

Impact of the COVID-19 Pandemic on Arterial Hypertension Monitoring and Control in Portugal

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OBJECTIVES

- This study aimed to evaluate the impact of the COVID-19 pandemic on healthcare provided to patients with arterial hypertension in Portugal.

METHODS

- Publicly available data on performance and health outcomes indicators from the Portuguese National Health Service (NHS) were used to compare pre-pandemic and pandemic periods.¹
- Pre-pandemic data were modelled to project hypothetical scenarios without a pandemic using an exponential smoothing algorithm, and then compared with data collected during the COVID-19 pandemic.
- A cohort model was developed to estimate the number of all-cause deaths and years of life lost (YLL) resulting from the decrease in blood pressure (BP) monitoring and in BP records <150/90 mmHg during the first two years of the pandemic.
- Statistical analyses were conducted using MS Excel®.

RESULTS

- There was a 26.4% relative reduction in the number of hypertensive patients under 65 years of age who had at least one BP measurement, and a 21.8% relative reduction in the proportion of patients with controlled disease (BP <150/90 mmHg) during the initial two years of the pandemic.
- The model projections indicate 176 additional deaths and 3,287 YLL among the Portuguese population of hypertensive patients.

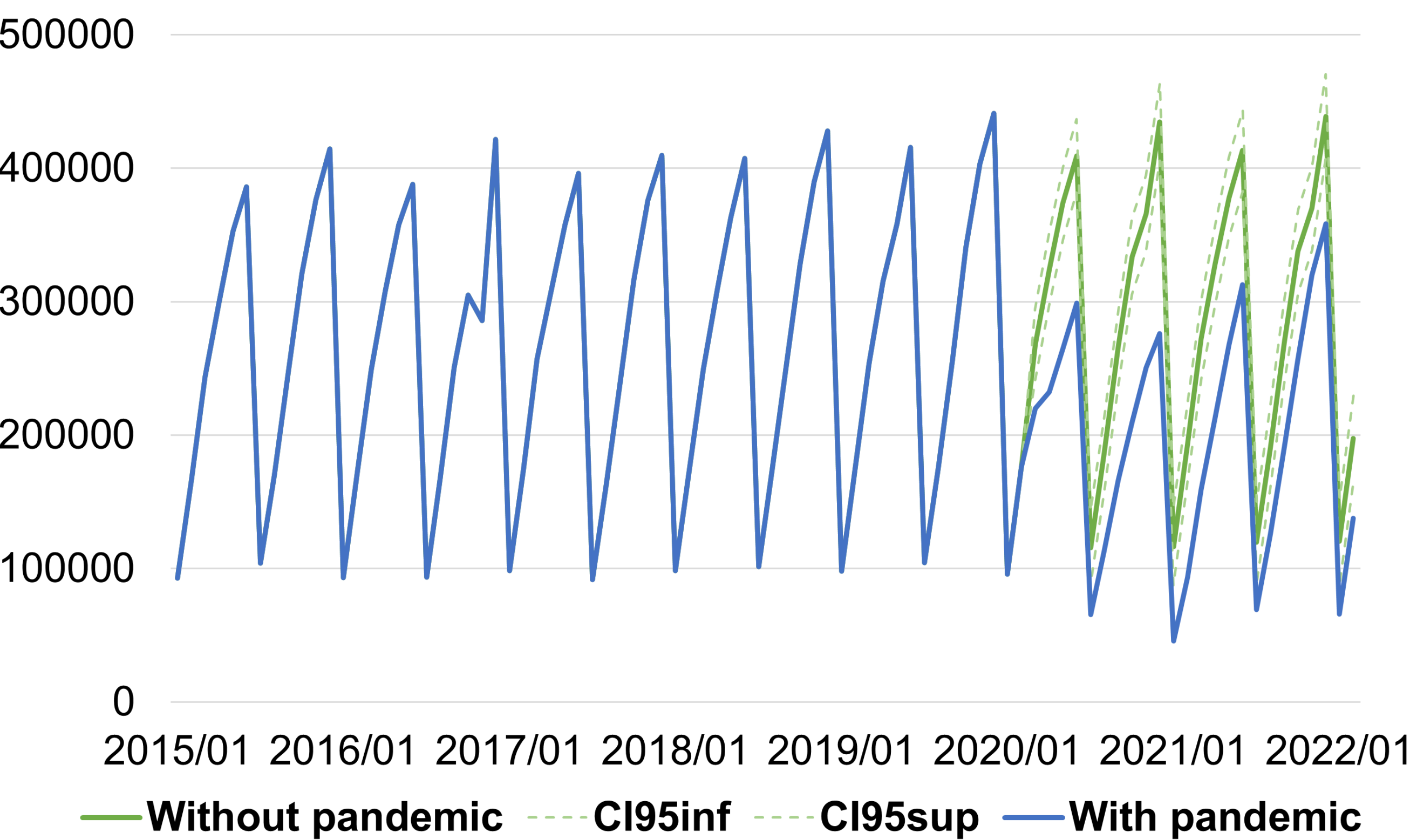


Fig. 1 - Number of hypertensive patients under 65 years of age with at least one BP measurement in the previous 6 months in Portugal.
Abbreviations: BP, blood pressure; CI, confidence interval; inf, inferior; sup, superior.

