Irish Heart Foundation

Pre Budget Submission 2021

www.irishheart.ie

INTRODUCTION

What are we asking the Government to do?

The Irish Heart Foundation is calling on the Government to take a total of 23 actions to improve cardiovascular health and reduce the rates of death and disability from stroke and heart disease in the next Budget. In doing so, it draws on our research and policy analysis, the experience of our health promotion projects, and the insight gained through our day-to-day dialogue with health professionals and patients. As a consequence of patient, medical staff and family experiences throughout the COVID-19 pandemic, fundamental changes to our healthcare services are inevitable. These cost-effective initiatives will address identified gaps in prevention, diagnosis and treatment, support and care to address one of Ireland's biggest killers – cardiovascular disease – which was responsible for 28.9% of all deaths in Ireland in 2019.[i]

Age-standardised death rates from circulatory system diseases, including ischaemic heart disease and stroke, have declined by 25% over the past ten years.[ii]This reduction, achieved on the back of successful research, prevention and treatment, has nurtured complacency. With an ageing population and a list of risk factors that are getting worse, it is no surprise that of the first 327 COVID-19 ICU admissions, 50% of those had a chronic heart disease.[iv] It is clear therefore that much more can be done by the new Government to reduce death and suffering caused by CVD.

Many of these gaps can be addressed with cost-effective, or even cost-saving interventions. This Budget submission presents a series of low-cost, high-value proposals that can prevent cardiovascular disease, better identify and manage those at risk, and improve quality-of-care for those living with CVD.

These proposals:

- support the long-term health plan to reduce potentially preventable hospitalisations[v]
- align with Sláintecare's preventative health aims,[vi] with a specific plan to tackle obesity and high blood pressure
- build on existing Government programmes to tackle chronic disease and plan for an ageing population
- are patient-centred, evidence-based, cost-effective and easy to implement.

This submission also suggests revenue measures which, in turn, would enable the Government to increase its investment in healthcare, prevention and research.

COVID-19 and the need to rethink the landscape of healthcare provision

Across the world, efforts are underway to respond to the crisis triggered by COVID-19. The pandemic has exposed the vulnerability of our health, our healthcare system and our society, and the need to ensure greater resilience.

Data from the Health Protection Surveillance Centre[vii] highlights that patients with pre-existing cardiovascular diseases suffer the highest mortality rate of all COVID patients. Based on information available on underlying medical conditions for 18,935 confirmed cases of COVID-19 for notifications up to and including 17th June 2020, chronic heart disease was the most common underlying condition:

	Community		Hospital		ICU		All settings	
Chronic heart disease	1681	10.4%	949	34.9%	207	49.8%	2630	13.9%
Chronic respiratory disease	1467	9.0%	533	19.6%	102	24.5%	2000	10.6%
Diabetes	737	4.5%	437	16.0%	101	24.3%	1174	6.2%
Chronic neurological disease	812	5.0%	329	12.1%	19	4.6%	1141	6.0%
Cancer/malignancy	380	2.3%	341	12.5%	48	11.5%	721	3.8%
Chronic kidney disease	267	1.6%	261	9.6%	36	8.7%	528	2.8%
Asthma requiring medication	299	1.8%	149	5.5%	49	11.8%	448	2.4%
Immunodeficiency including HIV	276	1.7%	114	4.2%	26	6.3%	390	2.1%
BMI ≥ 40	157	1.0%	116	4.3%	70	16.8%	273	1.4%
Chronic liver disease	91	0.6%	66	2.4%	13	3.1%	157	0.8%

Moreover, of the information on underlying conditions that was available for 1,389 cases who had died, 42% of those who have died had chronic heart disease. For already overstretched cardiac and stroke services, the impact of delayed presentations and other factors resulting in disruptions to emergency treatment is deeply worrying.

An Irish Cardiac Society survey found that cardiac admissions fell by up to 80% after the virus struck in Ireland, whilst initial analysis suggests that the reduction in stroke presentations peaked at 40%.

Evidence is emerging internationally that a high proportion of excess deaths may have been caused by disruption to health services rather than the virus itself. Because of their urgent need of effective treatment, stroke and coronary care patients are particularly susceptible to impeded access to acute services, in addition to delayed presentations.

Meanwhile, reductions in acute hospital capacity, estimated at up to 33% in cardiology services, due to social distancing underline the need for a rapid acceleration of measures to beef up community health services and to shift care whenever possible from acute hospitals to the lowest appropriate level of complexity in the community.

But at a time when a coherent cardiovascular health policy is urgently required, no such plan exists. *Changing Cardiovascular Health: Cardiovascular Health Policy 2010 - 2019* has not been replaced and nor has this framework been evaluated.

The National Review of Specialist Cardiac Services, which convened in January 2018, is expected to recommend the optimal configuration of a national adult cardiac service in Ireland, part of its work being to review the status of recommendations contained within the ten year strategy. While the National Review was to be complete in Q2 2020, the COVID-19 pandemic has delayed this.[viii] Moreover, it is unclear to what extent a thorough evaluation of the strategy was carried out. In addition, as of August 2020, the National Stroke Strategy requested by former Minister for Health Simon Harris almost three years ago remains unpublished.

Critical to the development of Budget 2021 is the need to take the hidden costs of deferred care seriously, while simultaneously managing the worst of COVID-19 crisis currently. In that regard, this document points to a need for a shift in the point-of-care, how life will change after COVID-19, and how life can and should change post-COVID-19 from a healthcare perspective.

Sláintecare

As a prevention and patient organisation, the main interest of the Irish Heart Foundation is in the effectiveness of cardiovascular health and social care services in terms of prevention, treatment, care and support. Many heart and stroke patients use medical, rehabilitation and social care services

concurrently. Set against the background of Budget 2021 therefore is healthcare reform. The actions in this pre-Budget submission align with Slaintecare priorities to increase equity, promote the health of our population to prevent illness, to provide the majority of care at or closer to home, to create a system where care is provided on the basis of need, not ability to pay, to move our system from long waiting times to a timely service and to create an integrated system of care, with healthcare professionals working closely together.

The COVID-19 pandemic has brought into sharp focus the need for health care reforms that promote universal access to affordable care. Similarly, it has highlighted that in the short and medium term we must address the issues of bed capacity, lack of step down care facilities and the need to broaden access to community care so that our acute hospital system is better placed to deal with any future shock.

The mainstay of any health service is primary care and community care, and this crisis has shown that these must be employed more readily to ensure pressure is taken off the acute services which will, ultimately, face greater capacity pressures as social distancing measures are maintained into the future. This requires investment in community care, primary care and social care, and implementing Sláintecare.

SUMMARY OF MEASURES

THEME 1: PREVENTION		
ACTION 1: Detect and manage those at risk		
	Fund a three-year awareness campaign of the dangers of hypertension and the need for regular free check-ups	***€669,000 in 2021***
ACTION 2: Tackle determinants of health		
	Extend the SSD Tax & Introduce a timetable for new taxes incentivising reformulation of unhealthy products, beginning with a chocolate and sweet confectionery tax	***COSTS NOT AVAILABLE- RESEARCH NEEDED***
	Extend the school meals scheme to reduce food poverty and holiday hunger	***20% increase in Budget 2021 from the 2020 budgetary allocation for the school meals programme would support these initiatives - €12.32million***
	Extend the hot school meals programme	
	Extend the pilot scheme for the meals programme in Early Learning and Care Settings	
ACTION 3: Achieve a Tobacco Free Ireland of smoking prevalence of less than 5% by 2025		
	Increase tobacco taxation annually on a pro-rata basis so that all packs of 20 cigarettes cost at least €20 by 2025. This would require an increase of €1.26 on a pack in Budget 2021	***-6.2 to +10 € million per full year***
	An equivalent annual tobacco tax increase on RYO and the adoption of a taxation policy that acknowledges the substitution impact and adjusts tax rates accordingly to remove incentives to switch to a cheaper alternative	***NOT AVAILABLE- RESEARCH NEEDED***
ACTION 4: Reduce and deter the prevalence of youth and non-smoker e-cigarette use	*Apply an excise tax of €0.06 per ml of e-cigarette liquid to deter young people and non-smokers from purchasing and taking up electronic cigarettes*	***COSTS NOT AVAILABLE- RESEARCH NEEDED***
ACTION 5: Combat illicit tobacco smuggling and reduce the number of illicit tobacco packs in circulation	*Increased resources, including additional staffing and equipment, to support Revenue's National Action Plan in combatting cigarette smuggling*	***RESEARCH NEEDED***
ACTION 6: Reduce the number of locations selling tobacco products and identify where		

