Trends of Mortality Related with Dengue in Colombia 2012-2021

ISPOR 2024 May 5-8, 2024 | Atlanta, GA, USA Alvis-Guzman N1, Zakzuk Sierra J2, Alvis Zakzuk N3

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OBJECTIVE

This study analyzes the trend of the mortality rate due to dengue (MR-Dengue) in Colombia from 2012 to 2021.

METHODS

A time series study was conducted using mortality data and population estimates from DANE, covering ICD-10 codes A90, A91 (2012-2018), and A970, A971, A972, A979 (2019-2021). MR-Dengue was calculated per 100,000 people. Trends were examined through Joinpoint regression. Annual Percent Change (APC) and Average Annual Percent Change (AAPC) were estimated with alpha=0.05.

RESULTS

Between 2012-2021, Colombia recorded a total of 2.62 million deaths. 1,392 death due to Dengue (57.4% in men). The average MR-Dengue of 0.29 per 100,000 persons (95% CI 0.22-0.42). Men had a higher MR-Dengue (0.35 per 100,000, 95% CI 0.26–0.49) compared to women (0.25 per 100,000, 95% CI 0.18–0.35). About 46.2% of dengue-related deaths occurred between 2013 and 2015. The male-to-female mortality ratio averaged 1.46 (95% CI: 1.31-1.69). Joinpoint analysis revealed one pivot in trends for 2012-2014 and 2014-2021. The APC for 2012-2014 showed an increase (men: 18.9%, 95%CI: -50.4, 36.5; women: 20.5%, 95%CI: -33.3, 171.8 and both sexes: 19.7%, 95%CI: -28.4, 135.2), while 2014-2021 showed a decrease (men: -9.8%, 95%CI: -50.4, 36.5; women: -9.9%, 95%CI: -60.4, 57.9 and both sexes: -9.8%, 95%CI: -54.8, 45.4). The AAPC from 2012-2021 was -4.1% (95%CI: -16.2, 7.7) for men, -3.9% (95%CI: -19.9, 13.2) for women, and -4.0% (95%CI: -17.7, 9.7) for both sexes.

CONCLUSIONS

The study reveals a significant decrease in MR-Dengue post-2014, following an initial increase. This trend was consistent across genders, with a higher mortality rate in men. The findings highlight the need for continuous surveillance and targeted public health interventions to further mitigate dengue impact. The period-specific peaks, particularly between 2013-2015, warrant further investigation to understand and address underlying factors in dengue mortality trends.

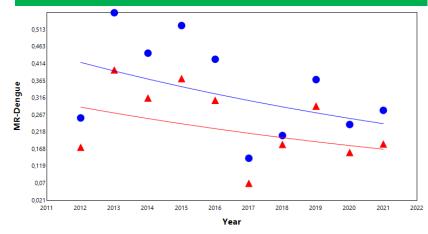
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Trends of Mortality Rate by Dengue in Colombia 2012-2021



Mortality Rate by Dengue by ages in Colombia 2012-2021

