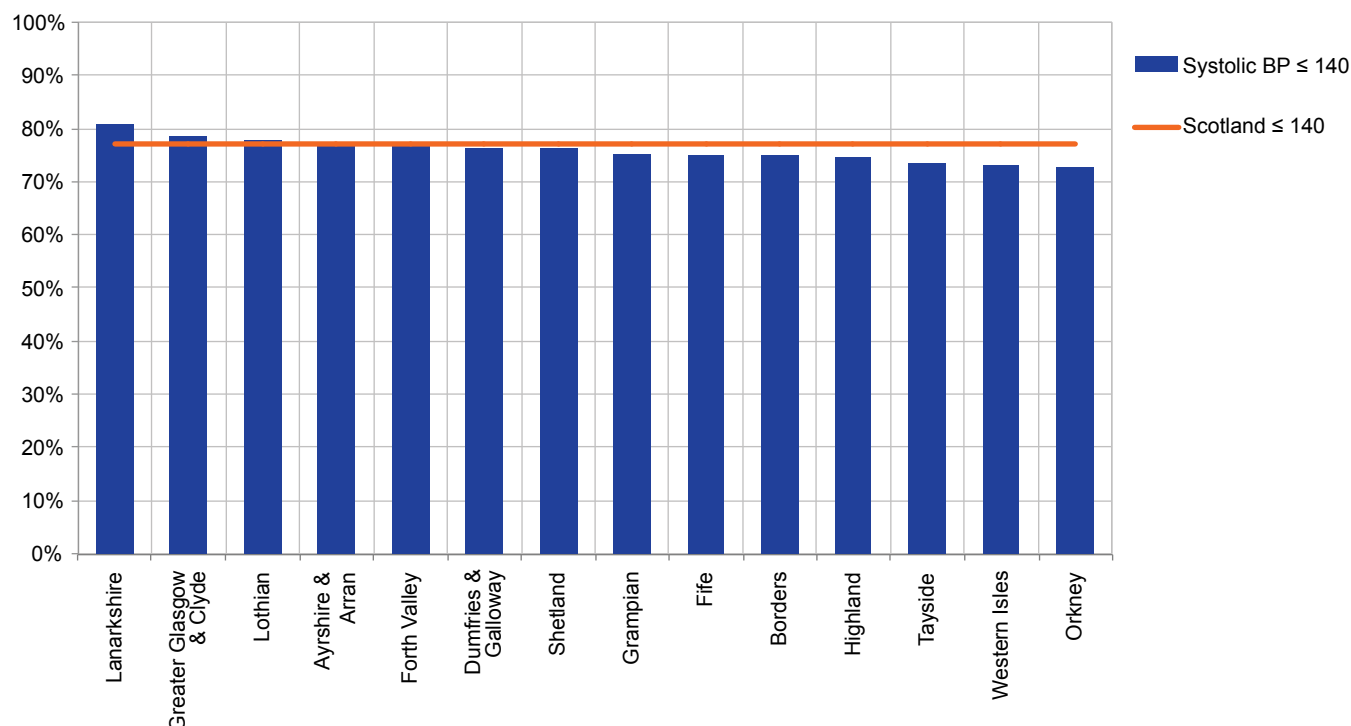


Figure 19. Type 2 diabetes: percentage of people with most recent blood pressure in the last 15 months < 130 mmHg (systolic) and <80mmHg (diastolic), by NHS Board. Horizontal line indicates level for Scotland as a whole.

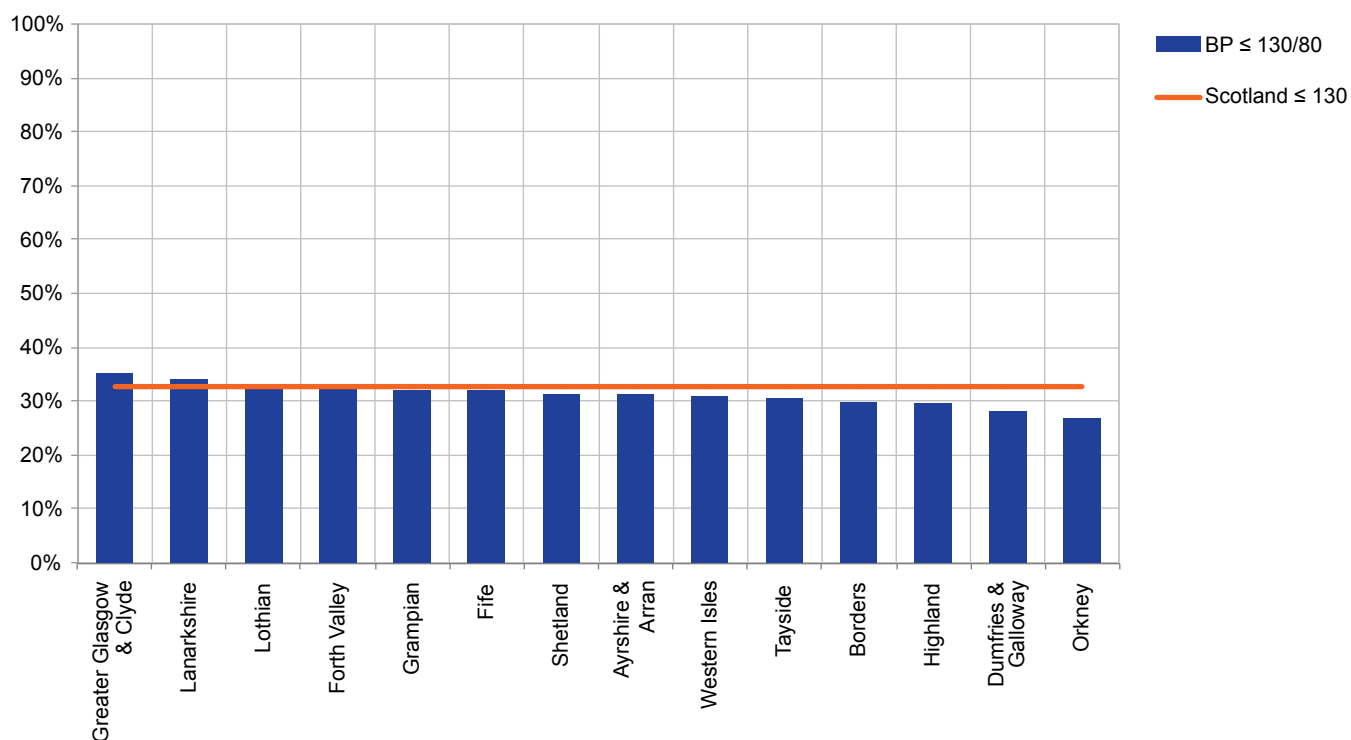
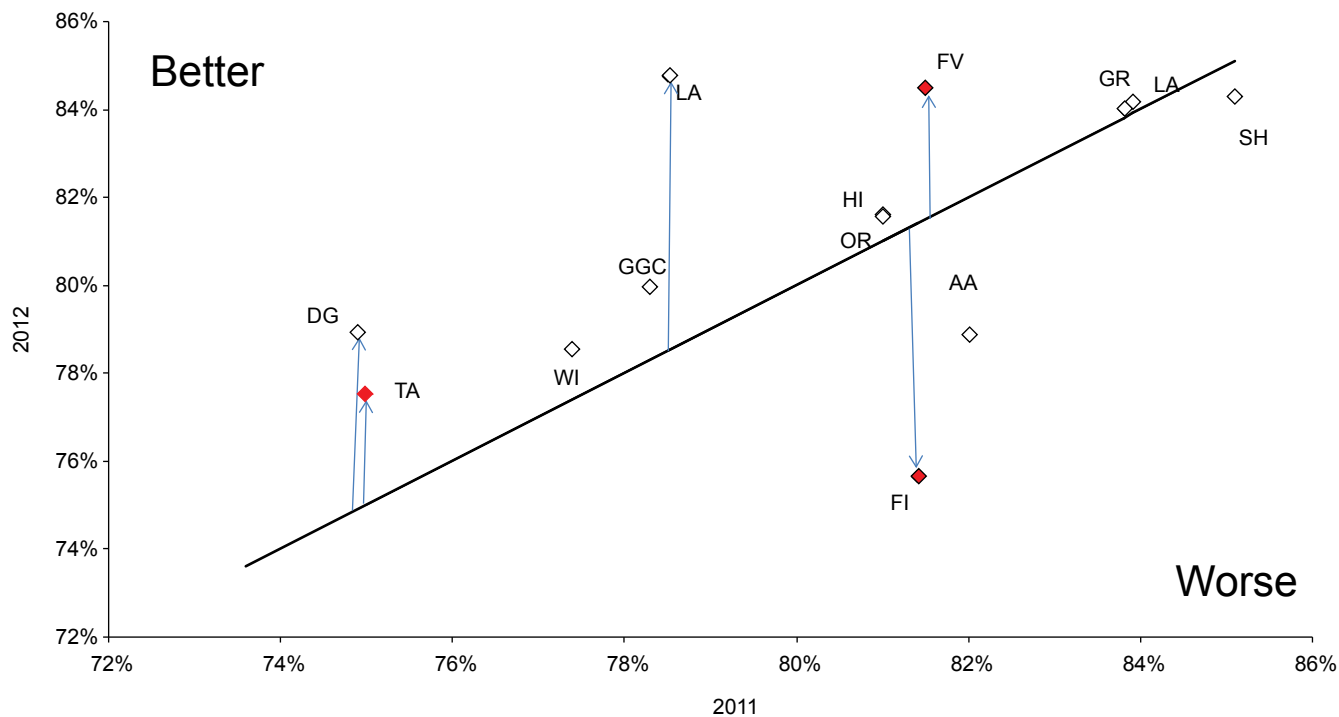


Table 32. Type 1 diabetes : percentage of people with systolic blood pressure (SBP) < 140 mmHg by NHS Board, ranked by percentage > 140.

NHS Board	Systolic BP ≤ 140		Systolic BP > 140		Total recorded	Not recorded (n,%)	
	Number	Percentage	Number	Percentage		Number	Percentage
Orkney	89	84.8%	16	15.2%	105	14	11.8%
Ayrshire & Arran	1,527	84.5%	281	15.5%	1,808	404	18.3%
Shetland	75	84.3%	14	15.7%	89	39	30.5%
Lanarkshire	2,449	84.2%	461	15.8%	2,910	675	18.8%
Grampian	2,246	84.0%	428	16.0%	2,674	455	14.5%
Highland	1,214	81.6%	274	18.4%	1,488	305	17.0%
Lothian	3,090	81.6%	699	18.4%	3,789	493	11.5%
Greater Glasgow & Clyde	4,405	80.0%	1,104	20.0%	5,509	857	13.5%
Dumfries & Galloway	603	78.9%	161	21.1%	764	125	14.1%
Forth Valley	1,101	78.9%	295	21.1%	1,396	252	15.3%
Western Isles	117	78.5%	32	21.5%	149	36	19.5%
Tayside	1,291	77.5%	375	22.5%	1,666	235	12.4%
Fife	1,264	75.6%	407	24.4%	1,671	315	15.9%
Borders	367	66.0%	189	34.0%	556	70	11.2%
Scotland	19,838	80.7%	4,736	19.3%	24,574	4,275	14.8%

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 \leq 140mmHg from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 2.5% change between 2011 and 2012.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 33. 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	
	Number	Percentage	Number	Percentage		Number	Percentage
Grampian	1,507	56.4%	1,167	43.6%	2,674	455	14.5%
Ayrshire & Arran	962	53.2%	846	46.8%	1,808	404	18.3%
Western Isles	77	51.7%	72	48.3%	149	36	19.5%
Lanarkshire	1,471	50.6%	1,439	49.5%	2,910	675	18.8%
Orkney	51	48.6%	54	51.4%	105	14	11.8%
Highland	708	47.6%	780	52.4%	1,488	305	17.0%
Greater Glasgow & Clyde	2,592	47.1%	2,917	52.9%	5,509	857	13.5%
Lothian	1,767	46.6%	2,022	53.4%	3,789	493	11.5%
Shetland	40	44.9%	49	55.1%	89	39	30.5%
Forth Valley	618	44.3%	778	55.7%	1,396	252	15.3%
Fife	710	42.5%	961	57.5%	1,671	315	15.9%
Tayside	695	41.7%	971	58.3%	1,666	235	12.4%
Dumfries & Galloway	300	39.3%	464	60.7%	764	125	14.1%
Borders	207	37.2%	349	62.8%	556	70	11.2%
Scotland	11,705	47.6%	12,869	52.4%	24,574	4,275	14.8%

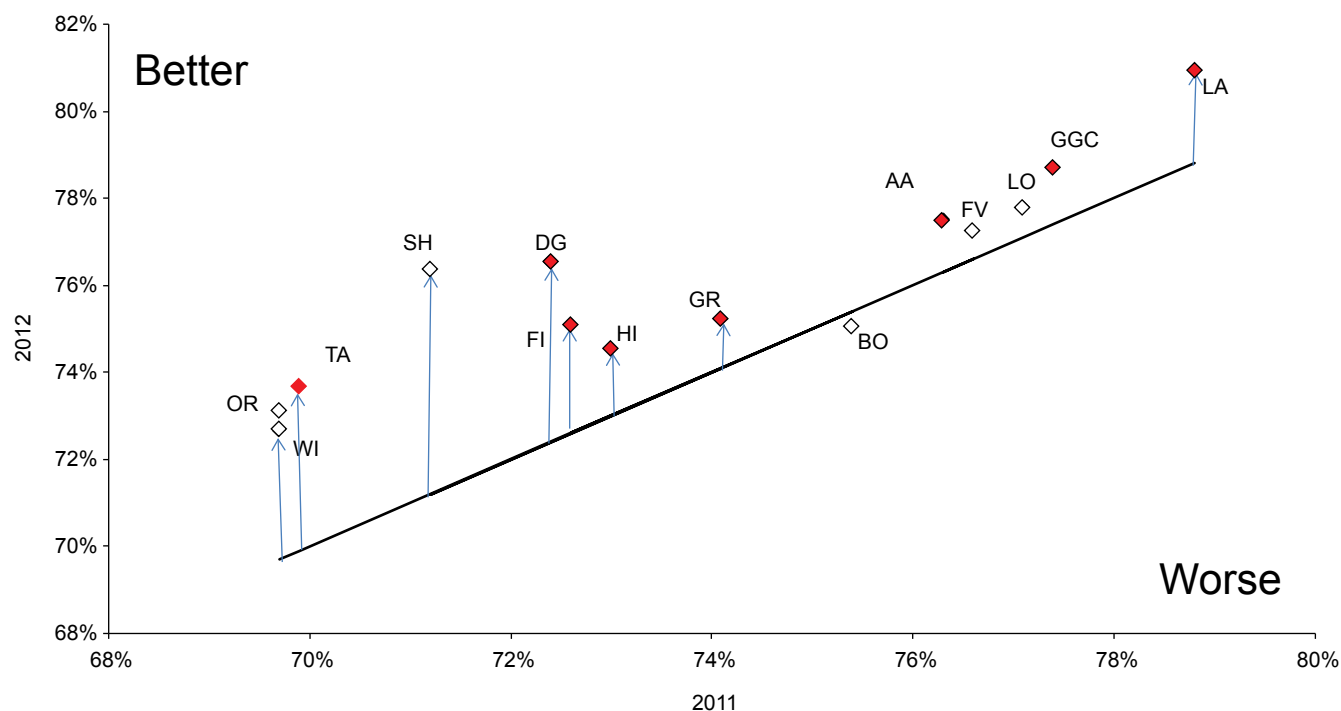
Note: Restricted to most recent value recorded in the previous 15 months – those recorded longer ago than that were classed as missing (not recorded).

Table 34. Type 2 diabetes: percentage of people with systolic blood pressure (SBP) < 140 mmHg by NHS Board (denominator those with recording of SBP within the previous 15 months), ranked by percentage > 140.

NHS Board	Systolic BP ≤ 140		Systolic BP > 140		Total recorded	Not recorded	
	Number	Percentage	Number	Percentage		Number	Percentage
Lanarkshire	19,780	80.9%	4,661	19.1%	24,441	2086	7.9%
Greater Glasgow & Clyde	38454	78.7%	10395	21.3%	48,849	3387	6.5%
Lothian	22941	77.8%	6546	22.2%	29,487	1248	4.1%
Ayrshire & Arran	14,031	77.5%	4,075	22.5%	18,106	693	3.7%
Forth Valley	9593	77.3%	2824	22.7%	12,417	674	5.1%
Dumfries & Galloway	5411	76.5%	1659	23.5%	7,070	458	6.1%
Shetland	475	76.4%	147	23.6%	622	259	29.4%
Grampian	15,998	75.2%	5,268	24.8%	21,266	771	3.5%
Fife	12069	75.1%	4003	24.9%	16,072	958	5.6%
Borders	3739	75.1%	1243	24.9%	4,982	178	3.4%
Highland	9289	74.5%	3173	25.5%	12,462	728	5.5%
Tayside	13301	73.7%	4755	26.3%	18,056	750	4.0%
Western Isles	740	73.1%	272	26.9%	1,012	58	5.4%
Orkney	625	72.7%	235	27.3%	860	17	1.9%
Scotland	166,446	77.2%	49,256	22.8%	215,702	12,265	5.4%

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 21. Type 2 diabetes: percentage of people with SBP ≤ 140 mmHg from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 1.5% change between 2011 and 2012.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 35. 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	
	Number	Percentage	Number	Percentage		Number	Percentage
Greater Glasgow & Clyde	17,262	35.3%	31,587	64.7%	48,849	3387	6.5%
Lanarkshire	8365	34.2%	16076	65.8%	24,441	2086	7.9%
Lothian	9647	32.7%	19840	67.3%	29,487	1248	4.1%
Forth Valley	4,029	32.4%	8,388	67.6%	12,417	674	5.1%
Grampian	6851	32.2%	14415	67.8%	21,266	771	3.5%
Fife	5176	32.2%	10896	67.8%	16,072	958	5.6%
Shetland	195	31.4%	427	68.7%	622	259	29.4%
Ayrshire & Arran	5,667	31.3%	12,439	68.7%	18,106	693	3.7%
Western Isles	315	31.1%	697	68.9%	1,012	58	5.4%
Tayside	5518	30.6%	12538	69.4%	18,056	750	4.0%
Borders	1485	29.8%	3497	70.2%	4,982	178	3.5%
Highland	3689	29.6%	8773	70.4%	12,462	728	5.5%
Dumfries & Galloway	1991	28.2%	5079	71.8%	7,070	458	6.1%
Orkney	231	26.9%	629	73.1%	860	17	1.9%
Scotland	70,421	32.6%	145,281	67.4%	215,702	12,265	5.4%

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 36. Percentage of people with diabetes (type 1 and type 2 combined) with systolic blood pressure (SBP) < 140 mmHg (denominator those with recording of SBP within the previous 15 months), Scotland, 2005-2012.