electronic cigarettes are being sold		
	Introduce an annual €500 tobacco retailer license fee per retail outlet	***Up to €6,621,500 per year could be raised***
	Introduce an annual €50 electronic cigarette retailer license fee per retail outlet	***COSTS NOT AVAILABLE- RESEARCH NEEDED***
ACTION 7: Reduce the number of deaths attributable to air pollution caused by solid fuel burning	*Increase the level of funding allocated to local authorities to monitor and enforce smoky coal bans, to staff additional employees mandated to enforce the ban, and to double the maximum fine amount for breaches of regulation from €5,000 to €10,000*	***COSTS NOT AVAILABLE- currently no specific funding allocated to local authorities for air quality monitoring and enforcement[ix].***
THEME 2: SUPPORT & CARE		
ACTION 8: Boost uptake of life-saving cardiac rehabilitation	*Provide adequate national capacity for cardiac rehabilitation*	***€9.6million***
ACTION 9: Increase Homecare Support	*Investment to provide the necessary levels of support for people who are already receiving home support services and to meet the growing demand for new home care packages*	***€123 million***
ACTION 10: Support Funding of AED provision for children at risk of sudden cardiac death	*Introduce a scheme to provide AEDs for children with life threatening cardiac conditions*	***€26,000***
ACTION 11: Support smokers in quitting through properly resourced smoking cessation services	*Increase the level of funding for tobacco cessation services*	***€27 million***
THEME 3: ACUTE SERVICES		
ACTION 12: Act FAST	*Support the delivery of a fully funded FAST awareness campaign*	***€300,000 in 2021***
ACTION 13: Provide access to thrombectomy for all suitable stroke patients regardless of location	*Provide funding for the costs associated with decision-supported software for emergency stroke radiology assessment and case selection for thrombectomy treatment*	***€150,000***
ACTION 14: Ensure that every hospital treating stroke has a properly functioning stroke service	*Fund Year 1 of NSP Staged Plan for HSCP Optimal staffing levels*	***€2,384,327***
ACTION 15: Save 5,124 hospital bed days and a net cost saving of €1,398,226 by enhancing Early Supported Discharge programmes		
	Consolidate the existing six ESD teams	***€876,570***
	Fund ESD Service Expansion as per the NSP plan for Year 1	***€1,112,649***

ACTION 16: Invest in Neurorehabilitation	*Investment of €4.5m in neurorehabilitation services as a first step in meeting the commitment in the Programme for Government to implement the National Neurorehabilitation Strategy*	***€4.5million***
ACTION 17: Improve Heart Failure services nationally & eliminate geographical gaps in care		
	Double the number of HF nurses, as well as appointing more Advanced Nurse Practitioners and developing their role in the community	***COSTS NOT AVAILABLE***
	HF Community Integration Teams should be available countrywide and their roles standardised across all CHO areas.	
	Widespread access for GPs to conduct testing for B-type Natriuretic Peptide	
	Develop standardised referral pathways for HF patients using existing IT infrastructure such as Health Link to aid improved communication between the community and hospital services	
	Address the geographical gap in the provision of heart failure services in the South/South West hospital group	***€551,000***
	National roll-out of heart failure integrated care projects	***€4.9 million***
ACTION 18: Quality Improvement for In-Hospital Resuscitation	*Fund a National Cardiac Arrest Audit pilot project in Ireland*	***€11,960***
	THEME 4: THE WORLD WE LIVE IN	
ACTION 19: Increase the level of cycling in Ireland to boost physical activity and reduce air pollution	*Expand the Cycle to Work scheme beyond PAYE to everyone – employers, sole-traders, students, jobseekers, disabled, unpaid home-work and enlarge from €1,000 to €2,000 for the purchase of electric bikes and cargo bike*	**COSTS NOT AVAILABLE-RESEARCH NEEDED**
ACTION 20: Increase the numbers of students walking and cycling to school	*Develop a grant scheme to fund infrastructure to support safer active travel to school – funding active school travel officers to work locally with government agencies and developers to improve active travel infrastructure around schools and address local barriers such as safety risks identified by parents*	***Double the level of funding allocated to the An Taisce Green-Schools Travel Programme from €1.65 million to €3.3 million to fund grant scheme and active school officers[x].***

ACTION 21: Reduce the number of private motorised vehicles in Dublin city centre to lower the level of toxic air pollution	*Implement a daily congestion charge on all private motorised vehicles entering Dublin city centre and examine the feasibility of extending similar congestion charges to other major urban areas*	**COSTS NOT AVAILABLE- Forthcoming government commissioned feasibility report to provide figures.**
ACTION 22: Deter the purchase and use of fossil fueled vehicles to lower air pollution levels	*Double the nitrogen dioxide levy applied to all VRT category A vehicles (passengers and SUVs) and apply the rate to all registered vehicles*	***€80 million per full year***
ACTION 23: Reduce the level of air pollution by incentivising the purchase of electric motorised vehicles over fossil-fuel powered vehicles	*Introduce a €7,000 diesel/petrol car scrappage scheme in favour of electric vehicles*	***COSTS NOT AVAILABLE- RESEARCH NEEDED***[xi]

THEME 1: PREVENTION

> *"Lifestyle factors such as smoking, drinking, levels of physical activity and obesity continue to be issues which have the potential to jeopardise many of the health gains achieved in recent years. However, inequalities in health are closely linked with wider social determinants including living and working conditions, issues of service access, and cultural and physical environments. Taken together with an ageing population, adverse trends, if not addressed now, will lead to an unhealthy and costly future."* – Health in Ireland Key Trends 2019[xii]

Significant further reductions in mortality are achievable through more effective use of existing resources and cost-effective service development. However, the impact of the adverse trends highlighted by Healthy Ireland have, unfortunately, been borne out during the COVID-19 pandemic here in Ireland. The evidence is clear that a change in dietary habits, physical activity and tobacco control can produce rapid changes in population risk factors for chronic diseases, but these preventative policies must trigger sustained actions directed particularly at the broader social, economic and commercial determinants of health. Unless these determinants are addressed, targeting interventions solely at individuals and families will be of limited use. For this reason, non-COVID-19 healthcare must concentrate on prevention programmes and there must be a cross-Departmental focus on addressing these determinants of health.

Problem: Lifestyle behaviours are fuelling preventable chronic disease as many Irish people are engaging in, or affected by, unhealthy behaviours. The most recent Healthy Ireland Survey[1] revealed that:

- 17% of the population are current smokers. Smoking rates remain highest among those aged 25 to 34
- 37% of the population are overweight and 23% are obese
- 17% of those who are overweight or obese are also smokers
- Just under half the population (46%) are achieving the minimum level of activity recommended by the National Guidelines by being moderately active for at least 150 minutes a week
- Of the million people in Ireland with high blood pressure, nearly half are unaware they have the condition.

- **Solution:** Build a comprehensive preventive health program
- **Impact:** Reduce avoidable hospital admissions and primary care costs

As the world waits indefinitely for a vaccine for COVID-19, action is needed to make populations more resilient. This includes a concerted effort to tackle Cardiovascular disease and its main risk factors – obesity and hypertension. Indeed, hospital admissions and COVID patient characteristics already point to a clear link between obesity, cardiovascular disease and COVID-19.

Of those who have died from COVID-19 in Ireland from 28 February to 21 August 2020 in Ireland, 1,449 had an underlying health condition. Of these, 647 (45%) had chronic heart disease, 245 had hypertension and 30 had a BMI >= 40. [xiii] This points to the severity of underlying health conditions in morbidity when trying to deal with this, and future, pandemics.

The current realities of the Irish health system are such that reactive care has taken precedence over preventative and planned care. This has manifested in the surge in acute hospital presentations that is becoming increasingly unsustainable in light of the projected growth in health service demand into the future, which is driven largely by demographic and epidemiological trends, and which will have implications for the prevention, treatment and management of cardiovascular disease.

Moreover, this deprioritising of preventative care is reflected in HSE Budgets for national health and wellbeing. The Health and Wellbeing Budget for 2020 is €141 million.[xiv] In 2017, when the Sláintecare Report was written, that budget was €233.3 million.[xv] Irish investment in public health falls well behind other OECD nations, at only 0.8% of the total HSE Budget – a drop from 1.7% in 2017.

One of the 8 fundamental principles of the 2017 Sláintecare Report centred on the nature of integrated care: "Patients accessing care at most appropriate, cost effective service level with a strong emphasis on prevention and public health."[xvi] The report then further noted that "up-front investments and a powerful prevention strategy will prevent chronic disease from overwhelming the health service in the future."[xvii]

Ireland needs a comprehensive approach to prevention and to achieve it needs appropriate resource allocation. This should include implementing and resourcing Healthy Ireland in a meaningful way, with specific measures to:

- Provide greater access to blood pressure checks and monitoring
- Expand physical activity investment through greater implementation of Get Ireland Active: The National Physical Activity Plan for Ireland
- Further reduce smoking rates, to meet the target of a Smoke Free Ireland by 2025
- Cut the rate childhood obesity in Ireland by 50% by 2030

ACTION 1: Detect and manage those at risk

Blood Pressure

Treating Hypertension in Ireland: The Costs of Inaction

The costs of treating high blood pressure in terms of medicines reimbursed across the GMS scheme, the DPS scheme, the LTI scheme, High Tech and HAA were €123,500,463 in 2019.[1] On top of this, Doctors' Special Item of Service for hypertension treatment cost an additional €9,184,260.

Indeed, this data does not capture the full extent of the costs of hypertension in Ireland as the figures do not include items dispensed outside community drug schemes where the prescription has been paid for privately or claims which are under the DPS monthly threshold amount.

If you are diagnosed with high blood pressure (hypertension), it means your blood pressure is consistently higher than it should be. The higher your blood pressure, the greater your risk of heart attack or stroke. But the only way to find out if you have high blood pressure is to have it measured. A person with high blood pressure may feel well, look well and rarely has any symptoms.

Research has shown that Ireland has one of the lowest rates of awareness, treatment, and control of hypertension among 12 high-income countries[xviii]. Currently, only patients holding a medical or a GP visit card can receive check-ups for hypertension without charges and there are no plans at present to introduce free check-ups for hypertension to the general population[xix].

