



# HEALTHY MOMS. STRONG BABIES.

## Environmental Exposure and Birth Outcomes

Mashariki Kudumu, MPH  
Maternal and Child Health Director Greater Los Angeles  
February 28, 2019

# Objectives

- **Examine Birth Outcomes and equity data in CA**
- **Examine relationship between environmental justice and perinatal health**
- **Review MOD research on toxic environmental exposure and birth outcomes**
- **Policies and systems strategies to combat toxic exposure**



# OUR MISSION

**MARCH OF  
DIMES LEADS  
THE FIGHT FOR  
THE HEALTH OF  
ALL MOMS AND  
BABIES.**



**STRONG**





# MOMS AND BABIES NEED A CHAMPION

**ADVOCATES** for policies that prioritize the health of moms and babies.

**SUPPORTS** moms through every stage of the pregnancy journey, even when everything doesn't go according to plan

**EDUCATES** medical professionals to make sure that moms and babies get the best possible care.

**UNITES** local communities across the nation through programs and events. We fight for local families in all 50 states, plus Puerto Rico to ensure all babies are born healthy.

**PARTNERS** with organizations and companies committed to helping moms and their families.

**FUNDS** scientific research at our Prematurity Research Centers to improve the health of moms and babies.



# 2018 PREMATURE BIRTH REPORT CARD

Premature birth and its complications are the largest contributors to infant death in the U.S., and a major cause of long-term health problems in children who survive. March of Dimes aims to reduce preterm birth rates and increase equity, and monitors progress through Premature Birth Report Cards. Report Card grades are assigned by comparing the 2017 preterm birth rate in a state or locality to March of Dimes' goal of 8.1 percent by 2020. Report Cards provide county and race/ethnicity data to highlight the importance of addressing equity in areas and populations with elevated risk of prematurity. March of Dimes is working to expand solutions to help all mothers and babies have healthy, full-term births.

