MATERNAL CHARACTERISTICS & BIRTH OUTCOMES

AMONG SOONERCARE (OKLAHOMA MEDICAID)

OKLAHOMA
State Department
of Health

OKLAHOMA
Health Care Authority

2022 & 2023
SoonerCare Birth Data Linkage Report

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SoonerCare - Birth Certificate Data Linkage Project Overview

Oklahoma's Medicaid program, known as SoonerCare, is administered by the Oklahoma Health Care Authority (OHCA). SoonerCare, is a health coverage program jointly funded by the federal and state government that provides health insurance for low-income people, including pregnant women. OHCA is the state agency that administers the program. Oklahoma Vital Records maintains the records for births that occurred in the State of Oklahoma. The Oklahoma State Department of Health Division of Vital Records is responsible for registering every birth which occurs in the State of Oklahoma.

The SoonerCare – Birth Certificate Data Linkage Project is made possible through an interdepartmental agreement between the Oklahoma Health Care Authority and the Oklahoma State Department of Health's Family Support and Prevention Services department. SoonerCare (Oklahoma Medicaid) data contains a wealth of detailed information on health conditions, diagnoses, procedures and health care services provided to pregnant women and infants. Birth certificate data provides insights into risk factors during pregnancy and birth outcomes. Linked SoonerCare and birth certificate data enhance the information found in both Oklahoma's birth records and SoonerCare claims, offering a more comprehensive view of pregnancy and birth outcomes for Medicaid members. The intended uses of the Oklahoma Medicaid-Birth Certificate Linkage Project include but are not limited to:

- Identifying live births paid by SoonerCare.
- Assessing the maternal characteristics of mothers with SoonerCare paid live births, their behaviors during pregnancy and at delivery, and related birth outcomes.
- Comparing pregnancy risks and birth outcomes between the SoonerCare and non-SoonerCare populations in Oklahoma.
- Linking matched SoonerCare-birth data to other data sources (e.g., PRAMS, WIC) which provide a wide variety of information that is not currently available with the matched SoonerCare-birth data alone.
- Conducting inferential statistical analysis of SoonerCare-birth matched data.

The SoonerCare-Birth Certificate Linkage Project provides opportunities to use SoonerCare data in support of Family Support and Prevention Services by enhancing health assessment and evaluation of mothers with SoonerCare paid live births in Oklahoma. The information can be used to improve current state policies and programs to benefit SoonerCare members in the State of Oklahoma.

Objectives

The objective of this report is to describe and compare select characteristics and birth outcomes of mothers with live births paid for by SoonerCare, Oklahoma's Medicaid program, with mothers whose live births were not paid by SoonerCare during calendar years (CY) 2022 and 2023.

Data and Methods

The data used in this report was from the SoonerCare – Birth Certificate Linkage Project for 2022 and 2023.

SoonerCare data was extracted from the Oklahoma Medicaid Management Information Systems (OKMMIS) of the Oklahoma Health Care Authority. The delivery dates tables, from OKMMIS, include deliveries paid for by SoonerCare; mother and infant data were pre-linked. SoonerCare eligibility data for mothers and the matching infants were extracted based on the delivery dates table. Oklahoma birth data was obtained from the Center for Health Statistics division of OSDH. Deterministic linkages between the SoonerCare eligibility data and birth certificate data were conducted using SAS (version 9.4) and probabilistic linkages between Link King (version 9.0). SoonerCare paid live births were identified from the data matching process using SoonerCare eligibility data and birth certificate data. Non-SoonerCare live births were those without SoonerCare eligibility data. Select maternal characteristics and birth outcomes were assessed using variables from the birth certificate data.

Data Qualification

The quality of SoonerCare and birth linked data was determined by the efficacy of the SoonerCare and birth certificate data linkage process, as well as the completeness of the SoonerCare delivery dates table. Data exclusions are as follows:
- Oklahoma births to out-of-state residents and out-of-state births to Oklahoma residents.
- Mothers for whom SoonerCare paid for the delivery claim but were unable to match with an infant's newborn claim.
- Infants with SoonerCare-paid newborn claims when the mother's delivery is not paid for by SoonerCare.
- Infants without SoonerCare-paid newborn claims but who were enrolled in SoonerCare after birth.

SoonerCare partial paid claims, such as third-party liability and Medicare, are included in the data set. Due to frequent updates of data in OKMMIS, SoonerCare data are a point-in-time, and a representation of the data as of the extract date.

Population

The population in the final SoonerCare and birth certificate linked data includes Oklahoma residents who gave birth in an Oklahoma facility in CY 2022-2023, and SoonerCare paid for the mother's delivery claim and her infant's newborn claim. The infants were enrolled in SoonerCare at the time of birth.

General Steps of the Oklahoma Medicaid-Birth Data Linkage Process **2022**


```
OHCA (OKMMIS)          Removed Records         Medicaid Eligibility
Medicaid Delivery      with Missing Child IDs  Records for Mothers
Dates Table                                    and Matched Infants
                       1,498 (5%)
(n = 27,936)                                   (n = 26,438)
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Medicaid-Birth         Oklahoma Medicaid
Matched Records        Paid Births in CY 2022
2022
                       (n = 25,065)
(n = 25,065)
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OSDH (CHS)             Removed out-of-        Birth Records for
Birth Records 2022     state birth records   Oklahoma Residents
                                             with in-state births
(n = 48,314)           2,173 (4.5%)
                                             (n = 46,141)
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Non-Medicaid Paid
Births in CY 2022

(n = 21,076)
```

Births to Oklahoma Residents by Medicaid Status 2022

■ SoonerCare
■ Non-SoonerCare

45.7%

54.3%

General Steps of the Oklahoma Medicaid-Birth Data Linkage Process 2023

OHCA (OKMMIS) Medicaid Delivery Dates Table

(n = 28,961)

⤑ Removed Records with Missing Child IDs

1,607 (6%)

⤑ Medicaid Eligibility Records for Mothers and Matched Infants

(n = 27,354)

Medicaid-Birth Matched Records 2023

(n = 25,880)

⤑ Oklahoma Medicaid Paid Births in CY 2023

(n = 25,880)

OSDH (CHS) Birth Records 2023

(n = 47,895)

⤑ Removed out-of-state birth records

2,281 (4.8%)

⤑ Birth Records for Oklahoma Residents with in-state births

(n = 45,614)

⤑ Non-Medicaid Paid Births in CY 2023

(n = 19,734)

Births to Oklahoma Residents by Medicaid Status 2023

- ■ SoonerCare
- ■ Non-SoonerCare

43.3%

56.7%

SoonerCare is an essential lifeline for mothers in Oklahoma, providing crucial health coverage for more than half of the state's annual births. SoonerCare offers access to prenatal care, labor and delivery services, and postnatal support, all of which are vital for the health and well-being of both mother and child. In January 2023, a significant increase to the Federal Poverty Level (FPL) expanded eligibility requirements for SoonerCare, allowing even more of Oklahoma's mothers to benefit from the program. As a result, a greater percentage of births are now covered by SoonerCare than ever before. This highlights SoonerCare's critical role in improving maternal health outcomes in Oklahoma by ensuring more mothers have access to the care and resources they need.

Figure 1. Births to Oklahoma Residents by SoonerCare Status 2022-2023
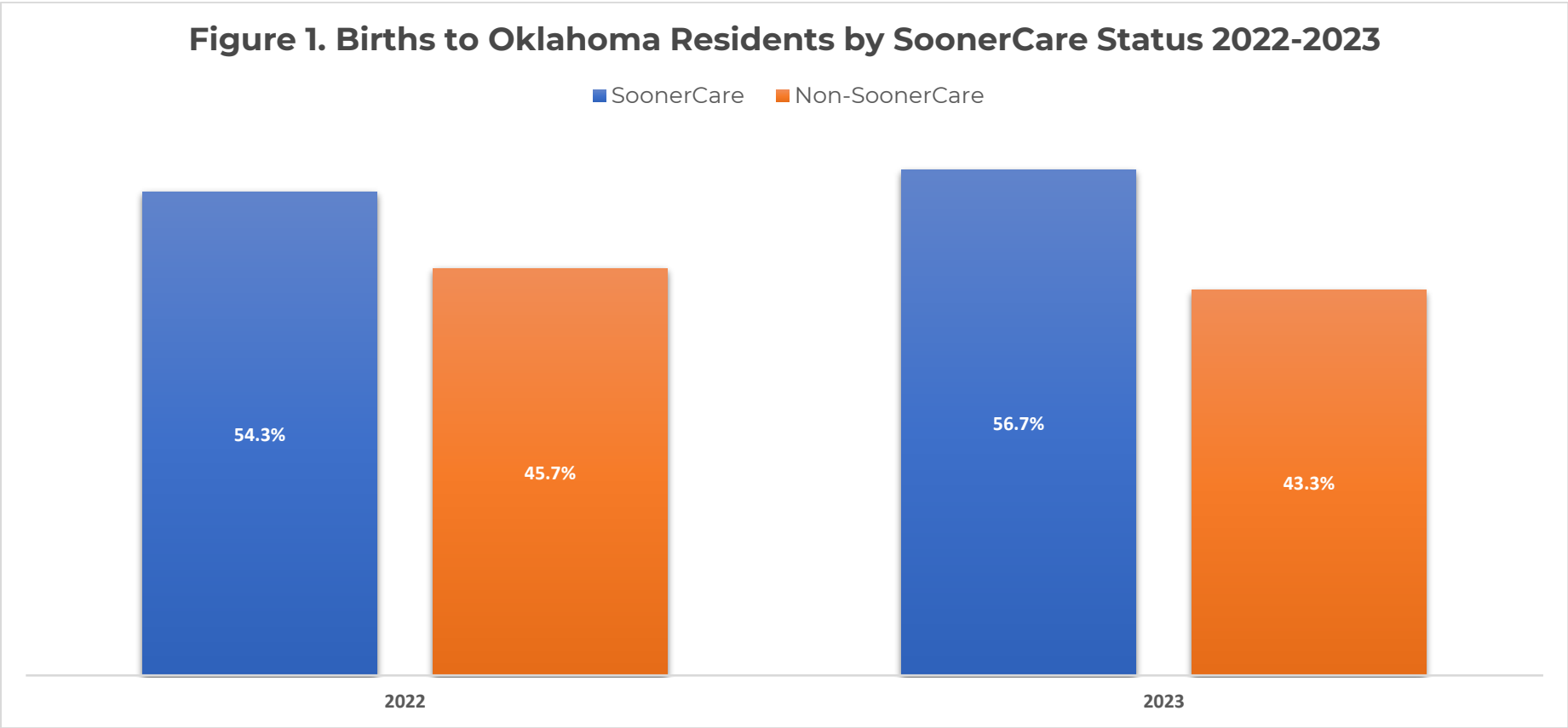
Table 1. Distribution Births to Oklahoma Residence by SoonerCare Status 2022-2023

	2022		2023	
	n	%	n	%
SoonerCare	25,065	54.3	25,880	56.7
Non-SoonerCare	21,076	45.7	19734	43.3

Figure 2. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Race and Hispanic Origin, 2022-2023

■ SoonerCare   ■ Non-SoonerCare

Percent

2022

Category	SoonerCare	Non-SoonerCare
Non-Hispanic White	42.5	66.7
Hispanic	24.6	9.5
Non-Hispanic American Indian	10.4	7.5
Non-Hispanic Black	10.1	5.1
Non-Hispanic Two or More Races	9.1	7.2
Non-Hispanic Asian or Pacific Islander	2.9	3.6
Non-Hispanic Other Race	0.5	0.3

2023

Category	SoonerCare	Non-SoonerCare
Non-Hispanic White	42.2	66.4
Hispanic	25.4	9.8
Non-Hispanic American Indian	9.7	7.0
Non-Hispanic Black	10.1	5.0
Non-Hispanic Two or More Races	9.4	7.7
Non-Hispanic Asian or Pacific Islander	2.8	3.8
Non-Hispanic Other Race	0.5	0.1

Table 2. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Race and Hispanic Origin, 2022

	NH White		Hispanic		NH American Indian		NH Black		NH Two or More Races		NH Asian or Pacific Islander		NH Other Race	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
SoonerCare	10,649	42.5	6,164	24.6	2,612	10.4	2,524	10.1	2,283	9.1	715	2.9	118	0.5
Non-SoonerCare	14,053	66.7	2,010	9.5	1,580	7.5	1,089	5.1	1,526	7.2	758	3.6	60	0.3

Table 3. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Race and Hispanic Origin, 2023

	NH White		Hispanic		NH American Indian		NH Black		NH Two or More Races		NH Asian or Pacific Islander		NH Other Race	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
SoonerCare	10,909	42.2	6,560	25.4	2,519	9.7	2,612	10.1	2,427	9.4	730	2.8	123	0.5
Non-SoonerCare	13,111	66.4	1,942	9.8	1,377	7.0	989	5.0	1,521	7.7	742	3.8	52	0.1

Figure 3. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Age at Delivery, 2022-2023
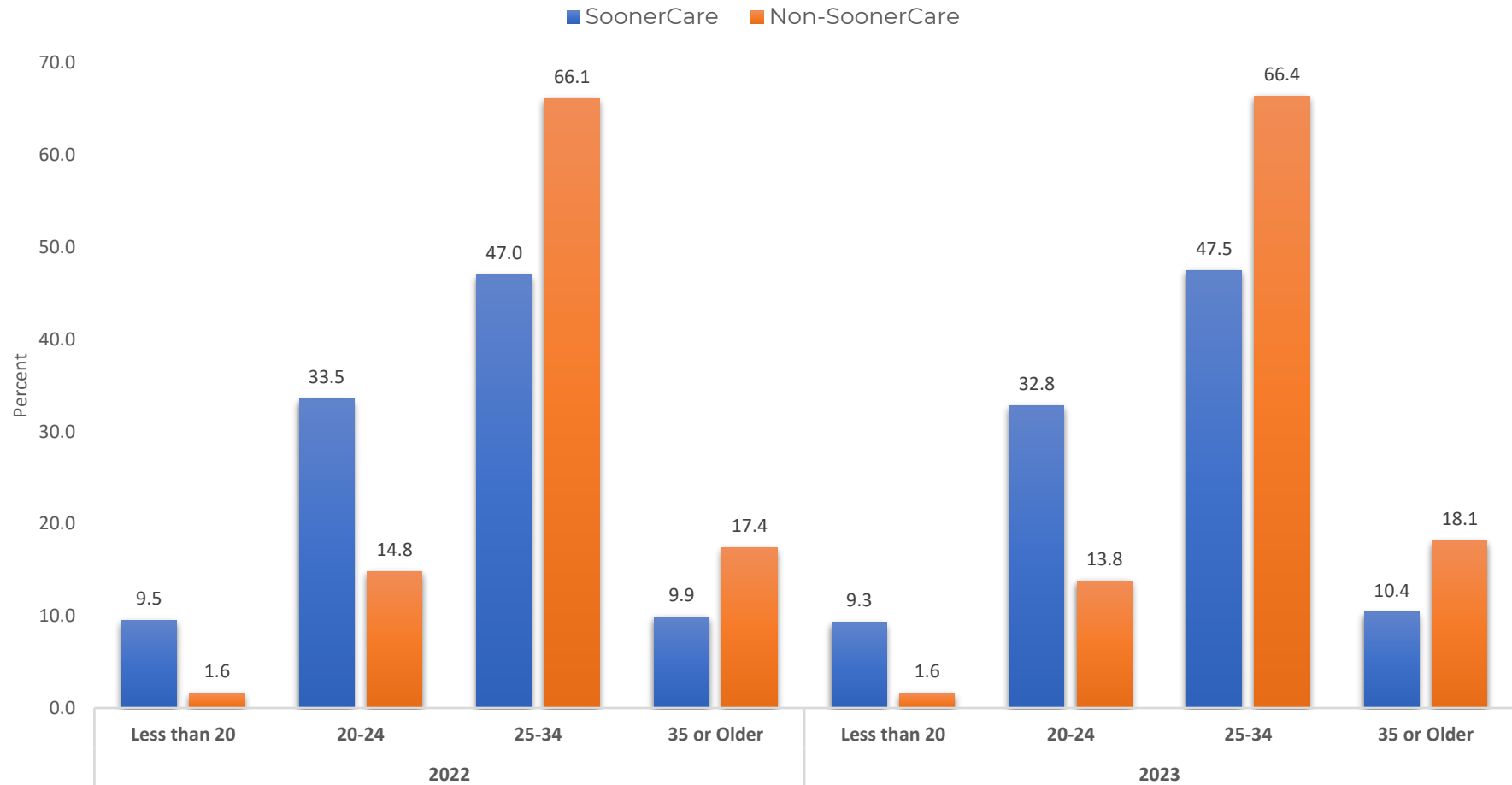
Table 4. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Age at Delivery, 2022

