



# Induction of Labor Increases in the United States: 2016 to 2024

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## Key findings

Data from the National Vital Statistics System

- Labor induction increased from 24.9% in 2016 to 34.5% in 2024.
- Labor induction rates increased across all maternal age groups from 2016 to 2024.
- Labor induction rates increased 32%–67% across all six race and Hispanic-origin groups from 2016 to 2024.
- Labor induction rates increased across all gestational age categories from 2016 to 2024, with the largest increase observed for early-term births (37–38 weeks of gestation).
- Labor induction rates increased in 49 states and the District of Columbia from 2016 to 2024.

## Introduction

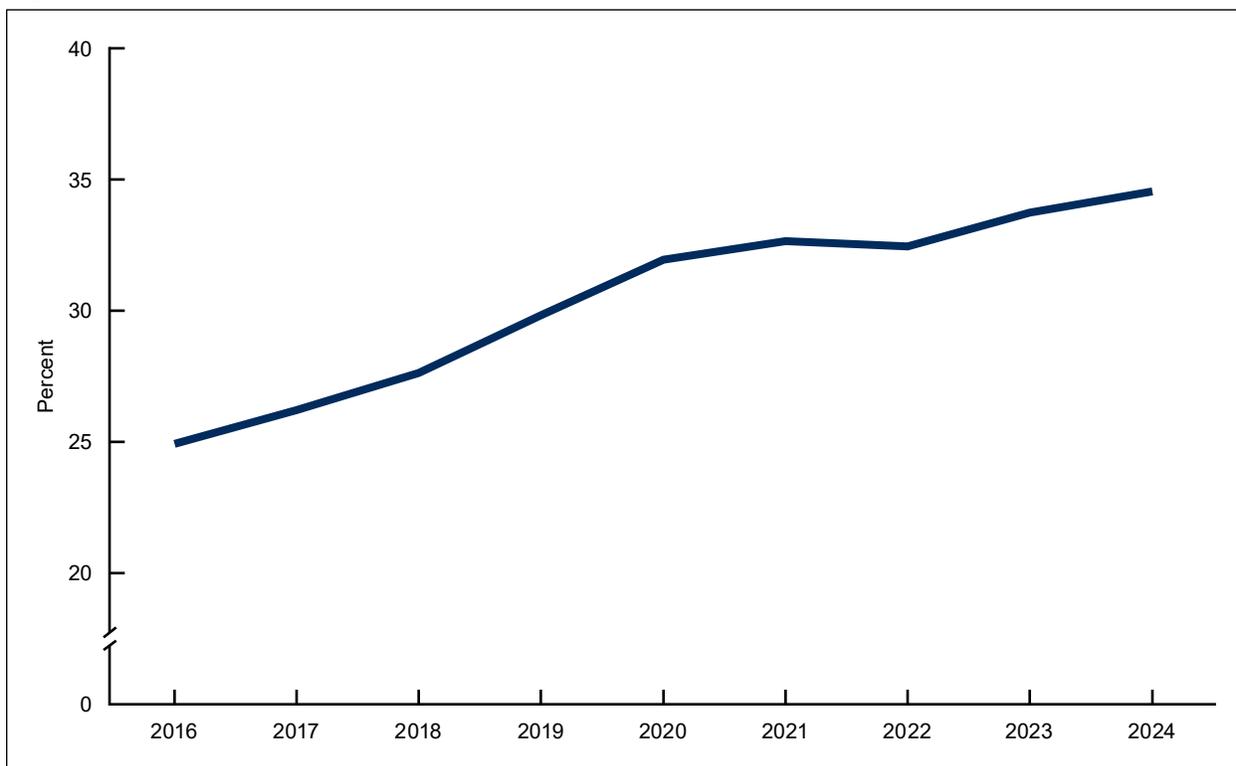
Induction of labor rates have been on the rise in the United States for several decades. Birth certificate data show that labor was induced in fewer than 1 in 10 births in 1989 compared with more than 1 in 4 births in 2016 (1–3). Inducing labor by medical or surgical means instead of waiting for the spontaneous onset of labor can help protect maternal and perinatal health by reducing the complications of continuing the pregnancy, but it may also carry risks (4–7). This report describes trends in labor induction among singleton births from 2016 to 2024 and changes in labor induction between 2016 and 2024 by age, race and Hispanic origin of the mother, and gestational age of the newborn.



