Accelerating Upstream Together to Eliminate Racial Disparities in Infant Health Outcomes by 2030

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Vision: Healthy Communities, Healthy People



Paradigm for Improving Maternal and Infant Health



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Infant Mortality Rate, United States (1980-2020)



Black-White Infant Mortality Survival Lag



In 2017, the infant mortality rate (IMR) for black infants (10.8 deaths per 1,000 births) achieved the same rate as for white infants in <u>1980</u>. **37 years later.**

If the black IMR continues at the same rate of decline since the beginning of this millennium, it will reach the 2017 white IMR (4.9 deaths per 1,000 births) in **2069**. **52 years later**.

2045

2050

2055

2060

2065

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2040

Source: National Vital Statistics System, unlinked mortality (child race) and birth (maternal race) files for Black and White infant deaths and births

American Indian/Alaska Native - White Infant Mortality Survival Lag

10 year survival lag 26 year survival lag

In 1995, the infant mortality rate (IMR) for AI/AN infants (9.2 deaths per 1,000 births) achieved the same rate as for white infants in <u>1985</u>. **10 years later.**

By 2015, the AI/AN IMR (8.0 deaths per 1,000 births) reached the white IMR in <u>1989</u>. 26 years later.

If the same rate of decline continues, it will reach the 2015 white IMR (4.9 deaths per 1,000 births) in **2087**. **72 years later**.



25

20

15

10

5

Deaths per 1,000

Healthy People 2030: Infant Mortality

U.S. Department of Health and Human Services	OPPHP Office of Disease Prevention and Health Promotion				
	Objectives and Data $$	Tools for Action $ \checkmark$	Priority Areas 🗸	About \sim	Custom List (0) 盾
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Reduce the rate of infant deaths — MICH-02

Objective Overview	Status: Improving \oplus	<u>Learn more aboi</u>	<u>ut our data release schedule</u>
Data	Most Recent Data: 5.6 infant deaths per	Target: 5.0 per 1,000	Desired Direction: Decrease desired
Data Methodology and Measurement	1,000 live births (2019) Baseline:		
Healthy People in Action	5.8 infant deaths per 1,000 live births occurred within the first year of life in 2017		



Where Are We Now?



Among broad or bridged race/ethnic groups, **our policies, systems, and environments have failed** to reduce infant mortality among Non-Hispanic Black and Al/AN infants down to the HP2030 target.



Source: United States Department of Health and Human Services (US DHHS), Centers of Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Division of Vital Statistics (DVS). Linked Birth / Infant Death Records 2016-2018, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program, on CDC WONDER On-line Database. Accessed at http://wonder.cdc.gov/lbd-current.html

Ultimately, we want to prevent every infant death possible.

We need to accelerate efforts to achieve equity now.





What Would It Take to Achieve Equity Now?

Population	Annual Births	Infant Mortality Rate (per 1,000)	Reduction to Achieve Equity (Subtract 4.7)	Number of Annual Deaths Needed to Prevent (Multiply by Births/1,000)
NH Black	583,439	10.9	6.2	3,592
NH AI/AN	34,801	8.6	3.9	135

To achieve equity, we need to make policy and system changes that make it possible for an additional 3,727 babies need to celebrate their first birthday. That's ~10 babies/day.



For context: ~10,500 babies born each day in the United States.



Regional Variation in Black Infant Mortality

Black infant mortality AND the Black-White infant mortality gap are highest in Region 5



State Variation in Black Infant Mortality

5 of the 10 states with the highest Black infant mortality rate are in Region 5

The 4 states with the largest Black-White infant mortality gap are in Region 5



Regional Variation in AI/AN Mortality

Region 5 has the 2nd highest AI/AN infant mortality rate and 3rd highest AI/AN-White infant mortality gap among all 10 Public Health Regions



What Can <u>States</u> Do to Achieve Equity Now?



To Achieve Equity			
Black Infant Deaths to Prevent Annually	# States	% of Total Black Infant Deaths to Prevent	
1-11	15	1%	
12-59	15	11%	
60-119	9	22%	
120-239	9	42%	
240-336	3	24%	



Notes: Uses 3-year average data (2016-2018) with Bayesian spatial smoothing to improve stability of estimates.

What Can <u>Counties</u> Do to Achieve Equity Now?



