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Special Committee on Covid-19 Response  
 Leinster House  
 Dublin 2  
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1<sup>st</sup> July 2020

Ref: Irish Heart Foundation Written Submission

Dear Aileen,

Please find attached the written submission from the Irish Heart Foundation in response to the invitation issued by the Special Committee on Covid-19 Response on the topic of Non-COVID-19 Healthcare.

The Irish Heart Foundation welcomes the opportunity to provide suggestions regarding the steps that policymakers, the HSE and the Department of Health can take to achieve preparedness to reduce non- COVID-19 healthcare fragmentation in the post-COVID-19 era. Our main interest is in the effectiveness of health and social care services in terms of prevention, treatment, care and support. Many cardiovascular disease patients use medical, rehabilitation and social care services concurrently and, unfortunately, the quid pro quo for “flattening the curve” of the virus has been inadvertently “steepening the curve” of these non-COVID-19 healthcare services.

Furthermore, there is now a crucial window of opportunity to reduce the severity and impact of Covid-19 amongst those who will be infected in the coming months. One in two patients in ICU with Covid-19 have a serious heart condition with a significant proportion having obesity. Irish research has shown that people with high blood pressure may be twice as likely to die from Covid-19 if they contract the virus, compared to people without high blood pressure. Therefore, there is an urgent need to build the physical resilience of the population by addressing two key drivers of Covid-19 severity, high blood pressure and obesity.

As a prevention and patient organisation, we are concerned about the significant potential effect of this pandemic — a future second wave of cardiovascular complications. From discussions with health-care providers in cardiology and stroke, it is clear that health professionals have been seeing fewer patients with acute cardiovascular conditions coming to hospitals. This concerning drop in health-care utilisation corresponds to the onset of the COVID-19 pandemic. Unfortunately, cardiovascular disease - heart disease and stroke - does not disappear or significantly decrease in prevalence during a pandemic.

Critical to the work and report of the Special Committee on Covid-19 Response is the need to take the hidden costs of deferred care seriously, while simultaneously managing the worst of COVID-19 crisis currently. Any plan for non-COVID-19 healthcare must:

- support the long-term health plan to reduce potentially preventable hospitalisations<sup>1</sup>

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<sup>1</sup> “A substantial focus is on facilitating this re-orientation of the health services towards more care in community settings and reducing the current reliance on acute hospitals for the care of patients with chronic conditions and older patients.” P63 HSE. (2019). National Service Plan 2020. [Online]. Available from: <https://www.hse.ie/eng/services/publications/national-service-plan-2020.pdf>

- align with Sláintecare’s preventative health aims,<sup>2</sup> 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
- be patient-centred, evidence-based, cost-effective and easy to implement.

In the attached submission we focus on key actions to minimise preventable death and disability from heart disease and stroke in the ongoing battle against the virus, including tackling pre-existing structural and policy weaknesses relating to service provision and the organisation of care.

The Irish Heart Foundation would welcome the opportunity to present the topics discussed in this submission.

Should you have any questions or wish to discuss this submission further, you can contact the Head of Advocacy and Patient Support, Mr Chris Macey, at [cmacey@irishheart.ie](mailto:cmacey@irishheart.ie) or myself at [kreilly@irishheart.ie](mailto:kreilly@irishheart.ie)

Kind Regards,

Kathryn Reilly  
**Kathryn Reilly | Policy Manager**

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<sup>2</sup> “Population health approaches can prevent chronic illness from developing in the first place, so prevention must be a strong focus of our health system.” Committee on the Future of Healthcare. (2017). Sláintecare Report May 2017. [Online] Available from: <https://assets.gov.ie/22609/e68786c13e1b4d7daca89b495c506bb8.pdf> p15



## Irish Heart Foundation

Submission to Special  
Committee on Covid-19  
Response  
Non-COVID-19 Healthcare



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## Introduction

The Irish Heart Foundation welcomes the opportunity to highlight major challenges facing cardiovascular health services in the midst of COVID-19.

In this submission we focus on the impact of the pandemic on cardiovascular services and key actions to minimise preventable death and disability from heart disease and stroke in the ongoing battle against the virus. This includes tackling pre-existing structural and policy weaknesses relating to service provision and the organisation of care.

With many of the main drivers of chronic disease such as poor diet, smoking, hypertension and air pollution being identified as leading risk factors for COVID, we also set out the urgent necessity to prioritise prevention and health promotion to a level that has not been seriously contemplated in Ireland to date, in spite of their prominence in Slaintecare plans. These actions must be rooted in disadvantaged communities where chronic disease rates are highest.

Given that patients with chronic heart disease suffer the highest mortality rate among victims of COVID, it is clear that particular emphasis should be placed on cardiovascular health in order to build population-wide resilience in the face of this and future pandemics.

## Summary

We need only to look at how other health systems have been overwhelmed by COVID-19 to understand the lifesaving impact of decisive action taken by the Irish health authorities to *flatten the curve* and the political consensus that has helped make this possible.

Like our frontline healthcare workers, policymakers stepped up at a time of national emergency and deserve our gratitude. However, it is apparent that measures to suppress the virus resulted in the curve being inadvertently steepened for cardiovascular and other chronic disease sufferers. There are many lessons from the last four months that must inform the continuing struggle to overcome COVID and that can facilitate the creation of a more sustainable health service into the future.

We submit that in order to properly protect heart disease and stroke patients, together with the cardiovascular health of the nation in the crucial period ahead, the following measures are required:

- A dual strategy to address the residual effects of reduced presentations for major cardiac events and strokes, estimated to have peaked at between 40-80% and to ensure that future waves of COVID do not discourage patients from seeking emergency treatment. This includes a commitment to ongoing promotion of FAST stroke and heart attack awareness campaigns.
- Evidence is emerging internationally that a high proportion of excess deaths, estimated at 25-30% in the UK since the outbreak of COVID, 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.

