Estimated and Projected Diagnosis Rates for Dementia in Scotland: 2014-2020

(NHS NSS Information Services Division: December 2016)

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1. INTRODUCTION

This report was commissioned from NHS National Services Scotland's Information Services Division (NSS ISD) by The Scottish Government.

The purpose of the commission was to establish, for the first time, an estimated annual dementia diagnosed incidence rate for Scotland; which would in turn help contextualise post-diagnostic performance data against The Scottish Government's national LDP Standard for post-diagnostic support. Incidence refers to the estimated number of new dementia cases developed in a given time period. Prevalence refers to the estimated snapshot of the number of cases in a population at a given point in time. This report is concerned with estimated *diagnosed* incidence

Improving post-diagnostic support has been a key part of The Scottish Government's National Dementia Strategies since they were first developed. Commitment 2 of Scotland's National Dementia Strategy (2013-16) states that "We will transform the availability, consistency and the quality of post-diagnostic support by delivering the new post-diagnostic HEAT target".

The LDP Standard (originally HEAT Target) sets out the commitment '**To deliver expected rates of dementia diagnosis and by 2015/16, all people newly diagnosed with dementia will have a minimum of a year's worth of post-diagnostic support coordinated by a link worker, including the building of a person-centred support plan**' and came into effect from April 2013. Reported achievements towards this LDP Standard for each NHS Board are due to be published soon, highlighting performance in respect of those individuals who entered the post-diagnostic service (PDS) between 1 April 2014 and 31 March 2015.

1.1 Purpose of Report and History of Estimating Individuals Diagnosed with Dementia

To allow for the calculation of the LDP Standard and to set performance in a meaningful context, there was a need to acquire an estimate of the number of individuals newly diagnosed with dementia in a given year within each NHS Board.

An initial attempt at deriving this estimate was obtained from analysis taken from a Medical Research Council - funded study, *"The Incidence of Dementia in England and Wales: Findings from Five Identical Sites of the MRC CFA*

Study" (Matthews & Brayne, 2005[1]). Limitations of the study were of the assumption of a patient's survival time post-diagnosis and the number of individuals dying after developing dementia before receiving a formal diagnosis.

This initial estimate was then used to estimate numbers of people with dementia in order to inform each NHS Board about the resources required for their local PDS services. However, the early Dementia PDS data returns from the Health Boards to ISD suggested that the number of individuals qualifying for and using the PDS service was higher than anticipated. This indicated that the initial analysis was a substantial underestimation

In response, The Scottish Government requested that ISD carry out an investigation into the initial calculations of the estimates. It was discovered that there had been a misinterpretation of the results from the MRC study (Matthews et al., 2005) which the analysis had been based on. This then resulted in an under-estimation of the rate of diagnosis of dementia in a given year in Scotland. It is thought that the initial dementia diagnosis rate is likely to have been under estimated by approximately 50%.

1.2 Consideration of New Methodologies

After stakeholder consultation it was decided to undertake a new approach to determining estimated diagnosis rates of dementia in Scotland. This led to the commissioning of the new 'Estimated and projected diagnosis rates for dementia in Scotland; 2014-2020' project.

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[1] Matthews F, Brayne C, Medical Research Council Cognitive Function and Ageing Study Investigators (2005) The Incidence of Dementia in England and Wales: Findings from the Five Identical Sites of the MRC CFA Study, PLoS Med 2(8): e193.

2. RESULTS

The resulting estimations and projections were as follows:-

Table 1. Estimated and Projected Number of Individuals to be Diagnosed with Dementia in Scotland – 2014 to 2020.

