Health Indicators

HSE Board update

February 2022

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Introduction

Health indicators provide an ‘at a glance’ perspective on the health of a population and how well a healthcare systems performs. Health indicators impart insight into the health status of a population by illustrating risk factors for disease, morbidity and mortality patterns and health-related trends over time. This can help identify what interventions have improved the health of the population or where interventions may be needed.

Life expectancy and mortality

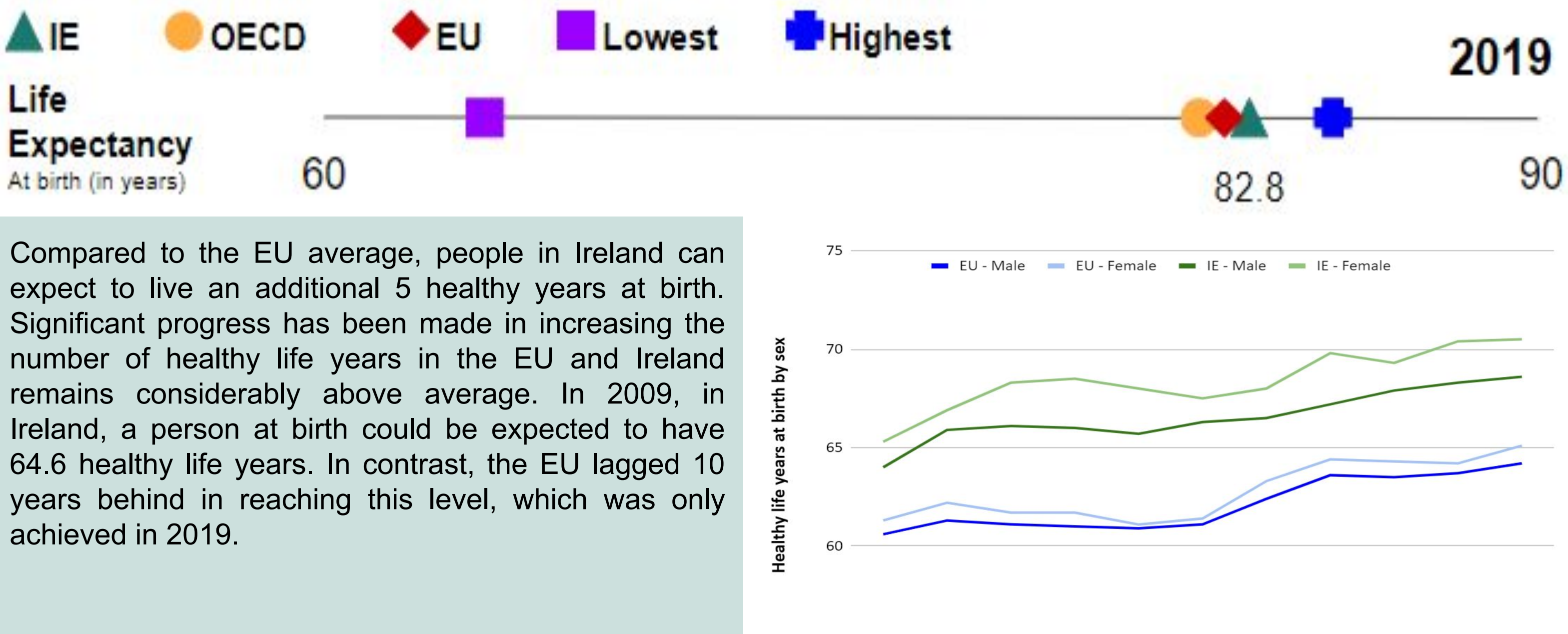
No single set of measures can comprehensively characterise the health of a population. However, life expectancy and mortality data are useful indicators of overall population health because they represent the cumulative effects of social and physical environmental factors, behavioural and genetic risk factors and the level and quality of healthcare.

Life expectancy at birth, Healthy life years at birth and at age 65

Life expectancy is affected by factors such as (1) socioeconomic status, (2) the quality of healthcare systems, (3) health and wellbeing behaviours, (4) genetic and (5) environmental factors. Life expectancy has increased in all OECD countries over the past 50 years, but progress has slowed in the last decade. Factors which have contributed to these gains include higher quality and more accessible healthcare services, better standards of living and healthier lifestyles, each of which is influenced by policies within and beyond the health system. However, life expectancy at birth is a measure of quantity and does not provide information about the quality of a person’s life. Healthy life at birth measures the number of years that a person at birth is expected to live in a healthy condition (i.e. the absence of limitations in functioning/disability). As people get older, the share of the remaining years of life that they can expect to live free of disability falls, healthy life expectancy at 65 measures how many remaining years a person age 65 can expect to live free of limitations in functioning or disability.

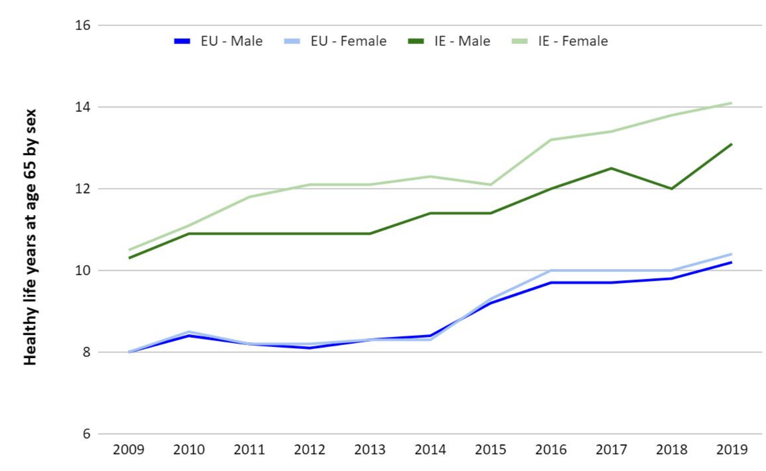
Life expectancy at birth in Ireland compared to EU and OECD average

In the 1970s life expectancy at birth in Ireland was 71.2 years, increasing to 76.6 years in 2000. Since 2000, life expectancy at birth in Ireland has increased by a further 6.2 years to 82.8 years. This is 1.8 years above the OECD average and 1.5 years above the EU average. In 2019, the gap in life expectancy between men and women was nearly 4 years (80.8 years for men compared to 84.7 years for women), less than the EU average of 5.5 years.



Compared to the EU average, people in Ireland can expect to live an additional 5 healthy years at birth. Significant progress has been made in increasing the number of healthy life years in the EU and Ireland remains considerably above average. In 2009, in Ireland, a person at birth could be expected to have 64.6 healthy life years. In contrast, the EU lagged 10 years behind in reaching this level, which was only achieved in 2019.

In 2009, in Ireland a person aged 65 could expect a further 10.3 healthy years, the EU lagged 10 years behind in reaching this level, which was only achieved in 2019. People aged 65 in Ireland are currently expected to live an additional 13.6 healthy years (3.3 years above the current EU average).