## Trends

- The percentage of singleton births in which labor was induced increased 39% in the United States from 2016 to 2024, from about one-quarter (24.9%) to more than one-third of all births (34.5%) (Figure 1, Table 1).
- The pace of increase was greater from 2017 to 2020 (an average increase of 6% per year) compared with 2020 to 2024 (an average increase of 2% per year).

Figure 1. Induction of labor rate: United States, 2016 to 2024



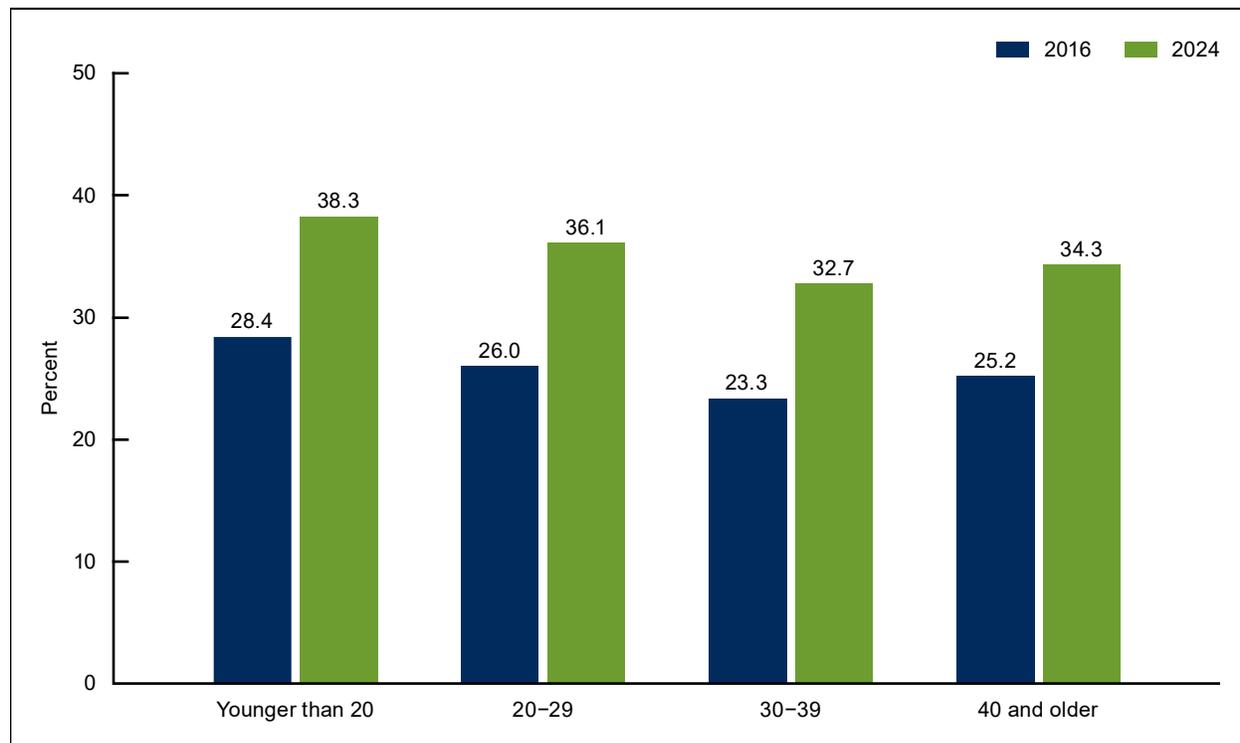
NOTES: Significantly increasing trend from 2016 to 2024 ( $p < 0.05$ ) with different rates of change. Singleton births only.  
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

## Maternal age

- Labor induction rates increased 35%–40% among all four maternal age groups from 2016 to 2024 (Figure 2, Table 2).
- Rates increased 35% for mothers younger than age 20 from 2016 (28.4%) to 2024 (38.3%) and by 39% for mothers ages 20–29 during the same period (from 26.0% to 36.1%).
- The largest increase (40%) was observed for mothers ages 30–39 from 2016 (23.3%) to 2024 (32.7%). The rate for mothers age 40 and older increased 36% during the same period (from 25.2% to 34.3%).