| Year	Total	95% Confidence Intervals (Byar's Method)	Under 60	60-64	65-69	70-74	75 -79	80-84	85-89	90+
2014	16,712	*16,078; 17,382*	268	343	878	1,742	3,198	4,336	3,699	2,246
2015	17,097	*16,036; 18,220*	268	344	899	1,766	3,228	4,430	3,812	2,349
2016	17,496	*16,411; 18,644*	268	348	911	1,818	3,223	4,516	3,945	2,466
2017	17,994	*16,879; 19,172*	268	356	875	1,972	3,254	4,590	4,106	2,572
2018	18,489	*17,345; 19,697*	268	364	861	2,058	3,322	4,708	4,232	2,675
2019	18,989	*17,817; 20,229*	268	372	857	2,117	3,403	4,807	4,356	2,809
2020	19,473	*18,271; 20,743*	267	381	861	2,170	3,460	4,876	4,503	2,954

Note: Due to rounding within the age groups, the sum of the age groups may not equal the Scotland total for the year.
Source: SMR01, SMR04, SMR50, NHS Ayrshire& Arran, NHS Greater Glasgow & Clyde, NHS Lanarkshire.

In 2014 there were an estimated 16,712 individuals newly diagnosed with dementia in Scotland. By 2020, this number is estimated to increase by 17% to 19,473. The age group with the most estimated diagnosis of dementia appears to be 80-84 year olds.

The rates used assume that rate of diagnosis will stay the same for each age band, and therefore, any increases evidenced in the table are due to population growth.

A more visual representation of the depicted increase of diagnoses can be seen via the chart overleaf.

CHART 1. Estimated and Projected Number of Individuals Diagnosed with Dementia; Calendar Years 2014-2020.
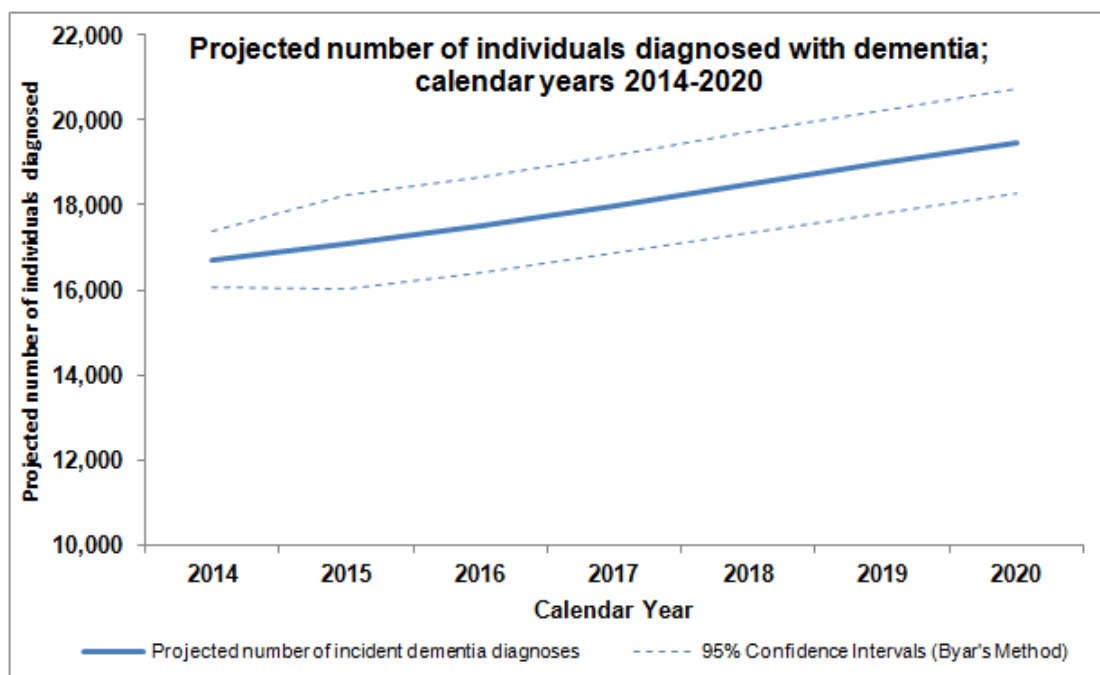
For more detail on NHS Board-specific projections between 2014 and 2020, please refer to **Appendix 1** at the end of the report.

