



OMNI INSTITUTE REPORT



The Virginia Neonatal Perinatal Collaborative Annual Report

The Virginia Neonatal Perinatal Collaborative Annual Report

2023

Submitted to:
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The Virginia Neonatal Perinatal Collaborative 2023 Annual Report Executive Summary

The Virginia Neonatal Perinatal Collaborative (VNPC) was established in 2017 as the 42nd state perinatal quality collaborative (PQC) to improve maternal and infant health outcomes for all pregnant and parenting people, their families, and their infants. **The VNPC’s mission aims to ensure that every pregnant and parenting person has the best possible perinatal care and that every infant across Virginia is cared for in a way that gives them the best possible start to their lives.** To accomplish this, the VNPC utilizes an evidence-based, data-driven collaborative process that brings together pregnant people and their families, maternal health providers, and state leadership to iteratively strengthen maternal health practices across a wide range of metrics. This report details the work that the VNPC completed in 2023.



Perinatal quality collaboratives (PQCs) exist to help ensure the safety and health of all pregnant and parenting people and their infants. To accomplish this, PQCs work closely with medical and community-based healthcare professionals, including birth hospitals, doulas, midwives, advanced practice providers, and community partners focused on maternal and infant health, to implement best practices and quality improvement (QI) projects through PDSA cycles (Plan Do Study Act), webinars and Summits. As of 2022, all states currently have PQCs.

Strategic Priorities for 2023-2026

The VNPC developed a strategic plan to guide their work for 2023-2026. This plan identified four major priority areas:

Priority 1

Respectful Care: Ensure all pregnant and parenting people and families receive quality care reflective of their needs and desires before, during, and after pregnancy

Priority 2

Communities: Strengthen relationships and build trust to engage diverse communities, that reflect the pregnant/parenting populations, in the work of the Collaborative

Priority 3

Data: Increase access, understanding, and utilization of perinatal and infant care data

Priority 4

Communication: Share a vision of success that mobilizes our community to action and change

2023 Projects

Project LOCATe (Levels of Care Assessment Tool)

Project LOCATe is a web-based assessment tool used to gather data about birthing facilities' levels of preparation and care provided. The data from Project LOCATe has successfully highlighted discrepancies between providers' perceived level of care and their actual ability to provide care to pregnant people and newborns.

16 facilities

participated in the first wave of data collection, which took place in late 2022



An additional 18 facilities

took part in the second wave of data collection, which closed in May of 2023



The third wave closed in July 2023 with four additional hospitals participating, bringing the total to 38 hospitals who have received an assessment of their level of care for maternity and newborn capacities.



A fourth wave will close in December 2023 as the VNPC strives to meet its goal.

The VNPC is working toward a 100% participation rate for birth hospitals around the state, and after data collection is complete, the VNPC will share aggregate results with providers and healthcare leaders around the state. With the results, the VNPC is identifying steps for implementation in 2024 to ensure that health systems know when to transfer patients to the appropriate level of care and which hospitals provide higher levels of care. The VNPC is also identifying ways to ensure that patients are receiving the ideal level of care to improve outcomes.

Turn the Page

The Turn the Page project focuses on collecting stories of times when birthing people overcame challenges or received exceptional support during their journey with the maternal health system and then shares those stories on social media. These stories serve to lead by example and provide ways to improve the maternal health system in the state.



Stories posted on social media: **12 stories shared** via Instagram, Facebook, and YouTube

The VNPC completed three rounds of Turn the Page in 2023. The first round included five participants, the second round included two participants including one video completed in Spanish, and the third round had five participants.

The VNPC's video submission "Turn the Page" was accepted to the Film Festival at the 2023 American College of Obstetricians and Gynecologists District IV Annual District Meeting, which took place October 21, 2023, in Washington, D.C. This submission by Shannon Pursell and Dr. Jaclyn Nunziato won first place.



That on-call doctor changed my life in a 15-minute phone call at midnight. I'll never be able to thank her enough for listening to me, seeing me, and taking action to address my concerns to make sure I delivered a healthy baby boy.