In relation to cardiovascular disease, the World Health Organisation recommends an absolute risk approach for the control of hypertension (high blood pressure), describing it as the 'best buy' available to governments to support people who have had a heart attack or stroke or are at high risk of a cardiovascular event.[xx]

1.1 Detect and manage those at high risk of heart attack and stroke by funding a three-year awareness campaign of the dangers of hypertension and the need for regular free check-ups.

ACTION 2: Tackle determinants of health

OBESITY

Safefood research estimates that 85,688 on the island of Ireland will die prematurely due to overweight and obesity.[xxi] In Ireland, data from the Health Protection Surveillance Centre[xxii] shows that, while BMI ≥ 40 is the 9th most prevalent condition across COVID-19 cases in all settings, it is the 4th most prevalent condition for cases in ICU at 16.8%, behind chronic heart disease, chronic respiratory disease and diabetes.

To achieve the Government's vision to turn the tide of the obesity epidemic, to increase the number of people with a healthy weight and set us on a path where healthy weight becomes the norm, prevention programmes need a significant investment. Moreover, recognising the commitment in the Programme for Government for a Public Health (Obesity) Act, tackling childhood obesity should be a pivotal part of offsetting the severity of any future pandemics through

- a ban on unhealthy food and beverage marketing to children
- the introduction of "no-fry" zones around schools, developing national level guidance for all Local Authorities on the introduction of no-fry zones adjacent to schools as a matter of priority
- new fiscal measures to incentivise reformulation and fund subsidies for healthy foods as per Actions 1.8 and 1.10 of A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016-2025

Whilst beverages containing milk fats with less than 119 milligrams of calcium per 100 millilitres came under the scope of the sugar sweetened drinks tax in January 2019, popular brands of milk with high sugar and low calcium content continue to be exempt. This is an anomaly in conflict with the rationale for the tax and should be addressed.

Otherwise the sugar sweetened drinks tax has been a resounding success. Although the impact on sugar consumption in Ireland is not yet known, in the UK there was a 28.8% drop in the average sugar content of drinks subject to SSDT in UK and a 21.6% decrease in the total sugar purchased from these drinks.

However, the impact of the tax in assisting efforts to reduce our high rates of overweight and obesity would be increased if at least a proportion of the proceeds were spent on measures to improve diets, particularly of children in disadvantaged communities.

Table 1: The yield from Sugar Sweetened Drinks Tax (SSDT) since its inception in 2018 to April 2020[xxiii]

	€m
2018	16.3
2019	33.0
2020 (4 Months)	10.2

Meanwhile, industry reformulation programmes have consistently failed to deliver reductions in fat, sugar and salt required to reduce calorie intake and produce a healthier diet. In Ireland, a reformulation programme undertaken by IBEC's Food Drink Ireland over 12-year period[xxiv] delivered no reduction in average energy consumed across the population in any age group.

By the end of 2018 reductions in sugar under Public Health England's reformulation programme achieved an overall reduction of just 2.9% in average sugar content among retail and manufacturer branded products out of 20% target to be reached over five years to 2020. This is just one tenth of the reduction in average sugar content of fizzy drinks achieved due to the imposition of the tax over a much shorter period of time.

The decisive action of manufacturers to reduce their exposure to the tax compared to efforts under the reformulation programme demonstrates the futility of voluntary schemes and the need for further use of taxes to incentivise reformulation, in addition to a programme imposing mandatory incremental targets that includes provision for rigorous monitoring, time limits and significant penalties for non-compliance.

Consequently, a timetable for the imposition of new taxation should be drawn up. Due to its impact on children's diets, along with the fact that it is a significant factor in the overconsumption of both sugar and fat by children, chocolate confectionary is the most obvious next subject for taxes that encourage reformulation.

Even among three year-olds, sugar intake equating to ten teaspoons a day is 250% higher than the recommended daily maximum[xxv]. Meanwhile the National Children's Survey II Summary Report states that saturated fat intake among 5-12 year-olds in Ireland totals 14% - 40% above the recommended maximum[xxvi]. Chocolate and sweet confectionery are among the biggest contributors to both sugar and saturated fat in our children's diets, yet they contain no nutritional value and contribute to excess calorie intake.

Recent research in the UK found that a tax on high sugar snacks would have even more impact than the sugar sweetened drinks tax, with a 20% price increase reducing average annual calorie intake by 8,900 calories, leading to an average weight loss of 1.3kg over one year[xxvii]. Evidence from Mexico shows that in the year after the imposition of an 8% tax on non-essential foods with energy density of ≥275 kcal/100 g purchases were reduced by 5.1% in the whole population and 10.2% in low socioeconomic status households[xxviii].

A levy for chocolate and sweet confectionery should be introduced here, incentivising reformulation based on overall energy density to providing manufacturers with the opportunity for their products to be exempt.

Despite the rationale for extending taxation on unhealthy products, no work has been undertaken to review evidence for such fiscal measures as set out in Action 1.10 of A Healthy Weight for Ireland: Obesity Policy and Action Plan 2016-2025. This evidence review was to have been developed between 2016-2018 alongside proposals on the rollout of evidence-based fiscal measures to support healthy eating and lifestyles.

According to the Department of Health, the current focus in this area is on putting in place a reformulation programme for HFSS food and drink, under Action 3.1 of the Obesity Plan, working on a roadmap for reformulation, including targets for reductions in salt, sugar, saturated fats and calories, and a proposed approach to achieve these targets.[xxix] These action points should not be in competition for implementation with additional taxation, but should be done concurrently.

2.1 Extend the SSD Tax & Introduce a timetable for new taxes incentivising reformulation of unhealthy products, beginning with a chocolate and sweet confectionery tax

The school meals programme provides funding towards the provision of food to 1,580 schools and organisations, benefitting 250,000 children.

Following the announcement of the closure of schools due to the Covid-19 pandemic, the impacts of school meals being unavailable to pupils, particularly those experiencing disadvantage and food poverty, was raised. The Department of Employment Affairs and Social Protection confirmed that funding to schools would continue to enable schools provide food during the summer months, in line with the parameters of the school meals scheme.[xxx] The pandemic drew to public attention on how important this programme is for hundreds of thousands of children in the State. After the pandemic, we cannot resort to school meals in term time alone and the scheme should be maintained during holidays.

As part of Budget 2019, the Department of Employment Affairs and Social Protection announced a pilot scheme providing hot school meals in primary schools at a cost of €1m for 2019 and €2.5m in 2020. The pilot involves 37 schools benefitting 6,744 students for the 2019/2020 academic year. Budget 2020 provided an additional €4 million in funding to extend the hot meals for children currently receiving the cold lunch option from September 2020, covering an additional 35,000 children who currently receive the cold lunch option.

The school meals programme is not universal and priority is given to DEIS schools, as decided by the Department of Education and Skills. Moreover, "the settings where children most at risk of experiencing food poverty are, early years settings for young children and youth services for teenagers, do not form part of the School Meals Programme." The Department of Children and Youth Affairs are currently planning a pilot meal programme in Early Learning and Care Settings under First 5, the Whole-of-Government Strategy for Babies, Young Children and their Families 2019-2028.[xxxi] As part of Budget 2020, funding of €160,000 was secured to pilot this initiative and will be trialled in a sample of approximately 45 community, not-for-profit ELC settings.[xxxii] While this is welcome, more should be done and a meals programme pilot to cover youth services, and after-school programmes to address the issue of food poverty for children and young people availing of those should be introduced for September 2021.

The cost of increasing the School meals programme is presented in Table 2. Looking at the expenditure from the school meals programme, a 20% increase in expenditure in Budget 2021 from the 2020 budgetary allocation of €61.6 million, could fund further pilots in youth services and early after-school programmes, as well as meet the costs of the extension of the School Meals Scheme to during the holidays.

Table 2: Cost of increasing expenditure on the school meals programme[xxxiii]

Increase	Cost €m
5%	3.08
10%	6.16
15%	9.24
20%	12.32

2.2 Extend the school meals scheme to reduce food poverty and holiday hunger, providing nutritious food to the most disadvantaged in society.

2.3 Extend the hot school meals programme, following on from the pilot scheme

2.4 Extend the pilot scheme for the meals programme in in Early Learning and Care Settings to cover youth services and after-school programmes

TOBACCO

ACTION 3: Achieve a Tobacco Free Ireland of smoking prevalence of less than 5% by 2025

Tobacco use is still the leading cause of preventable death in Ireland with almost 6,000 smokers dying each year from tobacco related diseases[xxxiv]. And whilst smoking rates have steadily reduced in recent years, smokers still constitute 17% of the population over the age of 15, or an estimated 680,000 people .

Evidence shows that the most effective way to reduce demand for cigarettes is through taxation[xxxv]. Therefore, we are recommending that tax on 20 cigarettes at the most popular price category should increase annually on a pro-rata basis so that the overall cost of a pack reaches €20 by 2025.

Below, table X sets out the most popular price category (MPPC) for a pack of 20 cigarettes (displayed in cents) following the €0.50 tax increase from budget 2020 and the additional €0.30 trade increase in 2019 and the €0.20 trade increase in 2020.

