

Achievement 2016

Regional Collaborative Database

Southern New Jersey Perinatal Cooperative

The licensed Maternal and Child Health Consortium
serving the seven counties of South Jersey





2016 ACHIEVEMENT

Report of the Regional Collaborative Database

Since its inception in 1981, SNJPC has recorded and documented trends in birth weight, mortality and transport in southern New Jersey and presented these findings in the Regional Collaborative Database. Members of the Cooperative have, as part of the agency's core mission, directed their efforts toward developing and maintaining a regional perinatal system that ensures that high-risk mothers and infants receive optimal care. The effectiveness of these efforts is documented in the Regional Collaborative Database. This Database also follows ongoing concerns and identifies emerging problems.

The regionalization of perinatal services includes these core objectives:

- Accessible quality care for pregnant women and newborns
- Appropriate use of perinatal personnel and facilities
- Assurance of reasonable cost effectiveness

Thank You

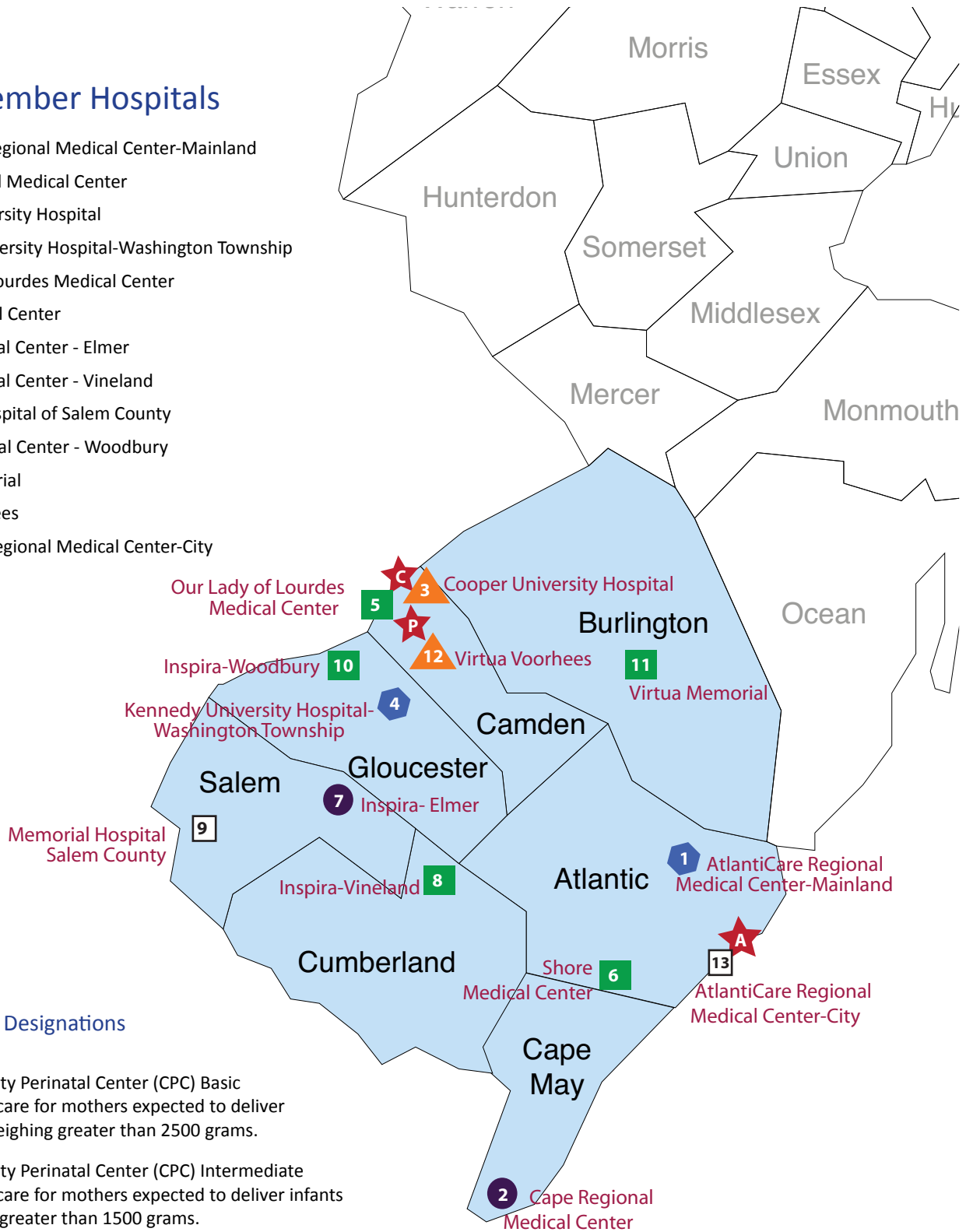
Production of the Regional Collaborative Database report is possible only through the support and assistance of the obstetrical and nursery staffs of our member hospitals. Their contributions are invaluable. We extend our gratitude to these individuals whose consistently high level of professionalism is the basis of the information in this report.

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SNJPC Member Hospitals

- 1 AtlantiCare Regional Medical Center-Mainland
- 2 Cape Regional Medical Center
- 3 Cooper University Hospital
- 4 Kennedy University Hospital-Washington Township
- 5 Our Lady of Lourdes Medical Center
- 6 Shore Medical Center
- 7 Inspira Medical Center - Elmer
- 8 Inspira Medical Center - Vineland
- 9 Memorial Hospital of Salem County
- 10 Inspira Medical Center - Woodbury
- 11 Virtua Memorial
- 12 Virtua Voorhees
- 13 AtlantiCare Regional Medical Center-City



Hospital Designations

-  Community Perinatal Center (CPC) Basic provides care for mothers expected to deliver infants weighing greater than 2500 grams.
-  Community Perinatal Center (CPC) Intermediate provides care for mothers expected to deliver infants weighing greater than 1500 grams.
-  Community Perinatal Center (CPC) Intensive provides care for mothers expected to deliver infants weighing greater than 1000 grams.
-  Regional Perinatal Center (RPC) provides full range of services for high-risk mothers and newborns.

Cooperative Offices

SNJPC maintains offices in Atlantic City, Camden City and Pennsauken.

REGIONAL HOSPITAL SUMMARY

	BASIC		INTERMEDIATE		INTENSIVE		RPC		REGION	
	ACTUAL	RATE %	ACTUAL	RATE %	ACTUAL	RATE %	ACTUAL	RATE %	ACTUAL	RATE %
TOTAL HOSPITAL BIRTHS	700		5235		4865		7728		18528	
LIVE BIRTHS IN HOSPITAL	698		5194		4830		7656		18378	
NEONATAL MORTALITY	0	0.000	15	2.888	12	2.484	48	6.270	75	4.081
LBW - LIVE BIRTHS < 2501 GM	17	2.44	387	7.45	424	8.780	747	9.760	1575	8.570
LBW - NEONATAL MORTALITY	0	0.000	15	38.760	12	28.302	44	58.902	71	45.079
VLBW - LIVE BIRTHS < 1501 GM	1	0.14	47	0.90	78	1.61	202	2.64	328	1.78
VLBW - NEONATAL MORTALITY	0	0.000	15	319.149	12	153.846	42	207.921	69	210.366
ELBW - LIVE BIRTHS < 1001GM	0	0.000	18	0.35	31	0.64	108	1.41	157	0.85
ELBW - NEONATAL MORTALITY	0	0.000	13	722.222	12	387.097	35	324.074	60	382.166
ELBW2 - LIVE BIRTH (500-1000)	0	0.000	9	0.17	22	0.46	84	1.10	115	0.63
ELBW2 - NEONATAL MORTALITY	0	0.000	4	444.444	3	136.364	13	154.762	20	173.913
ELBW3 - LIVE BIRTH (751-1000)	0	0.000	4	0.08	8	0.17	43	0.56	55	0.30
ELBW3 - NEONATAL MORTALITY	0	0.000	0	0.000	1	125.000	1	23.256	2	36.364
FETAL MORTALITY > 499 GM	2	2.857	29	5.562	22	4.543	35	4.565	88	4.776
FETAL MORTALITY > 2500 GM	1	1.466	10	2.076	5	1.134	12	1.734	28	1.664
MATERNAL TRANSPORTS (% of total births + trans)	35	4.76	110	2.06	51	1.04	2	0.03	198	1.06
NEONATAL TRANSPORTS (% of live births)	15	2.15	92	1.77	62	1.28	75	0.98	244	1.33
NEONATAL MORTALITY AFTER TRANSPORTS (% of live births)	0	0.000	3	0.06	0	0.000	3	0.04	6	0.03
LIVE BIRTHS OUTSIDE HOSPITAL	2	0.29	22	0.42	31	0.64	29	0.38	84	0.45



Vital Information Platform

The New Jersey Vital Information Platform (VIP) system is one of the most comprehensive perinatal data systems in the country. It contains birth record information and perinatal data for each birth that occurs in the birthing facilities in New Jersey.

