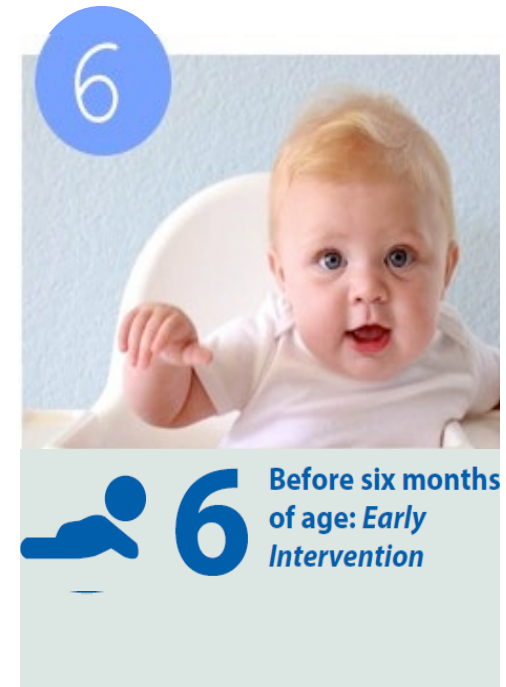
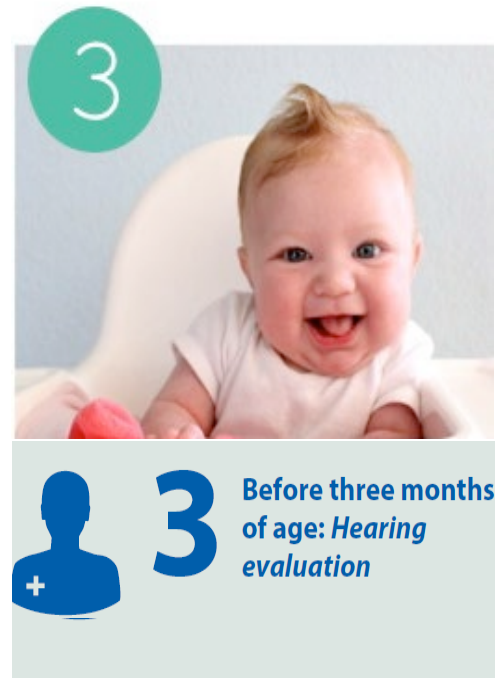




**EHDI After Newborn Screening:
Status of Meeting the Evaluation by 3 months of Age and Intervention
Enrollment by 6 months Benchmarks Among 37 states, 2020**

Suhana Ema, MPH
CDC EHDI Team

- Nearly 1 in every 500 live born infants is born deaf or hard of hearing (DHH)
 - CDC national data
- Undetected hearing loss can cause delays in speech, language, social, and emotional development that can have a lasting impact
- EHDI 1-3-6 Benchmarks



OBJECTIVE

Assess status of meeting the benchmarks for diagnostic and intervention services among babies born in year 2020, using individual-level data provided by 37 jurisdictional EHDI programs (recipients of current CDC cooperative agreement DD20-2006)

METHODS

- Deidentified, child-level data were extracted from EHDI Information Systems of 37 states
- Study population: infants born during calendar year 2020
- Who were excluded
 - Babies who died or moved out of their birth jurisdiction (reason: we do not have date of when they died or moved)
- Statistical analyses were performed using SAS 9.4

Status of the Evaluation by 3 Months of Age and Intervention Enrollment by 6 months of Age Benchmarks

37 states, 2020 (n=2,288,859)

Table 1. Meeting the 1-3-6 Benchmarks and Age of Service Completion

Evaluated					
				Age at Diagnosis (days)	
	Total ^a	% Evaluated	% Meeting Benchmark ^{b,c,d}	Mean	Median
Result ^e	43,786	51.2	71.4	83.0	56.0
+	3,600	n/a	65.8	94.2	64.0

Intervention Enrollment					
				Age at Intervention Enrollment (days)	
	Total ^a	% Enrolled in Part C Intervention Services	% Meeting Benchmark ^{b,c,d}	Mean	Median
Result	3,600	52.0	70.1	161.0	122.0

Table 2. Results of Multiple Logistic Regression Predicting Receipt of Diagnosis and Enrollment into Intervention Services for Infants Who Referred the Final Hearing Screen

	Diagnosis Receipt ^a		Enrollment of Intervention Services ^b	
	RR	(95% CI)	RR	(95% CI)
NICU status				
Yes	1.7	(1.6, 1.8)	0.9	(0.8, 1.2)
No	Reference		Reference	
WIC status				
Yes	1.1	(1.1, 1.2)	1.2	(0.9, 1.5)
No	Reference		Reference	
Maternal education				
Bachelor's degree and beyond	2.3	(2.1, 2.5)	1.8	(1.3, 2.6)
Some college/associate degree	1.5	(1.4, 1.6)	1.1	(0.8, 1.6)
High school diploma	1.1	(1.1, 1.2)	0.9	(0.7, 1.3)
Below high school	Reference		Reference	
Maternal race/ethnicity				
White, Non-Hispanic	1.1	(1.1, 1.2)	1.1	(0.9, 1.5)
Black, Non-Hispanic	0.7	(0.6, 0.7)	0.7	(0.5, 0.9)
Asian, Non-Hispanic	1.7	(1.5, 2.0)	1.0	(0.6, 1.5)
Hispanic	Reference		Reference	

The odds of NICU infants receiving diagnostic evaluation is 70% higher than non-NICU infants.

