

# DEAFNESS IN SCOTLAND

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## 1. Introduction

Deaf people<sup>1</sup> in Scotland have a diverse range of needs and require a wide range of services to support them in their everyday life. In order to plan the services that will be needed in the future, it is important to have a sense of the composition and characteristics of deaf people in Scotland. This report sets the main characteristics of people who are deaf in Scotland and tries to give an impression on how this group will evolve over time.

The next section sets out the main data sources that are currently available. Unfortunately, the provision of data is limited, which makes it harder to get a good sense of the long-term trends. The next section uses these and some other data sources in order to sketch the current situation with regards to deafness in Scotland. It is possible to distinguish between five different groups of people and these will be discussed separately. This section shows that the demand for services for older people, as well as for BSL (British Sign Language) interpreters is set to increase in the future. The final section serves as a conclusion and draws together the main recommendations from the report.

## 2. Data sources

In order to determine the long-term trends and needs of deaf people in Scotland it is necessary to look at a number of different data sources. This is necessary because there is no comprehensive data source on the number of people with a hearing loss. This section outlines the main sources of information. Other sources are referenced in the footnotes throughout the document.

### 2.1 National Study of Hearing (1995)

The National Study of Hearing provides population estimates by age on the prevalence of deafness and hearing loss. This study is still the most comprehensive overview of the incidence of deafness in the British population and is widely used by policy makers and academics to estimate the prevalence of hearing loss.

The main results are found in this publication:

Davis, Adrian. *Hearing in adults: the prevalence and distribution of hearing impairment and reported hearing disability in the MRC Institute of Hearing Research's National Study of Hearing*. London: Whurr Publishers, 1995.

### 2.2 2011 Census

The 2011 Census includes questions on language used at home (including British Sign Language) and on long-term health conditions, including hearing impairments.

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<sup>1</sup> A note on terminology: throughout the report, the term “deaf” is used to refer to people who are deaf, deafened, hard of hearing or deafblind. Where relevant, distinctions will be made between different groups. This is consistent with current practice in the deaf community. The terms “hearing loss” or “hearing impairment” are generally only used in a medical context and are deemed inappropriate elsewhere, since many deaf people do not consider themselves to have lost anything or to be impaired.

The Census also provides population estimates which are necessary to make estimates of the number of people with hearing impairments in Scotland.

Census results and research reports for Scotland are available here:

<http://www.scotlandscensus.gov.uk/>

### 2.3 Action on Hearing Loss

Action on Hearing Loss provide reports on various issues related to deafness. Most of their information is sourced from other publications, including the National Study of Hearing. These reports provide a useful picture of the main issues around hearing loss.

A report on the situation in Scotland can be found here:

<https://www.actiononhearingloss.org.uk/about-us/scotland/policy-and-research/hearing-matters.aspx>

### 2.4 Scottish Council on Deafness

The Scottish Council on Deafness has a factsheet on their website with various statistics about deafness and hearing loss:

<http://www.scod.org.uk/faqs/statistics/>

### 2.5 Scottish Government studies

The Scottish Government has previously carried out some studies on hearing impairment in Scotland. A study from 2008 is about mental health provision for people with sensory impairments:

<http://www.gov.scot/Resource/Doc/129826/0030944.pdf>

Other work has been carried on BSL access:

*The Long and Winding Road. A roadmap to British Sign Language & Linguistic Access.* Edinburgh, 2009. Available from

<http://www.gov.scot/Publications/2009/07/01102537/0>

*See Hear. A Strategic Need for meeting the needs of people with sensory impairment in Scotland.* Edinburgh, 2014. Available from

<http://www.gov.scot/Publications/2014/04/7863>

### 2.6 Centre for Disability Research

The Centre for Disability Research at Lancaster University published a study in 2010 about the prevalence of deafblindness in the UK. The study provides estimates based on existing national data sources and provides an upper and lower estimate for deafblindness.

Robertson, Janet, and Eric Emerson. "Estimating the number of people with co-occurring vision and hearing impairments in the UK." Lancaster: Centre for Disability Research, Lancaster University (2010). Available from

[https://www.sense.org.uk/sites/default/files/CEDR\\_Research\\_Full\\_Report\\_PDF.pdf](https://www.sense.org.uk/sites/default/files/CEDR_Research_Full_Report_PDF.pdf)

### 3. Deafness in Scotland

This section aims to give an overview of the main groups of people affected by deafness in Scotland. As outlined above, there is no single data source that provides useful estimates. Whereas there is a register for blind and partially sighted people, no such data is collected on people who are deaf or have a hearing loss. This makes it difficult to get a full picture of the prevalence of deafness in Scotland and hinders the planning of services.

There are several estimates of the overall number of deaf people. In the UK, the most common estimate is that provided by the National Study of Hearing (Davis, 1995), which estimates that around 16.1% of the population has at least a mild hearing impairment.<sup>2</sup> In medical terms, a mild hearing impairment is defined as a hearing impairment of more than 25 dB in the better ear and is associated with difficulty in following speech. This means that about 1 in six people are deaf or have some form of hearing loss.<sup>3</sup> The 2011 Census estimates that 6.6% of the population of Scotland is affected by deafness. This comes down to around 350,000 people.<sup>4</sup> This number is likely to be lower because it relies on self-reporting.

Below, it will be outlined that the rate is likely to increase as the population ages, and within the next 20 years the number of deaf people is expected to increase by 20% or more.<sup>5</sup>

Deaf people fall into distinct groups with varying needs. Therefore, the only way to arrive at a full view of the characteristics of the deaf community in Scotland is to extract information from a number of different sources. Taken together, these sources of information give a more balanced picture than any single data source can provide.

