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Short Communication

Protecting our vulnerable in the midst of the COVID-19 pandemic: lessons learnt from Malta

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ARTICLE INFO

Article history:

Received 17 June 2021

Received in revised form

28 July 2021

Accepted 30 July 2021

Available online 11 August 2021

Keywords:

Coronavirus

Elderly

Mortality

Morbidity

Vaccination

Malta

ABSTRACT

Objectives: COVID-19 is a health burden threatening the elderly and those with comorbidities. Malta is an ageing and cardiometabolic country. The study depicts how Malta protected the elderly and the effect of vaccination on this subpopulation.

Study design: Observational study with quantitative analyses.

Method: Data were obtained from Malta's COVID dashboard, Institute for Health Metrics and Evaluation and Maltese newspapers. The case-fatality ratio (CFR) and Years of Life Lost (YLLs) for COVID were calculated. Comparisons were made between COVID-19 mortality and YLL to the pre-COVID leading mortality causes. Comparative observations were made between positive and mortality cases stratified by age groups in relation to the cumulative vaccination doses.

Results: The elderly were cocooned during the first wave (CFR 0.98) through the Vulnerable Act, with only 10.80% of positive cases and seven out nine deaths above 65 years. The Vulnerable Act was not reinstated again, with 13.68% of positive cases and 91.34% ($n = 369$) of deaths above 65 years during the second wave (CRF 1.39). The elderly were given priority in COVID-19 vaccination rollout leading to an inverse relationship between positive cases/mortality and vaccination coverage.

Conclusion: The elderly should be protected with timely restrictions to reduce morbidity, mortality and burden on healthcare systems. Vaccination is key to protecting the elderly, although mitigation measures, such as physical distancing, are still required to prevent the resurgence of infections and hospitalizations, especially in this group.

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Background

COVID-19 is ruthless, dispassionate and opportunistic, avid for noncommunicable diseases (NCDs) and multimorbidity (presence of two or more concurrent chronic diseases), with poorer outcomes for such individuals.¹

Malta is a small European country (population circa 500,000) with a high prevalence of cardiovascular problems, diabetes and obesity.² Supplement table 1 presents the Malta population stratified by age-groups for the year 2018.³ Indeed, multimorbidity was reported to affect more than a quarter of the adult population,⁴ and the top leading mortality causes for 2019 were cardiovascular disease, stroke, chronic respiratory disease and diabetes.⁵ This study

demonstrates how Malta protected the vulnerable (defined as elderly population ≥ 65 years) and the outcome of vaccination on this subpopulation. The impact of 11 premature death through the Years of Life Lost (YLL) metric for COVID-19 in Malta was compared to the YLLs of the commonest occurring noncommunicable diseases (cardiovascular disease, stroke, chronic respiratory disease, diabetes) and road traffic injuries in Malta.⁵ Furthermore, the Case-Fatality Ratio (CFR) was calculated for the three major pandemic phases: (i) first wave (weeks 10–19, 2020); (ii) transitional period (weeks 20–32, 2020) (iii) second and consecutive waves (week 33, 2020 to week 17, 2021).

Results

COVID-19 and the elderly

During the first wave, the Superintendent of Public Health enacted the Protection of Vulnerable Persons Order (March 27,

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2020) to protect the vulnerable (including the elderly).^{6,7} This was lifted on June 5 (transitional phase) when consecutive low daily cases were reported.⁷ During this Vulnerable Act period, only 10.80% of the positive reported cases were >65 years,⁸ while seven deaths out of a total of nine deaths were above 65 years; all the deceased had multimorbidity.^{6,8} This period also saw postponements and cancellations of planned hospital appointments, surgeries and screening programmes.⁶ These services were slowly restarted as Malta moved into the transition phase (May 2020).