Year	Total	Systolic BP ≤ 140	Systolic BP > 140	Not recorded
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 2004 to 2007, older results could be included if there was no recent result.

Table 37. Type 1 diabetes: mean BP (mmHg) recorded in previous 15 months in people aged <40 years, by NHS Board, 2012, ranked by mean systolic BP.

NHS Board	Mean systolic BP	Mean diastolic BP
Grampian	119	70
Ayrshire & Arran	119	72
Western Isles	119	72
Orkney	120	70
Highland	121	73
Lanarkshire	122	74
Lothian	123	75
Greater Glasgow & Clyde	124	74
Shetland	125	72
Forth Valley	125	73
Dumfries & Galloway	125	75
Tayside	125	75
Fife	125	77
Borders	127	74

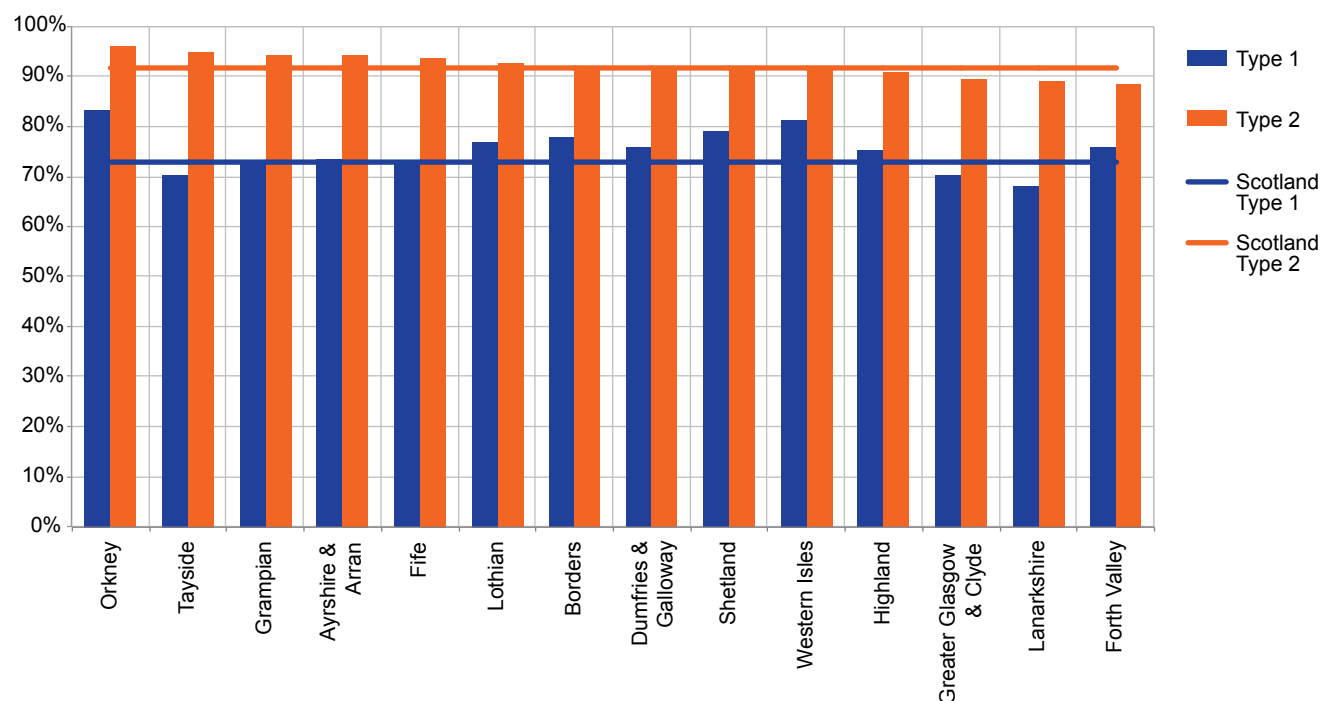
Table 38. Type 2 diabetes: mean BP recorded in previous 15 months in people aged 50-60 years, by NHS Board, 2012, ranked by mean systolic BP.

NHS Board	Mean systolic BP	Mean diastolic BP
Lothian	131	78
Dumfries & Galloway	132	78
Forth Valley	132	78
Greater Glasgow & Clyde	132	78
Lanarkshire	132	78
Ayrshire & Arran	133	78
Borders	133	78
Grampian	133	78
Highland	133	78
Fife	133	79
Tayside	133	79
Western Isles	133	79
Orkney	134	79
Shetland	134	80

Total cholesterol

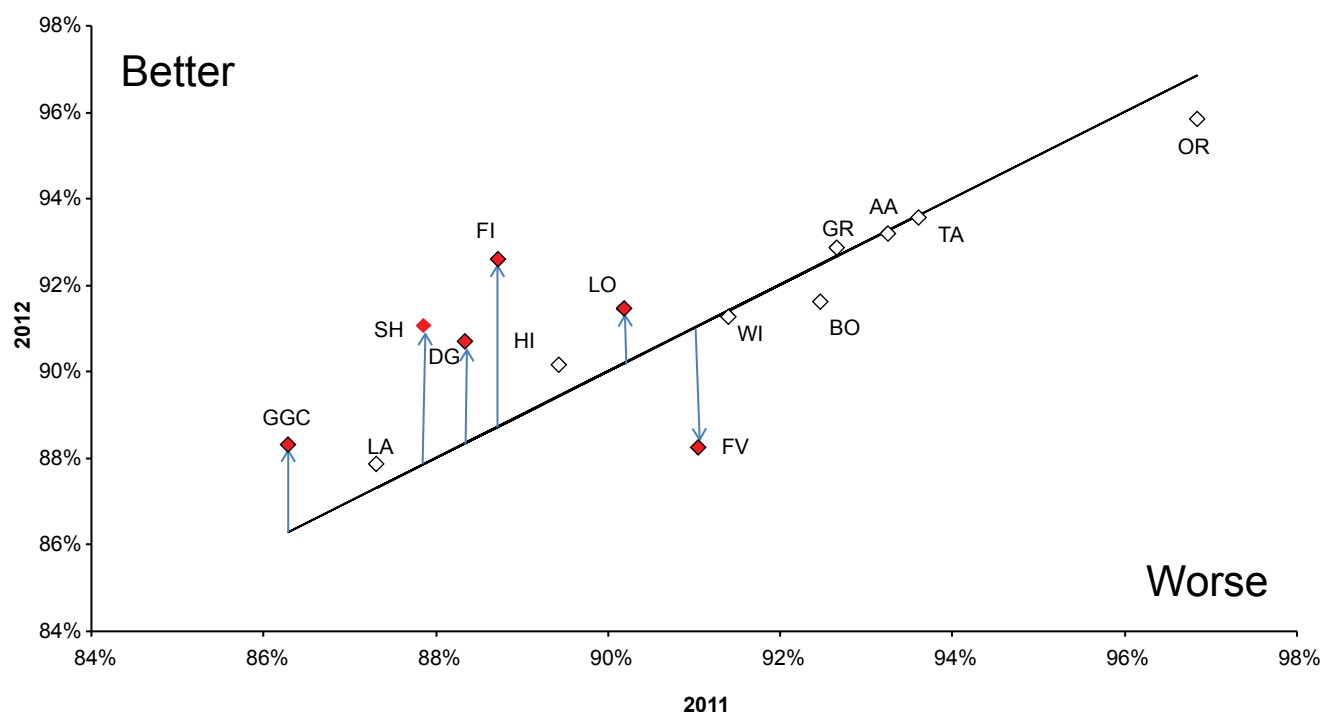
Cholesterol was recorded in 90.6% of people with type 1 or type 2 diabetes within the previous 15 months. Total cholesterol was less than or equal to 5.0mmol/l in 79.5% of patients with a recorded result.

Figure 22. Percentage of people with diabetes with a record of cholesterol within the previous 15 months by diabetes type and NHS Board, 2012. Horizontal lines indicate figures for Scotland as a whole.



Note: Excludes children under 12 years (n=986).

Figure 23. Percentage of people with diabetes (type 1 and type 2 combined) with a record of cholesterol within the previous 15 months from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 1% change between 2011 and 2012.



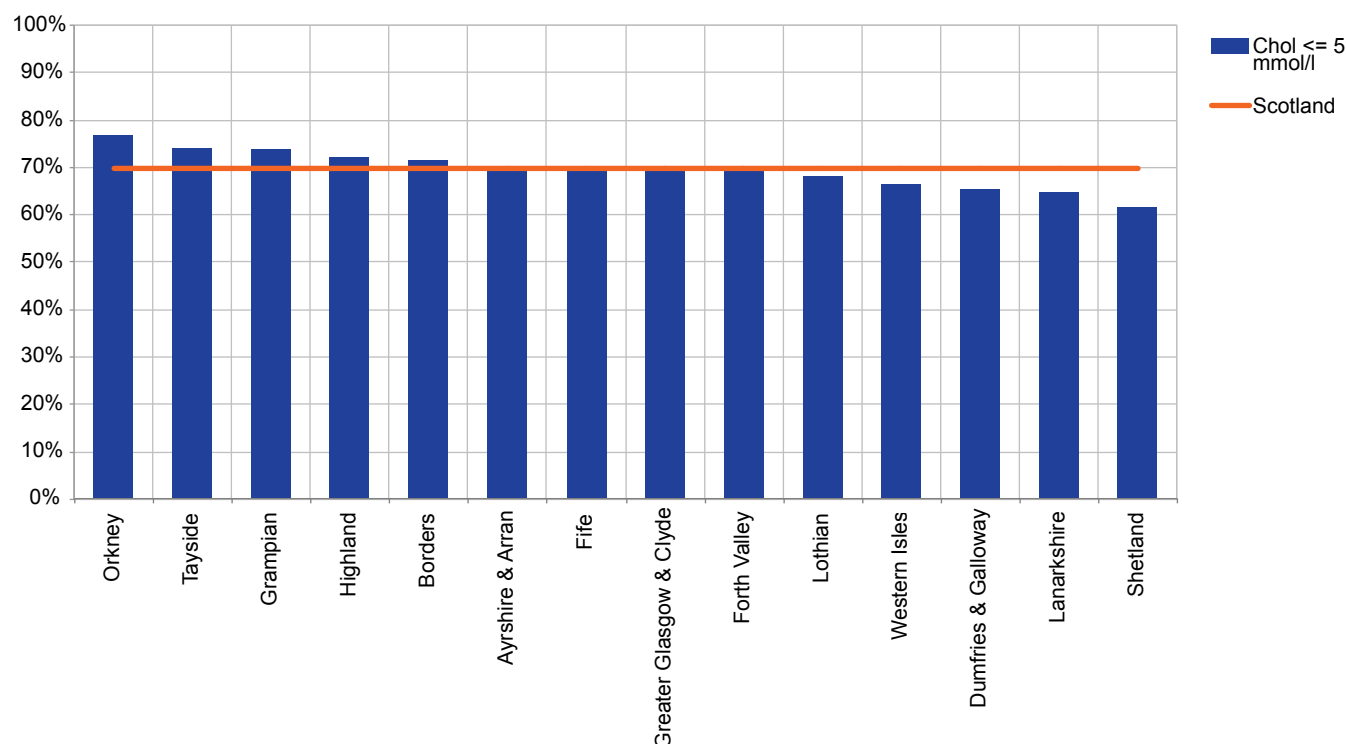
Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 39. Percentage of people with diabetes (Type 1 and Type 2 combined) with a record of cholesterol within the previous 15 months, Scotland, 2002-2012.

Year	Recorded within previous 15 months
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%

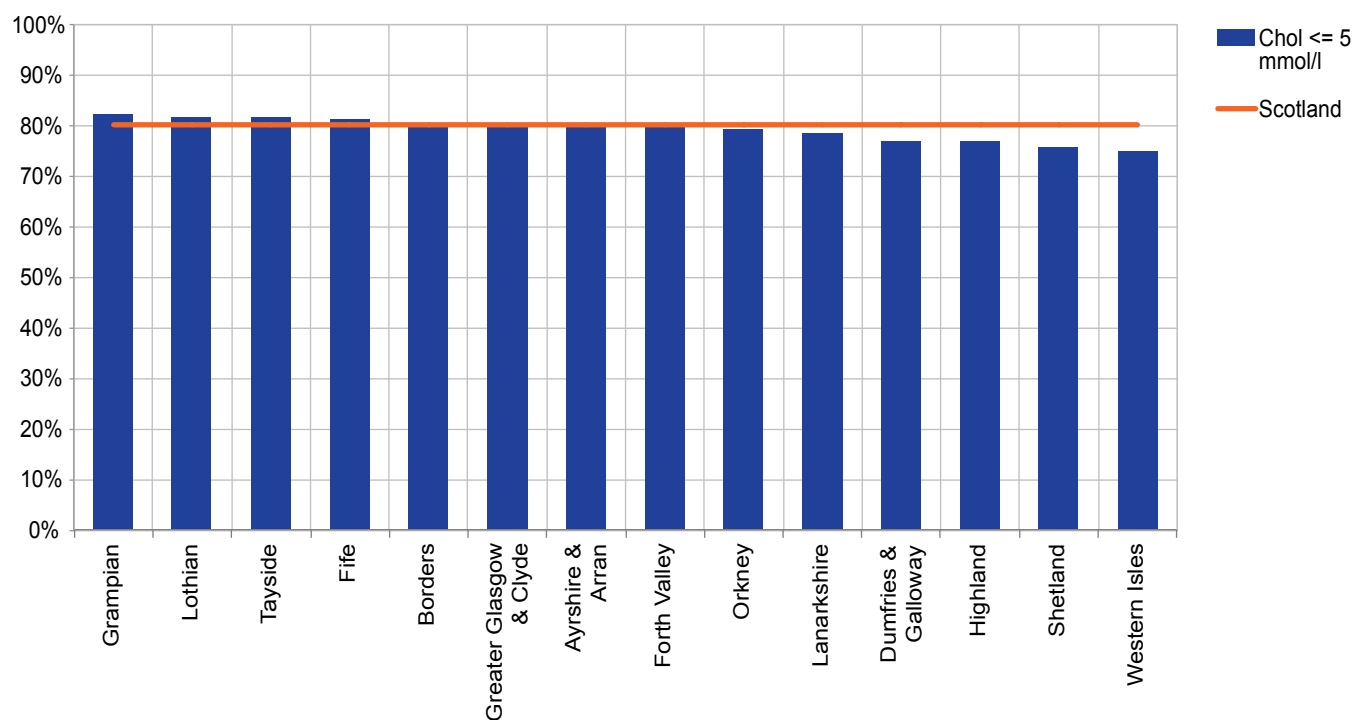
Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3133).

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



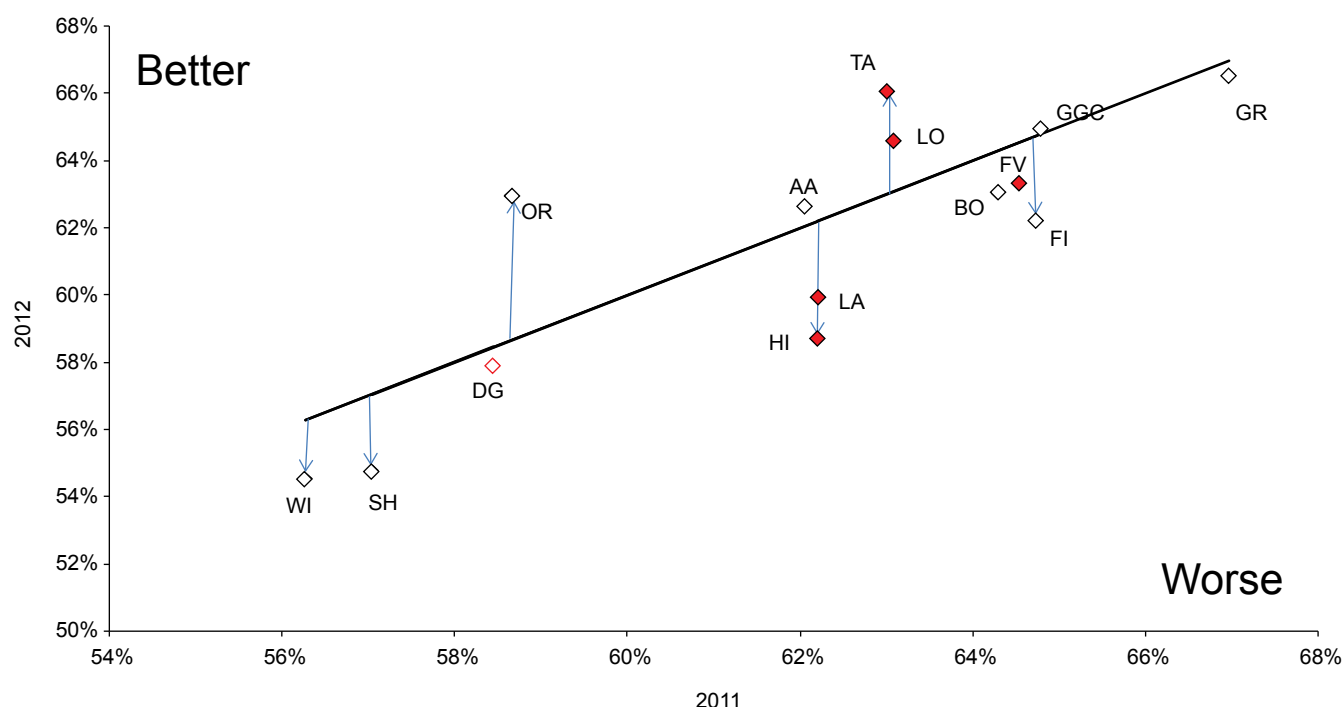
Note: Excludes children under 12 years (n=980).

Figure 25. Type 2 diabetes: percentage of people with cholesterol ≤ 5 mmol/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 12 years (n= 6).

Figure 26. Percentage of people with diabetes (type 1 and type 2 combined) with cholesterol ≤ 5 mmol/l within the previous 15 months from 2011 to 2012: Arrows showing the direction of change have been added for all boards with more than 1.5% change between 2011 and 2012.



Note: Points in red indicate statistically significant change. The diagonal line shows no change between 2011 and 2012.

Table 40. Type 1 diabetes : percentage of people with cholesterol ≤ 5 mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months), ranked by percentage.

