Strategic Policy, Planning and Performance Report



Public Health Intelligence

Subject: Disease Projection Report 2023 - 2053

Date of report: 8 February 2024

Introduction

This report describes the potential levels of chronic disease in Jersey, based on the current prevalence of disease combined with the projected future population, under a range of population projection scenarios. The report also includes projections for the number of people living with multimorbidity (more than one long-term condition), activity-limiting disability, the number of General Practice (GP) consultations and hospital bed days.

The results of this analysis are not forecasts, but demonstrate what may potentially happen if the current disease prevalence continues, while the population ages and changes. The value of projections is to support policymakers and service providers to both better prepare for the future, and to act, where change could lead to better outcomes.

This analysis by Public Health Intelligence uses figures from the recently published Population Projections 2023-2080 report¹, current prevalence rates of chronic diseases and consultations extracted from the Jersey General Practice (GP) Central Server, hospital bed day data provided by Health and Community Services, and information on disability from the 2021 census. For details on data sources and methods see the Background Notes section of this report.

The analysis is based on 2 primary assumptions:

- 1. that current patterns of disease prevalence, multimorbidity, disability and healthcare use patterns will continue (i.e. no adjustments have been made for improvements or worsening in health conditions)
- 2. that net migration will continue under one of five scenarios, ranging between -100 and +1,000 per year over the next 30 years (between 2023 and 2053)

Key Findings

Population projections show that Jersey is likely to have an ageing population over the coming decades.

In 20 years' time²:

- as the population ages, illnesses affecting predominantly older people are projected to have the
 largest proportional increases: dementia and heart failure with +52% and +42% respectively by 2043
- hypertension and chronic kidney disease are projected to have the largest absolute increases in numbers of people with the condition, with +3,280 and +1,000 people respectively by 2043
- the number of people living with multimorbidity (more than one long-term health condition) is projected to increase by 20% (+2,860 people)
- the number of people on the cancer register is projected to increase by 21% (+1,010 people) by 2043
- the number of people living with long-term illness or disability that limits their daily activity is projected to increase by 12% (+1,850 people)
- o demand for primary care (GP surgery appointments) is projected to increase by 9% by 2043, whilst the number of hospital bed days is projected to increase by 30% by 2043

¹ www.gov.je Population Projections 2023-2080

² under a central +325 annual net migration scenario

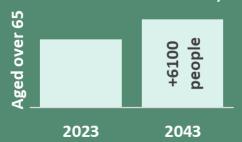
Disease Projections → In 20 years' time...

The proportion of the population aged over 65 is **projected to rise** from 19% to ~25% by 2043

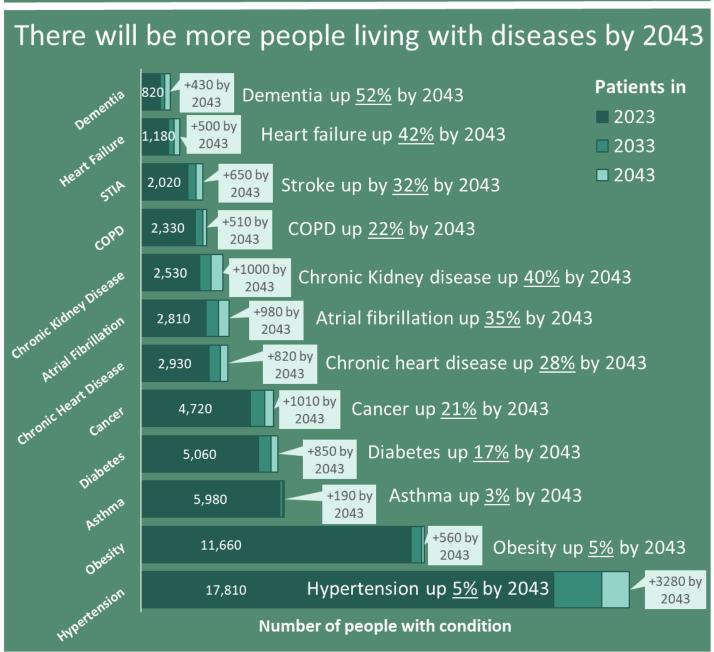








A projected **+2,860 more people** will be living with multimorbidity by 2043 (two or more long-term conditions)



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Population Projections

Statistics Jersey published population projections³ under a range of different migration scenarios. For details on the projection methods used, including information about the mortality and fertility assumptions made, please see the Statistics Jersey report.

There are projections under 5 different migration scenarios, the central of which is +325 net migration per year, shown in Figure 1.

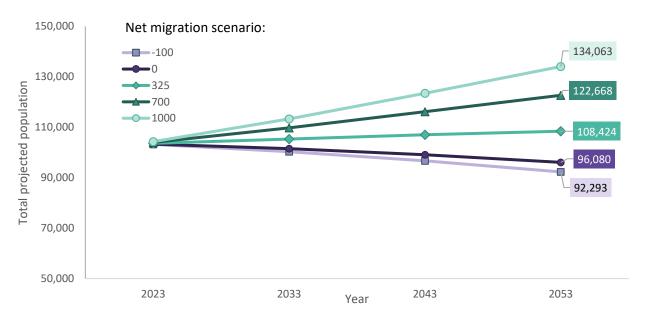
Figure 1. Projected population pyramids under +325 per year net migration scenario at 10-year intervals, 2023 – 2053



³ www.gov.je Population Projections 2023-2080

Under the -100 and 0 net migration scenarios, Jersey population is projected to decrease overall over the next few decades, whilst under the +325, +700 and +1,000 net migration scenarios the population is expected to increase overall (Figure 2).

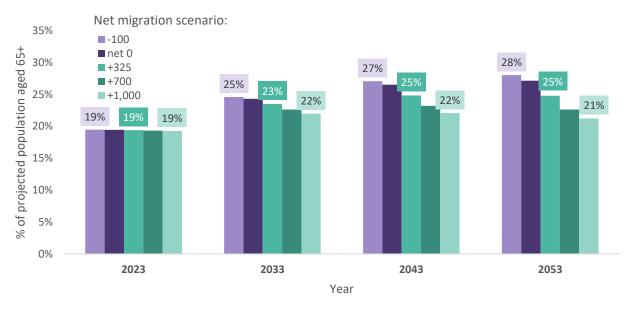
Figure 2. Overall total population change under five net migration scenarios



Under **all five** migration scenarios, a general ageing of the population is projected:

- the proportion of the population aged 65 years or older was around 19% in 2023
- under the different population projection scenarios this is projected to increase to between 21% (if net migration is +1,000 per year) and 28% (if net migration is -100 per year).

Figure 3. Projected proportion of the population aged 65 or over, under 5 different population projections (-100, 0, +325, +700, +1,000 net migration) at 10- year intervals, 2023 - 2053



In general, health deteriorates with age, and morbidities tend to accumulate with time. This means that in an ageing population, the number of people living with chronic diseases will increase, even if the age-specific prevalence of diseases remains the same. This report applies the population projections to disease prevalence and indicators of health care demands (GP appointments and hospital bed days), to demonstrate how Jersey might expect the burden of ill health to change as our population ages over the next few decades.

1. General Practice (GP) Consultation Projections



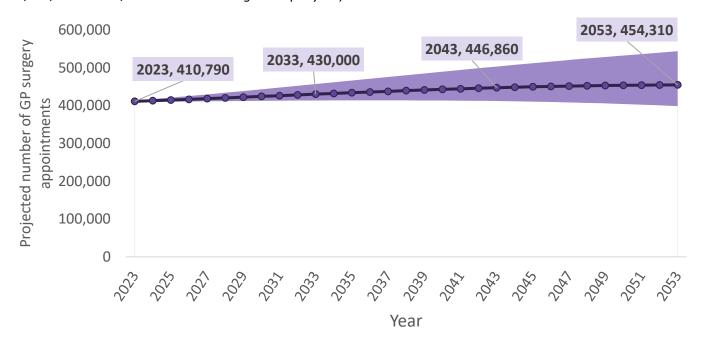
There were around 410,790 GP surgery appointments per year in Jersey, during the period 2021-2023. Older people typically had more GP appointments (Figure 4). Amongst younger people (aged 20 to 60 years) females had more GP consultations on average than males, whilst amongst older people (aged 80+) males had more than females.

Figure 4. Average estimated number of annual GP appointments, by age and gender, during the 2021-2023 period



As the population changes over the next 30 years an increase in the number of GP appointments is projected under most scenarios, if current usage patterns continue (Figure 5). Under the central population projection estimate, there is projected to be +43,520 more appointments per year by 2053 (11% increase). If the current primary care delivery model remains the same, this would also mean demand for ~10% more primary care staff (e.g. GP's) over the next 20-30 years.

Figure 5. Projected number of GP appointments between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)



2. Disease Projections

Overview

In 2023 the most common long-term condition was hypertension (with ~17,810 patients registered), whilst dementia and mental health had the fewest people on their registers (with ~810 and ~780 patients, Table 1). Some conditions are found more commonly in certain age groups. For example, dementia, heart failure and chronic kidney disease affect mainly older people, whilst asthma and mental health problems affect broader age groups.

The most striking feature of the population projections is the increase in the number of older people (the ageing population, Figure 3). Therefore, diseases that have highest prevalence amongst the elderly see the biggest increase (proportionally) in the projections (Table 1, Figure 6).