- Induction rates were highest for the youngest mothers (under age 20) and lowest for mothers ages 30–39 in both 2016 and 2024.

**Figure 2. Induction of labor rate, by maternal age: United States, 2016 and 2024**



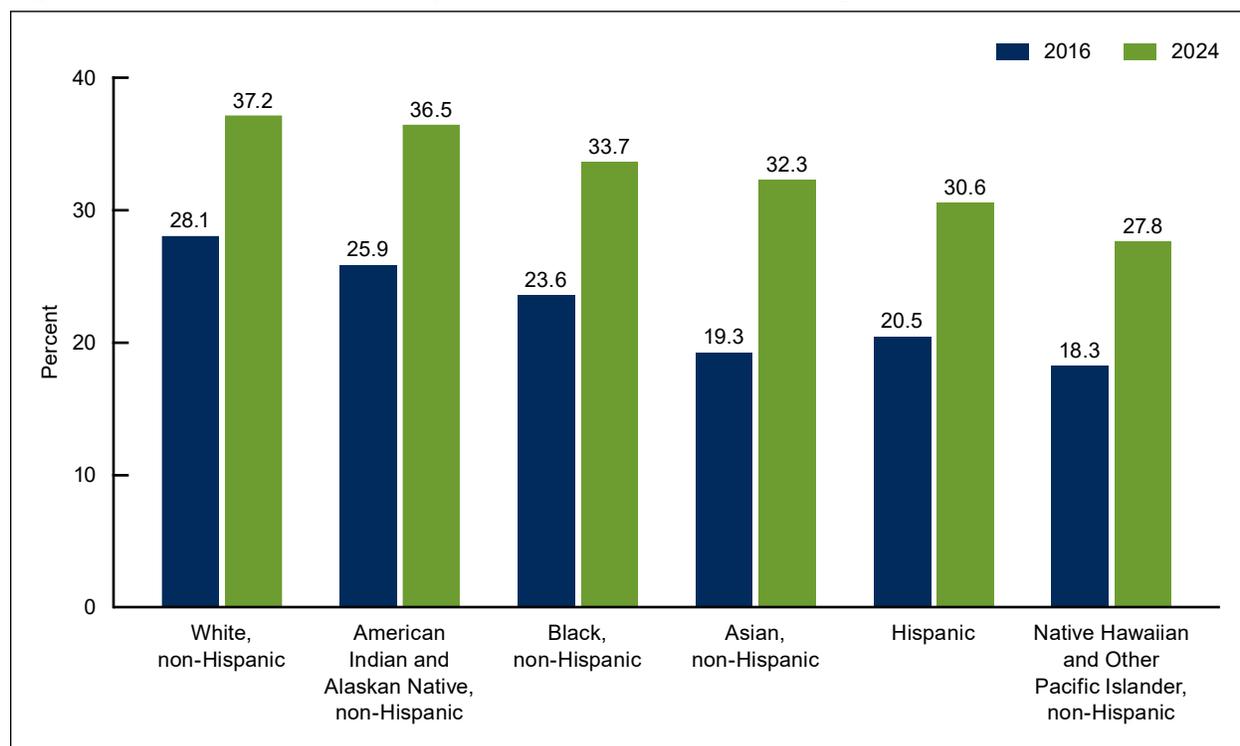
NOTES: Significant increases from 2016 to 2024 for each maternal age group ( $p < 0.05$ ). Significant differences between age groups for both years ( $p < 0.05$ ). Singleton births only.

SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

## Race and Hispanic origin

- Labor induction rates increased 32%–67% across all six race and Hispanic-origin groups from 2016 to 2024 (Figure 3, Table 3).
- The largest increase among the six race and Hispanic-origin groups was for Asian non-Hispanic mothers from 2016 to 2024 (up 67%, from 19.3% to 32.3%), followed by Native Hawaiian and Other Pacific Islander non-Hispanic mothers (up 52%, from 18.3% to 27.8%) and Hispanic mothers (up 49%, from 20.5% to 30.6%).
- For American Indian and Alaskan Native non-Hispanic mothers, the induction rate increased 41% (from 25.9% to 36.5%); for Black non-Hispanic mothers, the rate increased 43% (23.6% to 33.7%); and for White non-Hispanic (subsequently, White) mothers, the rate increased 32% (28.1% to 37.2%).
- Labor induction rates were highest for White mothers in both 2016 and 2024.

**Figure 3. Induction of labor rate, by maternal race and Hispanic origin: United States, 2016 and 2024**



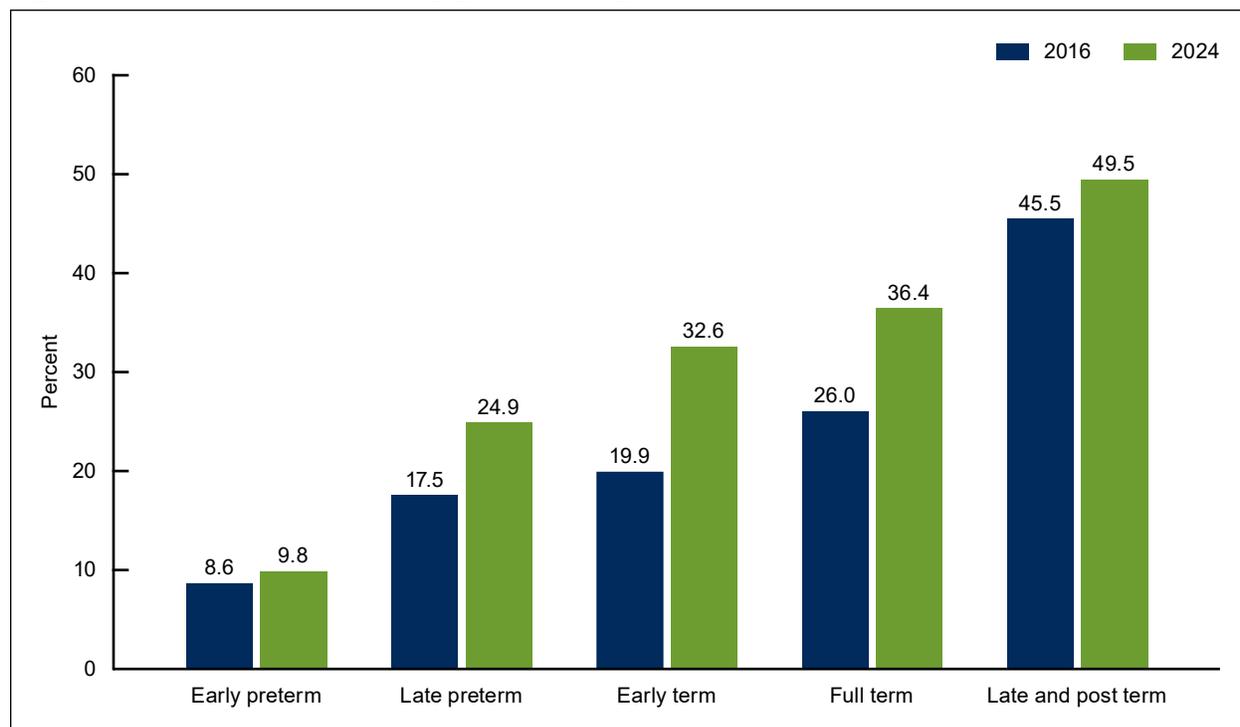
NOTES: Significant increases from 2016 to 2024 for each maternal race and Hispanic origin group ( $p < 0.05$ ). Significant differences between all race and Hispanic origin groups for 2016 and 2024 ( $p < 0.05$ ). Singleton births only.

SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

## Gestational age

- Labor induction rates increased across all gestational age categories from 2016 to 2024. The largest increase was for early-term births (up 64%, from 19.9% to 32.6%) (Figure 4, Table 4).
- The induction rate increased 42% for late preterm births (from 17.5% in 2016 to 24.9% in 2024) and 40% for full-term births (26.0% to 36.4%).
- Rates increased 14% for early preterm births (from 8.6% in 2016 to 9.8% in 2024) and by 9% for late and post-term births (45.5% to 49.5%).
- Labor induction rates were lowest at the shortest gestational ages (early preterm births), and highest at the longest gestational ages (late and post-term births) in both 2016 and 2024.

Figure 4. Induction of labor rate, by gestational age: United States, 2016 and 2024



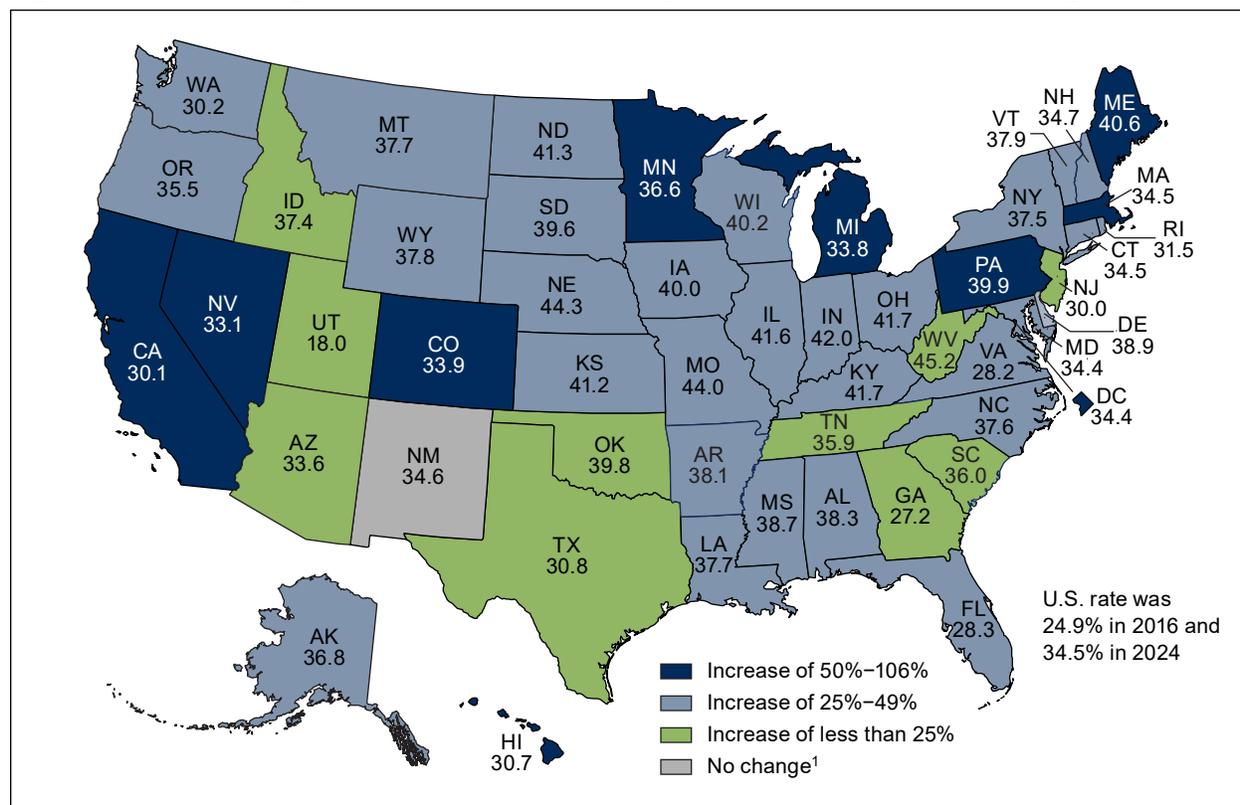
NOTES: Significant increases from 2016 to 2024 for each gestational age category ( $p < 0.05$ ). Significant differences between all gestational age categories in 2016 and 2024 ( $p < 0.05$ ). Singleton births only. Early preterm is less than 34 weeks, late preterm is 34–36 weeks, early term is 37–38 weeks, full term is 39–40 weeks, and late and post term is 41 and later weeks.

SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

## State of residence

- Labor induction rates increased in 49 states and the District of Columbia between 2016 and 2024. The rate was essentially unchanged in New Mexico (Figure 5, Table 5).
- Between 2016 and 2024, increases of 50% or more were observed in 9 states and the District of Columbia, and increases of 25%–49% were observed in 30 states.
- In 2024, labor induction rates ranged from 18.0% in Utah to 45.2% in West Virginia.

Figure 5. Percent change in induction of labor rate, by state, 2016 to 2024, and rates by state, 2024



<sup>1</sup>Changes not significant at  $p < 0.05$ .

NOTE: Singleton births only.

SOURCE: National Center for Health Statistics, National Vital Statistics System.

## Summary

Induction of labor rates continue to increase in the United States. Labor was induced for more than one-third of all singleton births in 2024 (34.5%), an increase of 39% from 2016. The largest increases were observed during the earlier part of the study period, from 2017 to 2020.

Labor induction has quadrupled since 1989 (9.0%) (1).

Increases in labor induction rates occurred across all maternal age groups, across all race and Hispanic-origin groups, and in 49 states and the District of Columbia from 2016 to 2024.

Increases were also seen across all gestational age categories. Labor induction before 39 completed weeks of gestation is not recommended unless there is a medical reason to deliver the baby early (8). At 39 weeks and later, counseling on the potential benefits and risks of labor induction compared with expectant management of labor is recommended (5).

In both 2016 and 2024, induction rates were highest among mothers younger than age 20, White mothers, and late and post-term births. In 2024, state rates ranged from 18.0% in Utah to 45.2% in West Virginia.

## Definitions

**Gestational age:** Based on the obstetric estimate of gestation. Early preterm is less than 34 completed weeks, late preterm is 34–36 weeks, early term is 37–38 weeks, full term is 39–40 weeks, and late and post term is 41 weeks and later.

**Induction of labor:** Initiation of uterine contractions by medical or surgical means for the purpose of delivery before the spontaneous onset of labor (before labor has begun).

## Data source and methods

This report is based on birth certificate data from the National Vital Statistics System (NVSS). The vital statistics natality file includes information for all births occurring in the United States in a given year and includes a wide range of information on demographic and health characteristics of mothers and infants ([https://www.cdc.gov/nchs/data\\_access/vitalstatsonline.htm](https://www.cdc.gov/nchs/data_access/vitalstatsonline.htm)). Provisional and final NVSS data may also be accessed through the CDC WONDER platform at: <https://wonder.cdc.gov/natality.html>.

This report includes births from singleton deliveries only. Singleton births comprised 97% of all births in 2024. Births from singleton deliveries are more likely to involve induced labor than births from multiple-gestation deliveries. As a result, trends in the rate of multiple births can impact overall labor induction rates. Trends in labor induction rates for 2016–2024 were evaluated using the Joinpoint Regression Program (9). Differences between rates described in this report are statistically significant at the 0.05 level unless otherwise noted and are based on a pairwise comparison using a two-tailed z test. The linearity of induction was tested using the Cochran-Armitage test for trends.

## About the authors

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## Figure tables

**Data table for Figure 1. Induction of labor rate: United States, 2016 to 2024**

Year	Percent
2016	24.9
2017	26.2
2018	27.6
2019	29.8
2020	31.9
2021	32.6
2022	32.4
2023	33.7
2024	34.5

NOTES: Significantly increasing trend from 2016 to 2024 ( $p < 0.05$ ) with different rates of change. Singleton births only.  
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

### Data table for Figure 2. Induction of labor rate, by maternal age: United States, 2016 and 2024

Age of mother	2016	2024
Younger than 20	28.4	38.3
20–29	26.0	36.1
30–39	23.3	32.7
40 and older	25.2	34.3

