

Epidemiology in Latin America and Caribbean region

APHA 2015

Brief Description

- ▶ 33 countries and 13 territories
- ▶ Enormous diversity in size, population, economic, social, cultural and political development
- ▶ Predominantly urban populations, low population growth rates (-0.05 to 2.52%)
- ▶ Life expectancy between 63 to 80 years, over 70 years for 75% of the countries
- ▶ HDI over 0.70 for 75% of the countries but Haiti has only 0.471
- ▶ Access to potable water over 80% except for Haiti
- ▶ Access to internet – median 44%
- ▶ Women participation in national legislature: 3 to 49%
- ▶ GDP per capita between US\$ 2.00 to 63.00 day
- ▶ Epidemiological profile: reduction in malnutrition and increase in obesity, reduction in infant mortality, greater mortality by chronic diseases, increase mortality from violence and increase prevalence of mental health problems with alcohol and illicit drugs consumption standing out in the main countries



Institutionalization of Epidemiology

- ▶ Training in Epidemiology
 - ▶ 18 countries and one territory offer Master (161 courses) or PhD (46) programmes in Epidemiology or Public Health
 - ▶ Brazil accounts for 70% of PhD programmes
 - ▶ 15 countries offer Field Epidemiology Training Program
- ▶ Scientific associations
 - ▶ 11 active national associations of Epidemiology or Public Health. The two oldest were founded in the 1940s in Mexico and Puerto Rico. The others were founded after 1970.
 - ▶ Ibero American Alliance for Epidemiology and Public Health – Argentina, Brazil, Colombia, Chile, Mexico, Portugal and Spain
 - ▶ IEA members: 282 of whom 158 (56%) are from Brazil



Institutionalization of Epidemiology

- ▶ National Congress
 - ▶ Were organized in only four of the region's countries
 - ▶ Chile – 5th Chilean Congress of Epidemiology in 2014.
 - ▶ Cuba – 7th National Congress of Hygiene and Epidemiology in 2007
 - ▶ Argentina – 12 congresses of Epidemiology were convened between 1994 and 2012
 - ▶ Brazil- 9 congresses of epidemiology between 1990 and 2014
- ▶ International Congress
 - ▶ 2nd World Congress of Epidemiology was in Colombia in 1959
 - ▶ 8th World Congress of Epidemiology was in Puerto Rico in 1977
 - ▶ 18th World Congress of Epidemiology was in Brazil in 2008
 - ▶ 1st Ibero American Congress of Epidemiology was in Brazil in 1995
 - ▶ 1st Latin American Congress of Epidemiology was in Brazil in 1995
 - ▶ 2nd Latin American Congress of Epidemiology was in Colombia in 2013



Institutionalization of Epidemiology

- ▶ Scientific Journals
 - ▶ 37 scientific journals of which six are specifically dedicated to Epidemiology (two in Brazil and one in Argentina, Cuba, Paraguay and Peru)
 - ▶ Only four journals are indexed in the ISI database(Thomson Reuters)
 - ▶ 15 journals are indexed by SCOPUS
 - ▶ 19 journals are indexed by SciELO
 - ▶ 12 journals are indexed by RedALyC
 - ▶ 30 journals are indexed by Latindex
 - ▶ Only four journals have a integral version in English
 - ▶ Four journals exhibited h indexes greater than the median value of the journals in the Public Health and Epidemiology subject. (h=22)
 - ▶ Two journals exhibited IF above the median value (1.15)



Scientific system in Epidemiology

- ▶ Access to qualified scientific literature
 - ▶ PUBMED central – 38 Public Health or Epidemiology journals
 - ▶ DOAJ – 321 Public Health journals and 439 Epidemiology journals
 - ▶ SciELO – 16 Public Health or Epidemiology journals
 - ▶ CAPES Journal Portal – 157 titles in Public Health and Epidemiology
- ▶ Health Information System :
 - ▶ updated records of vital events of good or regular quality; epidemiological surveillance systems, hospital or population registries of congenital malformations or cancer
 - ▶ Health national surveys
 - ▶ Problems: access to data, coverage and quality