It is helpful to distinguish between different groups of deaf people.<sup>6</sup> The five main groups are people who

1. become hard of hearing later in life
2. are born profoundly deaf or become deaf in the early years of life and use BSL as their first language
3. are born profoundly deaf or become deaf in the early years of life but do not use BSL

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<sup>2</sup> Davis, Adrian. *Hearing in adults: the prevalence and distribution of hearing impairment and reported hearing disability in the MRC Institute of Hearing Research's National Study of Hearing*. London: Whurr Publishers, 1995.

<sup>3</sup> Action on Hearing Loss. *Hearing Matters. Scotland*. 2015. London: Action on Hearing Loss. Available from [https://www.actiononhearingloss.org.uk/~media/Documents/Policy%20research%20and%20influencing/Research/Hearing\\_Matters\\_2015/Hearing\\_Matters\\_Scotland\\_Supplement.ashx](https://www.actiononhearingloss.org.uk/~media/Documents/Policy%20research%20and%20influencing/Research/Hearing_Matters_2015/Hearing_Matters_Scotland_Supplement.ashx)

<sup>4</sup> Scotland's Census 2011. Available from <http://www.scotlandscensus.gov.uk/variables-classification/language-used-home>

<sup>5</sup> Skellington Orr, Kate, Traci Leven, Ruth Bryan and Elaine Wilson. *Community Care and Mental Health Services for Adults with Sensory Impairment in Scotland*. 2008. Scottish Executive Social Research. Available from <http://www.gov.scot/Resource/Doc/129826/0030944.pdf>

<sup>6</sup> Scottish Government. *The Long and Winding Road. A roadmap to British Sign Language & Linguistic Access*. Edinburgh, 2009. Available from <http://www.gov.scot/Publications/2009/07/01102537/0>

4. are deafened, acquired profound deafness as children or adults
5. are deafblind.

Each of these groups has different needs and therefore it is useful to know how many people are in these groups and how they are likely to develop in the future. In this section, each of these groups will be discussed in turn.

### 3.1 People who become hard of hearing later in life

The largest group of people affected by deafness concerns people who become hard of hearing later in life. Hearing loss in this group is usually associated with a medical diagnosis where there is a loss of high frequency sounds. People in this group may have difficulty understanding speech and might benefit from a hearing aid and / or learning to lip read.

There is no definitive data source on the number of people who fall in this group. The most common way to estimate how many people are in this group, is to consider how often this type of deafness occurs in the population and extrapolate this number to the size of the population. The most widely-used population estimates are those provided by Davis (1989, 1995).<sup>7</sup> His research focused on hearing loss in adults in the United Kingdom and has the most comprehensive empirical sample. These estimates are still considered the best even though the data was collected in the 1980s.

Akeroyd et al. have recently used these estimates and the latest Census results (2011) to calculate the number of people with hearing loss in Scotland.<sup>8</sup> They use the estimates provided in Davis for people with a hearing loss of 35 dB or more in the better ear, since this is the threshold where people would benefit from using a hearing aid or from the use of other interventions. Their results are listed in table 1.

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<sup>7</sup> Davis, Adrian. *Hearing in adults: the prevalence and distribution of hearing impairment and reported hearing disability in the MRC Institute of Hearing Research's National Study of Hearing*. London: Whurr Publishers, 1995; Davis, Adrian C. "The prevalence of hearing impairment and reported hearing disability among adults in Great Britain." *International Journal of Epidemiology* 18, no. 4 (1989): 911-917.

<sup>8</sup> Akeroyd, Michael A., Kay Foreman, and Jack A. Holman. "Estimates of the number of adults in England, Wales, and Scotland with a hearing loss." *International journal of audiology* 53, no. 1 (2014): 60-61.

Age group	Prevalence rate (%)		Census numbers		Prevalence		
	Females	Males	Females	Males	Females	Males	Sum
18 - 30	0.6%	0.1%	464,700	456,300	3,000	500	3,500
31 - 40	1.2%	1.7%	341,500	327,600	4,000	5,500	9,500
41 - 50	3.7%	4.3%	414,300	393,600	15,500	17,000	32,500
51 - 60	5.3%	10.7%	352,600	339,300	18,500	36,500	55,000
61 - 70	13.3%	19.7%	300,200	278,700	40,000	55,000	95,000
71 - 80	38.8%	41.5%	214,700	169,000	83,500	70,000	153,500
<b>Total</b>					<b>164,000</b>	<b>184,500</b>	<b>348,500</b>

*Table 1: Expected number of adults with hearing loss in Scotland per age group. Prevalence rate is for hearing loss of at least 35 dB in the better ear. Three right-most columns are rounded to the nearest 500. Source: Ackeroyd et al. (2014).*

As the table shows, the total number of people with this type of deafness in Scotland is close to 350,000. The total adult population of Scotland aged between 18 – 80 on Census day was estimated to be 4,052,500. This mean that around 9% of all people suffer from hearing loss that is severe enough to warrant the use of hearing aids.

The table also shows that the prevalence of hearing loss increases with age. In the oldest age group, 71 to 80, around 40% of all people are affected by hearing loss. In people aged over 80, the prevalence of hearing loss rises to around 81%.<sup>9</sup>

The National Records of Scotland produce population projections for Scotland until 2039.<sup>10</sup> These figures can be used to produce estimates of the development over time of the number of people who become hard of hearing later in life.

Table 2 shows the projected incidence of hearing loss in Scotland from 2014 until 2039. The total numbers indicate that we can expect an increase in the prevalence of this type of deafness. The number is expected to increase by around 40% by 2034. Figure 1 gives a graphical representation of this trend. Table 2 also provides separate numbers for males and females. This indicates a higher number of females affected by hearing loss. This is the result of females living longer than males. As

<sup>9</sup> Davis, Adrian. *Hearing in adults: the prevalence and distribution of hearing impairment and reported hearing disability in the MRC Institute of Hearing Research's National Study of Hearing*. London: Whurr Publishers, 1995, p. 822.