NOTES: Significant increases from 2016 to 2024 for each maternal age group ( $p < 0.05$ ). Significant differences between age groups for both years ( $p < 0.05$ ). Singleton births only.  
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

### Data table for Figure 3. Induction of labor rate, by maternal race and Hispanic origin: United States, 2016 and 2024

Race and Hispanic origin	2016	2024
White, non-Hispanic	28.1	37.2
American Indian and Alaskan Native, non-Hispanic	25.9	36.5
Black, non-Hispanic	23.6	33.7
Asian, non-Hispanic	19.3	32.3
Hispanic	20.5	30.6
Native Hawaiian and Other Pacific Islander, non-Hispanic	18.3	27.8

NOTES: Significant increases from 2016 to 2024 for each maternal race and Hispanic-origin group ( $p < 0.05$ ). Significant differences between all race and Hispanic-origin groups for 2016 and 2024 ( $p < 0.05$ ). Singleton births only.  
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

### Data table for Figure 4. Induction of labor rate, by gestational age: United States, 2016 and 2024

Gestational age	2016	2024
Early preterm	8.6	9.8
Late preterm	17.5	24.9
Early term	19.9	32.6
Full term	26.0	36.4
Late and post term	45.5	49.5

NOTES: Significant increases from 2016 to 2024 for each gestational age category ( $p < 0.05$ ). Significant differences between all gestational age categories in 2016 and 2024 ( $p < 0.05$ ). Singleton births only. Early preterm is less than 34 weeks, late preterm is 34–36 weeks, early term is 37–38 weeks, full term is 39–40 weeks, and late and post term is 41 weeks and later.  
SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

**Data table for Figure 5. Percent change in induction of labor rate, by state, 2016 to 2024, and rates by state, 2024**

Area	2016	2024	Percent change
Alabama	30.6	38.3	25
Alaska	26.1	36.8	41
Arizona	29.7	33.6	13
Arkansas	27.9	38.1	37
California	14.6	30.1	106
Colorado	22.2	33.9	53
Connecticut	23.8	34.5	45
Delaware	32.4	38.9	20
District of Columbia	18.7	34.4	84
Florida	20.5	28.3	38
Georgia	24.0	27.2	13
Hawaii	18.3	30.7	68
Idaho	30.1	37.4	24
Illinois	29.7	41.6	40
Indiana	31.4	42.0	34
Iowa	29.6	40.0	35
Kansas	31.4	41.2	31
Kentucky	30.4	41.7	37
Louisiana	28.4	37.7	33
Maine	25.8	40.6	57
Maryland	25.7	34.4	34
Massachusetts	19.5	34.5	77
Michigan	22.5	33.8	50
Minnesota	23.8	36.6	54
Mississippi	28.1	38.7	38
Missouri	34.9	44.0	26
Montana	28.0	37.7	35
Nebraska	32.5	44.3	36
Nevada	21.6	33.1	53
New Hampshire	25.5	34.7	36
New Jersey	24.1	30.0	24
New Mexico	35.1	34.6	†
New York	28.2	37.5	33
North Carolina	26.3	37.6	43
North Dakota	29.2	41.3	41
Ohio	32.6	41.7	28
Oklahoma	33.2	39.8	20
Oregon	28.4	35.5	25
Pennsylvania	23.8	39.9	68
Rhode Island	25.0	31.5	26

South Carolina	29.1	36.0	24
South Dakota	29.2	39.6	36
Tennessee	34.5	35.9	4
Texas	24.8	30.8	24
Utah	15.8	18.0	14
Vermont	28.2	37.9	34
Virginia	19.1	28.2	48
Washington	22.4	30.2	35
West Virginia	40.2	45.2	12
Wisconsin	30.3	40.2	33
Wyoming	28.2	37.8	34

† Change not significant ( $p < 0.05$ ).

NOTES: Significant increases from 2016 to 2024 for all jurisdictions except New Mexico ( $p < 0.05$ ). Singleton births only.

SOURCE: National Center for Health Statistics, National Vital Statistics System, natality data file.

## Suggested citation

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