Mortality Related with Respiratory Syncytial Virus (RSV) Specific and Unspecified Acute Bronchiolitis in Under 2 Years in Colombia, 2012 - 2021

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OBJECTIVE

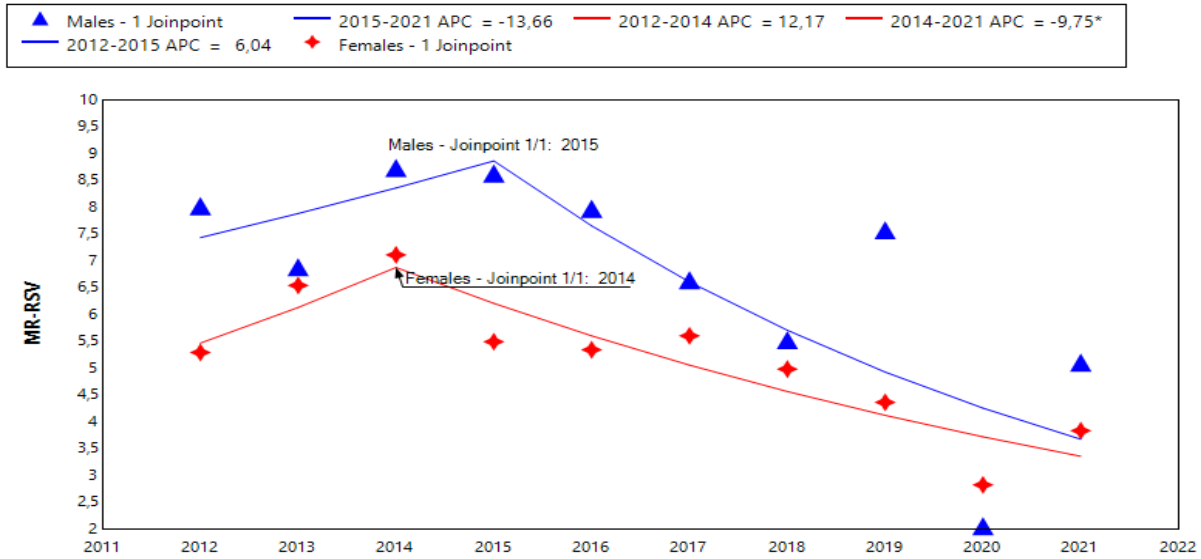
To analyze the temporal trend of RSV mortality rate (RSV-MR) in Colombia between 2012 and 2021

METHODS

A time series study of MR-RSV was conducted in Colombia for the period between years 2012 and 2021. Mortality data were extracted from the vital records from the DANE (Departamento Administrativo Nacional de Estadistica). The ICD-10 codes included in the analysis were divided into 2 groups: 1. RSV- specific deaths (J21.0, J12.1, B97.4, J20.4), and 2. Deaths by unspecified acute bronchiolitis (J21.8, J21.9). Trends of MR-RSV, annual percent change (APC) and average annual percent change (AAPC) were estimated using join point regression.

RESULTS

In Colombia, between 2012-2021 there were 986 deaths related to RSV. Most of them (69%), occurred in infants 1 to 5 months of age and only 25.8% were classified as RSV-specific. There was a clear trend to reduction in the number of deaths during the study period. Compared to 2012, in 2021 MR-RSV decreased by 32% for both sexes, by 36% for men, and by 27% for women. The join point regression showed that AAPC (2012-2021) for both sexes was -6.1% (95%CI: -14.0, 1.1) , for men -7.5% (95%CI: -17.5, 2.9), and for women -5.3% (95%CI: -9.5, -1.8)