Table 3: Price of MPPC for a pack of 20 cigarette sticks in 2020[xxxvi]

	MPPC	Tax increase	Trade increase	Total increase	MPPC
Year	**At 1 Jan**	**Increase**	**Increase**		**At year end**
2018	12.00	0.50	0.20	0.70	12.70
2019	12.70	0.50	0.30	0.80	13.50
2020	13.50	0.00	0.20	0.20	13.70*
Increase (2018 – 2020)		**1.00**	**0.70**	**1.70**	

According to elasticity modelling results from Revenue, a 10 per cent *increase* in the price of cigarettes is associated with a *decline* in the consumption of taxed cigarettes of 18% on average[xxxvii].

We propose the introduction of an annual tobacco tax escalator that will increase the price of a pack of 20 cigarettes from the current retail price of €13.70 to at least €20 by 2025 deadline for a Tobacco Free Ireland. If delivered on a pro-rata basis, this would result in an increase of €1.26 per pack in Budget 2021. In tandem with this, we are also calling for a fourfold increase in funding for tobacco control measures to €50 million.

Such an increased would raise the price of a MPPC from €13.70 to €14.96 and represent a 9% increase rounded. According to the budget 2021 Revenue Ready Reckoner, a 10% increase in the price of 20 pack of cigarettes would lead to a change in the estimated receipts of tobacco products tax in the range of -7 to +11 € million per full year[xxxviii]. As a 5% increase would lead to a change in the range of -3 to +6 € million, a 9% would lead to a change in the range of -6.2 to +10 € million per full year.

3.1 Increase tobacco taxation annually on a pro-rata basis so that all packs of 20 cigarettes cost at least €20 by 2025. This would require an increase of €1.26 on a pack in budget 2020

An increase in tobacco taxation on cigarettes can lead to consumers switching to other tobacco products however, such as roll-your-own (RYO) cigarettes. This is reflected in data showing that RYO consumption increased eight-fold between 2003 and 2016[xxxix]. Since 2005, driven by an increase in RYO consumption, Tobacco Product Tax (TPT) receipts on 'Other Smoking Tobacco', or Roll Your Own (RYO) products have risen from €26m to €105m at the end of 2019[xl].

In the midst of regular budget increases on manufactured cigarettes, the excise on RYO tobacco has remained substantially lower. This has made RYO cigarettes more appealing, particularly to younger smokers. Indeed, the highest prevalence of RYO smokers is among under 25-year-olds who account for 45% of the market[xli]. Therefore, to maximise the health impact of tax increases on cigarettes, there is a need for action to close the price gap with RYO.

The consumption of RYO cigarettes is a significant public health issue as they expose smokers to similar levels of carcinogens as manufactured cigarettes[xlii].There is also evidence to show that the risks are higher for RYO smokers in terms of particular cancers such as cancer of the oesophagus, mouth, pharynx and larynx. Although price has been shown to be the main reason for smoking RYO, they are also chosen as they are thought be healthier than manufactured cigarettes with less risk.[xliii]

The Irish Heart Foundation recommends that Budget 2021 significantly narrows the price variability and price gaps between products in the tobacco market. This recommendation is in accordance with the views of the Tobacco Free Ireland Programme and National Tobacco Control Office of the HSE, who note that: "Taxation policy on RYO cigarettes should be reviewed to minimize the price differential between RYO and manufactured cigarettes[xliv]."

3.2 An equivalent annual tobacco tax increase on RYO and the adoption of a taxation policy that acknowledges the substitution impact and adjusts tax rates accordingly to remove incentives to switch to a cheaper alternative.

ACTION 4: Reduce and deter the prevalence of youth and non-smoker e-cigarette use

Electronic cigarette use in Ireland has grown steadily in the past several years and currently 5% of the population use these devices, up from 3% in 2015[xlv]. As electronic cigarettes are still relatively new, the long-term health implications are still unknown. However, studies have shown that short-term use can damage the brain, heart, lungs, and blood vessels[xlvi], and the WHO has stated that they are harmful to health[xlvii].

The programme for government stated that it intended to bring in a ''targeted regime to specifically discourage 'vaping' and e-cigarettes''[xlviii]. We welcome the introduction of an excise tax on e-cigarettes but believe the excise tax must be set at a level that prices these devices out of the purchasing reach of children and adolescents, but remain affordable for adults who are using them a smoking cessation device. Any e-cigarette excise tax must be accompanied by a larger increase in tobacco excise tax to ensure users are deterred from moving back to traditional cigarettes and roll-your-own as the balance of current evidence suggests they are significantly more harmful to health.

The latest research indicates that over one-in-five children (22%) aged between 12 and 17 years of age have tried e-cigarettes. Given the harmful effects of e-cigarette use on health and the impact that nicotine has on youth brain development[xlix], we are greatly concerned about the increasing youth uptake of e-cigarettes. In this context, it is imperative that all measures, including the form of e-cigarette taxation, must be introduced to reduce the accessibility of e-cigarettes to youth people.

To deter the purchase and use of e-cigarettes among young people and non-smokers, the Irish Heart Foundation recommends the imposition of an excise tax of €0.06 per ml of e-cigarette liquid. There is growing evidence that youth use of e-cigarettes can act as a gateway to eventual tobacco cigarette smoking initiation. A systematic review carried out by the Health Research Board found a four-fold increased likelihood between e-cigarettes use and initiating smoking tobacco cigarettes in adolescents[l].

Although the systematic review is a pre-print and has yet to be peer reviewed, the studies included in it have been peer reviewed and suggest an increased likelihood between e-cigarette use and tobacco smoking initiation.

We are conscious of the importance of finding a rate that has a significant impact on discouraging young people from purchasing e-cigarettes, but also one that does not result in long-term smokers using these products to revert to tobacco. As a result, we are suggesting an initial rate that is low compared to most other countries that have imposed an e-cigarette tax. Finland and Portugal have applied a 30c per ml tax, for example, whilst at least another eight European countries have double digit rates. To support smokers to quit, we are also calling for all revenue raised from this tax to be ringfenced and allocated to smoking cessation services.

In the World Bank's working paper on e-cigarettes and taxation, it recommends that imposing a tax on e-cigarette products could limit youth access to these harmful products and reduce e-cigarette use and consumption[li]. The paper cites several studies that suggest tax could limit youth access to e-cigarettes, including evidence from the US which reveals that higher prices for e-cigarettes appear to be associated with reduced e-cigarette use among adolescents[lii]. Furthermore, evidence from North Carolina found that for every 10% increase in e-cigarette price there may be a 0.8% to 9.1% decrease in the youth use rate[liii]. As such, we believe that the introduction of an e-cigarette tax could help reduce the youth use and consumption rate of e-cigarettes here in Ireland.

In addition, we recommend the introduction of an immediate ban on online cross-border sales of e-cigarettes to prevent young people from purchasing cheaper e-cigarettes and e-liquids online from overseas markets. Finally, the Covid-19 pandemic has re-enforced the need to prevent all age groups from taking up and using e-cigarettes or traditional tobacco as the use of both is an act of touching hand-to-mouth and thereby increases the possibility of transmission.

4.1 Apply an excise tax of €0.06 per ml of e-cigarette liquid to deter young people and non-smokers from purchasing and taking up electronic cigarettes

ACTION 5: Combat illicit tobacco smuggling and reduce the number of illicit tobacco packs in circulation

Overestimating the tobacco smuggling rate has been the tobacco industry's main tactic for years in seeking to prevent tobacco tax increases that reduce smoking rates and thereby their profits. In fact, the correlation between high prices and high levels of smuggling does not exist in Western Europe[liv]. Cigarette smuggling is not caused principally by "market forces". It is mainly caused by fraud, by the illegal evasion of import duty and by factors such as the strength of criminal networks, the scale of enforcement measures and penalties imposed for smuggling.

However, smuggling rates are rising in Ireland and Revenue estimates that illicit tobacco accounted for some 15% of total cigarette consumption in Ireland during 2019, approximately 484 million of the 3.3 billion cigarettes smoked [lv]. This level of illicit consumption represents a potential loss to the Exchequer of approximately €242 million (Excise & VAT).

This is not only important due to its cost to the State in lost revenue. Smuggling can negate the impact of tobacco tax increases by providing a supply of cheap tobacco, including to younger smokers.

Consequently, it is now vital that Revenue develop a new national action plan to combat illicit tobacco. In order to be effective, the Revenue plan must be adequately funded. This should include increased resources including staffing and equipment for investigations; more effective control of tobacco industry supply chains; and a clear target for reducing the size of the illicit market.

To combat the threat posed by illegal cigarette smuggling, we recommend that the government provide increased funding for Revenue dedicated to tackling illicit trade, with an aim to reduce the smuggling rate to at least 10%, as achieved in 2016, by 2024.

5.1 Increased resources, including additional staffing and equipment, to support Revenue's National Action Plan in combatting cigarette smuggling

ACTION 6: Reduce the number of locations selling tobacco products and identify where electronic cigarettes are being sold

Anyone selling tobacco products by retail in Ireland whether over the counter or from a self-service vending machine must register with the National Tobacco Control Office (NTCO)[lvi]. Each applicant registering with the NTCO must pay a once-off application fee of €50 and this fee only applies once to a business regardless of how many to a business retail outlets they have[lvii]. This is inadequate given the harm wrought on society by tobacco and the need for a strong regulatory system overseeing its sale.

In addition, there is no e-cigarette retailer license fee meaning that any retail establishment can sell these addictive products. This has resulted in a widespread prevalence of retail establishments selling e-cigarettes making them easily accessible to the public, and in particular young people. Given high addiction rates among teenagers, this must also be addressed.