August (2020) saw the emergence of the second wave in Malta, and the Vulnerable Act was not reinstated.⁹ High community transmission with a spill off to nursing homes was reported.⁹ From June 5, 2020 (end of Vulnerable Act) to date (May 9, 2021), 13.68% of the reported positive cases were above the age of 65 years,⁸ while 91.34% ($n = 369$) of deaths ($n = 404$) in this period were elderly (>65 years).⁸ On comparing the case-fatality ratio (CFR: calculated by subdividing the confirmed positive cases by the confirmed mortality cases and then multiplying by 100) across the three main COVID-19 phases, the second wave was observed to carry the highest CFR (first

wave CFR 0.98; transition period CFR 0.67; second wave CFR 1.39). Indeed, the COVID-19 attributed Years of Life Lost (YLL: calculated by identifying the number of deaths in an age group and multiplying it by a standard life expectancy for that age group) for a year (March 2020–2021) was 5,228.54. When comparing this to the YLLs of the leading NCDs and road injuries for Malta, as reported by the Global Burden of Disease (GBD) study, COVID-19 was the second leading mortality cause (cardiovascular disease 20,557.96, stroke 4,281.98, chronic respiratory disease 2,282.47; diabetes mellitus 1,889.28 and road traffic injuries 649.42).⁵ Of note, the GBD study, conducted by the Institute for Health Metrics and Evaluation, provides estimates of the burden of disease for different diseases and risk factors for regions and countries across the world and is based on a comprehensive methodology of complex statistical models and specific assumptions.

The end of December 2020 saw the arrival of the first (Pfizer BioTech) vaccine in Malta. A four-tier vaccination priority strategy was set up by the Ministry of Health and the Superintendent of Public Health.¹⁰ Healthcare workers, populations in long-term