## CALIFORNIA

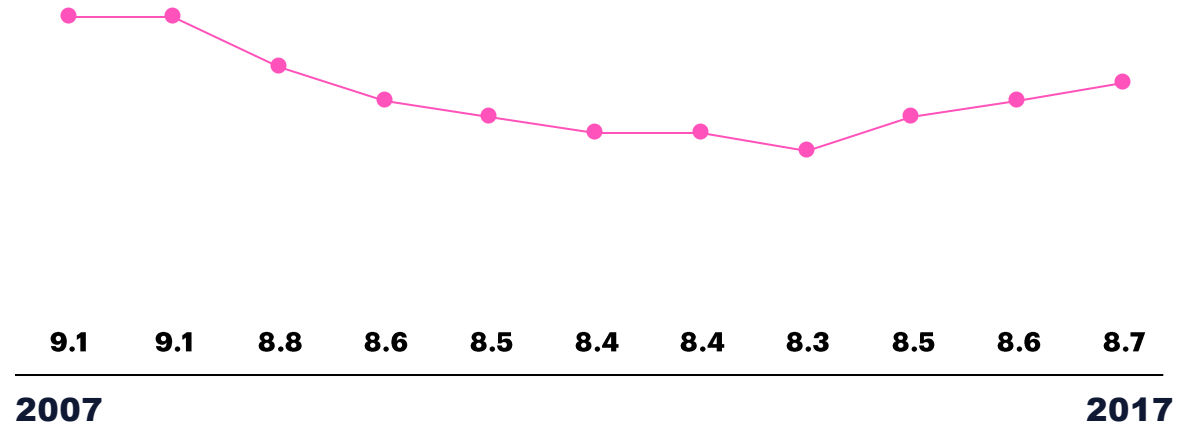
**GRADE**

**PRETERM  
BIRTH RATE**

**B**

**8.7%**

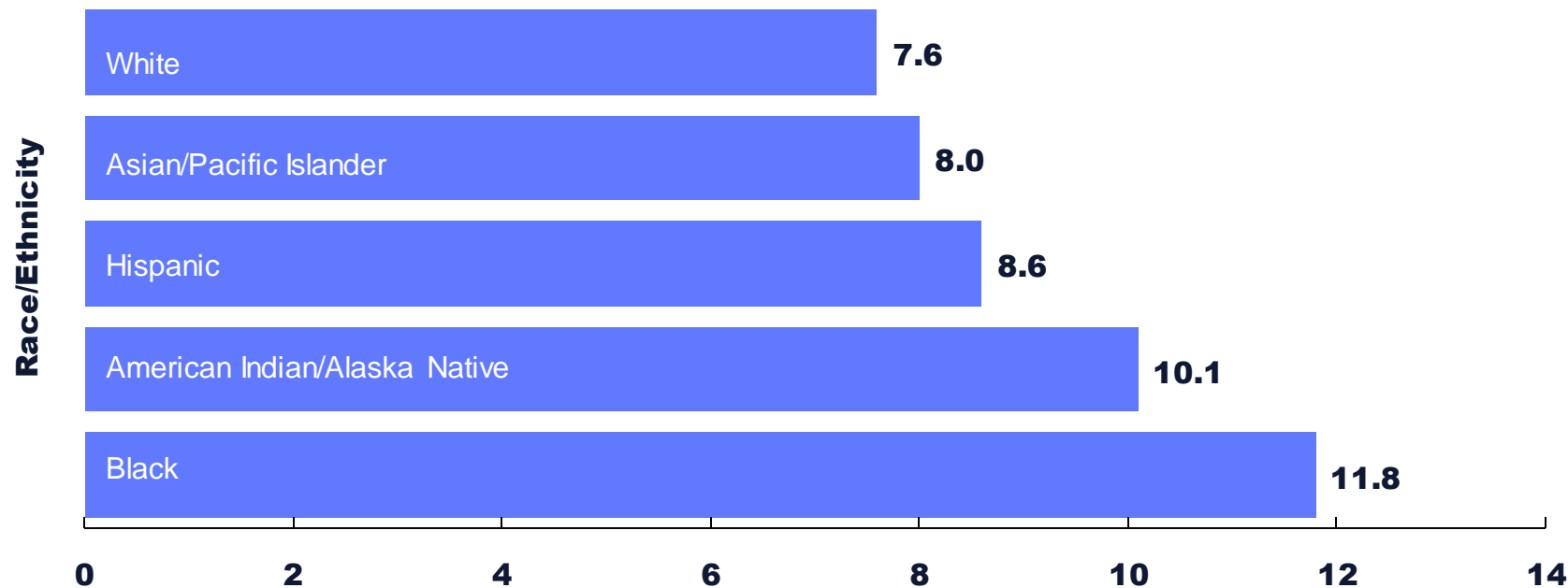
Percentage of live births  
that are preterm



# 2018 PREMATURE BIRTH REPORT CARD

## RACE & ETHNICITY IN CALIFORNIA

Percentage of live births in 2014-2016 (average) born preterm



*In California, the preterm birth rate among black women is 44% higher than the rate among all other women.*

# 2018 PREMATURE BIRTH REPORT CARD

## COUNTIES IN CALIFORNIA

Counties with the greatest number of births are graded based on their 2016 preterm birth rates.

