

Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active. Contents lists available at ScienceDirect



Archives of Gerontology and Geriatrics

journal homepage: www.elsevier.com/locate/archger



Correspondence

Coronavirus and quarantine: will we sacrifice our elderly to protect them?

Dear editor,

the global life expectancy at birth increased from 48 years in the first part of the twentieth century to 72.2 years old, and up to 82 years old for French women in 2015 ... but our elderly are lonely. Even if they were created in the Seventeen century, the number of nursing homes increased since the fifties in response to the increase of life expectancy. Isolation, economic problems, disabilities, loss of autonomy lead to depression and are common factors retrieved in the residents of nursing homes [1]. Geriatric depression is a major public health problem that can affect the prognostic for non-communicable diseases and can conduct to geriatric cachexia [2]. At the end of 2019, a new coronavirus disease (COVID-19) appeared in Wuhan, Hubei, China [3]. The local epidemic became in less than three months a pandemic, with a high mortality among elderly. Most countries declared quarantine and containment to stop the spreading of the virus. Four billion people are now contained (more than half the global population). The influx of severe patients with acute respiratory distress syndrome and the deficit of artificial respirator forced rapidly the emergency physicians not to resuscitate people over 80 years old [4]. Despite strict containment of the general population, rigorous conditions were even pushed a step further for elderly in nursing homes considering their high risk. Even if elderly had already decreased socialization, low physical activity and high sedentary behaviors [5-7], all common activities that stimulate the physical and the memory were cancelled [8]. They were restricted to their room, and not allowed to play cards, to discuss with other residents, to see their family, or to walk outside or even inside their nursing home. Low levels of physical activity and high sedentary behaviors are major risk factors for non-communicable diseases in the general population [8]. The negative consequences will be even more dramatic in the elderly population, increasing sarcopenia, dependence, risk of falls and femoral neck fracture [9]. For elderly living at home, they may even stay longer on the floor because of limited visitors during containment, with putative rhabdomyolysis, kidney failure, and death. Moreover, with an expected worldwide prevalence of 150 million people in 2040 suffering from dementia, and 10 million new cases of dementia every year [10], a high proportion of elderly in nursing homes suffer from dementia. For those residents, nursing homes may be considered as a jail during containment, with dementia residents confined into their room. Even more sadly, contrary to inmates, residents with dementia will not have any understanding of the situation. Such situations will probably increase the cognitive disorders and the medications by psychotics. Only the authorized staff from the nursing home can visit them. In order to fight the COVID-19 pandemic and according to the World Health Organization (WHO), the International Association for Gerontology and Geriatrics (IAGG) and Geriatrics-Asia/Oceania Region proposed recommendations to prevent COVID-19 in elderly [12]. They proposed the COVID-IAGG-AO algorithm (Table 1) as a basic guidance. In the nursing homes, the WHO proposed also to provide

COVID-19 infection prevention and control training to all employees, to provide information sessions for residents on COVID-19, to audit practices regularly and to emphasis on hand hygiene and respiratory etiquette. Physical distancing should also be instated whenever it is possible – and if it is not, group activities must be cancelled and access to visitors should be restricted as much as possible. The members of staff have also to recognize early sign of COVID-19, set up isolation and report any suspected or confirmed COVID-19 cases [13]. But even in non-pandemic conditions, staffs lack time and are not train for cognitive arousal and physical training of residents [11]. Furthermore, regaining previous physical activity levels will be hard to reach and consequences may be definitive [14]. Strategy targeting physical activity and cognitive stimulation of the residents will be strongly needed [5]. Even for funerals, our elderly will be lonely with restriction to three participants in many countries, and sometimes dedicated cemeteries, or obligatory cremation. To conclude, our elderly are paying the worst tribute of the pandemic, being the most at risk, and those who may suffer the most. Rigorous containment may avoid an acute fatal issue, but may have dramatical mid-term consequences for our elderly too.

Declaration of Competing Interest

The authors of this work declare no conflict of interest.