To drive down excess deaths in future waves of the pandemic, priority must be given to providing the staffing and resources to minimise increases in door to needle times. A particular commitment is required to exempt coronary care and stroke unit staff from further future redeployment to COVID wards.

- 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, such as Early Supported Discharge for stroke patients and programmes providing a more integrated approach to the management of heart failure in the community. Plans to shift care whenever possible from acute hospitals to the lowest appropriate level of complexity in the community should be urgently implemented. A failure to relieve pressure on Emergency Departments during the coming winter will have dire consequences for patients.

Additionally, swift action is needed to tackle the looming double threat of people simultaneously contracting COVID and flu. This requires a major programme to ensure that over 60s and people in at risk groups are vaccinated for flu in the run up to winter, along with children who are vectors for the disease.

- Cardiovascular disease is responsible for almost 30% of total mortality in Ireland, yet services are operating in a policy vacuum. A new 10-year Cardiovascular Health Strategy must be urgently drawn up and the previous plan properly evaluated. Meanwhile, the long-awaited first National Stroke Strategy should be published, accompanied by a full COVID-proofed implementation plan.
- Whilst the taxpayer spends billions of euro each year paying for the impact of chronic disease, funding for prevention and health promotion measures that could massively reduce this burden is derisory. The repeated failure of policymakers to tackle this gaping hole in our health services can no longer be tolerated in light of the impact of COVID on people with obesity, smokers and those with high blood pressure.

In addition to major investment in prevention, including vastly more realistic funding for Healthy Ireland, important measures in the new Programme for Government to tackle obesity and sedentary lifestyles should be implemented without delay, along with a stronger focus on achieving a Tobacco Free Ireland.

- Amid all the human tragedy and economic destruction wrought by the pandemic, the enforced change in our lifestyles has brought some health gains in the form of cleaner air and changes to the built environment promoting physical activity. Government policy on air pollution and active travel should be urgently implemented, along with further measures to recalibrate our toxic built environment. In addition to reducing susceptibility to harm from

COVID, this will embed health and quality of life improvements in a healthier and more sustainable Ireland.

One of the most striking features of COVID-19 has been to expose the effects of underlying socioeconomic inequalities across different countries. Evidence continues to mount on how the health of people who are already marginalised has suffered disproportionately from the virus. It is likely these same communities will also face increased financial hardship from the economic downturn caused by the pandemic. Consequently, it has never been more important to deliver policies that address social inequality at its roots, including particular focus on the provision of healthcare.

Right now, we have a unique opportunity to develop a health service that can deliver for our citizens. In the face of the monumental task of rebuilding an economy brought to its knees by COVID, it would be easy to shirk the challenge. But this is the moment to direct political will to building resilience, sustainability, efficiency and fairness across our entire system of healthcare, committing resources to long-term population health gains and realising the Slaintecare vision.

## Cardiovascular Disease

Age-standardised death rates from circulatory system diseases, including ischaemic heart disease and stroke, have declined by 25% over the past ten years.<sup>1</sup> However, in 2019, diseases of the circulatory system claimed 8,989 lives in Ireland.<sup>2</sup> Declining cardiovascular disease death rates – built on the back of successful research, prevention and treatment – have, unfortunately, 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.<sup>3</sup>

Some implications of COVID-19 for the cardiovascular care of patients that have been identified<sup>4</sup> include:

1. Those with COVID-19 and pre-existing cardiovascular disease have an increased risk of severe disease and death.
2. Infection has been associated with multiple direct and indirect cardiovascular complications including acute myocardial injury, myocarditis, arrhythmias, stroke and venous thromboembolism.
3. Therapies under investigation for COVID-19 may have cardiovascular side effects.
4. The response to COVID-19 can compromise the rapid triage of non-COVID-19 patients with cardiovascular conditions

Data from the Health Protection Surveillance Centre<sup>5</sup> 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 17<sup>th</sup> June 2020, chronic heart disease was the most common underlying condition:

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<sup>1</sup> Department of Health. (2019). Health in Ireland Key Trends 2019. [Online]. Available from: <https://www.gov.ie/en/publication/f1bb64-health-in-ireland-key-trends-2019/>

<sup>2</sup> Central Statistics Office. (2019). Vital Statistics Yearly Summary 2019. [Online] Available from: <https://www.cso.ie/en/releasesandpublications/ep/p-vs/vitalstatisticsyearlysummary2019/>

<sup>3</sup> Department of Health. Updates on COVID-19 May 6th. [Online]. Available from: <https://www.gov.ie/en/publication/20f2e0-updates-on-covid-19-coronavirus-since-january-2020/#may>

<sup>4</sup> Driggin, E., Madhavan, M.V., Bekdeli, B., Chuich, T. et al. (2020). Cardiovascular Considerations for Patients, Health Care Workers, and Health Systems During the COVID-19 Pandemic. *Journal of the American College of Cardiology* Volume 75, Issue 18, 12 May 2020, Pages 2352-2371

<sup>5</sup> Health Protection Surveillance Centre. (2020). Underlying conditions in confirmed cases of COVID-19 in Ireland. [Online] Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/surveillance/underlyingconditionsreports/Underlying%20conditions%20summary%20170620.pdf>

	Community		Hospital		ICU		All settings	
Chronic heart disease	1881	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.

Despite this, however, cardiovascular health policy has been largely neglected. 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 plan is now out of date.

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.<sup>6</sup> Moreover, it is unclear to what extent a thorough evaluation of the strategy was carried out.

