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Original Article

Assessment of the association between the Brazilian family health strategy and adult mortality

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Abstract

This study aimed to analyse a wide range of related health problems that respond favourably to efficient primary care treatment among adults. We evaluate the direct impact of the Family Health Strategy (ESF) in Brazil on mortality of adults aged 25–64 years related to conditions for which access to effective primary care can reduce the likelihood of more severe outcomes. Additionally, we discuss heterogeneous effects associated with different intensities of the programme. To address these issues, we estimated a model with variation at the municipal level of the ESF expansion, including municipal-fixed effects, municipal specific trends and year-fixed effects. Our results show that a higher intensity of ESF is associated with reduced mortality by all conditions sensitive to primary care and for some diseases, especially after some years: avoidable conditions, asthma, heart failure, cerebrovascular diseases and gastrointestinal ulcer, infectious gastroenteritis and complications, diseases of the lower airways, hypertension and diabetes. As a public policy view, these results help understand how a nationwide primary care strategy can help mitigate mortality and emphasize the role of having sufficient health teams to attend to the population.

Keywords: Family Health Strategy (ESF), adult mortality, datasus database, impact evaluation

Key messages

- Long-term effects of the Family Health Strategy on adults remain largely unexplored.
- We investigated adult mortality from conditions sensitive to primary care.
- Thirteen years of exposure to the programme is associated with 30.2% reduction in mortality.
- High-intensity exposure is associated with larger decreases in mortality over time.

Introduction

Evidence indicates that the adoption of universal health coverage (UHC) produces positive results for the health of the population (Moreno-Serra and Smith, 2012; 2015). Additionally, UHC was adopted as one of the new Sustainable Development Goals and started to be incorporated as a health reform goal in several countries (Wagstaff and Neelsen, 2020). The 1988 Brazilian Constitution created the Unified Health System (SUS), which 'aims to provide comprehensive, universal preventive and curative care' (Paim *et al.*, 2011, pp. 1778).

The Family Health Program launched in December 1993, later called the Family Health Strategy (ESF), has progressively become the Brazilian nationwide initiative of primary care (Pinto and Giovanella, 2018). Essentially, the programme provides primary care for defined populations and is organized by geographic region by deploying interdisciplinary and multi-professional health care teams—composed of a physician, a nurse, a nurse assistant and four to six community health workers (Macinko and Harris, 2015).

The programme is federal, and accreditation of the ESF requires that municipal managers submit a proposal with details on the area and population to be covered, minimum actions to be developed, number and process of hiring teams, matching funds from the municipality, etc, to be approved by several agencies from all three levels of government (municipal, state and federal). After approval, the municipality starts to receive resources in proportion to the number of deployed teams. The number of accredited teams is established in the proposal. The teams are registered by each municipal health manager in the registration system (SIAB) defined by the Ministry of Health for this purpose. The deployed teams are those for which the