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We should be considering age, comorbidities and health-care system performance to relax Covid-19 related social distancing measures

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Dear Editor,

Aiming to avoid the health system to collapse due to the COVID-19 pandemic – social distancing measures are taken broadly.[1] The very high or high-risk population is of specific concern, once expected to have an increase rate of admission.[2] In spite of being criticised, the strategy seems to be working properly and now brings up the discussion about when the measures will be relaxed with safety.

Comparisons with other pandemics are not entirely appropriate, but it seems reasonable to look back at the past and consider valuable lessons learned. The direct association between death and age (Figure 1) as well as for comorbidities or clinical risk is observed in other viral infections similarly to the current outbreak (Figures 2 and 3).[3-13]

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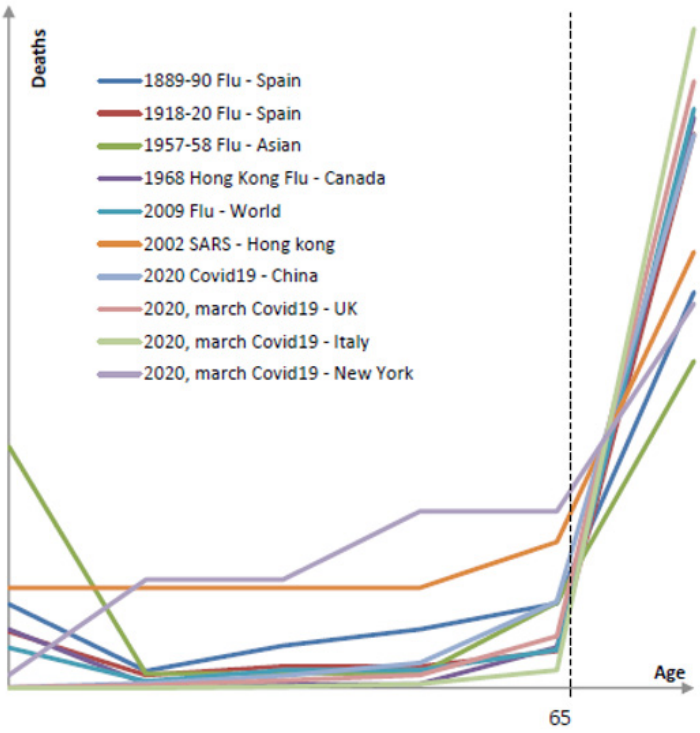
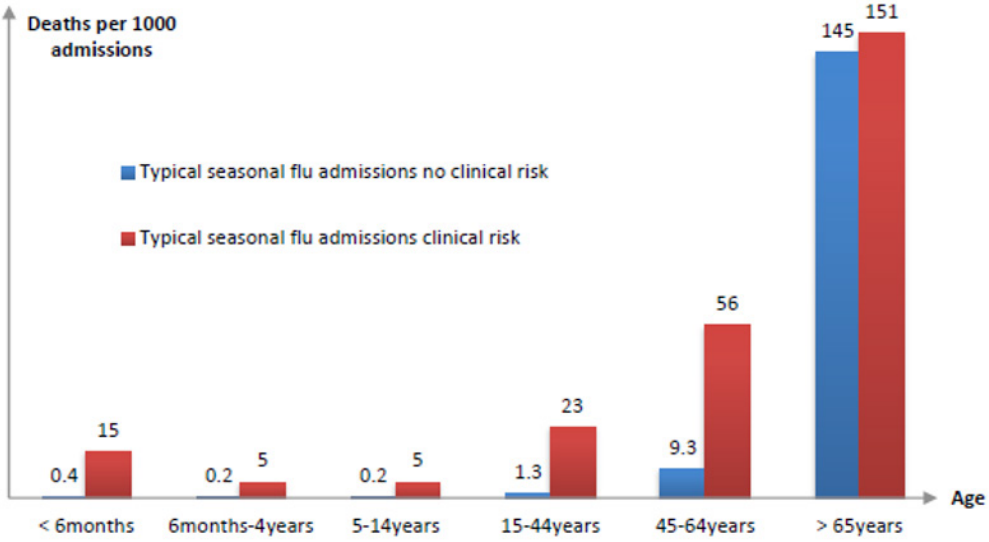
Figure 1 – Age related deaths amongst the main relevant viral outbreaks



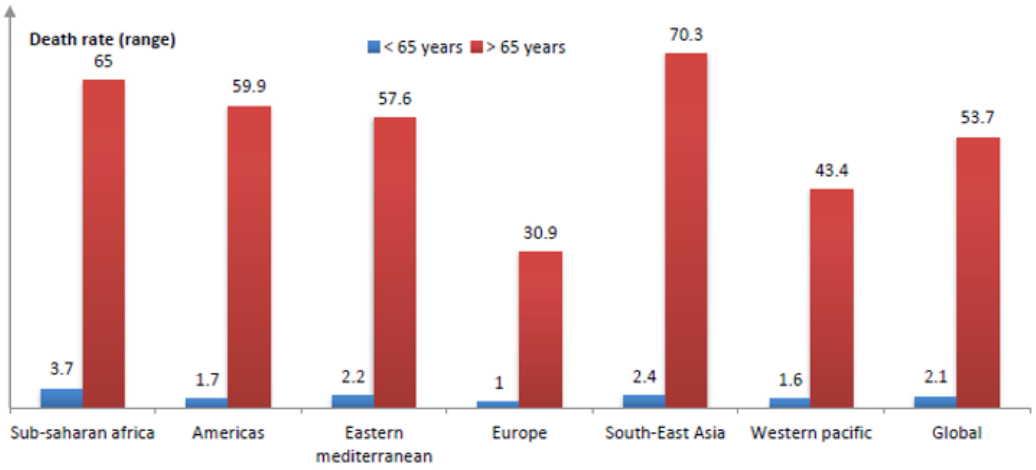
Research source: (proportionally adapted from each author regardless the absolute number of deaths [3-13]);

Figure 2 – Case fatality rate amongst admitted patients by clinical risk: deaths per 1000 admissions.



Research source: (adapted from CROMER et al., 2014);

Figure 3 – Influenza-associated respiratory mortality estimates by world regions: rates per 100 000



Research source: (adapted from PAGET et al., 2019)

Age is also known as an independent survival factor. On the other hand, it should be highlighted that young children are the exception once they have an immature immune system, the main reasons why we generally see a "J-like" curve shape as schematically represented by Figure 1. Although age--mortality rate seems to be similar amongst world regions, poor healthcare and quality index is associated with increase in death rate.[14]

Unfortunately, we were relying on certainties that are fragile for the moment. There is no solid evidence about herd immunity in patients with asymptomatic disease. Moreover, we all expect that the patients that recovered from the infection are hopefully immune or at least have a mild disease in case of re-infection, but the knowledge about the immune response and anti-bodies' nature is currently immature[15, 16]. There is also scarce evidence if mass use disposable barrier methods, such as face masks or gloves, will diminish the viral transmission.[17] Although community use of personal protection equipment might give a sensation of safety in some cultures, the misuse or re-use could be dangerous and there is no evidence assuring the benefit provided by community manufactured masks.[18,19]

Therefore, once the evidence is being gathered and a vaccine, probably the most reliable scientifically based way out of this crisis, will take at least some months to be available, we should consider relaxing social distancing measures based on age adjusted by comorbidities as a first step, whilst continuing with hand washing associated with high standards of self-hygiene whenever possible.

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