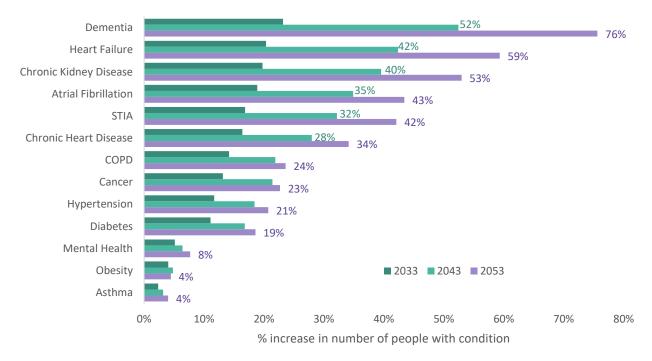
In projections for 2043 (using a central population projection of +325 annual net migration)

- hypertension showed the largest absolute projected increase (+3,280 people)
- dementia saw the greatest proportional increase (+52%) followed by heart failure (+42%)

Table 1. Summary of disease projections; No. of patients with each condition in 2023 compared with 2043 projections (based on +325 annual net migration), and the % change. Highest values highlighted purple.

	Number w	ith condition	
Condition	Current (2023)	Projected in 20 years (2043)	% increase (2043)
Hypertension	17,810	+3,280	18%
Chronic Kidney Disease	2,530	+1,000	40%
Atrial Fibrillation	2,810	+980	35%
Diabetes	5,060	+850	17%
Chronic Heart Disease	2,930	+820	28%
Stroke and transient ischaemic attack	2,020	+650	32%
Obesity	11,660	+560	5%
Chronic obstructive pulmonary disease	2,330	+510	22%
Heart Failure	1,180	+500	42%
Dementia	820	+430	52%
Asthma	5,980	+190	3%
Mental Health	780	+50	6%

Figure 6. Summary of disease projections; % projected increase in each condition by 2033, 2043 and 2053 (based on +325 annual net migration). Figure includes cancer projections (see section 4).



Of the conditions considered in this report, 7 are found on the UK Health Foundation's list⁴ of top 10 conditions with the highest impact on health care use and mortality among those aged 30 years and older⁵; dementia, heart failure, COPD, atrial fibrillation, chronic kidney disease, cancer and diabetes.

All 7 of these high impact conditions are projected to increase in Jersey in the coming decades (Figure 7). Some similar upwards trends were seen in disease projections for England⁵, which projected a 45% increase in dementia between 2019 and 2040, for example.

Figure 7. Projected number of people with different illnesses by 2043 (with purple shading showing range depending on population projection scenario). % change shown in labels. Illnesses appearing on the Health Foundation's top 10 high impact conditions list boxed in green. Figure includes cancer projections (see section 4).



More detail for the projections for each disease are found in pages 9 to 20, and in the Appendix tables. Data on the cancer projections can be found in section 4 (page 23).

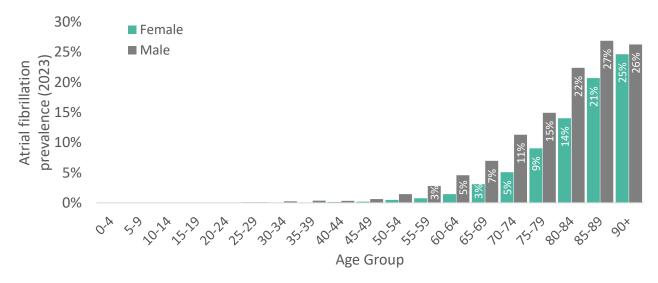
⁴ Health in 2040: projected patterns of illness in England - The Health Foundation

⁵ The other conditions in the top 10 were constipation, chronic pain and anxiety or depression; these conditions aren't captured as part of the JQIF registers, so it was not possible to include them in these projections for Jersey



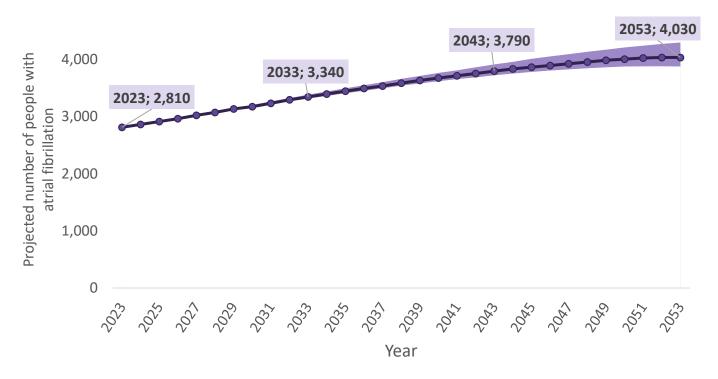
In 2023, around 2,810 people had atrial fibrillation in Jersey. Older people are more likely to have atrial fibrillation (Figure 8), with those on the register having an average age of 75 years.

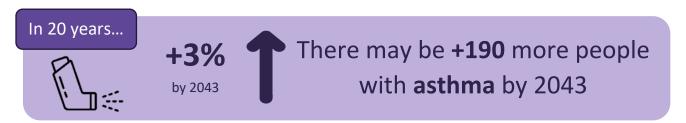
Figure 8. Atrial fibrillation prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with atrial fibrillation is projected, if age and gender specific prevalence remains constant (Figure 9), with +1,220 people on the register by 2053 (43% increase).

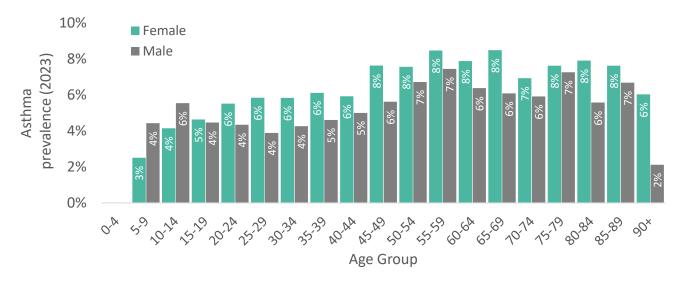
Figure 9. Projected number of people with atrial fibrillation between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





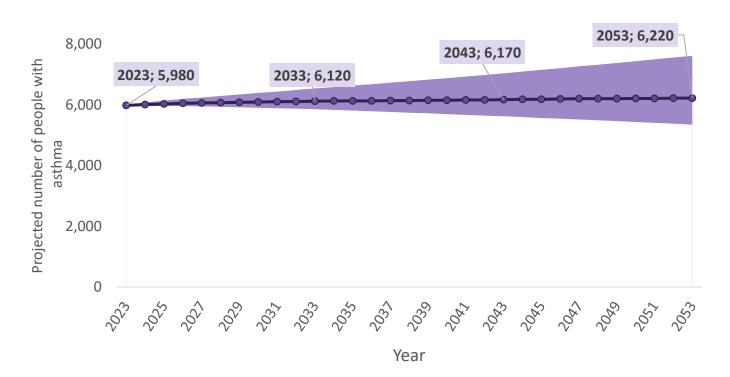
In 2023, around 5,980 people had asthma in Jersey. Prevalence of asthma is around 4-8% across most age groups (Figure 10), with those on the register having an average age of 49 years.

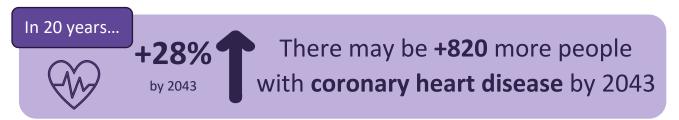
Figure 10. Asthma prevalence by age and gender, 2023



As the population changes over the next 30 years there may be an increase or decrease in the number of people with asthma, depending on migration scenarios, if age and gender specific prevalence remains constant (Figure 11). The central estimate projects an additional with +240 people on the register by 2053 (4% increase).

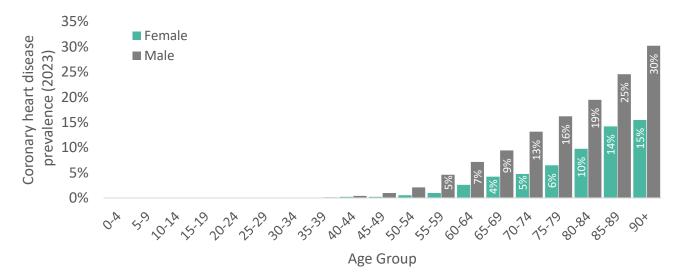
Figure 11. Projected number of people with **asthma** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





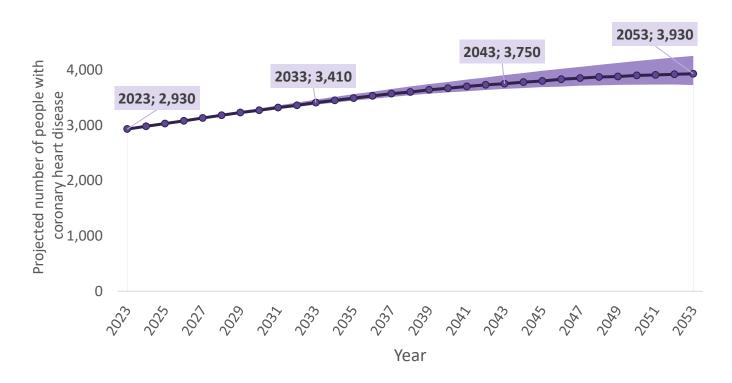
In 2023, around 2,930 people had coronary heart disease in Jersey. Prevalence of CHD increases with age, and is more common amongst males (Figure 12). Those on the register have an average age of 73 years.

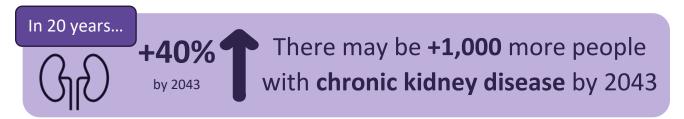
Figure 12. Coronary heart disease (CHD) prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with CHD is projected, if age and gender specific prevalence remains constant (Figure 13), with +1000 people on the register by 2053 (34% increase).