Adopted by all NJ birthing hospitals in 2015, the VIP replaced the DOS-based Electronic Birth Certificate (EBC) which was the source for this report since 1993. VIP was the first major update to the birth data set since its implementation in 1992. Implementation support by SNJPC, FHI and the Department of Health continues to date with regular meetings to discuss issues with use, definitions and data quality. VIP's new web-based interface has enabled NJ to comply with federal standards and has reduced technological burdens on hospital IT.

SNJPC staff support quality improvement and provide technical assistance to regional hospitals in the use of VIP. As anticipated, the implementation of VIP has had an impact on the data used for this report. As hospitals work to implement the new system, data completeness, accuracy and reliability has been affected. Additionally, the data points collected in VIP have changed. Wherever possible VIP data points have been used to generate the tables familiar to our audience, and we look forward to adding new analyses based on the new data set in future years.

Live Birth Analysis

As you review the data in this document you will see that the denominator used for factors has some variation. In order to present data in the most useful format, SNJPC uses two different live birth denominators. When presenting hospital-based data (including the official Live Births number, Neonatal Mortality Rate, Fetal Mortality Rate and birth weight trends), we use Live Births in Hospitals. This number excludes outside births and was 18,378 for 2016. For population and patient behavior based data (birth and pregnancy characteristics, delivery and feeding method), SNJPC uses Total Live Births.

This number includes outside births and was 18,528 for 2016.

Disclaimer

The VIP data in the following charts represents births that occurred in Cooperative member facilities.

Information is limited to those who delivered at or were transferred to a regional facility. This is hospital reported information and is not to be considered official or population-based. These data are preliminary and are not considered official by the New Jersey Department of Health and may not be represented as such.

The accuracy of the data contained in this report is dependent upon the completeness and reliability of the information recorded by each VIP birth facility

Distribution of Births

The live births birthrate for South Jersey is depicted in Figure 1. The annual number of births peaked in 1990.

Consistent with statewide and national trends, births in southern New Jersey have continued to decline over the past few years with 18,378 births in 2016.

Although the number of births in the region fluctuated very little over the past 12 years, demographic shifts have precipitated changes in the perinatal healthcare delivery system. The regional consortia system supports the stakeholders in the hospitals and community to examine these changes and use data to support systemic changes and enhancements that reflect the needs of the community.

Live Births 1984 - 2016

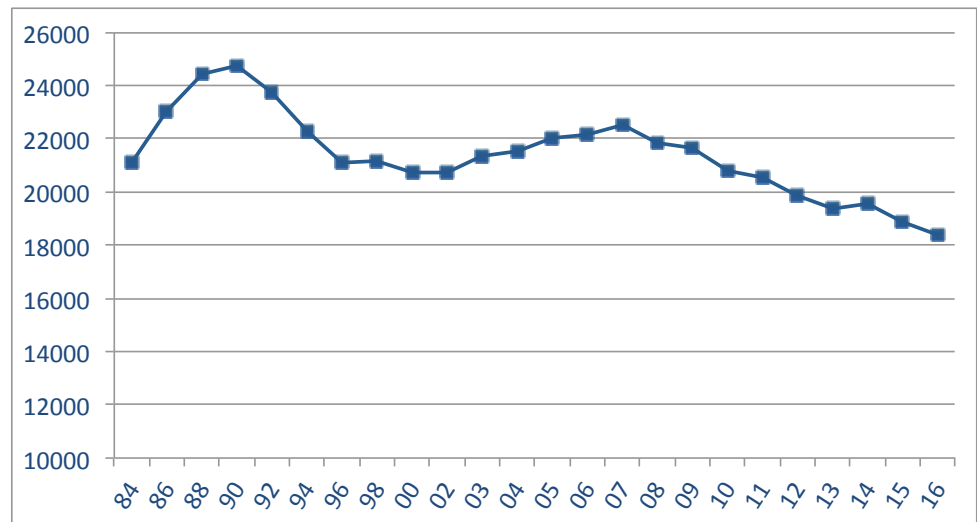


Figure 1

Characteristics of Births

Of the 18,994 births that occurred to residents of the Southern Region in 2016, two-thirds (65.5%) were to residents of the region's northern counties (Burlington, Camden and Gloucester) (Figure 2). Nonresidents accounted for 2.5% (n=457) of births in South Jersey.

Table I depicts the number of births that occurred in each county, comparing the two time periods of 2007 to 2011 and 2012 to 2016. The decline in live births on average was 10% but the distributions of these changes were quite varied. While the numbers of births decreased in all counties, the largest decrease occurred in Salem County.

2016 Births by County of Residence

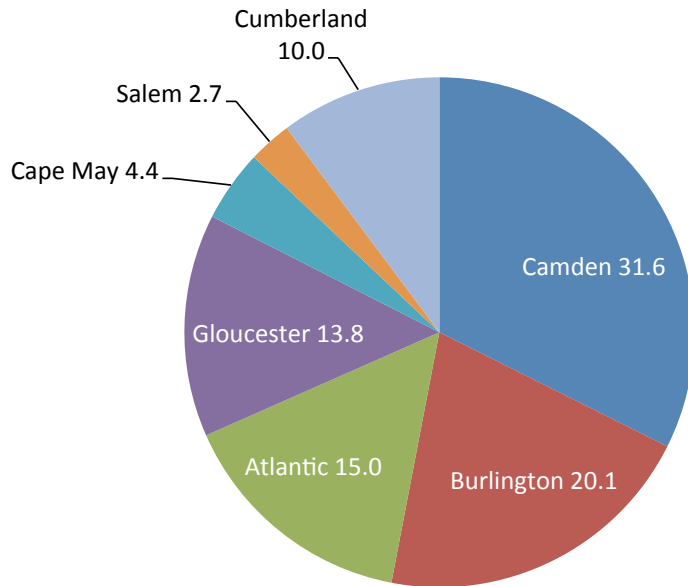


Figure 2

County Birth Totals Five-Year Averages 2007 - 2016

Hospital Births by County	2007-2011	2012-2016	%Change
Atlantic	3750	3309	-11.76%
Burlington	2962	2373	-19.88%
Camden	8996	8836	-1.78%
Cape May	543	452	-16.82%
Cumberland	2179	1966	-9.77%
Gloucester	2434	1909	-21.57%
Salem	601	408	-32.13%
REGION	21465	19253	-10.31%

Table I

Maternal Age

In 2016, the highest percentage of births in the region occurred to mothers aged 30-34 years (32.6%), followed by 25-29 years (27.22%), 20-24 years (16.99%), 35-39 years (16.54%), under 20 years (3.17%), 40-44 years (3.40%) and 45 years and older (0.22%)(Figure 3).

Shifts in the distribution of birth by maternal age have been dramatic since 2010. Teen births, discussed at length in the next section, decreased from 8.56% to 3.17%, a 63% decrease. In the same time period births to mothers 30-34 increased from 26.13% to 32.46%, a 19.5% increase.

Variation in the distribution of births by age group can be seen at the county level in Figure 4. Burlington County had the highest percentage of mothers 35 and over (20.16%) while Cumberland had the highest percentage of mothers under 20 (5.87%). Camden County had the most births in these two categories with 1,185 births to mothers over 35 and 201 births to mothers under 20.