—Turn the Page participant story

Project EMBRACE

Project EMBRACE is a data-driven quality improvement project that works with birthing facilities to implement educational programming based on the needs of their facilities and populations. Birthing facilities can choose the focus of their educational programming based on the needs of their community. The goal of the project is to improve outcomes related to maternal and neonatal care.

22 hospitals participating across the Commonwealth

Topics include: Perinatal Mental Health, Maternal Health, Prevention Care and Counseling, Human Milk Feeding, Reproductive Health

The topic chosen by the participating hospital is implemented across six phases:

- PHASE 1 ● **Early Prenatal** (first and second trimester)
- PHASE 2 ● **Late Prenatal** (third trimester to admission to hospital)
- PHASE 3 ● **Delivery** (admission to discharge from hospital)
- PHASE 4 ● **Early Postpartum** (discharge from to 3 weeks postpartum)
Note: This period aligns with the American College of Obstetricians and Gynecologists guidance
- PHASE 5 ● **Late Postpartum** (4 weeks to 6 months postpartum)
Note: This is the period with the most preventable maternal deaths
- PHASE 6 ● **Transition:** A decision to be made between a patient and their provider for that patient to transition from maternity care to well-women care

Eliminating Bias in the Dyad Care (EBDC)

Eliminating Bias in the Dyad Care (EBDC) is a quality improvement project that will focus on improving outcomes for our pregnant and parenting families and infants impacted by substance use disorder.

There will be three AIMs for this project:

- Aim 1** Improve the care for birthing persons with substance use
- Aim 2** Improve the care of newborns exposed to substances prior to birth
- Aim 3** Eliminate the bias and stigma associated with perinatal substance use and exposure

Key Events

Monthly Webinars

The VNPC holds a webinar on the third Tuesday of every month to provide additional information and education opportunities for providers around the state. Topics are determined in collaboration with providers to ensure they are as useful as possible.

Average attendance: 50-60 attendees each month; attendance made up of providers, midwives, doulas, nurses from local health districts and health systems, community partners, and state agencies.

All webinars are recorded and put on the [VNPC YouTube](#) channel to watch again or if missed during the live presentation.

Topic List for 2023 Webinars:

Jan.	VNPC Year in Review
Feb.	Infant & Early Childhood Mental Health
Mar.	Federal Resources for Maternal Health
Apr.	Family Physicians and Maternal Health
May	Menstrual Equity
June	2SLGBTQIA+ Communities and the Perinatal Experience
July	Implementation Science
Aug.	Balancing Safe Sleep and Breastfeeding Recommendations: Strategies to Reduce Infant Mortality
Sept.	Cardio Obstetrics
Oct.	Limits of Viability: Reviews of Provider Knowledge

Fourth Annual Day of Learning

The Annual Day of Learning provides educational resources related to maternal and infant health, allows participants to network and learn from each other, and challenges participants to look at maternal and infant health in new ways. This year, the VNPC held its Fourth Annual Day of Learning on March 20, 2023 in Richmond, VA.