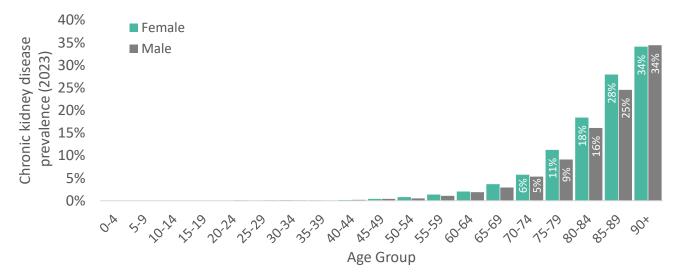
Figure 13. Projected number of people with **CHD** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





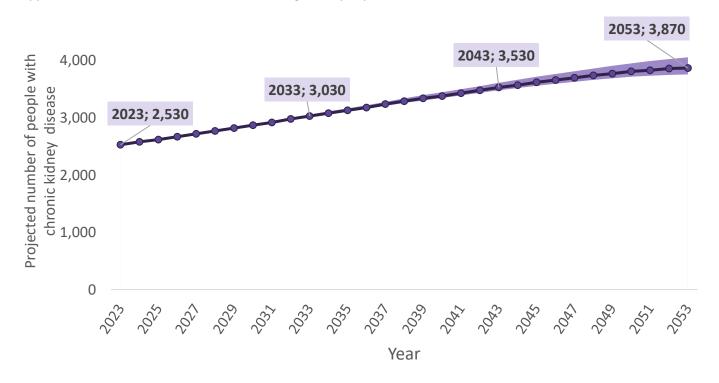
In 2023, around 2,530 people had chronic kidney disease in Jersey. Prevalence of CKD increases with age, and is slightly more common amongst females (Figure 14). Those on the register have an average age of 78 years.

Figure 14. Chronic kidney disease (CHD) prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with CKD is projected, if age and gender specific prevalence remains constant (Figure 15), with +1,340 people on the register by 2053 (53% increase).

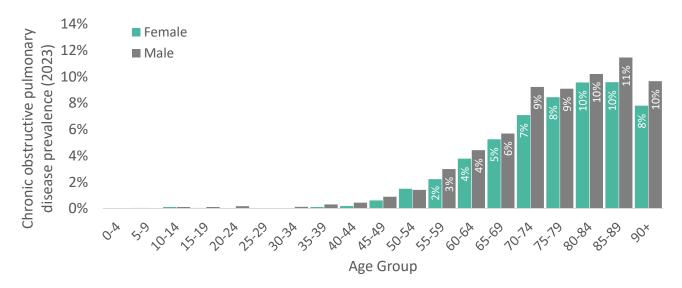
Figure 15. Projected number of people with **CKD** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





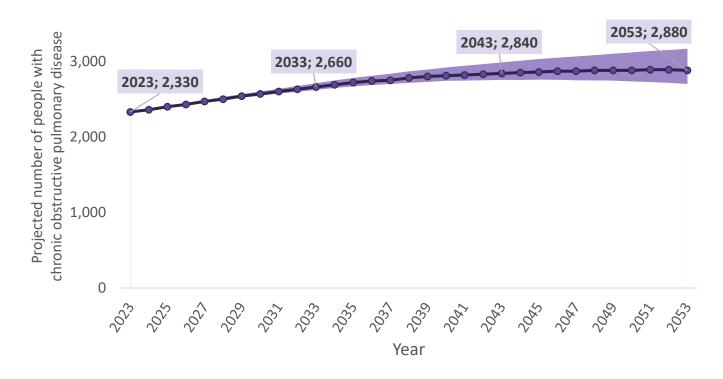
In 2023, around 2,330 people in Jersey had chronic obstructive pulmonary disease. COPD becomes more prevalent from middle age onwards (Figure 16). Those on the register have an average age of 70 years.

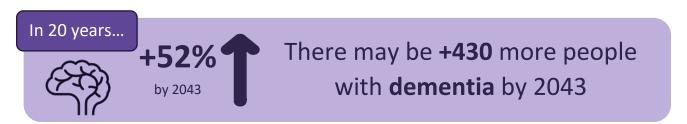
Figure 16. Chronic obstructive pulmonary disease (COPD) prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with COPD is projected, if age and gender specific prevalence remains constant (Figure 17), with +550 people on the register by 2053 (24% increase).

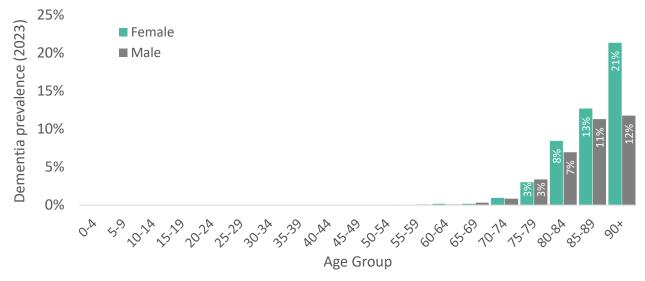
Figure 17. Projected number of people with **COPD** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





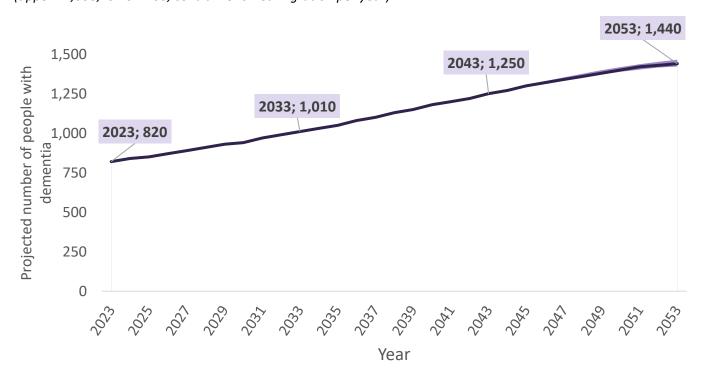
In 2023, around 820 people had dementia in Jersey. Prevalence of dementia increases with age (Figure 18). Those on the register have an average age of 84 years.

Figure 18. Dementia prevalence by age and gender, 2023



As the population changes over the next 30 years a marked increase in the number of people with dementia is projected, if age and gender specific prevalence remains constant (Figure 19), with +620 people on the register by 2053 (76% increase).

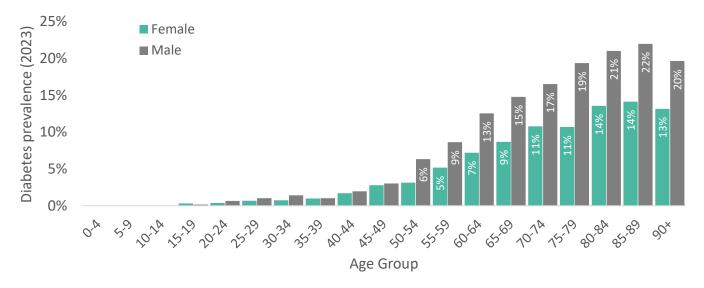
Figure 19. Projected number of people with **dementia** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





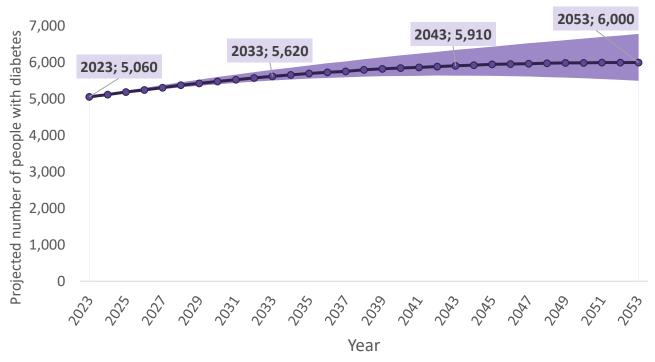
In 2023, around 5,060 people had diabetes in Jersey. Diabetes becomes more prevalent from middle age onwards (Figure 20) and is higher amongst males. Those on the register have an average age of 66 years.

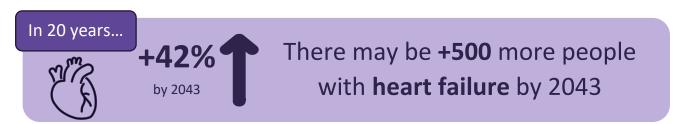
Figure 20. Diabetes prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with diabetes is projected, if age and gender specific prevalence remains constant (Figure 21), with +940 people on the register by 2053 (19% increase).

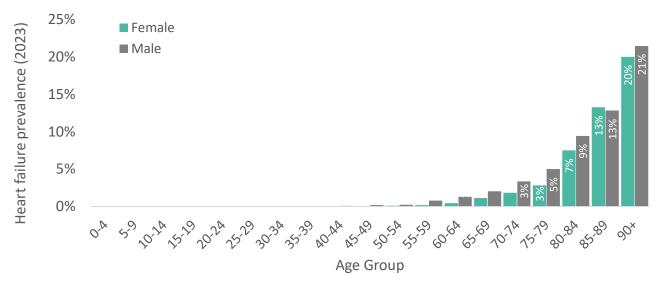
Figure 21. Projected number of people with **diabetes** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





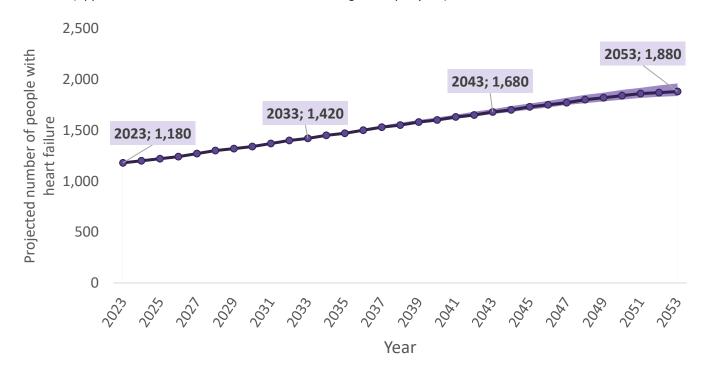
In 2023, around 1,180 people had heart failure in Jersey. Heart failure becomes more prevalent in old age (Figure 22). Those on the register have an average age of 79 years.