<sup>10</sup> National Records of Scotland. *Project Population of Scotland (2014-based). National population projections by sex and age, with UK comparisons*. Edinburgh, 29 October 2015. Available from <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/population-projections-scotland/2014-based>

It is important to note that projections are based on assumptions about migration, fertility and mortality. Different assumptions would produce different projections and the calculations are not policy-based. For more information about the limitations of population projections, please consult the National Records of Scotland website at <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/uses-and-limitations-of-population-projections>

this type of deafness is more prevalent in older age groups, this explains the higher number of females affected by hearing loss over time.

Year	2014	2019	2024	2029	2034	2039
Females	280,000	300,000	324,000	355,500	386,500	414,500
Males	255,500	283,000	312,500	345,000	375,500	401,000
Total	534,500	583,500	636,000	700,500	762,500	815,500

Table 2: Projected prevalence of hearing loss in Scotland over time. Prevalence rate is for hearing loss of at least 35 dB in the better ear (Davis 1995). Numbers have been rounded to nearest 500.

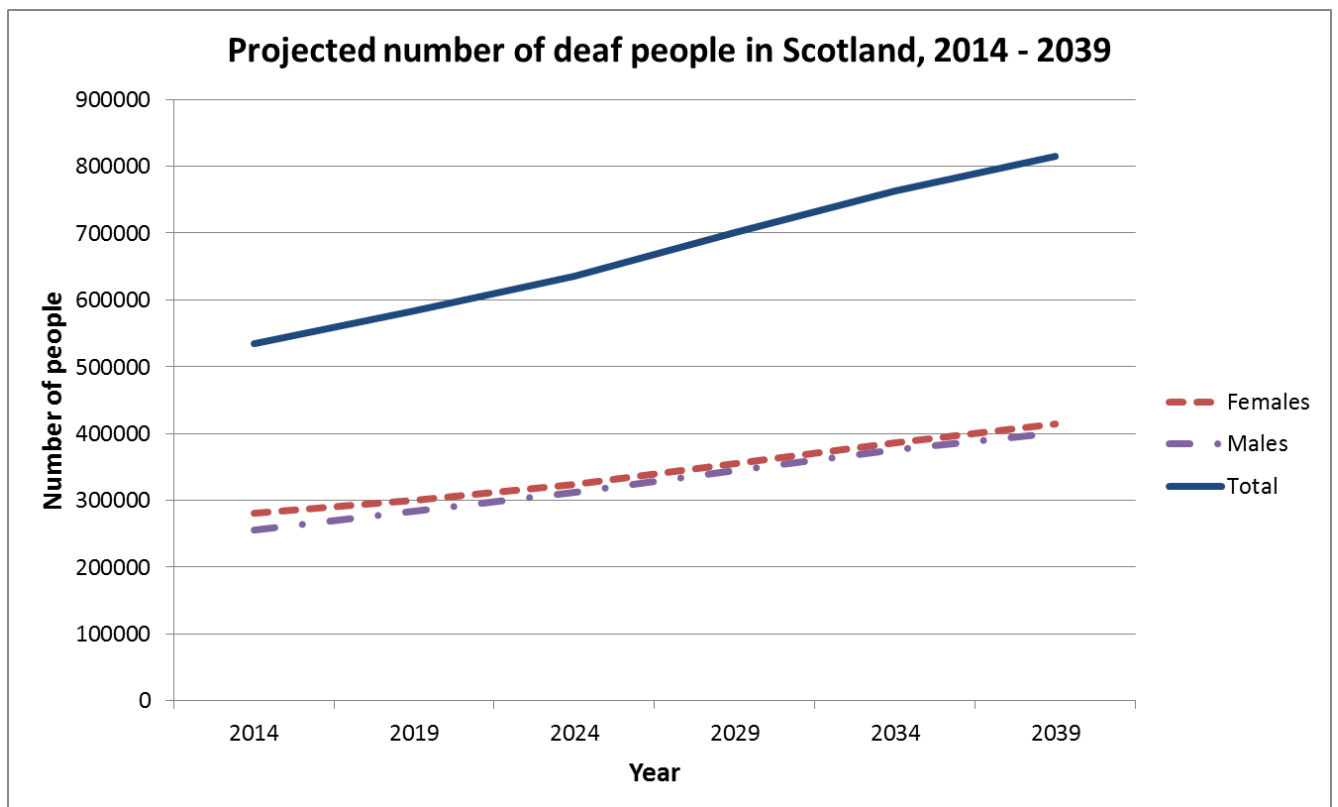


Figure 1: Projected number of people with hearing loss in Scotland, 2014 to 2039. Numbers based on populations projections by the National Records of Scotland and hearing loss prevalence rates by Davis (1995).



Age group	Year					
	2014	2019	2024	2029	2034	2039
18-30	3,000	3,000	3,000	3,000	3,000	3,000
31-40	9,500	10,000	10,500	10,500	10,000	9,500
41-50	31,000	27,500	26,000	28,000	29,500	29,500
51-60	58,500	62,500	60,500	53,500	51,000	54,500
61-70	99,500	103,500	113,000	121,500	119,000	105,000
71-80	158,000	180,500	200,500	212,000	236,000	256,500
80+	175,000	196,500	222,500	272,000	314,000	357,500
<b>Sum</b>	<b>534,500</b>	<b>583,500</b>	<b>636,000</b>	<b>700,500</b>	<b>762,500</b>	<b>815,500</b>

*Table 3: Projected incidence of hearing loss in Scotland over time by age. Prevalence rate is for hearing loss of at least 35 dB in the better ear (Davis 1995). Numbers have been rounded to nearest 500.*

Table 3 shows the trends over time by age group. This shows that the overall increase in the number of people with hearing loss is mainly driven by the overall ageing of the population. Whereas the number of people in age groups 20 to 60 stays more or less constant over time, it is the older age groups that are behind the increase in the overall number of people with hearing loss.