3. NEW METHODOLOGY

The most significant difference between what had been done previously and the agreed new methodology was the utilisation of real data held within Scotland's health service. This approach was preferred as it was more likely to give an accurate reflection of Scottish rates without relying on estimates calculated from data gathered in other nations.

The main steps of this methodology are discussed fully within their own respective sections throughout the report, however to summarise they were to:-

- Consider available data sources and agree final list for data collection
- Calculate new estimated diagnosis rates for dementia in Scotland using real Scottish health data
- Report on and present the new results with consideration to any developments that may strengthen the methodology in future
- Consider any future analysis that may be of interest from the provided conclusions.

4. DATA SOURCES AND DATA COLLECTION

Different aspects of Dementia information are captured throughout several datasets; Primary Care, Prescribing, Post-Diagnostic Support, Secondary Care and local systems and therefore a rigorous exercise was conducted first to ascertain the most appropriate and fit for purpose dataset from which to calculate the estimated diagnosis rates. It was concluded that diagnosis of dementia is likely to occur within community and outpatient services, therefore it was presumed the richest source of data would exist within the local systems of each of the Health Boards. Section 4.4 provides more detail on the above datasets.

A number of Health Boards were asked to participate in the project; however, only three of those approached were able to provide the required data items within the specified timescales. These were NHS Ayrshire & Arran, NHS Greater Glasgow & Clyde and NHS Lanarkshire.

An initial analysis of the data found NHS Greater Glasgow & Clyde diagnoses numbers to be grossly inflated in comparison to the two other participating Health Boards – even with consideration to population differences. Further exploration concluded that data submission included records of patients with a dementia diagnosis within community, secondary care inpatient and acute mental health settings, whereas NHS Ayrshire and Arran and NHS Lanarkshire only provided their local data and did not include records from an acute setting (inpatient or mental health) as detailed in Table 2. Consistency was required across all three sites, therefore it was agreed that ISD would include acute mental health and secondary care inpatient submissions for the other two Health Boards. The reason for this was to ensure that as many people as possible with dementia diagnoses were being captured so as to avoid underestimation of individuals who may require the dementia PDS service.

This alteration meant the new estimates would be calculated from two data sources: local, community-based data and secondary care data. Specific detail on the data collections of each of the data sources is explained in the subsequent sub-sections.

4.1 Local Data Collection

The table below provides details on the data sources from each of the participating Health Boards, including the specific local systems that the data was extracted from as well as any known limitations of the data.

TABLE 2. Local Data Collection Summary Table

Health Board	Time Period of Data Supplied	Local Systems Used	Points of Relevance
NHS Ayrshire & Arran	Apr 2013 – Feb 2015	• Community Mental Health Team – Elderly (CMHTE) System	Contains those diagnoses within a community setting. Would only contain inpatient data where a patient was referred from an inpatient setting.
NHS Greater Glasgow & Clyde	1999 – Jan 2015	• PIMS Outpatient Data • SMR04 Data • SMR01 Data	Data contained secondary care inpatient and secondary care mental health data as well as community-based data, whereas other participating Health Boards only supplied data from community settings.
NHS Lanarkshire	2014	• Monthly PDS Submission to ISD	Only 2014 data sent to ISD for the routine PDS submissions was used as the information contained was the same as held locally.

4.2 Secondary Care Data Collection

As a result of secondary care inpatient data being included within the NHS Greater Glasgow & Clyde extract, a decision was made to extract secondary care information for the other two participating NHS Boards also.

Secondary care data is one of the nationally held data sources within ISD. The secondary care data includes the following:-

- SMR01 records – General Acute Inpatient and Day Case
- SMR04 records – Mental Health Inpatient and Day Case
- SMR50 records – Geriatric Long Stay

As NHS Greater Glasgow & Clyde already supplied SMR01 and SMR04 records along with their local data, SMR50 records were extracted and added to the dataset. For NHS Ayrshire and Arran and NHS Lanarkshire SMR01, SMR04 and SMR50 records were extracted from the centrally held SMR database and added to the local records.