2016 Births by Maternal Age

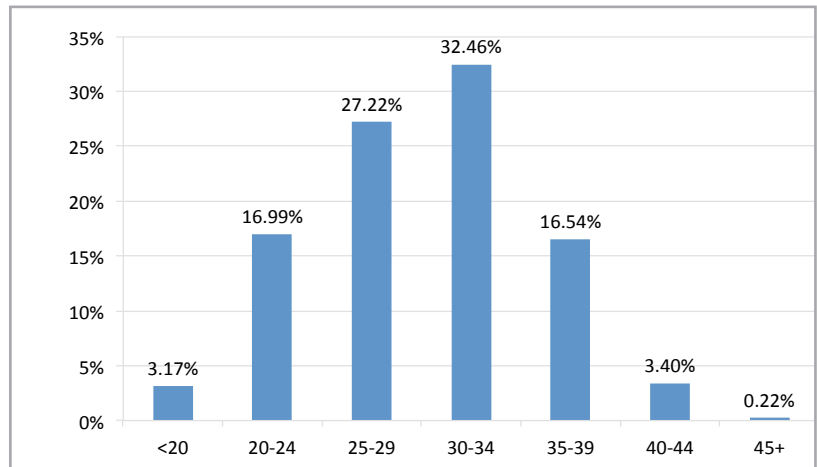


Figure 3

2016 Births by Maternal Age

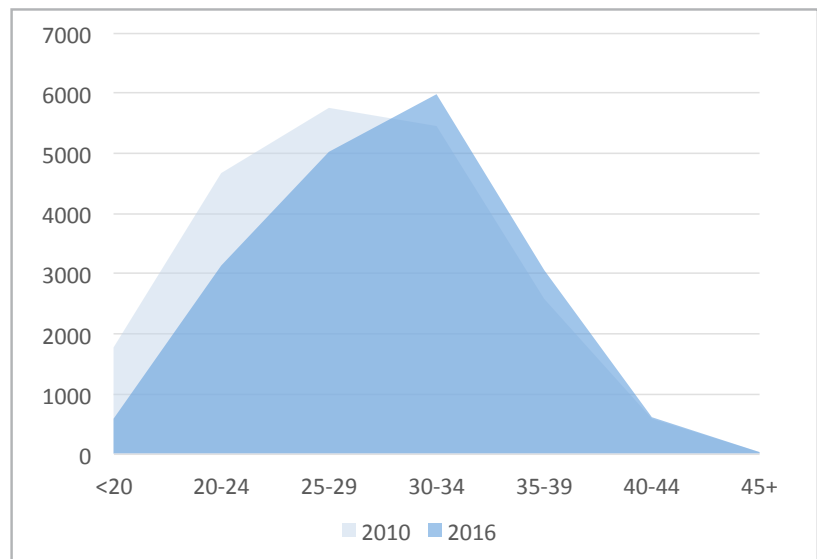


Figure 4

2016 County Births by Maternal Age

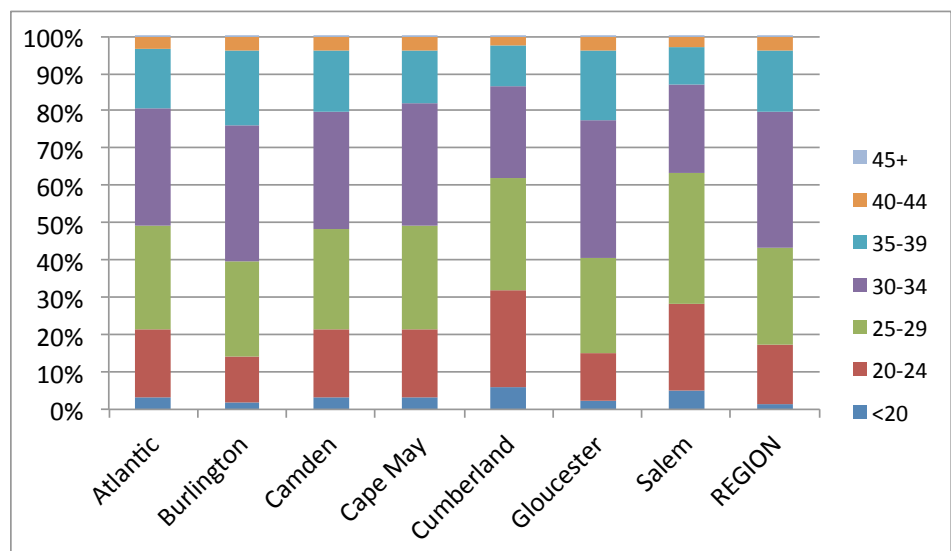


Figure 5

Births to Teens

The percentage of births to teens (under age 18) in the Southern Region has been on the decline in the past 10 years, decreasing 79% from 3.76% in 2001 to .80% in 2016 (Figure 6).

The majority (75.09%) of teens giving birth were 18 and 19 years of age compared with 22.53% to 16 and 17 year-olds, and 2.39% to teens less than 16 years of age (Figure 7).

Nationally there has been a decrease in teen births which is reflected in the data for southern New Jersey.

Cumberland (54/1000) and Salem (34/1000) counties have the highest rates of births to young mothers in New Jersey.

In partnership with regional, state and federal initiatives the number and capacity of programs for young mothers and teen pregnancy prevention activities are increasing in these areas.

In 2016, a primary focus was given to addressing risky behaviors often linked with teen pregnancy including substance abuse, intimate partner violence and the increase of STIs in these counties. SNJPC continued to conduct capacity building workshops promoting teen-adult relationships, LGBTQ issues and positive youth development. Through funding from a national project under Advocates for Youth, SNJPC created the Salem City Youth Wellness Collaborative. The Collaborative engages key players in a community mobilization process to improve access and utilization of teen reproductive health services and provide opportunities for young people to envision and achieve their personal best.

Teen Births as Percent of Total Births 17 and Younger

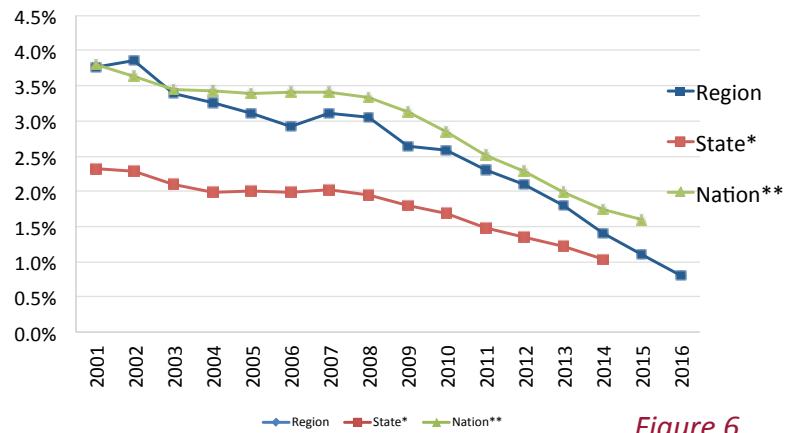


Figure 6

*Source: Center for Health Statistics, New Jersey Department of Health. <http://www4.state.nj.us/dhss-shad>. 4/20/16.
 **Source: Centers for Disease Control and Prevention. National Center for Health Statistics. [VitalStats/nchs/vitalstats.htm](http://www.cdc.gov/nchs/vitalstats.htm). 4/21/16, and <http://www.cdc.gov/nchs/births.htm>, 4/21/16.

2016 Births to Teens by County

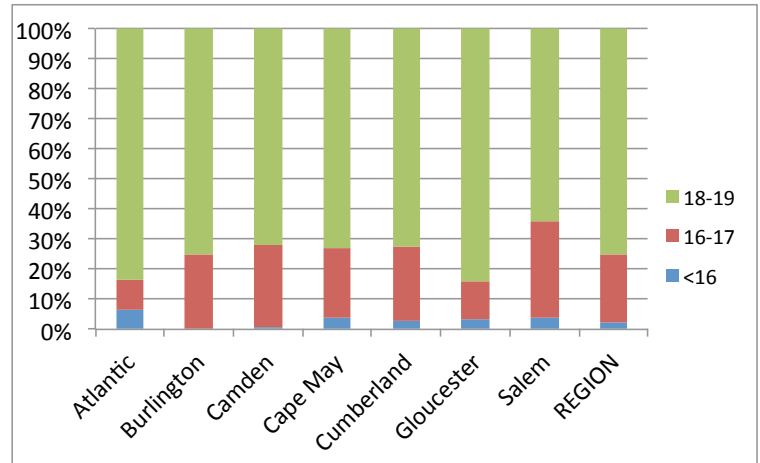


Figure 7

Pregnancy Characteristics

Prenatal Care

First trimester entry to care reduced for a second year in a row from 75.10% to 72.58% in 2016. No care remained very low at only 1%.

Early and regular prenatal care are important strategies to assure healthy pregnancy outcomes for mothers and infants. Two of the most significant benefits are improved birth weight and decreased risk of preterm delivery. Pregnant women who do not receive adequate prenatal care are at risk for complications that may not be detected or managed in a timely manner.

