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Exceptionally high mortality rate of the 1918 Influenza Pandemic in the Brazilian Naval Fleet

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Abstract:

The naval experience with the 1918 pandemic during WWI remains underexplored despite its key role on the pandemic's global diffusion and the epidemiological interest of isolated and relatively homogeneous populations. The pandemic outbreak in the Brazilian naval fleet is of particular interest both due to its severity and the fact that it was the only Latin American military force deployed to war. In this study we examined the mortality patterns of the pandemic in the Brazilian fleet sent to patrol the West African coast in 1918. To this end, we analyzed and compared mortality burden across vessels, ranks and occupations, based on the official population and mortality records from the Brazilian Navy Archives. The results show that the outbreak that swept this fleet included the highest influenza mortality rate on any naval ship reported to date. Nearly 10% of the crews died, with death rates reaching 13%-14% on two destroyers. Stokers and engineer officers had the highest death rates, possibly due to the pulmonary damage from the constant exposure to the smoke and coal dust from the boilers. The fatality patterns observed provide valuable data on the conditions that can exacerbate the impact of a pandemic. The putative lack of exposure to a first pandemic wave seems to have played a major role in the excessive mortality observed in this fleet in 1918. While we found that military rank and occupation were associated with differences in mortality within ships, the unequal death rates among the vessels remain an open question.