NHS Board	Total recorded	Total cholesterol ≤ 5	Not recorded
Orkney	99	76.8%	4.8%
Tayside	1,337	74.0%	21.3%
Grampian	2,277	73.9%	18.5%
Highland	1,348	72.3%	15.5%
Borders	487	71.5%	11.8%
Ayrshire & Arran	1,626	70.3%	16.9%
Fife	1,450	70.0%	18.7%
Greater Glasgow & Clyde	4,474	69.3%	22.0%
Forth Valley	1,247	69.3%	14.3%
Lothian	3,295	68.3%	16.1%
Western Isles	150	66.7%	9.1%
Dumfries & Galloway	672	65.6%	16.8%
Lanarkshire	2,430	64.9%	23.0%
Shetland	101	61.4%	11.4%
Scotland	20,993	69.7%	18.8%

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3001).

Table 41. Type 2 diabetes: percentage of people with cholesterol ≤ 5 mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months), ranked by percentage.

NHS Board	Total recorded	Total cholesterol ≤ 5	Not recorded
Grampian	20,777	82.5%	5.7%
Lothian	28,409	81.9%	7.6%
Tayside	17,837	81.9%	5.1%
Fife	15,964	81.6%	6.2%
Borders	4,742	80.5%	8.0%
Greater Glasgow & Clyde	46,706	80.4%	10.5%
Ayrshire & Arran	17,713	80.0%	5.8%
Forth Valley	11,583	80.0%	11.5%
Orkney	841	79.7%	4.1%
Lanarkshire	23,579	78.9%	10.8%
Dumfries & Galloway	6,885	77.2%	8.5%
Highland	11,977	77.1%	9.2%
Shetland	805	75.8%	8.6%
Western Isles	977	75.0%	8.7%
Scotland	208,795	80.5%	8.4%

Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 132).

Table 42. Percentage of people with diabetes (type 1 and type 2 combined) with cholesterol ≤ 5 mmol/l, by NHS Board (denominator those with recording of cholesterol within the previous 15 months).

Year	Cholesterol ≤ 5		Cholesterol > 5		Not known		Total
	Number	Percentage	Number	Percentage	Number	Percentage	
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 2004 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 = 3133).

Table 43. Type 2 diabetes: mean total cholesterol recorded in previous 15 months in people aged ≥50-60 years, by NHS Board, 2012, ranked by mean cholesterol.

NHS Board	Mean total cholesterol (mmol/l)
Grampian	4.2
Fife	4.2
Tayside	4.2
Forth Valley	4.2
Orkney	4.3
Greater Glasgow & Clyde	4.3
Ayrshire & Arran	4.3
Borders	4.3
Lanarkshire	4.3
Western Isles	4.4
Lothian	4.5
Highland	4.6
Shetland	4.6
Dumfries & Galloway	4.7

Smoking status

Smoking status was recorded for 95.3% of the diabetic population. Almost 1 in 5 people with diabetes were recorded as being current smokers.

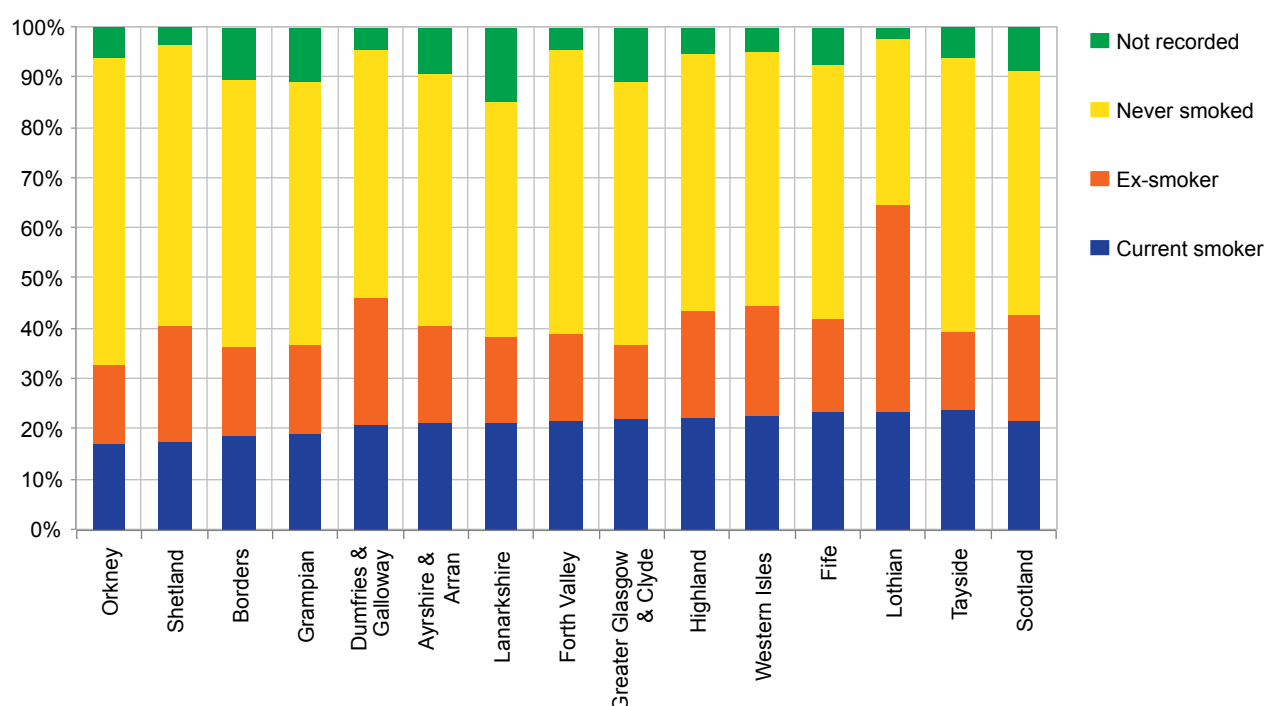
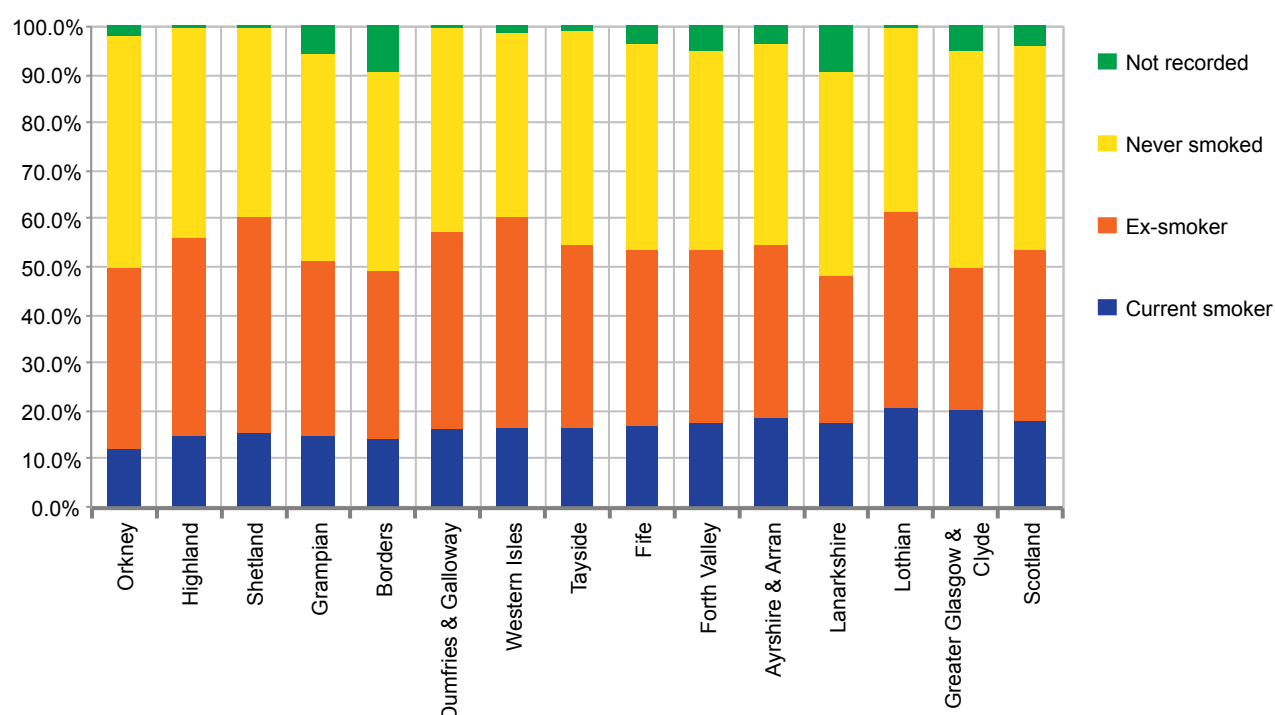
Figure 27. Type 1 diabetes: smoking status as a percentage of all those with type 1 diabetes, by NHS Board.

Figure 28. Type 2 diabetes: smoking status as a percentage of all those with type 2 diabetes, by NHS Board.**Table 44. 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 proportion who are current smokers.**

NHS Board	No with known status	Current smoker	Ex-smoker	Never smoked	% recorded
Shetland	123	17.9%	24.4%	57.7%	96.1%
Orkney	111	18.0%	17.1%	64.9%	93.3%
Borders	553	21.0%	19.5%	59.5%	88.3%
Grampian	2,751	21.2%	20.1%	58.7%	87.9%
Dumfries & Galloway	847	21.7%	26.7%	51.6%	95.3%
Forth Valley	1,570	22.7%	18.0%	59.2%	95.3%
Highland	1,689	23.4%	22.6%	54.0%	94.2%
Ayrshire & Arran	1,984	23.6%	21.3%	55.1%	89.7%
Western Isles	176	23.9%	22.7%	53.4%	95.1%
Lothian	4,188	24.0%	42.0%	34.0%	97.8%
Greater Glasgow & Clyde	5,587	24.7%	16.3%	59.0%	87.8%
Lanarkshire	2,965	25.1%	20.0%	54.8%	82.7%
Fife	1,826	25.1%	20.3%	54.6%	91.9%
Tayside	1,777	25.3%	16.7%	58.0%	93.5%
Scotland	26,147	23.8%	22.9%	53.3%	90.6%

Table 45. 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 proportion who are current smokers.

NHS Board	No with known status	Current smoker	Ex-smoker	Never smoked	% recorded
Orkney	860	12.6%	38.3%	49.2%	98.1%
Highland	13,159	15.0%	41.1%	43.9%	99.8%
Shetland	877	15.5%	45.2%	39.3%	99.5%
Grampian	20,809	15.6%	38.9%	45.5%	94.4%
Borders	4,661	15.7%	38.7%	45.6%	90.3%
Dumfries & Galloway	7,488	16.5%	41.0%	42.4%	99.5%
Western Isles	1,054	16.8%	44.5%	38.7%	98.5%
Tayside	18,581	16.8%	38.1%	45.1%	98.8%
Fife	16,378	17.8%	37.7%	44.6%	96.2%
Forth Valley	12,376	18.6%	37.7%	43.7%	94.5%
Ayrshire & Arran	18,105	19.0%	37.7%	43.3%	96.3%
Lanarkshire	24,028	19.5%	33.3%	47.1%	90.6%
Lothian	30,668	20.7%	40.7%	38.6%	99.5%
Greater Glasgow & Clyde	49,489	21.3%	31.2%	47.5%	94.7%
Scotland	218,533	18.8%	36.7%	44.5%	95.9%

Table 46. 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), Scotland, 2005-2012.

Year	Current smoker	Ex-smoker	Never smoked	Not recorded
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%

Note: Data for years 2001 to 2012 are calculated as a percentage of all registered patients with recorded smoking status.

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 the people of working age

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

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

Myocardial infarction

24,073 (9.4%) of registered patients have a record of a previous MI. Others will have had an MI but not survived. Validation of these data is needed. There have been improvements in recording, increased use of procedures and better survival following an MI in recent years.

Table 47. Percentage of people with diabetes recorded as having had a previous myocardial infarction (MI), by diabetes type and NHS board, ranked by percentages for type 2.

NHS Board	Recorded as having had an MI			
	Type 1		Type 2	
	Number	Percentage	Number	Percentage
Shetland	7	5.5%	63	7.2%
Dumfries & Galloway	29	3.3%	634	8.4%
Orkney	5	4.2%	79	9.0%
Western Isles	6	3.2%	100	9.3%
Grampian	102	3.3%	2,119	9.6%
Borders	29	4.6%	511	9.9%
Forth Valley	53	3.2%	1,308	10.0%
Lothian	131	3.1%	3,072	10.0%
Ayrshire & Arran	92	4.2%	1,882	10.0%
Fife	71	3.6%	1,709	10.0%
Highland	66	3.7%	1,356	10.3%
Greater Glasgow & Clyde	233	3.7%	5,403	10.3%
Lanarkshire	161	4.5%	2,771	10.4%
Tayside	64	3.4%	2,017	10.7%
Scotland	1,049	3.6%	23,024	10.1%

Note: These data are as reported and have not been validated.

Table 48. Percentage of people with diabetes (type 1 and type 2 combined) who are recorded as having had a previous myocardial infarction (MI), Scotland, 2001-2012.

Year of Survey	Myocardial infarction
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 heart attack and survived.

Cardiac revascularisation

17,216 (6.7%) people included in the survey have a record of having undergone cardiac revascularisation, including coronary artery bypass graft (CABG) and percutaneous transluminal coronary angioplasty (PTCA).

Table 49. Percentage of people with diabetes who have a record of cardiac revascularisation by NHS Board and diabetes type, ranked by percentages for type 2.

NHS Board	Recorded as having undergone cardiac revascularisation			
	Type 1		Type 2	
	Number	Percentage	Number	Percentage
Shetland	5	3.9%	39	4.4%
Dumfries & Galloway	27	3.0%	444	5.9%
Fife	36	1.8%	1,059	6.2%
Orkney	2	1.7%	58	6.6%
Ayrshire & Arran	51	2.3%	1,255	6.7%
Forth Valley	41	2.5%	882	6.7%
Tayside	49	2.6%	1,317	7.0%
Highland	51	2.8%	958	7.3%
Borders	16	2.6%	384	7.4%
Lanarkshire	117	3.3%	1,993	7.5%
Western Isles	2	1.1%	81	7.6%
Lothian	103	2.4%	2,332	7.6%
Greater Glasgow & Clyde	147	2.3%	3,976	7.6%
Grampian	78	2.5%	1,713	7.8%
Scotland	725	2.5%	16,491	7.2%

Table 50. Percentage of people with diabetes recorded as having ever had cardiac revascularisation, Scotland, 2001-2012.

Year of Survey	Cardiac Revascularisation
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

12,593 (4.9%) 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 2011, 5.0% in 2010 and 5.1% in each year between 2006 and 2009).

Table 51. Percentage of people with diabetes who were recorded as ever having had a stroke, by NHS Board and diabetes type, ranked by figures for type 2 diabetes.

NHS Board	Recorded as having had a stroke			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	1	0.8%	30	3.4%
Shetland	2	1.6%	33	3.7%
Dumfries & Galloway	20	2.2%	315	4.2%
Grampian	52	1.7%	1,000	4.5%
Western Isles	2	1.1%	49	4.6%
Lanarkshire	81	2.3%	1,304	4.9%
Highland	39	2.2%	661	5.0%
Fife	47	2.4%	878	5.2%
Forth Valley	27	1.6%	688	5.3%
Greater Glasgow & Clyde	117	1.8%	2,837	5.4%
Ayrshire & Arran	58	2.6%	1,039	5.5%
Tayside	39	2.1%	1,057	5.6%
Lothian	94	2.2%	1,784	5.8%
Borders	17	2.7%	322	6.2%
Scotland	596	2.1%	11,997	5.3%

Kidney Disease

Serum creatinine

Serum creatinine was recorded for 92.6% of patients overall.

Table 52. Percentage of people with diabetes who have a record of serum creatinine within the previous 15 months, by NHS board and diabetes type, ranked by percentage for type 2.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Tayside	1,612	88.3%	18,275	97.2%	19,887
Western Isles	171	95.5%	1,038	97.0%	1,209
Ayrshire & Arran	1,848	86.9%	18,181	96.7%	20,029
Grampian	2,550	84.6%	21,271	96.5%	23,821
Shetland	112	93.3%	848	96.3%	960
Fife	1,641	85.7%	16,378	96.2%	18,019
Forth Valley	1,415	89.1%	12,533	95.8%	13,948
Orkney	107	93.9%	829	94.5%	936
Lothian	3,565	85.8%	28,800	93.7%	32,365
Dumfries & Galloway	700	81.2%	6,947	92.3%	7,647
Greater Glasgow & Clyde	4,944	80.6%	48,177	92.3%	53,121
Lanarkshire	2,639	77.2%	24,304	91.9%	26,943
Borders	523	87.3%	4,565	88.5%	5,088
Highland	1,333	77.4%	11,457	86.9%	12,790
Scotland	23,160	83.4%	213,603	93.7%	236,763

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (n=1176).

Table 53. Percentage of people with diabetes (type 1 and type 2 combined) who had a record of serum creatinine within the previous 15 months, 2003-2012.

Year	Recorded within previous 15 months	Total eligible population
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=1176). 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.

Due to existing data flow issues it is still not possible to present adequate figures on direct eGFR testing. It is however, possible to derive approximate eGFR values by applying the abbreviated Modification of Diet in Renal Disease (MDRD) formula to creatinine values that are available to SCI-DC. A breakdown of these by eGFR range as a percentage of the type 1 and type 2 diabetes populations is shown below.

Table 54. Type 1 diabetes: percentage of people in each eGFR category, using values derived from creatinine records on SCI-DC, by NHS Board.

NHS Board	eGFR derived					Total derived	Not derived	% derived
	<15	15-29	30-44	45-59	≥60			
Shetland	0.0%	0.0%	3.6%	2.7%	93.7%	111	3	97.4%
Grampian	0.7%	1.0%	2.1%	3.2%	92.9%	2,448	346	87.6%
Tayside	0.5%	1.7%	2.2%	3.0%	92.6%	1,502	197	88.4%
Lothian	0.6%	0.8%	2.2%	4.4%	92.0%	3,446	483	87.7%
Western Isles	0.6%	1.2%	1.9%	6.2%	90.1%	161	4	97.6%
Greater Glasgow & Clyde	0.6%	1.5%	2.8%	5.2%	90.0%	4,754	983	82.9%
Fife	0.2%	1.7%	3.2%	7.1%	87.8%	1,537	246	86.2%
Orkney	0.0%	3.1%	3.1%	6.2%	87.6%	97	7	93.3%
Highland	0.3%	2.0%	3.9%	6.4%	87.4%	1,306	289	81.9%
Lanarkshire	0.6%	1.6%	3.9%	7.0%	87.0%	2,570	587	81.4%
Ayrshire & Arran	1.1%	2.1%	3.9%	7.4%	85.6%	1,754	202	89.7%
Forth Valley	0.4%	1.6%	3.8%	9.6%	84.7%	1,326	129	91.1%
Dumfries & Galloway	0.3%	1.3%	4.5%	9.7%	84.2%	691	117	85.5%
Borders	0.2%	3.1%	3.1%	9.6%	84.0%	489	63	88.6%
Scotland	0.6%	1.5%	3.0%	5.8%	89.2%	22,192	3,656	85.9%

Table 55. Type 2 diabetes: percentage of people in each eGFR category, using values derived from creatinine records on SCI-DC, by NHS Board.