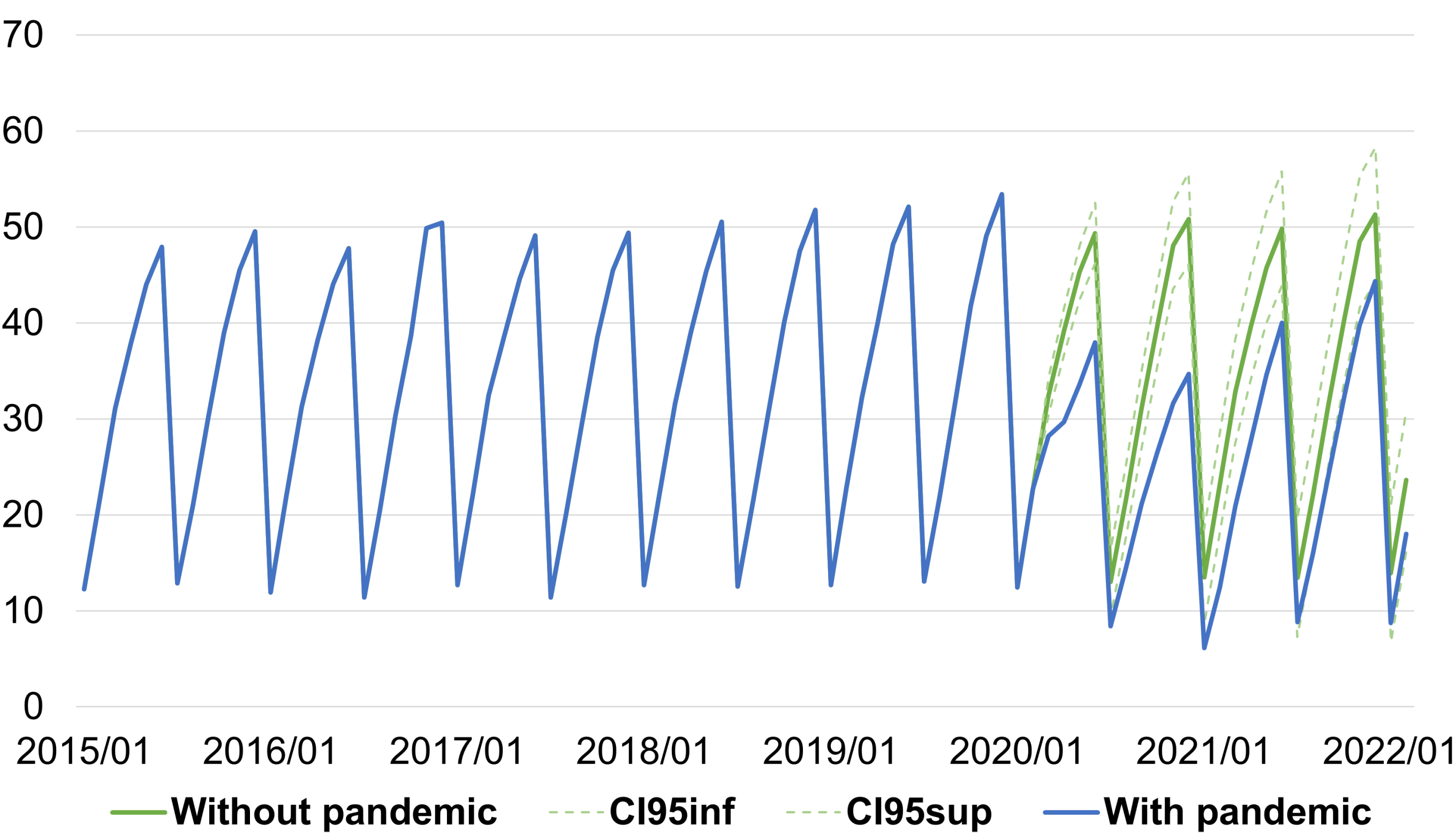


Fig. 2 - Proportion of hypertensive patients under 65 years of age with a last record <150/90 mmHg in Portugal.
Abbreviations: CI, confidence interval; inf, inferior; sup, superior.

Table 1 - Impact of the pandemic on the mortality of hypertensive patients.

	Number of follow-up consultations ^a	Average number of hypertensive patients with BP <150/90 mmHg per six months ^b	Total years of life	All-cause deaths
Scenario A	1,747,329	220,450	12,848	8,907
Scenario B	1,208,353	112,894	9,561	9,083
Difference B – A	-538,976	-107,556	-3,287	+176

Abbreviations: BP, blood pressure.
Scenario A: without pandemic; Scenario B: with pandemic. a, From March 2020 to February 2022. b, Last BP record <150/90 mmHg.

CONCLUSIONS

The disruption in BP testing in Portugal during the pandemic increased hypertension-associated morbidity and mortality, with significant YLL. The long-term implications of compromised monitoring and control of hypertensive patients should be assessed, and proactive measures implemented to mitigate the increase in hypertension-related morbidity and mortality associated with the COVID-19 pandemic.