To Achieve Equity			
Black Infant Deaths to Prevent Annually	# Counties	% of Total Black Infant Deaths to Prevent	
1-5	704 counties (63% of deaths) Need to prevent <2 additional deaths/month		
6-11			
12-23			
24-47	20	20%	
48-95	5	7%	
96-149	3	9%	



Notes: Uses 3-year average data (2016-2018) with Bayesian spatial smoothing to improve stability of estimates; 324 counties had no Black births and 2,081 counties had too few births to expect one excess death per year.

What Can Region 5 <u>States</u> Do to Achieve Equity?

 Region 5 accounts for 21% of all U.S. Black infant deaths that need to be prevented to achieve equity



To Achieve Equity			
State	Black Infant Deaths to Prevent in a Year	% of All U.S. Black Infant Deaths to Prevent	
IL	208	6%	
OH	192	5%	
MI	177	5%	
IN	67	2%	
WI	64	2%	
MN	38	1%	



What Can Region 5 <u>Counties</u> Do to Achieve Equity?

- 4 of the top 10 counties with the most Black infant deaths to prevent are in Region 5
- Cook, Wayne, Cuyahoga, Milwaukee



To Achieve Equity			
Black Infant Deaths to Prevent in a Year	# Counties	% of All U.S. Black Infant Deaths to Prevent	
1-5	66	4%	
6-11	10	2%	
12-23	5	2%	
24-47	4	4%	
48-95	2	4%	
96-149	1	4%	



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Thinking Upstream About Prematurity

- Typical Rounds on Premature Infant
 - Vent settings
 - Discussion of morbidities
 - Fluid status
 - TPN stats
 - Labs
 - Maybe (hopefully) something about social status







Thinking Upstream About Prematurity: Perinatal Periods of Risk (PPOR)



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Perinatal Periods of Risk (PPOR): Opportunities for Intervention





Source: Peck MG, Sappenfield WM, Skala J. Perinatal Periods of Risk: A Community Approach for Using Data to Improve Women and Infants' Health. Maternal and Child Health Journal. 2010. 14: 864–874.

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PPOR for Illinois (2017-2018) Excess Black Fetal-Infant Mortality





Source: Illinois Infant Mortality Report. Illinois Department of Public Health. (December 2020). Available at: <u>https://dph.illinois.gov/content/dam/soi/en/web/idph/files/publications/illinois-infant-</u>mortality-data-report-2020-december-0.pdf. Last accessed 03/15/2022.

HRSA

Life Course Approach



Adapted from the Life Course Toolkit by CityMatCH. Available at: http://www.citymatch.org/projects/mch-life-course-toolbox . Based on: Lu, M.C. & Halfon, N. Matern Child Health J (2003) 7: 13

What Determines Health?



Upper left: McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. Health Aff. 2002; 21(2):78-93. **Lower left**: Remington PL, Catlin BB, Gennusko KP. The County Health Rankings: rationale and methods. Popul Health Metr. 2014; 13:11. **Upper right**: American's Health Rankings. <u>www.americashealthrankings.org</u>. **Lower right**: Park H et al. Relative Contributions of a Set of Health Factors to Selected Health Outcomes Am J Prev Med 2015:49(6):961–969.

Structural and Social Determinants of Health



Graphic Source: Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved 02/11/2021, from https://health.gov/healthypeople/objectives-and-data/social-determinants-health

Paradigm for Improving Maternal and Infant Health



Working Together





How Can Perinatal Quality Collaboratives Help Achieve Equity Now?



- Help providers better understand and eliminate biases
- Support provision of respectful, culturallyappropriate care
- Incorporate screening for concerns related to underlying social determinants of health
- Facilitate referrals to community-based resources



How Can Perinatal Quality Collaboratives Help Achieve Equity Now?



- Examine data from:
 - Practice
 - Affiliated health systems
 - Local/state public health entities
- Identify disparities
- Include data on patient/family experience of care
- Implement improvement initiatives based on community need/disparities, <u>and not just in</u> <u>hospitals</u>



How Can Perinatal Quality Collaboratives Help Achieve Equity Now?



- Include and amplify voices and experiences of families
- Partner with public and private organizations to address social and structural determinants
- Educate local, state, and national policymakers on policies that tackle root causes of inequities



Summary

If we are to achieve equity, we must <u>accelerate our efforts</u> to help <u>all</u> infants reach their first birthday.

Clinical care is necessary, but not sufficient. To solve for equity, we must **get outside of the hospital and clinic**.

Quality improvement collaboratives can play an important role in driving change at the provider, practice, and systems levels.











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