Entry to Prenatal Care by Trimester
SNJPC Member Hospital Births

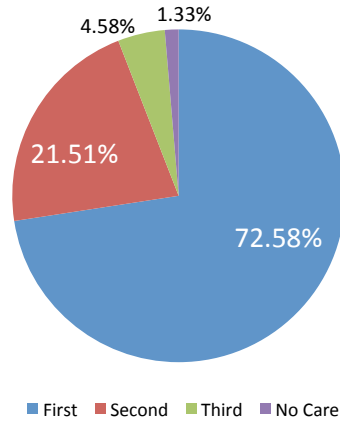


Figure 8

Plurality

In 2016, singleton births represented 96% of all births in the region, twin births represented 3.87%, and triplet births represented 0.13% of all births. There were no quadruplets births in 2016 (Table II).

The decline in higher order multiples is seen after 2005, with only one set of quadruplets born in the past 10 years. These births often result in preterm, extremely low birthweight deliveries and fetal losses; surviving infants often experience lifelong health problems related to prematurity. Improvements in reproductive technologies were critical to the reduction in these high-risk births.

Table II

Year	Singleton		Twin		Triplet		Quadruplet		Total Multiples
	N	%	N	%	N	%	N	%	N
2007	21834	96.04	870	3.83	30	0.13	0	0.00	900
2008	21155	96.00	834	3.78	48	0.22	0	0.00	882
2009	21034	95.88	859	3.92	44	0.20	0	0.00	903
2010	20202	96.16	785	3.74	21	0.10	0	0.00	806
2011	19844	95.51	888	4.27	45	0.22	0	0.00	933
2012	19276	95.99	787	3.92	19	0.09	0	0.00	806
2013	18662	95.89	767	3.941	33	0.17	0	0.00	800
2014	18865	96.06	745	3.79	27	0.14	1	0.01	773
2015	18231	95.98	741	3.9	22	0.12	0	0.00	763
2016	17723	96.00	715	3.87	24	0.13	0	0.00	739

Risk Assessment

Risk assessment is conducted during pregnancy to identify women who are at high-risk for fetal or infant death or infant morbidity. Early identification and intervention are keys to prevention. Because of this, risk assessment is conducted at the first prenatal visit and updated throughout the course of prenatal care.

The goal of risk assessment is to prevent or treat conditions associated with poor pregnancy outcomes and to assure linkage to appropriate services and resources through referral.

Table III depicts some of the risk factors that were associated with Very Low Birth Weight (VLBW) births in 2016.

Inadequate prenatal care, tobacco use, and multiple births (twins, triplets) are more likely to result in the birth of a VLBW infant. Maternal risks such as hypertension, pre-eclampsia and advanced maternal age can also be associated with decreased birth weight.

The association between no prenatal care and late entry to care, and the occurrence of low birthweight is also depicted in Table III. Although only 1.32% of pregnant women did not receive prenatal care, the no prenatal care rate for women delivering VLBW infants was 5.42%.

In data reflective of national reports, black women in South Jersey continue to have a higher proportion of low birthweight

babies. Table III shows that while 18.43% of the births in the region were to black women, higher proportions (30.72%) of the VLBW births were black. Since low birth weight is closely associated with infant mortality, reducing the incidence of VLBW infants born to black women is essential to reducing the racial disparity that has long challenged the perinatal healthcare community.

Table III

Southern Region	ALL	<1501 grams	>1500 grams
<i>Live Births</i>	18462	332	1830
Mother's race: White	63%	44%	63%
Mother's race: Black	18%	31%	18%
Mother's ethnicity: Hispanic	25%	29%	25%
1st trimester entry to prenatal care	73%	68%	73%
No prenatal care	1%	5%	1%
Used tobacco during pregnancy	9%	16%	9%
Plurality of 2 or more	4%	25%	4%
Mother's age less than 20 years	3%	3%	3%
Mother's age 35 years or greater	20%	26%	20%
Primigravida	28%	23%	28%
Maternal risk: Hypertension in pregnancy	5%	18%	5%
Maternal risk: Pre-eclampsia	0%	1%	0%

Method of Delivery

While New Jersey continues to be among the states with the highest Cesarean birth rate, improvements have been made over the past 5 years. Figure 9 depicts the relationship between Cesarean births and vaginal deliveries in South Jersey.

The reduction of inductions before 39 weeks, accomplished by implementing a “hard stop” for any nonmedically indicated procedure at this stage of pregnancy, is a quality metric that has become the standard of care in NJ and across the US. We now see an improvement in the regional percentage of C-sections for mothers who experience spontaneous labor as well as a reduction in the percentage of mothers who have no trial of labor before a C-section is performed (often referred to as an elective Cesarean).

An examination of the births to mothers in SNJPC member hospitals based on the unified reporting standards in Cesarean Delivery: Comparing New Jersey Hospitals can be seen in Table IV.

The examination of these deliveries exposes opportunities to reduce C-sections for low risk mothers and infants. With over 80% of South Jersey mothers who had a prior C-section repeating this method of delivery, the consideration of VBAC by patients and physicians is an area that merits examination. (Table V)

Vaginal - Cesarean Births South Jersey 2005-2016

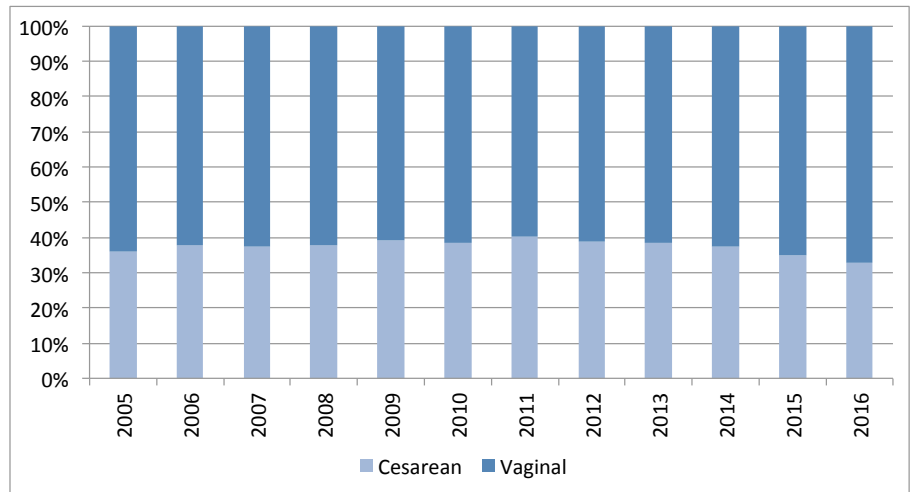


Figure 9

2007-2016

South Jersey Cesarean Births & Inductions of Women With Prior C-section

Year	Nullipara C-section	No Trial Repeat C-section	Induction <39 wks	Induction 39+ wks	Induction with C-section
2007	33.90%	84.00%	4.40%	7.60%	3.29%
2008	34.20%	86.90%	2.70%	8.10%	3.09%
2009	34.50%	84.70%	4.90%	6.80%	1.61%
2010	34.30%	84.50%	5.50%	12.60%	4.41%
2011	36.12%	83.96%	6.70%	13.27%	2.65%
2012	34.15%	83.07%	4.98%	14.93%	4.48%
2013	30.20%	82.97%	7.39%	14.57%	3.64%
2014	30.51%	83.55%	10.11%	16.35%	5.45%
2015	26.42%	83.24%	11.11%	14.71%	3.30%
2016	24.72%	82.21%	9.68%	12.85%	3.35%
Change over time	-27.08%	-2.13%	120.00%	69.08%	1.82%

Table IV

VBAC Trends

Year	Failed VBAC	Successful VBAC
2007	40.90%	59.10%
2008	45.50%	54.50%
2009	47.40%	52.60%
2010	41.50%	58.50%
2011	48.82%	51.18%
2012	42.51%	57.49%
2013	35.29%	64.71%
2014	27.34%	72.66%
2015	22.32%	77.68%
2016	18.64%	81.36%
Change over time	-54.43%	37.66%

Table V

ISSUES

South Jersey Cesarean Births, & Inductions

1. *Nullipara Cesareans for standard presenting women. (First-time, live births, baby head down)* In 2016, the rate of these Cesarean births was 24.72%. This rate had been steadily increasing over the previous decade and reached a high point of 36.10% in 2011. Making a change in this group is critical to a state wide reduction in C-section rates.