NHS Board	eGFR derived					Total derived	Not derived	% derived
	<15	15-29	30-44	45-59	≥60			
Tayside	0.3%	1.2%	4.4%	9.5%	84.6%	18,270	531	97.2%
Grampian	0.3%	1.2%	4.6%	9.6%	84.3%	21,270	764	96.5%
Orkney	0.2%	1.6%	5.3%	9.5%	83.4%	829	48	94.5%
Shetland	0.2%	1.8%	5.4%	9.3%	83.3%	848	33	96.3%
Greater Glasgow & Clyde	0.3%	1.6%	5.2%	9.8%	83.0%	48,174	4,040	92.3%
Lothian	0.3%	1.6%	5.6%	11.2%	81.3%	28,797	1,935	93.7%
Lanarkshire	0.3%	1.6%	6.0%	12.2%	80.0%	24,301	2,151	91.9%
Ayrshire & Arran	0.3%	1.8%	6.0%	13.3%	78.5%	18,179	617	96.7%
Highland	0.3%	1.9%	7.1%	14.5%	76.1%	11,456	1,733	86.9%
Western Isles	0.2%	2.3%	6.5%	15.0%	76.0%	1,038	32	97.0%
Dumfries & Galloway	0.3%	1.9%	7.3%	15.5%	75.0%	6,947	579	92.3%
Fife	0.2%	1.7%	7.1%	17.4%	73.6%	16,377	643	96.2%
Borders	0.1%	2.3%	8.3%	16.9%	72.4%	4,743	413	92.0%
Forth Valley	0.2%	2.1%	8.9%	22.3%	66.5%	12,532	555	95.8%
Scotland	0.3%	1.6%	5.9%	12.5%	79.7%	213,761	14,074	93.8%

Urinary microalbuminuria

Table 55 below shows information on the recording of microalbuminuria. Note that there are data quality issues for some boards and that not all boards have decided to collect data on microalbuminuria for those with type 2 diabetes.

Table 56. 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 by figures for type 2.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Orkney	85	74.6%	742	84.6%	827
Tayside	1210	66.3%	15,657	83.3%	16,867
Grampian	2,000	66.4%	18,297	83.0%	20,297
Fife	1,353	70.7%	13,893	81.6%	15,246
Western Isles	133	74.3%	868	81.1%	1,001
Shetland	97	80.8%	666	75.6%	763
Highland	994	57.7%	9,353	70.9%	10,347
Lothian	3110	74.9%	21,447	69.8%	24,557
Forth Valley	898	56.5%	9113	69.6%	10,011
Greater Glasgow & Clyde	3618	59.0%	35337	67.7%	38,955
Ayrshire & Arran	1,097	51.6%	12,299	65.4%	13,396
Lanarkshire	1,706	49.9%	17,265	65.3%	18,971
Dumfries & Galloway	209	24.2%	2,514	33.4%	2,723
Borders	341	56.9%	113	2.2%	454
Scotland	16,851	60.7%	157,564	69.1%	174,415

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (n=1176). In some cases, urinary microalbumin was estimated from albumin/creatinine ratio (ACR).

Table 57. Number and percentage of people with diabetes who have a record of eGFR available on SCI-DC within the previous 15 months, by NHS board and diabetes type, ranked by figures for type 2.

NHS Board	Recorded within previous 15 months				Total
	Type 1 diabetes		Type 2 diabetes		
	Number	Percentage	Number	Percentage	
Tayside	1450	85.3%	18213	96.9%	19,663
Shetland	110	96.5%	843	95.7%	953
Grampian	2,390	85.5%	21,053	95.6%	23,443
Orkney	90	86.5%	820	93.5%	910
Borders	489	88.6%	4,743	92.0%	5,232
Forth Valley	1148	78.9%	11,822	90.3%	12,970
Highland	1,328	83.3%	11,884	90.1%	13,212
Western Isles	114	69.1%	937	87.6%	1,051
Greater Glasgow & Clyde	3900	68.0%	45276	86.7%	49,176
Fife	1022	57.3%	12972	76.2%	13,994
Lothian	1,399	35.6%	15,720	51.2%	17,119
Dumfries & Galloway	192	23.8%	2,632	35.0%	2,824
Ayrshire & Arran	414	21.2%	6,010	32.0%	6,424
Lanarkshire	613	19.4%	7702	29.1%	8,315
Scotland	14,659	56.7%	160,627	70.5%	175,286

Note: The figures in Table 52 relate to eGFR results found on SCI-DC while the larger number of results presented in tables 53 and 56 are based on derived results calculated from information held in SCI-DC.

End stage renal failure

End stage renal failure implies a need for renal dialysis or transplantation.

Table 58. Percentage of people with diabetes recorded as having end stage renal failure, by NHS board and diabetes type, ranked by percentage for type 2.

NHS Board	Recorded as having end stage renal failure			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Orkney	2	1.7%	2	0.2%
Western Isles	1	0.5%	3	0.3%
Dumfries & Galloway	5	0.6%	27	0.4%
Lanarkshire	43	1.2%	105	0.4%
Ayrshire & Arran	40	1.8%	80	0.4%
Borders	10	1.6%	22	0.4%
Fife	17	0.9%	86	0.5%
Forth Valley	15	0.9%	67	0.5%
Greater Glasgow & Clyde	59	0.9%	272	0.5%
Highland	19	1.1%	70	0.5%
Grampian	46	1.5%	121	0.5%
Lothian	41	1.0%	184	0.6%
Tayside	38	2.0%	122	0.6%
Shetland	1	0.8%	6	0.7%
Scotland	337	1.2%	1,167	0.5%

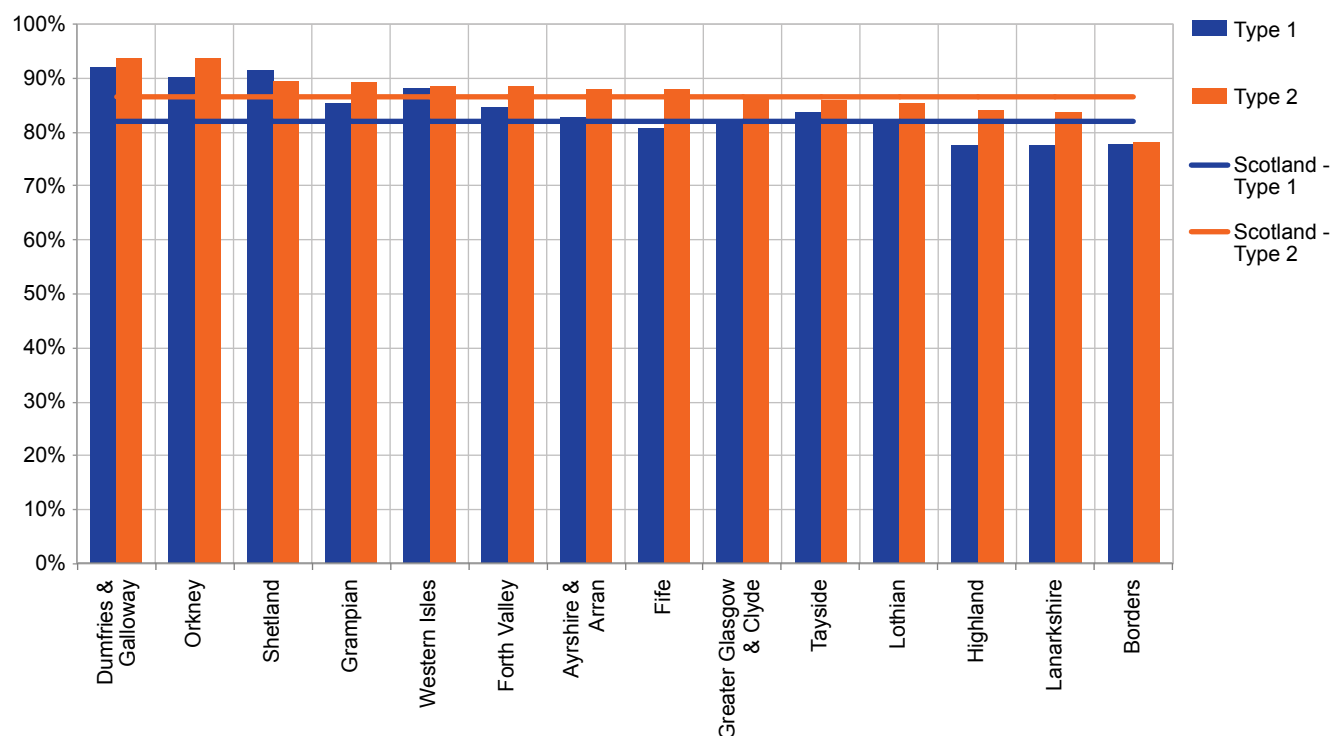
Diabetic Eye Disease

Diabetic retinal screening

86.1% of patients had a record of eye screening through the retinal screening service recorded on SCI-DC in the previous 15 months, including those attending ophthalmology services. More exploratory work on data accuracy needs to be carried out.

Note that figures for retinopathy and blindness are not provided in this year's report. Quantifying blindness and retinopathy (using last known retinal status) requires interrogation of historical data that may be some years old. As the move from SCI-DC to SCI-Diabetes limited historical data migration to 2 years it was not possible to provide accurate figures for these items. At the time of data extraction this affected 10 of the 14 Health Board Regions and thus it was decided to exclude these questions from this year's report. All historical data should be back-populated into SCI-Diabetes in time for next year's survey and questions relating to blindness and retinopathy will be re-instated.

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 by percentage for type 2.



Note: Excludes patients under 18 years of age and patients whose date of birth has not been recorded (n = 3,133).

Table 58 shows the number 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 59. Percentage of people with diabetes 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; by NHS Board and diabetes type, ranked (descending) by percentage Figure for Type 2.

NHS Board	Type 1 diabetes		Type 2 diabetes		All (type 1 and type 2)		Not recorded
	Number	Percentage	Number	Percentage	Number	Percentage	
Dumfries & Galloway	795	92.2%	7,064	93.9%	7,859	93.7%	529
Orkney	103	90.4%	822	93.7%	925	93.3%	66
Shetland	110	91.7%	790	89.7%	900	89.9%	101
Grampian	2,569	85.3%	19,692	89.4%	22,261	88.9%	2,789
Western Isles	158	88.3%	949	88.7%	1,107	88.6%	142
Forth Valley	1,344	84.6%	11,599	88.6%	12,943	88.2%	1,732
Ayrshire & Arran	1,756	82.6%	16,545	88.0%	18,301	87.5%	2,623
Fife	1,544	80.6%	14,970	87.9%	16,514	87.2%	2,424
Greater Glasgow & Clyde	5,005	81.6%	45,168	86.5%	50,173	86.0%	8,183
Tayside	1,527	83.6%	16,195	86.1%	17,722	85.9%	2,909
Lothian	3,428	82.5%	26,261	85.4%	29,689	85.1%	5,200
Highland	1,336	77.5%	11,069	83.9%	12,405	83.2%	2,508
Lanarkshire	2,647	77.4%	22,117	83.6%	24,764	82.9%	5,113
Borders	467	78.0%	4,032	78.2%	4,499	78.1%	1,258
Scotland	22,789	82.0%	197,273	86.6%	220,062	86.1%	35,577

Note: Excludes children under 12 years of age or patients who have no date of birth recorded (n = 1176).

Table 60. Numbers of patients eligible for screening and percentages of those who were actually screened (type 1 and type 2 combined), 2012, ranked by percentage of screened patients.

NHS Board	Eligible for screening	Screened	Percentage screened
Dumfries & Galloway	7,645	7,116	93.1%
Orkney	873	807	92.4%
Shetland	936	835	89.2%
Grampian	23,311	20,522	88.0%
Western Isles	1,148	1,006	87.6%
Forth Valley	13,919	12,187	87.6%
Ayrshire & Arran	19,519	16,896	86.6%
Fife	17,170	14,746	85.9%
Greater Glasgow & Clyde	53,559	45,376	84.7%
Tayside	17,684	14,775	83.6%
Lothian	31,495	26,295	83.5%
Lanarkshire	27,506	22,393	81.4%
Highland	13,344	10,836	81.2%
Borders	4,908	3,650	74.4%
Scotland	233,017	197,440	84.7%

Table 61. 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 each report): 2001-2012.

Year	Recorded within previous 15 months
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 (n=1,176). 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

Peripheral pulses

70% of people with type 1 or type 2 diabetes have had their feet checked (peripheral pulses recorded) in the previous 15 months. This is a decrease from 2011 where 75.0% had their feet checked.

Figure 30. Type 1 diabetes: percentage of people who had peripheral pulses recorded within the previous 15 months.

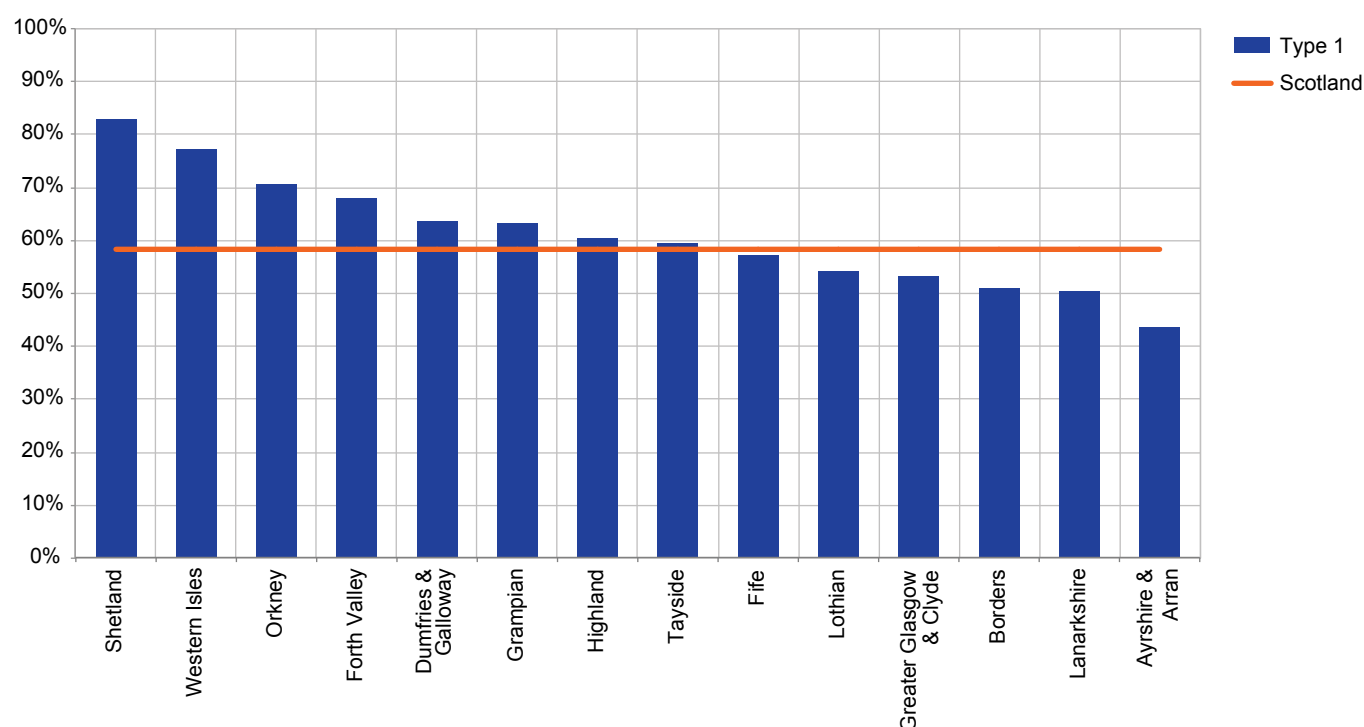


Figure 31. Type 2 diabetes: percentage of people who had peripheral pulses recorded within the previous 15 months.

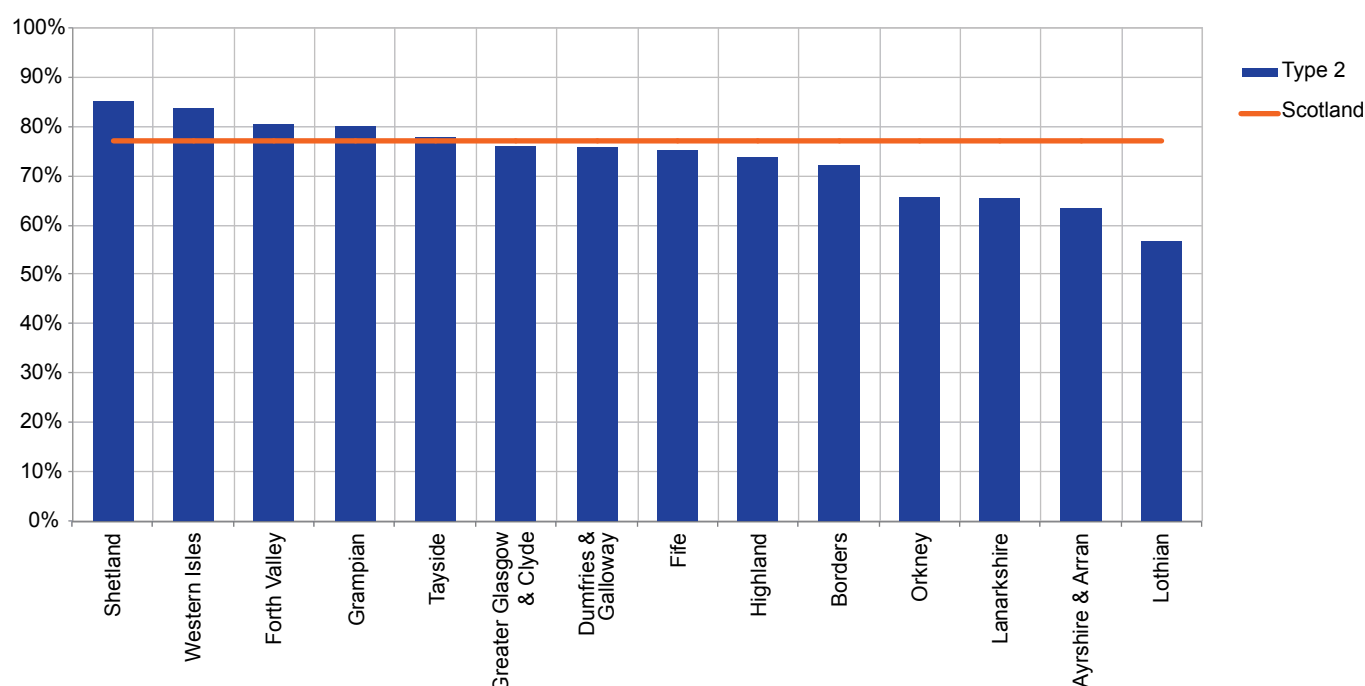


Table 62. Percentage of people with diabetes who had peripheral pulses recorded within previous 15 months, by NHS board and diabetes type, ranked by figures for type 2.