Cardiovascular disease has been found to be a risk factor for the virus and those affected are therefore categorised as a vulnerable patient group. However, cardiac injury can occur in those with confirmed Covid-19 and no previous cardiovascular risk. This will therefore mean an increase in the use of and the demand for various cardiovascular treatments and services. In the short and medium term, therefore:

- The Cardiac Services Review should be published and funding provided
- 'Changing Cardiovascular Health: National Cardiovascular Health Policy 2010-2019' must be reviewed in its entirety and a new comprehensive cardiovascular policy developed, taking into consideration the prevalence of cardiovascular disease links to, and effects resulting from, the COVID-19 pandemic

### **How has COVID-19 affected cardiac care in Ireland?**

The COVID-19 pandemic has brought unprecedented strain on hospitals and clinics, from a shortage of testing and medical supplies to issues in access among rural and underserved populations.

International research is showing that excess mortality during the pandemic cannot be attributed to COVID-19 alone, but also to disruption of care pathways and resources. Stroke and coronary care

<sup>6</sup> PQ 3584/20 to the Minister for Health

services are particularly susceptible and in any future waves of the virus these services should be protected from any displacement of resources.

A better way to measure the damage caused to non-COVID-19 healthcare by the virus is to look at “excess mortality”: the gap between the total number of people who died from any cause, and the historical average for the same place and time of year. EuroMOMO is a European mortality monitoring activity, aiming to detect and measure excess deaths related to seasonal influenza, pandemics and other public health threats. EuroMOMO’s figures suggest that there were about 170,000 excess deaths between March 16th and May 31st.

Research looking at Scotland, England and Wales, the Netherlands, Italy and New York State found that there has been a substantial increase (ranging from 39 to 75%) in observed, compared with expected, mortality at a population level. The increases in mortality are not wholly explained by deaths attributed to Covid-19, where only between 53% and 80% of the excess in deaths can be explained by official Covid-19 reports.

Unfortunately, in Ireland, as a result of very significant delays in death registrations during March and April 2020, due to the COVID-19 pandemic, weekly scores of excess all-cause mortality do not reflect current COVID-19 (and non-COVID-19) excess mortality.

It is important to remember that if hospitals are overwhelmed, people with other conditions might not get the intensive care they need to survive. This, coupled with the lag in data, means we are likely witnessing an increase in deaths from non-Covid-19 causes, potentially resulting from diminished routine diagnosis and treatment of other conditions.

Not only has elective clinical activity almost ceased in many countries, including Ireland, but emergency presentations have also declined and for some conditions, for example acute coronary syndromes, this could have fatal consequences.

Although these are now reported to be back to pre-Covid levels, the impact of heart attack admissions falling by up to 80% according to a study by the Irish Cardiac Society (ICS)<sup>7</sup>, is likely to result in a surge in cases over the coming period.

Notable results from the information collected by the ICS from cardiologists working in hospitals throughout the country include:

- 65.8% of respondents reported that the number of presentations for heart attack at their hospital had decreased while the vast majority or 92% said that the number of presentations for unstable angina had reduced
- Some respondents (9.1%) reported that the number of presentations for heart attack had reduced by up to 80%, while a small number (2.6%) reported that presentations for unstable angina had reduced by more than 80%.
- Overall, the perceived percentage reduction in presentations ranged from less than 20% to more than 80%

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<sup>7</sup> [http://www.irishcardiacsociety.com/documents/618\\_PReleaseCovid-19.pdf](http://www.irishcardiacsociety.com/documents/618_PReleaseCovid-19.pdf)

Italian data indicates that the COVID-19 outbreak was associated with a remarkable decrease in the rates of PCI across the entire spectrum of ACS. The incidence rate of PCI for ACS decreased from 178 to 120 cases per 100 000 residents per year during the 4-week period before in comparison with after the COVID-19 outbreak.

In Italy, a reduction in rates of treatment for acute coronary syndromes has been accompanied by an increase in the expected numbers of out of hospital cardiac arrests (OHCAs), with 362 cases identified, as compared to 229 cases identified during the same period in 2019 (a 58% increase). In Paris, comparing the 521 OHCAs of the pandemic period (March 16 to April 26, 2020) to the mean of the 3052 total of the same weeks in the non-pandemic period (weeks 12–17, 2012–19), the maximum weekly OHCA incidence increased from 13.42 to 26.64 per million inhabitants. Similarly, the pandemic period remained significantly associated with lower survival rates at hospital admission.

Non-Covid-19 hospital admissions are likely to rebound as chronic conditions destabilise. Failure to diagnose and treat new events may have other delayed consequences, for example the development of heart failure in sub-optimally treated or untreated acute myocardial infarction and stroke in patients with untreated transient ischaemic attack.

Specific impact on cardiology services since the outbreak of the pandemic includes:

- Routine outpatient services were curtailed or transferred to follow up by phone, resulting in a service already under significant pressure falling even further behind in providing services to outpatients
- Cardiac Rehabilitation was stopped due to redeployment of staff and concern over bringing patients into the hospital environment.
- Cardiac investigative services have mainly focused on providing urgent in-house services with limited out-patient access for investigations deemed urgent

All the following services have also been affected and it is not yet possible to estimate the extent to which they have been reinstated as services levels are variable and changing week by week: Routine cardiology outpatient clinics; Elective diagnostic and interventional cardiology procedures; Outpatient diagnostic services; Subspecialty Heart Failure services; Cardiac Rehabilitation services.

As the requirements of COVID management diminish, and concern regarding the impact that the response to the pandemic has understandably had on cardiovascular care, units are beginning to look at how to retrieve what has been deferred and put in place systems that will allow continued focus on the Covid epidemic, but also structure capacity to provide standard cardiovascular care.

