

## Chambers Ireland response to the Public Consultation Climate Change Adaptation Plan for the Health Sector.

Considering health in the context of climate change it is essential that in future consultations the department takes a far wider view on both 'health' and 'climate adaptation'.

The department should avoid using point estimates for likely climate 'average' (presumably mean) values over the next century, firstly there is a significant amount of uncertainty regarding how much the average temperature may shift. Secondly the mean temperature shift is likely to be far less important than the mean number of days where the temperature/weather conditions are at or beyond what we currently believe to be extreme. A week where temperatures are in excess of 30° will cause far more heat stress than a mean increase of 5 degrees if it were spread evenly across the year. Similarly, our average winter temperature is likely to increase, but that could occlude the increased demand for ED resources that will come with even a few days of significant snowfall each year.

As extreme weather is likely to become more frequent, then that is the criterium that the department of health should be using to model the resilience of our health system.

### Climate change and population settlement patterns:

Climate Change, and our response to it, will fundamentally change many aspects of our lives. Paramount to this is the National Development Plan (NDP). The changes that this plan will make necessary will greatly affect the distribution of population, and so must lead to significant redistribution of health resources if the supply of services is going to match demand.

A principal element of the NDP is the urbanisation and densification of our population, led primarily by reconfiguring our transport infrastructure.

In some ways this will make provision of healthcare services easier, with a more concentrated population the mean cost of providing healthcare services will decline as the concentration of treatment centres increases. However, it is also likely to reveal other issues, with a denser population, communicable diseases are likely to have a broader impact on the population as opportunities for transmission will be more frequent.

Also, an urbanising population is likely to amplify the demographic bifurcation of the urban/rural divide, while this will again make urban areas easier to provide healthcare services to, it will increase the current difficulty of staffing healthcare facilities outside of these population centres.

This will increasingly place demand on healthcare systems capacity to transfer patients within the system, we will not be able to have centers of excellence which will be close to those who need them, so there will have to be a considered approach to how the health service can ensure that patients, particularly older ones from regional areas will be able to access healthcare services.

Complicating this will be the decreased use of personal vehicles that the NDP is predicated upon, this will mean that while the population that is living in urban areas are likelier to be healthier than rural populations, they will be likely to be less able to access acute care via the ED. And will, as they will have fewer transport options, be more likely to make use of the National Ambulance Service (NAS) if they are to require access to hospitals.

If we are to continue to rely on the NAS to transport patient to centres of excellence, at a time when there is increased demand on acute transport services, then these rural patients will likely spend more time receiving a less than adequate level of care in regional centres which will lead to further expensive delays to treatment, with an increased frequency of complications, and thus an even more expensive and less healthcare system.

Similarly, the move towards the provision of healthcare service through health centres will have to be better integrated with public transport networks so that an increasingly non-car driving population will have access to the ambulatory care that they will need.

While these changes will require a reorientation of some health facilities, in conjunction with coordinating extra factors into healthcare spatial plans, they are not likely to require considerable resources, and will require ever fewer the earlier they are introduced into the decision making of the ministry.

It is already the case that our healthcare services are not appropriately matched to the spatial requirements of our population, this is a feature that will likely increase in combination with climate change adaptation.

### **Climate change as a public health benefit:**

Climate change will lead to alterations in how and where we live, and the underlying transport infrastructure of our country. Already Dublin City Council has a maximum number of car parking spaces for every new development, where office space is currently being redeveloped planning permission is often conditional upon reducing the number of car parking spaces, as other urban areas are redeveloped across the country, the availability of dedicated space for cars will decline nationally and the number of individuals who use alternative methods of transport will increase. This will result in a decreasing amount of daily inactivity as people spend more time walking to bus stops, standing on rail services, and cycling to work, school, and college. This will create a massive opportunity for improving the lifestyle of large sections of the population.

Obesity is the main risk factor in developing type 2 diabetes and contributed to almost 500,000m in direct healthcare costs in Ireland in 2009<sup>1</sup>. Further, obesity is a risk factor in cardiovascular diseases and cancers<sup>2</sup>, while also complicating treatment circumstances in as diverse as osteoporosis, pregnancy, and mental health.

The shift away from our current obesogenic environment ought to have support from the healthcare service. The NDP will see a transformation in our built environment which will ultimately be of enormous benefit to our healthcare system, the shift towards urban living should be seized upon by the healthcare services at the