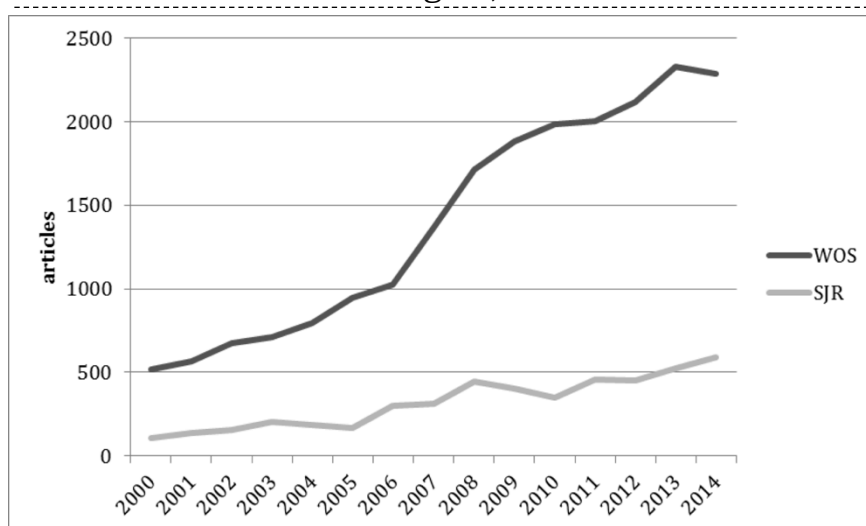


Scientific system in Epidemiology

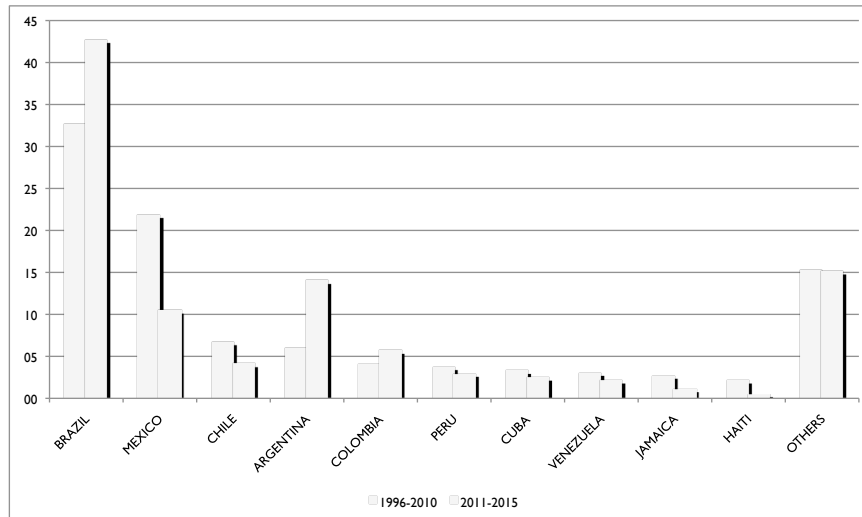
- ▶ Funding of research activities:
 - ▶ According to RICYT – Network for Ibero-American Science and Technology Indicators, in 2012 countries in the region spent 65 billion dollars in S&T activities and 40 billion dollars on R&D
 - ▶ Average investment of US\$ 104.87 per capita in S&T and US\$ 64.49 per capita on R&D
 - ▶ World Bank data: % GDP spending on R&D
 - ▶ 15 Latin American and Caribbean countries: < 2%
 - ▶ USA = 2.9%
 - ▶ Sweden = 3.4%
 - ▶ Only Brazil spend more than 1% on R&D
 - ▶ Argentina, Costa Rica and Cuba spend between 0.5 and 0.9%
 - ▶ Bolivia, Chile, Colombia, Ecuador, Mexico, Panama and Uruguay spend between 0.1 and 0.4%
 - ▶ El Salvador, Guatemala, Paraguay and Trinidad&Tobago spend less than 0.1%