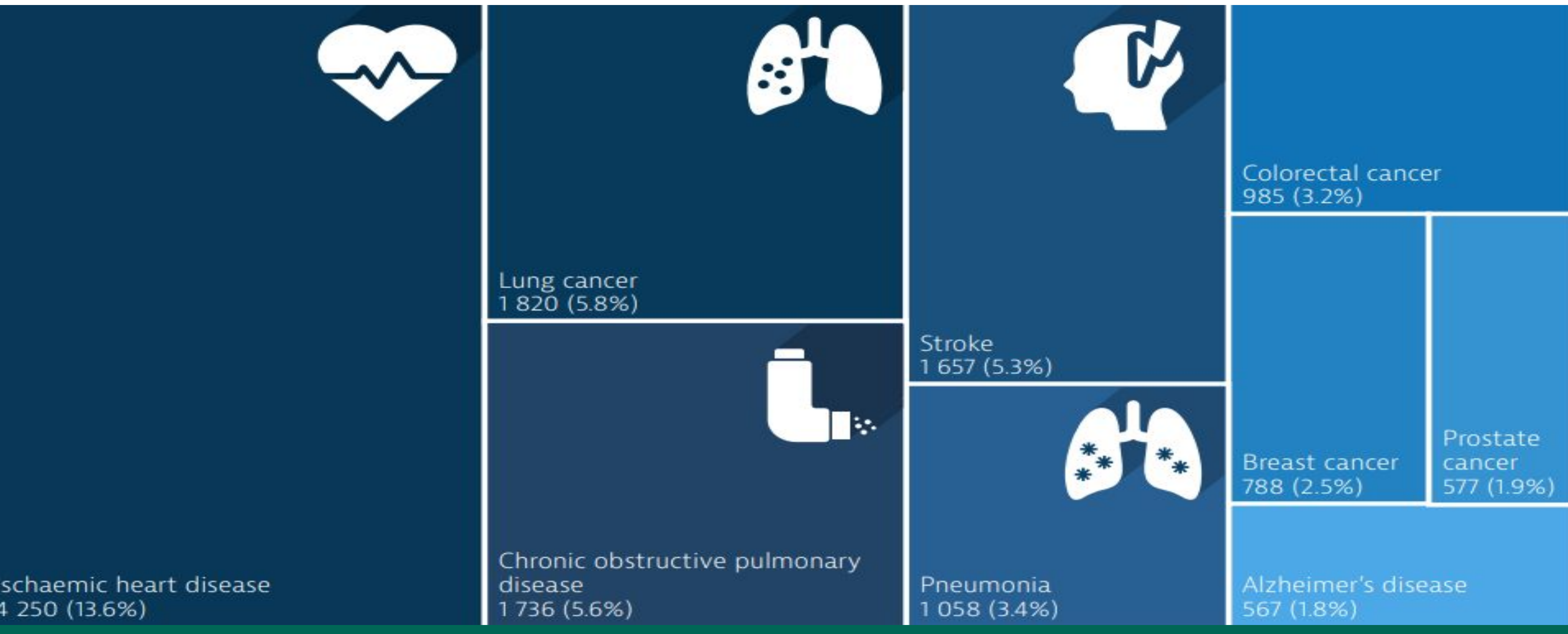


Mortality in Ireland

Understanding the leading causes of death provides a broad perspective on (1) the diseases and conditions that are having the greatest impact on health, (2) the progress we have made in improving outcomes and survival through enhanced and new service provision and (3) identification of future service enhancement priorities.

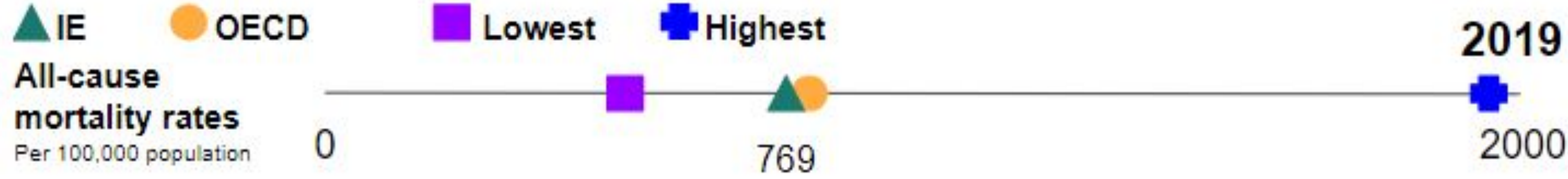
Causes of mortality in Ireland

Circulatory diseases and cancer are the leading cause of death in Ireland, accounting for more than 30% of total deaths in 2018. These diseases are the leading cause of death in most OECD countries and reflect the epidemiological transition from communicable to non-communicable diseases as the leading cause of death in high income and increasingly in middle-income countries.



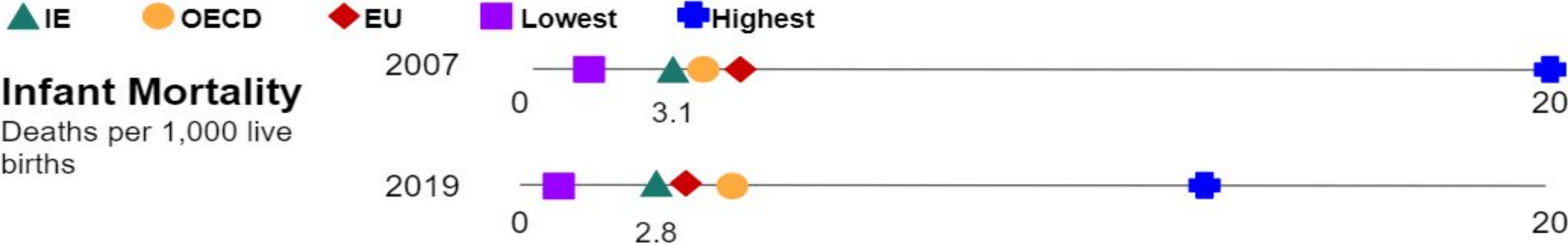
All cause mortality in Ireland compared to OECD average

Despite having a high prevalence of modifiable risk factors for non-communicable diseases, all cause mortality in Ireland is below the OECD average.



Infant mortality in Ireland compared to EU and OECD average

Infant mortality rates have fallen in all OECD member and partner countries since 2000, with reductions generally largest in countries with the highest rates historically. From 2007-2019, infant mortality in Ireland reduced by almost 10%. Ireland remains below both the EU and OECD average.



National Cancer Control Programme

The National Cancer Control Programme (NCCP), established in 2007, was set up to implement the 2006 National Cancer Strategy. This strategy had introduced the concept of cancer control as a 'whole population, integrated and cohesive approach to cancer services across a patient pathway that involves prevention, screening, diagnosis, treatment, and supportive and palliative care.' NCCP takes a programmatic approach to implementing strategies working across regions and organisational boundaries. The National Cancer Strategy 2017-2026 outlines the current programme of work for the National Cancer Control Programme by building on the lessons learned from the previous cancer strategy, where key gaps were flagged, such as limited capacity and resources, insufficient support for cancer patients after diagnosis and the need for greater coordination and integration across the healthcare system.

NCCP Service development initiatives 2017- 2026

Systemic Therapy Programme: The Model of Care for the Systemic Therapy Programme is expected to be published in late 2021.

National Cancer Information System (NCIS): the implementation and support of a single national NCIS solution which will be deployed centrally, utilised, and accessed by public hospitals delivering anti-cancer treatment nationally.

Clinical Lead Groups/Service Development: Clinical lead groups are supporting the development of clear, evidence-based GP referral guidelines, clear pathways to specialist care, timely access to diagnostic services and establishing standardised operating procedures for MDT meetings.

Cancer Nursing Services: development of integrated care models including development of specialist nursing roles in acute oncology services and the Community Oncology Nurse Education Programme.

Radiation Oncology: further development of radiation oncology facilities in Dublin, Cork, and Galway. National expansion of Stereotactic Ablative Radiotherapy (SABR) services, including the development of a workforce plan and training and the development of a Radiation Oncology Quality Assurance Framework.

Cancer Survivorship Programme: Development of integrated survivorship care, delivering information, support, and services.

