

## ERS submission to the European Commission's Green Paper on Ageing 'Fostering solidarity and responsibility between generations'

The European Respiratory Society (ERS) welcomes the European Commission's initiative to tackle the challenges posed by a European ageing population. Ageing is the main risk factor for major chronic respiratory diseases such as Chronic Obstructive Respiratory Disease (COPD), Idiopathic Pulmonary Fibrosis (IPF) and Lung cancer.<sup>1</sup> IPF usually occurs in individuals older than 50 years and increases considerably with age while COPD prevalence is reported to be two to three times higher in the elderly.<sup>2</sup> In Europe, 44% of lung cancer patients are over 70 years of age.<sup>3</sup> Ageing may also have a negative impact on the outcomes of chronic respiratory diseases acquired earlier in life such as Asthma<sup>4</sup>. Unfortunately, studies have predicted that the number of chronic respiratory diseases patients is expected to significantly increase in the next four decades due to demographic change<sup>5</sup>.

In addition to these pre-existing challenges, the COVID-19 pandemic has clearly shown the need to open a policy debate on ageing. The disease has taken a heavy toll on the elderly population. Older people have not only been affected by high mortality rates but also faced significant disruptions to the continuity of their care.<sup>6</sup> Further, the outbreak drew attention to the lack of human and monetary resources allocated to the chronic disease and geriatric

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<sup>1</sup> Silke Meiners, Oliver Eickelberg, Melanie Königshoff. European Respiratory Journal Mar 2015, 45 (3) 807-827; DOI: 10.1183/09031936.00186914. Available from: <https://erj.ersjournals.com/content/45/3/807>

<sup>2</sup> Rojas M, Mora AL, Kapetanaki M, Weathington N, Gladwin M, Eickelberg O. Aging and Lung Disease. Clinical Impact and Cellular and Molecular Pathways. *Ann Am Thorac Soc*. 2015;12(12):S222-S227.

doi:10.1513/AnnalsATS.201508-484PL. Available from: <https://pubmed.ncbi.nlm.nih.gov/26653202/>

<sup>3</sup> ERS White Book. Chapter on Lung Cancer. Available from : <https://www.erswhitebook.org/chapters/lung-cancer/>

<sup>4</sup>Rojas M, Mora AL, Kapetanaki M, Weathington N, Gladwin M, Eickelberg O, *op. cit.*

<sup>5</sup>William MacNee, Roberto A. Rabinovich, Gourab Choudhury. European Respiratory Journal Nov 2014, 44 (5) 1332-1352; DOI: 10.1183/09031936.00134014. Available from: <https://erj.ersjournals.com/content/44/5/1332>

<sup>6</sup> Colombo Francesca, Berchet Caroline. Protecting elderly people from COVID-19: the role of primary health care. Friends of Europe. Dec 9 2020. Available from: <https://www.friendsofeurope.org/insights/protecting-elderly-people-from-covid-19-the-role-of-primary-health-care/>

sectors. Learning from the pandemic should be a key aspect of future EU initiatives on ageing.

## Laying the foundations (Chapter 2)

We commend the Green Paper life-cycle approach to healthy ageing. We fully agree with the statement that early childhood to young adulthood events impact us for the rest of our lives. Emerging evidence has shown that some respiratory diseases often originate early in life and even at a pre-natal level. In the case of COPD, genetic and environmental factors (for example maternal smoking, air pollution, nutrition or infections) may cause impaired lung development and increase the risk of COPD later in life<sup>7</sup>. Identifying high-risk individuals at an earlier stage could allow the implementation of targeted approaches to prevent the onset or progression of the disease. We believe that multidisciplinary, collaborative and transnational research efforts in this field should be encouraged by the EU through the Horizon Europe programme. This would help to understand genetic and epigenetics mechanisms as well as prenatal and postnatal environmental factors that are associated with the development of diseases and ultimately improve prevention interventions.