Attendance:
Over 175 People



Theme:
Reframing the Why

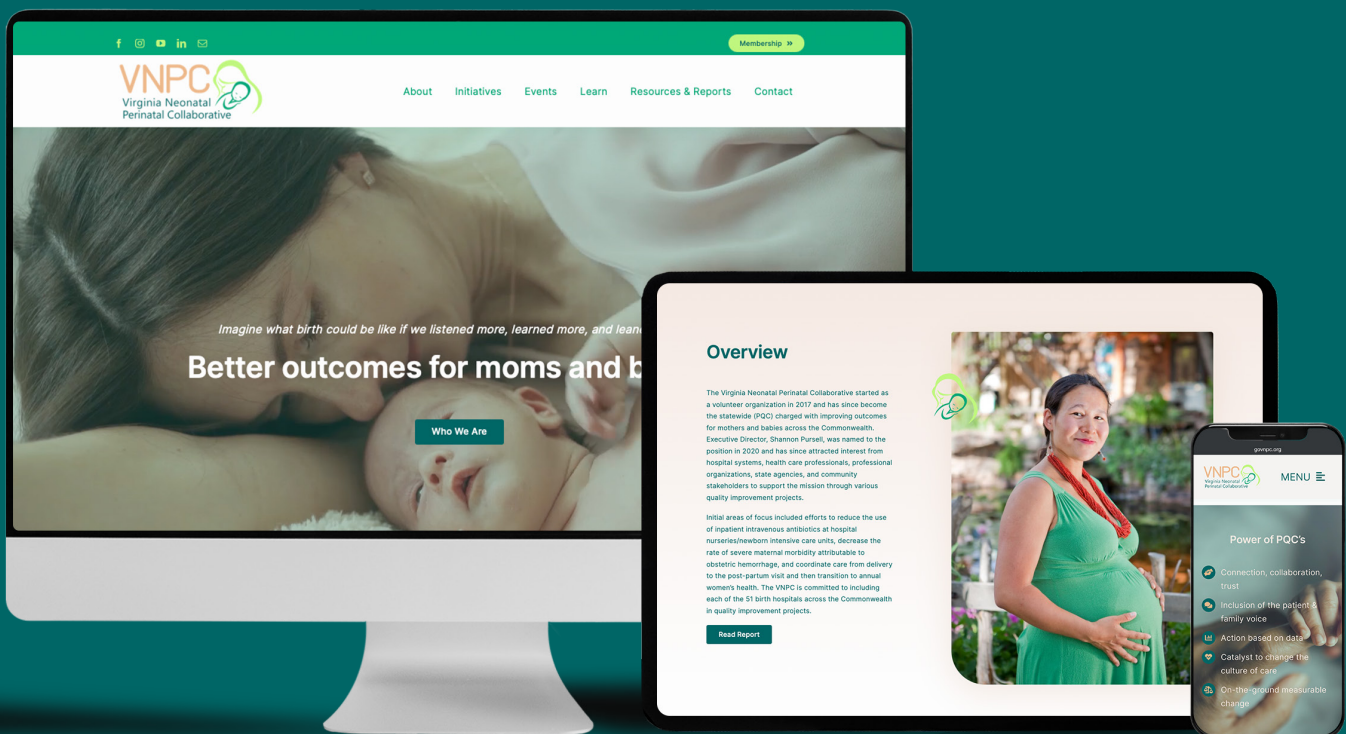
Seventh Annual VNPC Summit

The Summit is an immersive and collaborative experience that is designed for clinical and community care providers. The VNPC held its Seventh Annual Summit from October 22-23, 2023 in Williamsburg Virginia. The Summit included updates from the VNPC as well as sessions with topics including: perinatal mental health, General Assembly updates, Department of Corrections and maternal health, and Project Rebyrth®.

Infrastructure Changes

In the six years since the VNPC was established, the VNPC has been successful in increasing funding, expanding program offerings, and growing its staff. The VNPC staff grew from two in 2022 to six full-time staff, one consultant, and three student interns by the end of 2023.

The VNPC launched new branding and a new website in May of 2023, marking the next phase in the VNPC's growth and development.





Legislation

The VNPC has been involved with legislative efforts throughout the year. Below are descriptions of the four main bills that have impacted the work that the VNPC does in 2023.

SB 1275

Senate Bill 1275 was introduced in January and passed in February of 2023. It adopts regulations which govern the practice of midwifery in the Commonwealth, particularly related to the administration of medications and medical devices by midwives.



In partnership with the Alliance for Innovation on Maternal Health, the American College of Nurse-Midwives, and the Centers for Disease Control and Prevention, the VNPC participated in a 2-hour webinar, with over 200 people registered nationally. This webinar was recorded and will be available with Continuing Education Units for two years. The VNPC's next step is to develop an additional webinar about medication that midwives can carry and administer within their scope of practice, how to administer, contraindications of the meds, dosing, etc.