*Policy implication: In the future, there is likely to be a higher demand for services used by older people. Accessibility will become increasingly important to consider, in relation to public buildings and services, for example the provision of hearing loops, visual information on notice boards and staff trained in deaf awareness. In alignment with the rights of those who become blind or partially sighted, ensuring that there are similar rehabilitation opportunities and services planned and developed.*

### 3.2 British Sign Language Users

People who have BSL as their first language consider themselves part of the Deaf community. This is a minority group with a shared language, culture and identity. For members of the Deaf community English is a second language.

The extent to which deaf persons consider themselves part of the Deaf community depends on several factors, including the age of the onset of their deafness, the degree of deafness they experience and the type of education they receive.<sup>11</sup> It seems likely that most people who have BSL as their first or preferred language will either have been born deaf or will have become profoundly deaf at a very young age.

Raine (2013) estimates the prevalence of permanent childhood deafness of at least 40 dB in the better ear in the UK to be around 1.07 for every 1,000 births. Some children become deaf after birth or are only diagnosed later. As a result, the number

<sup>11</sup> Skellington Orr, Kate, Traci Leven, Ruth Bryan and Elaine Wilson. *Community Care and Mental Health Services for Adults with Sensory Impairment in Scotland*. 2008. Scottish Executive Social Research. Available from <http://www.gov.scot/Resource/Doc/129826/0030944.pdf>

of children who are deaf in the age group until nine years is estimated to be 2.05 for every 1,000 children.<sup>12</sup> In Scotland, around 75 children a year are born deaf, five of which have a severe to profound hearing loss.<sup>13</sup> The prevalence of childhood deafness is expected to be largely constant in the population over time. Since the number of people in the younger age groups is likely to decrease due to a falling birth rate, we might see a reduction in the number of children and young adults with profound hearing loss.

The 2011 Census in Scotland for the first time included a question on the number of people who use BSL at home. In the Census, 12,533 people indicated they used BSL at home: this amounts to 0.23% of the total population of Scotland.<sup>14</sup> Figure 2 shows the age and gender distribution of BSL users in Scotland. The figure indicates that the largest group of BSL users falls into the 35 to 49 age group. One in five BSL users is aged under 15. The total figure likely includes people who are not themselves deaf but live with someone who uses BSL as their first language. The total number of people in Scotland who use BSL as their first or preferred language is estimated to be around 6,000.<sup>15</sup>

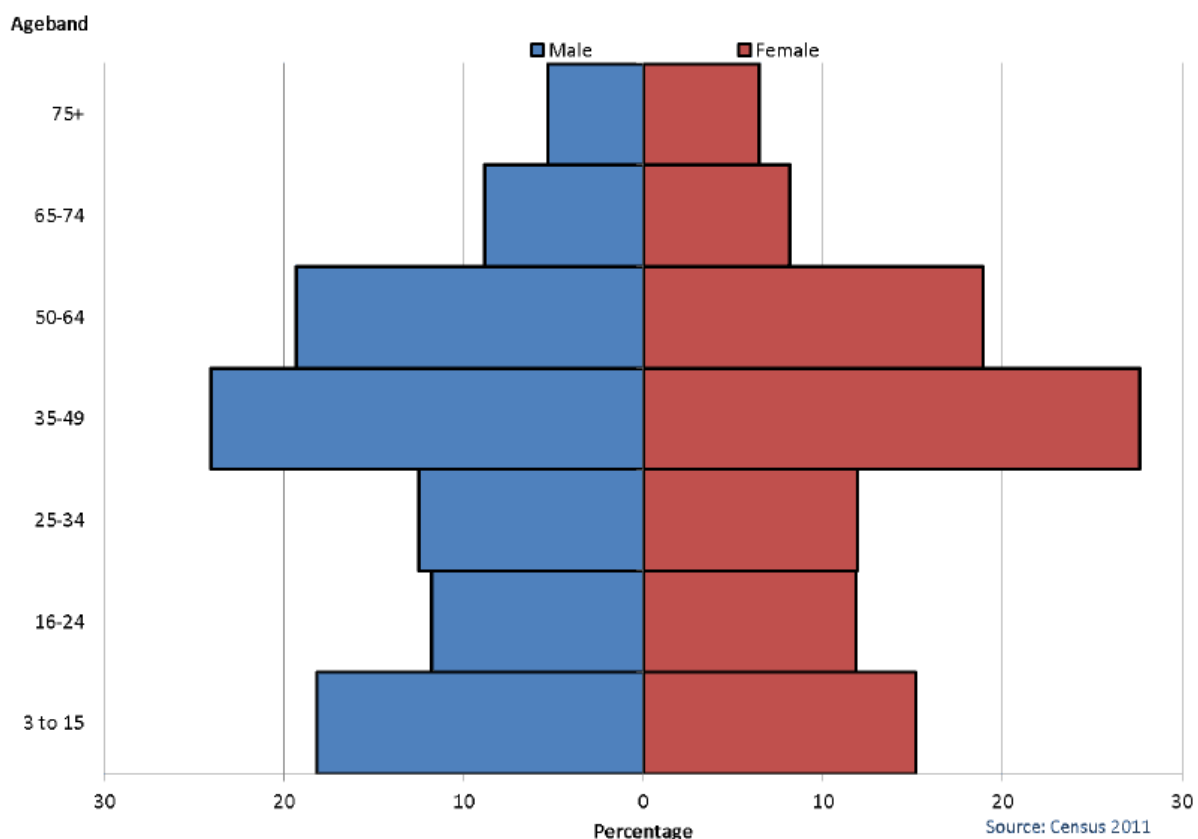


Figure 2: BSL users by age and gender. Source: Scotland's Census 2011.

