## Comment

# Knowledge is the key to prevention: Managing the silent epidemic of sleep apnoea

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Sleep apnoea is a sleep disorder that causes breathing to repeatedly stop and restart. Sleep apnoea is highly prevalent in the general population, and increases the risk of cardiovascular diseases and other severe health conditions. It is also strongly associated with obesity which in turn depends on many lifestyle related factors.<sup>1</sup> The poor diagnosis rate of sleep apnoea is alarming.<sup>2</sup> Poor awareness is likely a major contributor to the late or missed diagnoses: as an example, according to a survey in Singapore only about 20% of the adult population knew about obstructive sleep apnoea.<sup>3</sup> Early detection and diagnosis could help both the clinicians to treat sleep apnoea in the optimal way, and the public to consider their lifestyle habits.

In the present issue of the Lancet Regional Health Europe, Mattila et al. analysed how the health and economic burden associated with sleep apnoea evolved over the time period from 1996 to 2018.<sup>4</sup> The number of sleep apnoea patients in secondary health care increased more than seven-fold during the study period, from 8600 to 61,000. A probable reason is the increased awareness thanks to the National Programme for Sleep Apnoea implemented by the Finnish Ministry of Social Affairs and Health from 2002 to 2010.<sup>5</sup> The specific aims of this programme included enhancing weight control and prevention of obesity, strengthening awareness of sleep apnoea among the key populations, and accelerating the diagnosis and initiation of rehabilitation therapy. Among the concrete interventions to improve awareness were, for example, intensified focus on sleep apnoea in the training of health care professionals; providing information to the key populations living with, or at high risk of, sleep apnoea; and the organization of national and regional events and training.<sup>5</sup> The results by Mattila et al. thus demonstrate how better awareness and knowledge of sleep apnoea, both among the public and healthcare workers, can effectively optimize the uptake of healthcare services and ultimately lead to better outcomes, both for the patient and the society.4

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The results also show the importance of societal perspective in health economics. The growing number of healthcare visits due to sleep apnoea led to an even more dramatic increase in the related absences from work, from 1100 absence days in 1996 to 46,000 in 2018.<sup>4</sup> A narrow perspective focusing on this number alone could easily lead to a misinterpretation of the situation as "health versus economy" - an argument that was also often heard during the COVID-19 pandemic.<sup>6</sup> Taking into account the entire societal context however changes the picture. The number of disability pensions due to sleep apnoea fluctuated around 700 to 900 per year during most of the study period, but turned in 2012 into sharp decrease, reaching 550 in year 2018. About two hundred averted disability pensions per year thanks to the intensified care clearly outnumber the labour force lost due to sick leave. Also, as pointed out by the authors, the increase in sick leave days may have been caused by the regulations for professional drivers, and thus may have indirectly prevented loss of health through accidents.7 This study therefore supports the view that has been constantly claimed by not only epidemiologists and clinicians but also economists: there should be no confrontation between health and wealth.<sup>8</sup> Health is one of the best investments, and there are numerous examples from different fields of medicine showing that investments in health can pay themselves back in the foreseeable future.9

Quantitative evaluations in health economics are subject to a great number of sources of uncertainty. As in any such analysis, the quantitative results of Mattila et al. on the societal costs need to be interpreted with caution, and should be seen rather as an estimate of the magnitude. Moreover, although the centralized healthcare management system of the Nordic countries offers unique opportunities for research, it also has its limitations. The part of results from public primary care may not be completely representative: in Finland more than half of primary healthcare visits take place outside the public healthcare system in private or occupational clinics, and the characteristics of patients differ between the sectors.<sup>10</sup> Nevertheless, there should be no doubt that the conclusions of Mattila et al., most of which were based on data from secondary care, are well generalizable to both Finland and other European countries.

The fundament of prevention is in knowledge: of the disease and its determinants and consequences, and

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about the best ways of prevention and treatment. In global infectious disease epidemics, the lack of information has been a major obstacle for efficient epidemic response, and the same is true also for non-communicable diseases like sleep apnoea. The experience from Finland can help policy-makers to learn how to manage, in addition to sleep apnoea, other silent epidemics that continue to contribute to a substantial burden on the society.

#### Contributors

JE has written the whole article.

### **Declaration of interests**

Nothing to declare.

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