The previous government planned to bring in legislation that introduced a new licensing system that would require shops to pay an annual fee to sell tobacco products and nicotine-inhaling products such as e-cigarettes[lviii]. In addition, the Programme for Government states that it plans to ''introduce a licensing system for the retail sale of nicotine-inhaling products and restrict the types of retailers that can sell these products''[lix].

Increasing the tobacco retailer license fee from a once-off payment of €50 per entity to a minimum annual license fee of €500 per outlet in which they sell tobacco would create a much more robust system. Furthermore, introducing an e-cigarette retailer license fee per outlet of initially €50 per annum would create an essential database of retailers that sell e-cigarettes. Both fees would support further development and the maintenance of the HSE retailer database.

In 2019, there were 13,243 retail outlets registered to sell tobacco on the National Register of Tobacco Retailers[lx]. Assuming that figure has remained constant for 2020 and that each retail outlet purchases a tobacco retail license annually to continue to sell tobacco, the €500 annual fee could raise up to €6,621,500 each year.

6.1. Introduce an annual €500 tobacco retailer license fee per retail outlet

6.2 Introduce an annual €50 electronic cigarette retailer license fee per retail outlet

CLIMATE

ACTION 7: Reduce the number of deaths attributable to air pollution caused by solid fuel burning

Every year, over 1,000 premature deaths in Ireland are directly attributable to poor air quality caused by solid fuel burning. Moreover, the EPA has underlined that the dust in Irish air is of ''growing concern'', warning that levels are particularly high during the winter months when people's use of solid fuels such as coal, peat and wood impacts on air quality and on health, especially in small towns and villages where the smoky coal ban does not apply[lxi].

Although the Programme for Government has committed to extending the smoky coal ban to new towns and eventually nationwide as part of a clean air strategy[lxii], only an immediate nationwide ban of the burning of all solid smoky fuels is adequate to address the health crisis caused by air pollution.

Individual local authorities are primarily responsible for the enforcement of legislation on solid fuel, including the 'smoky coal' regulations[lxiii] and there is no dedicated funding to undertake these specific functions and it is at the discretion of each local authority to decide its own priorities and to allocate staff and resources accordingly[lxiv].

Moreover, as seen below in table 4, the number of enforcement actions and fines under the Solid Fuel regulations are extremely low.

Table 4: Level of enforcement notices and prosecutions as reported to the Agency by Local authorities for the years 2015 to 2018 under the ''Smoky Coal Ban'' Regulations.

	2015	2016	2017	2018
Enforcement actions under Solid Fuel regulations (S.I. 326 of 2012)	78	50	97	7
Fixed Payment Notices (FPNs) under Solid Fuel regulations (S.I. 326 of 2012)	0	11	5	8
Prosecutions initiated under the Solid Fuel regulations (S.I. 326 of 2012)	2	2	0	1
Prosecutions initiated for failure to pay FPNs	N/A	0	3	6

To ensure that the smoky coal ban is properly enforced by local authorities, a greater level of dedicated funding to each authority is required. Such allocated funding would allow local authorities to properly monitor and enforce the smoky coal ban, and to staff additional employees mandated to enforce the ban. Furthermore, to appropriately reflect the severity and health implications that breaching the smoky coal ban entails, the maximum fine amount for breaching the regulation should be doubled from €5,000 to €10,000. Only in this manner can the smoky coal ban be properly enforced, and air quality be maintained so that public health is protected, and lives are saved.

7.1 Increase the level of funding allocated to local authorities to monitor and enforce smoky coal bans, to staff additional employees mandated to enforce the ban, and to double the maximum fine amount for breaches of regulation from €5,000 to €10,000

THEME 2: SUPPORT & CARE

Shortcomings in care coordination between hospital and follow-up care in Ireland have been identified by the OECD, with high rates of delayed discharges in Ireland contributing to high hospital bed occupancy rates.[lxv] The report noted that hospital bed occupancy rates could be reduced if post-discharge planning and care arrangements were improved and that access to primary care and community care could also help avoid many hospitalisations for ambulatory care-sensitive conditions. The inability to discharge patients, often with cardiovascular disease, due to problems accessing support in the community, home care packages and other forms of support is a major contributor to the problem .

A recent Delayed Transfers of Care audit undertaken across eight hospitals highlighted significant gaps in community specialist and inpatient specialist services which are having a severe impact on acute services. This led to a larger audit which showed that under reporting of delayed discharges waiting for neurorehabilitation was significant across the country and this had a marked impact on identifying true demand subsequent investment in these services

When applying the eight-hospital audit to national figures, it's estimated that the numbers delayed in acute hospital due to lack of access to neurorehabilitation could be close to 400. The audit results show there are a considerable number of people delayed in the acute hospital system awaiting neurorehabilitation. They are largely within the 18-64 age group with diagnoses of stroke, Acquired Brain Injury and Spinal Cord Injury (56%). This group, on the day of data collection, had collectively accumulated 18,121 days. With the average length of stay in an acute hospital bed in Ireland being 6 days, 3,020 patients could have been admitted, treated and discharged through those beds.

A surge in the number of patients with new or comorbid cardiovascular disease will translate into more frequent and, in some cases, prolonged rehabilitation needs after acute hospitalisation. Therefore, it is necessary to address the lack of capacity and resources at the community level as a matter of priority to ensure care is being delivered.

With a reduction in hospital capacity caused by Covid, Budget 2021 must address the lack of capacity and resources at the community level as a matter of priority to ensure care is being delivered. Theme 3, Acute Services, further highlights how support and care measures like Early Supported Discharge, equally relevant to this theme, can help patients in recovery and ease pressure on acute services.

ACTION 8: Boost uptake of life-saving cardiac rehabilitation

The HIQA Health technology assessment of chronic disease self-management support interventions[lxvi] and the HSE's National Self-Management Support Framework identified cardiac rehabilitation as one of the most cost effective methods of supporting patients to self-manage, and improving clinical and health service usage outcomes (resulting in a 30% reduction in hospitalisation in 1 year). The provision of cardiac rehabilitation capacity to meet the population needs is a top priority under the Self-Management Support Framework.

A HSE needs assessment for cardiac rehabilitation research completed in November 2016 showed capacity to provide cardiac rehabilitation for fewer than 5,000 patients compared with a need to accommodate almost 13,000 annually following an admission with coronary heart disease or heart failure alone – equating to an ability to meet 39% of need. Geographical disparities are also apparent with need compared to capacity by county varying from 9% to 75%. Referrals for cardiac

rehabilitation were 41% below their target figure and HF patients were a particularly under-represented group comprising only 5% of referrals.

The study concludes that not only does cardiac rehabilitation reduce mortality and hospitalisations, it is cost effective and has the potential to save money and reduce pressures on acute services by saving an estimated 6,090 inpatient bed days.

Cardiac rehabilitation services should be expanded to be widely accessible and specifically inclusive of heart failure patients. In order to provide adequate national capacity for cardiac rehabilitation for patients for whom cardiac rehabilitation is recommended, €9.6million will be required annually. Budget 2021 must make this funding available given its cost effectiveness and significant human benefit.

8.1 Cardiac rehabilitation services should be expanded to be widely accessible and specifically inclusive of heart failure patients. In order to provide adequate national capacity for cardiac rehabilitation for patients for whom cardiac rehabilitation is recommended, €9.6million is required

ACTION 9: Increase Homecare Support

It is vital that funding for home care packages is made available in the community and to support discharge and enablement services. Therefore, funding for the Home Supports Service should be increased by €123 million in Budget 2021. This is based on an increase in both the budget allocation and the waiting list from September's HSE performance report. While the Department of Health is working on a new statutory scheme for home care, people with disabilities, older people and their families, can't put care off until the new scheme is introduced.

9.1 Investment of €123 million to provide the necessary levels of support for people who are already receiving home support services and to meet the growing demand for new home care packages

ACTION 10: Provide funding for AED provision for children at risk of Sudden Cardiac Death

Evidence has confirmed that personal ownership of AEDs by families of children at risk of sudden cardiac death can save lives.[lxvii] The number of requests made to the HSE between 2014 and 2018 for funding for automated external defibrillators by families with inherited heart conditions was on average 5 per year. However, this figure is in no means representative of the need that exists. Currently, AEDs are not covered under the Aids and Appliances Scheme for Medical Card/LTI Card Holders and when applications have been made in the past, they have been refused on these grounds.[lxviii] This, therefore, has acted as a deterrent to seek funding and, indeed, to show the underlying need for a scheme to be established.

AEDs are a costly, and critical, piece of medical equipment, particularly for families of children with inherited heart conditions. In many cases, however, these costs cannot be borne by families and voluntary organisations intervene. It is important, therefore, that a structured scheme is developed, where AEDs, which cost €1,300 can be provided to children at risk of SCD. Budget 2021 should provide €26,000 for this.

10.1 Develop and fund a scheme where people with children with inherited heart conditions can get an AED

ACTION 11: Support smokers in quitting through properly resourced smoking cessation services

The rate of smoking in Ireland currently stands at 17% which means we have in the region of 680,000 smokers. Research shows that 83% of smokers in Ireland regret starting and would like to quit[lxix].

However, , despite an estimated annual cost of smoking to the State totaling €1,653 million[lxx], the State spent just over €13 million in 2019[lxxi] on smoking cessation measures including medications, quit services, the national quitline and mass media campaigns. Table 5 below provides a breakdown of the funding directed to smoking cessation measures in 2019[lxxii].