SB 1531

Senate Bill 1531 was introduced in January and passed in February of 2023. It directed the Virginia Department of Health and all other agencies of the Commonwealth to support the efforts of the VNPC to the fullest extent practicable and to pursue opportunities to maximize public-private partnerships with the VNPC.



The Governor's office has held two meetings to identify recommendations for this bill, a report will be provided to General Assembly by the deadline. The VNPC has participated and attended all meetings.

HB 1567

House Bill 1567 was introduced in January 2023 and passed in February of 2023. It requires that the Virginia Department of Health (VDH) convene a workgroup in collaboration with the VNPC, the Virginia Maternal Quality Care Alliance, and Urban Baby Beginnings to evaluate strategies intended to reduce maternal and infant mortality rates.



The Virginia Department of Health has held two meetings to identify recommendations for this bill, a report will be provided to general assembly by the deadline. The VNPC has participated and attended all the meetings.

HB 2111

House Bill 2111 was introduced in 2021 and directs the State Health Commission to “establish a task force on Maternal Health Data and Quality Measures for the purpose of evaluating maternal health data collection processes to guide policies in the Commonwealth to improve maternal care, quality, and outcomes for all birthing people in the Commonwealth” (H.B. 2111, 2021).



The VNPC has participated in every meeting of the task force and provided feedback on the suggested recommendations and final report.

Looking Forward

In 2023, the VNPC has experienced significant growth, not only by increasing staff and launching new programs and educational opportunities, but through their ongoing engagement with legislation. The VNPC is poised to continue to tackle its strategic priorities into 2024 and beyond.



Introduction

The health of a state is often expressed by its maternal and infant mortality rates as these rates can provide key indicators of quality of care, poverty, illness, and social well-being among other concerns. Of all states, Virginia currently ranks 32nd with a rate of 5.96 infant deaths per 1,000 live births and 29.1 maternal deaths per 100,000 live births (CDC, 2021a, 2022a).

Across the Commonwealth of Virginia:

- ★ The total number of **pregnancy-related deaths has steadily increased** since 2018 (37.1 per 100,000 live births in 2018 to 86.6 in 2020; Virginia Maternal Mortality Review Team, 2023);
- ★ Rates of **severe maternal morbidity delivery hospitalizations increased** from 51.1 per 10,000 in 2017 to 71.4 per 10,000 in 2022 (VNPC, 2023b);
- ★ **Approximately one-fifth of births** involve a Cesarean Section delivery (Virginia Pregnancy Risk Monitoring System [PRAMS], 2022);
- ★ **Roughly 96% of women** do not receive a postpartum visit within 8 weeks of giving birth (PRAMS, 2022).

Perinatal quality collaboratives (PQCs) exist to help ensure the safety and health of all pregnant and parenting people and their infants.

To accomplish this, PQCs work closely with medical and community-based healthcare providers including birth hospitals, doulas, midwives, advanced practice providers, and community partners focused on maternal and infant health to implement best practices and quality improvement (QI) projects through PDSA cycles (Plan Do Study Act), webinars, and summits. Such efforts foster a sense of collaboration between medical providers, generate crucial data that allow practitioners and the public alike to understand trends in births, and continually improve practices within maternal health settings (CDC, 2022b). As of 2022, all states currently have PQCs, which have successfully accomplished goals such as improving care for pregnant people with opioid use disorder (Northern New England), reducing serious pregnancy complications among those with severe bleeding during pregnancy or delivery (California), and increasing compliance with safe sleep practices in level 3 neonatal intensive care units (Hwang et al., 2018; Massachusetts; CDC, 2022b; National Institute for Children’s Health Equity, 2023). **The Virginia Neonatal and Perinatal Collaborative (the VNPC) serves as the PQC for the Commonwealth of Virginia.**

The Virginia Neonatal Perinatal Collaborative exists to ensure that every mother has the best possible perinatal care and every infant cared for in Virginia has the best possible start to life.