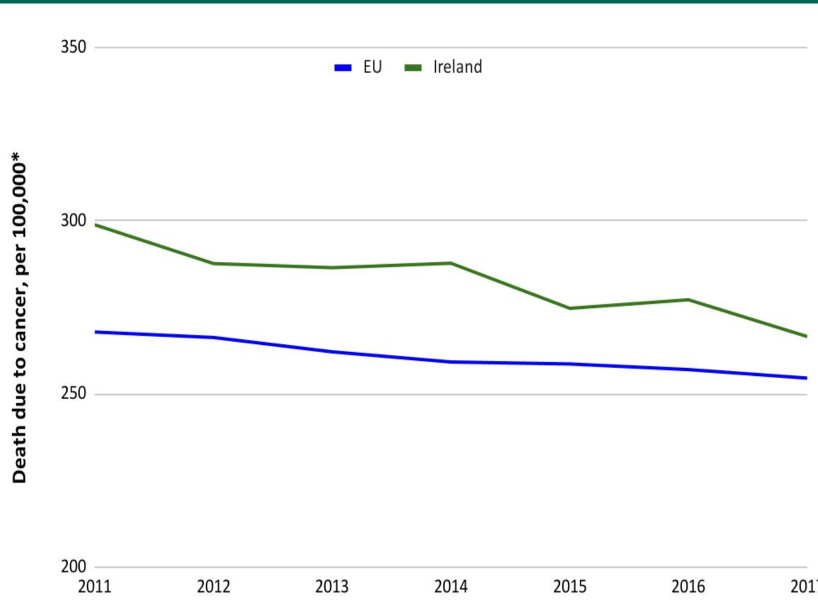
Psycho-Oncology Programme: Appointment of National Clinical Lead for Psycho-Oncology, establishment of MDT teams, delivery of a comprehensive hospital based clinical service and a community support function into community cancer support groups.

Early Detection and Primary Care: Improving the pathway to cancer diagnosis. Development of GP referral guidelines, standardised referral processes, establishment of rapid access clinics for breast, lung and prostate referrals and raising public awareness of possible signs of cancer.

Cancer Prevention: Providing expertise on disease causation, leadership and advocacy, collaboration with cross sectoral work in cancer prevention and supporting Healthy Ireland initiatives.

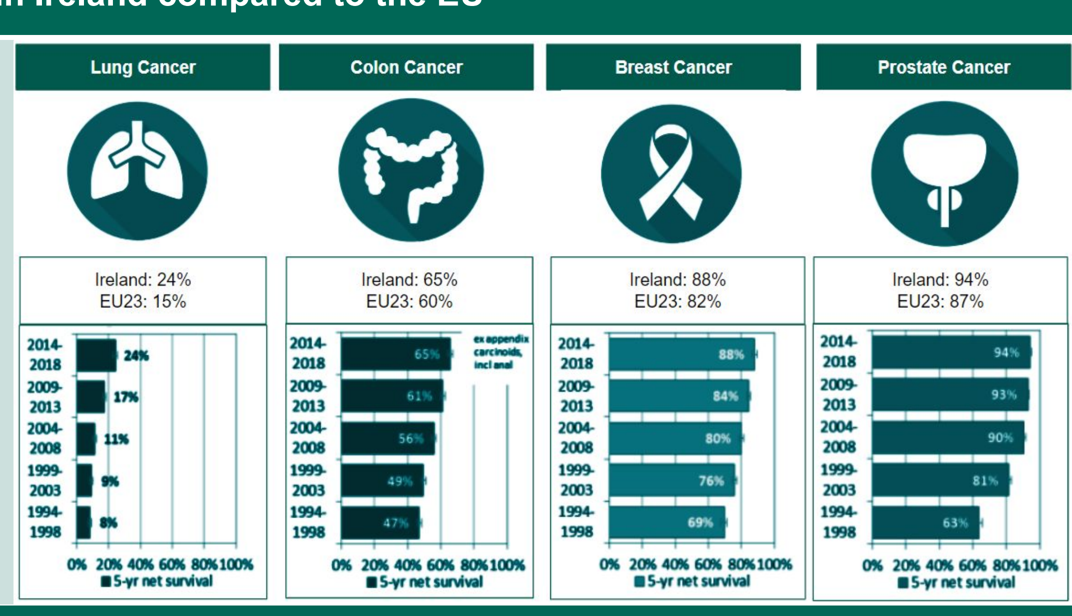
Trends in cancer mortality in Ireland compared to the EU

Ireland has reported an 11% decrease in deaths due to cancer from 2011 to 2017. Earlier detection (including through screening) and better treatments are most likely contributing to the fall in cancer mortality while the sustained efforts of those involved in primary cancer prevention, in particular tobacco control, are key factors in the reduction in cancer incidence rates. Although Ireland remains above the EU average, the deficit has reduced by almost 7% from 2011-2017.



Trends in 5 year survival rate in Ireland compared to the EU

There has been a substantial increase in five-year net survival for invasive cancers as a whole (excluding non-melanoma skin cancers) diagnosed during 2014-2018 (65%) compared to those diagnosed during 1994-1998 (42%). Improvements in survival have been seen for most major cancer types, including those that are the leading causes of cancer mortality in Ireland. However, cancer survival still varies markedly by cancer type.

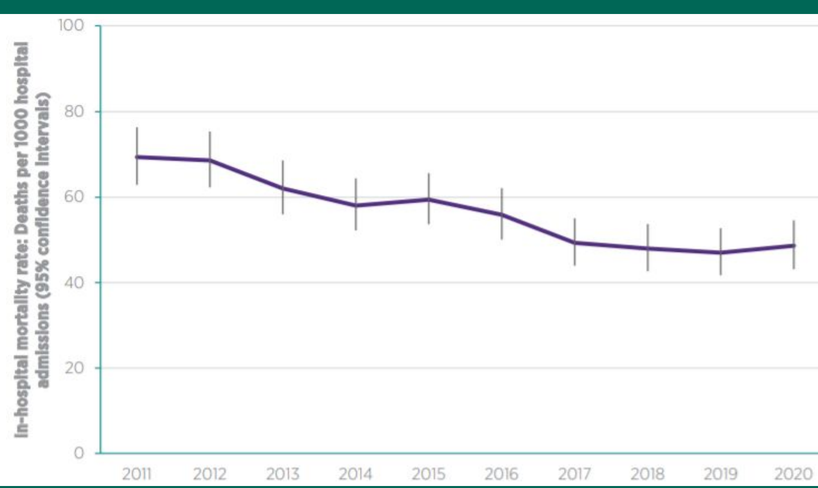


National Clinical Programme for Acute Coronary Syndrome

The National Clinical Programme for Acute Coronary Syndrome (ACS) was initiated in 2010, as a joint venture between the Irish Cardiac Society (under the auspices of the Royal College of Physicians of Ireland, RCPI) and the Health Service Executive. Its defined role was to standardise national delivery of treatment of patients with acute coronary syndromes. In 2012 the ACS model of care was published. The programme implemented an Optimal Reperfusion Service (ORS) protocol for the care of patients with ST Elevation Myocardial Infarction (STEMI) in January 2013 with the aim of saving lives by standardising care across the country. A performance monitoring mechanism, known as Heartbeat, was established to facilitate improvement in the care of ACS patients and so reduce mortality and morbidity through a focus on evidenced based indicators of care in hospitals across the country. In 2019, governance of Heartbeat was transferred to the National Office of Clinical Audit (NOCA) with a view to establishing the Irish Heart Attack Audit. The audit is clinically led, collecting high quality data on ACS patients admitted to Primary Percutaneous Intervention Centres in Ireland for the purpose of healthcare quality improvement.

Trends in mortality from Acute Myocardial Infarction (AMI) in Ireland

Ireland, like other OECD countries, has seen a downward trend in the number of deaths attributable to acute myocardial infarction, this reflects changing contributions from the prevention and control of major Coronary Heart Disease (CHD) risk factors, effective treatment of established CHD including cardiac rehabilitation and timely and effective treatments of Acute Myocardial Infarction. The in-hospital mortality rate for AMI from 2011 to 2020 has reduced by 29% with overall AMI deaths per 100,000 reducing by over 60% in the last 15 years.



Trends in 30-day mortality after admission for AMI in Ireland compared to OECD average

Thirty-day mortality rates for AMI (unlinked data) have decreased substantially between 2009 and 2019 across the OECD. During this time period Ireland has seen a 36% decrease in the 30-day mortality after hospital admission for AMI.