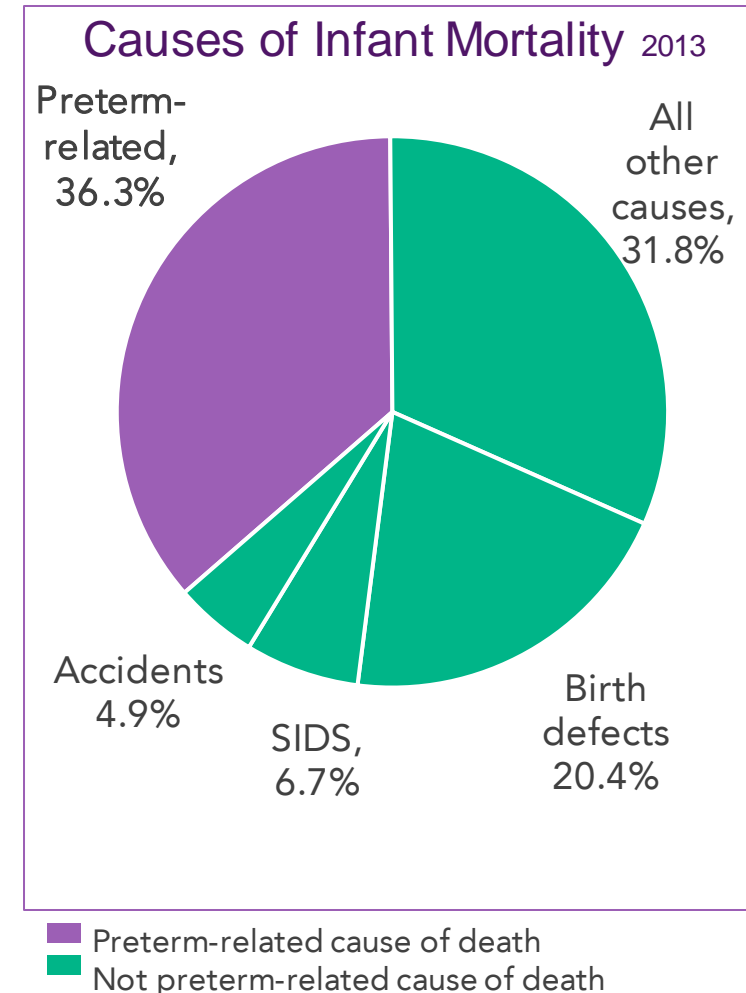
COUNTY	GRADE	PRETERM BIRTH RATE	CHANGE FROM LAST YEAR	COUNTY	GRADE	PRETERM BIRTH RATE	CHANGE FROM LAST YEAR
Alameda	B	8.4%	Worsened	Sacramento	B	8.5%	Worsened
Contra Costa	B	9.1%	Worsened	San Bernardino	C	9.3%	Worsened
Fresno	B	9.2%	Improved	San Diego	B	8.5%	Worsened
Kern	C	9.5%	Worsened	San Francisco	B	8.3%	Worsened
Los Angeles	B	9.0%	Worsened	San Joaquin	B	8.9%	Improved
Orange	A	8.0%	Worsened	San Mateo	B	8.2%	Improved
Riverside	B	8.5%	Worsened	Santa Clara	A	8.1%	No Change
				Ventura	A	7.5%	Improved

Grade and Range	A	B	C	D	F
	8.1 or less	8.2 – 9.2	9.3 – 10.3	10.4 – 11.4	11.5 or greater

# THE URGENCY OF PRETERM BIRTH IN THE U.S.

## #1 CAUSE OF INFANT DEATH, CAUSE OF LONG-TERM HEALTH PROBLEMS

- 4 million babies born each year
- 380,000 are premature
- 1 in 10 are premature
- \$26 billion excess annual health and societal costs; \$2 billion in CA
- Long term problems can include cerebral palsy, intellectual disabilities, chronic lung disease, blindness, and hearing loss
- Depression, anxiety & stress→preterm birth (Wadhwa, 2011, Hoffman 2016, Staneva 2015)
- Preterm birth & NICU→Depression (Williams 2018, Garfield 2015)





# **RACISM AND PERINATAL HEALTH**

## **Why America's Black Mothers and Babies Are in a Life-or-Death Crisis**

The answer to the disparity in death rates has everything to do with the lived experience of being a black woman in America.