NHS Board	Recorded within previous 15 months			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Shetland	106	82.8%	749	85.0%
Western Isles	143	77.3%	897	83.8%
Forth Valley	1,118	67.8%	10,520	80.4%
Grampian	1,980	63.3%	17,674	80.2%
Tayside	1,130	59.4%	14,649	77.9%
Greater Glasgow & Clyde	3,390	53.3%	39,854	76.3%
Dumfries & Galloway	564	63.4%	5,718	76.0%
Fife	1,131	56.9%	12,815	75.2%
Highland	1,082	60.3%	9,725	73.7%
Borders	318	50.8%	3,715	72.0%
Orkney	84	70.6%	576	65.7%
Lanarkshire	1801	50.2%	17365	65.5%
Ayrshire & Arran	964	43.6%	11,924	63.4%
Lothian	2321	54.2%	17,409	56.6%
Scotland	16,132	55.9%	163,590	71.8%

Table 63. Percentage of people with diabetes (type 1 and type 2 combined) who had peripheral pulses recorded within previous 15 months, Scotland, 2004-2012.

Year	Recorded within previous 15 months
2012	70.0%
2011	75.0%
2010	75.9%
2009	76.5%
2008	76.1%
2007	74.5%
2006	73.9%
2005	66.9%
2004	55.2%

Foot ulceration

13,091 (5.1%) people with type 1 or type 2 diabetes were reported to have had a foot ulcer. The increasing percentages for foot ulcer shown in table 64 below are likely to be due to better recording rather than a real increase in the risk of foot ulcer.

Table 64. Percentage of people with diabetes with a record of ever having had a foot ulcer, by NHS board and diabetes type, ranked by figures for type 2.

NHS Board	Recorded as ever having had a foot ulcer			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Shetland	2	1.6%	6	0.7%
Dumfries & Galloway	34	3.8%	145	1.9%
Ayrshire & Arran	111	5.0%	365	1.9%
Grampian	125	4.0%	441	2.0%
Highland	69	3.8%	327	2.5%
Borders	47	7.5%	145	2.8%
Tayside	139	7.3%	678	3.6%
Orkney	7	5.9%	32	3.6%
Forth Valley	161	9.8%	563	4.3%
Greater Glasgow & Clyde	555	8.7%	2,294	4.4%
Fife	118	5.9%	758	4.5%
Western Isles	13	7.0%	58	5.4%
Lothian	336	7.8%	1,933	6.3%
Lanarkshire	724	20.2%	2,905	11.0%
Scotland	2,441	8.5%	10,650	4.7%

Note: These data are provisional.

Table 65. Percentage of people with diabetes (type 1 and type 2 combined) who had a record of ever having had a foot ulcer, Scotland, 2001-2012.

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

(a) Excludes NHS Borders and NHS Lanarkshire.

Lower limb amputation

1854 (0.7%) patients have ever had a lower limb amputation.

Table 66. 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 figures for type 2.

NHS Board	Recorded as ever having had a lower limb amputation			
	Type 1 diabetes		Type 2 diabetes	
	Number	Percentage	Number	Percentage
Shetland	1	0.8%	2	0.2%
Lothian	24	0.6%	141	0.5%
Western Isles	1	0.5%	5	0.5%
Lanarkshire	39	1.1%	163	0.6%
Ayrshire & Arran	26	1.2%	118	0.6%
Dumfries & Galloway	14	1.6%	49	0.7%
Highland	20	1.1%	89	0.7%
Borders	8	1.3%	35	0.7%
Tayside	22	1.2%	129	0.7%
Greater Glasgow & Clyde	68	1.1%	364	0.7%
Grampian	38	1.2%	178	0.8%
Fife	27	1.4%	145	0.9%
Forth Valley	23	1.4%	113	0.9%
Orkney	2	1.7%	10	1.1%
Scotland	313	1.1%	1,541	0.7%

Table 67. Percentage of people with diabetes (type 1 and type 2 combined) who had a record of ever having had a lower limb amputation, Scotland, 2002-2012.

Year of Survey	Lower limb amputation	
	Number	Percentage
2012	1854	0.7%
2011	1359	0.6%
2010	1250	0.5%
2009	1132	0.5%
2008	1051	0.5%
2007	950	0.5%
2006	868	0.4%
2005 (a)	774	0.5%
2004	845	0.6%
2003	1014	0.8%
2002	996	1.0%

Note: These figures are for those who have ever had an amputation in any year, and are still alive.

(a) excludes NHS Borders and NHS Lanarkshire.

Foot risk calculation

Table 68. Type 1 diabetes: percentage of people with high, moderate or low foot risk score recorded in the previous 15 months, by NHS board, ranked by Figure for high foot risk.

NHS Board	Recorded as having high foot risk score		Recorded as having moderate foot risk score		Recorded as having low foot risk score		Recorded as having foot risk score	
	Number	Percent-age	Number	Percent-age	Number	Percent-age	Number	Percent-age
Shetland	3	2.8%	8	7.5%	96	89.7%	107	83.6%
Grampian	90	4.3%	195	9.3%	1,791	85.6%	2,076	66.4%
Ayrshire & Arran	55	4.4%	125	10.0%	1,050	84.1%	1,230	55.6%
Forth Valley	53	4.6%	171	14.9%	916	79.7%	1,140	69.2%
Lothian	147	5.3%	306	10.9%	2,303	82.3%	2,756	64.4%
Fife	69	6.0%	156	13.7%	895	78.4%	1,120	56.4%
Greater Glasgow & Clyde	209	6.1%	443	12.9%	2,699	78.5%	3,351	52.6%
Orkney	6	6.5%	11	11.8%	75	80.6%	92	77.3%
Lanarkshire	147	7.3%	290	14.4%	1,521	75.3%	1,958	54.6%
Dumfries & Galloway	46	7.5%	65	10.6%	489	79.5%	600	67.5%
Tayside	92	7.6%	102	8.5%	978	81.2%	1,172	61.7%
Highland	94	7.8%	139	11.5%	951	78.6%	1,184	66.0%
Western Isles	15	10.5%	30	21.0%	95	66.4%	140	75.7%
Borders	45	10.7%	49	11.6%	320	75.8%	414	66.1%
Scotland	1,071	6.1%	2,090	11.8%	14,179	80.2%	17,340	60.1%

Note: The denominator is the number of patients with a foot risk score plus the number of patients recorded as having 'Active foot disease'. In the last column, the denominator is the number of patients with foot risk or active foot disease plus the number of patients with no record of foot risk score.

Table 69. Type 2 diabetes: percentage of people with high, moderate or low foot risk score recorded in the previous 15 months, by NHS board, ranked by Figure for high foot risk.

NHS Board	Recorded as having high foot risk score		Recorded as having moderate foot risk score		Recorded as having low foot risk score		Recorded as having foot risk score	
	Number	Percent-age	Number	Percent-age	Number	Percent-age	Number	Percent-age
Ayrshire & Arran	434	2.8%	1,804	11.6%	13,223	85.0%	15,461	82.2%
Forth Valley	435	4.0%	1,958	17.9%	8,504	77.8%	10,897	83.2%
Grampian	769	4.1%	3,063	16.4%	14,805	79.1%	18,637	84.6%
Shetland	31	4.1%	141	18.8%	567	75.7%	739	83.9%
Dumfries & Galloway	280	4.5%	1,193	19.2%	4,657	75.0%	6,130	81.4%
Lothian	1,300	5.0%	4,711	18.2%	19,527	75.6%	25,538	83.1%
Greater Glasgow & Clyde	2,061	5.1%	9,149	22.6%	28,917	71.3%	40,127	76.8%
Borders	239	5.5%	560	12.8%	3,544	81.3%	4,343	84.2%
Orkney	42	5.7%	189	25.5%	498	67.1%	729	83.1%
Lanarkshire	1,158	5.8%	3,279	16.4%	15,284	76.4%	19,721	74.3%
Tayside	1,086	6.7%	3,051	18.9%	11,823	73.3%	15,960	84.9%
Highland	822	7.4%	2,089	18.8%	8,079	72.6%	10,990	83.3%
Fife	1,161	8.9%	3,701	28.4%	8,083	62.0%	12,945	76.0%
Western Isles	146	16.5%	296	33.5%	430	48.6%	872	81.5%
Scotland	9,964	5.4%	35,184	19.0%	137,941	74.6%	183,089	80.3%

Note: The denominator is the number of patients with a foot risk score plus the number of patients recorded as having 'Active foot disease'. In the last column, the denominator is the number of patients with foot risk or active foot disease plus the number of patients with no record of foot risk score.

Other statistics

My Diabetes My Way

"My Diabetes My Way" 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 2012. Records access is a key objective of the Scottish Diabetes Action Plan.

Table 70. Numbers of people with diabetes registered to access their clinical information using the “My Diabetes My Way” website by NHS Board, 2012, Scotland.

NHS Board	Type 1	Type 2	Total
Ayrshire & Arran	24	110	134
Borders	14	26	40
Dumfries & Galloway	30	56	86
Fife	79	228	307
Forth Valley	52	107	159
Grampian	70	180	250
Greater Glasgow & Clyde	144	281	425
Highland	43	135	178
Lanarkshire	140	151	291
Lothian	297	577	874
Orkney	140	6	146
Shetland	16	22	38
Tayside	73	233	306
Western Isles	2	4	6
Scotland	985	2,116	3,101

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 2012. It should be noted that many other people with diabetes who are not necessarily on this registry also take part in research.

Table 71. Numbers of people with diabetes who had joined the SDRN diabetes research register by the end of 2012, by NHS Board, Scotland.

NHS Board	Type 1	Type 2	Total
Ayrshire & Arran	2	4	6
Borders	-	1	1
Dumfries & Galloway	145	725	870
Fife	62	218	280
Forth Valley	5	39	44
Grampian	131	487	618
Greater Glasgow & Clyde	426	865	1,291
Highland	447	841	1,288
Lanarkshire	60	216	276
Lothian	892	1,795	2,687
Orkney	60	-	60
Shetland	-	-	-
Tayside	307	1,473	1,780
Western Isles	-	-	-
Scotland	2,477	6,664	9,141

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Prof John McKnight (Chair)

Dr Karen Adamson

Dr Louise Bath

Mr Mike Black

Prof Helen Colhoun

Mr Scott Cunningham

Dr Colin Fischbacher

Dr Mark Houliston

Ms Morag Low

Mr Ritchie McAlpine

Dr William Simpson

Prof Sarah Wild

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Appendix 1: SCI-DC Data Sources

SCI-DC Network 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 January 2012 is as follows:

- All 997 general practices across Scotland (EMIS, Vision)
- 39 hospital diabetes clinics (SCI-DC Clinical and SCI-Diabetes)
- 7 regions linking to local laboratory data (SCI Store – see below)
- National Diabetic Retinopathy Screening (DRS) System
- Community Health Index (master patient identifier)
- Direct web entry on both SCI-Diabetes and SCI-DC Network

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

At present, SCI-DC are, via its National Implementation Group, encouraging those boards that have not yet activated their SCI Store link to do so to ensure the completeness of their laboratory data. Although transcribed versions of these data are received from practice and clinic systems, data accuracy and completeness cannot be guaranteed and so a SCI Store link is essential. The current SCI Store Implementation matrix is shown below.

Table 72. Progress towards links from SCI Store to SCI-DC.

Region	Implementation Requested	Status	Comments
Ayrshire and Arran	Yes	Live	
Borders	Yes	Region contacted with documentation	Have confirmed that they will proceed.
Dumfries and Galloway	No	n/a	Reviewing documentation. Further discussion required
Fife	Yes	Live	
Fife/Tayside	Yes	Live	Tayside store feeding to Fife for north Fife patients
Forth Valley	Yes	Live	
Grampian	Yes	Live	
Greater Glasgow and Clyde	Yes	n/a	GGC noted intention to implement.
Highland	Yes	n/a	Highland do not want SCI-Store data feeding to primary care. This link would initiate this transfer
Lanarkshire	Yes	n/a	
Lothian	Yes	n/a	Temporarily suspended due to performance issues. Link will be re-initiated by mid-late 2013
Orkney	No	n/a	SCI-Store not yet fully implemented in Orkney. This is progressing.

continued

Region	Implementation Requested	Status	Comments
Shetland	Yes	Live	
Tayside	Yes	Live	
Western Isles	Yes	Live	

In addition to incoming feeds, SCI-DC data is 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-DC Audit Server: for regional and national reporting
- Back-Population of 828 GP systems (in support of a single-point of data entry). The implementation matrix for back-population is shown below:

Table 73. Progress towards back-population of GP systems from SCI-DC.

Region	01/01/2013	Total Practices	Percentage	Comments
Ayrshire & Arran	38	55	69%	
Borders	19	23	83%	
Dumfries & Galloway	24	34	71%	
Fife	56	58	97%	
Forth Valley	57	57	100%	
Glasgow	257	263	98%	
Grampian	76	82	93%	
Highland	12	100	12%	7 Highland Practices represented in a pilot. Wider rollout is awaiting assessment of this pilot.
Lanarkshire	96	99	97%	
Lothian	104	126	83%	
Orkney	6	12	50%	
Tayside	63	68	93%	
Western Isles	10	10	100%	
Shetland	10	10	100%	
Total	828	997	83%	

More information about SCI-DC is available at:

<http://www.sci-diabetes.scot.nhs.uk/>

The full details of the questions and definitions used in data collection for the 2012 Scottish Diabetes Survey are available at:

<http://www.sci-diabetes.scot.nhs.uk/wp-content/uploads/2013/05/ScottishDiabetesSurvey2012GuidelinesFINAL.pdf>

Appendix 2: Comparison with England

This section provides a comparison of the results of this survey with the 2011-12 National Diabetes Audit (NDA) in England. Please note that because the definitions and cutoff values are not exactly the same the comparisons should be treated with caution.

Diabetes prevalence. The 2012 Scottish Diabetes survey reports that 4.9% of the population had diabetes, compared to 4.6% among 83% of general practices in England that participated in the National diabetes Audit for 2010-11 (NDA)¹.

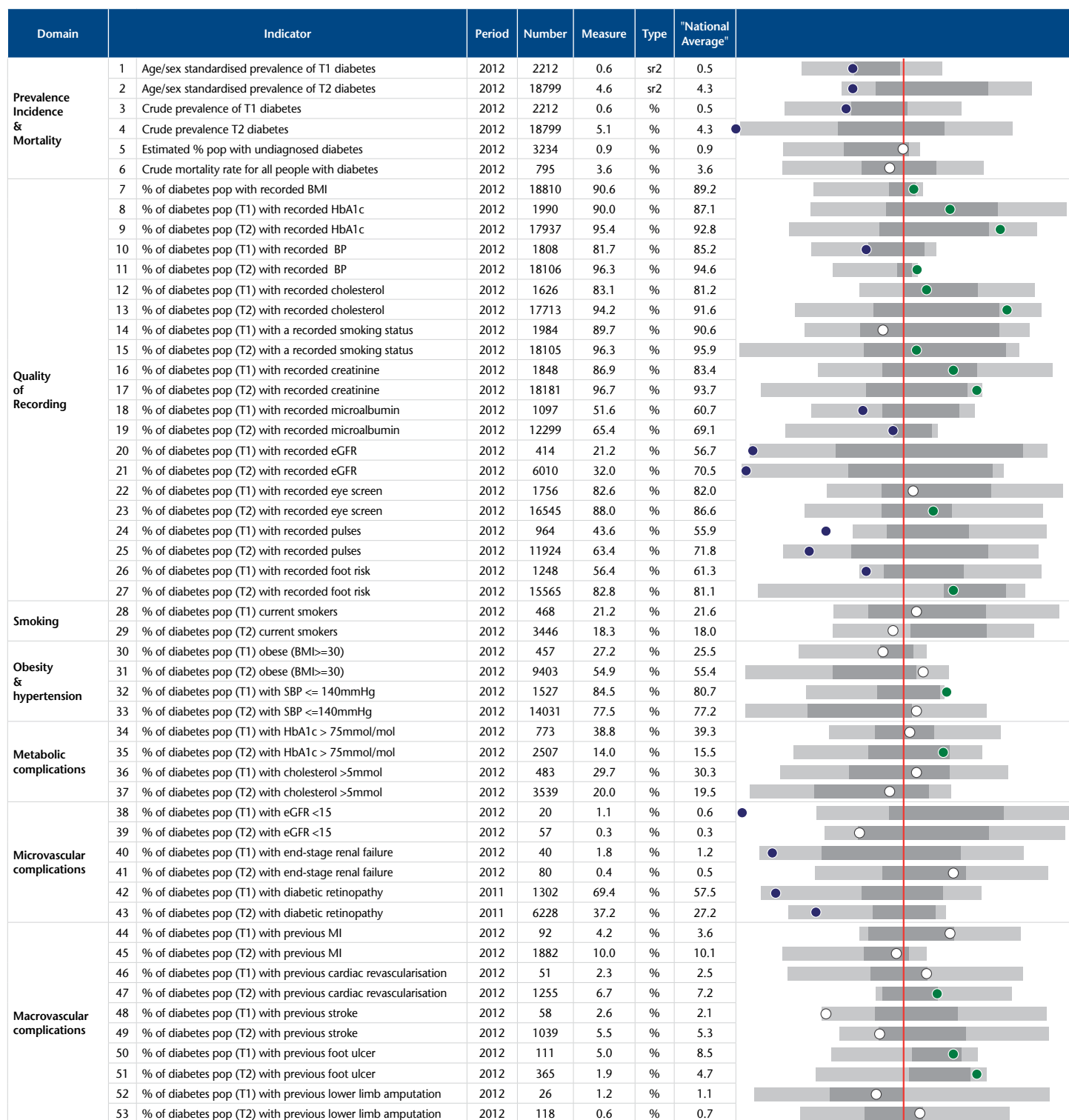
- **HbA_{1c}.** The 2012 Scottish Diabetes Survey reports that 87.1% (type 1) and 92.8% (type 2) had an HbA_{1c} recorded in the previous 15 months. Of these, 21.5% and 59.7% had a result < 58mmol/mol (7.5%), the target reported in previous surveys (tables 20, 22 and 23). The NDA reported that for all types of diabetes the proportion with HbA_{1c} ≤ 58 mmol/mol (7.5%) was 63.3%¹;
- **Blood pressure.** The 2012 Scottish Diabetes Survey reports that 85.2% of those with type 1 and 94.6% of those with type 2 diabetes had their blood pressure recorded in the previous 15 months. Of these, 47.6% and 32.6% respectively had a systolic BP measurement of ≤ 130/80 mmHg (tables 29, 32 and 34). The NDA reported that 36.4% of patients of all ages with all types of diabetes¹ had blood pressure <140/80 for patients without recorded eye, kidney or vascular disease and blood pressure <130/40 for patients with recorded eye, kidney or vascular disease;
- **Cholesterol.** The 2012 Scottish Diabetes Survey reports that cholesterol was recorded in 90.6% of patients within the previous 15 months, and the target of ≤5 mmol/l was achieved in 69.7% of those with type 1 and 80.5% of those with type 2 diabetes (tables 38, 39 and 40) compared to 77.6% with cholesterol <5mmol/l in English NDA data¹.