National Clinical Programme for Stroke

The National Clinical Programme for Stroke (NCPS) commenced in early 2010. The mission of the programme is to shape the delivery of better care through better use of resources. The vision is to design standardised models for the delivery of integrated clinical care and to embed sustained clinical operational management of the integrated pathway. The NCPS aims to improve access to and quality and cost-effectiveness of stroke services. The National Stroke Strategy 2020-2025 outlines the current programme of work for the National Clinical Programme for Stroke which is now known as the National Stroke Programme (NSP). It identified the four key pillars of a new stroke strategy as stroke prevention, acute care & cure, rehabilitation & restoration to life and education & research.

NCPS Service development initiatives 2015-2025

Irish National Audit of Stroke (INAS): It is a clinically led quality audit which measures the quality of stroke care, as well as the structure of stroke services, provided to patients in all hospitals that admit acute stroke patients.

Stroke Prevention and Atrial Fibrillation in Ireland (SPAFI): It is a multidisciplinary initiative of the National Clinical Programme for Stroke and colleagues in cardiology, general practice, public health medicine, pharmacy, nursing and health economics. It aims to tackle the challenge of atrial fibrillation in Ireland in a holistic and comprehensive way.

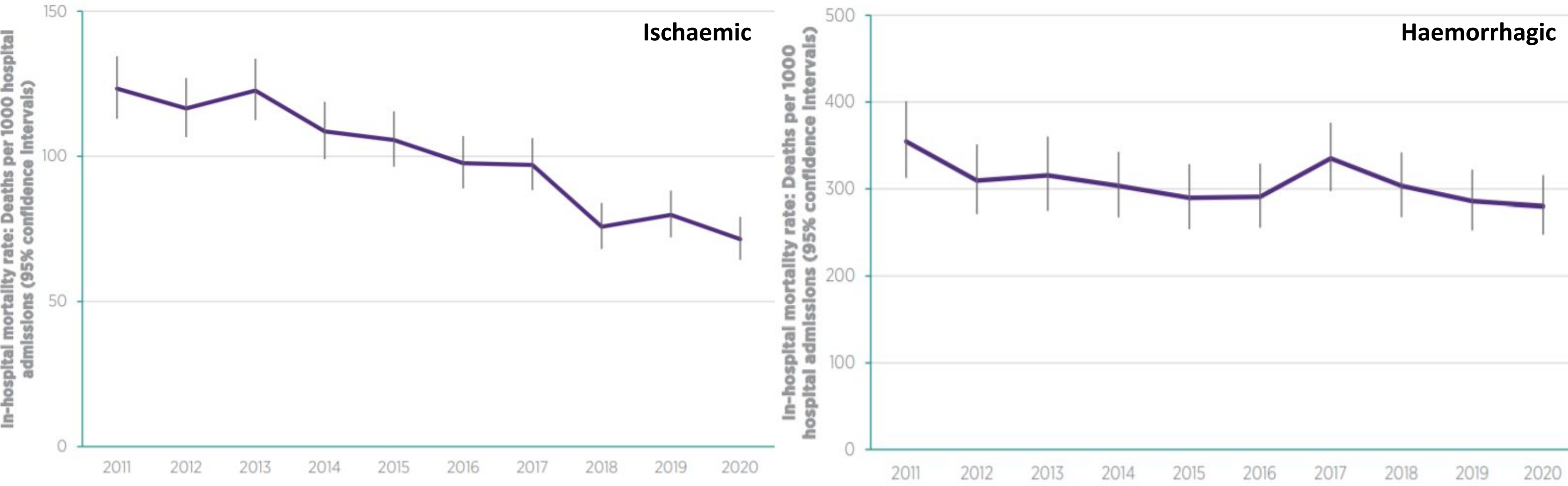
Stroke Clinical Trials Network Ireland (SCTNI): It brings together global experts in the field of stroke. The HRB-SCTNI will give Irish patients access to cutting edge new treatments with the potential to prevent strokes, or to improve emergency treatment and recovery after stroke.

National Thrombectomy Service (NTS): It provides a 24/7 two centre approach to the country's endovascular thrombectomy (EVT) needs with services based at Cork University Hospital and Beaumont Hospital. EVT is the mechanical removal of an obstructing clot and is applicable to ischaemic strokes where large vessels are occluded.

Trends in mortality from Stroke in Ireland

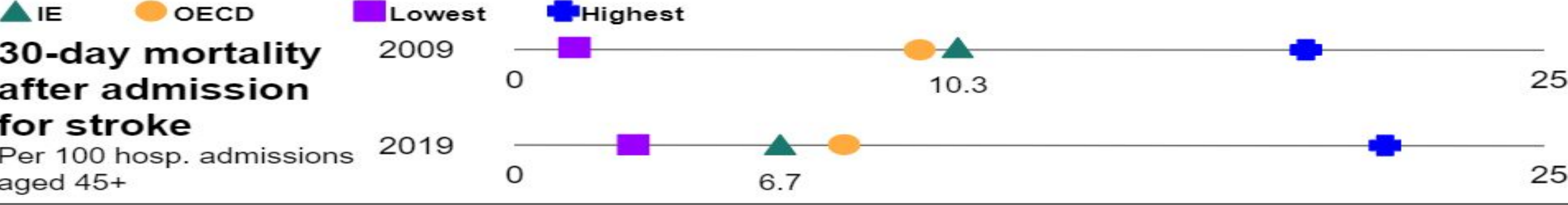
In an ischaemic stroke, blood flow to the brain is interrupted either by the formation of a clot in situ in a blood vessel in the brain (cerebral thrombosis) or by movement of a clot from elsewhere in the body's circulatory system. There has been a significant reduction (42%) in in-hospital ischaemic stroke mortality in the 10-year period from 2011-2020.

Haemorrhagic stroke occurs less frequently than ischaemic stroke but can have much higher associated mortality and morbidity. There has been a 21% decrease in in-hospital haemorrhagic stroke mortality in the 10-year period from 2011-2020.



Trends in 30 day mortality after admission for Stroke in Ireland compared to OECD average

Ireland has seen a 35% reduction in the 30-day mortality after hospital admission for ischaemic stroke (unlinked data) since 2009. Ireland now sits below the OECD average.

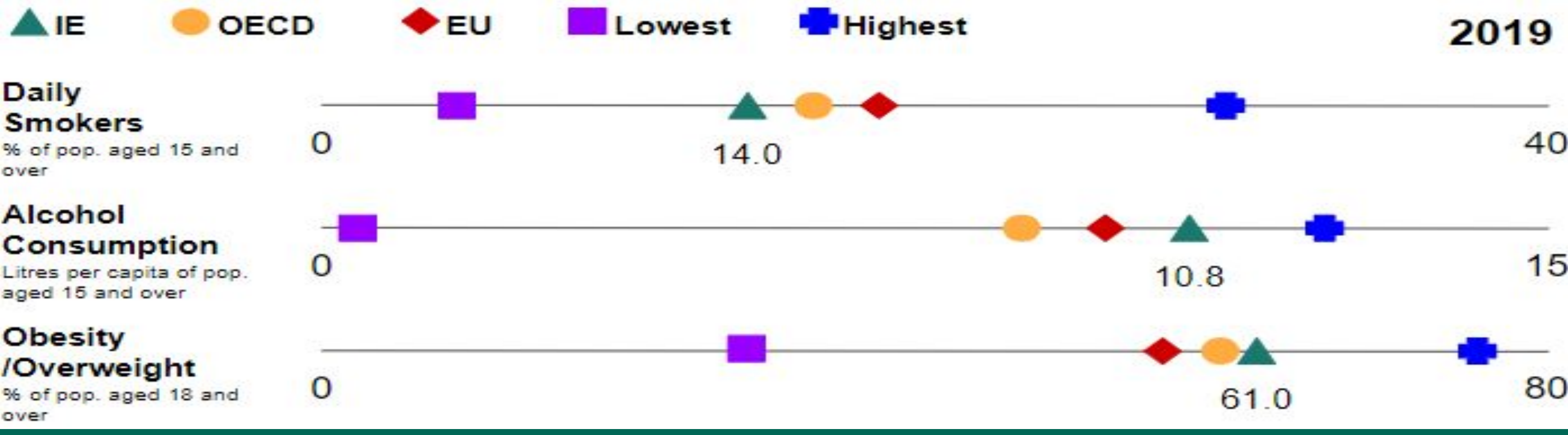


Preventative care: 'Staying Healthy'

