**Title: The uneven state-distribution of homicides in Brazil and their effect on life expectancy, 2000-15**

**Authors:** José Manuel Aburto\*,1,2, Júlia Calazans3, Bernardo L. Queiroz3, Shammi Luhar4, Vladimir Canudas-Romo5

**Names and Positions, Address for each author:**

1. Leverhulme Centre for Demographic Science and Department of Sociology, University of Oxford, 42-43 Park End Street, OX1 1JD Oxford, UK.

2. Interdisciplinary Centre on Population Dynamics, University of Southern Denmark, Odense 5000, Denmark.

3. CEDEPLAR, Universidade Federal de Minas Gerais, Av. Pres. Antônio Carlos, 6627 - Pampulha, Belo Horizonte - MG, 31270-901, Brazil.

4. Department of Public Health and Primary Care, University of Cambridge, Worts Causeway CB1 8RN Cambridge, UK

5. School of Demography, Australian National University, Canberra ACT 0200, Australia

\*Correspondence to José Manuel Aburto 42-43 Park End Street, OX1 1JD Oxford, UK.

Email: jose-manuel.aburto@sociology.ox.ac.uk

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**Abstract**

**Objective:** To determine cause- and age-specific contributions to life expectancy changes between 2000 and 2015, separately by state and sex in Brazil, with a focus on homicides.

**Methods:** Using mortality data from the Brazilian Mortality Information System and population estimates from the National Statistics Office, we estimate levels and changes in life expectancy. We analyse how multiple causes of death, including from homicides and amenable/avoidable mortality, contributed to these changes from 2000-2015.

**Results:** Between 2000 and 2015, life expectancy in Brazil increased from 71.5 to 75.1 years. Despite state-level variation in gains, life expectancy increased in almost all states over this period. However, across Brazil, homicide mortality contributed, to varying degrees, to either attenuate or decrease male life expectancy gains. In Alagoas in 2000-07 and Sergipe in 2007-15, homicides contributed to a reduction in life expectancy of 1.5 years, offsetting gains achieved through improvements due to medically amenable causes.

**Conclusions:** Homicides offset life expectancy gains made through recent improvements related to mortality amenable to medical services and public health interventions, with considerable subnational heterogeneity in the extent of this phenomenon.