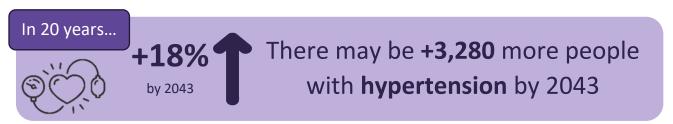
Figure 22. Heart failure prevalence by age and gender, 2023



As the population changes over the next 30 years a marked increase in the number of people with heart failure is projected, if age and gender specific prevalence remains constant (Figure 23), with +700 people on the register by 2053 (59% increase).

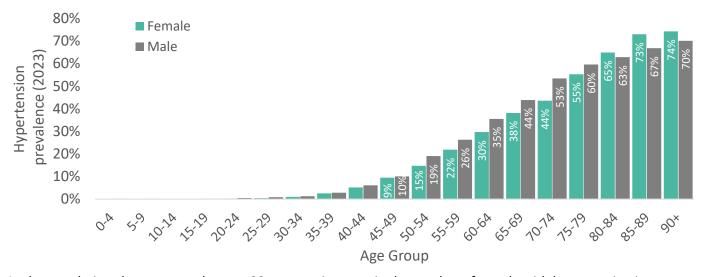
Figure 23. Projected number of people with **heart failure** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





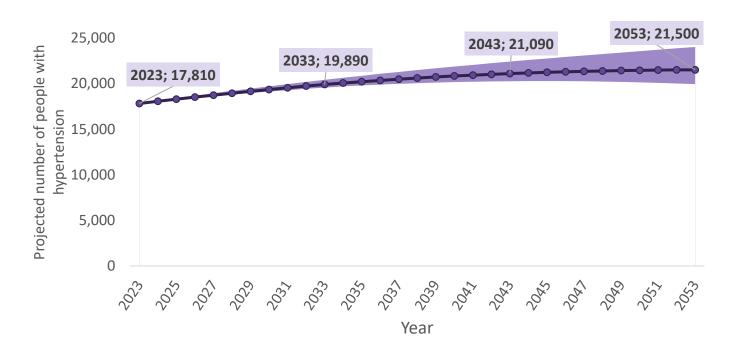
In 2023, hypertension was the most prevalent long-term condition in Jersey with around 17,810 people on the register. Hypertension becomes more prevalent with age (Figure 24). Those on the register have an average age of 68 years.

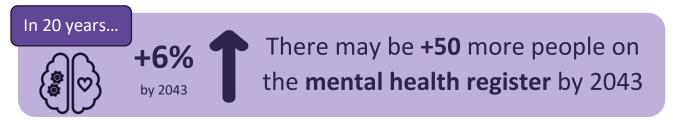
Figure 24. Hypertension prevalence by age and gender, 2023



As the population changes over the next 30 years an increase in the number of people with hypertension is projected, if age and gender specific prevalence remains constant (Figure 25), with +3,690 people on the register by 2053 (21% increase).

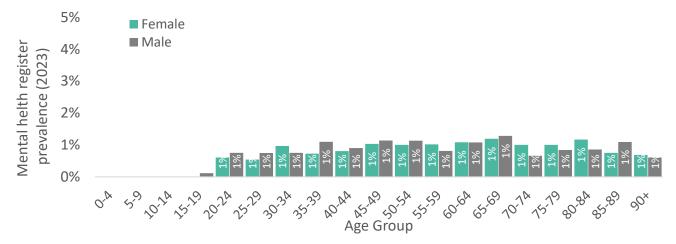
Figure 25. Projected number of people with **hypertension** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





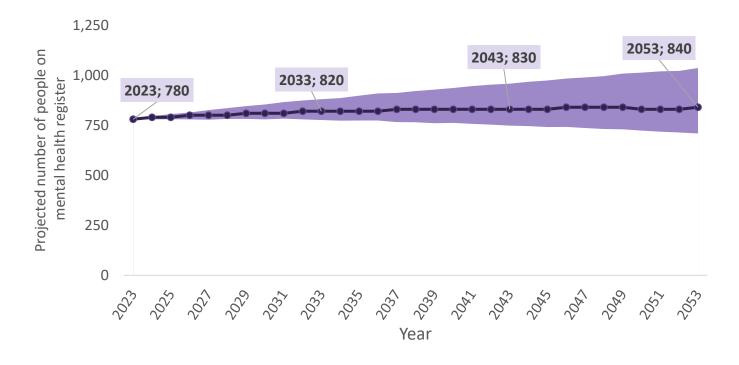
In 2023, there were around 780 people on the mental health⁶ register in Jersey. Prevalence of severe mental health conditions is low ($^{\sim}1\%$) across age groups (Figure 26). Those on the register have an average age of 52 years.

Figure 26. Mental health register prevalence by age and gender, 2023

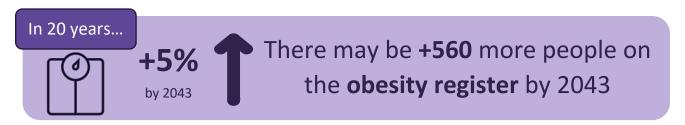


As the population changes over the next 30 years the number of people on the mental health register is projected to remain similar, if age and gender specific prevalence remains constant (Figure 27). The number could slightly increase or decrease, depending on the population scenario that plays out.

Figure 27. Projected number of people on the **mental health** register between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)

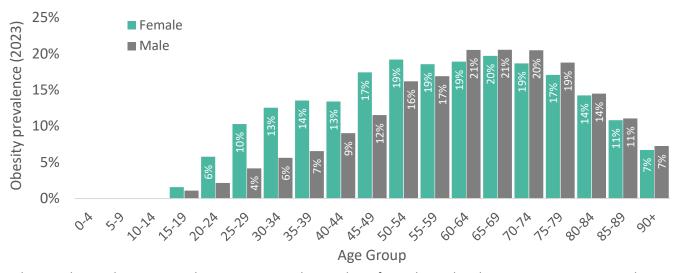


⁶ Mental health register refers to a narrow definition of more severe mental health conditions (e.g. bipolar, schizophrenia) and does not include more common or milder conditions such as anxiety and depression



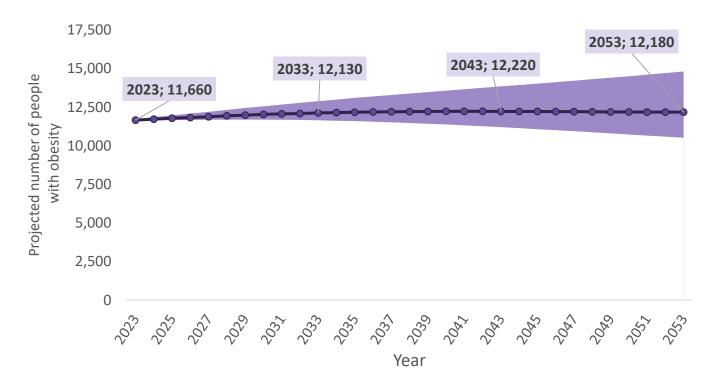
In 2023, there were around 11,660 people on the obesity register in Jersey. Prevalence of obesity is highest between ages 50-79 years (Figure 28). Younger females are more likely to appear on the obesity register than young males.

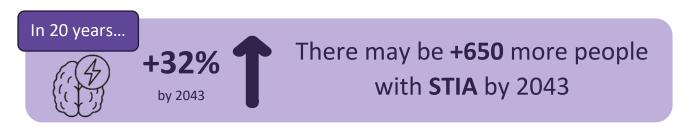
Figure 28. Obesity prevalence by age and gender, 2023



As the population changes over the next 30 years the number of people on the obesity register is projected to increase slightly, if age and gender specific prevalence remains constant (Figure 29). The number could increase or decrease, depending on the population scenario that plays out.

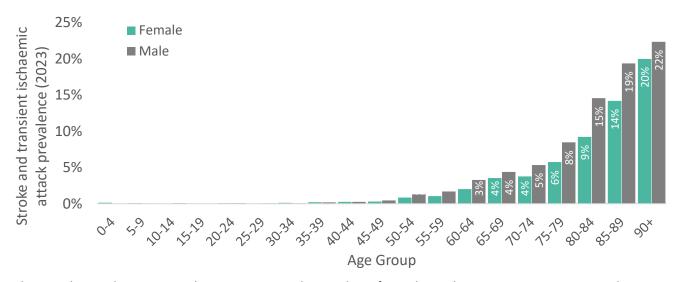
Figure 29. Projected number of people on the **obesity** register between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)





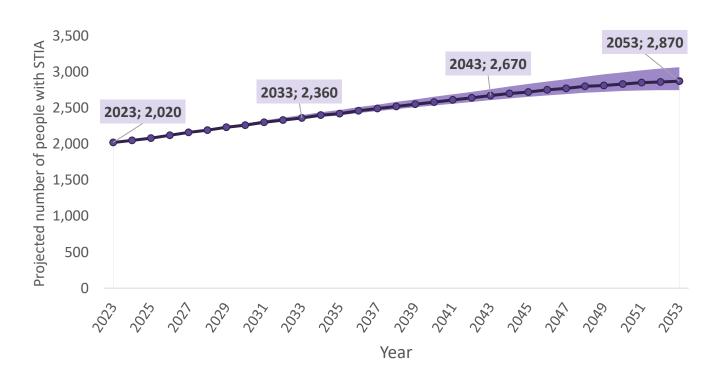
In 2023, there were around 2,020 people with stroke and transient ischaemic attack in Jersey. Prevalence of STIA increases with age (Figure 30). Those on the register have an average age of 74 years.

