Prevention in Health and Social Care (February 2023)

For more information about the consultation, please visit:
https://committees.parliament.uk/work/7205/prevention-in-health-and-social-care/

Background:

The Physiological Society (The Society) is Europe's largest network of physiologists, at the forefront of science for 146 years. Physiology is the science of life, and research in physiology helps us to understand how the body works in health, what goes wrong in disease, and how it responds and adapts to the challenges of everyday life. The Society's membership is made up of researchers in all of these areas, from neuroscience through to endocrinology, nutrition and sport and exercise science with the science ranging from the mechanistic to the applied, from molecular to whole body.

The Health and Social Care Committee launched a call for evidence looking at the prevention of ill health. This includes the wide range of factors that contribute to ill-health and what can be done to prevent it. The Committee called for proposals on potential topics or areas the Government should focus on to prevent ill health. Given the spread of our membership and the role physiology plays in understanding the mechanisms of disease, research in physiology provides basis for developing preventative measures. Thus, The Physiological Society recommended that the Health and Social Care Committee considers the **prevention of co-morbidities in older adults**.

Consultation response:

Why the Health and Social Care Committee should consider this issue as part of its Prevention inquiry.

The Physiological Society proposes that the Health and Social Care Committee consider the prevention of comorbidities and multi-morbidities in adults as they age as a part of its Prevention inquiry. Comorbidity refers to the presence of more than one illness or disease occurring in one person at the same time, and multi-morbidity means more than two illnesses or diseases occurring in the same person at the same time.

Advances in modern medicine have allowed people to live longer; however, this does not necessarily mean that people are leading healthy lives. Chronic diseases such as hypertension, high cholesterol and ischemic heart diseases are on the rise, especially following the COVID-19 pandemic.[1] The number of people suffering from comorbidities and multi-morbidities is also on the rise in the UK. As the population ages, comorbidities are more likely to occur, with obesity, heart diseases, high blood pressure being the most common. For instance, the likelihood of possessing two or more significant conditions is estimated to be 60% by the ages of 75 and 79 years and exceed 75% between the ages of 85 and 89 years.[2] Many of these comorbidities have a common physiological underpinning such as lack of physical activity and unhealthy diets.

The UK is already experiencing an 'exodus' of over 50s from the workforce which has contributed to sustained high vacancies and labour shortages. Long-term sick is the single most common reason cited by older people for

[1] Institute for Health Metrics and Evaluation. The Lancet: Latest global disease estimates reveal perfect storm of rising chronic diseases and public health failures fuelling COVID-19 pandemic. Available from: https://www.healthdata.org/news-release/lancet-latest-global-disease-estimates-reveal-perfect-storm-rising-chronic-diseases-and

[2] Medical News. *Comorbidities in Older Adults.* Available from: https://newsmedical.net/health/Comorbidities-in-Older-Adults.aspx

leaving the workforce.[3] Thus, there is an opportunity to act now to allow older people to lead longer and healthier lives as well as boost the economy.

Why the Committee should look at it now: in particular, whether there is an opportunity for it to add value to existing research and evidence.

The Committee should consider the issue of comorbidities in older adults now to enable people to live healthier lives and reduce the burden on health services. For example, in the UK, one in three adults admitted to hospitals in an emergency have five or more comorbidities.[4] People with comorbidities are higher users of ambulatory and inpatient care and are also associated with longer lengths of stay at hospitals.[3] Thereby posing a huge burden on an already challenged National Health Service (NHS).

Lack of physical activity and poor diet are major risk factors for disease-related comorbidities. Lack of exercise is linked to an increase in occurrence of Type 2 diabetes and cardiovascular disease.[5] Several studies including epidemiological, prospective cohort, and intervention studies, have linked chronic disease to physical inactivity and inappropriate diet consumption.[6] Understanding how these factors affect the ageing process and higher incidence of comorbidities is a key aspect of physiological research.