1 National Diabetes Audit 2011-2012 for England. Available at <https://catalogue.ic.nhs.uk/publications/clinical/diabetes/nati-diab-audi-10-11/nati-diab-audi-10-11-care-proc-rep-V4.pdf>

Appendix 3: Variability of HbA1c

In Scotland laboratory service are provided by 14 separately funded Health Boards from multiple sites. A range of technologies are used in those various sites. Recent information from Birmingham UK National External Quality Assurance Schemes indicated returns from Scotland for 20 sites using ion exchange methods (17 Arkray HA systems and 3 Tosoh G8 systems), 2 affinity chromatograph systems (Menarini 9210) and 6 immunoassay systems (Siemens DCA). Some services use different technologies for high volume workloads (e.g. Arkray HA) and point of care testing (Siemens DCA immunoassay). Although systems are similarly calibrated against IFCC standards, differences are seen in methods-specific bias (deviation) from all-method mean values in EQA schemes and from target values set by secondary IFCC assay methods. Recently the Tosoh G8 methods, used by two health boards in Scotland, for instance have shown UK-wide a median bias against method means of circa +5%, with the Arkray method demonstrating a median bias of -1.6%.

Ayrshire & Arran Health Board Spine Chart 201



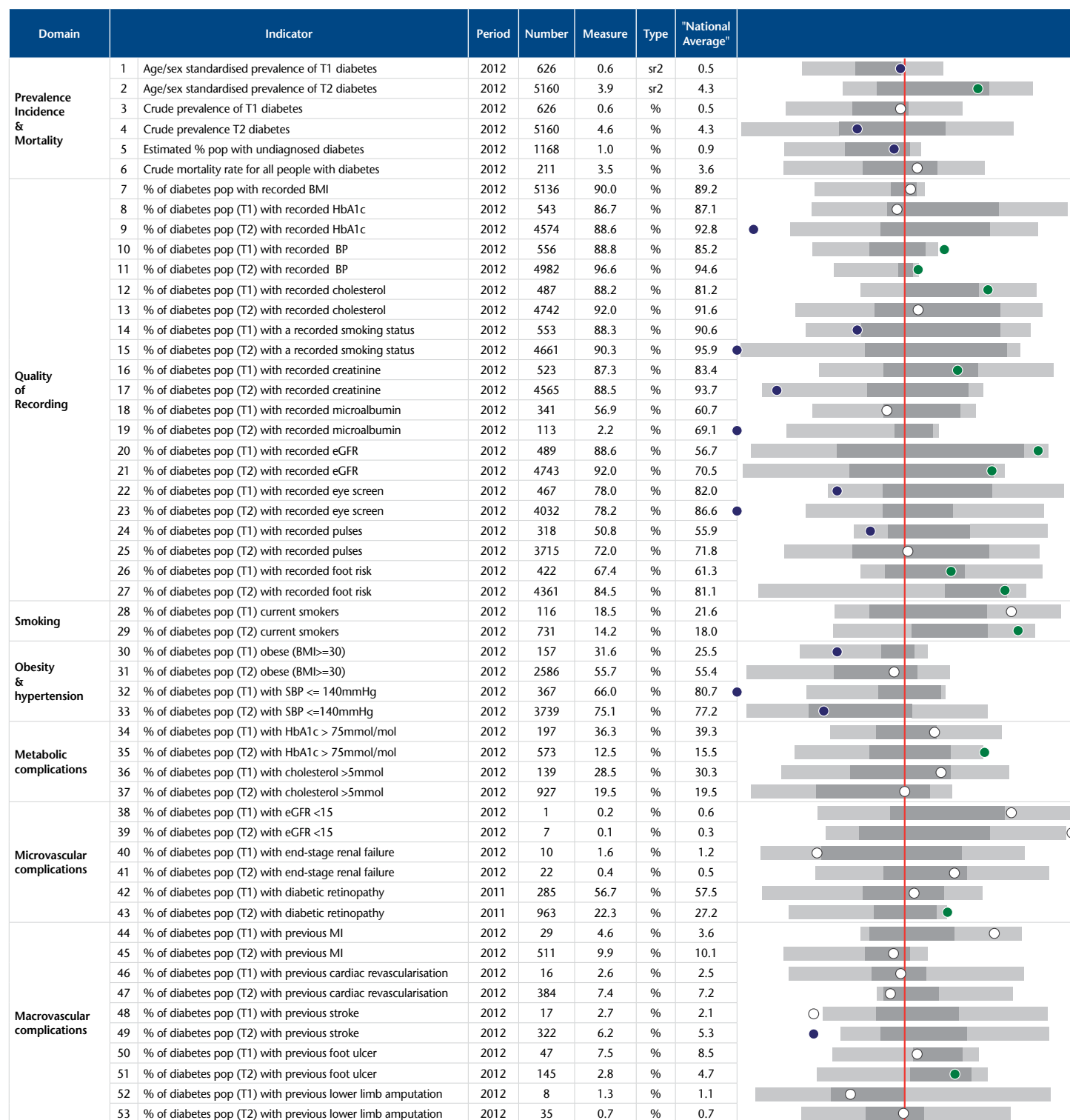
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Borders Health Board Spine Chart 2012



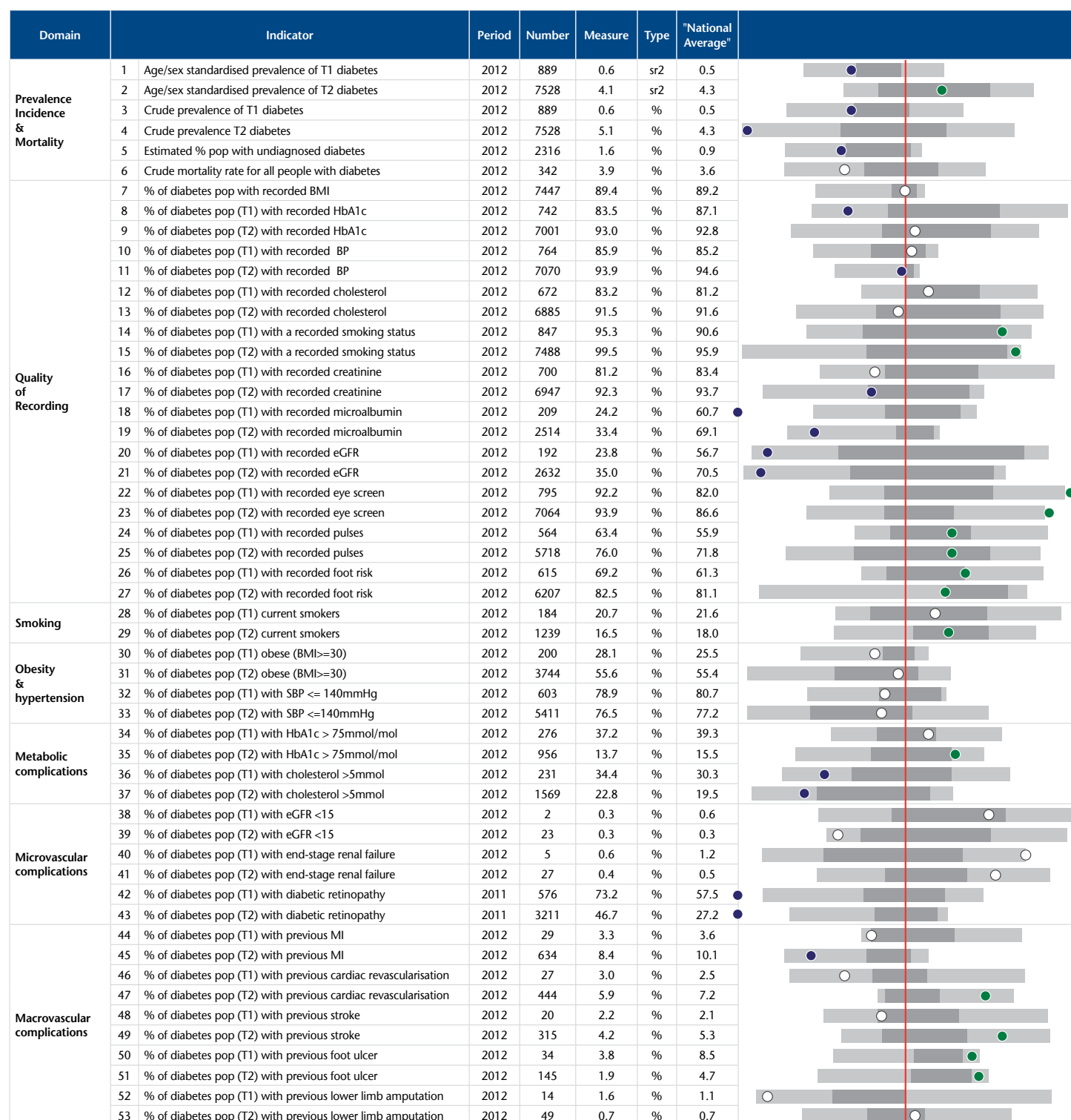
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

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Dumfries & Galloway Health Board Spine Chart 2012



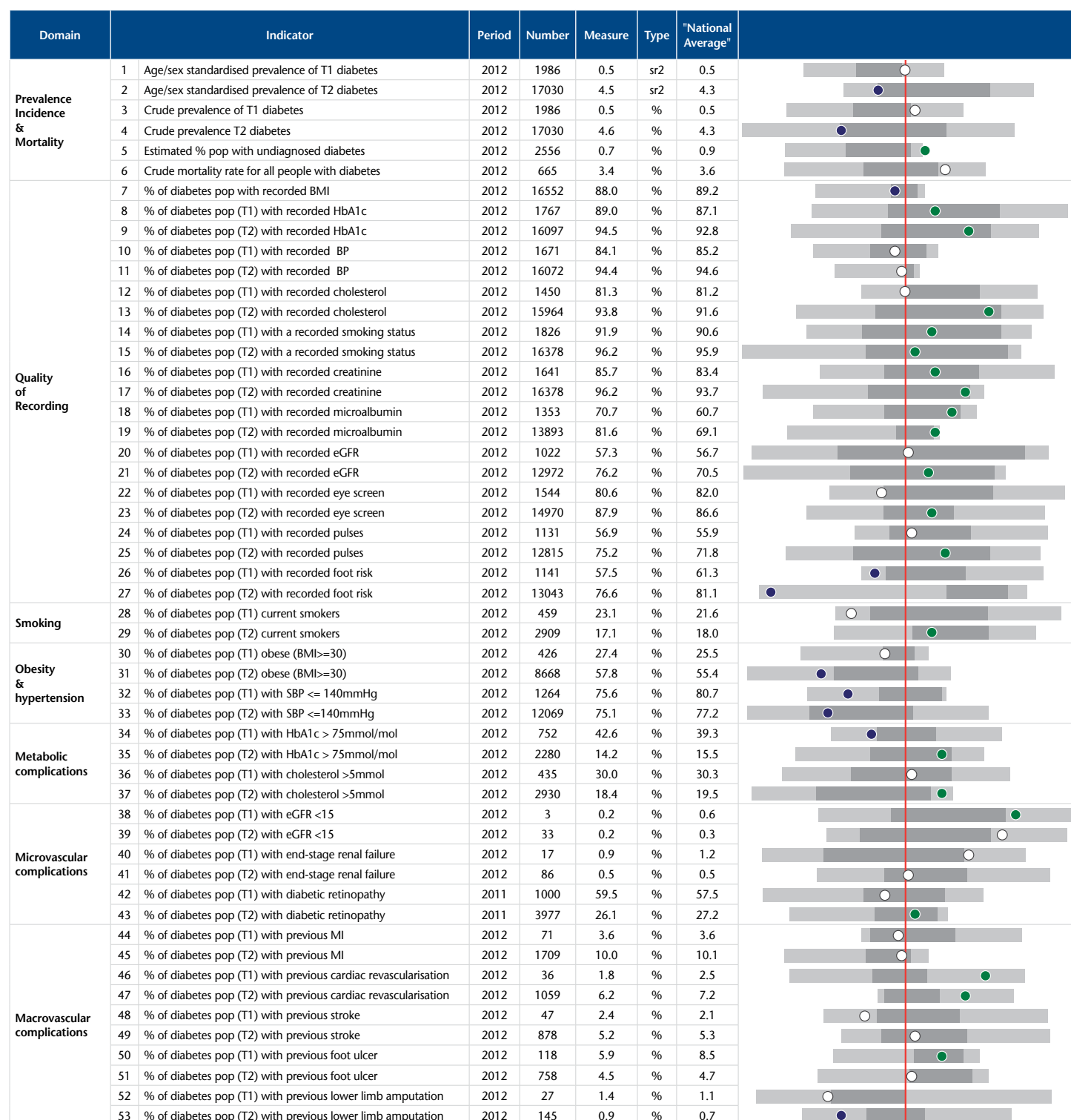
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

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Fife Health Board Spine Chart 2012



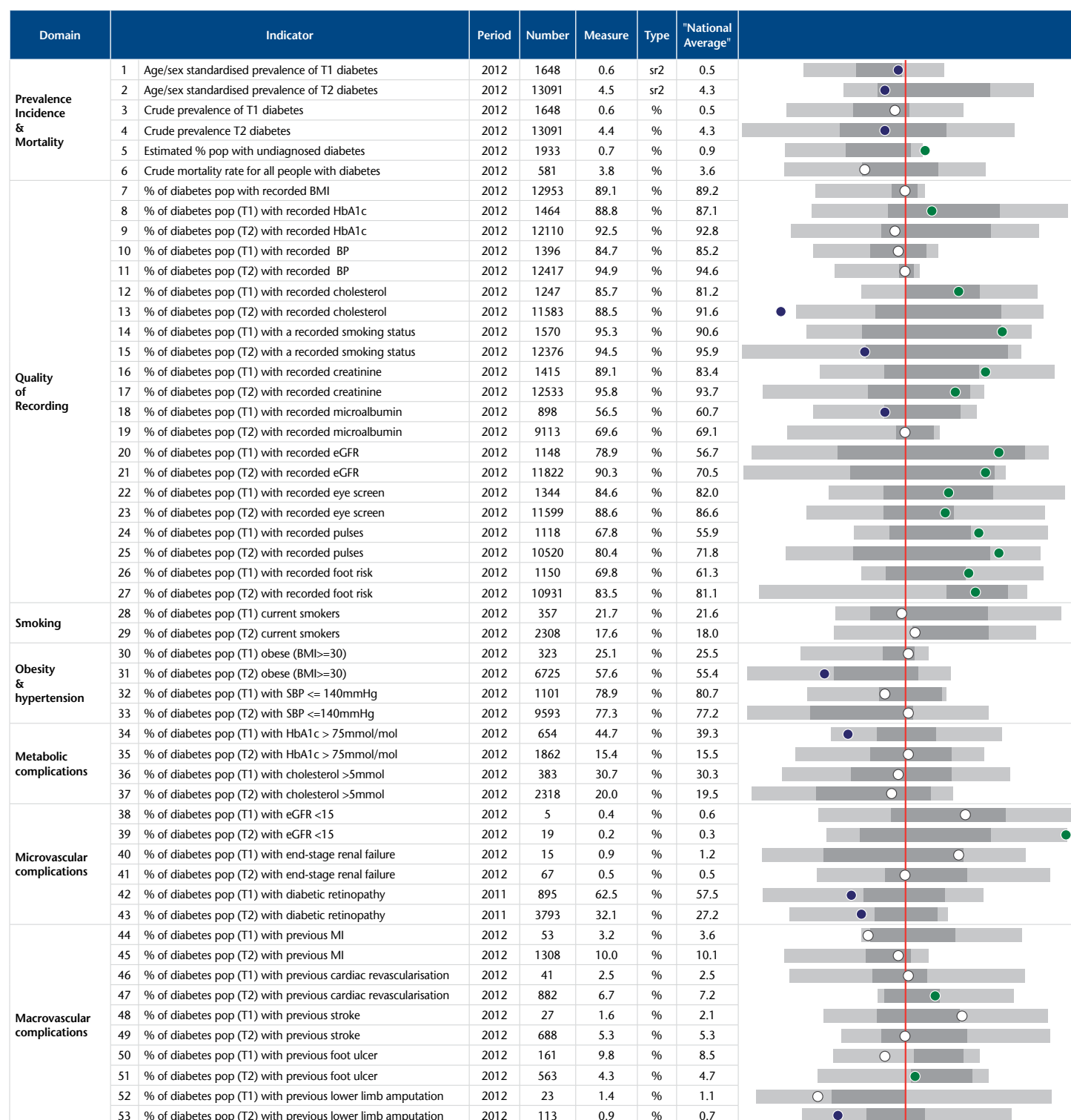
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

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Forth Valley Health Board Spine Chart 2012



"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

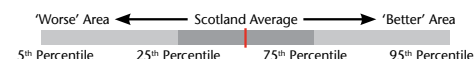
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Grampian Health Board Spine Chart 2012