<sup>1</sup> <https://bmjopen.bmj.com/content/5/3/e006189#T3>

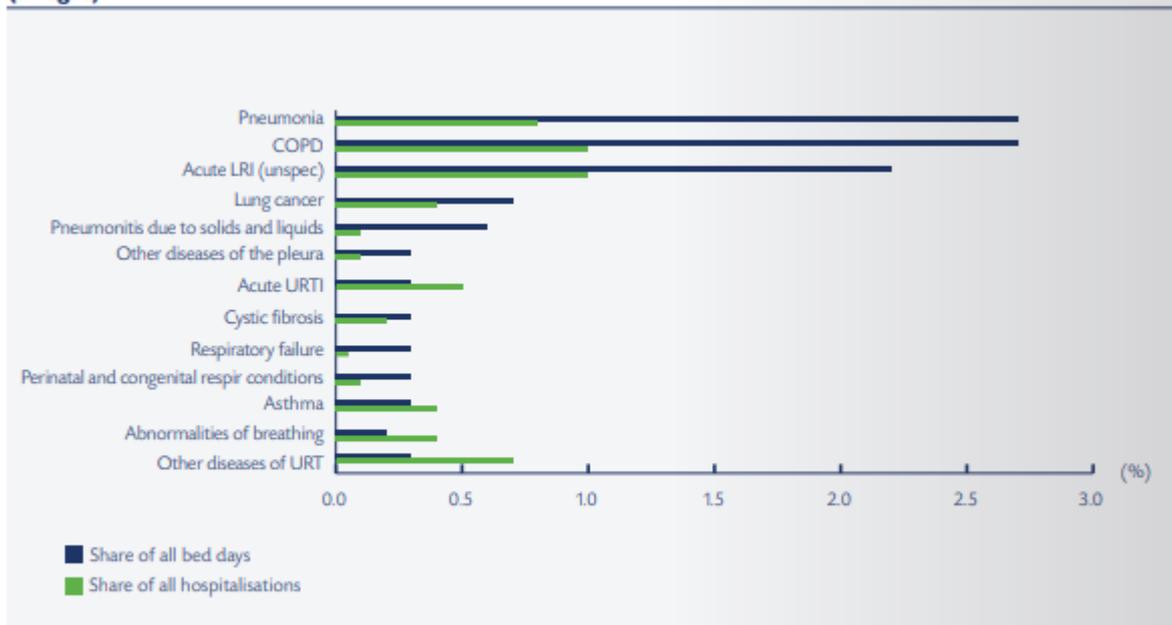
<sup>2</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6088226/>

highest levels. The department should make efforts to cost the health benefits associated with the Climate Action Plan (CAP) and the NDP.

These will arise from policy changes such as the move away from fossil fueled vehicles that will lower exposure to air pollutants such as Nitrogen Dioxide (NO<sub>2</sub>) and Ozone (O<sub>3</sub>) which are characteristic our urban environment, similarly removing diesel vehicles will greatly exposure to PM<sub>10</sub> and PM<sub>2.5</sub>, so too would the transition to tracked forms of public transport vs those with rubber tyres.

Just as climate action policies will improve health through reducing environmental pollution in the public realm, they will also reduce pollution in the private space. Retrofitting, and especially deep retrofitting, of existing housing will bring great gains to the public health service. Reducing the number of households with damp and mold, along with reducing the exposure to particulate matter caused by open fires burning peat and coal, and the reduction of heat poverty associated with properly insulating homes, together will greatly reduce the incidence of respiratory disorders, such as pneumonia<sup>3</sup> and COPD<sup>4</sup>. Lung diseases result in only 3% of hospitalisations, but collectively pneumonia COPD and nonspecific acute lower respiratory tract infections account for more than one in eight bed days in 2016<sup>5</sup>, any improvement in lung health in Ireland will have considerable benefits to the healthcare system.

**Figure 2.6. Percentage of all hospitalisations (including day cases) and bed days, by respiratory condition, 2016 (all ages)**



Source: HIPE 2016 - all hospitals reporting data to HIPE

<sup>3</sup> There is no data for the cost of pneumonia to the Irish healthcare system, but on a pro rata basis it is likely to cost at a minimum 100m per annum, and probably significantly more, given the high incidence of excess winter mortality in Ireland. <http://imj.ie/hospital-resource-utilisation-by-patients-with-community-acquired-pneumonia/>

<sup>4</sup> In 2016 COPD saw over 200,000 OPD attendances, 17,000 hospitalisation, and over 125,000 hospital nights in 2016 <https://irishthoracicsociety.com/wp-content/uploads/2018/12/RESP-Health-LATEST19.12.pdf>

<sup>5</sup> <https://irishthoracicsociety.com/wp-content/uploads/2018/12/RESP-Health-LATEST19.12.pdf>

### **Chambers Ireland Recommendations:**

The department needs to take a wider look at what climate change will mean for the healthcare service and ensure that adequate time and consideration is given to future consultations that relate to climate change.

This consultation document is tightly focused on weather rather than the significant consequences of climate change, e.g. flooding considers drowning, disease, and short-run disruption, but not matters like the mental health effects of living in a home that has flooded, the fear associated with the threat of future flooding, and the poverty that is the result of the destruction of the property's value, and ultimately the displacement that will be needed to avoid future flooding incidents, or the loss of a home to coastal erosion. These chronic effects are likely to be far more burdensome to the healthcare service than the acute effects of delayed surgeries etc.

The health services interests are tightly aligned with the proposed measures that we will be taking to mitigate the worst of climate change's consequences, and the health service must champion the efforts of the other departments which are attempting to introduce them.

While other departments will largely see the climate mitigation tasks as costs on their departmental balance sheet, the department of health will be the line ministry that will benefit most from the introduction of these policies.

The department of health should creditably establish the benefits that will be accrued from the reduction in pollution, obesity, substandard housing etc. and should publish them to ensure that they are introduced into the cost benefit analyses of the line departments that will have to introduce them.

Furthermore, the department of health needs to carefully align its service provision to ensure that it will meet the demands placed upon it by the NDP.