There is evidence that positive lifestyle changes not only mitigate disease progression and revert existing disease, but also prevent them from occurring.[7] Physical activity can increase musculoskeletal and bone health which is vital for older adults.[4] Further, research in this area is required to understand the type of diet and the level of physical activity needed to prevent comorbidities in adults as they age. Physiological research into healthy diets and exercise can be used to develop individual meal plans and physical activity regimens for people who are at increased risk of comorbidities, to prevent them from occurring in the first place.

Why this area would benefit from scrutiny.

The presence of comorbidities not only affects peoples' health and wellbeing, but also reduces their immunity levels making them vulnerable to other diseases.[8] For instance, the most severe cases of COVID-19 were associated with the presence of comorbidities such as cardiovascular disease and hypertension.[9]

People with comorbidities have poor functional status and quality of life. Preventing this will improve health outcomes for older people, thereby reducing the burden on health services. Weakening the link between age and

[3] The Physiological Society. *'Understanding 'Early Exiters': The case for a healthy ageing workforce strategy'.* Available from: https://www.physoc.org/policy/public-health-and-ageing/age-health-and-work/

[4] BMJ Best Practise. *The impact of comorbidities on health services.* Available from: https://bestpractice.bmj.com/info/the-impact-of-comorbidities-on-health-services

[5] Centre for Disease Control and Prevention. Physical activity. Available from: https://www.cdc.gov/chronicdisease/resources/publications/factsheets/physical-activity

[6] Roberts CK and Barnard RJ Effects of exercise and diet on chronic disease. *Journal of Applied Physiology*. Available from: https://journals.physiology.org/doi/full/10.1152/japplphysiol.00852.2004

[7] Rippe JM. Lifestyle Strategies for Risk Factor Reduction, Prevention, and Treatment of Cardiovascular Disease. *Am J Lifestyle Me*d. 2019 Mar-Apr; 13(2): 204–212. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6378495/

[8] Centres for Disease Control and Prevention. *Underlying Medical Conditions Associated with Higher Risk for Severe COVID-19: Information for Healthcare Professionals.* Available from: https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/underlyingconditions.html

[9] Ejaz H, Alsrhani A, Zafar A, et al. COVID-19 and comorbidities: Deleterious impact on infected patients. *J Infect Public Health*. 2020;13(12):1833-1839. Available from: https://pubmed.ncbi.nlm.nih.gov/32788073/

poor health associated with comorbidities will also enable people to stay in the workforce longer, and help prevent labour shortages. By encouraging people to make simple lifestyle changes such as eating healthier or walking instead of using a car will help reduce the number of chronic illnesses people develop. This, in turn, will have benefits for the future health of the population as it ages.

However, we still do not have the research in place to understand how such prevention techniques can help. Hearing from the medical and scientific communities together about the evidence gaps and potential for collaboration will be a key part of ensuring a healthier future for all.

Why the Government needs to take action in this area.

As mentioned previously, there is evidence that healthy diet and moderate exercise can alleviate the symptoms of chronic conditions as well as reduce the incidence of comorbidities. However, government action is needed to ensure that measures are put in place to make it easier for adults to make these lifestyle changes.

Healthier food choices are often more expensive than food containing unhealthy levels of fat, sugar and salt.[10] Government intervention through subsidies on fruits and vegetables and meal vouchers is required to ensure the economically disadvantaged are also able to incorporate these healthier options into their diets. Further, action is also needed to ensure everyone has access to green spaces and physical activity regimens tailored to their individual needs.

Physiologists must be at the forefront of preventative care for chronic conditions, including to develop the required guidelines for nutrition and physical activity. Interdisciplinary teams involving physiologists, nutritionists and physiotherapists are required to address this problem. Further, collaboration with industry to develop tools such as the Fitbit and other mobile health devices will allow people to track and monitor their health and see the progress they have made.

Thus, acting now will reduce the occurrence of comorbidities and multi-morbidities in the long term, which will make the population healthier as they age and reduce burden on the NHS.

Related reading:

Understanding 'Early Exiters': The Case for a Healthy Ageing Workforce Strategy

[10] The Telegraph. *Eating a healthy diet is too expensive for many Britons, research finds*. Available from: https://www.telegraph.co.uk/global-health/climate-and-people/eating-healthy-diet-expensive-many-britons-research-finds/