Figure 30. Stroke and transient ischaemic attack prevalence by age and gender, 2023

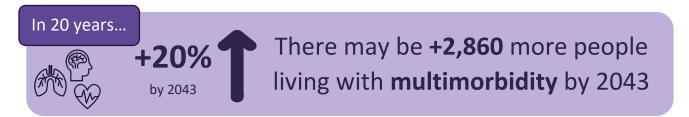


As the population changes over the next 30 years the number of people on the STIA register is projected to increase markedly, if age and gender specific prevalence remains constant (Figure 31), with +850 people on the register by 2053 (42% increase).

Figure 31. Projected number of people on the **stroke and transient ischaemic attack** register between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)



3. Multimorbidity Projections



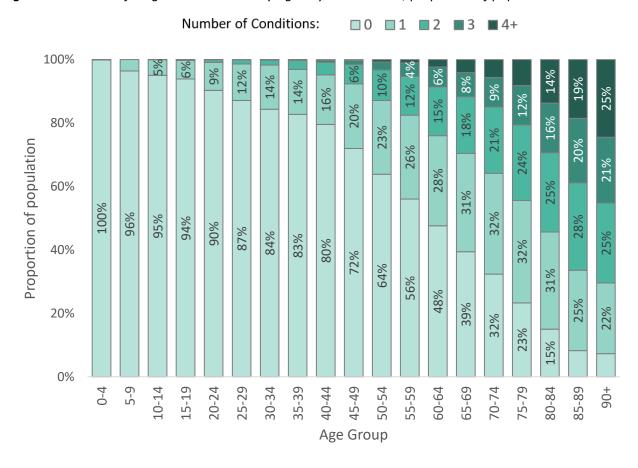
Multi-morbidity is defined as the presence of <u>two or more</u> long-term medical conditions in a patient. Studies show that people with multiple chronic conditions (those with multi-morbidity) typically suffer a lower quality of life⁷, have more frequent and lengthy hospital admissions⁸, and may be more likely to die prematurely⁹, than those who do not have multi-morbidity. Managing the health and care needs of people with multiple conditions also becomes increasingly complex.

This section details the projected burden of multi-morbidity that may be experienced by Jersey's population in the future, based on the most recent prevalence of multi-morbidity. The analysis shows how many people, and what proportion of the population may be living with more than one condition over the next 30 years.

The 12 long-term conditions in section 3 form the basis of the multi-morbidity analysis presented. More details can be found in the Multimorbidity report 10 .

• Overall, around 14% of the population (~14,150 people) were living with multi-morbidity in 2023, and the likelihood of someone living with multimorbidity increased with age (Figure 32).

Figure 32. Number of long-term conditions by age at year end 2023; proportion of population



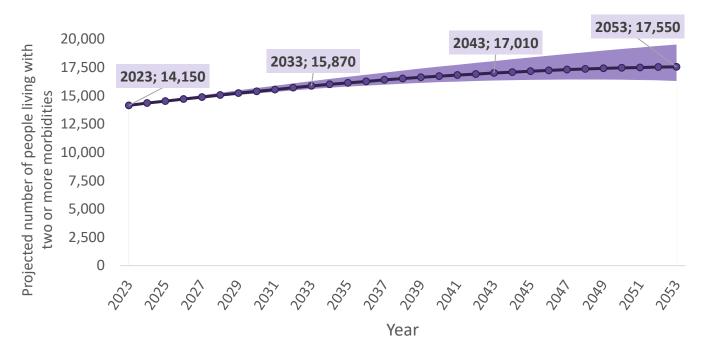
⁷Fortin et al., 2004. Health and Quality of Life Outcomes

⁸ Vogeli et al., 2007. Journal of General Internal Medicine

⁹ Menotti et al., 2001. Journal of Clinical Epidemiology

¹⁰ https://www.gov.je/Government/Pages/StatesReports.aspx?ReportID=5677

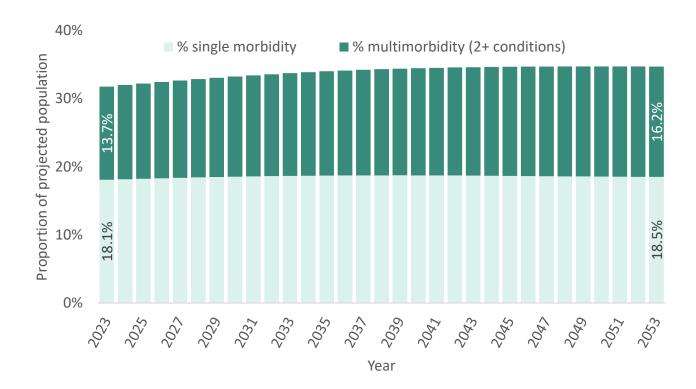
Figure 33. Projected number of people living with **two or more morbidities** between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)



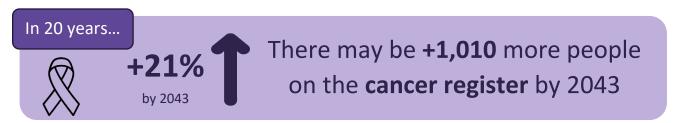
By 2053, under the +325 net migration scenario this is projected to be:

- an increase of +3,400 people with **two or more** morbidities (an increase of 24%, Figure 33)
- an increase of +2,010 people with three or more morbidities (an increase of 35%, Figure 33)
- an increase of around 3% in the overall proportion of Jersey's population who are living with one or more morbidity (Figure 34)

Figure 34. Projected number of people living with a single or multiple morbidities between 2023 and 2053, under central +325 net migration per year population scenario

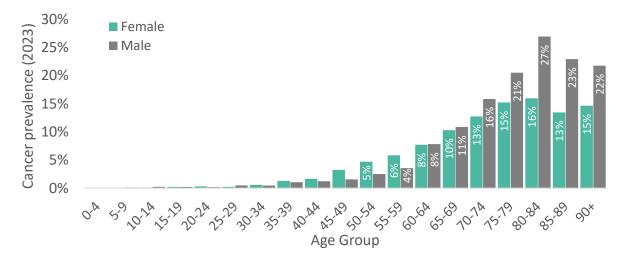


4. Cancer Projections



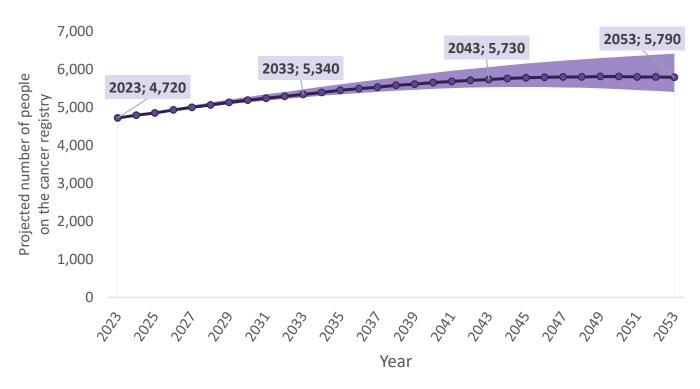
In 2023, there were around 4,720 people on the cancer registry in Jersey. Prevalence of cancer increases with age (Figure 35). Amongst younger people (aged under 60) cancer is more prevalent amongst females, whilst in older people (aged over 75) it is more prevalent amongst males.

Figure 35. Cancer prevalence by age and gender, 2023

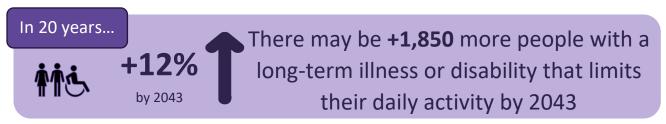


As the population changes over the next 30 years the number of people on the cancer register is projected to increase, if age and gender specific prevalence remains constant (Figure 36), with +1,070 people on the register by 2053 (23% increase).

Figure 36. Projected number of people on the **cancer** register between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)

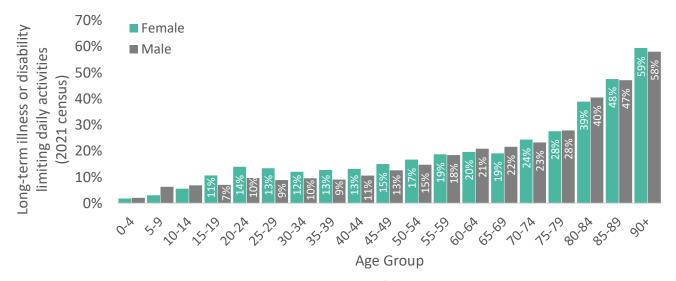


5. Projections for long-term illness or disability that limits daily activities



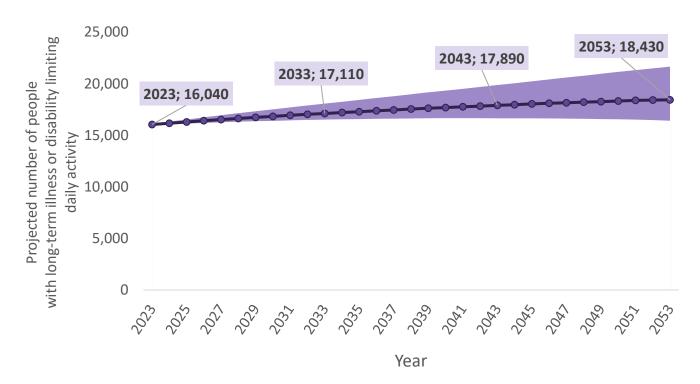
In the 2021 census around 16,000 people said they considered themselves to have a long-standing illness or disability that limited their daily activities. Prevalence of activity-limiting disability was found to increase with age (Figure 37). (Note that this is not limited to physical or visible disabilities).