Data were extracted as far back as 1997 where an ICD10 code for Dementia was included in any of the six data items reserved for detailing 'conditions' and where patients resided within one of the three participating Health Boards.

The appropriate International Classification of Diseases (ICD10) codes were supplied by the ISD Terminology Services and are as follows:-

- F00: Dementia in Alzheimer's Disease
- F01: Vascular Dementia
- F02: Dementia in other diseases classified elsewhere
- F03: Unspecified Dementia

The coding team advised that there are no known quality issues with dementia being falsely recorded on SMR records. However, it is worth highlighting that the existence of an ICD10 code for dementia in one of the diagnosis data items is not necessarily a formal diagnosis of dementia. Dementia is one of the 25 co-morbidities and therefore may be recorded alongside other reasons for admission to acute settings where relevant.

Secondary care data also does not contain a 'diagnosis date' data item, and therefore 'date of discharge' has been used as proxy.

4.3 Summary of Data Collected

The table below summarises high level figures from the data collection process. It indicates the number of individual diagnoses found within each data source for each Health Board. The local Health Board data and extracted secondary care data were combined, and the earliest diagnosis date for each individual was selected utilising CHI number to ensure there was no double

counting. Further detail on the linkage and aggregation of the data is explained within **Section 5** of this report.

TABLE 3. Summary of Data Collected from each Health Board

Health Board	Number of Individual Dementia Diagnoses Identified in Each Data Source in 2014		Estimated Number of People Diagnosed with Dementia in 2014
	Local Data	**Secondary Care Data**	
NHS Ayrshire & Arran	542	596	**1138**
NHS Greater Glasgow & Clyde	3362[2]	27[3]	**3389**
NHS Lanarkshire	834	1150	**1984**

4.4 Other Data Sources Considered

There are a number of data sources available within the Scottish health service held both locally and nationally. In the absence of a specific, official patient level register there was a need to consider the most appropriate options in order to most accurately estimate the incidence of dementia diagnoses. As explained in the preceding sections, the final agreed sources were a combination of localised community-facing data and secondary care data. Other data sources had been considered, but were, at the time, felt to be incapable of providing any significant contributions in comparison with the final data sources that were agreed.

Below is a selection of other considered data sources and reasons for their exclusion at this stage:-

- Primary Care (eg. SPIRE or QOF) – Primary care data is not currently centrally collated at an individual level and therefore cannot be linked to data from other sources. It would, therefore, be impossible to ascertain whether any identification of dementia in primary care was the first identification, or indeed, when that identification occurred.

- Prescribing (PIS) – It was thought that anyone in receipt of prescribed drugs to alleviate symptoms of dementia should have a formal diagnosis of dementia recorded in other data sources, and therefore was deemed inappropriate.

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[2] This includes SMR01 and SMR04 numbers as this was sent in with NHS Greater Glasgow & Clyde's original submission.
[3] This includes SMR50 only.

- Social Care – A formal diagnosis of dementia within a social care setting was felt to be unlikely. As a result focus was directed more toward healthcare data sources.

- Post Diagnostic Support Data Submissions – The monthly PDS submissions the local Health Boards send to ISD were deemed inappropriate as a measurement of incidence as not everyone who is diagnosed with dementia is contained within these submissions. NHS Lanarkshire's PDS was used for their local data as they confirmed it contained everyone available within their local systems.

5. CALCULATION OF THE RATES OF DIAGNOSIS

With data sources identified and the data collected from the three participating Health Boards, work could commence on developing an estimated rate of diagnosis for dementia.

Firstly, data from all sources were combined together to form one file that held individual level data from both the local systems as well as secondary care data. The first instance of dementia was then identified for each individual, utilising CHI number, by selecting the earliest diagnosis date (or discharge date in the case of secondary care data).