<sup>12</sup> Raine, Chris. "Cochlear implants in the United Kingdom: awareness and utilization." *Cochlear implants international* 14, no. sup1 (2013): S32-S37.

<sup>13</sup> Scottish Council of Deafness Statistics. Available from <http://www.scod.org.uk/faqs/statistics/>

<sup>14</sup> National Records of Scotland. British Sign Language (BSL) Users. 2015. Available from <http://www.gov.scot/Resource/0046/00460679.pdf>

<sup>15</sup> Scottish Council of Deafness Statistics. Available from <http://www.scod.org.uk/faqs/statistics/>

Given that the number of children and young adults who are deaf is likely to remain constant, we would expect BSL usage to stay constant as well. The increased use of cochlear implants, however, might reduce the number of BSL users over time. Around 45% of all deaf children are possible candidates for a cochlear implant, which may facilitate them accessing mainstream schools.<sup>16</sup> For a variety of reasons, this group will not always use BSL. Given that the uptake of cochlear implants is more frequent than it used to be and the current access to learning BSL for children and their families remains limited, this might lead to a decrease in the number of BSL users.

Despite the uncertainty around the future uptake of BSL, the demand for sign language services is set to become much higher. This is a result of the raised awareness of the needs for improved accessibility for people who are deaf and use BSL, in part due to the Scottish Parliament passing the British Sign Language (Scotland) Act 2015. The Act gives BSL the same status as Gaelic – in so far as the Act requires the Scottish Government and over 120 listed bodies to draft plans to make their services accessible to BSL users. As a result, it is expected that there will be a much higher demand for sign language interpreters and the development of website and knowledge content that is more accessible to BSL users. The full implications of the Act are currently unknown. The Scottish Government is required to lay out its plans for accessibility by autumn 2017 and all other public bodies have to show by 2018 how they will ensure their services are accessible for BSL users.

The Scottish Association of Sign Language Interpreters (SASLI) maintains a register of the number of interpreters. In 2015, only 56 fully qualified interpreters were registered with this organisation.<sup>17</sup> This means that for each interpreter, there are around 200 BSL users.<sup>18</sup> For each interpreter there are around 100 estimated BSL users who have BSL as their first or preferred language.

*Policy implication: The demand for sign language interpreters is set to increase within the next coming years. There will need to be additional consideration from public bodies on providing information which is more accessible to BSL users, through the use of video. This will require budget considerations when planning communication strategies and developing electronic resources and websites. Within the context of the current educational policy – Getting it Right for Every Child (GIRFEC) there is likely to be an increased demand in provision of interpreters or communication support workers with a high level of BSL (level 3 plus) to those in early years and throughout the education timeline.*

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<sup>16</sup> Fortnum, Heather M., Adrian Davis, A. Quentin Summerfield, David H. Marshall, Adrian C. Davis, John M. Bamford, Christine Yoshinaga-Itano, and Sally Hind. "Prevalence of permanent childhood hearing impairment in the United Kingdom and implications for universal neonatal hearing screening: questionnaire based ascertainment study." *British Medical Journal* 323, no. 7312 (2001): 536.

<sup>17</sup> Action on Hearing Loss. *Hearing Matters. Scotland*. 2015. London: Action on Hearing Loss. Available from

[https://www.actiononhearingloss.org.uk/~/\\_media/Documents/Policy%20research%20and%20influence/Research/Hearing\\_Matters\\_2015/Hearing\\_Matters\\_Scotland\\_Supplement.ashx](https://www.actiononhearingloss.org.uk/~/_media/Documents/Policy%20research%20and%20influence/Research/Hearing_Matters_2015/Hearing_Matters_Scotland_Supplement.ashx)

<sup>18</sup> Scottish Council of Deafness Statistics. Available from <http://www.scod.org.uk/faqs/statistics/>

### 3.3 People who acquire profound deafness as adults

This group concerns of people who become deaf as a result of sudden trauma or who have gradual hearing loss until the point where a hearing aid is no longer helpful.

*Policy implication: Access to rehabilitation services will need to be considered, this may include access to BSL classes and / or lipreading classes so that they can develop a new language and avoid isolation.*

### 3.4 People who are born profoundly deaf or become deaf in the early years of life but do not use British Sign Language

This group of people generally do not make use of hearing aids. The reasons why they do not use BSL can be complex but may be a result of the access and or attitude towards learning BSL during their time in education. Cochlear implants are increasingly offered to deaf people so this may support their communication. They may also make use of lipreading, visual clues and written communication.

*Policy implication: Deaf awareness training provided to those designing policy in public sector organisations so that they are aware that each deaf person is different and has their own approach to communicating, so it is important to consider accessibility from different perspectives.*

### 3.5 People who are deafblind

The term deafblindness is usually applied to people in whom the loss of one sense cannot be compensated by the other.<sup>19</sup> Most of these people have some hearing or some vision; only very few are completely deafblind. This group has distinct requirements that cannot be met by services that are only geared towards deaf or blind people.

There are various types of deafblindness. The organisation SENSE distinguishes between four different types: congenital, acquired, Usher syndrome and CHARGE.<sup>20</sup> Congenital deafblindness is a term used to describe situations where children are born with sight or hearing loss or acquire sight or hearing loss before developing language.<sup>21</sup> In contrast, acquired deafblindness is used in situations where there is sight and hearing loss after language development.<sup>22</sup> This is the most common type

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<sup>19</sup> Wittich, Walter, Kenneth Southall, Lindsey Sikora, Donald H. Watanabe, and Jean-Pierre Gagné. "What's in a name: Dual sensory impairment or deafblindness?." *British Journal of Visual Impairment* 31, no. 3 (2013): 198-207.