Figure 37. Activity-limiting disability or long-term illness by age and gender, Census 2021

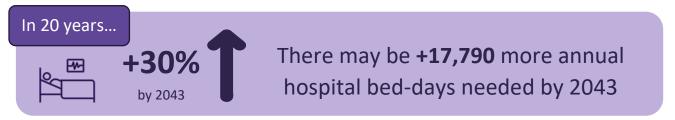


As the population changes over the next 30 years the number of people with activity-limiting disability or long-term illness is projected to increase, if age and gender specific prevalence remains constant (Figure 38), with +2,390 people on the register by 2053 (15% increase).

Figure 38. Projected number of people with activity-limiting disability or long-term illness between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year)

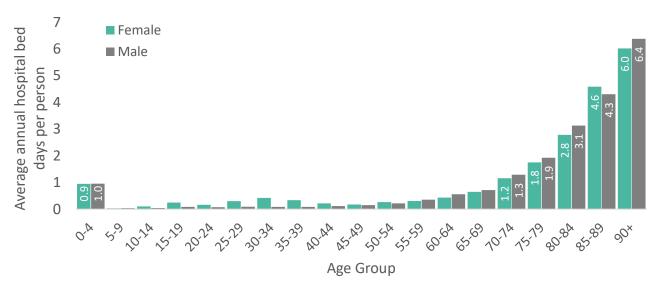


6. Projections for hospital bed days



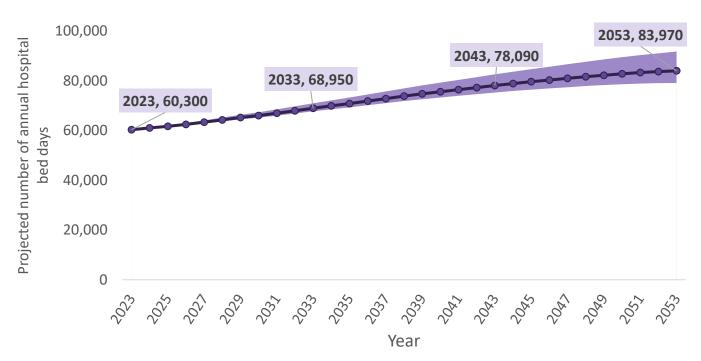
In the 2018-2022 period there was an annual average of around 60,000 hospital bed days in Jersey (including medical, surgical and women and children's services). The likelihood of needing to spend time in hospital increases steeply with age (Figure 39), with those aged 90 or older staying an average of around 6 bed days per year.

Figure 39. Average annual per capita hospital bed days (2018-2022 period) by age and gender, data provided by HCS Informatics



As the population changes over the next 30 years the number of annual hospital bed days is projected to increase, if age and gender specific usage remains constant (Figure 40), with +23,670 bed days by 2053 (39% increase).

Figure 40. Projected number of annual hospital bed days between 2023 and 2053, under different population scenarios (upper +1,000, lower -100, central +325 net migration per year



Background Notes

Data Sources

Population projections

Population projections used in this report are detailed more fully in the Population Projections 2023-2080 report.

Disease and multimorbidity data

Disease data used in this report is extracted from the General Practitioner Central Server (GPCS). The registers are calculated based on patients considered 'active' at year end – that is, any patient registered with a Jersey GP practice who had had a consultation within the previous five years, or who had registered with a GP surgery in the previous six months. Appendix 5 details the criteria used to identify patients on each of the 12 long-term conditions. Cancer was a new addition to the JQIF for 2023, and is not included in the multimorbidity analysis. The criteria are defined as per the Jersey Quality Improvement Framework (JQIF).

Disease registers, by age and gender, were pulled at year end 2023. Counts are rounded to the nearest 10 throughout the report.

GP surgery appointment data

The number of annual GP surgery appointments, by age and gender, was extracted from the General Practitioner Central Server (GPCS). This excluded telephone or out of hours appointments. We are aware that different surgeries may have slightly different methods for recording activity, and that activity patterns were affected during the pandemic period. In this report, an average of the surgery appointments between 2021 and 2023 were used.

Disease and multimorbidity data

In the 2021 Census¹¹, people were asked whether they had a long-standing illness or disability, and whether this limited their daily activity. We have grouped those who answered "a little" or "a lot", by age and gender, to produce an estimate of the prevalence of activity-limited disability amongst Jersey's population.

Hospital bed days data

Data on the number of annual bed days (by 5-year age and gender group) was provided by HCS Informatics. Data was extracted from the PAS (Patient Administration System) for medical, surgical and women and children's care groups, over the 5-year period 2018-2022. A mean average annual per capita number of bed days (over the 5-year period) was applied to the projections.

Methods

The projections in the report are calculated by applying the age (5-year group) and gender specific prevalence rates of diseases (and of health care usage) to the age and gender profiles for future years (as set out in the population projections produced by Statistics Jersey¹²).

The analysis is based on two primary assumptions:

- that current patterns of disease prevalence and GP consultation / hospital bed day patterns will continue (i.e. no adjustments have been made for improvements or worsening in health conditions)
- that net migration will continue under one of five scenarios, ranging between -100 and +1,000 per year over the next 30 years (between 2023 and 2053)

¹¹ 2021 census results

www.gov.je Population Projections 2023-2080

Regarding assumption 1: that the 2023 prevalence of disease and multimorbidity for each age and gender group remains constant as we move into the future. It is likely that there will be some changes in disease prevalence over time, due to changes in people's behaviours and other risk factors, and different surveillance regimes or treatments. These changes are difficult to predict, as they may depend on a variety of factors. The 2023 "Health in 2040" report¹³ published by the Health Foundation used sophisticated models to project changes in disease prevalence in England over the next 20 years. The report found that the majority (four-fifths) of the expected rise in ill-health is attributable to population ageing, with changes in the likelihood of individuals developing the disease contributing a much smaller amount to overall population disease burden. It is reasonable to assume the case would be similar for Jersey's population, and that the projections presented in this report (based on demographic change) are helpful, if not as sophisticated as the Health Foundation's working group analysis. It is worth noting that there is evidence that some conditions more than others might be affected by behaviours, lifestyle or treatment changes. Experts are hopeful that chronic heart disease, for example, may see a decline in prevalence in coming years as we see the benefits of declining smoking rates and preventative medicines coming into effect¹⁴.

A secondary analysis of the prevalence of the JQIF conditions over time was carried out and compared to previous projection work¹⁵ (carried out back in 2016). Overall, 6 of the long-term conditions are already (in 2023) at higher prevalence than in previous projections. However, when the prevalence patterns were broken down by 5-year age and gender groups (as necessary for the projection methodology), the picture became less clear and linear trends were weak.

Regarding assumption 2: that net migration will continue under one of the 5 scenarios. Over recent years, net migration has fluctuated between +450 in 2018 to -380 in 2021, with effects from both Brexit and the COVID-19 pandemic thought to be influencing migration behaviours. This variation means it is difficult to choose a "more likely" migration scenario, and hence all 5 scenarios published by Statistics Jersey have been worked up in this analysis. The "central" +325 per year net migration scenario is the scenario used for quoting figures and % changes throughout the report.

Accuracy and Reliability

Information on prevalence of diseases is taken from the GP central server. GPs are incentivised to accurately record patients that are eligible to be included on disease registers. Data is therefore reliant on accurate recording by GPs and GP practices in the Island, however, data derived from these registers is regarded as being of a greater accuracy than data for which GPs and practices are not incentivised. The total number of patients currently registered is also reliant on accurate recording, removal of duplicates and those patients who have died or left the Island.

The projections presented here are based on a number of assumptions (see Introduction) and provide a *potential* future scenario under which those assumptions hold. Projections are therefore not forecasts, and would require revision if there is evidence of change in the primary assumptions or in other relevant factors, such as family and household behaviours or medical knowledge and treatment, amongst other things.

Data Quality and Completeness

Data are extracted for a point in time estimate (in this case 31 December 2023 for disease registers) and reflect Jersey residents registered with GP practices in Jersey on this date. There will be a small proportion of people in Jersey who are not registered with a GP and do not appear in these figures. There may also be a number of people registered with GP surgeries on Island who no longer reside in Jersey. The projections therefore show future projections assuming that the proportion of those not registered, and those who should no longer be registered, remains constant over the next twenty years. Although resident population projections are available for a longer period of time, disease prevalence has only been mapped until 2053 as projections become increasingly uncertain the further they are carried forward.