**New York Times Magazine-April 2018**

## **Black Babies Die At Twice The Rate Of White Babies. My Family Is Part Of This Statistic**

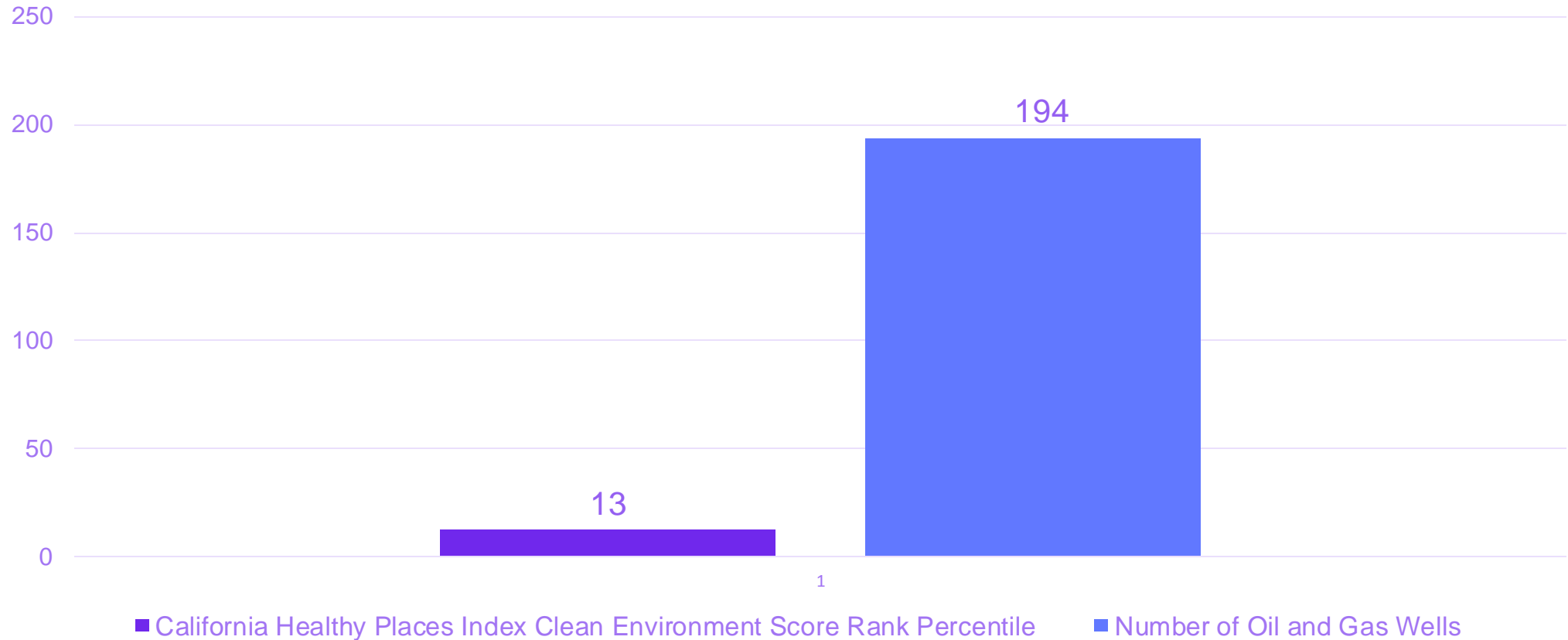
**KPCC-NPR Southern California June 2018**

