



# Top causes of mortality and morbidity in the Philippines, 1960-2013

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Morbidity and mortality reports inform health care policies, programs, and reforms.<sup>1-3</sup> Success in the implementation of health services is often gauged from incidence patterns of preventable diseases and deaths over time. In this infographic, we used data from the Philippine Department of Health to explore the trends in the annual top ten causes of morbidities and deaths in the country from 1960 to 2013.<sup>4-54</sup>

## Mortaility trends

Pneumonia and tuberculosis were the two most common causes of death from 1960 up to late 1970s. Pneumonia was the number one leading cause of mortality up to the end of the 1980s. Tuberculosis started to take a backseat from 1979 and had since declined further, albeit slowly, ending on the eighth spot in 2012 and 2013. Throughout the 54-year coverage of this report, tuberculosis had consistently been one of the ten leading causes of mortality. Diseases of the heart started to rise as the second leading cause of death in 1979, and from 1990 onwards, it became the number one cause of death. From 1993 to 2013, diseases of the vascular system became the second leading cause of mortality. Measles appeared in the top ten leading causes of mortality from 1976 to 1990. After 1990, measles continued to be one of the top ten causes of mortality. Gastroenteritis and colitis/diarrhea started as the third leading cause of mortality in 1960, moved to a lower spot in the 1970s and continued to decline from early 1980s up to early 1990s. From 1995 onwards, while diarrhea continued to be one of the leading causes of morbidity, it ceased to be among the ten leading causes of mortality.

### Morbidity trends

Bronchitis, gastroenteritis and colitis/diarrhea, and influenza were consistently the top three causes of morbidity from 1960 to 1995. From 1996 to 2007, diarrhea and bronchitis remained within the top three leading causes of morbidity, while pneumonia replaced the original spot of influenza. Beginning in the late 1990s, hypertension started to appear among the ten leading causes of morbidity. Hypertension started as the fifth most common cause of morbidity from 1998 to 2005, ranked fourth from 2006 to 2010, and ranked third from 2011 onwards. Tuberculosis and malaria had consistently been in the top ten causes of morbidity from 1960 to the late 2000s. Tuberculosis continued to be in the list, ending in the eighth spot from 2009 to 2013. Malaria, however, disappeared from the top ten list from 2008 onwards. Whooping cough had also been in the top ten causes of morbidity from the 1960s, disappeared in the list in 1979, and reappeared shortly from 1980 to 1983 as the tenth leading cause of morbidity. Measles, although not as consistent as tuberculosis, had been one of the top ten causes of morbidity from the 1960s up to the early 2000s.

## Possible links to lifestyle and public health strategies

The rise in incidence of heart diseases and hypertension parallels the increase in popularity of unhealthy diets, physical inactivity and smoking among Filipinos.<sup>55-58</sup> Food and Agriculture Organization (FAO) of the United Nations reported in early 2000s that, from 1970 to 2000, Filipinos had increased per capita dietary energy supply. Moreover, the percentage contribution of starchy foods, cereals, and vegetables to the total energy supply decreased, while the percentage contribution of oils, fats, animal meat, animal products, and sugar to the total energy supply increased over the time period. The FAO report added that the modernization of agriculture, and the increase in use of labor-saving technologies have contributed to decrease in energy expenditure.<sup>55</sup>

Public health strategies to reduce morbidity and mortality from infectious diseases can—at least partly—explain the patterns of common diseases in the Philippines over the last 54 years. The establishment of the National TB Control Program (NTP) in 1978<sup>59</sup> is possibly responsible for the decline in mortality from tuberculosis starting 1979. Likewise, the launch

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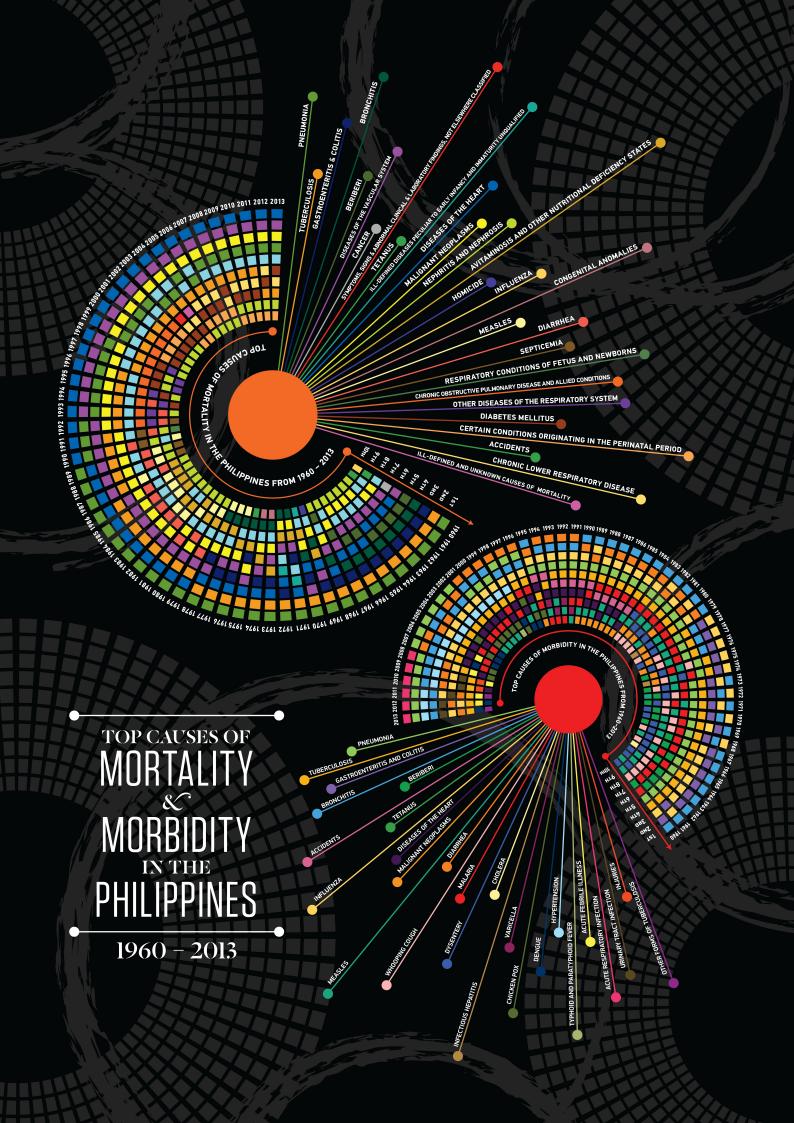
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of the Control of Diarrheal Diseases (CDD) in October 1980 possibly helped reduce deaths due to gastroenteritis and colitis/diarrhea in the succeeding years. The expanded program on immunization (EPI), which was established in 1976, was intended to reduce vaccine-preventable diseases including tuberculosis, poliomyelitis, diphtheria, tetanus, whooping cough, and measles. While morbidity from whooping cough already started to decline in the early 1980s, mortality from measles dropped only at the start of the 1990s, and morbidity from measles only started to wane in the early 2000s. In 1997, a malaria elimination initiative was launched with the aim of a malaria-free Philippines by 2020. Morbidity from malaria, however, only started to decrease in the late 2000s. By 2013, 27 out of 80 provinces in the Philippines were declared malaria-free.

## Summary

This brief exploration of mortality and morbidity trends in the Philippines has demonstrated that public health initiatives do keep at least some important infectious diseases in check. Over the past half a century, non-communicable diseases have gradually figured in the top three leading causes of mortality and morbidity, replacing spots once occupied by infectious diseases.

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