2. *Repeat Cesareans without a trial of labor. (Women who have had a previous Cesarean birth who are scheduled for the procedure before the onset of labor)* In 2016, 82.21% of deliveries to women who had a prior Cesarean were Cesareans without a trial of labor. This type of delivery has been on the decline overall in South Jersey. 2016 saw a slight decrease over 2015, however, since 2008 there has been a 5.40% decrease in repeat C-sections.

3. *Attempted Vaginal Births After Cesarean (VBAC) births at 39+ weeks gestation that end in cesarean.* These are defined as “failed” VBACs. In 2016, the rate of failed VBACs was 18.64%. This rate has been decreasing since 2011.

4. *Induction of labor before 39 completed weeks of gestation.* Because of the concern about the problems encountered by babies who are born less than but near term, this is an issue which is the focus of quality improvement activities across the US. In 2016 this rate was 9.68%.

5. *Inductions that end in Cesarean.* In 2016, the rate of C-section after induction among women who had a prior C-section was 3.35%.

Cesarean Deliveries, First-time Mothers, Singleton, Full-Term, Head Down

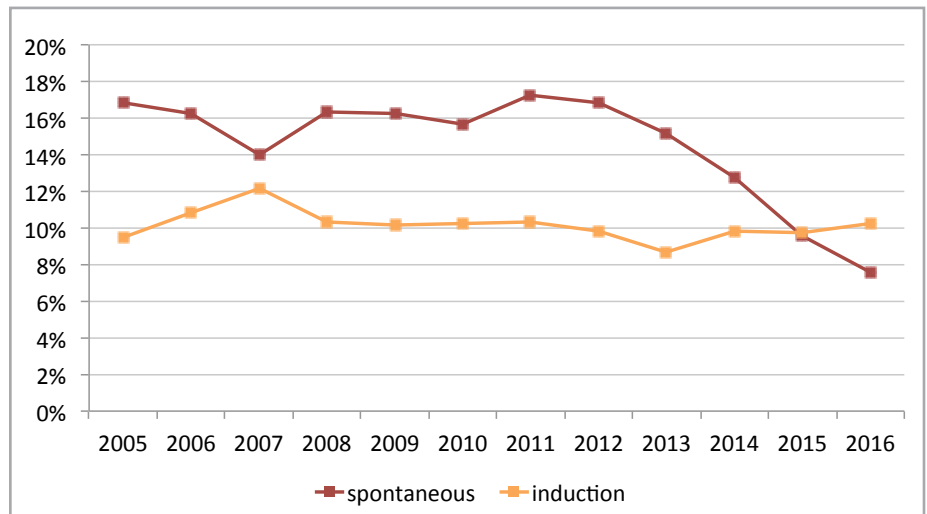


Figure 10

South Jersey Cesarean Births Trends

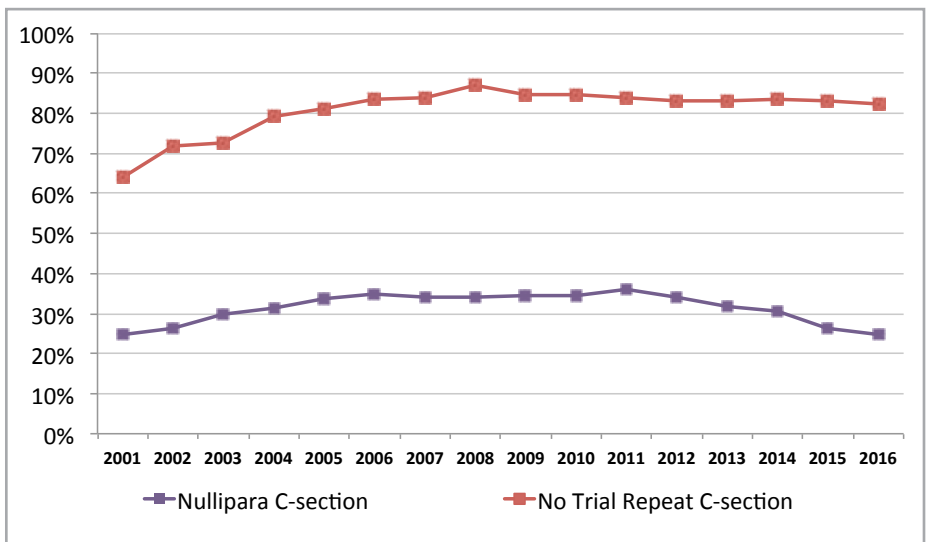


Figure 11

Newborn Feeding Method

In 2016, 70.70% of women who gave birth in SNJPC member hospitals breastfed their newborns (based on feeding method at discharge from the hospital). There has been a steady increase in breastfeeding over the past ten years as can be seen in Figure 12.

Because of the many positive benefits of breastfeeding for child survival, growth and development, exclusive breastfeeding - which means that an infant receives only breast milk with no additional formula or water - is recommended by the World Health Organization for all infants. Despite its many benefits, many women do not breastfeed exclusively.

VIP data updated the questions about breastfeeding were updated to match the NCHS requirement as part of the upgraded VIP. In past years, the information provided from EBC focused on feeding method 24 hours prior to discharge. The VIP dataset asks about exclusivity throughout the hospital stay, and an additional measure for breastfeeding at discharge. It has been determined that the feeding method at discharge is the more consistent variable. There have however been differences by race and ethnicity.

Table VI depicts these trends over time. In 2016, the percentage of breastfeeding at discharge for Black mothers increased nearly 25%.

In 2016 Our Lady of Lourdes and Atlanticare hospitals joined Elmer as baby friendly hospitals. While other health systems strive to support the importance of breastfeeding by ensuring that supportive messages and resources are integrated into care across the region. This is evident from the 12.74% increase in total breastfeeding in the past 10 years.

Feeding Trends 2002 - 2016

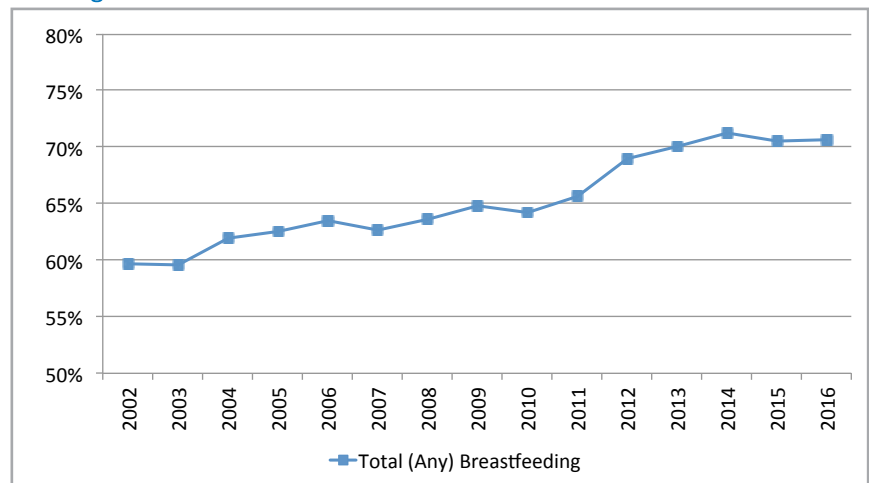


Figure 12

Breastfeeding at Discharge by Race/Ethnicity

Year	Black	White	Hispanic
2007	50.3%	64.8%	70.1%
2008	50.3%	65.3%	69.6%
2009	51.5%	66.8%	70.4%
2010	50.8%	64.6%	70.6%
2011	53.5%	66.5%	66.8%
2012	57.5%	69.7%	73.0%
2013	57.0%	70.9%	73.7%
2014	59.9%	73.3%	74.0%
2015	59.6%	73.0%	72.6%
2016	62.2%	72.6%	73.6%
Change over time	23.7%	12.0%	5.0%

Table VI

Infants Born Outside the Hospital

The regional database also tracks the number of infants born outside of hospitals. These are emergency births and include births at home, in transit or in the hospital emergency room. This number does not include planned home deliveries.

In 1988, the number of births outside the hospital rose sharply and continued until 1993 when the trend was reversed. This rate had remained very low for the past decade, however in 2015 the rate returned to the high levels of the early 1990s

(Figure 13). The rate was reduced by 10% to .46% in 2016, this remains higher than rates reported in the past ten years.