Table 5: Smoking cessation measures and costs 2019

Year	Service	€
2019	Smoking Cessation Medications (PCRS)	9,492,877
	Social Marketing	1,800,000
	National Quitline	258,453
	Smoking Cessation Staff Costs	1,425,530
	Quitmanager (Patient Management System Licensing)	24,182
	Total	**13,001,042**

Given that revenue raised from tobacco tax totalled almost €750 million in 2018[lxxiii], less than 2% of the additional tax handed over by smokers in 2018 went towards measures helping them to quit in the following year.

Investing in adequate cessation measures is critical if we intend to achieve the Tobacco Free Ireland objective by 2025. The effect that Nicotine Replacement Therapy (NRT) and behavioural interventions have in helping smokers to quit has been proven. A 2018 Cochrane Review indicated that all forms of NRT made it more likely that a person's attempt to quit smoking would succeed. The chances of stopping smoking were increased by 50 to 60%[lxxiv]. The role of mass media campaigns in raising the awareness and overall demand for smoking cessation measures, such as Quitline, is also highly important.

In light of the effectiveness of cessation services, the high proportion of smokers who want to quit and the lack of assistance available to them in spite of their high additional tax burden, we believe a major injection of funding for cessation measures in Budget 2021 is fully justified.

11.1 Increase the level of funding for tobacco cessation services from the current €13 million to €50 million annually

THEME 3: ACUTE SERVICES

STROKE SERVICES

The Irish Heart Foundation welcomes the recognition in the Programme for Government of the National Stroke Strategy, the first such national plan for stroke despite the fact it is Ireland's third biggest killer disease and the largest cause of acquired disability.

Over time, acute stroke care has become increasingly organised, protocoled and time dependent. Whilst this structured care has reduced mortality substantially in the last decade, it increases vulnerability to the effects of an event like the emergence of a pandemic, and presents particularly marked challenges and obstacles to service delivery and 'crowding out effects' such as the interruption of urgent service access, disruption of assessment and treatment protocols, loss of availability of specialist staff, reduced access to diagnostic equipment and re-designation of specialist beds.

Acute stroke services were already facing major challenges before the Covid emergency due to severe long-term shortages in staff and resources, along with a predicted increase of 69% in stroke prevalence by 2035 due mainly to our ageing population. The reduction in capacity caused by social distancing measures to minimise the impact of the virus within hospitals means the need for a strong national strategy that is properly funded and accompanied by an implementation plan that is prioritised by the health service is needed more than ever. In particular, the expansion of Early Supported Discharge and measures to tackle delayed discharges will free up precious hospital capacity to help make for beds lost to Covid measures.

ACTION 12: Act FAST

The average stroke destroys two million brain cells every minute, which means the quicker you get to hospital after an attack the more of your brain can be saved. The Irish Heart Foundation Act FAST campaign resulted in an 87% increase in stroke-related hospital admissions within the time window for effective treatment.

In 2013 the National Stroke Programme estimated that an extra 175 people were saved from death or permanent disability, with a reduction in nursing home costs to the State for that year of approximately €4.5 million due to the higher rate of patients receiving clot busting treatment during the campaign.

Today, a new and even more effective treatment for stroke is available. Thrombectomy reduces stroke mortality by up to half[lxxv], with around 60%[lxxvi] of those receiving the treatment regaining functional independence. Unfortunately, however, since the FAST campaign ended, the rate of timely presentation after stroke has continued to fall. The HSE has indicated that it will make some funding available for a campaign this winter in response to concerns about the impact of Covid during the winter flu season. This is very much to be welcomed. But there needs to be a broader recognition that funding an ongoing FAST campaign will save lives and reduce the severity of disability caused by stroke, whilst also reducing overall health service costs, chiefly through reduced requirement for nursing home places, but also reducing stroke-related bed days.

12.1 Support the delivery of a fully funded FAST awareness campaign, at a cost of €300,000 in 2021

ACTION 13: Provide access to thrombectomy for all suitable stroke patients regardless of location

Thrombectomy has become a standard of care treatment for acute stroke patients since 2015. HIQA, in their January 2017 Health Technology Assessment of thrombectomy[lxxvii] found that a national emergency endovascular service providing mechanical thrombectomy would be cost-effective.

The National Clinical Programme for Stroke believes that decision supporting software is necessary to assist the appropriate identification of stroke cases for transfer from referring regional stroke services in a more timely fashion and to ensure efficient use of a skilled and expensive resource and ultimately maximise patient safety and outcomes.

In order to assist in providing equality of access to acute stroke imaging and the potential to be referred for thrombectomy around the country, it would cost up to €150,000 to renew the on-trial software licences and extension to include all acute hospitals admitting stroke patients for the next 12 months.[lxxviii]

13.1 Provide funding for the costs associated with decision-supported software for emergency stroke radiology assessment and case selection for thrombectomy treatment

ACTION 14: Ensure that every hospital treating stroke has a properly functioning stroke unit

Stroke unit care is the cornerstone and foundation of all stroke care and no acute hospital should receive acute stroke patients without providing such care. Stroke unit care serves all stroke patients, regardless of stroke type or time of onset acute stroke units have been shown to reduce stroke mortality and dependency and are a European Stroke Organisation (ESO) recommendation with clear set guidelines on what constitutes an acute stroke unit.

The 2019 stroke audit report is currently being prepared but the most current data available is from the 2018 stroke audit report which states that 71 % (2471) of patients were admitted to an acute stroke unit and spent a median of 7 days in a stroke unit. The national key performance indicator target is 90%.[lxxix]

The National Stroke Programme looked at the existing number of beds and what is needed now to ensure we meet the agreed national key performance indicator (KPI) that 90% of cases of acute stroke are admitted to a stroke unit bed and what will be needed over the next five years at each site using a calculation based on the proportional growth in the over 65 population in the catchment of each hospital (taken from Central Statistics Office data) and the fact that 75% of strokes occur in that age group.[lxxx]

Table 5: Stroke beds required in the next 5 years

Current Stroke Unit Beds	Annual Stroke Admissions-2018	Potential increase in no of strokes	Total no acute stroke beds needed in next 5 years (cognisant of potential increase in stroke numbers and individual hospital AvLoS for stroke)
210	5546	1561	327

Adequate staffing of stroke units is essential to ensure proper care of this emergency brain injury, enhance acute treatment delivery, prevent and manage complications, start patient recovery and discharge planning early and to ensure proper patient and carer education and support. For Health and Social Care Professions the NSP mapped the existing gap in staff numbers for all disciplines that exists currently and what would be needed with the projected growth in stroke numbers at individual sites. The NSP recommends a stratified staged approach to reaching optimal staffing levels so sites can see the required human resource and indicative budgetary implications to staff their stroke services appropriately.

Table 6: NSP Plan to reach optimal HSCP staffing levels

Discipline	Year 1 Posts/ Costs		Year 2 Posts/Costs		Year 3 Posts/Costs	
Physiotherapy	9.5	€538,603	14.7	€833,417	14.7	€833,417
Occupational Therapy	9.5	€538,603	13.2	€748,374	13.6	€771,052
Speech and Language Therapy	2.9	€164,416	7.2	€408,204	6.7	€379,857
Dietetics	8.7	€493,247	6.8	€385,526	6.8	€385,526
Clinical Psychology	7.6	€649,458	4.5	€384,548	4.5	€384,548
Total Posts/Costs AHP	**38.2**	**€2,384,327**	**46.4**	**€2,760,069**	**46.3**	**€2,754,400**

It is also important to note that further investment in patient equipment and monitoring equipment would be required in all hospitals, and these infrastructural needs must also be identified and met.

14.1 Fund Year 1 of NSP Staged Plan for HSCP Optimal staffing levels, costing €2,384,327

ACTION 15: Save 5,124 hospital bed days and a net cost saving of €1,398,226 by enhancing Early Supported Discharge programmes

The disruption to community services arising from the COVID-19 pandemic, as well as historical gaps in services, has had a significant impact on stroke services, with a notable backlog in Early Supported Discharge. Furthermore, issues with access to homecare packages are contributing to delayed discharges.

Early Supported Discharge (ESD), rehabilitation and community care are essential to ensuring the greatest degree of recovery for stroke survivors. ESD involves rapid access to intense rehabilitation and community-based assessment by a specialist multidisciplinary team. This enables patients with stroke to leave hospital sooner whilst receiving the same quality and quantity of rehabilitation that would be provided in a hospital. ESD improves disability outcomes and quality of life, as well as reducing the likelihood of long-term institutional care length of stay in hospital.

The 2014 Economic and Social Research Institute (ESRI), Royal College of Surgeons in Ireland (RCSI) and Irish Heart Foundation report *Towards Earlier Discharge, Better Outcomes, Lower Costs: Stroke rehabilitation in Ireland* concludes that almost half all of stroke sufferers in Ireland – over 3,000 people each year, could avail of ESD, resulting in annual savings of some 24,000 bed days.

Building on the success of the 6 Early Supported Discharge Teams, however, progress still needs to be made with respect to expanding ESD to all acute stroke units, and the development of community-based rehabilitation services in line with Neurorehabilitation Strategy.[lxxxi] Therefore, Budget 2021 must commit to the expansion of post-hospital rehabilitation models.