In the short to medium term, attention must be given to dealing with the backlog of inpatient and outpatient investigations and additional resourcing must be prioritised.

The requirements of social distancing mean that capacity in cardiac services will be cut by up to 33%.

Hospitals, GP practices and all health care facilities are creating protocols to deal with this, but greater focus also has to be placed on community health services that relieve pressure on the hospital system and treat patients at the lowest appropriate level of complexity.

One positive effect of recent events is that telehealth has been demystified, with many hospitals and GP practices using telemedicine for up to 90% of visits. We need to understand that this new healthcare world will look very different to the world we have been used to, but the likelihood is that by adoption of new digital modalities in the care of people, we can get closer to the delivery of better care to everyone, everywhere. We need to incorporate appropriate and robust governance in the deployment of these new modalities and also include robust clinical decision support within deployments as a rule rather than as an exception.

- The impact of Covid-19 on mortality and morbidity from other causes needs to be quantified and addressed in public health planning.
- Public campaigns aiming to increase awareness of ischaemic symptoms should be reinforced, given that the lack timely treatment for patients with ACS could have other clinical consequences, including increased risk for heart failure or sudden cardiac death
- Public health messages encouraging patients with symptoms suggestive of an acute coronary syndrome and worsening of chronic heart failure to seek urgent medical attention must be developed alongside the continued delivery of essential treatment to high risk patients with chronic diseases and the triage of newly presenting individuals with potentially life-threatening conditions. This will require the reconfiguration of admission procedures to avoid mixing of suspected Covid-19 patients and other emergencies, as well as adapting ambulatory secondary care, and primary care. Indeed, designation of non-COVID hospitals may be necessary. Stroke and coronary care services are particularly susceptible and in any future waves of the virus these services should be protected from any displacement of resources.

## **Heart Failure**

Heart failure (HF) occurs when a person's heart muscle doesn't pump blood as well as it should. The five-year mortality rates for the condition are worse than for most cancers. It is estimated that 90,000 people are living with HF in Ireland, with 10,000 new cases each year.

Despite the crucial role of HF services, redeployment levels due to the pandemic have been high, including just under 26% of HF nurses being assigned to COVID wards. Much of HF presentation in acute hospitals has been directed to COVID assessment and if negative to general medical non-Covid services. As a result, cardiology involvement has been reduced, increasing the likelihood of incomplete work-up, suboptimal management, premature discharge and further clinical events. Inpatient education by heart failure nurses was reduced or suspended to reduce staff movement through wards.

In terms of outpatient services, it became apparent early in the reconfiguration of hospital services that disease management programmes for HF were being compromised at several levels in addition

to redeployment, including: advice to curtail face-to face clinical outpatient appointments; the impact of cocooning of over-70s on hospital presentation; and general patient reluctance to present to clinics due to fear of contracting the virus.

Clinic appointments were transferred to a virtual platform in many instances with face-to-face appointment based on clinical need. This has an impact on patient clinical stability, increasing the likelihood of patients having to be re-admitted to Emergency Departments. A significant slowing of use of life-prolonging disease modifying drugs was also reported.

The experience within HF services very much mirrors the Irish Heart Foundation's experience as an organisation that provides support to around 1,000 HF patients, with whom its support coordinators have been in close contact during the pandemic. These patients continue to live in fear due to their vulnerability to the virus, with some still cocooning regardless of the easing of lockdown restrictions. Despite this it appears that HF admissions to hospital are at least returning to normal levels, with some reports of an emerging surge in presentations as a result of patients going untreated after the pandemic struck.

Meanwhile, changes in dietary and lifestyle behaviors during social isolation, like increased processed foods and alcohol consumption and decreased physical activity, may trigger additional HF destabilisations.

A multifaceted approach will be critical to overcome this crisis. It is crucial that in any future waves of COVID no further redeployment takes places and services are delivered as normally as possible. Patients also need to be continually reassured that the hospital environment is safe and that the health impact of not presenting hugely outweighs any risk of contracting the virus.

In-person and virtual remote care services are of high value. The capacity for and consolidation of HF clinics, or in some cases home visits during which providers check vital signs and weights, perform blood draws, administer intravenous diuretics, and deliver prescriptions should be rapidly scaled.

Patients should be considered for telehealth programs and equipped with physiological monitors that can communicate information to providers. Clinicians should also incorporate targeted questioning regarding changes in food stability, alcohol use, psychological health, physical activity, and caregiver support status into their assessments and should regularly reinforce the indications for seeking medical evaluation. Palliative care and hospice services need to be expanded in parallel. Unfortunately, socioeconomically disadvantaged populations are less likely to have access to, and therefore, benefit from, this intensification of remote care, and may endure disproportionate cardiovascular morbidity and mortality. Effective alternative outreach initiatives for these populations are urgently needed.

In addition to these measures, 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 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.
- 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.

## Stroke

Stroke is a leading cause of death and disability worldwide. In Ireland, approximately 10,000 people have a stroke related event annually, with 7,000 acute hospital admissions and upwards of 30,000 people living in the community with stroke related disabilities.

Risks factors for stroke such as, age, hypertension and diabetes and other cardiovascular disease are associated with increased COVID-19 hazard. However, social isolation and fear delay both identification and referral for time critical interventions.

The World Stroke Organization has been monitoring the impact of the pandemic globally, and worryingly has identified an initial marked fall in stroke presentations as well as a widespread impact on stroke services.<sup>8</sup> Initial data in Ireland emerging from the new audit of stroke services indicates that the reduction in emergency presentations for stroke was 40% at peak and 15% over the period from Feb 29 to May 17th. The COVID-19 pandemic is also having huge implications for stroke care and COVID-19 has been described as a risk factor for stroke.