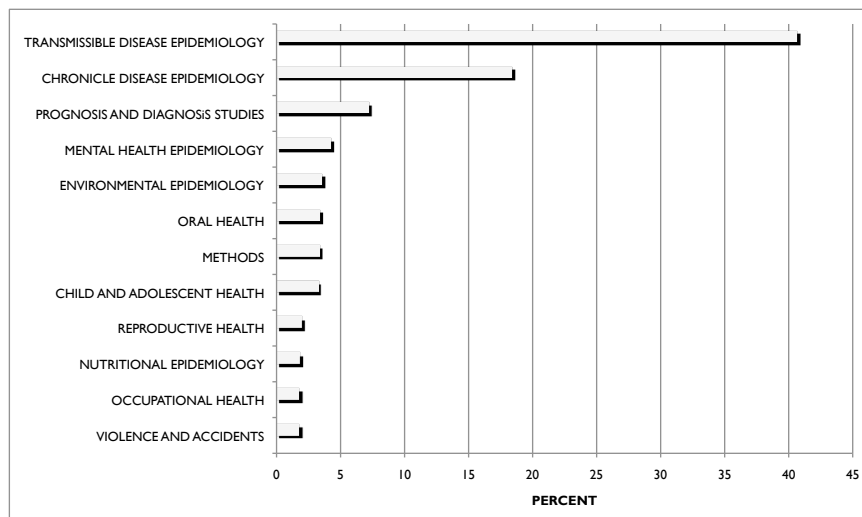
Epidemiology articles from Latin America and Caribbean Region, 2000-2014



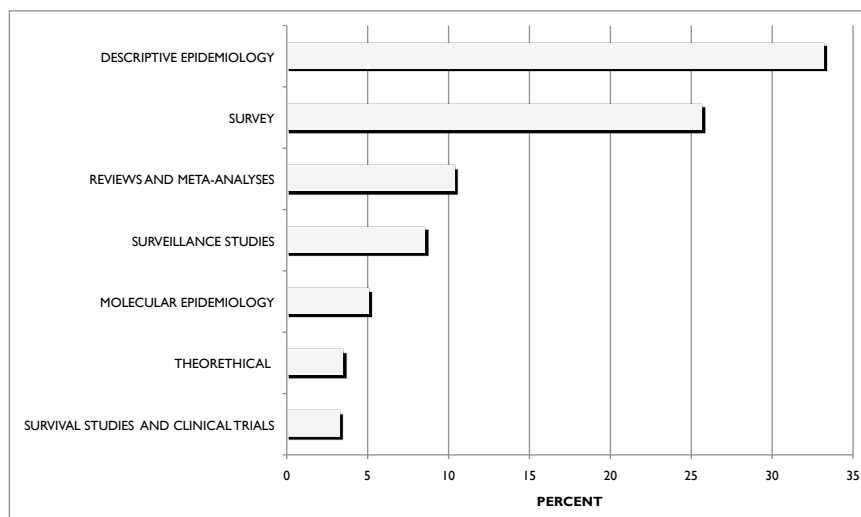
Sharing of epidemiology articles by country, PUBMED, 1996-2010 and 2011-015



Themes in epidemiology papers from LA and Caribbean authors, PUBMED, 2010-2015



Designs and approaches frequently found in epidemiology studies from LA and Caribbean region, PUBMED, 2010-2015



Characteristics (Mauricio Barreto)

- ▶ Strong influence of the methodological tradition of developed countries' epidemiology
- ▶ Development of Epidemiology as part of the broad movement of Social Medicine and Collective Health
- ▶ Epidemiology as a intrinsically part of Public Health
- ▶ Study of social determinants and inequalities in health and theoretical contributions to Social Epidemiology
- ▶ Criticism and questioning of simplistic models such as the natural history of disease model or the epidemiological transition model
- ▶ Epistemological reflections with philosophers of knowledge
- ▶ The effort to build a transdisciplinary approach
- ▶ The commitment to overcome the challenges in the transformation of the life conditions for our people, respecting the human rights and justice principles



Perspectives

- ▶ Maximizing the resources through scientific cooperation
- ▶ Cooperation among:
 - ▶ Regional countries
 - ▶ American countries
 - ▶ Other regions countries
- ▶ Work with multilateral organizations like PAHO/WHO; Inter-American Development Bank; ALAMES, ALAESP, AIESP and the regional section of the IEA
- ▶ Opportunities to broaden contacts in international scientific events
- ▶ Training opportunities to younger researchers through foreign PhD and post-doctoral programmes



Potential Collaborative Agenda

- ▶ The history of epidemiology on the American continent, bringing together information about not only epidemiological profiles over time and the intervention adopted but also the contributions of the region's researchers to the discipline;
- ▶ Comparative studies between the epidemiological profile of the region's countries;
- ▶ Collaborative studies about the health problems common to various countries;
- ▶ Comparative studies of determinants and social inequalities in health within and outside the region;
- ▶ Evaluative studies of the impact of interventions promoted by the national health systems in the region;
- ▶ Theoretical and methodological developments.