	Less than 20		20-24		25-34		35 or Older	
	n	%	n	%	n	%	n	%
SoonerCare	2,385	9.5	8,402	33.5	11,789	47.0	2,488	9.9
Non-SoonerCare	338	1.6	3,111	14.8	13,937	66.1	3,675	17.4

Table 5. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Age at Delivery, 2023

	Less than 20		20-24		25-34		35 or Older	
	n	%	n	%	n	%	n	%
SoonerCare	2,410	9.3	8,497	32.8	12,282	47.5	2,691	10.4
Non-SoonerCare	319	1.6	2,731	13.8	13,109	66.4	3,575	18.1

Figure 4. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Highest Level of Education, 2022-2023
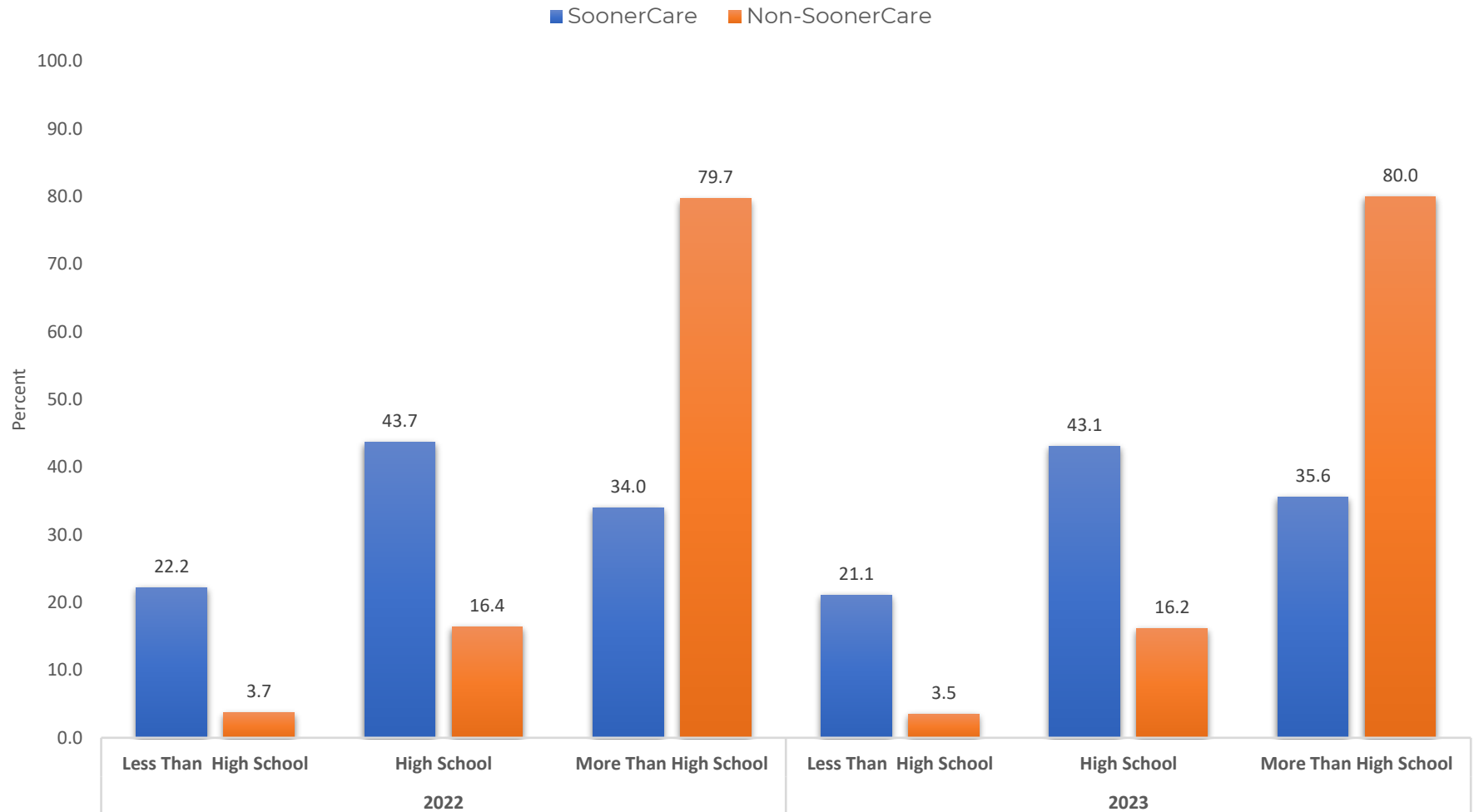
Table 6. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Highest Level of Education, 2022

	Less than High School		High School		More than High School		Unknown	
	n	%	n	%	n	%	n	%
SoonerCare	5,554	22.2	10,946	43.7	8,513	34.0	52	0.2
Non-SoonerCare	779	3.7	3,448	16.4	16,797	79.7	52	0.3

Table 7. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Highest Level of Education, 2023

	Less than High School		High School		More than High School		Unknown	
	n	%	n	%	n	%	n	%
SoonerCare	5,469	21.1	11,149	43.1	9,202	35.6	60	0.2
Non-SoonerCare	689	3.5	3,187	16.2	15,784	80.0	74	0.3

Figure 5. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Marital Status at Birth, 2022-2023

■ SoonerCare ■ Non-SoonerCare

	2022		2023	
	Married	Not Married	Married	Not Married
SoonerCare	35.0	65.0	35.1	64.9
Non-SoonerCare	79.0	20.9	82.1	18.0

Table 8. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Marital Status at Birth, 2022

	Married		Not Married	
	n	%	n	%
SoonerCare	8,769	35.0	16,296	65.0
Non-SoonerCare	17,454	81.0	4,092	19.0

Table 9. Distribution of SoonerCare and Non-SoonerCare Births by Mother's Marital Status at Birth, 2023

	Married		Not Married	
	n	%	n	%
SoonerCare	9,077	35.1	16,803	64.9
Non-SoonerCare	16,191	82.1	3,543	18

Figure 6. Distribution of SoonerCare and Non-SoonerCare Births by Whether Mother had Previous Live Births, 2022-2023
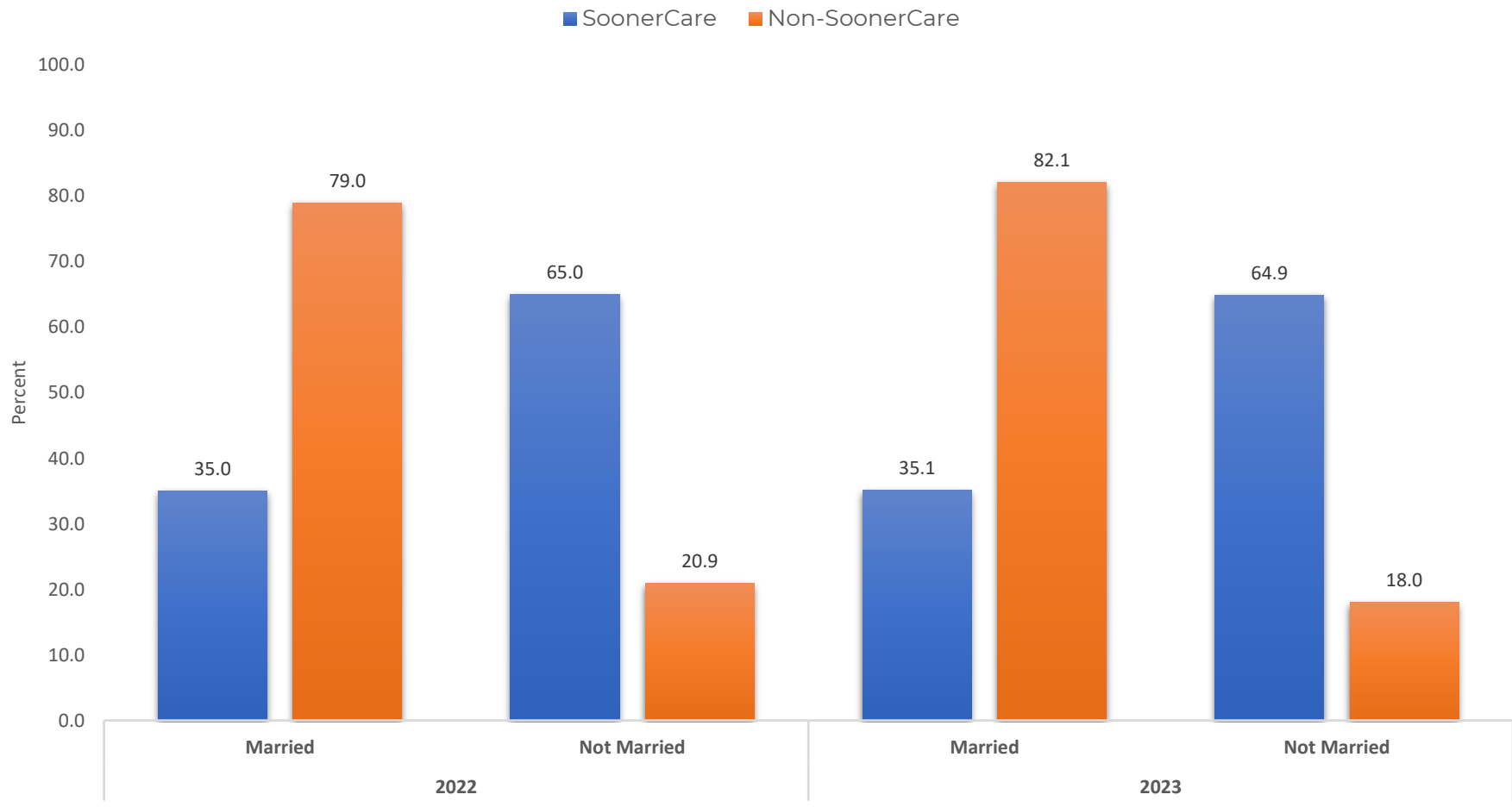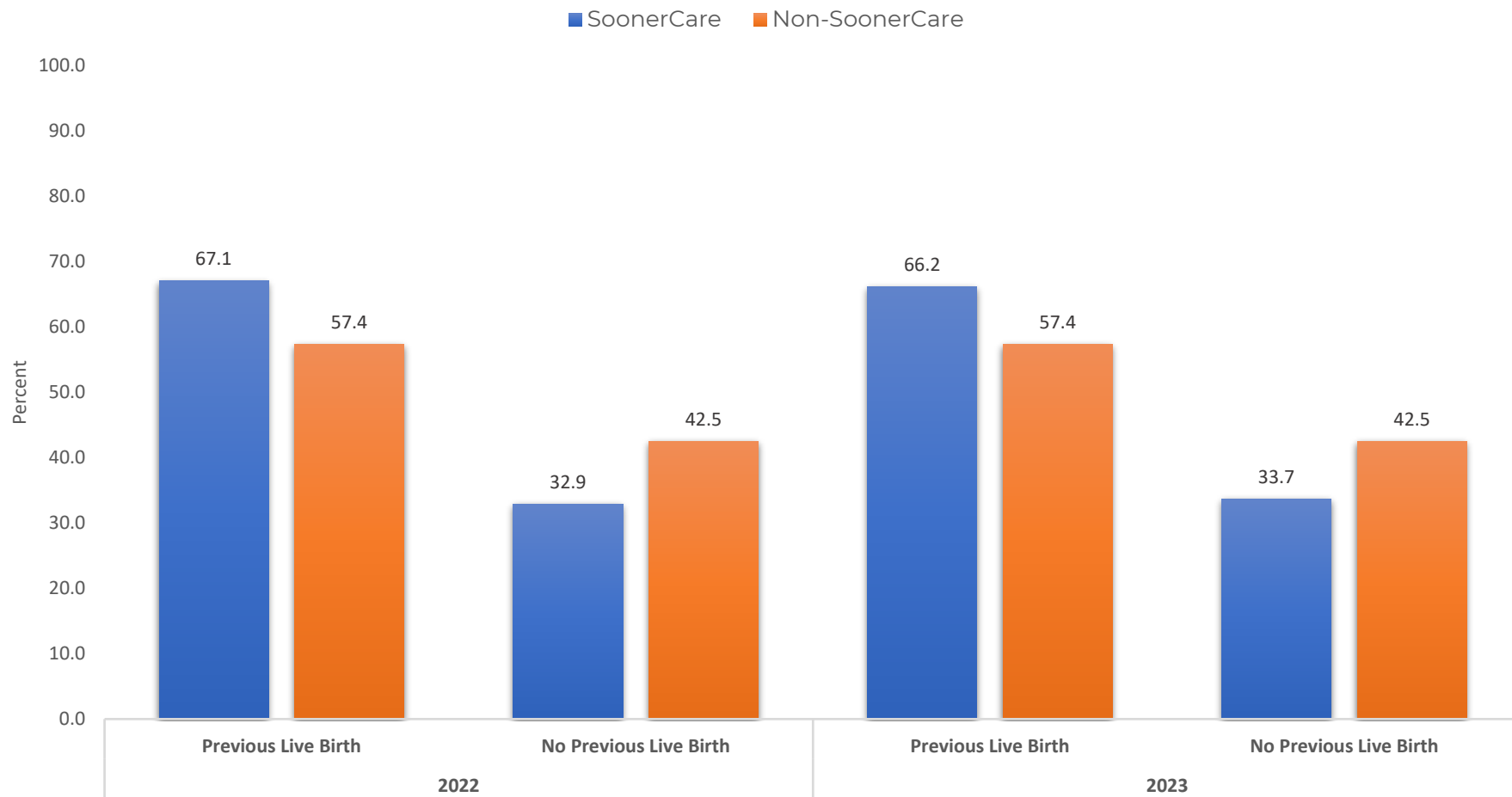
Table 10. Distribution of SoonerCare and Non-SoonerCare Births by Whether Mother had Previous Live Births, 2022