References

- Alexopoulos, G. S. (2005). Depression in the elderly. *Lancet*, 365(9475), 1961–1970. Zhang, Y., Chen, Y., & Ma, L. (2018). Depression and cardiovascular disease in elderly: Current understanding. *J Clin Neurosci.* 47, 1–5.
- JF-W, Chan, Yuan, S., Kok, K.-H.-H., KK-W, To, Chu, H., Yang, J., et al. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating personto-person transmission: a study of a family cluster. *Lancet*, 395(10223), 514–523.
- Garnier-Crussard, A., Forestier, E., Gilbert, T., & Krolak-Salmon, P. (2020). Novel Coronavirus (COVID-19) Epidemic: What Are the Risks for Older Patients? J Am Geriatr Soc.
- Marmeleira, J., Ferreira, S., & Raimundo, A. (2017). Physical activity and physical fitness of nursing home residents with cognitive impairment: A pilot study. *Exp Gerontol.* 100, 63–69.
- de Labra, C., Guimaraes-Pinheiro, C., Maseda, A., Lorenzo, T., & Millán-Calenti, J. C. (2015). Effects of physical exercise interventions in frail older adults: a systematic review of randomized controlled trials. *BMC Geriatr.* 15, 154.
- Voumard, R., Rubli Truchard, E., Benaroyo, L., Borasio, G. D., Büla, C., & Jox, R. J. (2018). Geriatric palliative care: a view of its concept, challenges and strategies. BMC Geriatr. 18(1), 220.
- Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet*, 380(9838), 219–229.
- de Rezende, L. F. M., Rey-López, J. P., Matsudo, V. K. R., & do Carmo Luiz, O. (2014). Sedentary behavior and health outcomes among older adults: a systematic review. *BMC Public Health*, 14, 333.
- Wu, Y.-T.-T., Beiser, A. S., Breteler MMB, Fratiglioni L, Helmer, C., Hendrie, H. C., et al. (2017). The changing prevalence and incidence of dementia over time - current evidence. *Nat Rev Neurol.* 13(6), 327–339.
- Maas, M. L., Specht, J. P., Buckwalter, K. C., Gittler, J., & Bechen, K. (2008). Nursing home staffing and training recommendations for promoting older adults' quality of

France

E-mail address: jbb.bouillon@gmail.com.

Clément Lahaye^b

^b Université Clermont Auvergne, University Hospital of Clermont–Ferrand, CHU Clermont–Ferrand, Department of Geriatric, F-63000 Clermont–Ferrand, France

Frédéric Dutheile

^c Université Clermont Auvergne, CNRS, LaPSCo, Physiological and Psychosocial Stress, University Hospital of Clermont–Ferrand, CHU Clermont–Ferrand, Occupational and Environmental Medicine, WittyFit, F–63000 Clermont–Ferrand, France

care and life: Part 1. Deficits in the quality of care due to understaffing and undertraining. *Res Gerontol Nurs.* 1(2), 123–133.

- Chhetri, J. K., Chan, P., Arai, H., Park, S. C., Sriyani Gunaratne, P., Setiati, S., et al. (2020). Prevention of COVID-19 in Older Adults: A Brief Guidance from the International Association for Gerontology and Geriatrics (IAGG) Asia/Oceania Region. J Nutr Health Aging. 1–2.
- Infection Prevention and Control guidance for Long-Term Care Facilities in the context of COVID-19. WHO.

Howell, D. R., Osternig, L. R., Christie, A. D., & Chou, L.-S.-S. (2016). Return to Physical Activity Timing and Dual-Task Gait Stability Are Associated 2 Months Following Concussion. J Head Trauma Rehabil. 31(4), 262–268.

Jean-Baptiste Bouillon-Minois^{a,*}

^a Université Clermont Auvergne, CNRS, LaPSCo, Physiological and Psychosocial Stress, University Hospital of Clermont–Ferrand, CHU Clermont–Ferrand, Emergency Medicine, F-63000 Clermont–Ferrand,

^{*} Corresponding author.