All enquiries and feedback should be directed to: healthintelligence@gov.je

¹³ www.health.org.uk health-in-2040

¹⁴ www.health.org.uk health-in-2040

¹⁵ Disease projections 2016-2036 report

Appendix 1: Disease Projections Under 5 Migration Scenarios

Appendix 1. Projected numbers of patients (by gender, M=male F=female) with each disease, and % change from 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Patient numbers rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	1
Atrial fibrillation	М	F	All	М	F	All	М	F	All	М	F	All	М	F	All
2023	1,680	1,140	2,810	1,680	1,140	2,810	1,680	1,140	2,810	1,680	1,140	2,810	1,680	1,140	2,820
2033	1,960	1,350	3,310	1,970	1,350	3,320	1,980	1,360	3,340	2,000	1,360	3,360	2,010	1,370	3,380
% change	17%	18%	18%	17%	18%	18%	18%	19%	19%	19%	19%	20%	20%	20%	20%
2043	2,170	1,550	3,720	2,180	1,550	3,730	2,230	1,570	3,790	2,280	1,580	3,860	2,320	1,590	3,910
% change	29%	36%	32%	30%	36%	33%	33%	38%	35%	36%	39%	37%	38%	39%	39%
2053	2,220	1,660	3,870	2,250	1,670	3,910	2,340	1,700	4,030	2,440	1,740	4,180	2,530	1,760	4,290
% change	32%	46%	38%	34%	46%	39%	39%	49%	43%	45%	53%	49%	51%	54%	52%
Net migration:		-100			0			+325	ı		+700	ı		+1,000	
Asthma	М	F	All	М	F	All	М	F	All	М	F	All	М	F	All
2023	2,700	3,260	5,960	2,700	3,260	5,960	2,710	3,270	5,980	2,720	3,280	6,000	2,730	3,290	6,020
2033	2,640	3,210	5,850	2,680	3,240	5,920	2,780	3,340	6,120	2,890	3,460	6,350	2,990	3,550	6,540
% change	-2%	-2%	-2%	-1%	-1%	-1%	3%	2%	2%	6%	5%	6%	10%	8%	9%
2043	2,540	3,080	5,620	2,610	3,140	5,750	2,820	3,350	6,170	3,070	3,580	6,650	3,270	3,770	7,040
% change	-6%	-6%	-6%	-3%	-4%	-4%	4%	2%	3%	13%	9%	11%	20%	15%	17%
2053	2,420	2,920	5,350	2,530	3,020	5,550	2,880	3,350	6,220	3,280	3,720	7,000	3,590	4,020	7,610
% change	-10%	-10%	-10%	-6%	-7%	-7%	6%	2%	4%	21%	13%	17%	32%	22%	26%
Net migration:		-100			0			+325			+700			+1,000	
Chronic heart disease	М	F	All	М	F	All	М	F	All	М	F	All	М	F	All
2023	1,960	960	2,930	1,960	960	2,930	1,960	960	2,930	1,970	960	2,930	1,970	960	2,930
2033	2,250	1,120	3,370	2,260	1,130	3,380	2,280	1,130	3,410	2,300	1,140	3,440	2,320	1,150	3,460
% change	15%	17%	15%	15%	18%	15%	16%	18%	16%	17%	19%	17%	18%	20%	18%
2043	2,420	1,240	3,660	2,440	1,240	3,680	2,500	1,260	3,750	2,560	1,280	3,840	2,610	1,290	3,910
% change	23%	29%	25%	24%	29%	26%	28%	31%	28%	30%	33%	31%	32%	34%	33%
2053	2,440	1,290	3,730	2,480	1,300	3,780	2,600	1,330	3,930	2,740	1,370	4,110	2,850	1,410	4,250
% change	24%	34%	27%	27%	35%	29%	33%	39%	34%	39%	43%	40%	45%	47%	45%
Net migration:		-100			0			+325	<u> </u>		+700	•		+1,000	
Chronic kidney	М	F	All	М	F	All	М	F	All	М	F	All	М	F	All
disease															
2023	1,030	1,510	2,530	1,030	1,510	2,530	1,030	1,510	2,530	1,030	1,510	2,530	1,030	1,510	2,530
2033	1,240	1,780	3,010	1,240	1,780	3,020	1,240	1,790	3,030	1,250	1,800	3,050	1,260	1,800	3,060
% change	20%	18%	19%	20%	18%	19%	20%	19%	20%	21%	19%	21%	22%	19%	21%
2043	1,440	2,040	3,480	1,450	2,040	3,490	1,460	2,060	3,530	1,490	2,090	3,570	1,510	2,110	3,610
% change	40%	35%	38%	41%	35%	38%	42%	36%	40%	45%	38%	41%	47%	40%	43%
2053	1,560	2,190	3,760	1,580	2,210	3,790	1,620	2,250	3,870	1,670	2,300	3,980	1,710	2,350	4,060
% change	51%	45%	49%	53%	46%	50%	57%	49%	53%	62%	52%	57%	66%	56%	60%

Net				1									1.000		
migration:		-100			0			+325			+700			+1,000	
COPD	М	F	All												
2023	1,190	1,140	2,330	1,190	1,140	2,330	1,190	1,140	2,330	1,190	1,140	2,330	1,190	1,140	2,330
2033	1,340	1,280	2,620	1,350	1,290	2,630	1,360	1,300	2,660	1,380	1,310	2,690	1,400	1,320	2,710
% change	13%	12%	12%	13%	13%	13%	14%	14%	14%	16%	15%	15%	18%	16%	16%
2043	1,410	1,350	2,760	1,420	1,360	2,780	1,460	1,390	2,840	1,510	1,420	2,920	1,550	1,440	2,990
% change	18%	18%	18%	19%	19%	19%	23%	22%	22%	27%	25%	25%	30%	26%	28%
2053	1,380	1,320	2,700	1,410	1,340	2,750	1,490	1,390	2,880	1,580	1,460	3,040	1,660	1,510	3,170
% change	16%	16%	16%	18%	18%	18%	25%	22%	24%	33%	28%	30%	39%	32%	36%
Net migration:		-100			0			+325			+700			+1,000	
Dementia	М	F	All												
2023	300	520	820	300	520	820	300	520	820	300	520	820	300	520	820
2033	380	630	1,010	380	630	1,010	380	630	1,010	380	630	1,010	380	630	1,010
% change	27%	21%	23%	27%	21%	23%	27%	21%	23%	27%	21%	23%	27%	21%	23%
2043	470	770	1,240	470	770	1,240	470	770	1,250	480	780	1,250	480	780	1,260
% change	57%	48%	51%	57%	48%	51%	57%	48%	52%	60%	50%	52%	60%	50%	54%
2053	530	890	1,420	530	890	1,420	540	900	1,440	550	910	1,450	550	910	1,470
% change	77%	71%	73%	77%	71%	73%	80%	73%	76%	83%	75%	77%	83%	75%	79%
Net															ı
migration:		-100			0			+325			+700			+1,000	
Diabetes	М	F	All												
2023	3,000	2,050	5,050	3,000	2,050	5,050	3,010	2,050	5,060	3,010	2,050	5,070	3,020	2,060	5,070
2033	3,280	2,230	5,510	3,290	2,240	5,530	3,350	2,270	5,620	3,410	2,300	5,720	3,470	2,330	5,800
% change	9%	9%	9%	10%	9%	10%	11%	11%	11%	13%	12%	13%	15%	13%	14%
2043	3,350	2,290	5,640	3,390	2,310	5,710	3,530	2,380	5,910	3,690	2,460	6,150	3,820	2,530	6,350
% change	12%	12%	12%	13%	13%	13%	17%	16%	17%	23%	20%	21%	26%	23%	25%
2053	3,260	2,240	5,500	3,340	2,280	5,620	3,590	2,410	6,000	3,880	2,550	6,430	4,120	2,670	6,790
% change	9%	9%	9%	11%	11%	11%	19%	18%	19%	29%	24%	27%	36%	30%	34%
Net		100													
migration:		-100			0	Γ		+325	T		+700	T		+1,000	
Heart failure	М	F	All	М	F	All	M	F	All	М	F	All	М	F	All
2023	610	570	1,180	610	570	1,180	610	570	1,180	610	570	1,180	610	570	1,180
2033	730	690	1,420	730	690	1,420	730	690	1,420	740	690	1,430	740	690	1,430
% change	20%	21%	20%	20%	21%	20%	20%	21%	20%	21%	21%	21%	21%	21%	21%
2043	840	820	1,660	850	820	1,660	860	820	1,680	870	830	1,700	880	830	1,710
% change	38%	44%	41%	39%	44%	41%	41%	44%	42%	43%	46%	44%	44%	46%	45%
2053	910	930	1,840	920	930	1,850	950	940	1,880	980	950	1,930	1,000	960	1,960
% change	49%	63%	56%	51%	63%	57%	56%	65%	59%	61%	67%	64%	64%	68%	66%
Net migration:		-100			0			+325			+700			+1,000	
Hypertension	М	F	All												
2023	8,920	8,870	17,790	8,920	8,880	17,800	8,930	8,880	17,810	8,940	8,890	17,830	8,950	8,900	17,850
2033	9,760	9,790	19,550	9,810	9,820	19,640	9,960	9,930	19,890	10,130	10,050	20,180	10,270	10,140	20,410
% change	9%	10%	10%	10%	11%	10%	12%	12%	12%	13%	13%	13%	15%	14%	14%
2043	10,040	10,210	20,260	10,160	10,290	20,450	10,540	10,550	21,090	10,980	10,840	21,820	11,330	11,080	22,400
% change	13%	15%	14%	14%	16%	15%	18%	19%	18%	23%	22%	22%	27%	24%	25%
2053	9,830	10,100	19,930	10,050	10,260	20,300	10,770	10,740	21,500	11,600	11,290	22,890	12,260	11,740	24,000
% change	10%	14%	12%	13%	16%	14%	21%	21%	21%	30%	27%	28%	37%	32%	34%
		_	_		_										