Domain	Indicator	Period	Number	Measure	Type	"National Average"	
Prevalence Incidence & Mortality	1 Age/sex standardised prevalence of T1 diabetes	2012	3129	0.6	sr2	0.5	
	2 Age/sex standardised prevalence of T2 diabetes	2012	22037	4.0	sr2	4.3	
	3 Crude prevalence of T1 diabetes	2012	3129	0.6	%	0.5	
	4 Crude prevalence T2 diabetes	2012	22037	4.0	%	4.3	
	5 Estimated % pop with undiagnosed diabetes	2012	4507	0.8	%	0.9	
	6 Crude mortality rate for all people with diabetes	2012	940	3.6	%	3.6	
Quality of Recording	7 % of diabetes pop with recorded BMI	2012	22863	92.1	%	89.2	
	8 % of diabetes pop (T1) with recorded HbA1c	2012	2734	87.4	%	87.1	
	9 % of diabetes pop (T2) with recorded HbA1c	2012	20623	93.6	%	92.8	
	10 % of diabetes pop (T1) with recorded BP	2012	2674	85.5	%	85.2	
	11 % of diabetes pop (T2) with recorded BP	2012	21266	96.5	%	94.6	
	12 % of diabetes pop (T1) with recorded cholesterol	2012	2277	81.5	%	81.2	
	13 % of diabetes pop (T2) with recorded cholesterol	2012	20777	94.3	%	91.6	
	14 % of diabetes pop (T1) with a recorded smoking status	2012	2751	87.9	%	90.6	
	15 % of diabetes pop (T2) with a recorded smoking status	2012	20809	94.4	%	95.9	
	16 % of diabetes pop (T1) with recorded creatinine	2012	2550	84.6	%	83.4	
	17 % of diabetes pop (T2) with recorded creatinine	2012	21271	96.5	%	93.7	
	18 % of diabetes pop (T1) with recorded microalbumin	2012	2000	66.4	%	60.7	
	19 % of diabetes pop (T2) with recorded microalbumin	2012	18297	83.0	%	69.1	
	20 % of diabetes pop (T1) with recorded eGFR	2012	2390	85.5	%	56.7	
	21 % of diabetes pop (T2) with recorded eGFR	2012	21053	95.5	%	70.5	
	22 % of diabetes pop (T1) with recorded eye screen	2012	2569	85.3	%	82.0	
	23 % of diabetes pop (T2) with recorded eye screen	2012	19692	89.4	%	86.6	
	24 % of diabetes pop (T1) with recorded pulses	2012	1980	63.3	%	55.9	
	25 % of diabetes pop (T2) with recorded pulses	2012	17674	80.2	%	71.8	
	26 % of diabetes pop (T1) with recorded foot risk	2012	2092	66.9	%	61.3	
	27 % of diabetes pop (T2) with recorded foot risk	2012	18720	84.9	%	81.1	
Smoking	28 % of diabetes pop (T1) current smokers	2012	584	18.7	%	21.6	
	29 % of diabetes pop (T2) current smokers	2012	3244	14.7	%	18.0	
	30 % of diabetes pop (T1) obese (BMI>=30)	2012	598	23.6	%	25.5	
Obesity & hypertension	31 % of diabetes pop (T2) obese (BMI>=30)	2012	11103	54.6	%	55.4	
	32 % of diabetes pop (T1) with SBP <= 140mmHg	2012	2246	84.0	%	80.7	
	33 % of diabetes pop (T2) with SBP <=140mmHg	2012	15998	75.2	%	77.2	
Metabolic complications	34 % of diabetes pop (T1) with HbA1c > 75mmol/mol	2012	1338	48.9	%	39.3	
	35 % of diabetes pop (T2) with HbA1c > 75mmol/mol	2012	3774	18.3	%	15.5	
	36 % of diabetes pop (T1) with cholesterol >5mmol	2012	595	26.1	%	30.3	
	37 % of diabetes pop (T2) with cholesterol >5mmol	2012	3642	17.5	%	19.5	
Microvascular complications	38 % of diabetes pop (T1) with eGFR <15	2012	18	0.7	%	0.6	
	39 % of diabetes pop (T2) with eGFR <15	2012	55	0.3	%	0.3	
	40 % of diabetes pop (T1) with end-stage renal failure	2012	46	1.5	%	1.2	
	41 % of diabetes pop (T2) with end-stage renal failure	2012	121	0.5	%	0.5	
	42 % of diabetes pop (T1) with diabetic retinopathy	2011	1307	48.4	%	57.5	
	43 % of diabetes pop (T2) with diabetic retinopathy	2011	4243	21.4	%	27.2	
Macrovascular complications	44 % of diabetes pop (T1) with previous MI	2012	102	3.3	%	3.6	
	45 % of diabetes pop (T2) with previous MI	2012	2119	9.6	%	10.1	
	46 % of diabetes pop (T1) with previous cardiac revascularisation	2012	78	2.5	%	2.5	
	47 % of diabetes pop (T2) with previous cardiac revascularisation	2012	1713	7.8	%	7.2	
	48 % of diabetes pop (T1) with previous stroke	2012	52	1.7	%	2.1	
	49 % of diabetes pop (T2) with previous stroke	2012	1000	4.5	%	5.3	
	50 % of diabetes pop (T1) with previous foot ulcer	2012	125	4.0	%	8.5	
	51 % of diabetes pop (T2) with previous foot ulcer	2012	441	2.0	%	4.7	
	52 % of diabetes pop (T1) with previous lower limb amputation	2012	38	1.2	%	1.1	
	53 % of diabetes pop (T2) with previous lower limb amputation	2012	178	0.8	%	0.7	

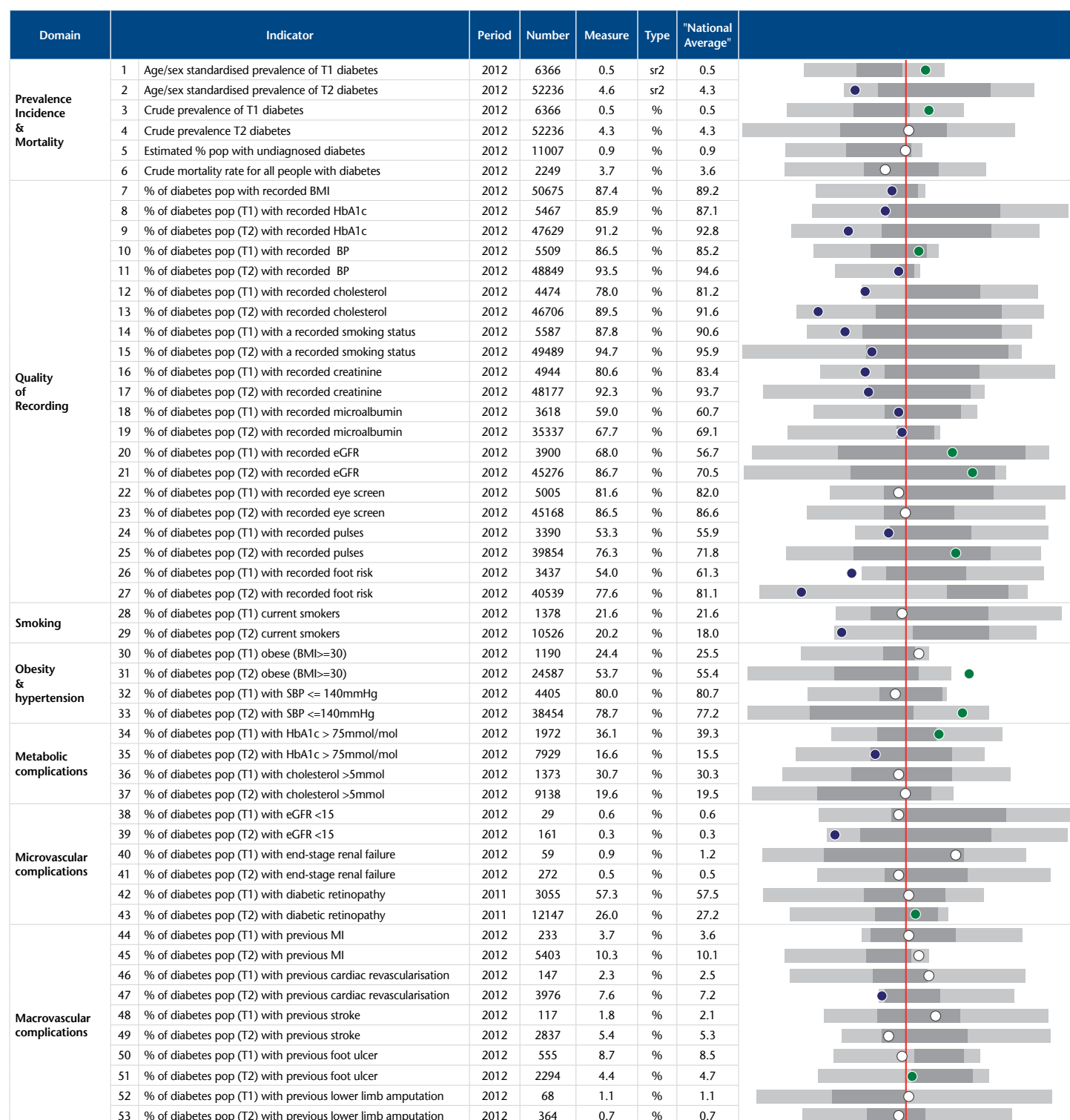


Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

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Greater Glasgow & Clyde Health Board Spine Chart 2012



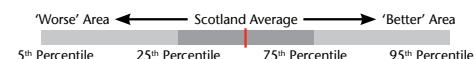
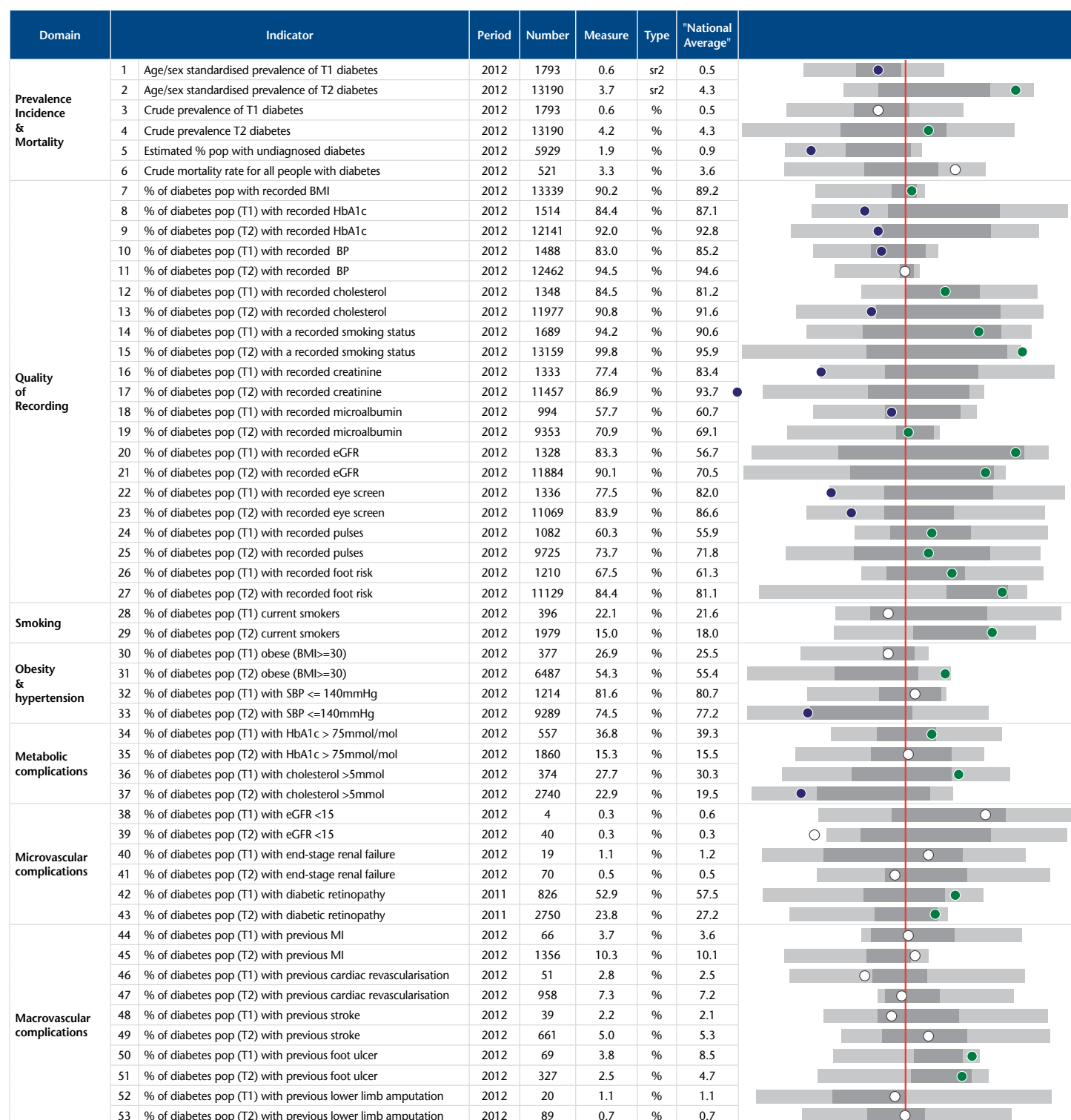
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Highland Health Board Spine Chart 2012

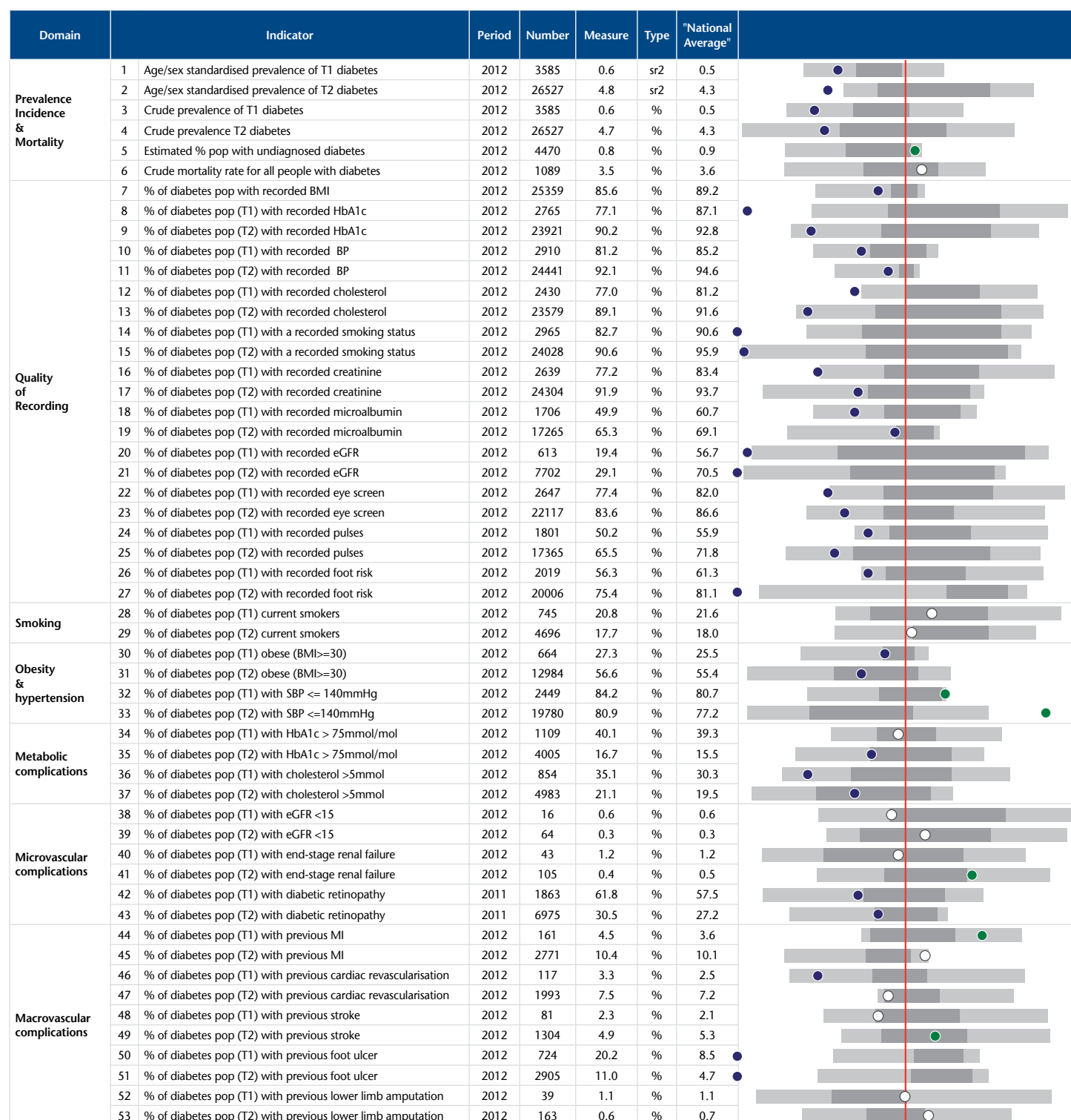


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- △ No significance can be calculated