Non-communicable diseases include the 'big four': cardiovascular disease, cancer, diabetes and chronic respiratory disease. Reducing the major modifiable risk factors for noncommunicable diseases (NCD) has a significant impact on health outcomes, the development of chronic disease, and health service utilisation. Modifiable risk factors include (1) tobacco use, (2) harmful use of alcohol, (3) sedentary lifestyles and (4) unhealthy diets. Tobacco use is a leading cause of multiple diseases, including some cancers, heart attacks, strokes and respiratory disease such as Chronic Obstructive Pulmonary Disease. High alcohol intake is a major risk factor for heart disease and stroke, liver cirrhosis and certain cancers, but even low and moderate alcohol consumption increases the long-term risk of these diseases. Overweight and obesity are major risk factors for chronic diseases and cancer. The OECD expects that overweight-related diseases will decrease life expectancy by 2.7 years over the next 30 years and will lead to higher healthcare expenditure.

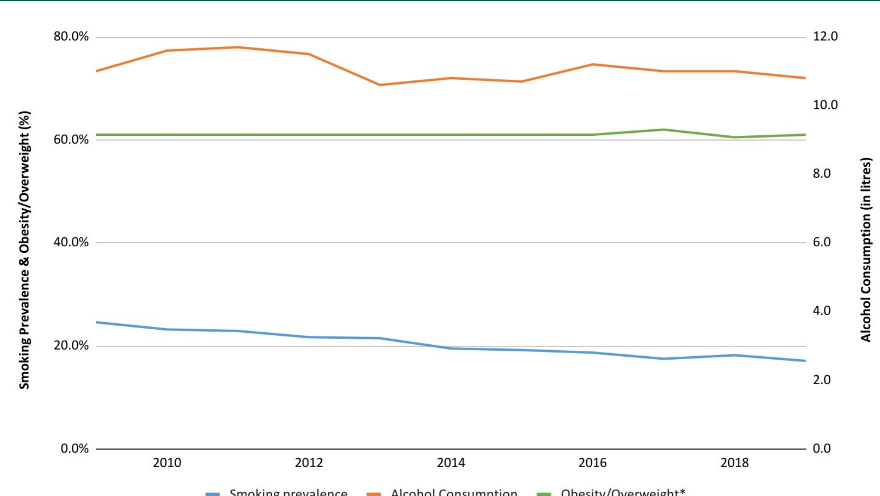
Modifiable risk factors in Ireland compared to EU and OECD average

Modifiable risk factors contribute significantly to mortality rates in Ireland. Ireland has had one of the largest decreases in daily smokers within the OECD in the last 10 years, however it remains one of the largest alcohol consumers despite a marginal reduction in consumption. The obesity/overweight rate has remained constant and is above both the OECD and EU average.



Trends over time in modifiable risk factors in Ireland

Ireland has significantly reduced the prevalence of smoking in the last two decades. Overweight and obesity among adults has remained unchanged over the last 10 years. However, fruit and vegetable consumption as well as physical activity among adults and adolescents are above the EU average. While alcohol consumption has marginally reduced, Ireland still ranks 9th among OECD countries in terms of alcohol consumption and 8th in the world when it comes to monthly binge drinking. Males aged 25-34 years are more likely to be classed as hazardous drinkers and are more likely to present with alcohol-related self-harm and suffer death due to poisoning.



National strategies and services to help people stay healthy

The Healthy Ireland Framework, which was launched in 2013, sought to deliver the vision for a Healthy Ireland, where 'everyone can enjoy physical and mental health and wellbeing to their full potential, where well being is valued and supported at every level of society and is everyone's responsibility.' Since the publication of the Healthy Ireland Framework significant progress has been made including but not limited to (1) the development and implementation of 7 health behaviour policies and national strategies, (2) 26 counties now have a Healthy Ireland presence, (3) Healthy Ireland surveys with over 7,500 participants, (4) 4 national healthy eating guides and (5) over 30 million invested in health and wellbeing initiatives.

Smoking: A National Standard for Tobacco Cessation Support Programmes was developed in 2013. Ireland is now recognised as a global leader in tobacco control. Key to the success of our progress in reducing tobacco and nicotine dependence has been the implementation of the HSE rigorous national cessation programme. The HSE currently provides and promotes a wide range of cessation services, ranging from online and social media supports on www.quit.ie and www.facebook.com/HSEquit, a National Smokers' QUITline 1800 201 203, HSE quit clinics and courses, primary care supports provided by GPs, Pharmacists and Dentists, and tobacco dependence treatments.

Overweight and obesity: 'A Healthy Weight for Ireland - Obesity Policy and Action Plan 2016-2025' was published in 2016 outlining a 10 step plan and 60 actions to assist people in Ireland to achieve better health and to reduce the levels of overweight and obesity. The implementation Progress report was published in February 2021. Significant achievements highlighted in the report include the (1) introduction of Sugar-Sweetened Drinks Tax, (2) appointment of a National Clinical Lead for Obesity, with work advanced on the development of a Model of Care for the management of

of overweight and obesity, (3) publication of healthy eating guidelines and supporting resources and (4) development of nutrition standards for schools.

Alcohol: The HSE Alcohol Programme was established in 2016 with a key aim to reduce the per capita consumption of alcohol from 10.8 litres of pure alcohol per capita to 9.1 litres in line with Healthy Ireland Framework 2013-2025. The Public Health (Alcohol) Act was signed into law on October 17th, 2018 with the primary objective of (1) reducing alcohol consumption, (2) delaying the initiation of alcohol consumption by children and young people, (3) reduce the harms caused by misuse of alcohol and (4) ensure the supply and price of alcohol is regulated and controlled. Significant achievements include the (1) public engagement with the HSE helpline in relation to alcohol (2) launch of the askaboutalcohol.ie website in 2017, (3) the Junior Cycle SPHE resource on Healthy Choices on Alcohol and Drug use was completed, (4) making Every Contact Count Alcohol and Drug use was completed and (5) and expert advisory group for the prevention of Foetal Alcohol Spectrum Disorders (FASD) was established.

Future service development

By 2024, Healthy Ireland will have supported (1) the establishment of 18 Slaintecare Healthy Communities in disadvantaged communities, (2) 4,500 people benefiting from the Slaintecare Age-Friendly Healthy Homes Scheme, (3) the development of 5 new policies to promote and improve public health and wellbeing, (4) 500 more GAA clubs providing the holistic Healthy Clubs model to members and communities and (5) 30 Third-level institutions implementing the Healthy Campus programme.

Public Health Reform

The HSE are currently progressing the reform of Public Health including the implementation of a new service delivery model for Public Health Medicine as recommended in the Crowe Horwath Report (2018).The enhanced service delivery model changes the governance and organisation of Public Health, introducing a more fit-for-purpose hub and spoke model, with a strong national function at the centre of the HSE and with regional professionals focused on local issue. The service will be structured across the four pillars of Public Health: (1) Health Protection, (2) Health and Wellness, (3) Health Intelligence and (4) Health service improvement.

Implementation of the reformed model of care will enable:

- Strong Public Health leadership both nationally and regionally, with the establishment of Consultant-led multi-disciplinary teams. The recruitment and training of multidisciplinary teams will help to ensure the service is appropriately resourced and supported to address public health needs effectively and efficiently.
- Unified governance structures, with clearly defined roles and responsibilities will help to ensure accountability and transparency.
- Robust workforce planning to ensure sufficient new entrants into the specialism.
- Medics working to the top of their licence and devolving relevant duties to their teams. Consultants will operate within a single domain of practice providing autonomy and authority to drive service improvement and policy implementation within their remit.
- The introduction of the grade of Consultant in Public Health Medicine for the first time in Ireland. 84 Consultant in Public Health Medicine posts will be established on a phased basis between June 2021 to December 2023; the first 34 posts will be established by the end June 2022, with priority focus on Health Protection and Regional Consultants.
- Engagement with international Public Health organisations to understand best practice.
- The reconfiguration of ten departments of Public Health to six areas aligned to Slaintecare.
- Timely and comprehensive national and local population health analysis and reporting will help to ensure programmes are evidence based, meet the needs of the population, and provide value for money.