Although the majority of these infants are full-term, they are, as a group, at increased risk. The fetal and neonatal mortality risk is higher for these infants than those born in the hospital with appropriate care and support. Because of this, surveillance continues to determine preventable causes of these occurrences.

Outside Birth Trend

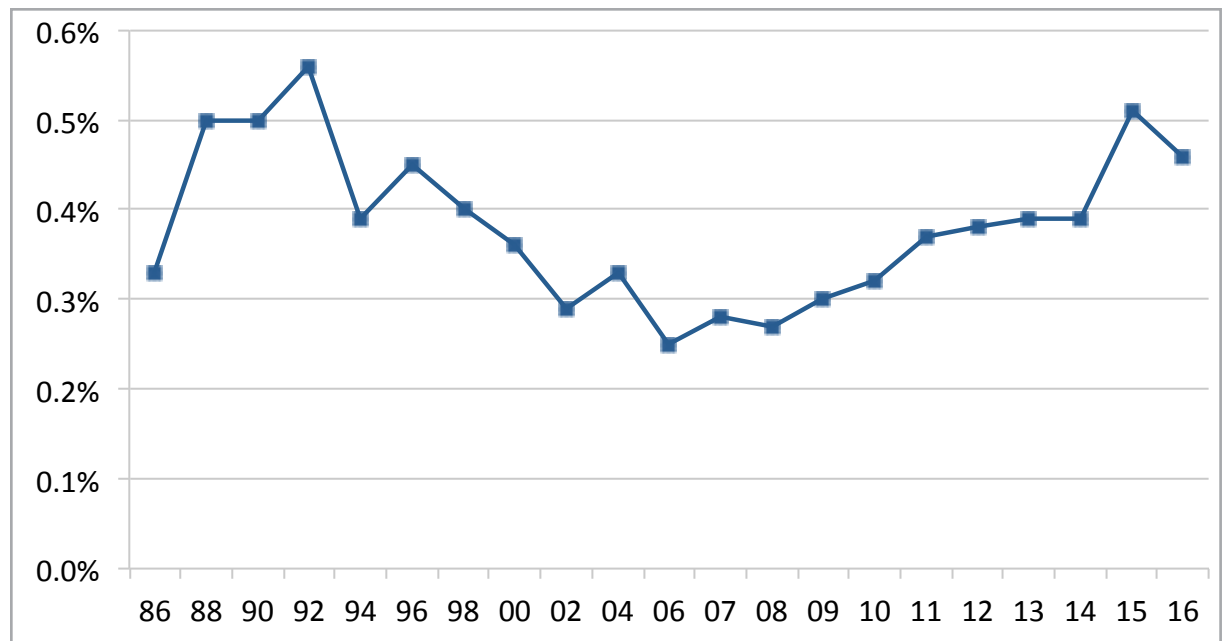


Figure 13

Birthweight Trends

Changes in medical management and the coordination provided by perinatal regionalization since 1995 set the stage for the increased birthrate of very small babies since the late 1990s. Technological and medical advances now support the live birth of many tiny, premature infants who would have died prior to delivery just 15-20 years ago, when the SNJPC database was first developed.

In 2016, 328 (1.78%) babies born in member hospitals were categorized as VLBW because they weighed less than 1500 grams (3.3 lbs). This group of infants are the most vulnerable and have the most influence on the neonatal mortality rate. When examined over time, the birth rate of small infants has remained relatively stable since 1999.

As seen in Figure 14, a greater proportion of infants weighing less than 5.5 lbs. were born in 2016 than in the baseline year of 1984, (8.57% vs. 6.80%). Table VII depicts five year averages for 2007 – 2016, decreases were seen for every weight group.

Of particular interest is the subset of the tiniest infants who weigh under 1000 grams (just under 2 lbs).

These babies are referred to as Extremely Low Birth Weight (ELBW). Figure 15 shows the birthweight trends for these small infants from the baseline year to the present. Although there have been changes year to year, an examination of 10 years of data shows the average birthrate of ELBW infants is 0.86%. In 2016, 157 infants, (.85% of the total births in the region) weighed less than 1000 grams.

Birthrate of LBW Infants 1984-2016

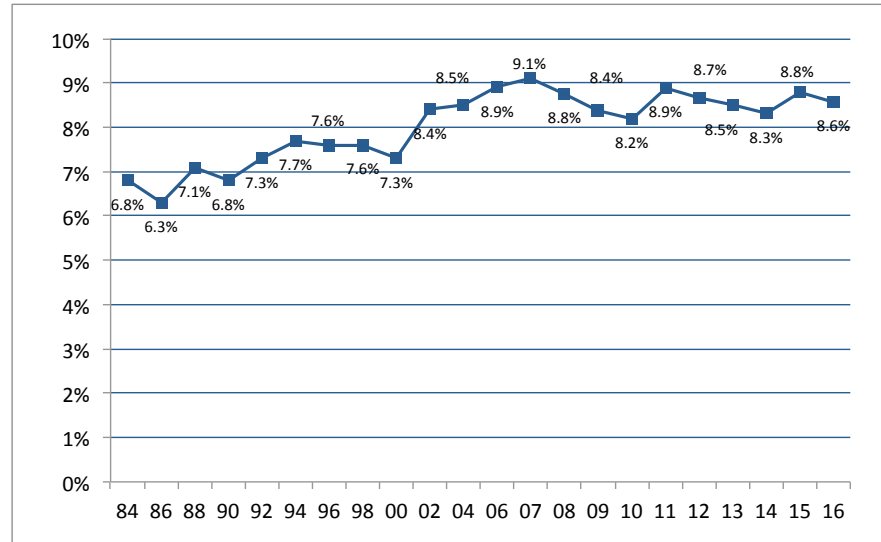


Figure 14

Birthweight Distribution

Weight Groups	Baseline	2012	2013	2014	2015	2016
< 2501	86.53	51.68	40.56	37.49	51.78	45.08
< 1501	424.6	250.76	188.68	196.67	259.01	210.37
<1001	666.67	468.75	348.68	413.04	527.78	382.17

Table VII

ELBW/VLBW Birthrate Comparison

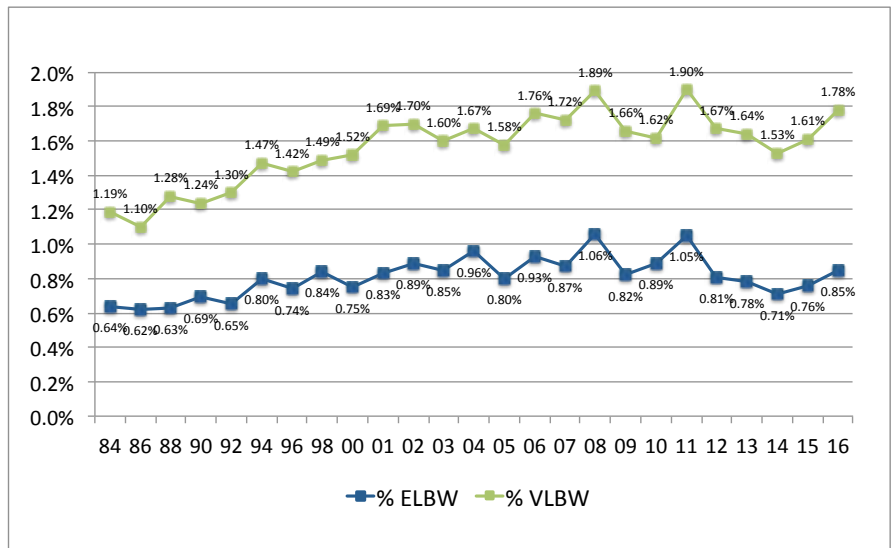


Figure 15

Neonatal Mortality

The regional neonatal mortality rate trend since 1986 can be seen in Figure 16.

At 4.08 deaths per 1000 live births, the 2016 Neonatal Mortality Rate (NMR) is 47% lower than the baseline year of 1984. The average NMR for infants of all weights over the past ten years is approximately 5 deaths per 1000 live births.

Since low birth weight is the single most important factor contributing to neonatal mortality, SNJPC monitors the relationship between the incidence of LBW and NMR.

Table VIII shows the five year averages for neonatal mortality by weight group for low birthweight babies since 2007. Between 2007 and 2011 the mortality rate for babies born under 2500 grams 5.32, in the past five years the average rate was 4.20 per 1000 live births. In 2016 there were 4.08 deaths of babies under 2500 grams per 1000 live births. An examination of the distribution of births across categories demonstrates the impact of ELB on the overall NMR for the region. The ability to take a step back and examine longitudinal trends is a strength of the SNJPC regional collaborative database.