<sup>20</sup> About deafblindness. SENSE. Available from [https://www.sense.org.uk/content/about-deafblindness?gclid=CjwKEAjwqpK8BRD7ua-U0orrgkESJADIN3YBqhNaFBMo802ABdnESZ9-xYSvixfhli\\_TO3cEmytqihoCwybw\\_wcB](https://www.sense.org.uk/content/about-deafblindness?gclid=CjwKEAjwqpK8BRD7ua-U0orrgkESJADIN3YBqhNaFBMo802ABdnESZ9-xYSvixfhli_TO3cEmytqihoCwybw_wcB)

<sup>21</sup> Congenital deafblindness. SENSE. Available from <https://www.sense.org.uk/content/congenital-deafblindness>

<sup>22</sup> Acquired deafblindness. SENSE. Available from <https://www.sense.org.uk/content/acquired-deafblindness>

of deafblindness and is found most frequently in elderly people; it is estimated that about 75% of all deafblind people are elderly.<sup>23</sup>

Usher syndrome is a genetic condition associated with vision and hearing loss. There are three different types of Usher syndrome, depending on the onset and progression of vision and hearing loss. Usher syndrome is not always diagnosed correctly, which makes it difficult to estimate the number of people affected. SENSE suggests a prevalence rate of 15 per 100,000 people.<sup>24</sup> The population in Scotland on Census day in 2011 was estimated to be 5,295,400, which suggests that there are around 800 people with Usher syndrome in Scotland.<sup>25</sup>

A final cause of deafblindness is CHARGE. CHARGE is believed to have a genetic origin and is associated with a range of physical difficulties, including multisensory loss. The exact number of people with CHARGE is unknown. The condition has only been recognised since 1979 and as a result it might be underdiagnosed in adults. Some research studies suggest a prevalence rate of 1 per 8,500 people. For Scotland, this would suggest there are around 620 people with CHARGE. About 60% of all people with CHARGE are deafblind. In Scotland, this comes down to around 375 people.<sup>26</sup>

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<sup>23</sup> Causes. Deafblind UK. Available from <http://deafblind.org.uk/deafblindness/causes/>

<sup>24</sup> Usher syndrome. SENSE. Available from <https://www.sense.org.uk/content/usher-syndrome>

<sup>25</sup> Scotland's Census. Statistical Bulletins, Release 1B. National Records of Scotland. Available from <http://www.scotlandscensus.gov.uk/statistical-bulletins>

<sup>26</sup> About CHARGE. SENSE. Available from [https://www.sense.org.uk/sites/default/files/About\\_CHARGE.pdf](https://www.sense.org.uk/sites/default/files/About_CHARGE.pdf)

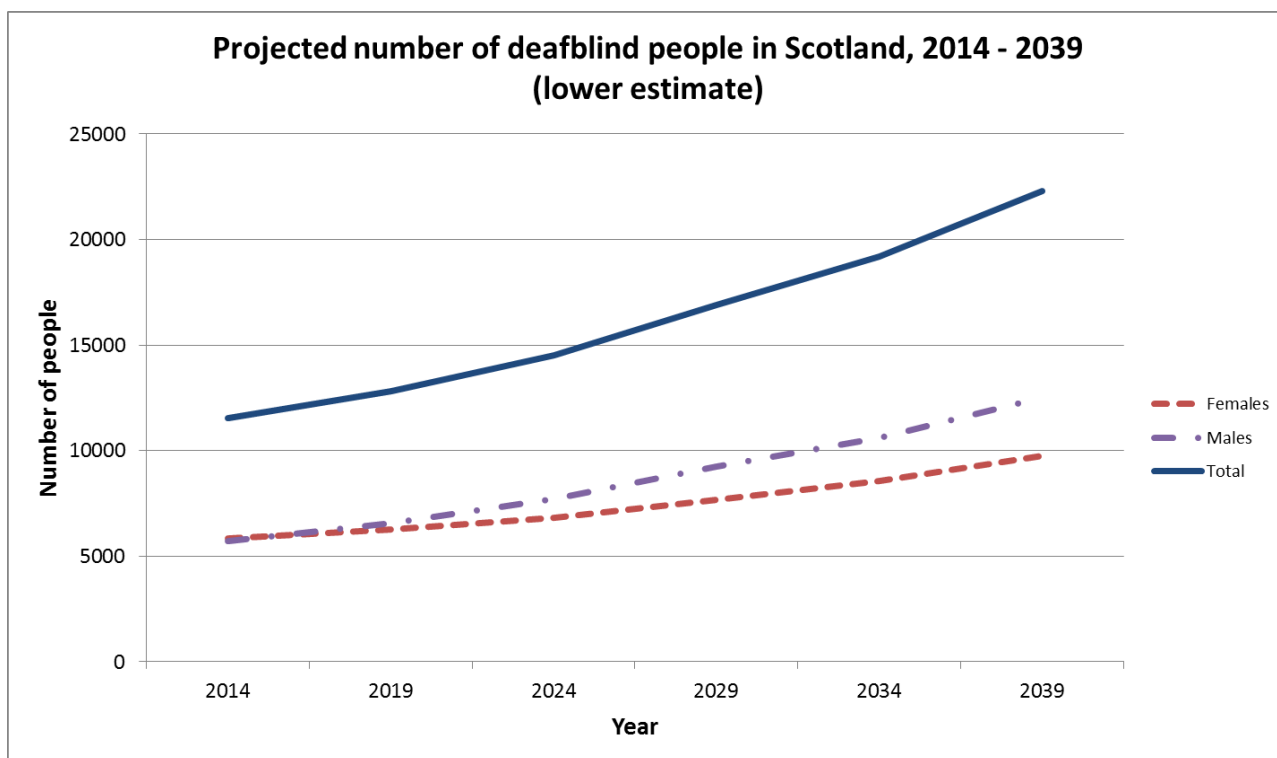


Figure 3: Projected number of people with deafblindness (lower estimate) in Scotland, 2014 to 2039. Numbers based on populations projections by the National Records of Scotland and deafblindness prevalence rates by the Centre for Disability Research (2010).