	Previous Live Birth		No Previous Live Birth		Unknown	
	n	%	n	%	n	%
SoonerCare	16,818	67.1	8,239	32.9	-	-
Non-SoonerCare	12,106	57.4	8,958	42.5	-	-

Table 11. Distribution of SoonerCare and Non-SoonerCare Births by Whether Mother had Previous Live Births, 2023

	Previous Live Birth		No Previous Live Birth		Unknown	
	n	%	n	%	n	%
SoonerCare	17,139	66.2	8,719	33.7	22	0.1
Non-SoonerCare	11,326	57.4	8,379	42.5	29	0.2

Figure 7. Distribution of SoonerCare and Non-SoonerCare Births by Trimester During Which Mother First Received Prenatal Care, 2022-2023
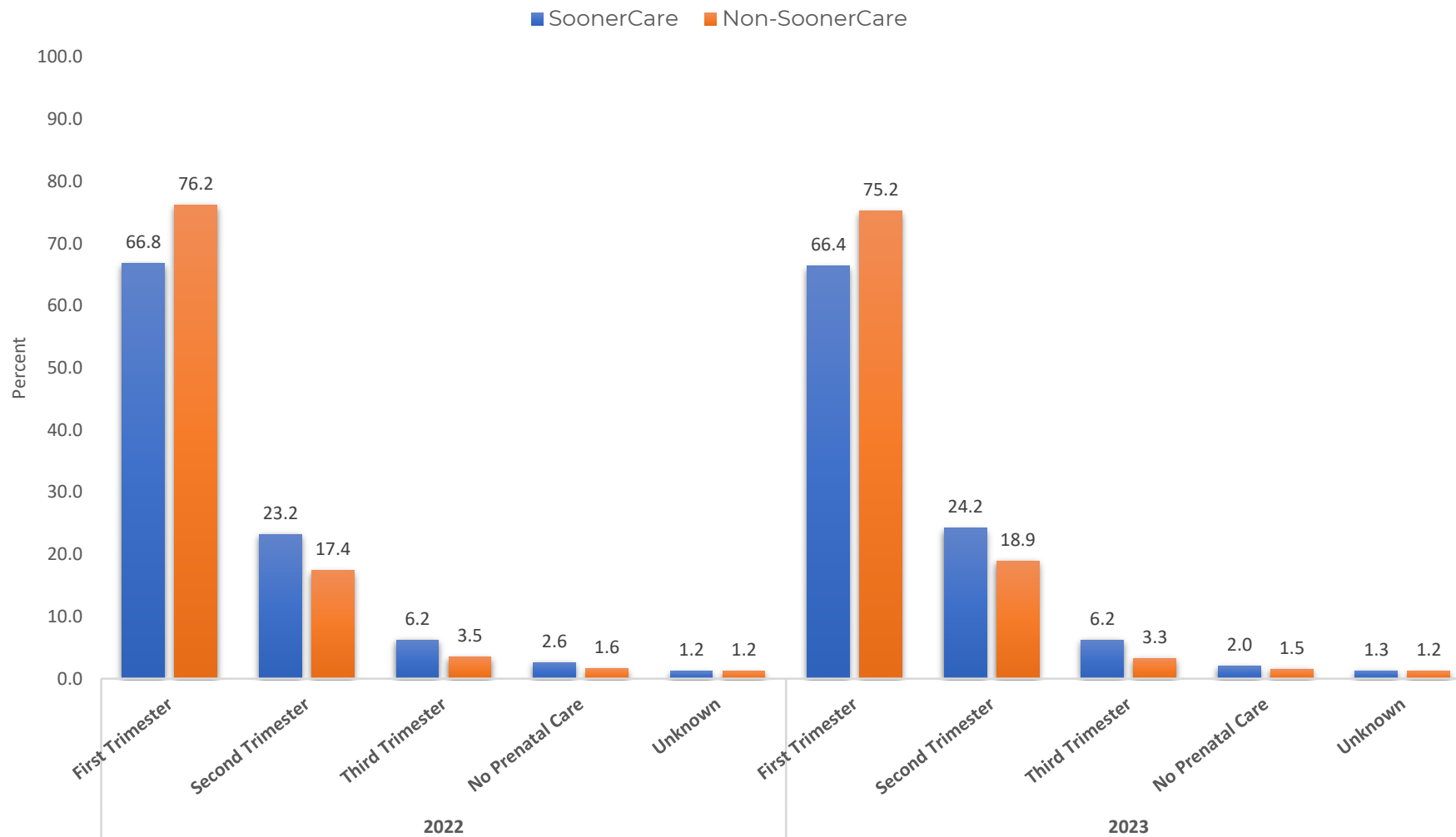
Table 12. Distribution of SoonerCare and Non-SoonerCare Births by Trimester Prenatal Care Began, 2022

	First Trimester		Second Trimester		Third Trimester		No Prenatal Care		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	16,732	66.8	5,821	23.2	1,562	6.2	661	2.6	289	1.2
Non-SoonerCare	16,074	76.2	3,665	17.4	740	3.5	346	1.6	251	1.2

Table 13. Distribution of SoonerCare and Non-SoonerCare Births by Trimester Prenatal Care Began, 2023

	First Trimester		Second Trimester		Third Trimester		No Prenatal Care		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	17,185	66.4	6,260	24.2	1,591	6.2	505	2.0	339	1.3
Non-SoonerCare	14,832	75.2	3,725	18.9	649	3.3	299	1.5	229	1.2

Figure 8. Distribution of SoonerCare and Non-SoonerCare Births by Maternal Pre-Pregnancy BMI, 2022-2023
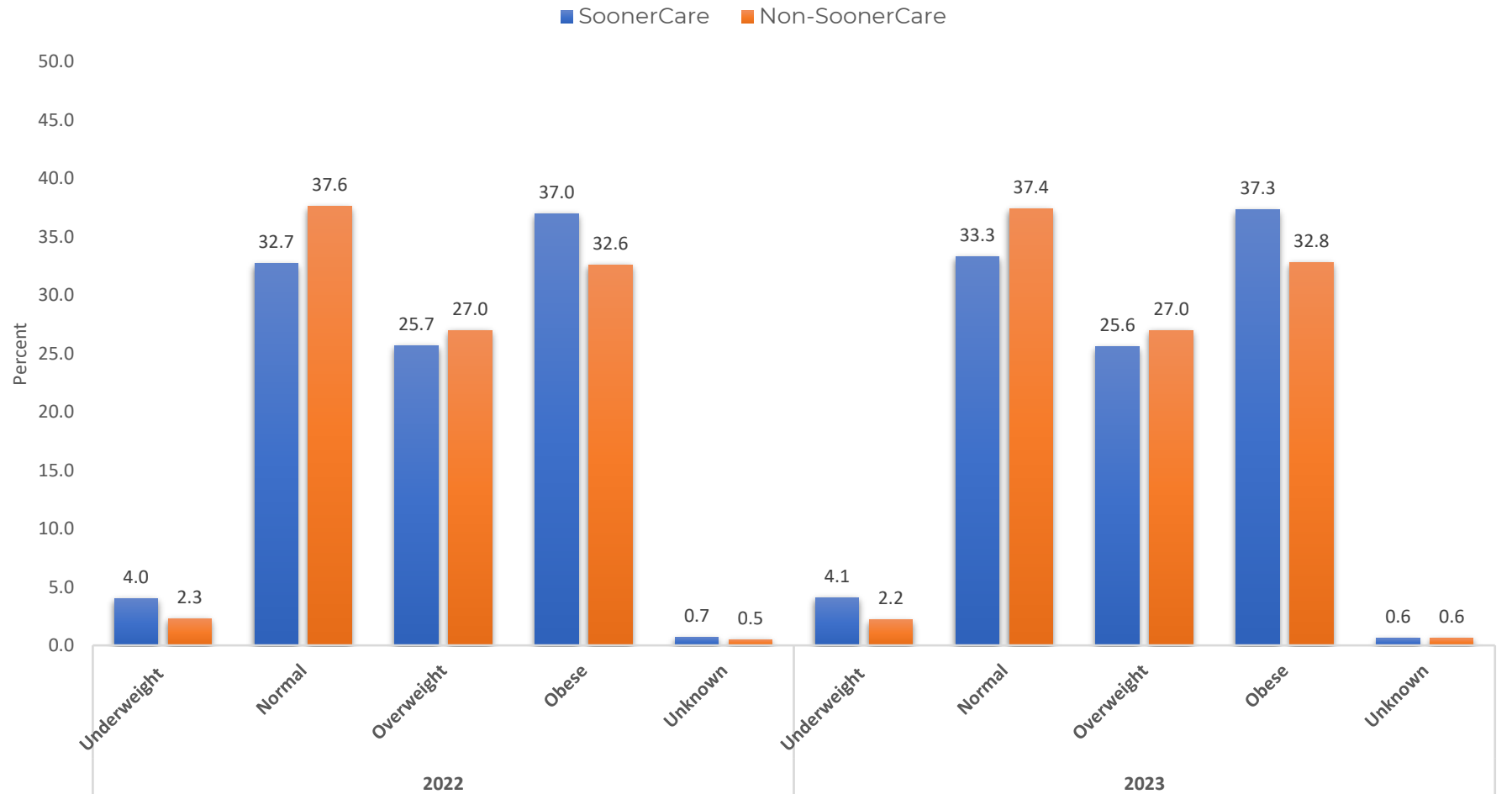
Table 14. Distribution of SoonerCare and Non-SoonerCare Births by Maternal Pre-Pregnancy Body Mass Index (BMI), 2022

	Underweight		Normal		Overweight		Obese		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	993	4.0	8,184	32.7	6,432	25.7	9,276	37.0	180	0.7
Non-SoonerCare	474	2.3	7,918	37.6	5,703	27.0	6,888	32.6	113	0.5

Table 15. Distribution of SoonerCare and Non-SoonerCare Births by Maternal Pre-Pregnancy Body Mass Index (BMI), 2023

	Underweight		Normal		Overweight		Obese		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	1,048	4.1	8,412	33.0	6,624	25.6	9,640	37.3	156	0.6
Non-SoonerCare	426	2.2	7,376	37.4	5,348	27.1	6,472	32.8	112	0.6

Figure 9. Distribution of SoonerCare and Non-SoonerCare Births by Birth Weight, 2022-2023

■ SoonerCare ■ Non-SoonerCare
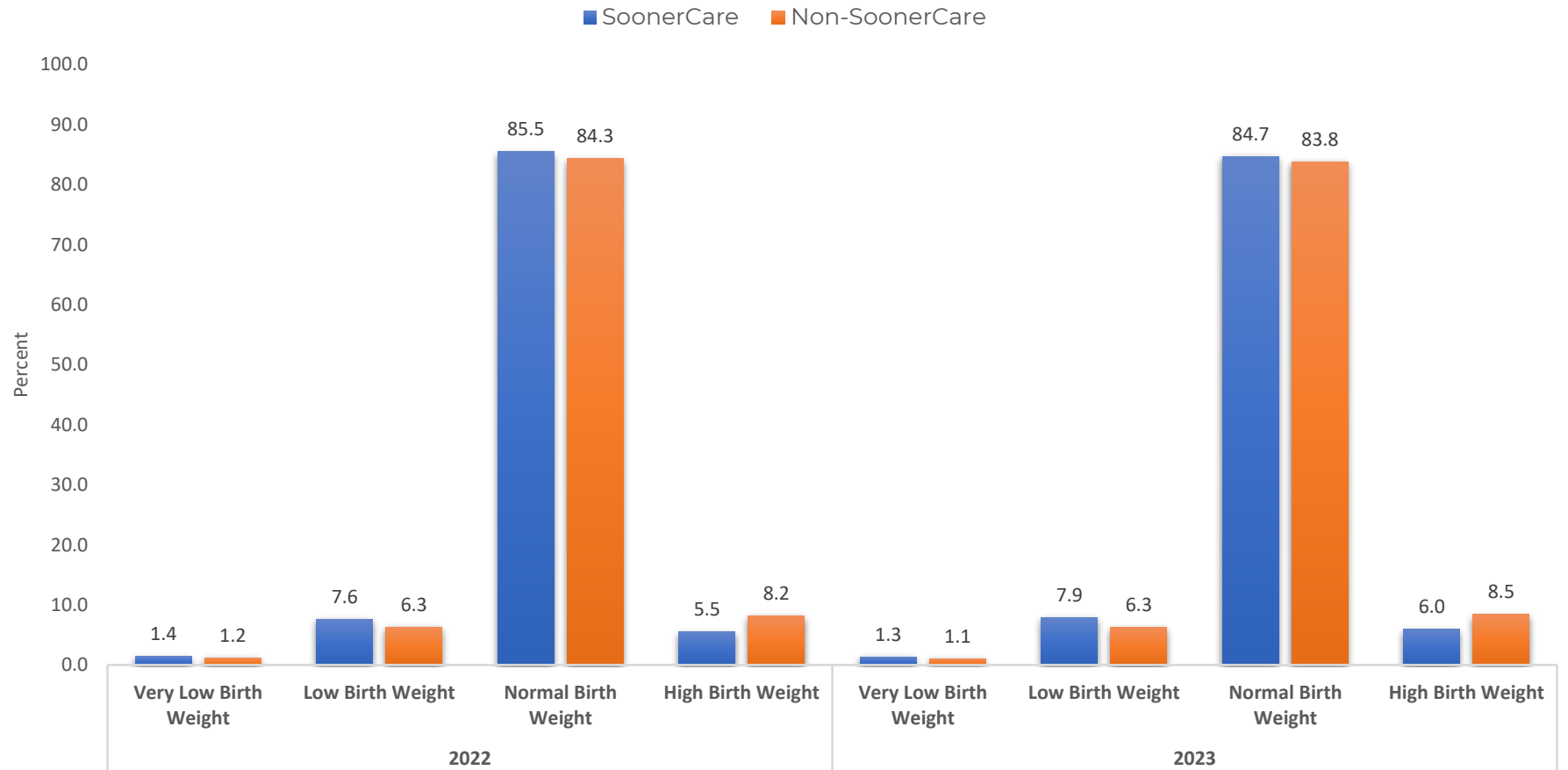
Table 16. Distribution of SoonerCare and Non-SoonerCare Births by Birth Weight, 2022