The new model introduces a strong Public Health Function strategically aligned within the HSE to protect and promote the health of the Irish population, to contribute effectively to major service design and policy implementation, to address health inequalities, and ensure a population needs based approach to integrated healthcare delivery.

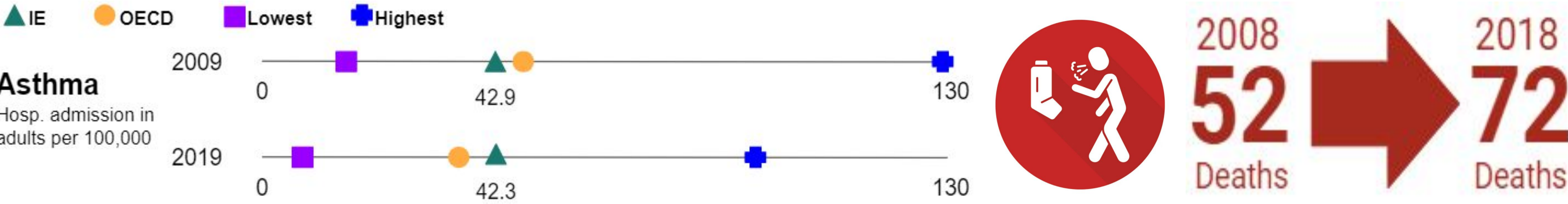
Morbidity and mortality from avoidable chronic conditions

Avoidable morbidity and mortality indicators provide a means to assess the performance of public health, health care policies and services in reducing harm from conditions that are treatable and in many cases preventable. Asthma, COPD, Heart Failure and Diabetes are widely prevalent long-term conditions. Common to all conditions is that they are largely preventable and the evidence base for effective treatment is well established. A high-performing primary care system can reduce the prevalence of, acute deterioration in patients, and mortality from these chronic conditions by providing (1) accessible and high-quality services and diagnostics (2) access to specialist services as required and, (3) patient supports, education and self-management tools.

The way we have traditionally provided care for these chronic conditions is hospital centric and relatively ineffective, inefficient and ultimately unsustainable. Too many people end up needing hospital admission and depend on hospital outpatient services for the management of their chronic diseases which could be managed closer to home through integrated community focussed care pathways.

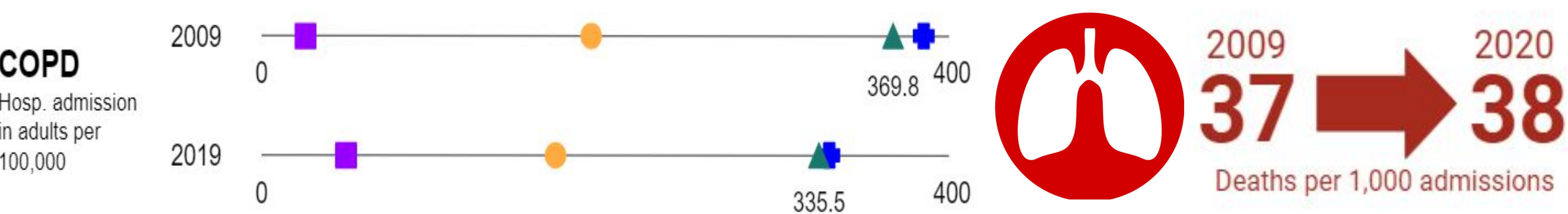
Trends in asthma admissions in Ireland

Between 2009 and 2019, hospital admission rates for asthma decreased in many OECD countries. The OECD average decreased by over 22%, however admission rates in Ireland only declined by 1% in the same period. Ireland's admission rates with asthma are now above the OECD average.



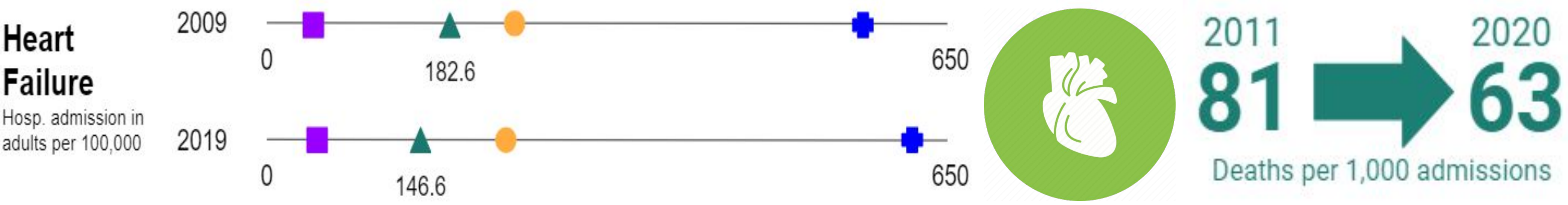
Trends in COPD admissions in Ireland

Ireland has seen a 9% decrease in COPD hospital admissions between 2009 and 2019. However, it continues to have one of the highest COPD hospital admission rates within the entire OECD.



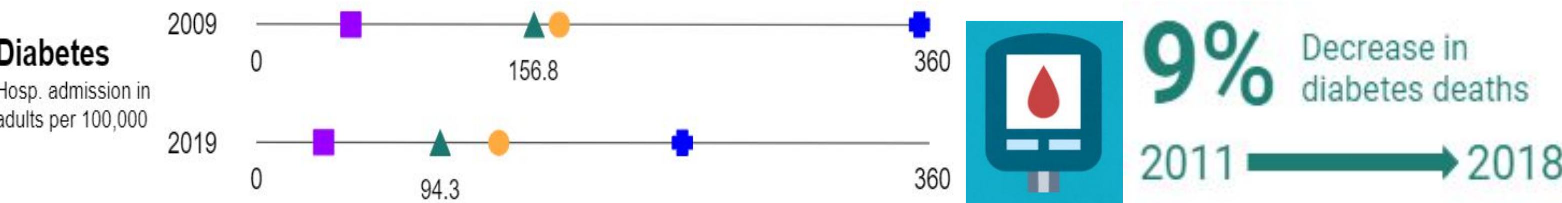
Trends in heart failure admissions in Ireland

Ireland has performed favourably against the OECD average for heart failure hospital admissions. Since 2009, the OECD average has decreased by 6.5%. Ireland has seen a 20% reduction in the same period and remains below the OECD average.



Trends in diabetes admissions in Ireland

While diabetes admissions have fallen in many countries over time (23% average decrease), a more than 6-fold variation in the rates still occurs across countries. Ireland has seen a significant improvement in diabetes hospital admissions, reducing by 40% between 2009 and 2019. 2020 figures suggest it has reduced by a further 9% on the previous year, remaining below the OECD average.



Integrated Care Programme for the Prevention and Management of Chronic Disease (ICPCD)

The Integrated Care Programme for the Prevention and Management of Chronic Disease (ICPCD) which commenced in January 2020 represents an important step in shifting chronic disease management from acute settings to the community and in improving integration of care. The programme focuses on improving the standard of care for four major chronic diseases: Cardiovascular disease, type 2 Diabetes Mellitus, COPD and asthma. Three National Clinical Programmes are working together as part of ICPCD: The National Heart Programme, the National Respiratory Programme and the National Diabetes Programme in partnership with Primary Care Strategy and Planning. The Chronic Disease Management programme, introduced by the 2019 GP agreement, provides GP led care for GMS patients with one or more of those chronic diseases.