Beyond the fact that people with cerebrovascular diseases have been found to be particularly prone to complications and death when suffering from COVID-19 infection, the pandemic also has a significant impact on stroke-related health services. Delayed presentation, impeded service access, changes in service delivery and 'crowding out effect' could result in as many deaths as the infection. Pandemic responses disrupt organised care pathways and infected stroke inpatients suffer worse outcomes.

Given the similarities between COVID-19 and stroke in terms of presenting features, protocols directed at potentially contaminated patients result in a prolonged door-to-needle time.

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<sup>8</sup> Markus, H. S., & Brainin, M. (2020). COVID-19 and stroke—A global World Stroke Organization perspective. *International Journal of Stroke*. <https://doi.org/10.1177/1747493020923472>

Over time, stroke care has become increasingly organised, protocolled 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.

Meanwhile delayed presentations among patients who were more frightened about contracting COVID than not receiving treatment for a stroke or a transient ischaemic attack or mini stroke is likely to have a severe impact on outcomes.

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<sup>9</sup>, with around 60%<sup>10</sup> of those receiving the treatment regaining functional independence.

Unfortunately, however, since the FAST campaign ended, awareness of stroke as a medical emergency has continued to fall, as evidenced by significant and consistent increases in the average time from stroke onset to hospital presentation. Stroke professionals have expressed concerns to the Irish Heart Foundation that delayed presentations related to COVID have further diminished awareness of the need to act FAST following stroke. With uncertainty over whether a surge in strokes will occur this winter due to a multiplicity of COVID-related factors, the delivery of a fully funded FAST campaign is more important than ever.

Meanwhile the HSE’s long-awaited National Stroke Strategy, covering the key areas of prevention, acute care, rehabilitation and restoration to health, must be published, along with a COVID-proofed implementation plan and a commitment to funding. This is particularly needed in relation to measures proven to improve outcomes and increase efficiencies, such as Early Supported Discharge and tackling delayed discharges. These will also free up precious hospital capacity to help make for beds lost due to social distancing requirements.

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<sup>9</sup>Randomized Assessment of Rapid Endovascular Treatment of Ischemic Stroke  
<https://www.nejm.org/doi/full/10.1056/NEJMoa1414905>

<sup>10</sup> Dr Máirín Ryan, HIQA’s Deputy Chief Executive and Director of Health Technology Assessment <https://www.hiqa.ie/hiqa-news-updates/hiqa-review-recommends-national-emergency-endovascular-service-acute-stroke>

### ***Dealing with Delayed discharges: A shift in the point-of-care***

Attention to date has predominantly focused on addressing the surge of critically ill patients in acute care settings. Less emphasis has been placed on the capacity of post-acute health care system to manage numerous stroke patients after COVID-19 i.e. as they move from hospital to long-term care facilities or home.

Shortcomings in coordination between hospital and follow-up care in Ireland have been identified by the OECD, with delayed discharges in Ireland contributing to high hospital bed occupancy rates.<sup>11</sup> 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. A major contributory factor is the inability to discharge people, often older patients, due to problems accessing support in the community, home care packages and other forms of support. This is equally true for cardiac patients.

A recent audit of delayed discharges undertaken across eight hospitals highlighted significant gaps in community specialist and inpatient specialist services which are having a severe impact on acute services. The Delayed Transfers of Care (DToC) audit was commissioned as part of a mapping exercise for the 2019 neuro-rehabilitation implementation framework. It looked at patients listed as delayed discharge in the eight hospitals against those confirmed as being ready for rehab and on the NRH inpatient waiting list. Based on this, a larger audit was funded to look at those waiting for neurorehabilitation across the country. The audit results showed that under reporting of delayed discharges waiting for neurorehabilitation was significant and that 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.**

The audit demonstrates that those delayed in acute hospitals while awaiting neurorehabilitation are in the moderate – to high dependency groupings. The needs of this group could not be met within generalist rehabilitation services and multidisciplinary intensive therapy is required in a post-acute neurorehabilitation inpatient service or by a community neurorehabilitation team.

- 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

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<sup>11</sup> OECD/European Observatory on Health Systems and Policies (2019), *Ireland: Country Health Profile 2019*, State of Health in the EU, OECD Publishing, Paris/European Observatory on Health Systems and Policies, Brussels, <https://doi.org/10.1787/2393fd0a-en>

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.

### **Early Supported Discharge (ESD)**

The disruption to community 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.

National Clinical Directors for Stroke in Ireland, Northern Ireland, England, Scotland and Wales as well as representatives of the ESD Programme have highlighted the need to maintain ESD and community rehabilitation stroke services to support hospital discharges, prevent inappropriate readmissions and facilitate the recovery and wellbeing for people who have had a stroke during the COVID-19 pandemic.<sup>12</sup> Capacity across stroke units is estimated to be down in the region of 20%, which necessitates the expansion of ESD nationally. In terms of non-COVID healthcare delivery:

- Maintain the current model and prioritise ESD programmes, providing the resources required to deliver effective services, as well as committing to the expansion of post-hospital rehabilitation models.

### **Prevention and Health Promotion**

*“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<sup>13</sup>*

The impact of these adverse trends mentioned by the HSE 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 both at individuals and families, as well as the broader social, economic and commercial determinants of health. For this reason, non-COVID-19 healthcare must concentrate on prevention programmes.