	Very Low Birth Weight		Low Birth Weight		Normal Birth Weight		High Birth Weight	
	n	%	n	%	n	%	n	%
SoonerCare	346	1.4	1,903	7.6	21,387	85.5	1,378	5.5
Non-SoonerCare	256	1.2	1,319	6.3	17,699	84.3	1,718	8.2

Table 17. Distribution of SoonerCare and Non-SoonerCare Births by Birth Weight, 2023

	Very Low Birth Weight		Low Birth Weight		Normal Birth Weight		High Birth Weight	
	n	%	n	%	n	%	n	%
SoonerCare	347	1.3	2,036	7.9	21,915	84.7	1,540	6.0
Non-SoonerCare	211	1.1	1,234	6.3	16,538	83.8	1,668	8.5

Figure 10. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Age at Birth, 2022-2023
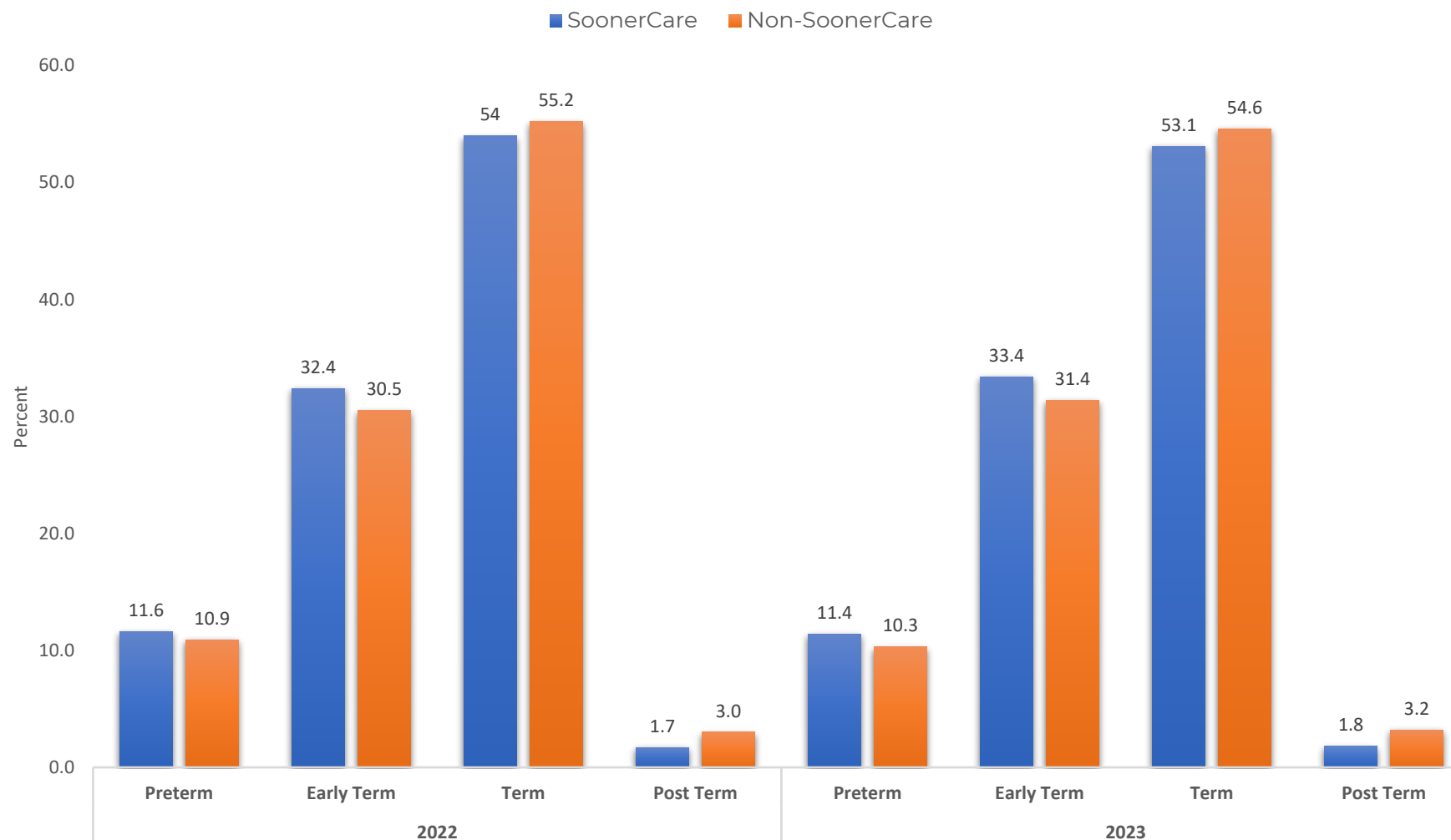
Table 18. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Age, 2022

	Preterm		Early Term		Term		Post term	
	n	%	n	%	n	%	n	%
SoonerCare	2,898	11.6	8,119	32.4	13,964	54.0	422	1.7
Non-SoonerCare	2,288	10.9	6,433	30.5	12,258	55.2	633	3.0

Table 19. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Age, 2023

	Preterm		Early Term		Term		Post Term	
	n	%	n	%	n	%	n	%
SoonerCare	2,956	11.4	8,631	33.4	13,740	53.1	474	1.8
Non-SoonerCare	2,024	10.3	6,197	31.4	10,777	54.6	632	3.2

Figure 11. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery, 2022-2023
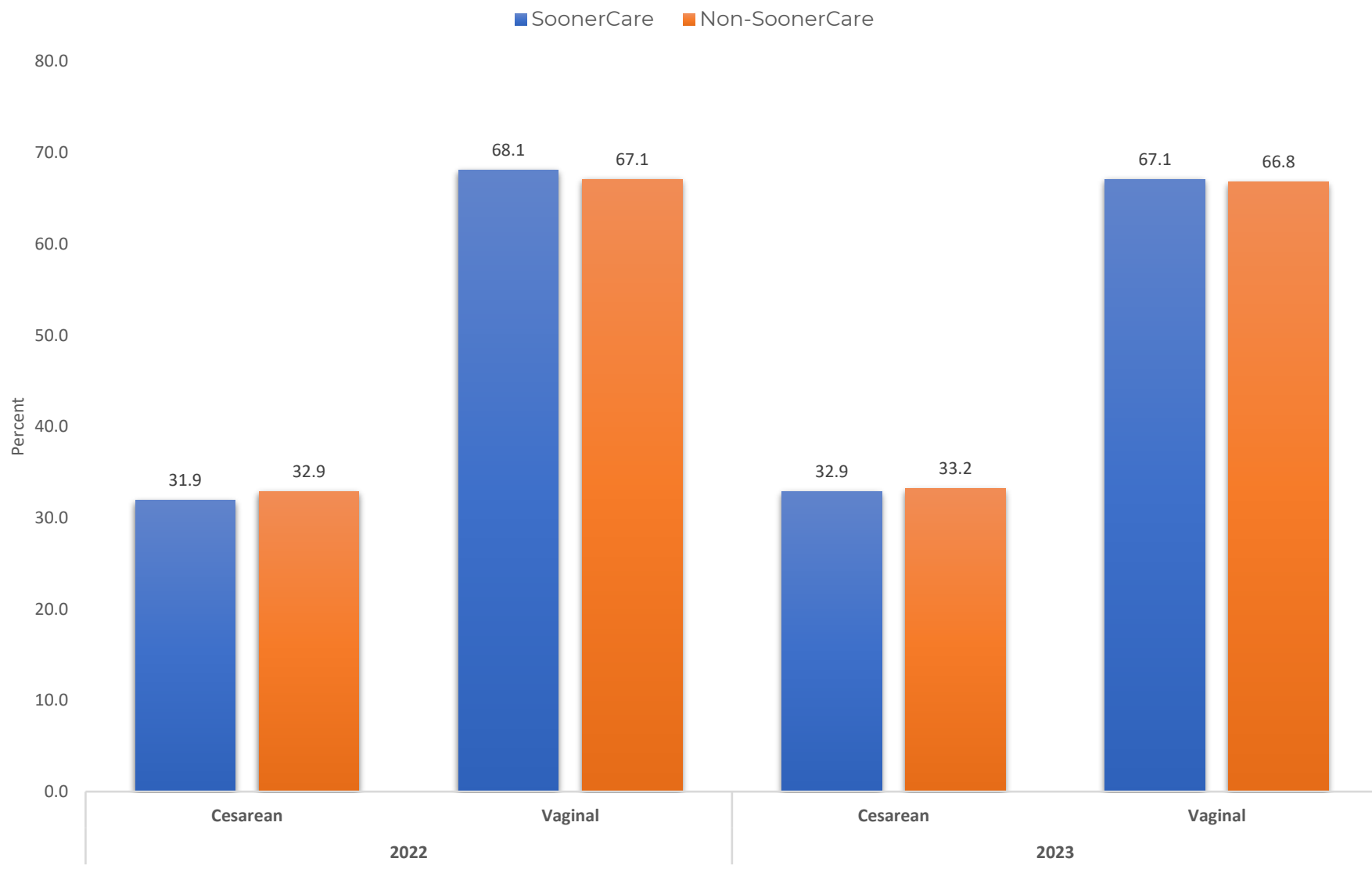
Table 20. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery, 2022

	Cesarean		Vaginal	
	n	%	n	%
SoonerCare	7,990	31.9	17,065	68.1
Non-SoonerCare	6,925	32.9	14,134	67.1

Table 21. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery, 2023

	Cesarean		Vaginal	
	n	%	n	%
SoonerCare	6,546	32.9	17,362	67.1
Non-SoonerCare	8,515	33.2	13,176	66.8

Figure 12. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Race, 2022

Legend: ■ SoonerCare   ■ Non-SoonerCare

Y-axis: Percent (0.0 to 80.0)

Non-Hispanic White
- Vaginal: SoonerCare 68.1, Non-SoonerCare 68.2
- Cesarean: SoonerCare 31.9, Non-SoonerCare 31.7

Hispanic
- Vaginal: SoonerCare 70.2, Non-SoonerCare 66.1
- Cesarean: SoonerCare 29.7, Non-SoonerCare 33.8

Non-Hispanic American Indian/AN
- Vaginal: SoonerCare 65.7, Non-SoonerCare 64.7
- Cesarean: SoonerCare 34.3, Non-SoonerCare 35.3

Non-Hispanic Black or African American
- Vaginal: SoonerCare 64.2, Non-SoonerCare 56.7
- Cesarean: SoonerCare 35.7, Non-SoonerCare 43.2

Non-Hispanic Two or More Races
- Vaginal: SoonerCare 67.4, Non-SoonerCare 69.7
- Cesarean: SoonerCare 32.6, Non-SoonerCare 32.9

Non-Hispanic Other Race
- Vaginal: SoonerCare 75.5, Non-SoonerCare 68.4
- Cesarean: SoonerCare 24.5, Non-SoonerCare 31.8

Non-Hispanic Asian or Pacific Islander
- Vaginal: SoonerCare 72.1, Non-SoonerCare 68.6
- Cesarean: SoonerCare 27.6, Non-SoonerCare 31.1

Table 22. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Race, 2022

		SoonerCare		Non-SoonerCare	
		n	%	n	%
Non-Hispanic White	Vaginal	7,253	68.1	9,583	68.2
	Cesarean	3,393	31.9	4,461	31.7
	Uknown	-	-	-	-
Hispanic	Vaginal	4,329	70.2	1,328	66.1
	Cesarean	1,832	29.7	681	33.8
	Uknown	-	-	-	-
Non-Hispanic American Indian/AN	Vaginal	1,716	65.7	1,023	64.7
	Cesarean	895	34.3	555	35.3
	Uknown	-	-	-	-
Non-Hispanic Black or African American	Vaginal	1,622	64.2	617	56.7
	Cesarean	901	35.7	470	43.2
	Uknown	-	-	-	-
Non-Hispanic Two or More Races	Vaginal	1,539	67.4	1,022	69.7
	Cesarean	744	32.6	503	32.9
	Uknown	-	-	-	-
Non-Hispanic Other Race	Vaginal	80	75.5	39	68.4
	Cesarean	26	24.5	18	31.8
	Uknown	0	0.0	0	0.0
Non-Hispanic Asian or Pacific Islander	Vaginal	516	72.1	520	68.6
	Cesarean	197	27.6	236	31.1
	Uknown	-	-	-	-

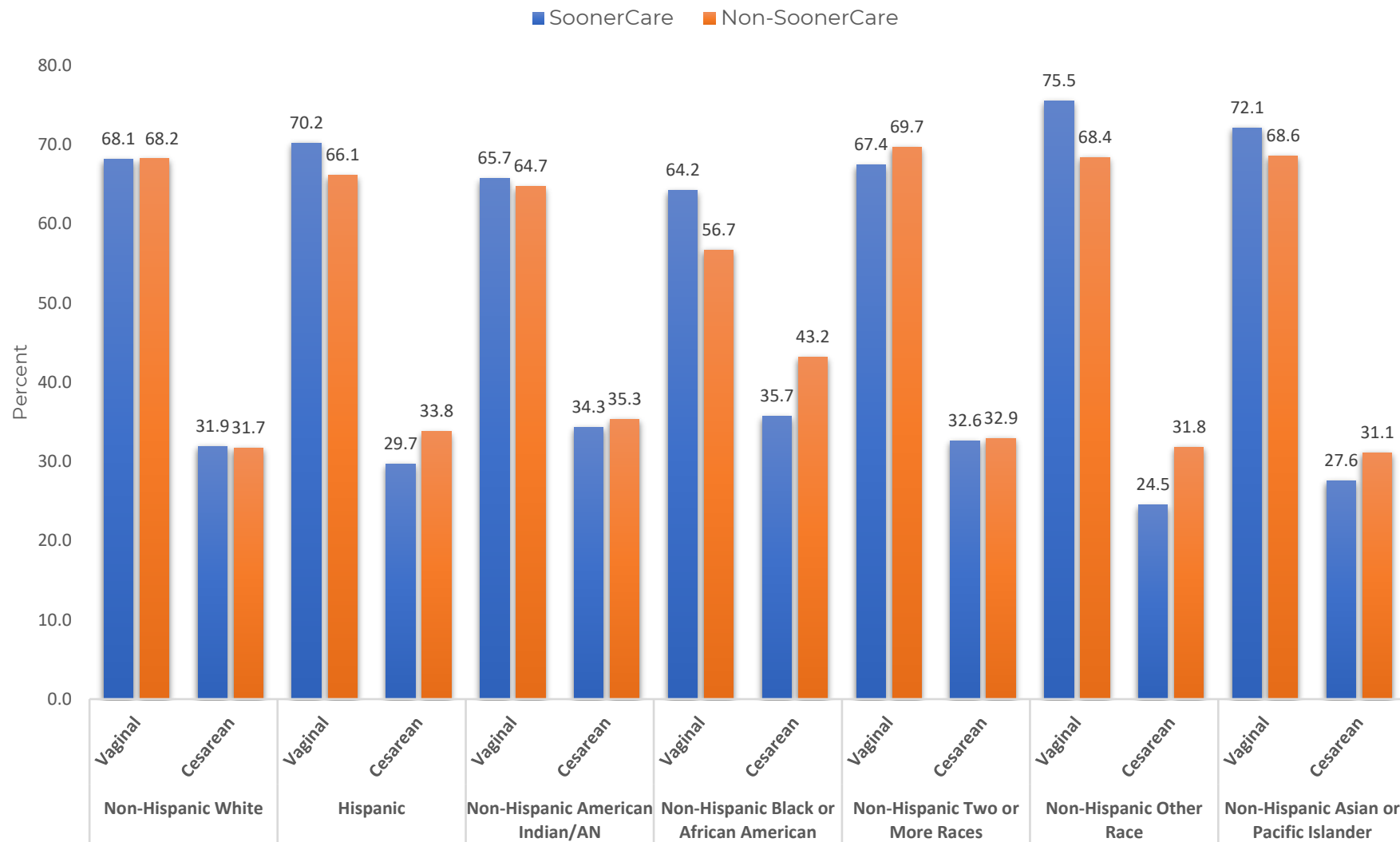**Figure 13. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Race, 2023**