The National Clinical Programme for Stroke has submitted a 2 year plan for the roll out of ESD to cover 70% of the country's stroke caseload. The roll out of the National Clinical Programme for Stroke ESD plan will result in more efficient use of acute stroke beds and cost savings, with positive impacts on patient flow, acute stroke outcomes and the unscheduled care management of stroke patients in Ireland.[lxxxii]

Total cost to provide enhanced ESD as recommended by the National Clinical Programme for Stroke to provide services to 20% of stroke discharges is €2,942,931. This will result in a projected 5,124 hospital bed days saved with a total and net cost saving of €4,386,144 and €1,398,226 respectively.[lxxxiii] The recommendations of the Stroke Strategy with respect to ESD are outlined in three phases:

1. Consolidation of existing six ESD teams = €876,570
2. ESD Service Expansion – Year 1 = €1,112,649
3. ESD Service Expansion - Year 2 = €953,712

15.1 Consolidate the existing six ESD teams, at a cost of €876,570
15.2 Fund ESD Service Expansion as per the NSP plan for Year 1, at a cost of €1,112,649

NEUROREHABILITATION

Neurorehabilitation is critical for the long-term recovery of people who have had a stroke or acquired brain injury, as well as minimising the long-term impact of progressive neurological conditions. Lack of proper investment, means that hospital and community neurorehabilitation services in Ireland are completely inadequate with less than half of the inpatient beds required for a population of our size. Six out of nine Community Health Organisation (CHO) areas have no community neurorehabilitation team in place, the remainder have only partially staffed teams.[lxxxiv]

ACTION 16: Invest in Neurorehabilitation

The Programme for Government commits to the implementation of the National Neurorehabilitation Strategy. A three-year implementation plan for the National Neurorehabilitation Strategy, published in February 2019, has seen NO investment to date. The Irish Heart Foundation, as a member of the Neurological Alliance of Ireland, is calling for immediate additional funding to enable the implementation of the Neurorehabilitation Demonstrator Project in CHOs 6 & 7.

The project was established in September 2018 with the appointment of a Project Manager but it has completely stalled due to lack of any funding to implement it.

16.1 Investment of €4.5m in neurorehabilitation services as a first step in meeting the commitment in the Programme for Government to implement the National Neurorehabilitation Strategy

HEART SERVICES

The Department of Health's *Changing Cardiovascular Health: Cardiovascular Health Policy 2010 - 2019* established a framework for the prevention, detection and treatment of cardiovascular diseases, to reduce the burden of these conditions.

The National Review of Specialist Cardiac Services, which convened in January 2018, is expected to recommend the optimal configuration of a national adult cardiac service in Ireland, part of its work being to review the status of recommendations contained within the now out of date strategy. While the National Review was to be complete in Q2 2020, the COVID-19 pandemic has delayed this.[lxxxv]

ACTION 17: Improve Heart Failure services nationally & eliminate geographical gaps in care

Heart failure remains a major public health issue with high recurrent hospital admission, regional disparities in services and outcomes, and disconnected care. The overall prevalence rate of heart failure in Ireland is approximately 2% which equates to approximately 90,000 people with a five year mortality rate of 36%[lxxxvi]. Over 10,000 cases of Heart Failure are diagnosed annually in Ireland[lxxxvii] and 250,000 people are at immediate risk of developing heart failure, with increases in demand for chronic disease management at community level. The total cost of heart failure to the State is estimated at €660 million each year.[lxxxviii] In 2012, Heart Failure accounted for 231,042 hospital bed days.

Within heart failure services, ongoing staffing and resource deficits must be addressed to ensure more efficient as well as cost effective provision of services, particularly in light of reductions in capacity caused by social distancing. These include:

- Doubling the number of HF nurses, as well as appointing more Advanced Nurse Practitioners and developing their role in the community. Despite the large burden of HF in Ireland there are only 65 HF nurses covering the entire country. Increasing staffing levels would have a significant impact on reducing hospital admission and readmission
- HF Community Integration Teams should be available countrywide and their roles standardised across all CHO areas.
- Widespread access is needed for GPs to be able to conduct testing for B-type Natriuretic Peptide, high levels of which can show that a patient has heart failure. This would result in major reductions in referrals to cardiology clinics. Where GPs have had rapid access, there has been a 30% reduction in the need for echocardiography and a 60% reduction in the need for a consultant review. This ties in with other studies showing that only 30% to 40% of patients who go to heart failure clinics are actually diagnosed with heart failure. This is because it can be very difficult to differentiate between heart failure and COPD, frailty or other illnesses. Over half of the GPs in the country do not have access to BNP testing for their patients, which leads to increased costs and worse outcomes.
- Standardised referral pathways should be developed for HF patients using existing IT infrastructure such as Health Link to aid improved communication between the community and hospital services.

A significant geographical gap in the acute heart failure services in Cork and Kerry has been identified. A new Consultant Cardiologist with interest in Heart Failure was appointed in Kerry University Hospital and one Clinical Nurse Specialist in Heart Failure was appointed in Cork University Hospital in 2019. However, in order to establish a structured Heart Failure service for Cork University Hospital a budget of approximately €360K is required and €191k approximately is required for University Hospital Kerry.[lxxxix]

In a 2016 Report, *Impact of living in the community with heart failure*[xc], allied healthcare professionals identified a significant need for more community resources, referral systems and education for healthcare professionals. Integrated care clinical nurse specialists (IC CNS) based in the community support GPs to manage heart failure patients. This service was first piloted in the Carlow-Kilkenny area. The current Slaintecare Care Integrated Care Project – Heart Failure Virtual Consultation Service with Integrated Care Clinical Nurse Specialist Supports in the Community has allowed expansion of the service in the East Coast as well as establishment of a new service in the Dublin North/ Mater Hospital area. To provide the hospital aspects of this Integrated HF service approximately €275,000 per Model 4 hospital is required to establish the hospital service hub i.e. €2.5m. To provide the community aspects of this service, approximately 4 Clinical Nurse Specialists are required in each of the 9 community healthcare organisational areas with some additional in urban areas (i.e. approximately €2.4m).[xci]

17.1 Address the geographical gap in the provision of heart failure services in the South/South West hospital group, at a cost of €551,000
17.2 National roll-out of heart failure integrated care projects, at a cost of €4.9million

ACTION 18: Quality Improvement for In-Hospital Resuscitation

In 2006 the Report of the Task Force on Sudden Cardiac Death[xcii] identified a need for the collection of national patient data on resuscitation in both the pre-hospital and in-patient settings. Subsequently, the National Out-of-Hospital Cardiac Arrest Register (OHCAR) was established in late 2007. However, no such comparable dataset exists to date nationally in the Republic of Ireland for in-hospital cardiac arrests. In hospital cardiac arrests bear a high cost to the patient and their families as well as the hospital and staff providing care. At present, decisions regarding cost-benefit, safety and cost-effectiveness regarding resuscitation equipment, drugs and training are being made locally by local resuscitation committees based on anecdotal experience, rather than real data.

Following extensive engagement, NOCA (National Office of Clinical Audit) has agreed to undertake a 12-month feasibility study to look at a data collection system for Sepsis, deteriorating patients, and cardiac arrest in-hospitals.

Through engagement and advice from NOCA, a small working group of a range of different hospitals has established a standard template data collection tool for in-hospital cardiac arrest with shared defined datasets, with a view to developing KPIs to facilitate a clinical governance structure for resuscitation in Irish hospitals. The project's next steps involve the enrollment of a representative sample of hospitals into NCAA to trial its applicability, reproducibility, and practical benefits for hospitals in the Republic of Ireland. However, approval for seed funding to facilitate a 12-month enrollment is required. The estimated costs for the pilot, for which there will be no extra requirement for staffing, ICT resources or for additional administrative support are detailed below:

NCAA Enrollment fee per hospital	£1075.00 = €1215.00
VAT @ 23%*	€280
Total fee per hospital	€1495
Total for eight hospitals	**€11960**

18.1 Fund a National Cardiac Arrest Audit pilot project in Ireland

THEME 4: THE WORLD WE LIVE IN

The built environment can either discourage or facilitate healthy choices. A focus is needed on creating supportive environments for behaviour change through partnerships between health and planning, transport and infrastructure, recreation and sport and across all levels of Government.

Physical Activity

At the height of the Covid-19 lockdown when all non-essential businesses were closed and a 2km travel restriction was imposed, research from Sport Ireland showed that more people were walking, cycling, and exercising[xciii]. As traffic levels fell and road space became free from congestion, there was an ensuing increase in the numbers walking and cycling on our roads as users felt safer and more comfortable to choose these active travel modes.

As we strive to overcome the pandemic, it is imperative that Ireland does not return to the dangerous and unsustainable norm of gridlocked streets with vehicles bumper to bumper but rather seize this opportunity to recalibrate the built environment to maintain and further promote this heightened level of walking and cycling. Reallocating vast swathes of road space for pedestrians and cyclists to boost active travel and deter private vehicle use will facilitate social distancing, increase physical activity levels, improve mental health, and cut the level of harmful air pollution. The latter two are especially pertinent as people living with obesity have an increased risk of more severe effects from coronavirus[xciv] and studies have shown that air pollution may be a key contributor to Covid-19 deaths[xcv]. Ireland must emulate the actions of other European countries and seize this moment to transform cities in favour of pedestrians and cyclists for the benefit of the nation's public health[xcvi].