The data was then aggregated to count the number of diagnoses per calendar year into 5 year age bands. The aggregations for the year 2014 were then used to produce an estimated rate of diagnosis for each age band. Given dementia is predominately diagnosed within the older population, age-specific rates were most appropriate at illustrating where in life new diagnoses are most common. These age-specific rates were calculated as follows:-

$$\left(\frac{\textit{Number of New Diagnoses of Dementia within that age group}}{\textit{Population Estimate for that age group}} \right)$$

This calculation was applied to each specific NHS Board's diagnosis figures and population estimates, and the resulting age-specific rates per 1,000 population (rate x 1000) were as follows:-

Table 4. Age-Specific Rates for Newly Diagnosed Individuals with Dementia per 1,000 population.

NHS Board	Under 60	60-64	65-69	70-74	75 -79	80-84	85-89	90+
NHS Ayrshire & Arran	0.1	0.9	2.1	6.4	14.3	28.7	43.9	49.9
NHS Greater Glasgow & Clyde	0.1	1.1	3.4	8.3	18.0	32.4	48.8	54.0
NHS Lanarkshire	0.1	1.2	2.6	7.3	17.5	35.9	53.7	65.6
Combined Rate	**0.1**	**1.1**	**2.9**	**7.6**	**17.1**	**32.7**	**49.2**	**56.2**

A combined rate was derived to apply to the remaining 11 Health Boards in the absence of their local data. This was calculated by summing all three participating Health Boards diagnoses and dividing by their combined population. The combined rate was to act as a proxy-rate to account for differences in diagnosis numbers and population sizes between the remaining Health Boards.

The actual age-specific rates calculated for NHS Ayrshire & Arran, NHS Greater Glasgow & Clyde and NHS Lanarkshire were used for their own projections.

The rates of diagnosis were then applied to projected population estimates to produce projected numbers of newly diagnosed dementia cases for each year up until 2020.

The projected population estimates between 2014 and 2020 were taken from the 2012-base population projections for Scotland derived from National Records Scotland (NRS) and can be accessed via their website[4]. Their web pages also detail important findings from the projections, such as areas where populations are projected to increase or decrease over time[5].

Confidence intervals were also calculated using the Byar's Method to demonstrate the range of values wherein there is reasonable certainty the true incidence value lies.

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[4] http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/sub-national-population-projections/2012-based

[5] http://www.nrscotland.gov.uk/news/2014/population-projections-for-scottish-areas

Listed below are some points for consideration when interpreting the outputs that resulted from this methodology. As with most projects there will be limitations and it is important to recognise these when transforming outputs into information and action.

1. This report provides an estimate of the number of people newly diagnosed with dementia in 2014. However, it is possible for individuals to be living with dementia for quite some time without any formal diagnosis.

2. These rates have no state of permanence and are subject to change due to ever evolving interventions. People could start getting diagnosed earlier, therefore increasing the rate of diagnosis in younger age groups and decreasing the rate in older age groups. We recommend that this work is frequently re-run to take account of these factors

3. Whilst these results provide a reasonable estimate of the number of individuals newly diagnosed with dementia in a given year, it should be noted that the estimate is based on the service delivery model & processes within the three Health Boards that provided data and it should be considered that service delivery models & processes could vary across Scotland. Future reiterations of this project may consider obtaining more local data sources to use in calculating more site-specific rates.

4. Given the short time frames of the local data sources, it is difficult to fully capture true first incidence. For example, someone may have been formally diagnosed on a date prior to the time period of the data supplied by the Health Boards. Therefore, if this same individual was admitted to hospital in 2014 with dementia recorded as a co-morbidity, this methodology would then conclude 2014 was the first incidence for that individual.

6. FUTURE EXPLORATIONS

Suggestions for how the methodology could be developed in the future as well as recommendations for further potential analyses are detailed below:-

1. For any future reruns of calculating incidence, reconsider other data sources for any new developments. For example, utilising Primary Care (SPIRE) data in future if the data source were developed to include data at an individual level.

2. Trend analysis of incidence could provide powerful insight, and therefore rerunning incidence calculations may be recommended.

3. Consider acquiring more real local data from other Health Boards to improve accuracy of rates within their respective sites.