■ SoonerCare ■ Non-SoonerCare

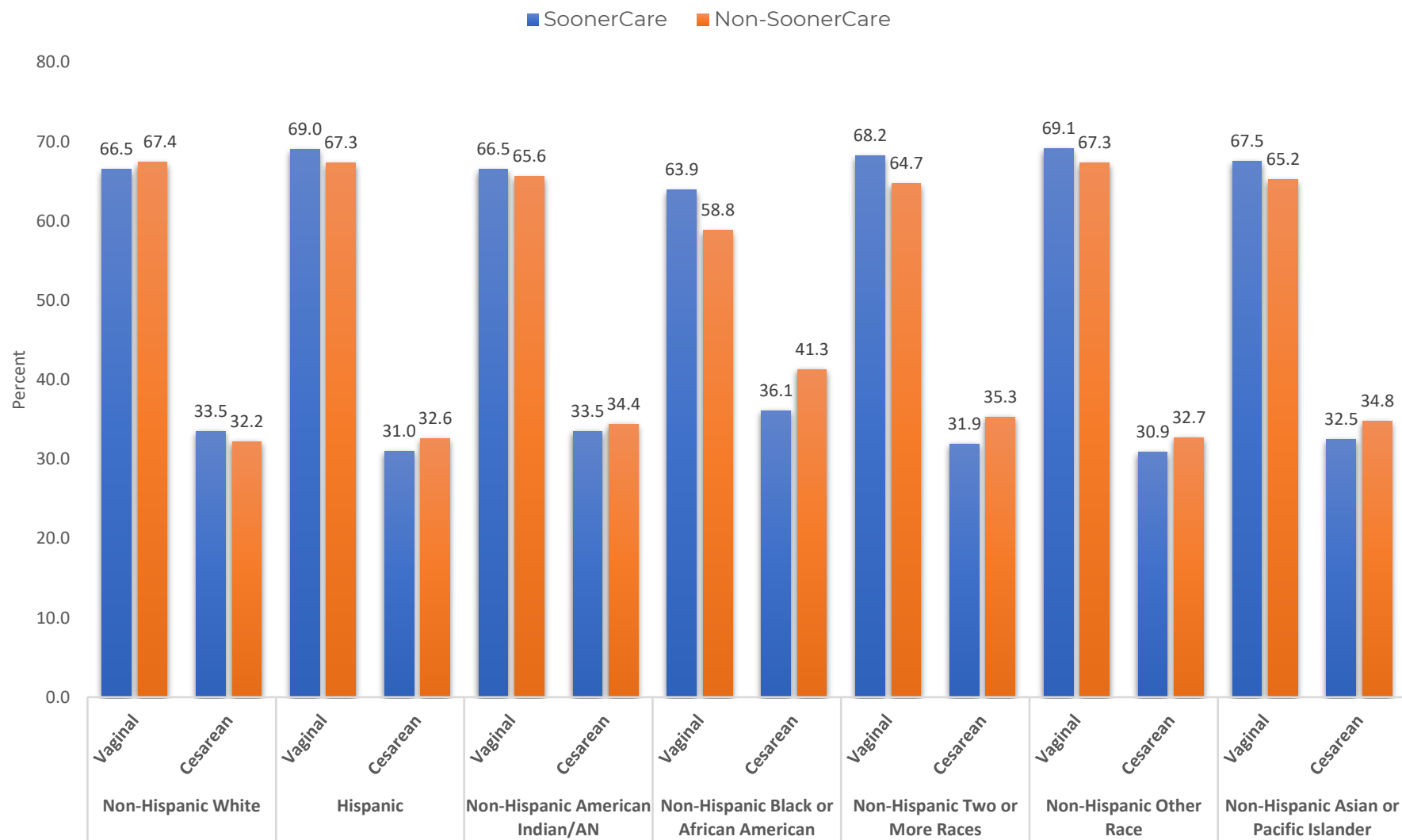|	Vaginal	Cesarean
Non-Hispanic White	66.5 / 67.4	33.5 / 32.2
Hispanic	69.0 / 67.3	31.0 / 32.6
Non-Hispanic American Indian/AN	66.5 / 65.6	33.5 / 34.4
Non-Hispanic Black or African American	63.9 / 58.8	36.1 / 41.3
Non-Hispanic Two or More Races	68.2 / 64.7	31.9 / 35.3
Non-Hispanic Other Race	69.1 / 67.3	30.9 / 32.7
Non-Hispanic Asian or Pacific Islander	67.5 / 65.2	32.5 / 34.8

Table 23. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Race, 2023

		SoonerCare		Non-SoonerCare	
		n	%	n	%
Non-Hispanic White	Vaginal	7,258	66.5	8,882	67.4
	Cesarean	3,650	33.5	4,219	32.2
	Uknown	-	-	10	0.1
Hispanic	Vaginal	4,528	69.0	1,307	67.3
	Cesarean	2,030	31.0	633	32.6
	Uknown	-	-	-	-
Non-Hispanic American Indian/AN	Vaginal	1,676	66.5	903	65.6
	Cesarean	843	33.5	474	34.4
	Uknown	0	0	0	0
Non-Hispanic Black or African American	Vaginal	1,668	63.9	581	58.8
	Cesarean	944	36.1	408	41.3
	Uknown	0	0	0	0
Non-Hispanic Two or More Races	Vaginal	1,654	68.2	984	64.7
	Cesarean	773	31.9	537	35.3
	Uknown	0	0	0	0
Non-Hispanic Other Race	Vaginal	85	69.1	35	67.3
	Cesarean	38	30.9	17	32.7
	Uknown	0	0	0	0
Non-Hispanic Asian or Pacific Islander	Vaginal	493	67.5	484	65.2
	Cesarean	237	32.5	258	34.8
	Uknown	0	0	0	0

Figure 14. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Age, 2022

■ SoonerCare ■ Non-SoonerCare

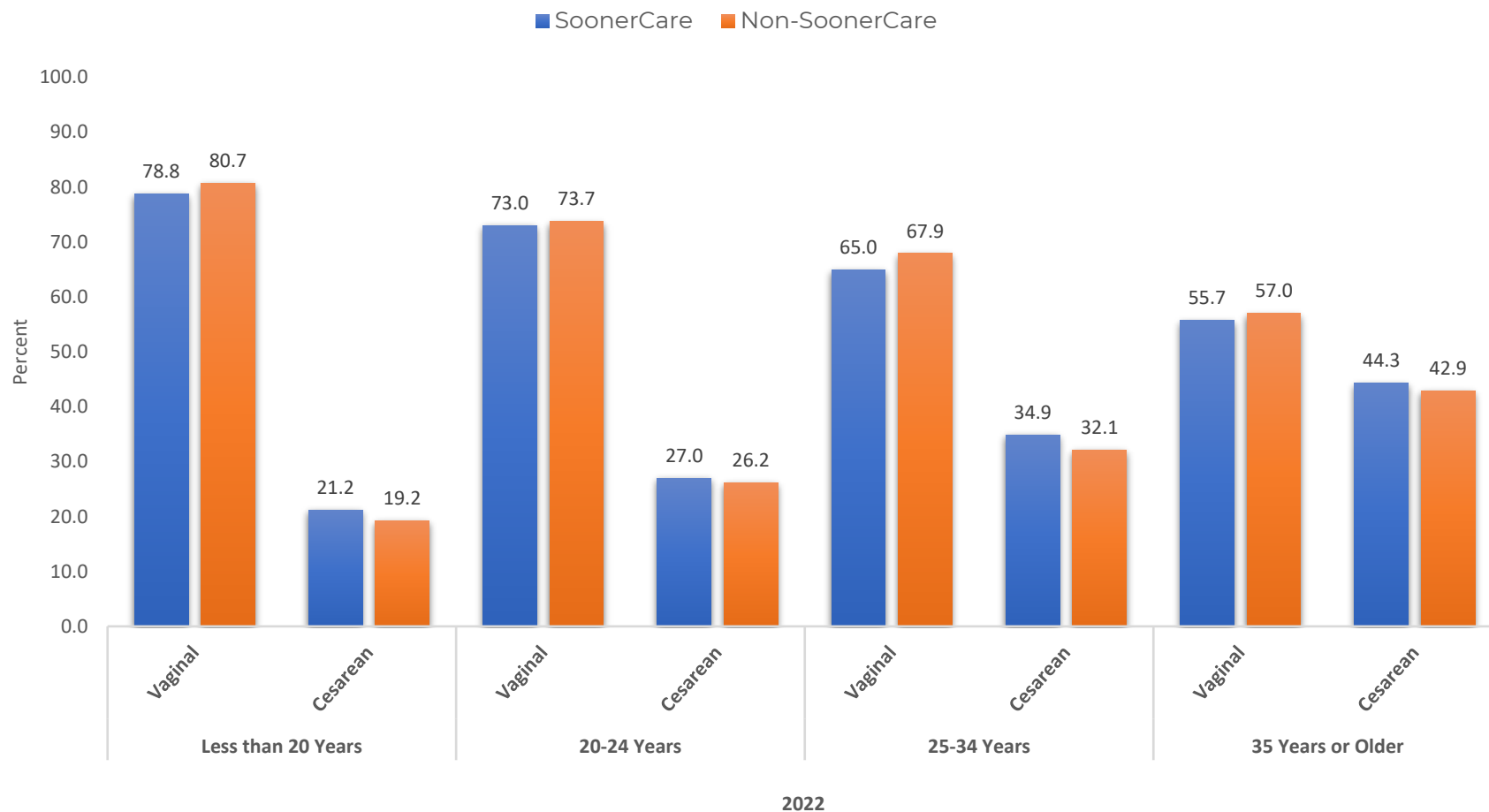|	Less than 20 Years		20-24 Years		25-34 Years		35 Years or Older	
	Vaginal	Cesarean	Vaginal	Cesarean	Vaginal	Cesarean	Vaginal	Cesarean
SoonerCare	78.8	21.2	73.0	27.0	65.0	34.9	55.7	44.3
Non-SoonerCare	80.7	19.2	73.7	26.2	67.9	32.1	57.0	42.9

2022

32

Table 24. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Age, 2022

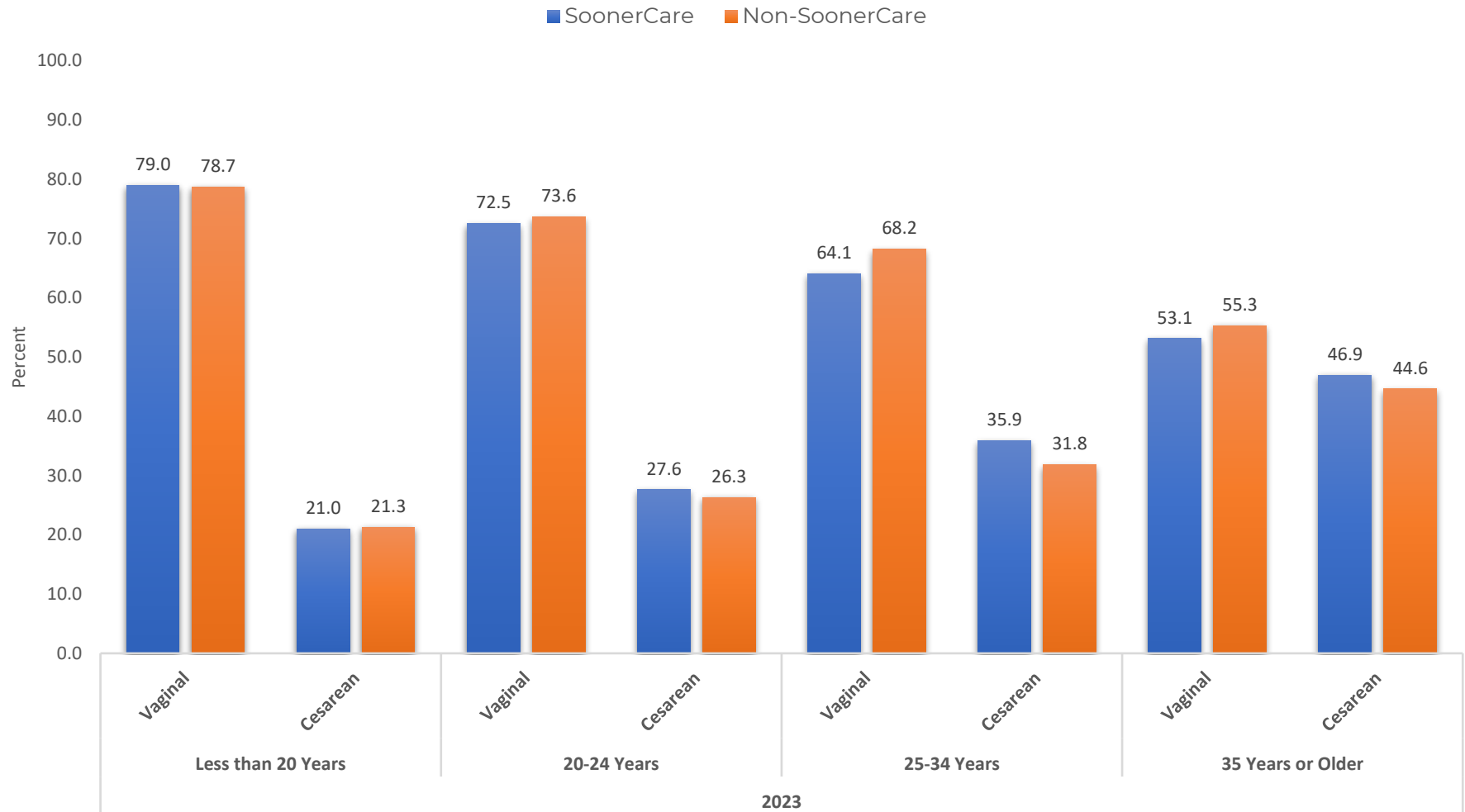|		SoonerCare		Non-SoonerCare	
		n	%	n	%
Less than 20	Vaginal	1,879	78.8	273	80.7
	Cesarean	506	21.2	65	19.2
20-24	Vaginal	6,132	73.0	2,295	73.7
	Cesarean	2,265	27.0	849	26.2
25-34	Vaginal	7,667	65.0	9,459	67.9
	Cesarean	4,117	34.9	4,467	32.1
35 or Older	Vaginal	1,386	55.7	2,095	57.0
	Cesarean	1,102	44.3	1,575	42.9