## **I Was Pregnant and in Crisis. All the Doctors and Nurses Saw Was an Incompetent Black Woman**

**Time Magazine-January 8, 2019**

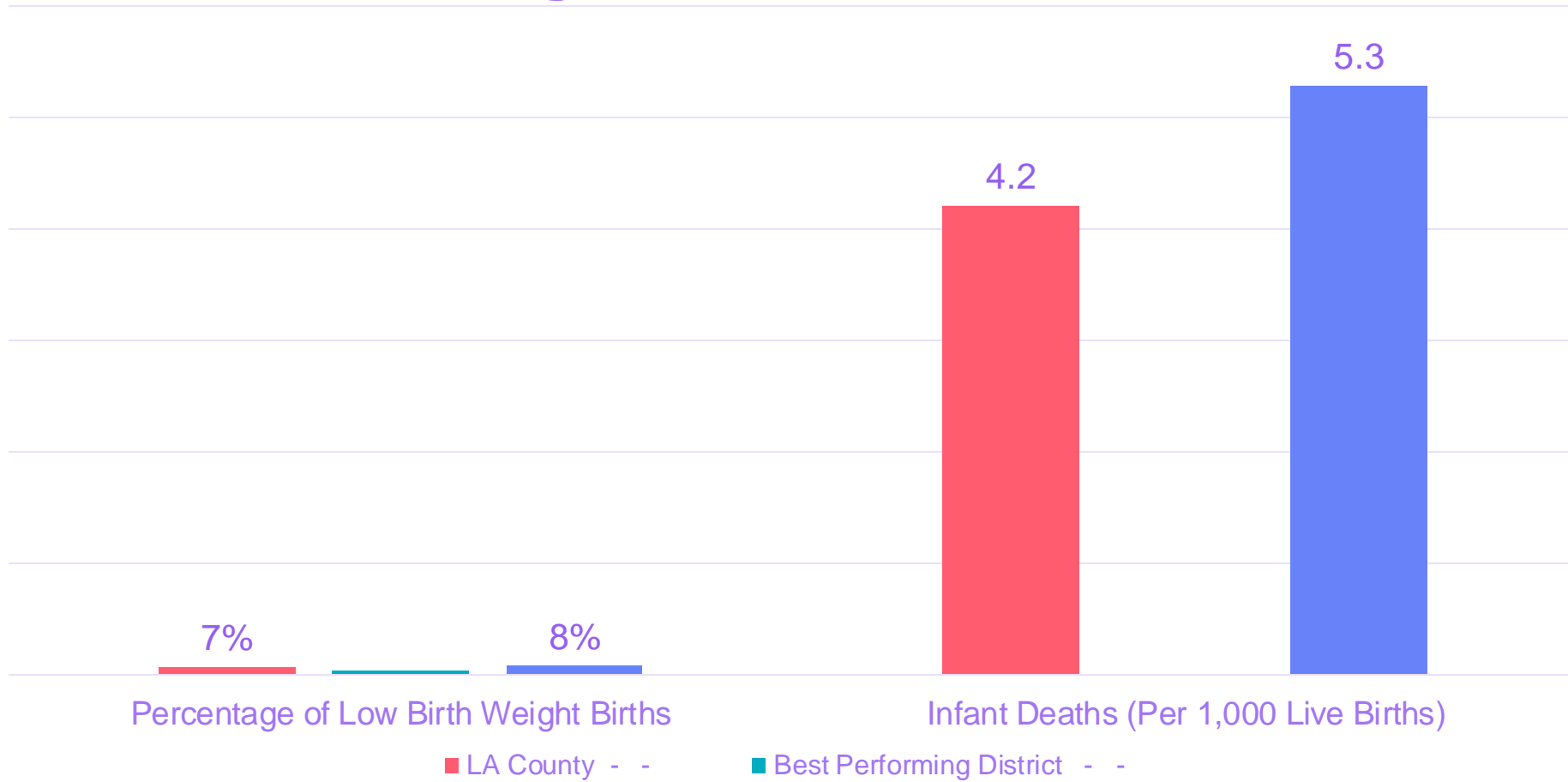
# Environmental Justice

## LA City Council District 10



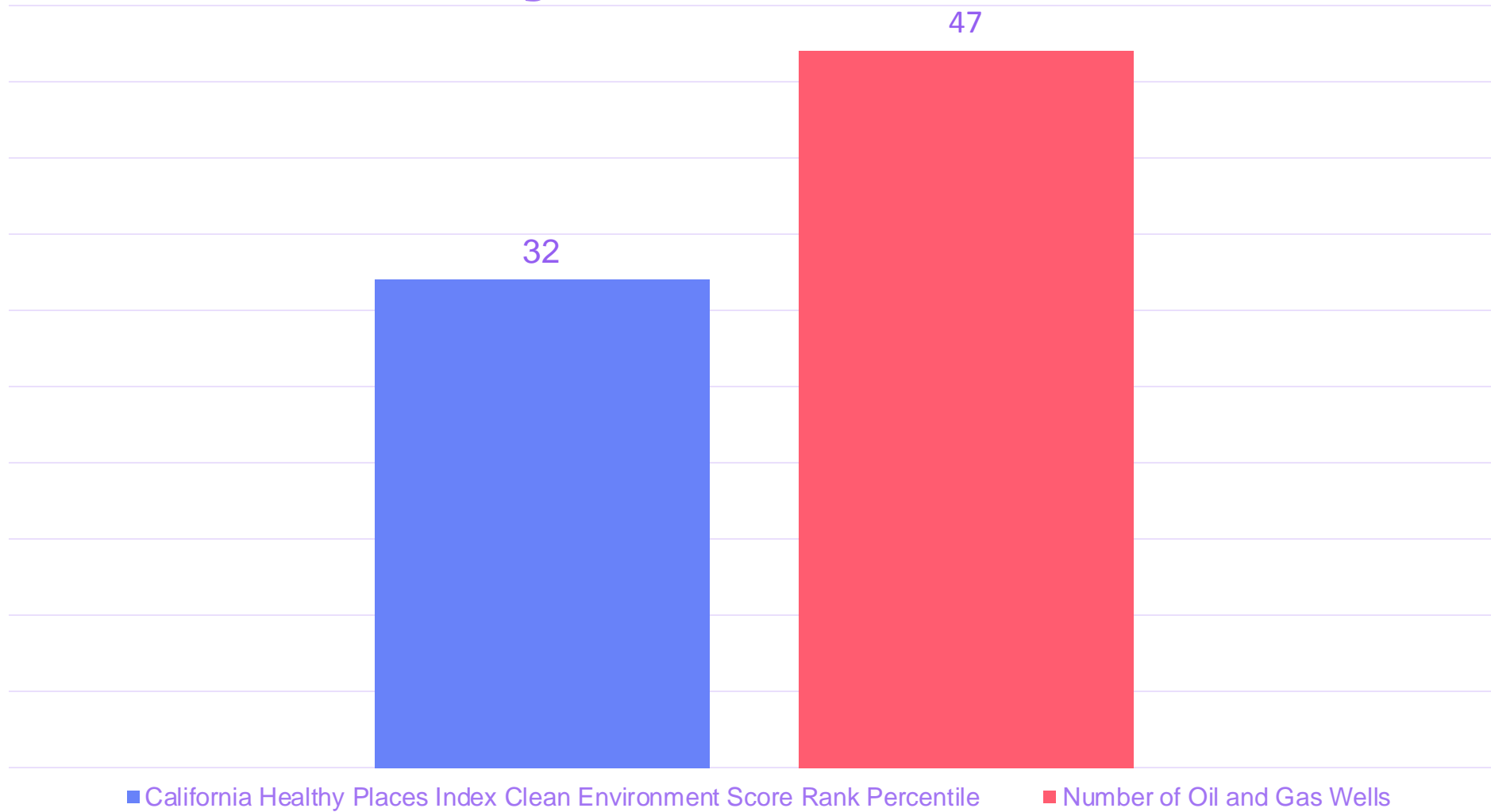
# Birth Outcomes

## LA City Council District 10



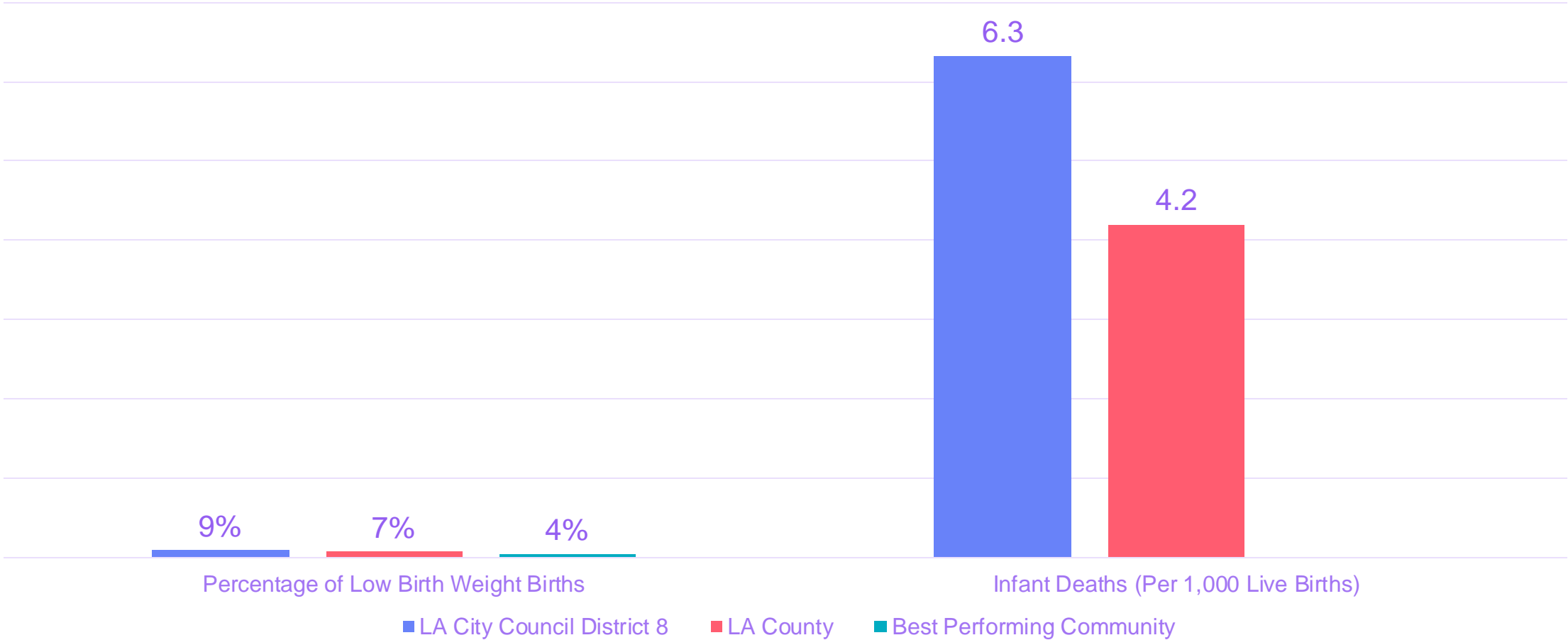
# Environmental Justice

## LA City Council District 8



# Birth Outcomes

## LA City Council District 8





**1 in 10** premature births  
could be prevented by reducing  
air pollution in California

Reducing particulate matter would prevent  
over 3,000 premature births each year



saving \$170 million  
in medical costs



avoiding \$980 million  
in lost lifetime earnings



Sources of preventable particulate matter



Industry



Transportation



Wood smoke

For more information visit [www.cehtp.org/pretermbirthcosts](http://www.cehtp.org/pretermbirthcosts)

CALIFORNIA  
ENVIRONMENTAL  
HEALTH TRACKING  