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<sup>12</sup> Statement on the rationale for maintaining Early Supported Discharge and Community Stroke services during COVID-19 outbreak – A UK and Ireland collaborative [Online]. Available from: [https://www.world-stroke.org/assets/downloads/Statement\\_ESD\\_Community\\_Stroke\\_%28COVID%29-May2020.pdf](https://www.world-stroke.org/assets/downloads/Statement_ESD_Community_Stroke_%28COVID%29-May2020.pdf)

<sup>13</sup> Department of Health. (2019). Health in Ireland Key Trends 2019. [Online]. Available from: <https://www.gov.ie/en/publication/f1bb64-health-in-ireland-key-trends-2019/> p1

The most recent Healthy Ireland Survey<sup>14</sup> revealed that:

- 17% of the population are current smokers. 14% smoke daily and 3% smoke occasionally. 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
- High blood pressure was the most commonly reported health condition out of a list of 25 at 13%

As the world waits indefinitely for a vaccine for COVID-19, it is clear that 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 12 June 2020 in Ireland, 1,338 had an underlying health condition compared to 50 who did not and 57 which were not specified. In contrast, while 9,748 of the COVID-19 cases had an underlying health condition, 9,108 did not and 6,449 were not specified.<sup>15</sup> 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.<sup>16</sup> In 2017, when the Sláintecare Report was written, that budget was €233.3 million.<sup>17</sup> 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. If we are serious about preparing for pandemics in the future, building population resilience is key and that means investment in prevention and health promotion.

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<sup>14</sup> Department of Health. (2019). HEALTHY IRELAND SURVEY 2019 Summary of Findings. [Online]. Available from: <https://assets.gov.ie/41141/e5d6fea3a59a4720b081893e11fe299e.pdf>

<sup>15</sup> CSO. (2020). COVID-19 Deaths and Cases Series 5. CSO statistical release, 19 June 2020. [Online]. Available from: <https://www.cso.ie/en/releasesandpublications/br/b-cdc/covid-19deathsandcasesseries5/>

<sup>16</sup> HSE. (2019). National Service Plan 2020. [Online]. Available from: <https://www.hse.ie/eng/services/publications/national-service-plan-2020.pdf>

<sup>17</sup> HSE. (2016). National Service Plan 2017. [Online]. Available from: <https://www.hse.ie/eng/services/publications/serviceplans/service-plan-2017/national-service-plan-2017.pdf>

Ireland needs a comprehensive approach to prevention and it needs appropriate resource allocation to do so. This should include implementing and resourcing Healthy Ireland in a meaningful way and include 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

## Hypertension

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. Sixty-four percent of over 50s have high blood pressure.

Research has shown that Ireland has one of the lowest rates of awareness, treatment, and control of hypertension among 12 high-income countries<sup>18</sup>. 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<sup>19</sup>. Given the high level of undetected high blood pressure and its silent nature, there is a need for a multi-annual awareness campaign calling people to have their blood pressure checked regularly and to ‘know their numbers’.

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.<sup>20</sup>

## Chronic Disease Management

A Chronic Disease Prevention and Management Programme has commenced this year as part of the new GP contract<sup>21</sup> and will be incrementally rolled out to GMS and GP visit card patients over the next four years. Cardiovascular disease is included in the chronic disease category.

The Programme comprises three components:

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<sup>18</sup> NCD Risk Factor Collaboration. (2019). Long-term and recent trends in hypertension awareness, treatment, and control in 12 high-income countries: an analysis of 123 nationally representative surveys. *The Lancet* VOLUME 394, ISSUE 10199, P639-651, AUGUST 24, 2019. DOI:[https://doi.org/10.1016/S0140-6736\(19\)31145-6](https://doi.org/10.1016/S0140-6736(19)31145-6) [Online] Available from: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)31145-6/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)31145-6/fulltext)

<sup>19</sup> Parliamentary Question 10939/20 to the Minister for Health

<sup>20</sup> World Health Organisation (2017) Tackling NCDs. ‘Best buys’ and other recommended interventions for the prevention and control of noncommunicable diseases. [Online]. Available from: <https://apps.who.int/iris/handle/10665/259232>

<sup>21</sup> <https://www.hse.ie/eng/about/who/gmscontracts/2019agreement/>

- Opportunistic Case Finding Programme – involving opportunistic assessment in order to detect and diagnose diseases at an early stage so that they can be appropriately managed.
- Chronic Disease Management Structured Programme – with two GP visits and two Practice Nurse visits a year.
- High Risk Preventive Programme – with one annual review

Lifestyle behaviour change, including diet and physical activity, is a core component of cardiovascular disease prevention but it requires a series of ongoing interventions to support patients to make and maintain changes to their behaviour. The Irish Heart Foundation is concerned that one annual review for those in the High Risk Preventive Programme is wholly inadequate in that regard. The HSE's Framework for Self-Management Support<sup>22</sup> recommends 'support for behaviour change' as being a crucial element for the management of high blood pressure. International guidelines highlight the importance of lifestyle changes in the prevention and management of hypertension, including health behaviour change.

There is an opportunity to enhance the effectiveness of the High Risk Preventive Programme by incorporating a specialised behaviour change component to meaningfully support patients to reduce their cardiovascular risk. The HIQA health technology assessment of chronic disease self-management support interventions for hypertension recommended that a patient-specific approach may be most beneficial, involving components tailored to the individual patient'.<sup>23</sup> It also noted that 'The absence of symptoms may reduce an individual's motivation to self-manage, emphasising the potential role of appropriate education'.

## **Obesity**

The COVID-19 crisis has further exposed the limitations of a food system that fails to adequately nourish the majority of the world's population. Similarly, the collective failure to implement policy changes to address the root cause of diet related disease — the unavoidable cheap junk food environment - has manifested in the reality that obesity is a major factor in young ICU patients battling COVID-19.