APC	Both sexes - 1 Joinpoint	(2012-2014)	12,1(95%UI -16,5;62,2)
		(2014-2021)	-10,8(95%UI -38,6;12,9)
	Males - 1 Joinpoint	(2012-2015)	6(95%UI -23;85,6)
		(2015-2021)	-13,7(95%UI -49,1;20,4)
	Females - 1 Joinpoint	(2012-2014)	12,2(95%UI -7,2;34,7)
		(2014-2021)	-9,7*(95%UI -23,9;-4)
AAPC	Both sexes - 1 Joinpoint	(2012-2021)	APC: -6,1(95%UI -14;1,1)
	Males - 1 Joinpoint	(2012-2021)	APC: -7,5(95%UI -17,5;2,9)
	Females - 1 Joinpoint	(2012-2021)	APC: -5,3*(95%UI -9,5;-1,8)

CONCLUSIONS

RSV mortality decreased between 2012 and 2021 and the reduction started in 2015. Further research is needed to stablish which is the role of palivizumab and other interventions in this positive outcome for public health

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Excess of Mortality By Asthma during COVID-19 Pandemic in Colombia

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OBJECTIVE

Global efforts to estimate epidemiological trends for asthma indicate that asthma-related deaths have declined globally. However, the effect of COVID-19 on asthma mortality is not well understood. We aimed to investigate excess asthma mortality during the COVID-19 pandemic in Colombia using available official national records.

METHODS

Data on asthma-related mortality (ICD-10: J45-J46) from 2015 to 2021 were obtained from the vital statistics provided by National Administrative department of Statistics (DANE) in Colombia. Population projections from DANE were utilized to estimate crude mortality rates (CMR) for asthma. Mean deaths during the periods 2015–2019 and 2020–2021 were compared. Variations of CMR according to main geographical units of the country (states) were analyzed.

RESULTS

Between 2015 to 2019, Colombia recorded a mean of deaths of 203 due to asthma. During pandemics (2020–2021) the mean of deaths was 321 (95% UI 320 – 322). The difference of means was 118 deaths (95% UI 116 – 120). There was an increase of 40.2% in asthma-related mortality during the pandemic. Out of the 33 Colombian states, 14 experienced an increase above the national mean, while in 6 states, there was a decrease in the CMR for asthma during the pandemic, wherein Bolívar was the most affected state. Age-specific CMR showed that the asthma-percent change during the pandemic was more pronounced among individuals under the age of 65, with a 48.9% increase, compared to a 36.3% increase in those over 65 years-old

CONCLUSIONS

The study indicates a concerning increase in asthma-related deaths during the pandemic in Colombia, especially among those under 65 years old.

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Mortality Rate By Tuberculosis in Colombia, 2012-2021: Regional Inequalities

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OBJECTIVE

To analyze the temporal trend of tuberculosis mortality rates (TB-MR) in Colombia between 2012 and2021.

METHODS

This was an ecological time series study of TB-MR in Colombia between 2012 and 2021. Data were extracted from the vital records and population estimates from DANE (Departamento Administrativo Nacional de Estadistica, in Spanish). ICD-10 codes for tuberculosis mortality were A15 to A19 (four characters). Crude mortality rates for TB (MR-TB) per 100,000 people were estimated by sex and year. Trends of MR-TB were analyzed by Joinpoint regression, which recognizes inflection points for temporal analysis.

RESULTS

The average TB-MR (2012 to 2021) was 2.09 deaths per 100,000 people (95%CI 2.01 - 2.16) in both sex; in women and men were 1.21 (95%CI 1.15 - 1.26) and 3.00 (95%CI 2.88 - 3.12) respectively. The average annual percentage change for both sexes was of 0.9% (95%CI [–0.4, 2.2]) in women was 0.7%(95%CI [–1.2, 2.6]) in men 0.9% (95%CI [–0.7, 2.6]). There were no significant changes during the period. 17out of 33 states of Colombia were above of national TB-MR. However, 7 of these 17 states had a decrease in the average TB-MR in the second five-year period with respect to the first five-year period. Six states with 19.4% of population (Amazonas, Atlántico, Risaralda, Meta, Caquetá, and Valle del Cauca) were TB-MR above 3,00 per 100,000 people. Compared to Bogota, which had an average TB-MR of 1.37 (95%CI 1.26 -1.54), the regions, according to DANE, (Caribe, Central, Oriental, Orinoquía, Amazonia e Insular, and Pacífica) had MR-TB between 1.6 and 1.9 times higher.