Figure 15. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Age, 2023

■ SoonerCare   ■ Non-SoonerCare

	Less than 20 Years		20-24 Years		25-34 Years		35 Years or Older	
	Vaginal	Cesarean	Vaginal	Cesarean	Vaginal	Cesarean	Vaginal	Cesarean
SoonerCare	79.0	21.0	72.5	27.6	64.1	35.9	53.1	46.9
Non-SoonerCare	78.7	21.3	73.6	26.3	68.2	31.8	55.3	44.6

2023

Table 25. Distribution of SoonerCare and Non-SoonerCare Births by Method of Delivery and Mother's Age, 2023

		SoonerCare		Non-SoonerCare	
		n	%	n	%
Less than 20	Vaginal	1,903	79.0	251	78.7
	Cesarean	507	21.0	68	21.3
20-24	Vaginal	6,156	72.5	2,010	73.6
	Cesarean	2,341	27.6	718	26.3
25-34	Vaginal	7,875	64.1	8,937	68.2
	Cesarean	4,404	35.9	4,165	31.8
35 or Older	Vaginal	1,428	53.1	1,978	55.3
	Cesarean	1,263	46.9	1,595	44.6

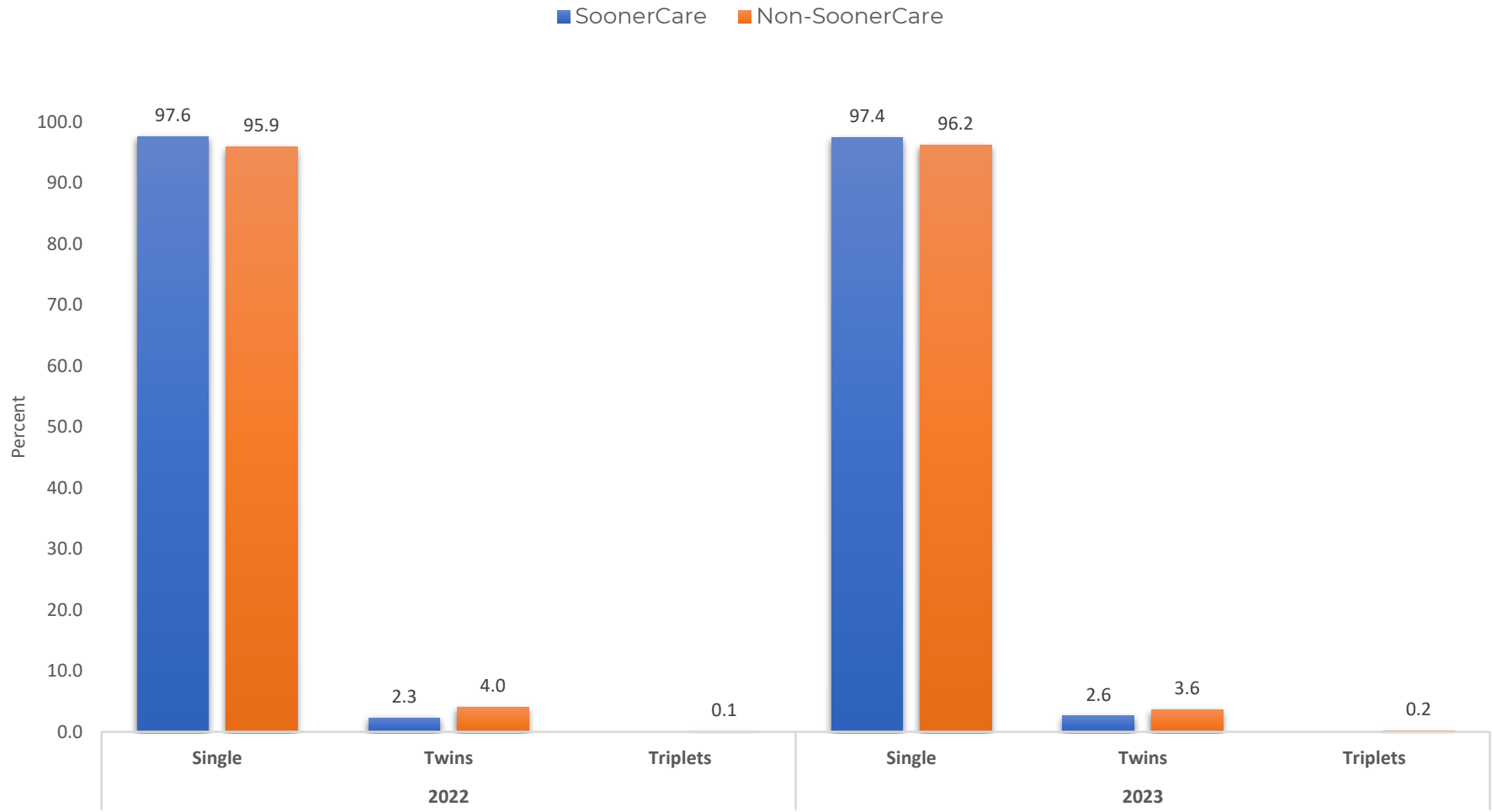Figure 16. Distribution of SoonerCare and Non-SoonerCare Births by Plurality, 2022-2023

Table 26. Distribution of SoonerCare and Non-SoonerCare Births by Plurality, 2022

	Single		Twins		Triplets		Unknown	
	n	%	n	%	n	%	n	%
SoonerCare	24,461	97.6	579	2.3	-	-	-	-
Non-SoonerCare	20,185	95.9	844	4.0	20	0.1	-	-

Table 27. Distribution of SoonerCare and Non-SoonerCare Births by Plurality, 2023

	Single		Twins		Triplets		Unknown	
	n	%	n	%	n	%	n	%
SoonerCare	25,193	97.4	664	2.6	-	-	-	-
Non-SoonerCare	18,976	96.2	707	3.6	12	0.2	-	-

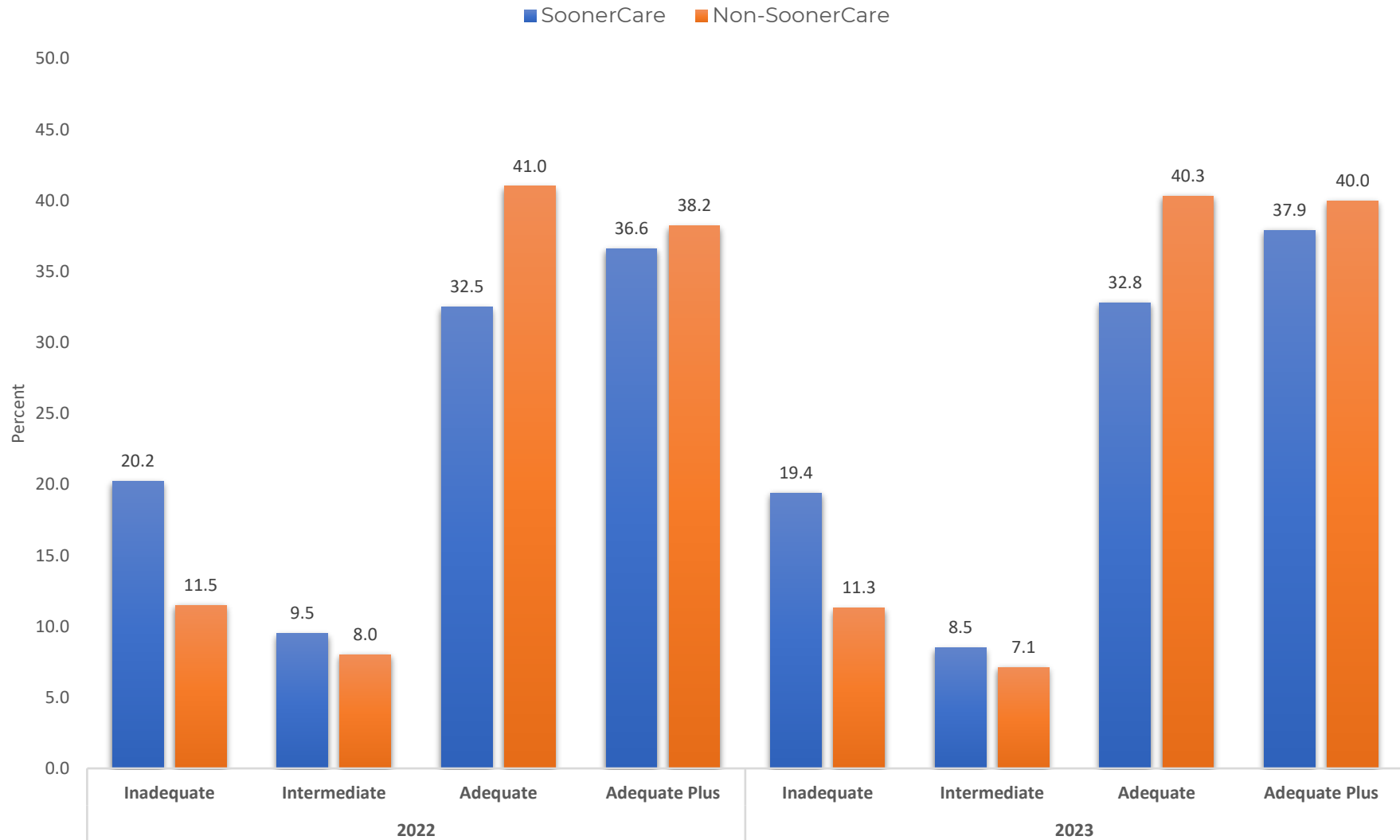Figure 17. Distribution of SoonerCare and Non-SoonerCare Births by Kotelchuck Index*, 2022-2023

Table 28. Distribution of SoonerCare and Non-SoonerCare Births by Kotelchuck Index*, 2022

	Inadequate		Intermediate		Adequate		Adequate Plus		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	5,063	20.2	2,371	9.5	8,146	32.5	9,162	36.6	323	1.3
Non-SoonerCare	2,433	11.5	1,695	8.0	8,630	41.0	8,041	38.2	277	1.3

Table 29. Distribution of SoonerCare and Non-SoonerCare Births by Kotelchuck Index*, 2023

	Inadequate		Intermediate		Adequate		Adequate Plus		Unknown	
	n	%	n	%	n	%	n	%	n	%
SoonerCare	5,007	19.4	2,205	8.5	8,485	32.8	9,814	37.9	369	1.4
Non-SoonerCare	2,233	11.3	1,405	7.1	7,958	40.3	7,891	40.0	247	1.3

Figure 18. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Diabetes, 2022-2023
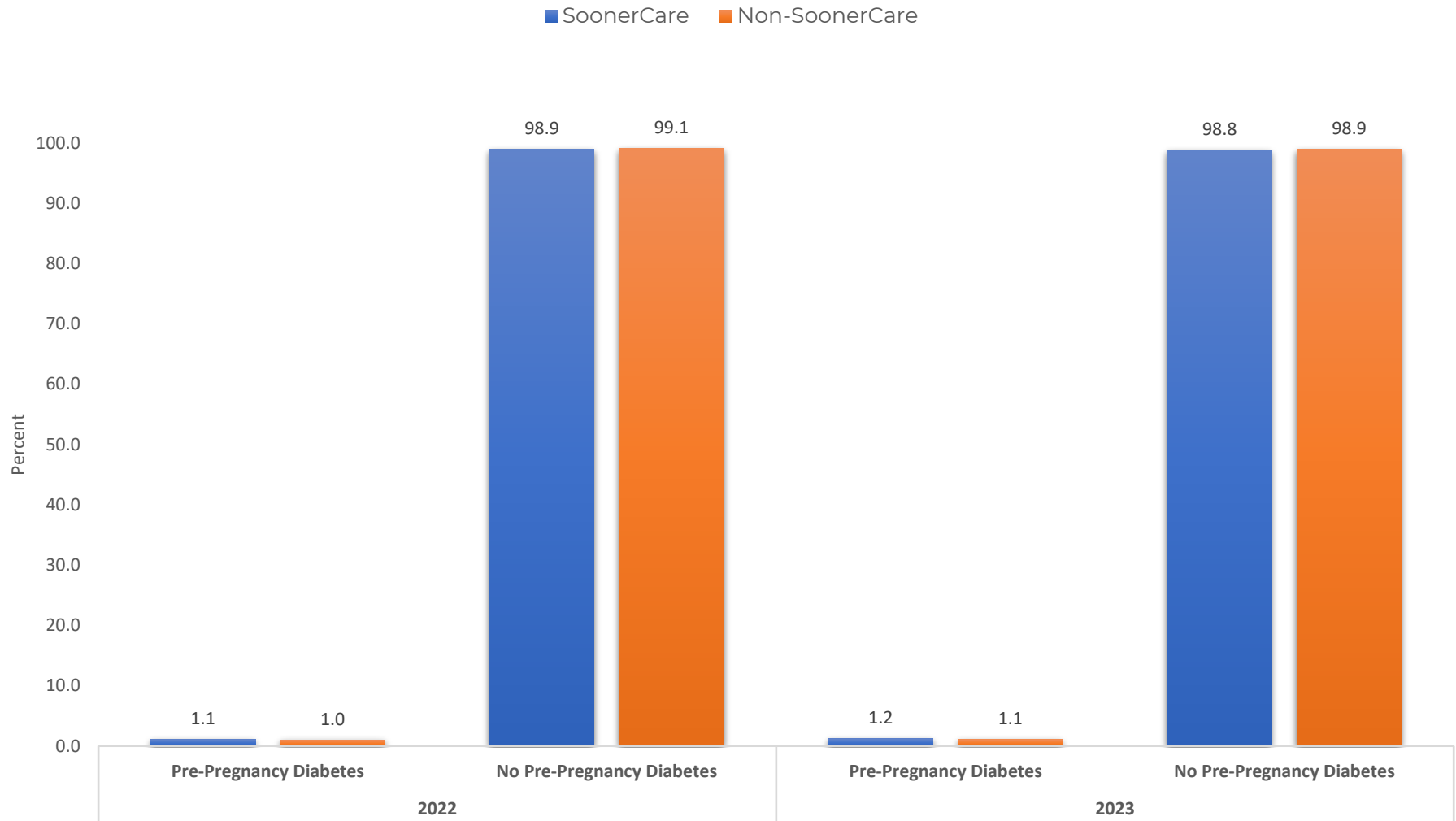
■ SoonerCare ■ Non-SoonerCare