This programme aims to provide better care to people with chronic diseases. This will be achieved by providing a continuum of preventative, management and support services to patient with these conditions. This is built on an approach which helps people understand and care for their own condition in collaboration with their General Practitioner and the general practice team. This includes easy access to diagnostics and specialist supports in the community and includes a close coordination with hospital services so that people can receive the care they need, when they need it and in the most appropriate way for their circumstances, be it at home, in the community or in hospital.

Progress has been made in (1) the roll out of CDM hubs (2) increasing the availability of core diagnostic tests such as Natriuretic peptide (NP), ECHO and spirometry in the community (3) launching the National Framework for the prevention and management of chronic disease (4) developing end to end Models of Care for Diabetes, Respiratory and Heart disease and scheduled care transformation pathways (5) launching the ICPCD website and (6) developing a suite of patient support and educational material. However, the absence of a standardised or comprehensive information technology system in acute settings remains a significant barrier to integrated care, hindering communication both between hospitals and between hospitals and primary care .

Future service development

Key priorities for 2022 include: (1) Ongoing recruitment of key ICPCD staff vacancies (2) rollout of phase 2 of the ICPCD programme to increase the number of CDM hubs to 30, supporting 26 acute hospitals across the country, (3) continued rollout of community chronic disease diagnostic services, (4) development of educational material and online training (5) continue to work with patient advocacy groups and (6) build capacity in general practice through the continued implementation of the GP Agreement 2019.

Vaccination uptake rates

Vaccines represent one of the most successful and cost-effective health interventions in human history. Vaccinations are critical to reducing morbidity and mortality from infectious diseases and controlling the spread of these infections in the community. Reduction in vaccination uptake can rapidly lead to outbreaks in the community resulting in an increase in preventable harm, hospitalisation and death.

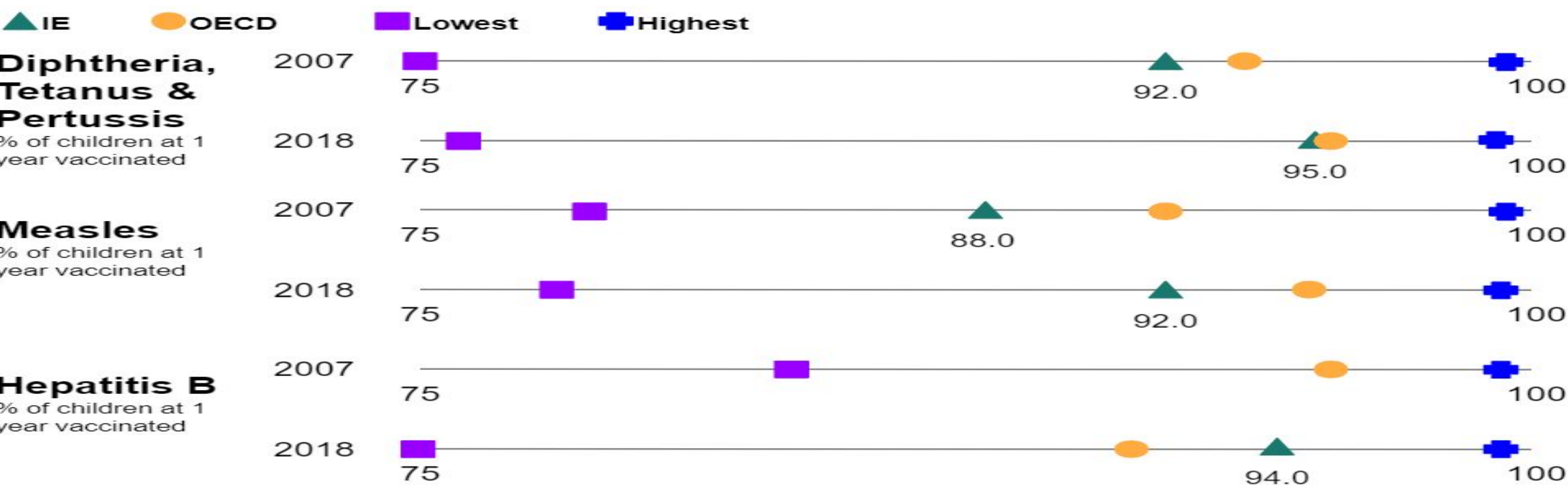
Influenza uptake rates in Ireland compared to OECD average

Influenza is a common infectious disease. Older people are at greater risk of developing serious complications from influenza – including pneumonia and sepsis, which can result in serious illness or death. The WHO recommends that 75% of older people should be vaccinated against seasonal influenza.

In 2019, the average vaccination rate for this vulnerable group was only 46% across OECD countries, decreasing from the 2009 rate of 49%. Abating public confidence in the safety and efficacy of vaccination may play a role in declining coverage in some countries. Ireland has seen a 5% increase in uptake from 54-59% in this period. However, this figure rose to 71% in 2020 due to greater public awareness and promotion of the influenza vaccine for high risk groups during the pandemic .

Childhood vaccinations uptake rates in Ireland compared to OECD average

All EU countries have established childhood vaccination programmes to reduce the spread of many infectious diseases and related deaths, although the number and type of compulsory or recommended vaccines vary to some extent across countries. In recent years, some parts of Europe witnessed a steep resurgence of vaccine-preventable diseases due to declining vaccine coverage driven at least partly by anti-vaccine campaigns. To counter these alarming trends, over the past years the European Commission has repeatedly called for stronger efforts and cooperation to tackle vaccine hesitancy and improve vaccination coverage to reduce the spread of vaccine-preventable diseases.



Across OECD countries, vaccination levels are high, with around 95% of children receiving the recommended DTP or measles vaccinations and 91% receiving the recommended hepatitis B vaccination. Despite high overall rates, however, nearly half of countries fall short of attaining the minimum immunisation levels recommended by the WHO to prevent the spread of measles (95%). Ireland has increased DTP and measle vaccination coverage by 3% and 4% respectively, however they both remain below the OECD average. Conversely, Ireland has a 94% Hepatitis B vaccination rate which is above both the OECD (91%) and EU (93%) average.

Impact of the COVID-19 pandemic

It is generally acknowledged that the COVID-19 pandemic has impacted the general health and wellbeing of the population. Restrictions put in due to the COVID-19 crisis caused significant changes to our everyday behaviours. However, the true impact of the COVID-19 pandemic on general health/wellbeing and patient outcomes may not be known for several more years.

Current impacts on general health and wellbeing

The 'Healthy Ireland Survey 2021' suggests that since the beginning of the pandemic, more people have gained weight than lost weight, while the number of smokers has remained relatively unchanged. On a positive note, 42% of drinkers report that they drink less compared to before the COVID-19 pandemic.

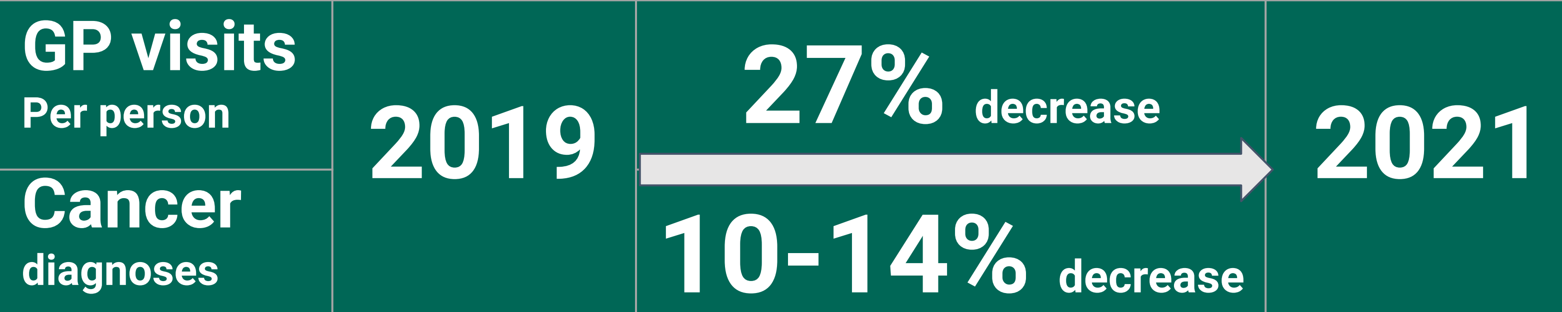
Less				More
21% Smoke less	−	Smoking	+	28% Smoke more
42% Drink less	−	Drinking	+	13% Drink more
11% Lost weight	−	Weight	+	29% Gained weight

Potential future impacts of the COVID-19 pandemic

During the height of the COVID-19 pandemic patients postponed doctors' visits, screening programmes were paused and acute services were reconfigured to reduce footfall in hospitals. The key question that remains outstanding is how big an impact the pandemic will have on future patient outcomes. There are clear signals that there may be an increased number of cases of undiagnosed cancer and chronic conditions due to the COVID-19 crisis.