CONCLUSIONS

During the analyzed period, no change in the trend for mortality was found in Colombia. However, a greatinequality in the TB-MR between the 33 states of Colombia was observed.

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Trend of Mortality By Asthma in Colombia, 1998 - 2021

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OBJECTIVE

We aimed to analyze trends of mortality by asthma in Colombia, 1998 - 2021

METHODS

Data on asthma-related mortality (ICD-10: J45-J46) from 1998 to 2021 and population projections were obtained from National Administrative Department of Statistics (DANE) in Colombia. Crude mortality rates (CMR) for asthma were estimated. Asthma mortality rates (AMR) per 100,000 people were estimated by sex and year. Trends of AMR were analyzed by Joinpoint regression (JPR) to determine inflection points for temporal analysis. Annual Percent Change (APC) and Average Annual Percent Change(AAPC) were also estimated..

RESULTS

8,920 asthma-related deaths were registered (55.0% in women). The annual mean of deaths during period was 372 (SD±162; 95%CI 307-436). For women and men, 204 (SD± 89; 95%CI 169-240) and167 (SD±74; 95%CI 64-270), respectively. The annual mean of AMR was 0.88 (SD±0.45; 95%CI 0.70-1.06) per100,000 people. For women and men, 0.95 (SD±0.48; 95%CI 0.75-1.14) and 0.80 per 100,000 people(SD±0.41; 95%CI 0.64-0.97) respectively. AMR decreased significantly during 1998-2021 [AAPC: -4,2(95%CI-4,8;-3,6)]; in men: -3,7(95%CI -4,7;-2,6) in women: -4,4(95%CI -5,6;-3,4). Three joinpoints resulting in four periods with varying APC in AMR were observed: 1998-2007: -5.7 (95%CI: -7.4 to -3.4); 2007-2012: -14.3(95%CI: -20 to -8); 2012-2017: -3.7 (95%CI: -10.7 to 3.1) and 2017-2021: 13.4 (95% CI: 7.6 to 24.4). For men the APCs were: [1998-2004: -3.9 (95% CI: -7.7 to -0.1); 2004-2016: -10.7 (95%CI: -17.3 to -9.3) and 2016-2021: 15.6 (95% CI: 8.7 to 26.9)]. For women, APCs were: [1998-2007: -5.9 (95% CI: -15 to 2.9); 2007-2012:-13.8 (95%CI: -21.4 to -4); 2012-2018: -2.3 (95%CI: -15.3 to 4.2) and 2018-2021: 14.2 (95%CI: 1.4 to 29.5)].

CONCLUSIONS

The trend of mortality due to asthma has decreased significantly during the study period. However, the AMR increased in the last 5 years of the observation window, especially in men.

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Changes in the Epidemiological Burden of Breast Neoplasms in Colombia after the Cancer Control Model

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OBJECTIVE

To determine changes in the epidemiological burden of breast neoplasms in Colombia afterthe implementation of the "Model for Cancer Control".

METHODS

Interrupted time series study. 70,899 deaths were analyzed, from 1990 to 2019, with basic cause codes:174.0-174.9 (ICDO9) and C50.0-C50.9 (ICDO-10), from the Departamento Administrativo Nacional de Estadísticas (DANE). Age-adjusted mortality and incidence rates (derived) were calculated by the directmethod and their annual percentage variations. Using SPSS V24®, the ARIMA Model (Auto Regressive Integrated Moving Average) was used to determine the existence of significant changes in rates, taking asthe “interruption point”: 2006, year from which the “Model for Cancer Control” began to be implemented in Colombia.