Table 30. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Diabetes, 2022

	Pre-Pregnancy Diabetes		No Pre-Pregnancy Diabetes	
	n	%	n	%
SoonerCare	274	1.1	24,791	98.9
Non-SoonerCare	201	1.0	20,875	99.1

Table 31. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Diabetes, 2023

	Pre-Pregnancy Diabetes		No Pre-Pregnancy Diabetes	
	n	%	n	%
SoonerCare	300	1.2	25,580	98.8
Non-SoonerCare	224	1.1	19,510	98.9

Figure 19. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Diabetes, 2022-2023
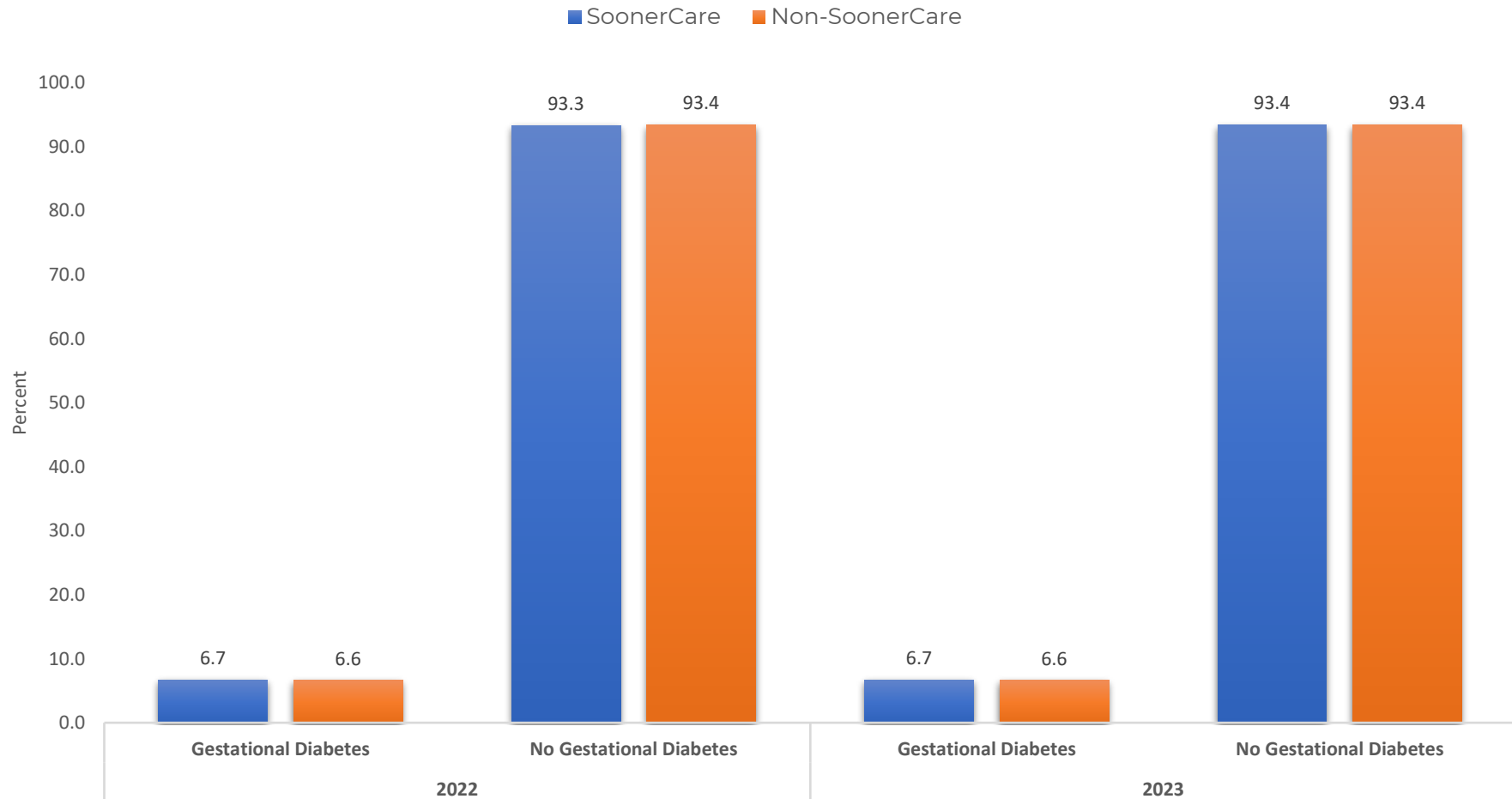
Table 32. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Diabetes, 2022

	Gestational Diabetes		No Gestational Diabetes	
	n	%	n	%
SoonerCare	1,682	6.7	23,383	93.3
Non-SoonerCare	1,396	6.6	19,680	93.4

Table 33. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Diabetes, 2023

	Gestational Diabetes		No Gestational Diabetes	
	n	%	n	%
SoonerCare	1,720	6.7	24,160	93.4
Non-SoonerCare	1,302	6.6	18,432	93.4

Figure 20. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Hypertension, 2022-2023

Table 34. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Hypertension, 2022

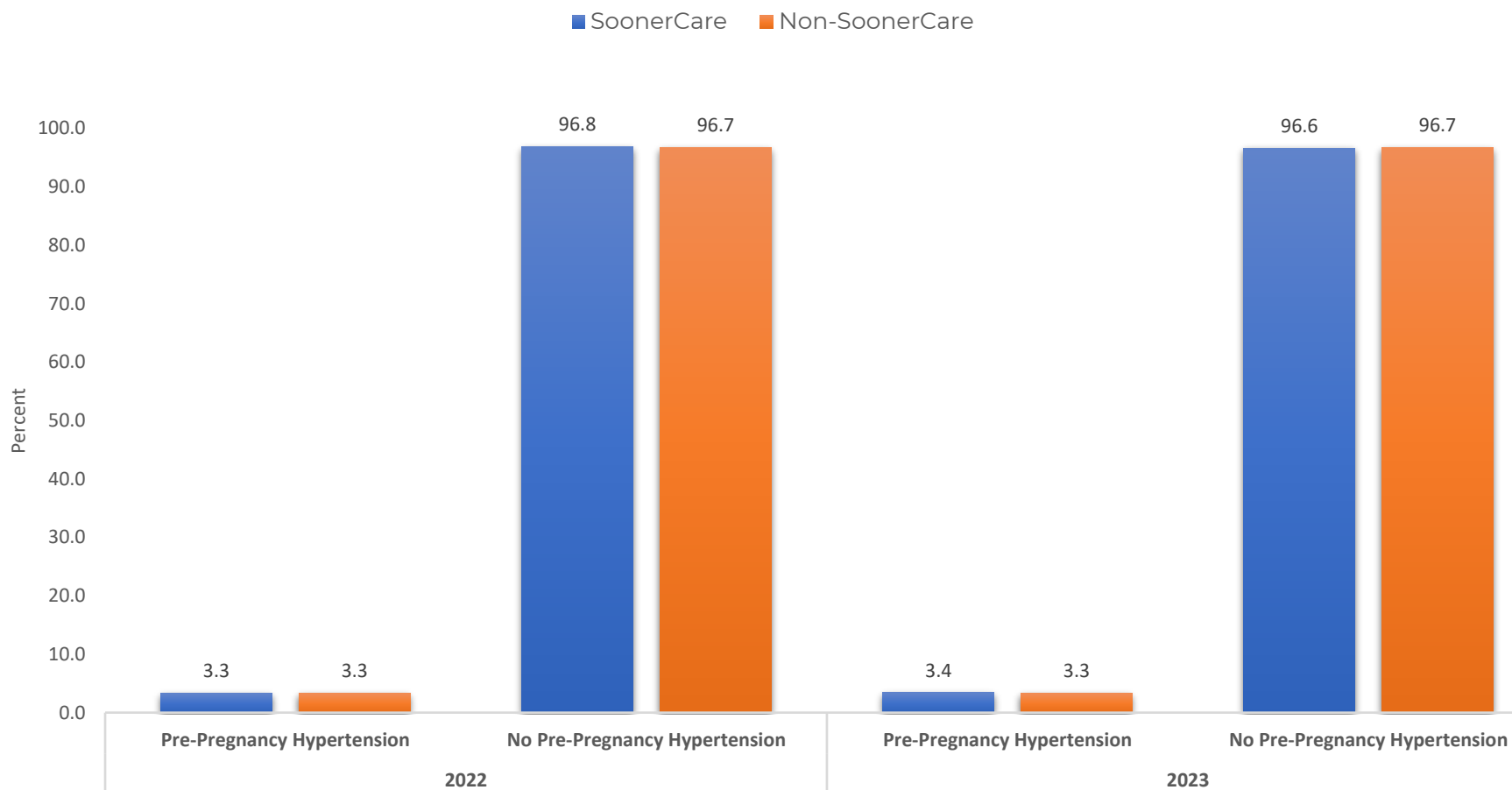|	Pre-Pregnancy Hypertension		No Pre-Pregnancy Hypertension	
	n	%	n	%
SoonerCare	814	3.3	24,251	96.8
Non-SoonerCare	688	3.3	20,388	96.7

Table 35. Distribution of SoonerCare and Non-SoonerCare Births by Pre-Pregnancy Hypertension, 2023

	Pre-Pregnancy Hypertension		No Pre-Pregnancy Hypertension	
	n	%	n	%
SoonerCare	880	3.4	25,000	96.6
Non-SoonerCare	655	3.3	19,079	96.7

Figure 21. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Hypertension, 2022-2023

Table 36. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Hypertension, 2022

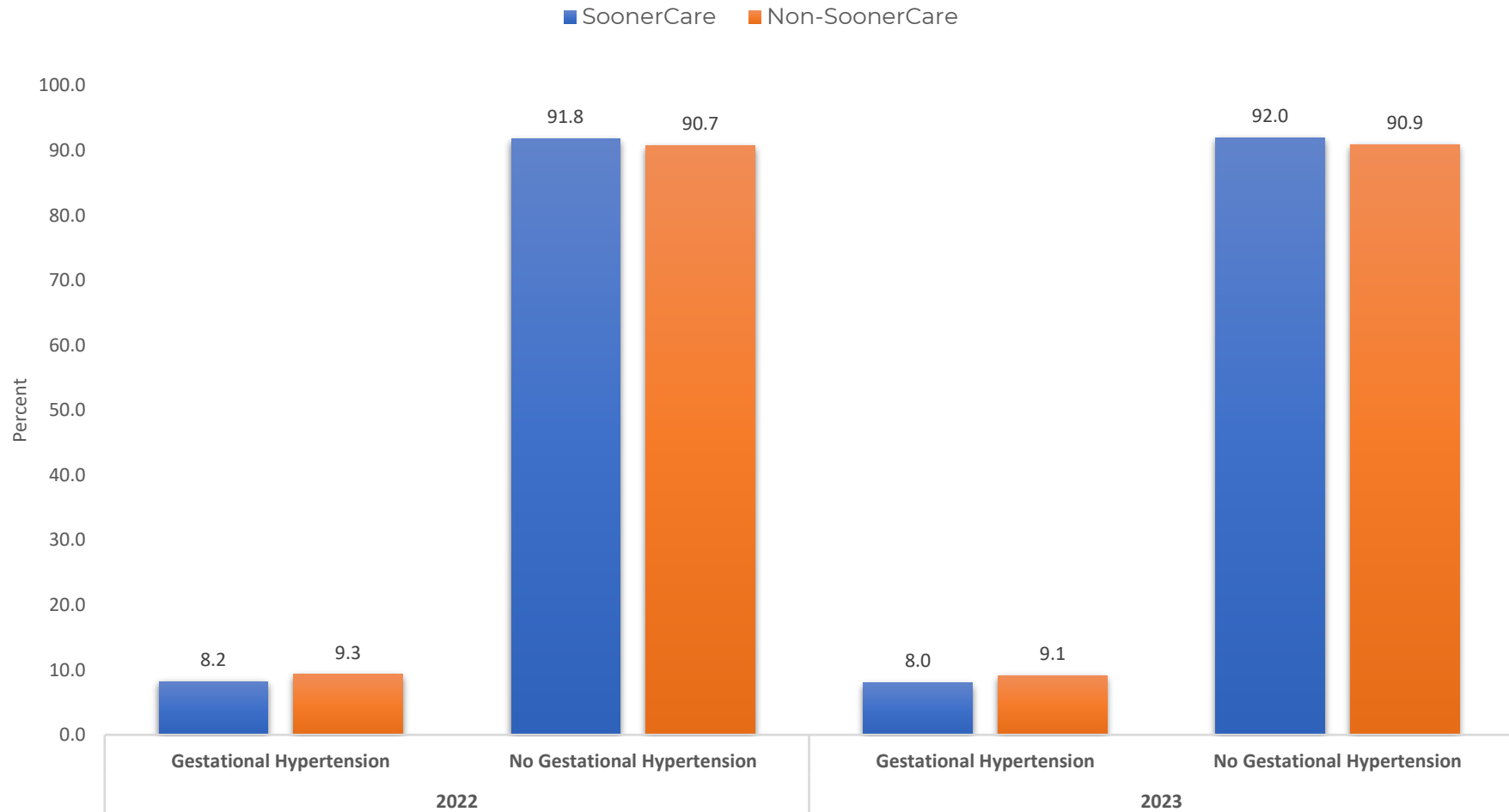|	Gestational Hypertension		No Gestational Hypertension	
	n	%	n	%
SoonerCare	2,050	8.2	23,015	91.8
Non-SoonerCare	1,965	9.3	19,111	90.7

Table 37. Distribution of SoonerCare and Non-SoonerCare Births by Gestational Hypertension, 2023

	Gestational Hypertension		No Gestational Hypertension	
	n	%	n	%
SoonerCare	2,076	8.0	23,804	92.0
Non-SoonerCare	1,799	9.1	17,935	90.1