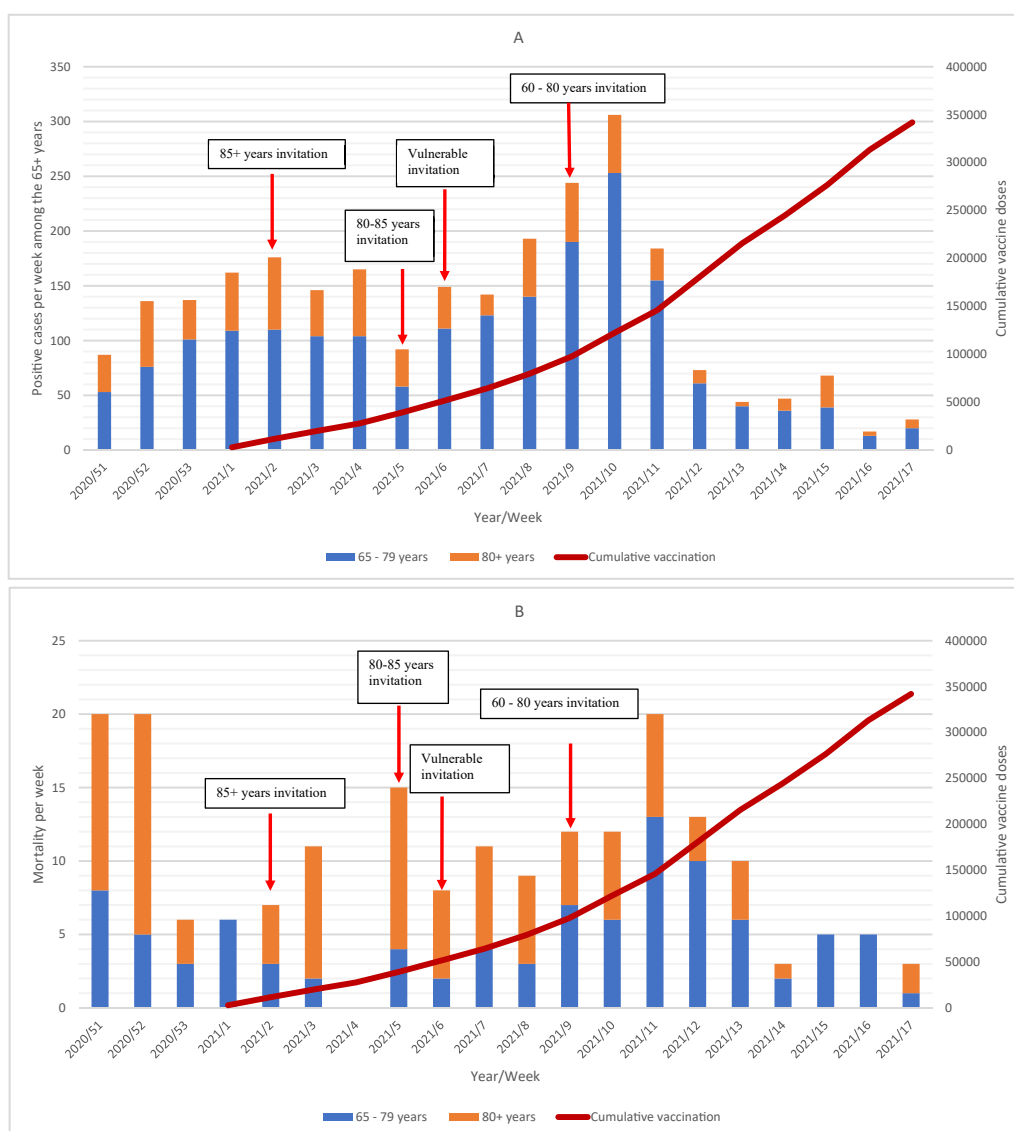


Fig. 1. Comparison between (A) positive reported cases (B) mortality cases per week stratified by age groups and cumulative vaccine coverage in relation to the invitation for vaccination according to age groups.

facilities and persons above 85 years were given priority (Priority group 1), followed by persons of 80–85 years (Priority group 2), vulnerable population and persons of 70–80 years (Priority group 3) then descending down the age groups.¹⁰ All persons above the age of 65 years were invited to take the first dose of the vaccine by mid-March 2021. There was high uptake with 96% vaccinated among the >60 years cohort (up till 28th May 2021)⁸ with decreased morbidity, positive cases (Fig. 1A), and mortality (Fig. 1B). Also, no positive cases have been reported in nursing homes since May 2021.⁸

Discussion

COVID-19 has taken millions, with elderly and comorbid individuals being most susceptible, including in this study. Tight restrictions with the vulnerable ‘cocooned’ were highly effective.⁷ However, delayed medical care and screening in this high-risk cardiometabolic country, is anticipated to have repercussions in the long term. Limited healthcare access might have resulted in periods of uncontrolled NCDs management, as well as the development of new onset and possibly undiagnosed NCDs with elevated secondary COVID-19 associated mortality and morbidity. The flip side is that relaxed restrictions lead to infection in this population category with morbidity and mortality, as occurred in the second wave in Malta.⁹ Furthermore, individuals with NCDs surviving COVID-19 are more likely to have disease progression of their pre-existing disease/s and/or suffer from long-haul symptoms. This calls for a multidisciplinary approach to COVID-19 related illness/symptoms simultaneously with NCDs.

COVID-19 vaccination was initially met with some vaccine hesitancy. However, vaccination is highly protective, as shown in this study. Vulnerable individuals may also have been more careful and more familiar with restrictions by this time.

Conclusion

In the midst of the COVID-19 pandemic and the vaccination rollout race, it is still important to follow the WHO Director-General’s advice to ‘*strike a fine balance between protecting health, preventing economic and social disruption and respecting human right*’.¹¹ Protecting the elderly and the vulnerable should remain high in the agenda, although vaccination appears to be a major player in their protection from the virus. The provision of equitable health measures and the delivery and communication of effective health messages to remain vigilant while maintaining social justice remains paramount in this phase of the pandemic.

Author statements

Acknowledgements

None.

Ethical approval

Not required.

Funding

None.

Competing interests

The authors declare none.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.puhe.2021.07.043>.

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