RESULTS

The age-standardized incidence and mortality rates x 100,000 went from 29.2 to 39.4 and from 11.1 to16.1, respectively, with a net percentage change of 34.9% and 45%. The ARIMA model estimates confirmed the increasing trend in the two indicators, but this was only significant ($p<0.05$) for mortality. When considering the percentage variation 1990-2005 vs 2006-2019, the differences in the proportions were significant for Incidence: 9.9% to 20.1% (p: 0.045), but not for mortality: 19.8% -22% (p: 0.86).

CONCLUSIONS

A significant increase in the incidence of breast cancer was found, which may be due, among other factors, to the greater detection of this disease due to the regulatory changes promoted by the Cancer Control Model, but this was not accompanied by a decrease in mortality. Thus, comprehensive risk management, prevention, and early detection in early stages must be intensified.

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Changes in Direct Costs of Breast Cancer in Colombia from 2011 to 2022

ISPOR 2024
May 5-8, 2024 | Atlanta, GA, USA

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OBJECTIVE

To analyze the temporal trend of RSV mortality rate (RSV-MR) in Colombia between 2012 and 2021

METHODS

A time series study of MR-RSV was conducted in Colombia for the period between years 2012 and 2021. Mortality data were extracted from the vital records from the DANE (Departamento Administrativo Nacional de Estadistica). The ICD-10 codes included in the analysis were divided into 2 groups: 1. RSV- specific deaths (J21.0, J12.1, B97.4, J20.4), and 2. Deaths by unspecified acute bronchiolitis (J21.8, J21.9). Trends of MR-RSV, annual percent change (APC) and average annual percent change (AAPC) were estimated using join point regression.

RESULTS

In Colombia, between 2012-2021 there were 986 deaths related to RSV. Most of them (69%), occurred in infants 1 to 5 months of age and only 25.8% were classified as RSV-specific. There was a clear trend to reduction in the number of deaths during the study period. Compared to 2012, in 2021 MR-RSV decreased by 32% for both sexes, by 36% for men, and by 27% for women. The join point regression showed that AAPC (2012-2021) for both sexes was -6.1% (95%CI: -14.0, 1.1) , for men -7.5% (95%CI: -17.5, 2.9), and for women -5.3% (95%CI: -9.5, -1.8)

CONCLUSIONS

RSV mortality decreased between 2012 and 2021 and the reduction started in 2015. Further research is needed to stablish which is the role of palivizumab and other interventions in this positive outcome for public health

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Changes in the Economic Burden of Breast Cancer Neoplasms in Colombia after the Cancer Control Model

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CONCLUSIONS

RSV mortality decreased between 2012 and 2021 and the reduction started in 2015. Further research is needed to stablish which is the role of palivizumab and other interventions in this positive outcome for public health

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Trends of Mortality Related with Dengue in Colombia 2012-2021

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OBJECTIVE

To analyze the temporal trend of RSV mortality rate (RSV-MR) in Colombia between 2012 and 2021

METHODS

A time series study of MR-RSV was conducted in Colombia for the period between years 2012 and 2021. Mortality data were extracted from the vital records from the DANE (Departamento Administrativo Nacional de Estadistica). The ICD-10 codes included in the analysis were divided into 2 groups: 1. RSV- specific deaths (J21.0, J12.1, B97.4, J20.4), and 2. Deaths by unspecified acute bronchiolitis (J21.8, J21.9). Trends of MR-RSV, annual percent change (APC) and average annual percent change (AAPC) were estimated using join point regression.

RESULTS

In Colombia, between 2012-2021 there were 986 deaths related to RSV. Most of them (69%), occurred in infants 1 to 5 months of age and only 25.8% were classified as RSV-specific. There was a clear trend to reduction in the number of deaths during the study period. Compared to 2012, in 2021 MR-RSV decreased by 32% for both sexes, by 36% for men, and by 27% for women. The join point regression showed that AAPC (2012-2021) for both sexes was -6.1% (95%CI: -14.0, 1.1) , for men -7.5% (95%CI: -17.5, 2.9), and for women -5.3% (95%CI: -9.5, -1.8)

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