## Healthy and active ageing (chapter 2.1)

We welcome the mention of active ageing to reduce the risk of obesity, diabetes and other non-communicable diseases. However, we would like to add that physical activity can also improve health outcomes of chronic disease patients.<sup>8</sup> Studies demonstrate that higher physical activity among asthma and COPD patients appear to attenuate lung function decline.<sup>9</sup> A few years ago, ERS and the European Lung Foundation (ELF) have launched the '[Take the active option](#)' campaign to encourage people living with lung conditions to regularly exercise. We believe similar awareness-raising campaigns, at EU/National levels and in collaboration with medical societies and patients representatives, could be beneficial in promoting healthy and active ageing among the general population and chronic disease patients.

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<sup>7</sup> The Lancet Respiratory Medicine. Early-life origins of respiratory diseases: a key to prevention October 8 2020. Editorial. Available from: [https://www.thelancet.com/journals/lanres/article/PIIS2213-2600\(20\)30419-7/fulltext](https://www.thelancet.com/journals/lanres/article/PIIS2213-2600(20)30419-7/fulltext)

<sup>8</sup> Burr JF, Davidson W, Shephard RJ, Eves N. Physical activity in chronic respiratory conditions: assessing risks for physical activity clearance and prescription. *Can Fam Physician*. 2012;58(7):761-764. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3395516/>

<sup>9</sup> Garcia Aymerich J Physical activity and COPD development. Time to advocate Thorax 2019;74:831-832. Available from: <https://thorax.bmj.com/content/74/9/831>

We support the idea that healthy and active ageing also depends on the environment in which people live. Air pollution is an important risk factor for chronic respiratory diseases<sup>10</sup>, particularly in urban areas and deprived neighbourhoods. EU policies have the potential to heavily influence environments, for example by adopting stricter air pollution standards closer to the WHO Air Quality Guidelines. Implementing bold actions in this field will be key in safeguarding the health of communities, including most vulnerable ones and to avoid overcrowding health systems.

### **Bringing more people into the workforce (chapter 3.1)**

Although the Green paper dedicates a chapter to good working conditions and references accidents at work, we would like to emphasise the need to protect workers from exposure to hazardous substances. Exposure to carcinogens, particulate matter and irritating gases in the workplace widely contribute to the burden of chronic respiratory diseases.<sup>11</sup> Exposure to hazardous substances can lead to increases in early retirements rates and put pressure on social care expenditures.<sup>12</sup> We therefore recommend to include the exposure to hazardous substances in the workplace as a contributor to early retirements.

### **Productivity, innovation and business opportunities (chapter 3.2)**

We commend the attention given to innovation in health, particularly in the digital sector. New ICT-based personalised systems, wearables and mobile health technologies have the potential to provide innovative screening and monitoring solutions for respiratory diseases (e.g. tuberculosis treatment control, smoking-cessation, remote pulmonary rehabilitation, physical activity tele-coaching)<sup>13</sup> and should be leveraged.

In this sense, the European Innovation Partnership in Active and Healthy Ageing (EIP on AHA) an initiative launched some years ago by the European Commission to foster innovation and digital transformation in the field of active and healthy ageing is a very positive development and should be prolonged and expanded.

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<sup>10</sup> World Health Organisation. First WHO Global Conference on Air Pollution and Health. Available from: [https://www.who.int/airpollution/events/conference/Health\\_effects\\_background.pdf](https://www.who.int/airpollution/events/conference/Health_effects_background.pdf)

<sup>11</sup> Global and regional burden of chronic respiratory disease in 2016 arising from non-infectious airborne occupational exposures: a systematic analysis for the Global Burden of Disease Study 2016. *Occupational and Environmental Medicine* 2020;77:142-150. Available from: <https://oem.bmj.com/content/77/3/142>

<sup>12</sup> UNISON. Hazardous substances at work: A guide for UNISON branches. Organising for health and safety. April 2015. Available from: <https://www.unison.org.uk/content/uploads/2015/04/On-line-Catalogue22976.pdf>