Neonatal Mortality 1986-2016

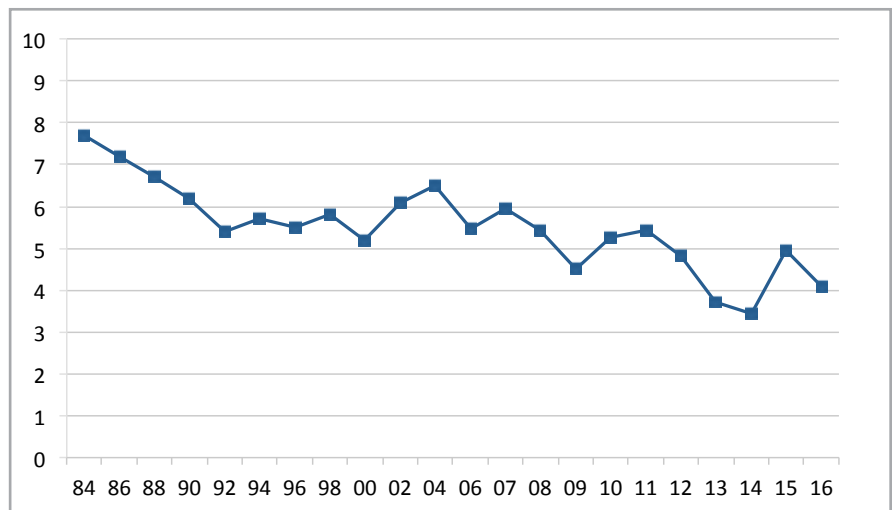


Figure 16

Neonatal Mortality Rate Birthweight Distribution

Weight Group	Baseline	2016	%Change
Overall	7.68	4.08	-46.88%
<2501 g (LBW)	86.53	45.08	-47.90%
<1501 g (VLBW)	424.60	210.37	-50.45%
<1001 g (ELBW)	666.67	382.17	-42.67%

Table VIII

Fetal Mortality

In addition to programs aimed at reducing neonatal mortality, the Cooperative has also coordinated educational and consultation activities directed at reducing the Fetal Mortality Rate (FMR).

The FMR is reported in two ways: deaths of all fetuses weighing more than 500 grams and the subset of fetal deaths in later pregnancy, when the fetus weighs more than 2500 grams. VIP no longer tracks fetal mortality, therefore the data reported here have been provided by SNJPC member hospitals and validated

internally against medical records in order to meet QI standards for accuracy. Even with these checks there is a reduction in the reliability of these data and SNJPC is working to support the implementation of a system to reinstate standard reporting procedures for fetal death data.

In 2016, the fetal mortality rate for births over 500 grams was 4.78, a decrease of 20% since 1986, but has been fairly stable since 2000. The average FMR since 2000 was 4.27 per 1000 births.

Since 1988, the FMR among infants weighing more than 2500 grams, a marker of late pregnancy complications and management, decreased 26.22%. These cases are uncommon and the small numbers can result in high levels of variability from year to year. In 2016 the rate for this group was 1.66 losses per 1000 births.

Fetal Mortality Rate

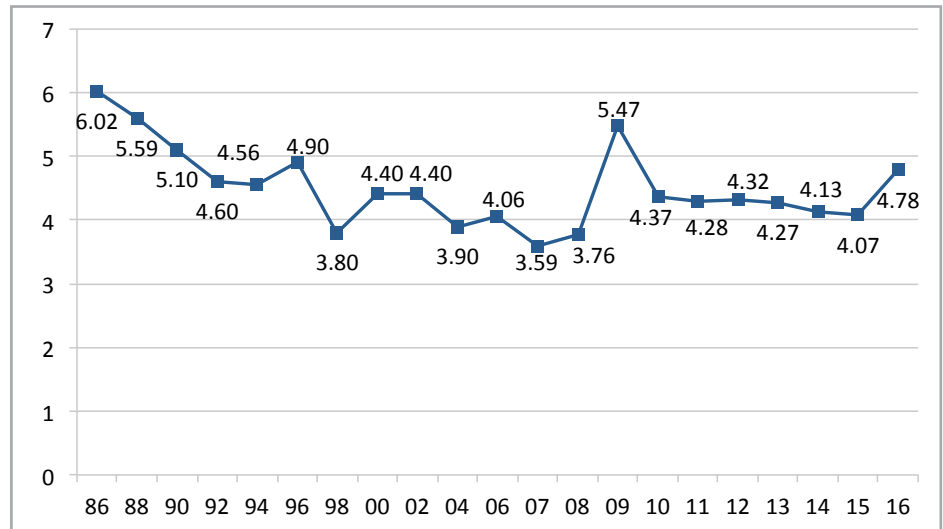


Figure 17

Fetal Mortality Rate >2500

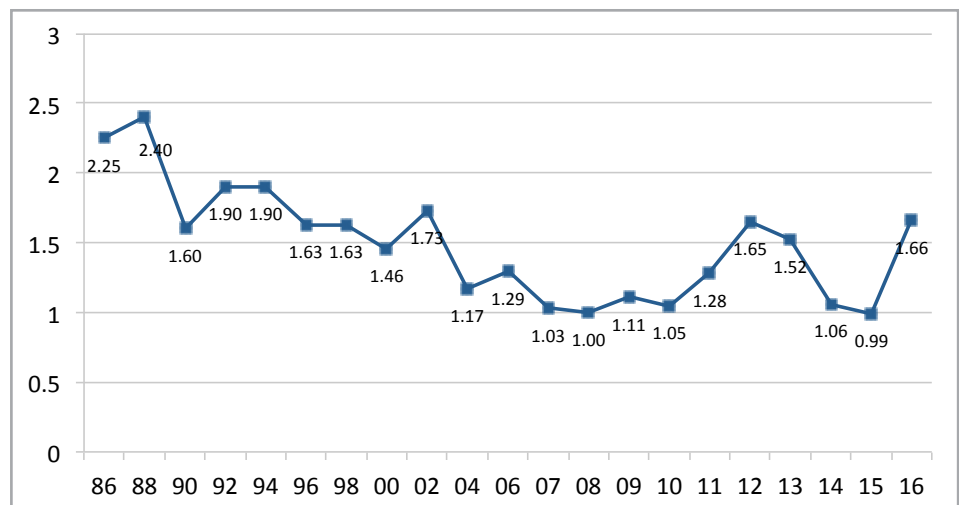


Figure 18

Transport Patterns

Neonatal Transports

In 2016, 244 infants were transported from South Jersey hospitals for neonatal intensive care (Figure 19). The effectiveness of the maternal transport system, which ensures that mothers deliver in hospitals prepared to care for their infants at any weight, is seen in the fact that only 26.05% of these transported infants weighed less than 1500 grams. Additionally, 54.20% of the transported infants weighed more than 2500 grams. Many of larger, term or close to term, infants who were transported required surgery or other specialized care in New Jersey and neighboring states.