4. Mapping patient pathways to better understand the flow of individuals within and across services.

5. Given individuals will inevitably die over the coming years, modelling prevalence rates should be considered.

Appendix 1 - Estimated and Projected Incidence of the Diagnosis of Dementia by NHS Board 2014 to 2020

2014	Estimated Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**16,712**	**268**	**343**	**878**	**1,742**	**3,198**	**4,336**	**3,699**	**2,246**
Ayrshire & Arran	1,138	19	22	52	122	214	301	251	157
Borders	446	5	9	24	48	86	114	100	60
Dumfries & Galloway	615	7	12	32	66	118	163	136	81
Fife	1,192	18	25	67	129	229	301	263	161
Forth Valley	904	15	19	51	100	184	230	191	114
Grampian	1,716	30	37	93	175	319	440	389	234
Greater Glasgow & Clyde	3,389	59	67	191	361	673	877	734	427
Highland	1,165	15	24	64	128	221	298	254	161
Lanarkshire	1,984	32	46	94	201	385	544	429	253
Lothian	2,399	45	49	123	238	443	616	544	342
Orkney	79	1	2	4	9	15	19	17	11
Shetland	71	1	2	4	8	13	17	16	10
Tayside	1,501	20	28	74	146	278	389	348	219
Western Isles	115	1	2	6	12	21	28	28	18

Notes:
1. **Actual numbers submitted were used for NHS Ayrshire & Arran, NHS Greater Glasgow & Clyde and NHS Lanarkshire**
2. **Source: Local date collection from; NHS Ayrshire& Arran, NHS Greater Glasgow & Clyde & NHS Lanarkshire, combined with SMR01, SMR04 and SMR50.**

2015	Estimated Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**17,097**	**268**	**344**	**899**	**1,766**	**3,228**	**4,430**	**3,812**	**2,349**
Ayrshire & Arran	1,352	18	27	73	148	260	353	290	184
Borders	456	5	9	25	48	88	115	102	63
Dumfries & Galloway	631	7	12	32	67	121	165	142	85
Fife	1,220	18	24	68	133	232	307	272	166
Forth Valley	930	15	19	52	102	186	238	198	120
Grampian	1,757	30	37	96	176	324	451	396	249
Greater Glasgow & Clyde	3,375	59	67	165	331	631	901	760	460
Highland	1,199	15	24	65	130	226	305	263	169
Lanarkshire	1,919	33	43	106	211	383	506	411	226
Lothian	2,452	45	49	127	243	445	626	560	357
Orkney	82	1	2	4	9	16	19	18	12
Shetland	73	1	2	4	8	14	18	16	11
Tayside	1,534	20	27	76	148	280	397	356	230
Western Isles	118	1	2	6	11	21	29	27	19

2016	Estimated and Projected Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**17,496**	**268**	**348**	**911**	**1,818**	**3,223**	**4,516**	**3,945**	**2,466**
Ayrshire & Arran	1,386	18	27	73	152	262	360	301	194
Borders	467	5	9	25	50	89	117	105	66
Dumfries & Galloway	648	7	12	32	69	121	171	147	89
Fife	1,250	18	25	69	138	231	318	276	175
Forth Valley	955	15	19	53	105	187	247	204	124
Grampian	1,798	30	38	97	183	323	459	409	260
Greater Glasgow & Clyde	3,429	59	69	168	335	623	909	786	480
Highland	1,232	15	25	66	135	228	312	274	177
Lanarkshire	1,972	33	43	107	216	383	521	429	239
Lothian	2,512	45	50	129	251	445	635	581	375
Orkney	84	1	2	4	10	17	19	19	13
Shetland	75	1	2	4	9	14	18	16	11
Tayside	1,567	20	27	76	153	278	400	371	242
Western Isles	120	1	2	6	12	22	30	27	19