PROGRAM

PUBLIC  
HEALTH  
INSTITUTE

# Birth Equity and Preterm Birth



**We must address disparities in preterm birth to reduce preterm birth rates and to lower infant mortality in the U.S.**

# MOD Research

- **Prematurity Research Centers**-Five Centers including Stanford University-biomedical research on prematurity
- **Center for Social Science Research**-social and environmental factors impacting women's health
- Transdisciplinary and translational
- Stressful environments and preterm birth risk
- link between environmental contaminants and preterm birth-when and how





# CA LEGISLATIVE PRIORITIES

## Environmental Health

- **SB 258** - require manufacturers of cleaning products to disclose the ingredients or contaminants of concern on the impacts to public health
- **SB 997** – prohibited smoking within 250 feet of youth sports event
- **AB X2 7** – eliminated exemptions in smoke free workplace law
- **AB X2 9** – created tobacco free schools

## Maternal Mental Health

- **AB 3032**- require hospitals with perinatal units to develop a quality management program for maternal mental health
- **AB 2193**- requires obstetric providers to confirm screening for maternal mental health and private and public health plans and health insurers to create maternal mental health programs.



# MOVING THE NEEDLE

- **Green space and opportunities for physical activity**
- **Access to fresh fruits and vegetables**
- **Improved transportation infrastructure**
- **Workplace policies that protect workers' reproductive health**
- **Public awareness regarding cosmetic toxins (BWW)**
- **Enforcement of existing environmental regulations to protect communities and the public**
- **Community-informed strategies that highlight disparities and advance equity**



# THANK YOU

**Mashariki Kudumu, MPH**

**March of Dimes  
Maternal and Child Health Director  
Greater Los Angeles  
Email: [mkudumu@marchofdimes.org](mailto:mkudumu@marchofdimes.org)  
Phone: 818-539-2178**