Neonatal Transports

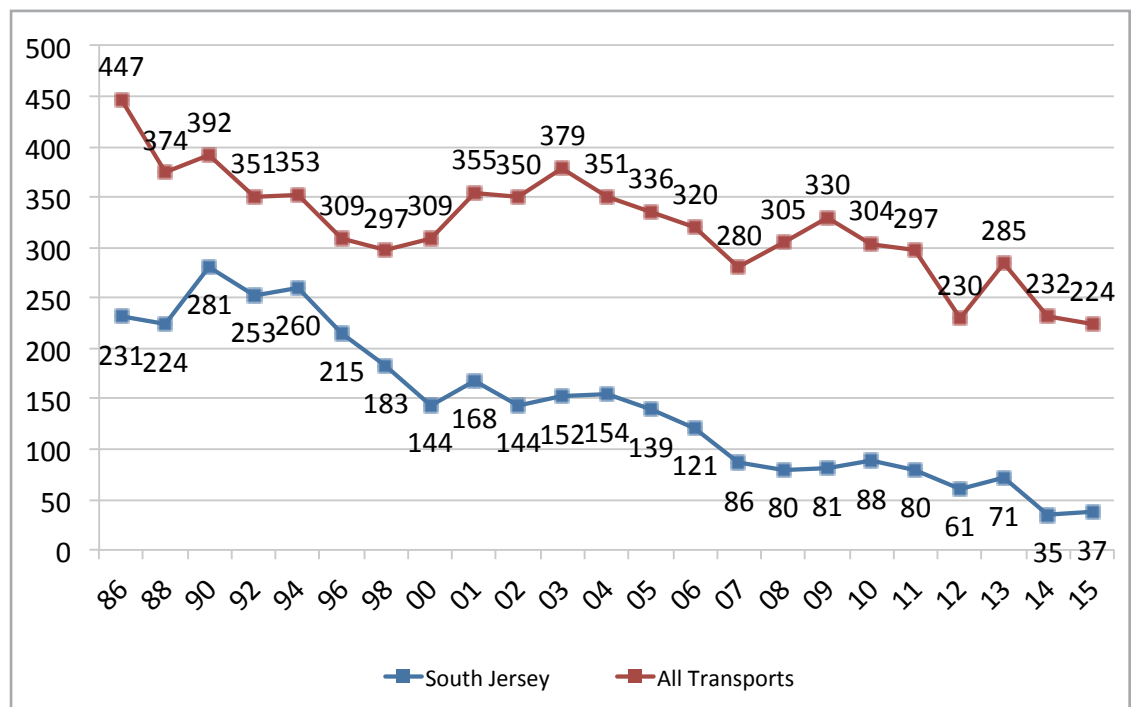


Figure 19

Transport Patterns

Maternal Transports

Maternal transport patterns have contributed to the reduction in the mortality rate for ELBW infants.

Survival rates for tiny infants, those weighing less than 1500 grams, improve when they are born at a hospital with a Neonatal Intensive Care Unit (NICU).

In 2016, 362 pregnant women were transported to high-risk perinatal centers. The proportion of these transports going to South Jersey RPCs has consistently exceeded 89%. (Figure 20). Eighty percent (80%) of the mothers transported to these perinatal centers were 32 weeks gestation or less. This trend corresponds

with the decreased incidence of small babies born in hospitals without NICUs and the increased survival of tiny infants.

One of the consistent findings in the SNJPC Regional Database Report is the effectiveness of the regional maternal transport system in assuring that few infants weighing less than 2 lbs are born at community hospitals without NICUs. Although every Community Perinatal Center (CPC) Intermediate and CPC Basic hospital is appropriately staffed and equipped to stabilize and care for tiny infants, having to transport these babies to a hospital with a NICU is a risk that can be avoided if the mothers can be transported prior to delivery.

Early identification, referral and transport of high-risk mothers helped to insure the majority of the smallest infants who benefit the most from specialized neonatal care are born at hospitals with these services. Figure 21 depicts the great change in where these infants are born since the first year these data were collected, when only 68% of the infants weighing 1 and 2 lbs. were born at hospitals with NICUs. In 2016, 85% of the tiniest infants were born at Regional Perinatal Centers (RPCs) and CPCs-Intensive.

Maternal Transports

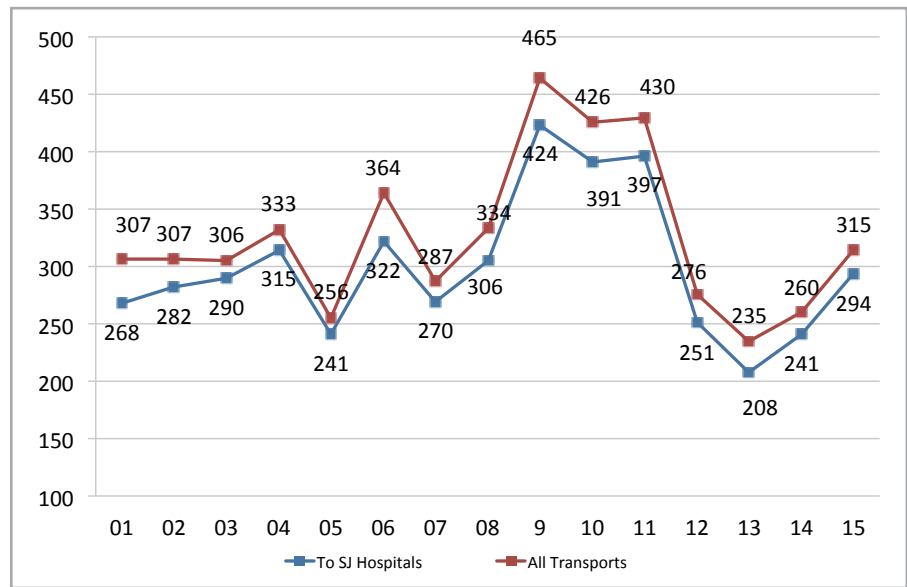


Figure 20

500-1000 gm Born at RPC & Intensive

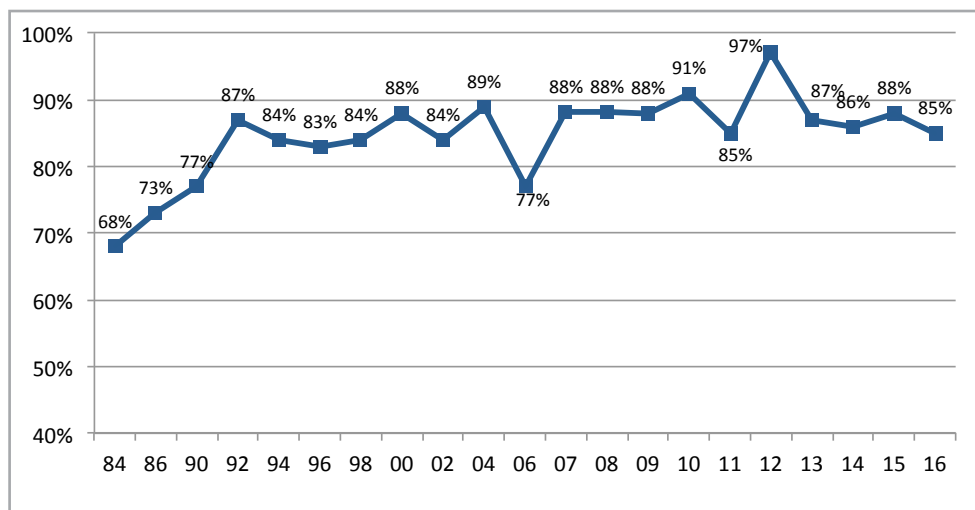


Figure 21

Definitions

Live Births

Births of infants who take at least one breath regardless of gestational age or weight. Unless otherwise indicated, "births" in this document refers to live births.

Total Births

Live births of any gestation and fetal deaths greater than 19 weeks gestation.

Birth Rate

Annual number of births to women at SNJPC member hospitals.

Birth Weight

The first weight of the newborn obtained after delivery. Birth weight is recorded in grams.

Extremely Low Birth Weight (ELBW)

Birth weight of less than 1,000 grams, which is approximately 2 pounds 3 ounces.

Gestational Age

Clinical estimate of the length of time from the first day of the mother's last normal menstrual period to the date of delivery.

Induction

Labor brought on by medical intervention.

Low Birth Weight (LBW)

Birth weight of less than 2,500 grams, or approximately 5 pounds, 8 ounces.

Newborn Feeding Method

The type of feedings (breast, formula, or both) given in the 24 hours prior to discharge from the hospital.

Nullipara

A woman who has not previously delivered a live infant.

Teen Birth

Birth to a mother under 20 years of age.

Tobacco, alcohol, and drug use during pregnancy

Use of these substances as self-reported by mother.

Trimester of Pregnancy:

The first trimester includes the first 12 weeks of pregnancy, the second trimester encompasses the 13th through the 27th weeks and the third trimester is the period after the 27th week through delivery.

Vaginal Birth After Previous Cesarean (VBAC)

Vaginal delivery of a woman who has previously had a cesarean delivery.

Very Low Birth Weight (VLBW)

Birth weight of less than or equal to 1,500 grams, or approximately 3 pounds, 5 ounces.

Fetal Death:

Death of a fetus prior to birth and after 19 weeks gestation.

Neonatal Death:

Death of an infant within the first 27 days of life.

Perinatal Mortality

The sum of fetal deaths of 20 or more weeks gestation plus neonatal deaths.

Post Neonatal Death

Death of an infant aged 28 days to one year of life.



2016 Regional Perinatal Database for South Jersey

Making possible data-driven interventions to improve the health status of mothers and babies.



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Printed April 2017