Lanarkshire Health Board Spine Chart 2012



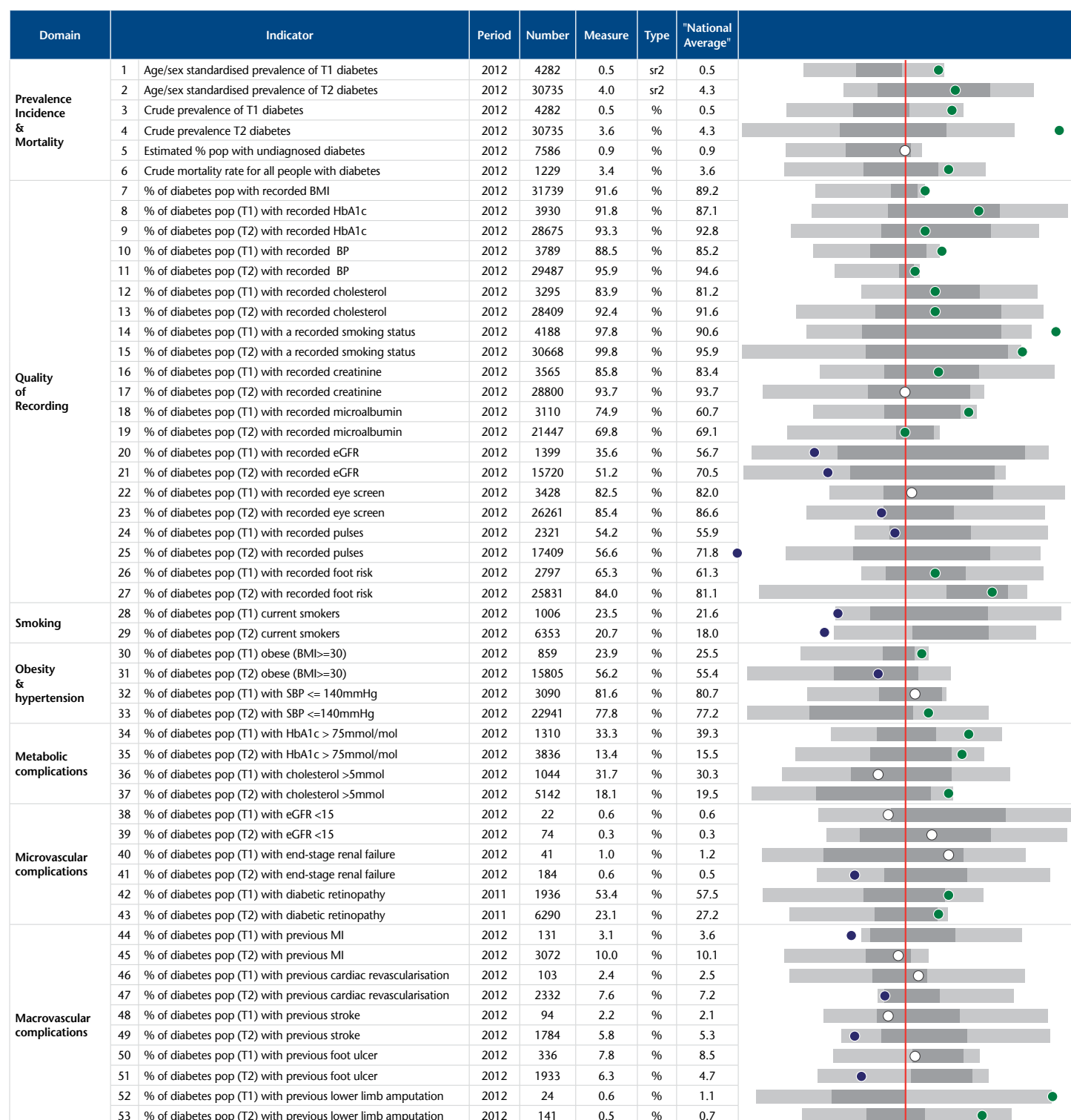
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Lothian Health Board Spine Chart 2012



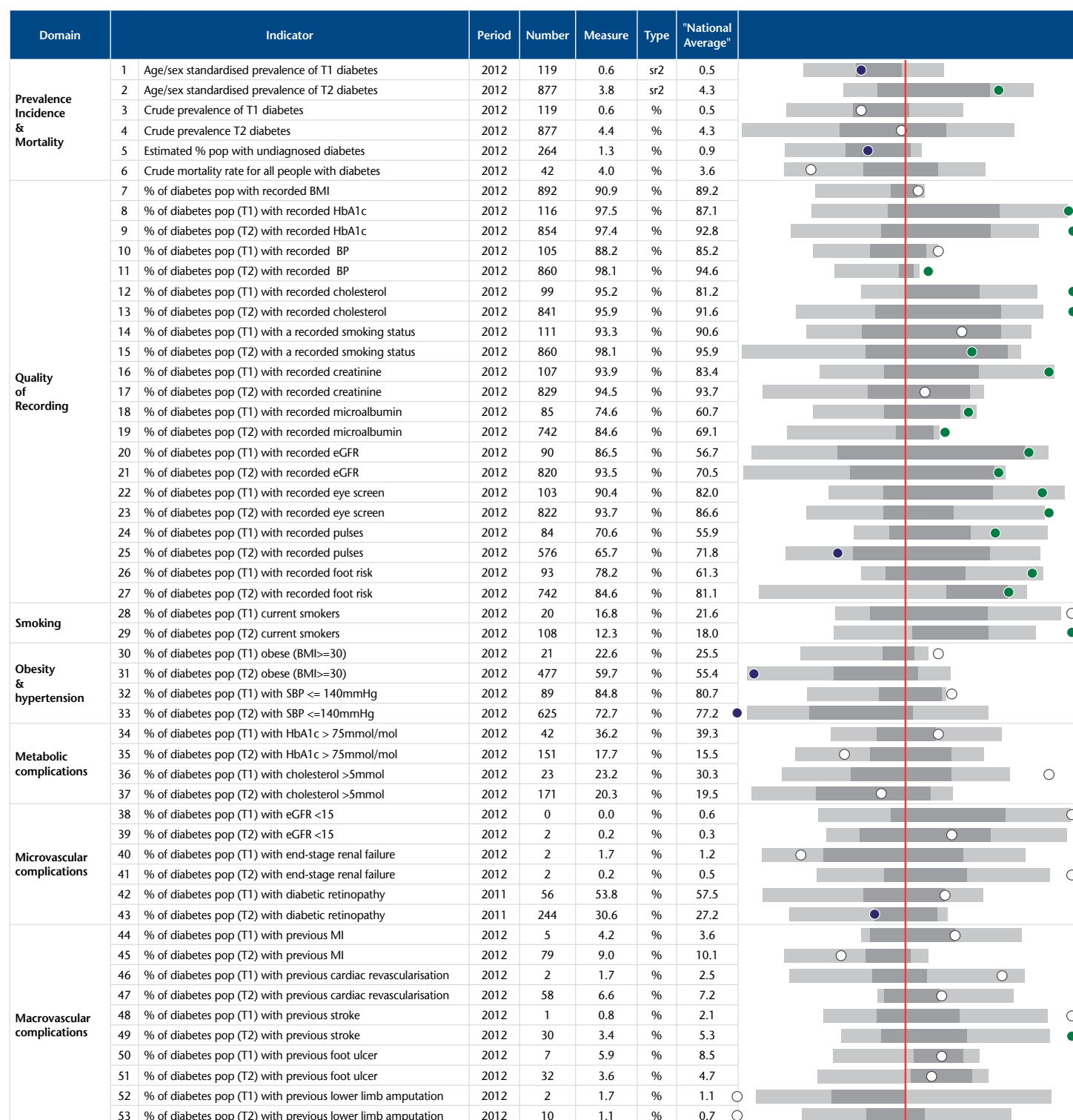
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Orkney Health Board Spine Chart 2012



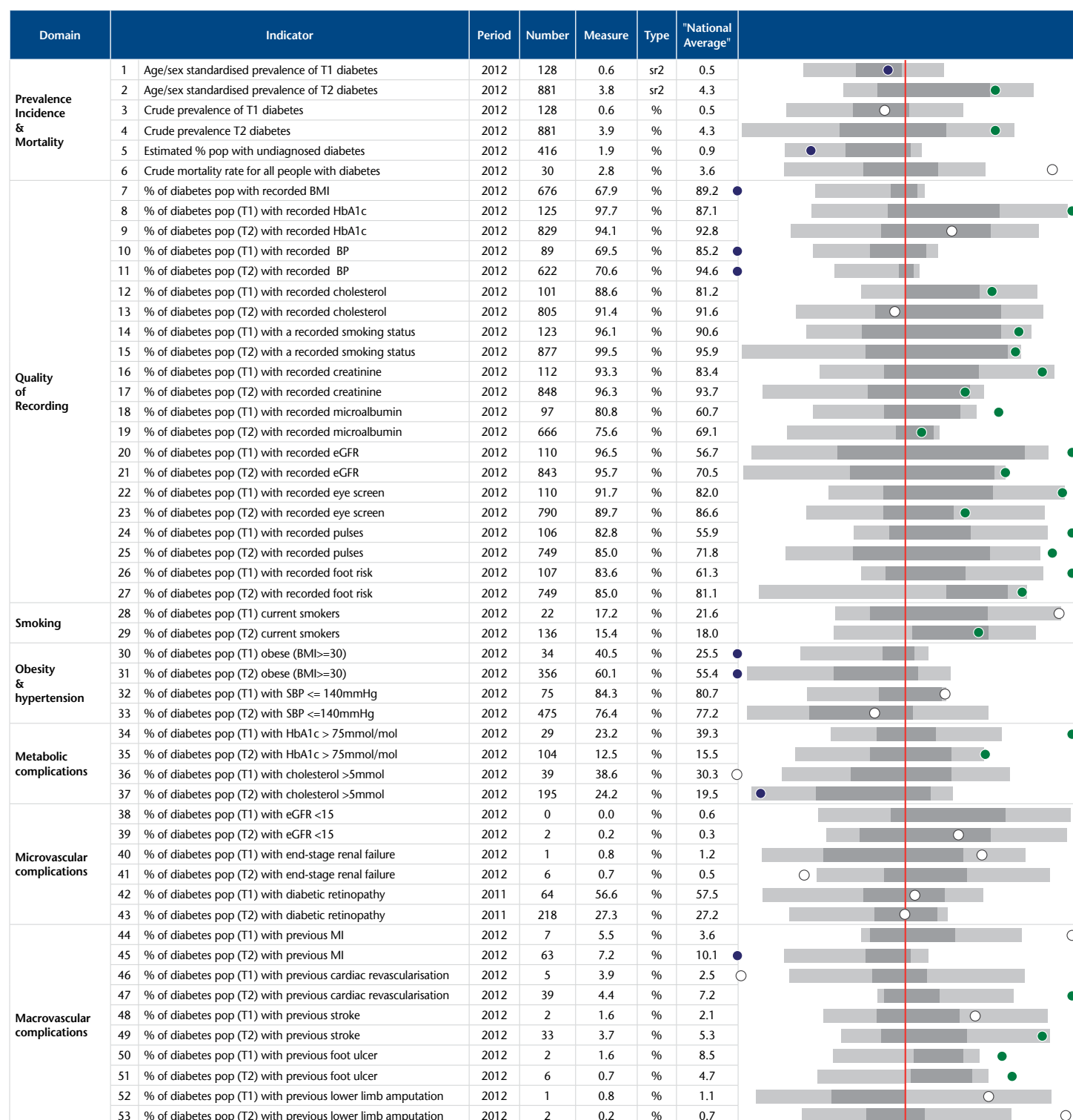
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Shetland Health Board Spine Chart 2012



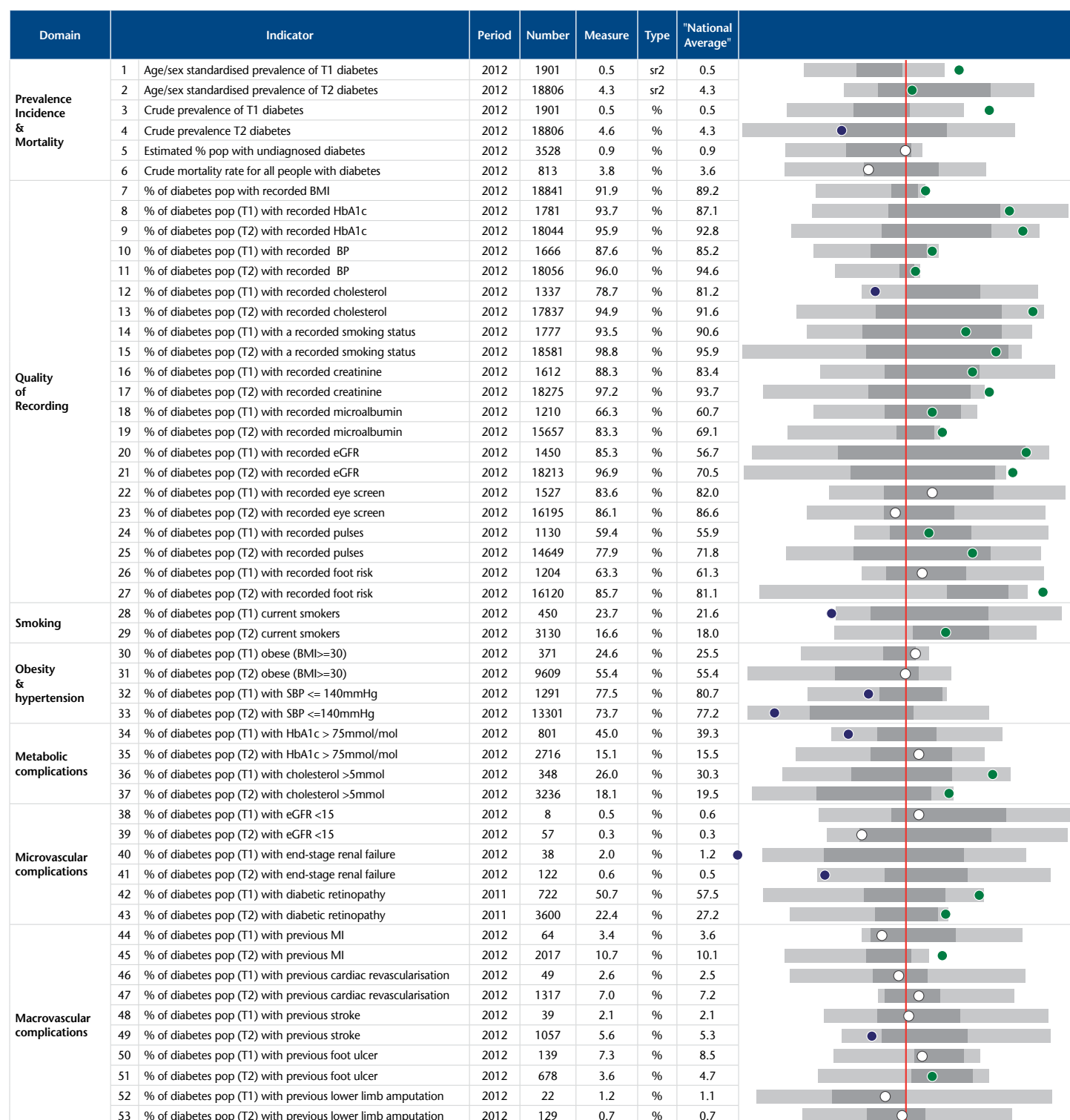
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Tayside Health Board Spine Chart 2012



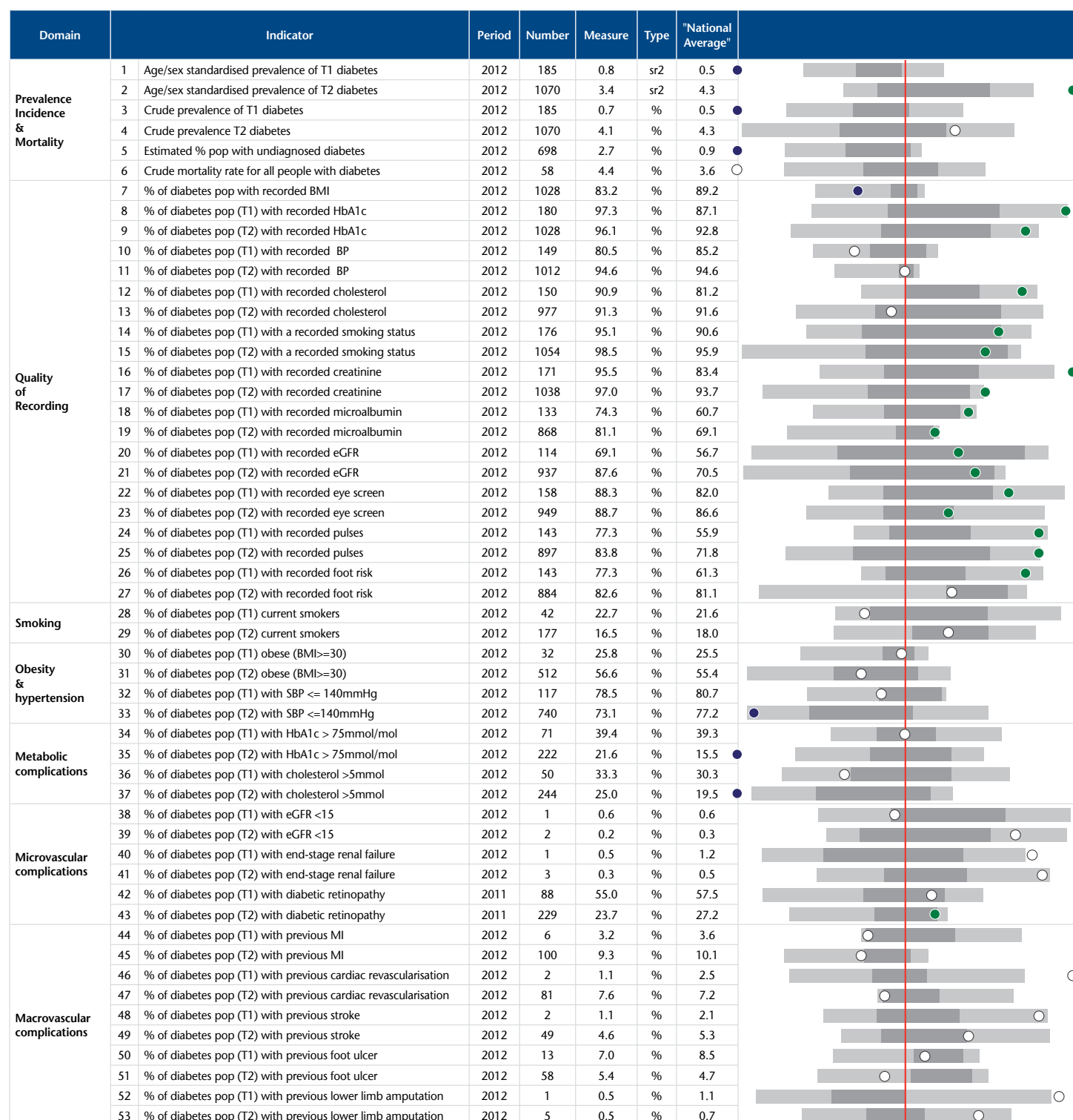
"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated

Western Isles Health Board Spine Chart 2012



"Worse" Area ← Scotland Average → "Better" Area
 5th Percentile 25th Percentile 75th Percentile 95th Percentile

Note: T1 = Type 1 diabetes; T2 = Type 2 diabetes; n/a = data not available, or cannot be calculated; sr2 = directly standardised rate per 100 population; % = percent. Only measures one and two are age adjusted. Differences in age composition of health board populations may partly explain differences in measures between boards. High level of recorded smoking in some boards may reflect the fact that smoking status has not been updated for those who have stopped smoking. All measures exclude those of 'unknown' status in the denominator. Further details of diabetes measure definitions are given in the main report for the 2012 Scottish Diabetes Survey.

Spine Chart Key:

- Statistically significantly 'worse' than National average
- Statistically not significantly different from National average
- Statistically significantly 'better' than National average
- △ No significance can be calculated