Trends which may impact future patient outcomes

GP visits per person, per year, were down from an average of 4.5 in 2019 to 3.3 in 2021. This reduction increases the likelihood of undiagnosed illnesses or sub-optimally managed chronic conditions in the community. There was a 10-14% shortfall in projected cancer cases in 2021 which was anticipated due to the reduction in non-COVID health services particularly during the start of the COVID-19 pandemic.



Health Indicators Progress Summary

Significant progress (green circle) · Moderate progress (yellow triangle) · Limited/no progress (red square)

Health Indicator	Metric	Baseline 2009	Status 2019	Progress
Life expectancy	Years, at birth	80.3	82.8	Significant progress
Healthy life years at birth	Expected years, to live in a healthy condition	64.6	69.6	Significant progress
Healthy life years at age 65	Expected years, to live in a healthy condition	10.3	13.6	Significant progress
All-cause mortality	Per 100,000 population	852.8	769	Significant progress
Infant mortality	Deaths per 1,000 live births	3.1 (2007)	2.8	Significant progress
Death due to cancer	Per 100,000 standard age distribution	298.87 (2011)	262.08 (2018)	Moderate progress
AMI death rate	Per 100,000 population	53.95	36.39 (2017)	Significant progress
30-day mortality after admission for AMI	Per 100 admissions aged 45+	7.4	4.7	Significant progress
In-hospital ischaemic stroke mortality	Deaths per 1,000 admissions	123	76 (2018)	Significant progress
In-hospital haemorrhagic stroke mortality	Deaths per 1,000 admissions	302	252 (2018)	Moderate progress
30-day mortality after admission for ischaemic stroke	Per 100 admissions aged 45+	10.3	6.7	Significant progress
Daily smokers	% of population aged 15+	24	14	Significant progress
Alcohol consumption	Litres per capita (aged 15+)	11	10.8	Limited/no progress
Obesity/Overweight	Measured % among adults	61	61	Limited/no progress
Asthma hospital admissions	Per 100,000 adults	42.9	42.3	Limited/no progress
COPD hospital admissions	Per 100,000 adults	369.8	335.5	Limited/no progress
Heart failure hospital admissions	Per 100,000 adults	182.6	146.6	Significant progress
Diabetes hospital admissions	Per 100,000 adults	156.8	94.3	Significant progress
Influenza	% of over 65 population vaccinated	54	59	Limited/no progress
Diphtheria, Tetanus, Pertussis	% of children at 1 year vaccinated	92 (2007)	95 (2018)	Moderate progress
Measles	% of children at 1 year vaccinated	88 (2007)	92 (2018)	Moderate progress
Hepatitis B	% of children at 1 year vaccinated	N/A	94 (2018)	Moderate progress

Key initiatives aligned to HSE Corporate plan, Slaintecare and National Service Plan

HSE Initiative	Corporate Plan 2021-2024 Objective	Slaintecare principle	Prioritised in National Service Plan
Healthy Ireland	6	3	Health and Wellbeing Strategy priority areas for action, core primary care services, community waiting list initiatives, implement Healthy Ireland
National Cancer Control Programme	1,2,6	1,2,3,5,6,7,8	Cancer services priority action areas and National Screening Service, capacity/patient flow, egress, scheduled and unscheduled care priority action areas
National Clinical Programmes	1,2,6	1,2,3	Capacity/patient flow, egress, scheduled and unscheduled care priority action areas
Public Health Reform Programme	2,6	3	Pubic Health, priority areas for action
Integrated Care Programme for the Prevention and Management of Chronic Disease	1,2,6	1,2,3	Admission avoidance, capacity/patient flow, egress, enhanced community care, core primary care services, community waiting list initiatives
Vaccination programme	6	3	Immunisation and vaccination priority areas

Conclusion

People in Ireland lead longer and healthier lives than most other Europeans, although behavioural risk factors, including smoking and obesity, remain important public health concerns. Significant progress has been made in recent years in optimising and enhancing service provision for the leading causes of mortality and Ireland compares favourably to OECD and EU countries. However, there is still significant progress that is required to improve the outcomes of people living with chronic conditions. The recent significant investment and resources in community based chronic disease programmes should help drive these improvements in the years to come. Although our vaccination uptake rates are high, we remain below WHO targets, and therefore targeted interventions are required to enhance uptake and further reduce vaccination hesitancy.

The indicators presented in this report are primarily health indicators, and although they provide some key insights into the performance of a health system, to form a holistic view of performance, it is necessary to review, analyse, track and benchmark a number of additional metrics including but not limited to (1) patient outcomes and experience, (2) equity of access, (3) quality and patient safety metrics including adverse events, near miss and never events (serious medical errors that are deemed to be preventable and should never occur), (4) staff metrics including morale, retention and recruitment, training and development, (5) innovation and learning capacity, (6) responsiveness and agility, (7) governance and accountability and (8) value for money.

The pandemic has taught us the importance of having robust real-world data to drive both health policy and operational decision making. The challenges we face due to the lack of a robust and modern integrated digital health infrastructure were heightened during the course of the pandemic particularly in relation to the absence of both a national disease register and a shared digital platform for knowledge exchange between acute hospitals and community and primary care services. In the absence of a fit for purpose digital health infrastructure, Ireland will continue to lag significantly behind other EU and OECD countries not just in terms of gains in operational effectiveness

and efficiencies but also in the robustness, thoroughness and quality of our data collection and analysis. To truly measure and evaluate the performance of our health service and to prioritise where investment and resources can have the biggest impact on improving the future health of our population, we need to have the digital infrastructure to make data-driven informed decisions.

Ireland has traditionally had a hospital centric healthcare system where the significant resources and investment have been primarily focused on acute care and building capacity. Over the past couple of years, accelerated by the pandemic and, in line with the Slaintecare vision, we have started to see an increasing shift to the left. The leading causes of death globally and in Ireland are preventable, chronic diseases which utilise a significant volume of our annual acute hospital bed days and outpatient capacity are preventable, and many communicable diseases are now preventable thanks to vaccines. To drive real and demonstrable improvements in population health we need to focus on prevention not cure. Empowering people to make better health choices by providing them with the resources and services in their own homes and communities is paramount to securing the future health and wellbeing of the population. Clinical leadership and oversight are key to ensuring that we focus, prioritise, integrate, and develop our community and primary care services in order to achieve real and demonstrable gains in healthy living years for the population.

Our health service is delivering good outcomes for our patients and compares favourable to the EU and OECD averages for many global health indicators despite the significant known challenges with access to services and capacity restraints. However, the future impact of COVID-19 on health outcomes remains uncertain in relation to both the long-term impact of previous viral infection and the negative impact which the pandemic has had on health seeking behaviours, potentially leading to late diagnoses and worse outcomes for many patients in the year(s) to come. In responding to the pandemic, globally, all healthcare systems experienced a steep learning curve and learned many valuable lessons to inform the future of healthcare delivery. Key to focusing and optimising the clinical effectiveness of future service provision is measuring and evaluating whether we are improving the lives, health, and wellbeing of our population by enabling people to live longer, healthier lives at home, with their families and friends and in their communities.

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