The higher the mother's education, the higher the odds of the infants getting diagnostic evaluation, compared to infants of mothers having below high school education.

Infants of Asian mothers have 70% higher odds of receiving diagnostic evaluation compared to infants of Hispanic mothers.

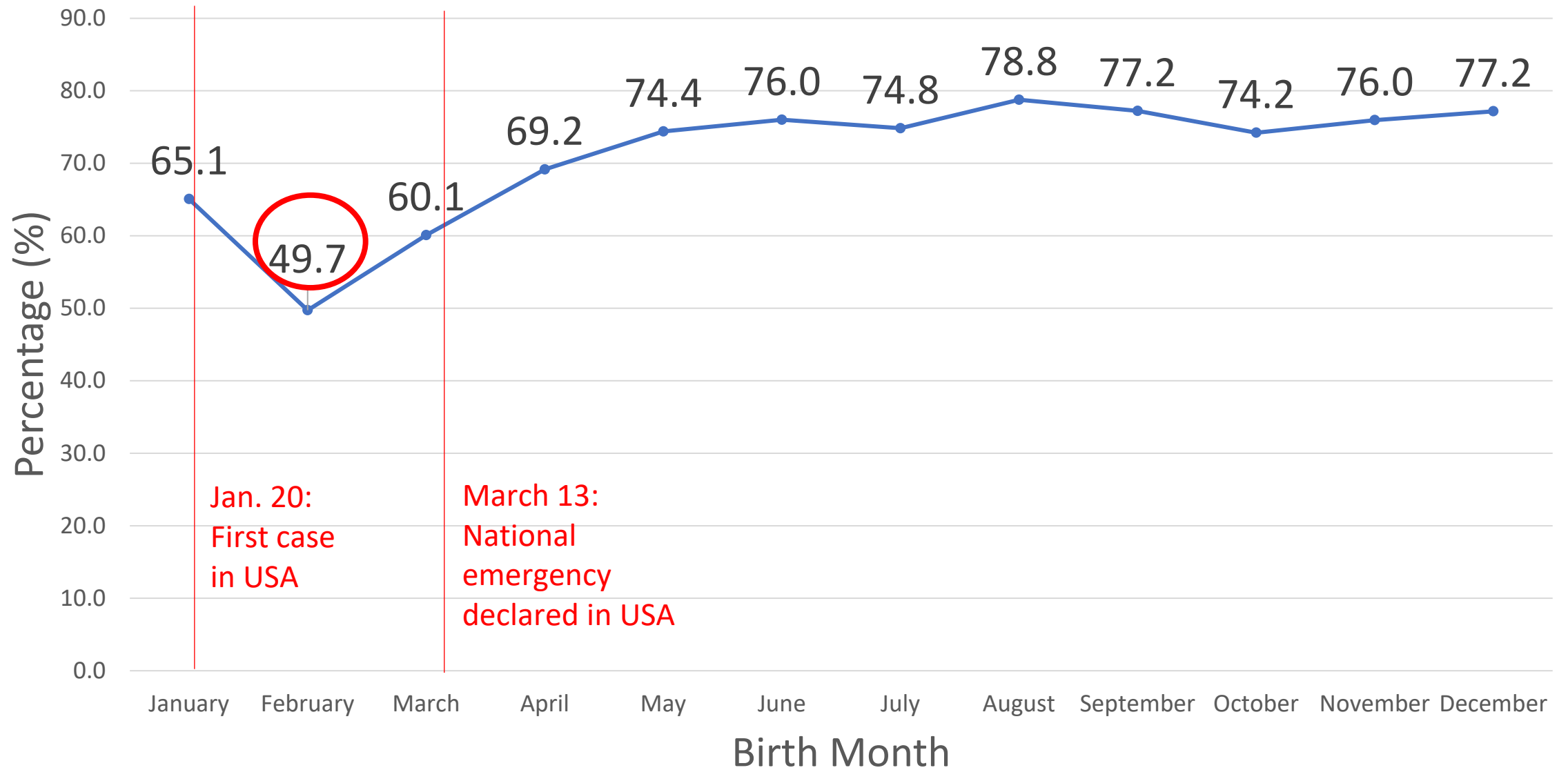
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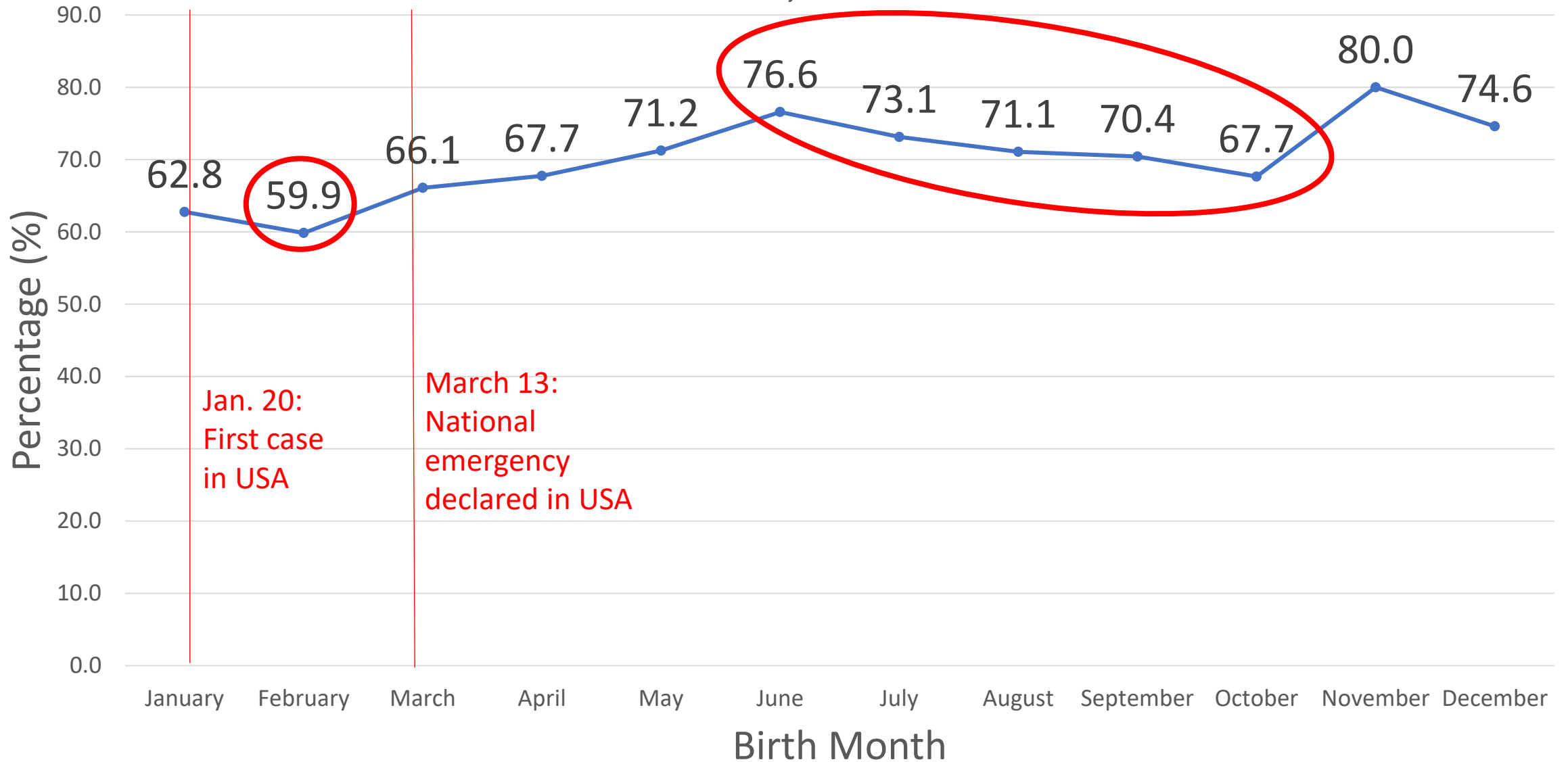
The odds of WIC infants being enrolled in intervention services is 20% higher than non-WIC infants.

The odds of infants whose mother have bachelor's degree and beyond enrolled in intervention services is **80%** higher than infants of mothers having below high school education.

Evaluated Before 3 Months of Age by Birth Month, 2020



Enrolled in Early Intervention Before 6 Months of Age by Birth Month, 2020



CONCLUSIONS

- Individual-level datasets provided by recipients (jurisdictional EHDI programs) provides **great** opportunities; enable detailed analyses and much has been learned from the data (*thank you!*)
- Findings allow for identifying specific populations EHDI programs and partners should consider targeting to improve equity/access in EHDI service provision.
- Findings also allow for EHDI programs and partners to strategize efforts and resources should natural disaster occur again in future.
- More work is needed to increase receipt and timeliness of infants getting important follow-up services, to minimize risk of developmental delays.

Questions?

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thank you!

For more information, contact CDC
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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