ACTION 19: Increase the level of cycling in Ireland to boost physical activity and reduce air pollution

According to the European Commission, cycling is the quickest mode of transport in an urban environment for trips up to 5-6km and for longer trips at peak hours[xcvii]. Additional economic savings arise from the reduced public health costs, the lower external costs associated with a more car dependent culture, and the lower levels of absenteeism among employees who cycle[xcviii] [xcix]. Unfortunately, only 3% of the population in 2016 cycled as part of their commute[c].

Cycling, as a moderate physical activity, can significantly reduce clinical health risks linked to several illnesses including cardiovascular disease, obesity, type-2 diabetes, certain forms of cancer, osteoporosis and depression[ci]. Furthermore, increased levels of cycling in favour of private vehicle use contributes to reduced noise pollution, which acts as an important environmental stressor, increasing the risk of ischaemic heart disease, contributing to cognitive impairment in children and disrupting sleep patterns[cii].

In order to facilitate the further take up of cycling, we believe the Cycle to Work scheme must be significantly expanded and enlarged to encompass a wider cohort of people and types of bikes. The scheme currently provides an exemption from benefit-in-kind where an employer purchases a bicycle and associated safety equipment up to a maximum of €1,000 for an employee to use, in whole or in part, to travel to work. Safety equipment includes helmets, lights, bells, mirrors and locks but does not include child seats or trailers.

Although the Minister for Finance stated in June that his department has no plans to change the €1,000 limit or alter the scope of the scheme[ciii], the Programme for Government plans to ''widen the

eligibility of the Bike to Work scheme'' and provide an increased proportionate allowance for e-bikes and cargo bikes[civ].

Incentives to purchase and use bicycles should be open for every cohort of our society, not just employees. Employers, sole-traders, students, jobseekers, people with disabilities and unpaid homecare workers should all be able to enjoy the physical and mental health benefits of cycling.

19.1 Expand the Cycle to Work scheme beyond PAYE to everyone – employers, sole-traders, students, jobseekers, disabled, unpaid home-work and enlarge from €1,000 to €2,000 for the purchase of electric bikes and cargo bikes.

ACTION 20: Increase the numbers of students walking and cycling to school

The number of children cycling to school has fallen from around 74,000 in 1986 to some 11,000 in 2006[cv]. Moreover, despite a growth in the overall numbers of cyclists from 2006-2011, only 1.6% of children cycled to school in 2011, compared to 8.3% in 1986. For girls cycling to school, the reduction is even more acute, as the number of girls aged 13-18 cycling to school in the state fell from 19.000 in 1986 to 500 in 2011, while over the same period the cycling mode share reduced from 11.2% to 0.3%. A drop from approximately 1 in every 9 girls to close to 1 in every 300[cvi].

This significant drop can be attributed largely to the dangerous nature of Irish roads for cyclists, and the lack of safe infrastructure. Unfortunately, cycling here is becoming increasingly dangerous as Ireland recorded the highest annual increase in cycling deaths among all EU member states over a nine-year period[cvii]. These tragic figures starkly illustrate the urgent need for safe and proper infrastructure. For example, in a survey of parents of primary school children 23% said they drove their children to school because walking was too dangerous, whilst the corresponding figure for cycling was 43%[cviii].

At the height of the Covid-19 lockdown when travel restrictions were in place, schools and businesses remained closed, and the majority of people worked from home, children and adults took advantage of the empty roads by walking and cycling in increased numbers[cix]. County councils have responded to this heightened demand by planning more cycling infrastructure[cx] and the programme for government has committed to a number of measures to boost active travel, including increased funding for pedestrian and cycling infrastructure.

We strongly welcome the new government's commitment to dramatically increase the number of children walking and cycling to school as doing so can ensure that we embed a culture of active travel and physical activity into a whole new generation of Irish children which will pay dividends for decades to come. Achieving this, however, will require making walking and cycling to school safe and accessible.

20.1 Develop a grant scheme to fund infrastructure to support safer active travel to school – funding active school travel officers to work locally with government agencies and developers to improve active travel infrastructure around schools and address local barriers such as safety risks identified by parents

Removing and Reducing Pollutants

ACTION 21: Reduce the number of private motorised vehicles in Dublin city centre to lower the level of toxic air pollution

Congestion charges have been introduced in cities across the world to address the heavy levels of congestion they experience by limiting the number of vehicles entering the city every day. London, Stockholm, Singapore and New York are among the cities that have successfully implemented congestion charges[cxi]. In Dublin, the car still accounts for 28.3% of all journeys made[cxii]. With many areas of Dublin city experiencing worsening levels of air pollution due to large volumes of traffic[cxiii] and the city being ranked the 6th most congested city in Europe[cxiv], the introduction of a congestion charge in the city centre is urgently required.

The impact of exposure to air pollution has been widely established and is associated with a wide range of human health effects including increased respiratory symptoms, hospitalisation for heart or lung diseases and premature deaths[cxv]. The most damaging pollutants include nitrogen dioxide (NO_2) and particulate matter (PM), both of which are produced by traffic emissions. Recent evidence indicating that high levels of air pollution may be one of the most important contributors to deaths from Covid-19 is deeply concerning.

As Ireland strives to re-open, it is essential that Dublin does not revert to its dangerous and unsustainable norm of gridlocked streets of vehicles bumper to bumper polluting our air. By implementing a congestion charge in Dublin city centre, we can transform the city for the better by restricting car use, making it safer for active travel, reducing air pollution, and thereby improving public health. In this regard, reports indicating that the Government has commissioned a study to consider congestion measures to address the impacts of growing traffic levels in Dublin, Cork, Limerick, Galway and Waterford are encouraging[cxvi].

21.1 Implement a daily congestion charge on all private motorised vehicles entering Dublin city centre and examine the feasibility of extending similar congestion charges to other major urban areas

ACTION 22: Deter the purchase and use of fossil fueled vehicles to lower air pollution levels

The air pollutant nitrogen oxide (NO_X) has been shown to cause severe health harms with even short-term exposure aggravating respiratory diseases, causing respiratory symptoms, triggering hospital admissions and visits to emergency rooms. Longer term exposures to elevated concentrations of NO_X can contribute to the development of asthma and potentially increase susceptibility to respiratory infections[cxvii].

There is mounting evidence that fossil-fuel powered traffic emissions are a major contributor to NO_X [cxviii]. To reduce NO_X levels, the previous Irish government brought in legislation to ban the sale of new petrol and diesel vehicles from 2030 onwards[cxix] and replaced the diesel surcharge with a nitrogen oxide emissions levy in budget 2020.

According to a spokesperson for the Department of Finance, based on the current rate, the levy was expected to yield +€25m in 2020 and +€25m thereafter in a full year[cxx]. A parliamentary question to the Minister of Finance revealed that, based on 2019 sales levels and the average NOx rate charged per vehicle, a doubling of the surcharge could increase an additional €55m in a full trading year, amounting to a total €80m in a full year[cxxi].

The Programme for Government intends to ''review the current motor taxation regime to ensure that it adequately captures the health harms caused by NO_X emissions'' as it seeks to further limit the use of fossil-fuel vehicles. While we welcome this upcoming review, it will only apply to newly registered vehicles. We believe that to address the enormous health harms caused by air pollution, a significantly higher levy must be imposed

22.1 Double the nitrogen dioxide levy applied to all VRT category A vehicles (passengers and SUVs) and apply the rate to all registered vehicles

ACTION 23: Reduce the level of air pollution by incentivising the purchase of electric motorised vehicles over fossil-fuel powered vehicles

Increasing the provision and take-up of active travel and public transport modes over private car use will be the two core mechanisms in reducing air pollution levels in urban areas. However, the role of zero emission electric vehicles (EV) cannot be dismissed. To incentivise the purchase of EVs in Ireland, the electric vehicles purchase grant was first introduced in 2011[cxxii] and budget 2020 extended the 0% benefit-in-kind (BIK) for electric vehicles until 2022[cxxiii].

However, even with these offers in place, the take-up of EVs in Ireland has been remarkably slow. From 2007 to 2018, a total of 3,700 electric cars were registered in Ireland; in 2018 1,200 were registered. This only accounts for 0.2% of the total number of private cars on the road in 2017[cxxiv]. We lag heavily behind other European countries, such as Norway which is a clear leader in terms of electric vehicles sales, where 31.2% of all new cars sold in 2018 were electric[cxxv].

At the current rate of take-up of EVs in Ireland, the target for 950,000 electric cars on our roads by 2030 in the 2019 Climate Action Plan seems unrealistic[cxxvi]. Recognizing this however, action 78 of that plan proposes that ''as an alternative to the current grant regime, consider in 2020 a car-scrappage scheme to promote the purchase of electric vehicles''. Meanwhile, the programme for government outlines that it will use a range of policy approaches to incentivise the use of EVs and encourage a shift away from petrol/diesel vehicles[cxxvii].

As the take-up of EVs in Ireland up to now has so far failed to take hold, drastic new policies are required if the 2030 goal can anyway be realistically met. We believe the government should follow the advice of the Climate Action Plan and introduce a diesel/petrol car scrappage scheme in favour of new electric models. The UK government were exploring a similar scheme, granting drivers up to £6,000 to swap their fossil-fuel powered cars for electric vehicles[cxxviii].

23.1 Introduce a €7,000 diesel/petrol car scrappage scheme in favour of electric vehicles

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