Age group	Year					
	2014	2019	2024	2029	2034	2039
0-9	200	200	200	200	200	200
10-19	150	150	150	150	150	150
20-29	600	550	500	500	550	550
30-39	50	100	100	100	50	50
40-49	200	150	150	150	200	200
50-59	350	400	350	300	300	350
60-69	1,750	1,800	2,000	2,100	2,000	1,750
70-79	2,200	2,500	2,750	2,900	3,250	3,450
80-89	3,100	3,450	3,850	4,700	5,250	5,750
90+	3,000	3,500	4,450	5,800	7,250	9,850
<b>Sum</b>	<b>11,600</b>	<b>12,800</b>	<b>14,500</b>	<b>16,900</b>	<b>19,200</b>	<b>22,300</b>

Table 4: Projected incidence of deafblindness (lower estimate) in Scotland over time by age. Numbers have been rounded to nearest 100.

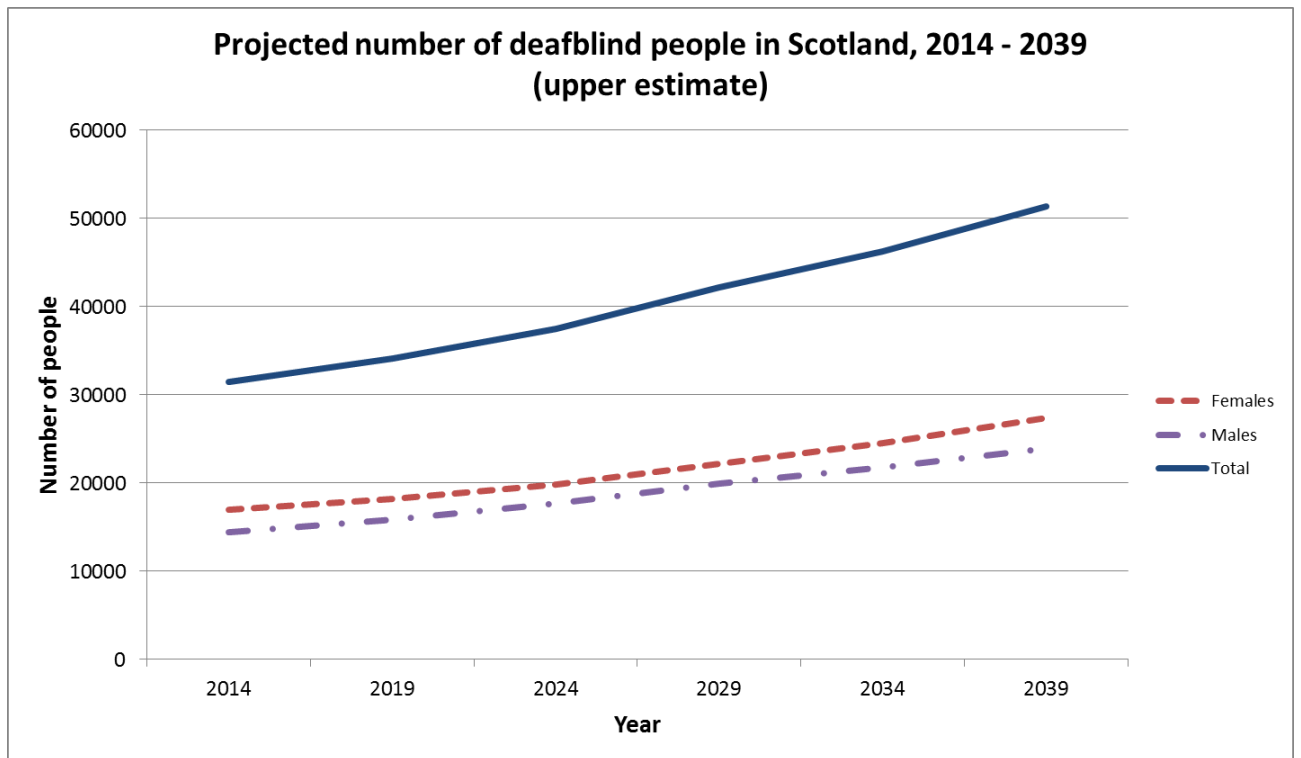


Figure 4: Projected number of people with deafblindness (upper estimate) in Scotland, 2014 to 2039. Numbers based on populations projections by the National Records of Scotland and deafblindness prevalence rates by the Centre for Disability Research (2010).

Age group	Year					
	2014	2019	2024	2029	2034	2039
0-9	1,000	1,000	1,000	1,000	1,000	1,000
10-19	500	500	500	500	500	500
20-29	500	500	500	500	500	500
30-39	500	500	500	500	500	500
40-49	1,500	1,000	1,000	1,000	1,500	1,500
50-59	3,000	3,000	3,000	2,500	2,500	3,000
60-69	5,500	5,500	6,000	6,500	6,000	5,500
70-79	5,500	6,000	6,500	7,000	8,000	8,500
80-89	9,000	10,000	11,000	13,000	14,500	16,000
90+	5,000	6,000	7,500	9,000	11,500	15,000
<b>Sum</b>	<b>31,500</b>	<b>34,000</b>	<b>37,500</b>	<b>42,000</b>	<b>46,500</b>	<b>51,500</b>

Table 5: Projected incidence of deafblindness (upper estimate) in Scotland over time by age. Numbers have been rounded to nearest 100.