Figure 22. Percent of SoonerCare Births by Mother's County of Residence, 2022

Percent of SoonerCare Births County

- Suppressed (<5)
- 0 to 49.9%
- 50 to 59.9%
- 60 to 69.9%
- 70% and greater
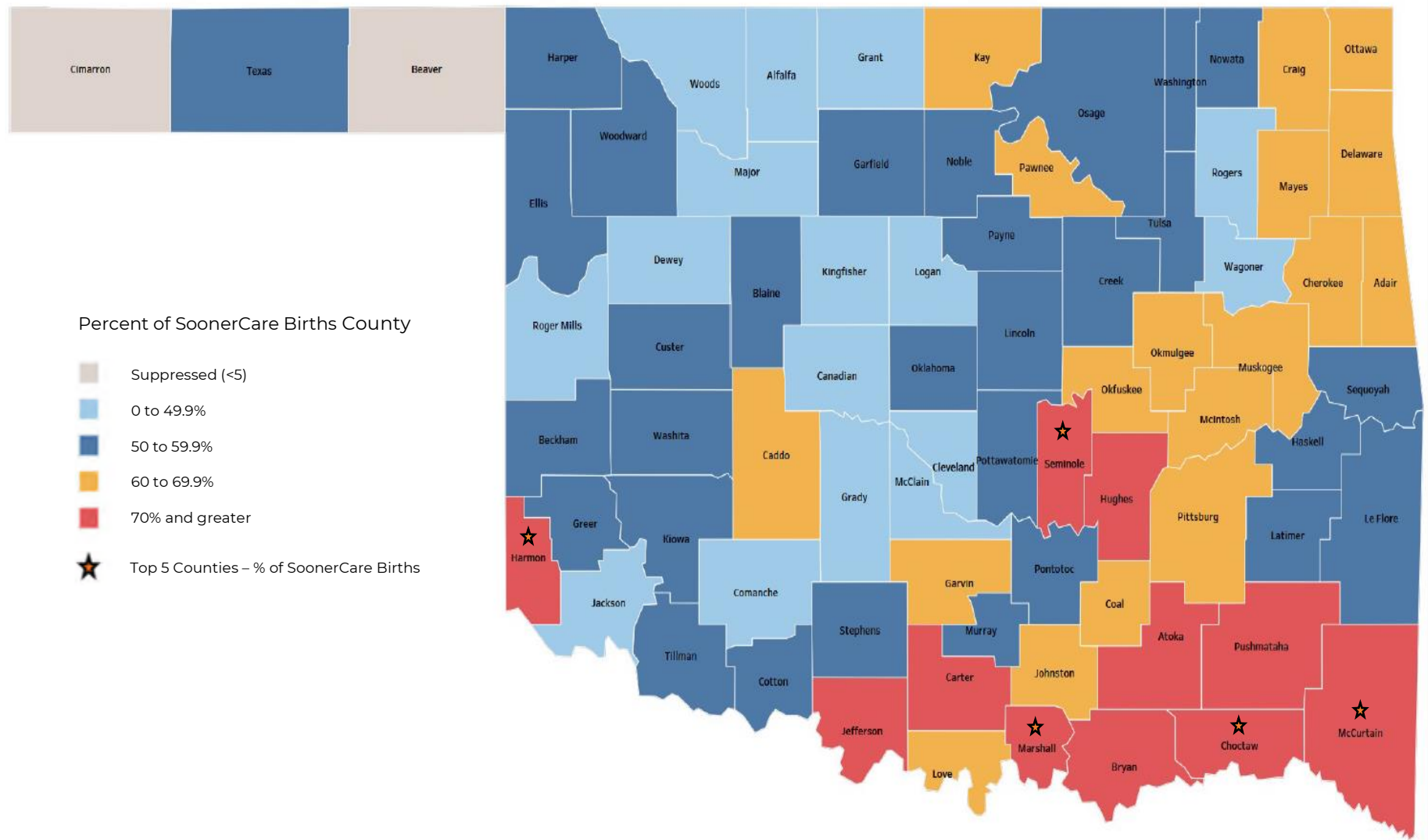- ★ Top 5 Counties – % of SoonerCare Births

Table 38. SoonerCare Births by Mother's County of Residence, 2022

County	Medicaid Births	Total Births	Percent	County	Medicaid Births	Total Births	Percent	County	Medicaid Births	Total Births	Percent
Adair	128	185	69.2	Grant	15	42	35.7	Nowata	54	103	52.4
Alfalfa	20	47	43.0	Greer	38	64	59.4	Okfuskee	92	138	66.7
Atoka	97	138	70.3	Harmon	20	26	76.9	Oklahoma	6,003	10,863	55.3
Beaver	-	-	-	Harper	14	28	50.0	Okmulgee	276	423	65.3
Beckham	158	269	58.7	Haskell	57	99	57.6	Osage	198	349	56.7
Blaine	57	104	54.8	Hughes	94	132	71.2	Ottawa	201	312	64.4
Bryan	381	539	70.7	Jackson	137	134	43.6	Pawnee	99	165	60.0
Caddo	192	300	64.0	Jefferson	42	60	70.0	Payne	382	746	51.2
Canadian	704	2,069	34.0	Johnston	67	97	69.1	Pittsburg	268	420	63.8
Carter	452	612	73.9	Kay	364	525	69.3	Pontotoc	257	462	55.6
Cherokee	311	507	61.3	Kingfisher	77	171	45.0	Pottowatomie	484	809	59.8
Choctaw	96	121	79.3	Kiowa	49	83	59.0	Pushmataha	66	93	71.0
Cimarron	-	-	-	Latimer	53	89	59.6	Roger Mills	17	37	46.0
Cleveland	1,206	2,741	44.0	Le Flore	109	184	59.2	Rogers	471	1,085	43.4
Coal	47	74	63.5	Lincoln	188	367	51.2	Seminole	221	289	76.5
Comanche	702	1,554	45.2	Logan	190	525	36.2	Sequoyah	75	140	53.6
Cotton	29	53	54.7	Love	75	113	66.4	Stephens	276	461	59.9
Craig	96	157	61.2	Major	192	485	39.6	Texas	10	18	55.6
Creek	459	839	54.7	Marshall	252	320	78.8	Tillman	31	53	58.5
Custer	199	349	57.0	Mayes	139	201	69.2	Tulsa	4,809	8,663	55.5
Delaware	202	311	65.0	McClain	39	82	47.6	Wagoner	377	934	40.4
Dewey	15	44	34.1	McCurtain	124	173	71.7	Washington	297	587	50.6
Ellis	15	30	50.0	McIntosh	295	460	64.1	Washita	73	123	59.4
Garfield	460	825	55.8	Murray	83	146	56.9	Woods	32	85	37.7
Garvin	199	323	61.6	Muskogee	552	817	67.6	Woodward	138	252	54.8
Grady	288	593	48.6	Noble	56	100	56.0	Unknown	20	34	58.8

Figure 23. Percent of SoonerCare Births by Mother's County of Residence, 2023

Percent SoonerCare Births

- Suppressed (<5)
- 0 to 49.9%
- 50 to 59.9%
- 60 to 69.9%
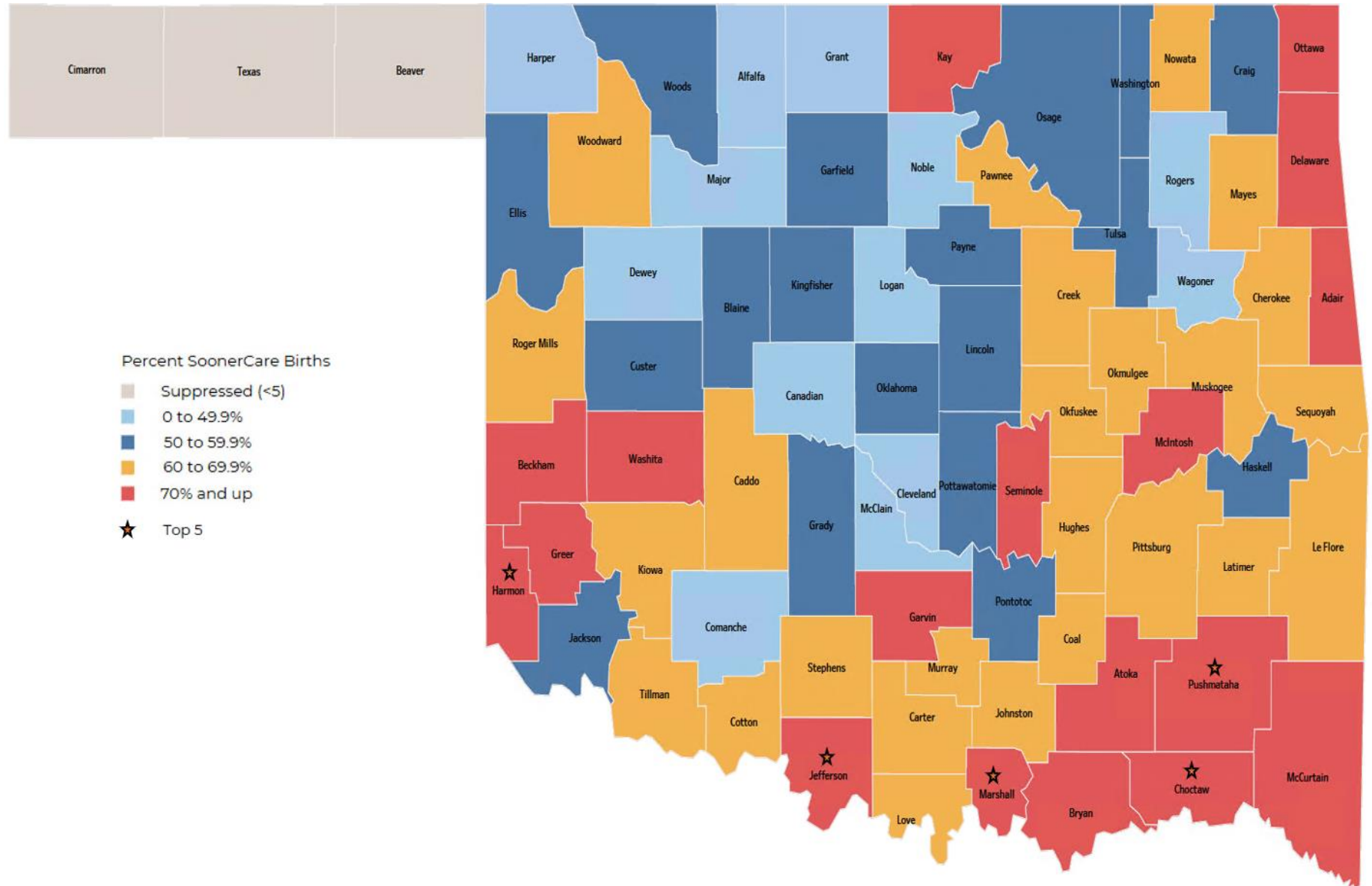- 70% and up
- ★ Top 5

Table 39. SoonerCare Births by Mother's County of Residence, 2023

County	Medicaid Births	Total Births	Percent	County	Medicaid Births	Total Births	Percent	County	Medicaid Births	Total Births	Percent
Adair	109	154	70.8	Grant	11	30	36.7	Nowata	60	97	61.9
Alfalfa	19	44	43.2	Greer	38	52	73.1	Okfuskee	87	136	64.0
Atoka	105	145	72.4	Harmon	22	25	88.0	Oklahoma	6,302	10,876	57.9
Beaver	-	-	-	Harper	15	33	45.5	Okmulgee	269	423	63.6
Beckham	165	231	71.4	Haskell	46	82	56.1	Osage	215	407	52.8
Blaine	53	93	57.0	Hughes	107	153	69.9	Ottawa	189	269	70.3
Bryan	360	509	70.7	Jackson	195	357	54.6	Pawnee	97	150	64.7
Caddo	181	277	65.3	Jefferson	52	71	73.2	Payne	367	730	50.3
Canadian	769	2,072	37.1	Johnston	63	100	63.0	Pittsburg	280	409	68.5
Carter	427	638	66.9	Kay	363	508	71.5	Pontotoc	275	466	59.0
Cherokee	315	522	60.3	Kingfisher	85	155	54.8	Pottowatomie	492	823	59.8
Choctaw	90	115	78.3	Kiowa	53	83	63.9	Pushmataha	69	93	74.2
Cimarron	-	-	-	Latimer	70	104	67.3	Roger Mills	22	35	62.9
Cleveland	1,290	2,731	47.2	Le Flore	112	184	60.9	Rogers	520	1,055	49.3
Coal	52	78	66.7	Lincoln	200	351	57	Seminole	221	302	73.2
Comanche	755	1,510	50.0	Logan	238	576	41.3	Sequoyah	96	159	60.4
Cotton	35	54	64.8	Love	74	113	65.5	Stephens	310	502	61.8
Craig	83	139	59.7	Major	43	90	47.8	Texas	-	-	-
Creek	476	789	60.3	Marshall	135	173	78.0	Tillman	47	73	64.4
Custer	203	349	58.2	Mayes	287	446	64.3	Tulsa	4,885	8,567	57.0
Delaware	221	304	72.7	McClain	208	521	39.9	Wagoner	388	925	41.9
Dewey	16	40	40.0	McCurtain	139	193	72.0	Washington	344	580	59.3
Ellis	19	43	44.2	McIntosh	140	195	71.8	Washita	59	84	70.2
Garfield	401	747	53.7	Murray	104	153	68.0	Woods	47	85	55.3
Garvin	239	331	72.2	Muskogee	561	808	69.4	Woodward	135	224	60.3
Grady	293	538	54.5	Noble	44	90	48.9	Unknown	17	31	54.8

Technical Notes

1. Data is suppressed to protect confidentiality where there is not sufficient data to obtain reliable results (less than 10 births), and percentages may not add up to 100 due to rounding. **(Figures and Tables 1-39)**

2. Distribution of SoonerCare and non-SoonerCare births. (Figures 1-39)

$$\text{SoonerCare} = \frac{\text{SoonerCare Births of the Category}}{\text{Total SoonerCare Births}} \times 100 \qquad \text{Non-SoonerCare} = \frac{\text{SoonerCare Births of the Category}}{\text{Total SoonerCare Births}} \times 100$$

3. Percent of SoonerCare births by mother's county of residence. **(Figure 22-23)** $= \frac{\text{Number of SoonCare-Births in Each County}}{\text{Total Number of Births in Each County}} \times 100$

4. Sample: (n) represents the total number of maternal characteristic or birth outcome records for a designated health indicator. (Tables 1-37)

5. Body Mass Index (BMI) - weight (kg) / [height (m)]2
   o Underweight: <18.5
   o Normal: 18.5 – 24.9
   o Overweight: 25.0 – 29.9
   o Obese: >29.9

6. Trimester of Prenatal Care (PNC)
   o First trimester: 1-3 months
   o Second trimester: 4-6 months
   o Third trimester: 7-9 months

7. Gestational Age – Obstetric estimate of gestational age
   o Preterm: 20-36 weeks
   o Early term: 37-38 weeks
   o Term: 39-41 weeks
   o Post-term: 42 or more weeks

8. **Birth Weight**
o Very low birth weight: <1500 grams
o Low birth weight: 1500-2,499 grams
o Normal birth weight: 2,500-3,999 grams
o High birth weight: >3,900 grams

9. **The Kotelchuck Index** is a measure of the number of prenatal visits compared to the expected number of visits depending on when prenatal care was initiated.
o Inadequate: <50%
o Intermediate: 50-79%
o Adequate: 80-109%
o Adequate plus: >109%