

## Conquering Racial Disparities in Perinatal Outcomes

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#### **KEYWORDS**

- African American infant mortality 
  Racial and ethnic disparities
- Adverse birth outcomes Preterm births Low birth weight
- Social determinants of health Life course Resiliency

### **KEY POINTS**

- Staggering disparities in infant mortality exist between racial/ethnic and socioeconomically disadvantaged groups in the United States and other industrialized countries.
- Environmental epigenetics provides a biological mechanism for the cumulative impact of environmental exposures through the life course that may cross multiple generations and contribute to the understanding of racial/ethnic disparities in adverse birth outcomes.
- For communities of color, discriminatory policies and practices that affect their developmental trajectory should be examined and modified to design culturally tailored action plans, with the goal of eliminating the influence of racism that permeates service systems such as education, health care, housing, justice, and labor.
- Early childhood programs such as supplemental nutrition, parenting support, and quality early childhood education programs are important components of a long-term strategy to ameliorate disparities in birth outcomes for current and future generations.

## INFANT MORTALITY RANKING WITH A FOCUS ON THE RACIAL/ETHNIC WIDENING GAP IN THE UNITED STATES

Infant mortality rate (IMR) is defined as the death of an infant per 1,000 live births, before their first birthday.<sup>1</sup> In this article, African Americans and blacks are used interchangeably, unless otherwise specified. Despite the best efforts by medical and public health communities, black infants are twice as likely to die as white infants. In 1960, the

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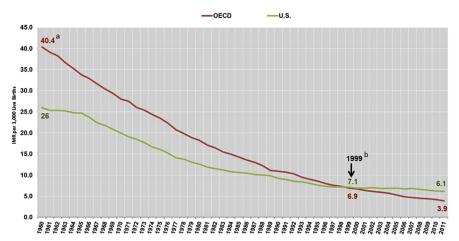
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average US IMR (26 infant deaths per 1,000 live births) was lower than the average IMR (40.4 infant deaths per 1,000 live births) reported for other industrialized countries who are members of the Organization for Economic Cooperation and Development (OECD).<sup>2</sup> IMR in the United States has been declining since 1960 to a rate of 6.1 reported in 2011, as shown in Fig. 1.<sup>2-5</sup> In the United States, advances in medical technology and public health have significantly contributed to the reduction in IMRs.<sup>1</sup> However, the widening racial gaps in IMR observed between black and white birth outcomes over this same period is disappointing.<sup>3,6</sup> From 1960 to 1971, the IMR for black infants declined at a faster rate (14 deaths/1,000 live births) compared with white infants (5.8 deaths/1,000 live births), leading to a narrowing of the infant mortality ratio from 1.9 in 1960 to 1.8 reported in 1971, as reflected in Fig. 2.3-5 However, after 1971, this trend reversed, and by 1988, the ratio in the United States was 2.1, remaining relatively unchanged based on the ratio of 2.2 reported in 2011 (see Fig. 2).<sup>3,5</sup> Moreover, in 1960, the United States ranked favorably among 34 OECD countries with the 12th lowest IMR.<sup>2</sup> For that year, countries with the highest IMRs were Turkey (189.5) and Chile (120.3).<sup>2</sup> Recent available data (2009-2011 average) show remarkable progress for decreasing IMRs in Turkey (8.6), and Chile (7.7), which is rapidly converging to the 34 OECD country average of 4.2 deaths per 1,000 live births, as shown in Fig. 3.<sup>2,7</sup> Conversely, reduction of IMRs in the United States has been slower than the aforementioned countries.<sup>7</sup> The average IMR (6.2) from 2009 to 2011 in the United States was 32.3% higher than the collective average for the 34 OECD countries of 4.2 and is ranked as 31st among these countries, as shown in Fig. 3.<sup>2,7</sup> Despite substantial progress to reduce IMRs in the United States, the downward trend obscures persistent racial/ethnic and geographic disparities.<sup>1</sup>

The primary reason for higher IMRs in the United States compared with European countries can be explained by higher percentages of preterm births (infants born before 37 weeks of gestation are completed).<sup>8</sup> Shorter gestation periods are closely linked with low-birth-weight (LBW) infants (weighing <2,500 g), and those infants



**Fig. 1.** Trends in average IMRs for 34 OECD countries versus the United States, 1960 to 2011. Death rates are expressed as deaths per 1,000 live births. <sup>a</sup> In 1960, the IMR in the United States (26) was lower than the average OECD IMR (40.4). <sup>b</sup> Since 1999, the IMR in the United States has been higher (7.1) than the average OECD IMR (6.9), and in subsequent years, the United States IMR reduction has slowed when compared with the average IMR among other industrialized countries. (*Data from* Refs.<sup>2–5</sup>)

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