As for other types of deafness, no record is kept on the number of deafblind people. It is, however, possible to use population prevalence rates and population estimates to gain a better sense of how this group will develop in the future. The Centre for Disability Research published a report in 2010 that estimates the prevalence of deafblindness from a range of existing national data sources.<sup>27</sup> For each data source, the prevalence of deafblindness by age and gender was determined. This information was then used to calculate the overall prevalence estimates for the United Kingdom. The study provides two sets of estimates: a lower estimate, which only includes more severe incidences of vision loss and deafness, and an upper estimate, which includes milder incidences of dual sensory impairment. Applying these prevalence rates to the population projections provided by the National Records of Scotland gives us an indication of the likely number of deafblind people over the next decades.<sup>28</sup>

Table 4 shows the projected incidence of deafblindness by year and age group for the lower estimate, i.e. only for the more severe cases of combined deafness and vision loss. As the table shows, the prevalence of deafblindness increases with age. As the number of older people in Scotland increases, the number of deafblind people increases as well. Between 2014 and 2039, the total number of people with severe deafblindness is set to increase by more than 10,000 and the overall number of severe deafblind people is expected to reach 22,300 by 2039. Figure 3 shows a graphical representation of this trend. This figure also shows the disaggregated trends for males and females and shows that severe deafblindness is more common in males.

Table 5 shows the projected incidence of deafblindness by year and age group for the upper estimate. This group includes people who have difficulty hearing without a hearing aid and difficulty seeing while wearing glasses or contact lenses. Since more people will meet these criteria, the expected incidence for this type of deafblindness is higher. Once again, the prevalence rate for this type of deafblindness increases by age. Between 2014 and 2039, the total number of people with moderate deafblindness is set to increase by 20,000 and the overall number of deafblind people is expected to reach 51,500 by 2039. Figure 3 shows a graphical representation of this trend. This figure also shows the disaggregated trends for males and females and shows that this type of deafblindness is more common in females.

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<sup>27</sup> Robertson, Janet, and Eric Emerson. "Estimating the number of people with co-occurring vision and hearing impairments in the UK." *Lancaster: Centre for Disability Research, Lancaster University* (2010). Available from

[https://www.sense.org.uk/sites/default/files/CEDR\\_Research\\_Full\\_Report\\_PDF.pdf](https://www.sense.org.uk/sites/default/files/CEDR_Research_Full_Report_PDF.pdf)

<sup>28</sup> National Records of Scotland. *Project Population of Scotland (2014-based). National population projections by sex and age, with UK comparisons*. Edinburgh, 29 October 2015. Available from <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/population-projections-scotland/2014-based>

It is important to note that projections are based on assumptions about migration, fertility and mortality. Different assumptions would produce different projections and the calculations are not policy-based. For more information about the limitations of population projections, please consult the National Records of Scotland website at <http://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/population/population-projections/uses-and-limitations-of-population-projections>



The information on deafblindness shows that the overall number of deafblind people is set to increase, mainly as a result of the overall ageing of the population. Although the overall number of people with deafblindness is lower than the number of people with hearing loss, the particular needs of this group mean it is very important they are included in the planning of services.

*Policy implication: The demand for services accessed by deafblind people is set to increase. Since this group has diverse needs they should be given special consideration in the planning of services.*

## **4. Conclusion**

This report has sought to provide an overview of deafness in Scotland, how the situation is likely to change over the next years and the policy implications of these changes. On the basis of the information presented, several conclusions can be drawn.

### **4.1 Data sources**

The lack of comparative data on the number of deaf people and the various types of deafness is problematic. Most numbers are based on population estimates that were collected in the 1980s. It is unclear whether these estimates still hold. Other sources of data, such as the Census, provide some supplementary information but are not precise enough to provide a full picture of the incidence of the different types of deafness in Scotland. To facilitate the planning of future services, a better data collection model on people that are deaf would be most beneficial.

### **4.2 Composition and trends**

It is possible to distinguish between different types of deafness. Each type of deafness requires different support services. The largest group of deaf people consists of people who become deaf later in life. Due to an ageing population, this group is set to become much larger over the next decades. Another group that is due to increase as a result of ageing concerns deafblind people. For other groups there is no clear indication about how the total numbers will vary in the future. However, the demand for services is set to increase across the board as the BSL (Scotland) Act requires better access to services for deaf people.

### **4.3 Policy recommendations**

The findings in the report lead to several policy implications:

1. In the future, there is likely to be a higher demand for services used by older people. Accessibility will become increasingly important to consider, in relation to public buildings and services, for example the provision of hearing loops, visual information on notice boards and staff trained in deaf awareness. In alignment with the rights of those who become blind or partially sighted, ensuring that there are similar rehabilitation opportunities and services planned and developed.

2. The demand for sign language interpreters is set to increase within the next coming years. There will need to be additional consideration from public bodies on providing information which is more accessible to BSL users, through the use of video. This will require budget considerations when planning communication strategies and developing electronic resources and websites. Within the context of the current educational policy – Getting it Right for Every Child (GIRFEC) there is likely to be an increased demand in provision of interpreters or communication support workers with a high level of BSL (level 3 plus) to those in early years and throughout the education timeline.
3. Access to rehabilitation services will need to be considered, this may include access to BSL classes and / or lipreading classes so that they can develop a new language and avoid isolation.
4. Deaf awareness training provided to those designing policy in public sector organisations so that they are aware that each deaf person is different and has their own approach to communicating, so it is important to consider accessibility from different perspectives.
5. The demand for services accessed by deafblind people is set to increase. Since this group has diverse needs they should be given special consideration in the planning of services.