Individuals with obesity are included in the HSE "high risk" group in relation to coronavirus and there is emerging evidence that obesity may be linked with COVID 19 disease severity given that obesity is linked with respiratory difficulties, significantly dysregulated immune system and impaired response to both bacterial and viral illness, inflammation and that many people with obesity also have other chronic diseases.

Given its prevalence in Ireland, emerging evidence on the links between COVID-19 and obesity cannot be ignored, with the HSE National Obesity Management Clinical Programme<sup>24</sup> highlighting that experience from Italian anaesthesiologists is that obesity is the most frequent co-morbidity in critical care. A retrospective report of 112 patients in China with cardiovascular disease who were

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<sup>22</sup> <https://www.hse.ie/eng/health/hl/selfmanagement/hse-self-management-support-final-document1.pdf>

<sup>23</sup> <https://www.hiqa.ie/sites/default/files/2017-01/CDSM-Hypertension.pdf>

<sup>24</sup> Covid-19 HSE Clinical Guidance and Evidence. [Online] Available from: <https://hse.drsteevenslibrary.ie/c.php?g=679077&p=4845309>

admitted to hospital for COVID-19 infection showed that BMI was significantly higher in the group with critical illness, and 88% (18/95) of non-survivors had a BMI > 25, which was significantly higher than the BMI of survivors; and over 70% of 775 individuals admitted to critical care with confirmed COVID 19 in the UK have overweight or obesity.

In Ireland, data from the Health Protection Surveillance Centre<sup>25</sup> shows that, while BMI ≥ 40 is the 9<sup>th</sup> most prevalent condition across COVID-19 cases in all settings, it is worryingly the 4<sup>th</sup> most prevalent condition for cases in ICU at 16.8%, behind chronic heart disease, chronic respiratory disease and diabetes.

Safefood research estimates 85,688 on the island of Ireland will die prematurely due to overweight and obesity.<sup>26</sup> To achieve the Government's vision to turn the tide of the overweight and 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

## 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 out walking, cycling, and exercising<sup>27</sup>. 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 a result, social distancing was facilitated, air pollution drastically fell and physical activity levels vastly improved.

With the lockdown restrictions slowly easing, it is imperative that Ireland does not return to the dangerous and unsustainable norm of gridlocked streets with vehicles bumper to bumper but rather

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<sup>25</sup> Health Protection Surveillance Centre. (2020). Underlying conditions in confirmed cases of COVID-19 in Ireland. [Online] Available from: <https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/surveillance/underlyingconditionsreports/Underlying%20conditions%20summary%20170620.pdf>

<sup>26</sup> Ivan J. Perry, Seán R. Millar, Kevin P. Balanda, Anne Dee, David Bergin, Laura Carter, Edel Doherty, Lorraine Fahy, Douglas Hamilton, Abigail Jaccard, André Knuchel-Takano, Laura McCarthy, Adam McCune, Grace O'Malley, Laura Pimpin, Michelle Queally and Laura Webber. (2017). What are the estimated costs of childhood overweight and obesity on the island of Ireland? Safefood. ISBN: 978-1-905767-75- 5 Available from: <http://www.safefood.eu/SafeFood/media/SafeFoodLibrary/Documents/Publications/Research%20Reports/Cost-of-childhood-obesity-Report.pdf>

<sup>27</sup> Fagan, Maresa. (2020) More Adults walking and exercising despite pandemic, survey reveals. Irish Examiner.

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 forms of coronavirus<sup>28</sup> and studies have shown that air pollution may be a key contributor to Covid-19 deaths<sup>29</sup>. 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<sup>30</sup>.

## **Tobacco**

Evidence suggests that tobacco use leads to worse symptoms, prognosis, and complications for patients suffering from COVID-19 and the HSE has stated that smoking affects the immune system and may increase the risk of a more severe infection from coronavirus . Smoking is a risk factor for both hypertension and diabetes and these two conditions increase the risk of severe complications for COVID-19 patients . In this context, every available measure to reduce the prevalence of smoking in Ireland should be implemented to protect public health.

In 2019, 17% of the Irish population still smoked. While this has dropped from 23% in 2015, we are many years away from achieving a tobacco-free Ireland . Despite 83% of smokers wanting to quit and regretting ever starting smoking in the first place, many lack the support to quit once and for all . Although 17% of the population still smoke, only €13m was allocated to tobacco cessation programmes in 2019 .

Only by establishing a properly resourced national tobacco control cessation programme can we help the hundreds of thousands of smokers wanting to quit and reduce the more severe infections of the coronavirus that they would develop in the likelihood that they are diagnosed with Covid-19. We are calling on the government to allocate €50m annually to tobacco control programmes so that smokers are properly supported in their road to quitting.

As cafes, bars, and restaurants being to re-open around the country as the lockdown is lifted, many are turning to outdoor terraces and seating to accommodate their customers practicing social distancing . While we welcome the re-opening plan for Ireland and support businesses in their proposals to change their working conditions to protect public health, we are calling on the government to make all outdoor areas in cafes, bars, and restaurants non-smoking zones.

It is imperative that customers who are seated in these outdoor areas and the staff employed by the establishment are not exposed to second-hand smoke. There is no-risk free level of second-hand smoke and we need to protect the general public and the service staff from the well-recognised health implications of second-hand smoke . As the evidence above shows that smokers are likely to be more vulnerable to Covid-19 infection and the very act of smoking involves fingers touching lips,

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<sup>28</sup> HSE. (2020) Obesity and coronavirus.

<sup>29</sup> Carrington, Damian. (2020). Air pollution may be 'key contributor' to Covid-19 deaths – study. The Guardian.