2017	Projected Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**17,994**	**268**	**356**	**875**	**1,972**	**3,254**	**4,590**	**4,106**	**2,572**
Ayrshire & Arran	1,430	17	27	70	165	266	367	318	200
Borders	480	5	9	24	56	90	121	108	68
Dumfries & Galloway	668	7	12	31	74	124	175	152	95
Fife	1,289	18	25	65	152	235	329	282	183
Forth Valley	989	15	20	51	115	188	257	215	129
Grampian	1,853	30	38	93	201	330	464	424	272
Greater Glasgow & Clyde	3,498	59	71	162	360	615	912	824	494
Highland	1,273	15	25	64	145	235	317	287	186
Lanarkshire	2,034	33	44	104	232	387	533	449	252
Lothian	2,581	46	51	124	275	451	641	598	395
Orkney	88	1	2	4	10	18	20	19	13
Shetland	78	1	2	4	9	15	19	17	12
Tayside	1,610	20	28	72	167	280	405	384	254
Western Isles	123	1	2	6	13	22	31	28	20

2018	Projected Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**18,489**	**268**	**364**	**861**	**2,058**	**3,322**	**4,708**	**4,232**	**2,675**
Ayrshire & Arran	1,475	17	28	69	171	273	376	333	208
Borders	495	5	9	23	58	93	125	111	70
Dumfries & Galloway	687	7	12	30	76	128	176	159	99
Fife	1,327	18	26	63	159	244	337	291	189
Forth Valley	1,022	15	20	50	120	193	266	223	134
Grampian	1,905	30	39	92	212	337	475	436	284
Greater Glasgow & Clyde	3,566	59	74	161	373	616	926	846	511
Highland	1,314	15	25	63	152	244	327	297	193
Lanarkshire	2,100	33	45	103	241	395	547	472	263
Lothian	2,651	46	53	122	289	458	662	611	410
Orkney	91	1	2	4	10	18	22	19	14
Shetland	81	1	2	4	9	16	20	16	13
Tayside	1,649	20	28	71	176	285	416	388	265
Western Isles	126	1	2	6	13	22	31	29	21

2019	Projected Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**18,989**	**268**	**372**	**857**	**2,117**	**3,403**	**4,807**	**4,356**	**2,809**
Ayrshire & Arran	1,516	17	28	68	174	283	384	345	216
Borders	511	5	9	23	60	95	131	114	74
Dumfries & Galloway	706	7	12	30	78	132	179	165	105
Fife	1,367	18	26	62	163	254	346	301	196
Forth Valley	1,055	15	21	49	123	198	277	230	142
Grampian	1,958	30	39	91	222	343	484	449	299
Greater Glasgow & Clyde	3,636	59	76	161	382	622	936	865	535
Highland	1,358	15	25	62	156	253	337	305	205
Lanarkshire	2,163	32	46	104	247	405	559	488	282
Lothian	2,722	46	54	122	299	471	674	628	428
Orkney	95	1	2	4	10	19	23	20	15
Shetland	84	1	2	4	10	17	20	17	13
Tayside	1,689	20	29	70	181	289	423	399	277
Western Isles	130	1	2	6	14	22	32	30	23

2020	Projected Number of individuals Diagnosed								
	Total	Under 60	60-64	65-69	70-74	75-79	80-84	85-89	90+
Scotland	**19,473**	**267**	**381**	**861**	**2,170**	**3,460**	**4,876**	**4,503**	**2,954**
Ayrshire & Arran	1,558	17	29	68	177	289	393	359	227
Borders	525	5	10	23	61	97	135	117	77
Dumfries & Galloway	725	6	12	30	78	134	184	169	111
Fife	1,405	18	27	62	166	262	353	311	206
Forth Valley	1,087	15	21	49	127	203	282	241	150
Grampian	2,009	30	40	92	230	346	494	464	312
Greater Glasgow & Clyde	3,703	58	78	164	390	627	928	894	562
Highland	1,399	15	26	62	159	258	347	316	216
Lanarkshire	2,222	32	47	105	253	409	572	504	299
Lothian	2,790	46	56	123	308	482	681	645	449
Orkney	99	1	2	4	10	19	26	21	16
Shetland	87	1	2	4	10	17	21	19	14
Tayside	1,730	20	30	69	185	294	429	412	291
Western Isles	133	1	2	5	14	22	33	31	23

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