Net migration:		-100			0			+325			+700			+1,000	
Mental health	М	F	All	М	F	All									
2023	390	390	780	390	390	780	390	390	780	400	390	780	400	390	790
2033	390	390	780	400	390	790	420	400	820	440	420	850	450	430	880
% change	0%	0%	0%	3%	0%	1%	8%	3%	5%	10%	8%	9%	13%	10%	11%
2043	380	370	750	390	380	770	420	410	830	470	440	900	500	460	960
% change	-3%	-5%	-4%	0%	-3%	-1%	8%	5%	6%	18%	13%	15%	25%	18%	22%
2053	360	350	710	380	360	740	430	400	840	500	450	950	550	480	1,040
% change	-8%	-10%	-9%	-3%	-8%	-5%	10%	3%	8%	25%	15%	22%	38%	23%	32%
Net migration:		-100			0			+325		+700				+1,000	
Obesity	М	F	All	М	F	All									
2023	5,150	6,470	11,620	5,160	6,470	11,630	5,170	6,490	11,660	5,180	6,510	11,690	5,190	6,520	11,720
2033	5,240	6,410	11,650	5,290	6,470	11,760	5,450	6,670	12,130	5,650	6,900	12,550	5,800	7,080	12,890
% change	2%	-1%	0%	3%	0%	1%	5%	3%	4%	9%	6%	7%	12%	9%	10%
2043	5,070	6,130	11,200	5,180	6,260	11,440	5,550	6,670	12,220	5,980	7,150	13,120	6,320	7,530	13,850
% change	-2%	-5%	-4%	0%	-3%	-2%	7%	3%	5%	15%	10%	12%	22%	15%	18%
2053	4,790	5,730	10,520	4,980	5,930	10,910	5,600	6,580	12,180	6,310	7,340	13,650	6,870	7,940	14,810
% change	-7%	-11%	-9%	-3%	-8%	-6%	8%	1%	4%	22%	13%	17%	32%	22%	26%
Net		400			•			. 225			. 700			. 4 . 0 . 0	
migration:		-100			0			+325			+700			+1,000	
Stroke and TIA	M	F	All	M	F	All									
2023	1,070	940	2,020	1,070	940	2,020	1,070	940	2,020	1,070	940	2,020	1,070	940	2,020
2033	1,250	1,100	2,340	1,250	1,100	2,350	1,260	1,100	2,360	1,280	1,110	2,390	1,280	1,120	2,400
% change	17%	17%	16%	17%	17%	16%	18%	17%	17%	20%	18%	18%	20%	19%	19%
2043	1,390	1,220	2,610	1,400	1,220	2,620	1,430	1,240	2,670	1,460	1,260	2,720	1,490	1,270	2,760
% change	30%	30%	29%	31%	30%	30%	34%	32%	32%	36%	34%	35%	39%	35%	37%
2053	1,450	1,290	2,750	1,470	1,300	2,780	1,530	1,340	2,870	1,600	1,380	2,980	1,650	1,410	3,060
% change	36%	37%	36%	37%	38%	38%	43%	43%	42%	50%	47%	48%	54%	50%	51%

Appendix 2: Multi-morbidity Projections Under 5 Migration Scenarios

Appendix 2. Projected numbers of people with multimorbidity, and % change from 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Figures rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	1
2+ conditions	М	F	All	М	F	All									
2023	7,250	6,880	14,140	7,260	6,880	14,140	7,260	6,890	14,150	7,270	6,900	14,170	7,280	6,900	14,180
2033	8,020	7,580	15,600	8,060	7,600	15,660	8,170	7,690	15,870	8,310	7,800	16,110	8,420	7,880	16,300
% change	11%	10%	10%	11%	10%	11%	13%	12%	12%	14%	13%	14%	16%	14%	15%
2043	8,390	7,960	16,350	8,480	8,020	16,500	8,780	8,230	17,010	9,120	8,480	17,600	9,390	8,680	18,060
% change	16%	16%	16%	17%	17%	17%	21%	19%	20%	25%	23%	24%	29%	26%	27%
2053	8,330	7,980	16,310	8,500	8,100	16,600	9,060	8,490	17,550	9,710	8,940	18,650	10,230	9,300	19,530
% change	15%	16%	15%	17%	18%	17%	25%	23%	24%	34%	30%	32%	41%	35%	38%

Appendix 3: GP Consultation Projections Under 5 Migration Scenarios

Appendix 3. Projected numbers of GP surgery consultations (by gender, M=male F=female), and % change from estimated 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Figures rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	
GP surgery consultations	М	F	All												
2023 est.	171,540	237,930	409,480	171,660	238,120	409,780	172,070	238,710	410,790	172,570	239,380	411,950	172,950	239,910	412,860
2033	175,390	237,830	413,210	177,090	240,080	417,170	182,610	247,390	430,000	188,990	255,820	444,810	194,110	262,570	456,680
% change	2%	0%	1%	3%	1%	2%	6%	4%	5%	10%	7%	8%	12%	9%	11%
2043	176,810	234,830	411,640	180,470	239,430	419,900	192,410	254,450	446,860	206,170	271,830	478,000	217,180	285,720	502,900
% change	3%	-1%	1%	5%	1%	2%	12%	7%	9%	19%	14%	16%	26%	19%	22%
2053	172,650	225,590	398,230	178,570	232,820	411,390	197,940	256,370	454,310	220,300	283,540	503,830	238,180	305,260	543,440
% change	1%	-5%	-3%	4%	-2%	0%	15%	7%	11%	28%	18%	22%	38%	27%	32%

Appendix 4: Cancer Projections Under 5 Migration Scenarios

Appendix 4. Projected numbers of patients (by gender) with cancer, and % change from 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Patient numbers rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	
Cancer register	М	F	All	М	F	All									
2023	2,320	2,390	4,720	2,320	2,390	4,720	2,320	2,400	4,720	2,330	2,400	4,730	2,330	2,400	4,730
2033	2,660	2,600	5,260	2,670	2,620	5,280	2,700	2,650	5,340	2,730	2,680	5,410	2,760	2,720	5,470
% change	15%	9%	11%	15%	10%	12%	16%	10%	13%	17%	12%	14%	18%	13%	16%
2043	2,850	2,680	5,530	2,880	2,700	5,570	2,960	2,780	5,730	3,050	2,870	5,910	3,120	2,940	6,060
% change	23%	12%	17%	24%	13%	18%	28%	16%	21%	31%	20%	25%	34%	23%	28%
2053	2,810	2,600	5,400	2,850	2,640	5,490	3,010	2,780	5,790	3,190	2,950	6,140	3,330	3,080	6,410
% change	21%	9%	14%	23%	10%	16%	30%	16%	23%	37%	23%	30%	43%	28%	36%

Appendix 5: Disability Projections Under 5 Migration Scenarios

Appendix 5. Projected numbers of patients (by gender) with activity-limiting disability or long-term illness, and % change from estimated 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Patient numbers rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	
Activity- limiting disability or long-term illness	М	F	All	M	F	All	M	F	All	M	F	All	M	F	All
2023 est.	7410	8570	15990	7420	8580	16000	7440	8600	16040	7460	8620	16080	7480	8640	16120
2033	7680	8830	16510	7760	8900	16660	7990	9120	17110	8260	9380	17640	8480	9580	18060
% change	4%	3%	3%	5%	4%	4%	7%	6%	7%	11%	9%	10%	13%	11%	12%
2043	7770	8880	16650	7920	9020	16940	8420	9470	17890	8990	9990	18990	9450	10410	19860
% change	5%	4%	4%	7%	5%	6%	13%	10%	12%	21%	16%	18%	26%	20%	23%
2053	7660	8750	16410	7910	8980	16890	8720	9710	18430	9670	10560	20220	10420	11230	21650
% change	3%	2%	3%	7%	5%	6%	17%	13%	15%	30%	23%	26%	39%	30%	34%

Appendix 6: Hospital Bed Days Projections Under 5 Migration Scenarios

Appendix 6. Projected numbers of hospital bed days (by gender), and % change from estimated 2023 levels, under 5 different migration scenarios. Figures for 10-year intervals shown (2023, 2033, 2043 and 2053). Patient numbers rounded to the nearest 10

Net migration:		-100			0			+325			+700			+1,000	
Hospital bed days	М	F	All												
2023 est.	26,370	33,850	60,220	26,380	33,860	60,240	26,400	33,900	60,300	26,430	33,950	60,370	26,450	33,980	60,430
2033	29,980	37,720	67,700	30,100	37,890	066'29	30,490	38,450	68,950	30,940	39,100	70,050	31,310	39,620	70,930
% change	14%	11%	12%	14%	12%	13%	15%	13%	14%	17%	15%	16%	18%	17%	17%
2043	33,640	41,640	75,280	33,920	42,010	75,930	34,870	43,220	78,090	35,970	44,610	80,570	36,830	45,730	82,560
% change	28%	23%	25%	29%	24%	26%	32%	27%	30%	36%	31%	33%	39%	35%	37%
2053	35,320	43,770	060'62	35,840	44,390	80,220	37,570	46,400	83,970	39,570	48,710	88,280	41,170	50,560	91,730
% change	34%	29%	31%	36%	31%	33%	42%	37%	39%	50%	43%	46%	56%	49%	52%

Appendix 7: Jersey Quality Improvement Framework (JQIF) disease register descriptions

Code	Condition	Definition
AST001		A register of patients with asthma, excluding patients with asthma
	Asthma	who have been prescribed no asthma-related drugs in the preceding
		12 months
AF007		A register of those with atrial fibrillation whose latest record of a
	Atrial fibrillation	CHA2DS2-VASc score is greater than 1, the number of patients who
		are currently treated with anti-coagulation therapy
CHD001	Coronary Heart Disease	A register of patients with coronary heart disease
CKD005	Chronic Kidney Disease	A register of patients aged 18 years or over with CKD with
	Childric Maricy Discuse	classification of categories G3a to G5 (previously stage 3 to 5)
COPD001	Chronic Obstructive Pulmonary Disease	A register of patients with COPD
DEM001	Dementia	A register of patients diagnosed with dementia
DM017	Diabetes mellitus	A register of all patients aged 17 or over with diabetes mellitus,
	Diabetes meilitus	which specifies the type of diabetes
HF001	Heart Failure	A register of patients with heart failure
HYP001	Hypertension	A register of patients with established hypertension
MH001	Mental Health	A register of people with schizophrenia, bipolar disorder and other
	IVICITAL FICALLI	psychoses and other patients on lithium therapy
OB002	Obesity	A register of patients aged 16 or over with a BMI greater than or
	Obesity	equal to 30 in the preceding 12 months.
STIA001	Stroke and Transient Ischemic Attack	A register of patients with stroke and TIA
CAN001	Cancer*	A register of patients with a diagnosis of cancer excluding non-
		melanotic skin cancers diagnosed on or after 1 April 2003

^{*}Cancer is a new addition to JQIF for 2023 and is not included in the multimorbidity analysis