<sup>30</sup> Connolly, Kate. (2020) 'Cleaner and greener': Covid-19 prompts world's cities to free public space of cars. The Guardian.

thereby increasing the possibility of virus transmission, we believe that smoking in any setting in the post-Covid era should be strongly discouraged.

The HSE has undertaken tremendous work in implementing tobacco free campuses across all its hospitals and primary care facilities . Smoke-free zones reduces the risk of second-hand smoke and denormalises smoking by reducing its visibility. Unfortunately, many of these anti-smoking policies are regularly flouted by both patients and visitors . To ensure that these smoke-free zones are properly followed then meaningful enforcement of these policies must be adopted. It is simply unacceptable that these smoking bans on hospital grounds are frequently ignored after the sacrifice undertaken by the Irish health service during the Covid-19 pandemic.

Implementing and enforcing smoke-free campuses to reduce the prevalence of smoking, lower the risk of second-hand smoke and denormalise the act of smoking must not stop at HSE grounds, however. We are calling on the government to expand these smoke-free policies across all public parks and for third level institutions to implement smoke-free campuses.

By establishing no-smoking policies across public parks and third-level institution campuses, we will be protecting the youth of today from initial take-up of smoking and second-hand smoke. It is critical that future generations are protected from the dangers of tobacco use, particularly as Ireland begins to emerge and adapt in the fight against Covid-19.

## **Vaccinations**

During this pandemic, many groups haven't had their routine vaccines - in particular, many children have missed out on their regular vaccines. In terms of prevention and vaccinations, one important issue is whether at risk groups get the flu vaccine given that failure to do so may lead to a serious flu epidemic during the winter months that will further compromise the health care system. In terms of stroke, for example, people with flu are 20% more likely to have a stroke. As such, it is important that over 60s, at risk groups and children get the vaccine.

## **Air Pollution**

Air pollution is the biggest environmental challenge we currently face in Ireland, making people more vulnerable to chronic disease and causing over 1,500 premature deaths each year, mainly due to cardiovascular disease. Furthermore, recent evidence indicates that high levels of air pollution may be one of the most important contributors to deaths from Covid-19. For example, European research which analysed the number of Covid-19 deaths across 66 administrative regions in Italy, Spain, France, and Germany, found that 78% occurred in just five regions, which were the most polluted<sup>31</sup>. The research noted that the "long-term exposure to this pollutant [NO<sub>2</sub>] may be one of the most important contributors to fatality caused by the Covid-19 virus in these regions and maybe across the world".

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<sup>31</sup> Ogen, Yaron. (2020). Assessing nitrogen dioxide (NO<sub>2</sub>) levels as a contributing factor to coronavirus (COVID-19) fatality. Science of The Total Environment. <https://doi.org/10.1016/j.scitotenv.2020.138605>

A similar link between air pollution and Covid-19 was found in a recent Harvard study. Researchers analysed air pollution and Covid-19 deaths up to early April in 3,000 US counties, covering 98% of the population and found that even a small increase in long-term exposure to PM<sub>2.5</sub> leads to a large increase in the Covid-19 death rate. In particular, the team concluded that an increase of only 1µg/m<sup>3</sup> in PM<sub>2.5</sub> is associated with a 15% increase in the Covid-19 death rate<sup>32</sup>. Further evidence was found in England where analysis there showed London, the Midlands, and the North-West had the highest levels of NO<sub>2</sub> and higher number of Covid-19 deaths<sup>33</sup>.

Exposure to air pollution cannot be significantly reduced by an individual's practical choices and must be tackled by effective policy solutions. Such interventions should involve legislation, regulation and enforcement, and redirection of taxation policy and public investment. By decarbonising our transport, agricultural and heating sectors we can improve health outcomes.

As Ireland slowly begins to re-open, it is critical that all preventative measures available to reduce the number of Covid-19 deaths are taken. These include actions that will reduce air pollution levels such as reducing the use of private motorised transport by implementing congestion charges in major urban areas and expanding public transport options, increasing active travel in walking and cycling through increased investment, and prohibiting the domestic burning of smoky solid fuel by introducing an immediate nationwide ban of all solid smoky fuel.

The challenge for Ireland now and into the future is to reduce air pollution, decarbonise the economy, and reduce the resources used in driving economic growth. The COVID-19 pandemic has provided a policy window for such action. Already, a striking reduction in pollution has been reported in multiple countries during the pandemic<sup>34</sup> and as economies reopen, these gains must not be lost.

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<sup>32</sup> Xiao Wu MS, Rachel C. Nethery PhD, M. Benjamin Sabath MA, Danielle Braun PhD, Francesca Dominici PhD. All authors are part of the Department of Biostatistics, Harvard T.H. Chan School of Public Health, Boston, MA, 02115, USA. Available here: <https://projects.iq.harvard.edu/covid-pm>

<sup>33</sup> Marco Travaglio, Yizhou Yu, Rebeka Popovic, Liza Selley, Nuno Santos Leal, L. Miguel Martins  
doi: <https://doi.org/10.1101/2020.04.16.20067405><https://www.medrxiv.org/content/10.1101/2020.04.16.20067405v5>

<sup>34</sup> Popovich, N. (2020). Watch the Footprint of Coronavirus Spread Across Countries. New York Times. [Online] Available from: <https://www.nytimes.com/interactive/2020/climate/coronavirus-pollution.html>

## **Sláintecare**

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.

## **Conclusion**

The COVID-19 pandemic has proven that making the shift from treating illness to preventing it requires a long-term political commitment. Implementing the Sláintecare plan is a critical part of this. But the specific actions outlined in this document, if prioritised by the incoming Government, would not only save lives and improve the quality of life for those living with cardiovascular disease, they would reduce avoidable hospital admissions and readmissions, easing pressure on hard pressed health budgets.



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