<sup>13</sup> Vitalii Poberezhets, Hilary Pinnock, Ioannis Vogiatzis, Vitaliy Mishlanov. Implementation of digital health interventions in respiratory medicine: a call to action by the European Respiratory Society m-Health/e-Health Group. *ERJ Open Research* Jan 2020, 6 (1) 00281-2019; DOI: 10.1183/23120541.00281-2019. Available from: <https://openres.ersjournals.com/content/6/1/00281-2019>

Nevertheless, the scale-up of digital health innovations needs to be coupled with adequate training of healthcare professionals, patients and carers. While smart devices can improve the autonomy and quality of life of the patient, we must ensure that these do not increase health inequalities for people facing digital illiteracy such as the elderly. The digital divide that can occur between generations has been recently shown with the roll-out of the COVID-19 vaccination campaign in the United-States.<sup>14</sup> The programme has been so heavily dependent on the internet that isolated older people were put at a disadvantage and had to rely on younger relatives to book their vaccine appointment online. Proper training and assistance for all parties involved, for example through the EU4Health programme, will be a key aspect to the successful digitalisation of healthcare. As the largest scientific and clinical organisation in respiratory medicine in Europe, we have many years of experience in the provision of training to healthcare professionals and we would be delighted to support the EU in this endeavour.

### **Meeting the health and long-term care needs of an ageing population (chapter 5.1)**

Demographic change will undeniably increase the burden of chronic diseases and comorbidities, which will affect all sectors of society. It is crucial that the policy response is comprehensive and multisectoral as the functional problems of the elderly population are most often not due to a pathology alone but a multitude of diseases interconnected<sup>15</sup>. For example, studies show that IPF patients often have cardiovascular disease, lung cancer, depression, hypertension and diabetes mellitus as comorbidities.<sup>16</sup> The multimorbidity pattern of older people's diseases often make the daily clinical practice challenging, all the more so because medication adherence falls as the number of diseases and complications increase.<sup>17</sup> We therefore strongly recommend the use of multidisciplinary teams including the patient, the General Practitioner, the specialist and the subspecialist and/or other allied physicians, as a standard clinical practice. Multidisciplinary care, has the potential to improve

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<sup>14</sup> Browning Kellen. Seniors Seeking Vaccines Have a Problem: They Can't Use the Internet. New York Times. Feb. 28. 2021. Available from: <https://www.nytimes.com/2021/02/28/technology/seniors-vaccines-technology.html>

<sup>15</sup> European Respiratory Society. Ageing and respiratory medicine. ERS vision. Available from: <https://www.ersnet.org/news-and-features/ers-vision/ageing-an-respiratory-medicine/>

<sup>16</sup> Antonella Caminati, Chiara Lonati, Roberto Cassandro, Davide Elia, Giuseppe Pelosi, Olga Torre, Maurizio Zompatori, Elisabetta Uslenghi, Sergio Harari. Comorbidities in idiopathic pulmonary fibrosis: an underestimated issue. European Respiratory Review Sep 2019, 28 (153) 190044; DOI: 10.1183/16000617.0044-. Available from: <https://err.ersjournals.com/content/28/153/190044>

<sup>17</sup> Mina Gaga, Pippa Powell, Marta Almagro, Ioanna Tsiligianni, Stelios Loukides, Josep Roca, Matthew Cullen, A nita K. Simonds, Brian Ward, Isabel Saraiva, Thierry Troosters, Carlos Robalo Cordeiro. ERS Presidential Summit 2018: multimorbidities and the ageing population. ERJ Open Research Jul 2019, 5 (3) 00126-2019; DOI: 10.1183/23120541.00126-2019. Available from: <https://openres.ersjournals.com/content/5/3/00126-2019>

health outcomes, enhance patient satisfaction and help healthcare systems to be more efficient.