The VNPC was established in 2017 to address maternal health issues and improve health outcomes for all pregnant and parenting people, their families, and their infants. The VNPC’s mission aims to ensure that every pregnant and parenting person has the best possible perinatal care and that every infant across Virginia is cared for in a way that gives them the best possible start to their lives.

The VNPC utilizes an evidence-based, data-driven collaborative process that brings together maternal health providers, pregnant people and their families, and state leadership to iteratively strengthen maternal health practices across a wide range of metrics.

Since their inception, the VNPC has successfully completed several initiatives aimed at increasing maternal and newborn health within Virginia. These initiatives include:

- ★ The development of a **maternal health dashboard** for the Commonwealth;
- ★ A **medical waiver training** offered to providers, at no cost, which focuses on neonatal abstinence syndrome and mothers with substance use disorder;
- ★ An **antibiotic stewardship program** intended to reduce overall antibiotic exposure in neonatal intensive care units;
- ★ The collection of data on obstetric hemorrhage across the Commonwealth;
- ★ And the development of the **Project EMBRACE** which seeks to increase discussion about and healthcare coverage during the perinatal and postpartum stages of pregnancy.

Each of these initiatives seek to foster a holistic form of healthcare that not only accounts for gaps in current perinatal healthcare practices but educates medical professionals and pregnant people alike on the many potential issues that may occur during a pregnancy.

In 2021, the VNPC began a strategic planning process intended to identify key areas of need across the Commonwealth and foster the development of initiatives aimed at reducing the identified gaps and issues in maternal and child healthcare. This strategic planning process led to the development of the following four strategic priorities which were put forth in their 2023 – 2026 Strategic Plan.

Priority 1: *Respectful Care*

Ensure all pregnant and parenting people and families receive quality care reflective of their needs and desires before, during, and after pregnancy

Priority 2: *Communities*

Strengthen relationships and build trust to engage diverse communities, that reflect the pregnant/parenting populations, in the work of the Collaborative

Priority 3: *Data*

Increase access, understanding, and utilization of perinatal and infant care data

Priority 4: *Communication*

Share a vision of success that mobilizes the community to action and change

These broad priorities seek to guide the VNPC's decision-making to ensure that all initiatives and programs target specific maternal and child healthcare needs across the Commonwealth of Virginia. The VNPC ties a series of goals, with their intended impacts, to each of these priorities to strengthen maternal healthcare access and practices:

GOALS

1. Build and strengthen the capacity of PQCs to improve the quality of perinatal care statewide.
2. Build and strengthen data systems to improve identification and documentation of successes and barriers to optimal perinatal and infant health outcomes.
3. Invest in education and relationship building to reduce barriers and increase access to quality care.
4. Communicate the impact of PQCs to increase collaboration on perinatal initiatives and interventions.
5. Solidify the VNPC as the preferred partner in perinatal healthcare.

IMPACTS

1. Virginians have the best possible start to life.
2. All regions of Virginia will have access to the expertise, resources, and data to increase the quality of care for pregnant people and infants.
3. Reduction in bias and barriers resulting in increased access and improved quality of care for pregnant and parenting people and families.
4. Interventions will be evidence-based and adopted through communities, vested supporters, partners, and organizations collectively working together to decrease barriers and improve health outcomes for pregnant and parenting people and babies.
5. The VNPC is well positioned to lead the state efforts to improve perinatal healthcare.



2023 Projects

Much of the work that the VNPC does to improve the health of pregnant people and infants is accomplished through projects. This section provides an overview of the three main projects that the VNPC worked on in 2023 as well as one project that will be launching soon.

Project LOCATe

Because definitions and monitoring levels of care vary widely among states, the VNPC has developed Project LOCATe (Levels of Care Assessment Tool), which is a web-based tool to help birthing hospitals and newborn care units to self-assess their levels of maternal and neonatal care. CDC LOCATe is based on the most recent guidelines and policy statements issues by the American Academy of Pediatrics, the American College of Obstetricians and Gynecologists, and the Society for Maternal-Fetal Medicine.

Across the United States, data highlights the need for available healthcare for pregnant people:

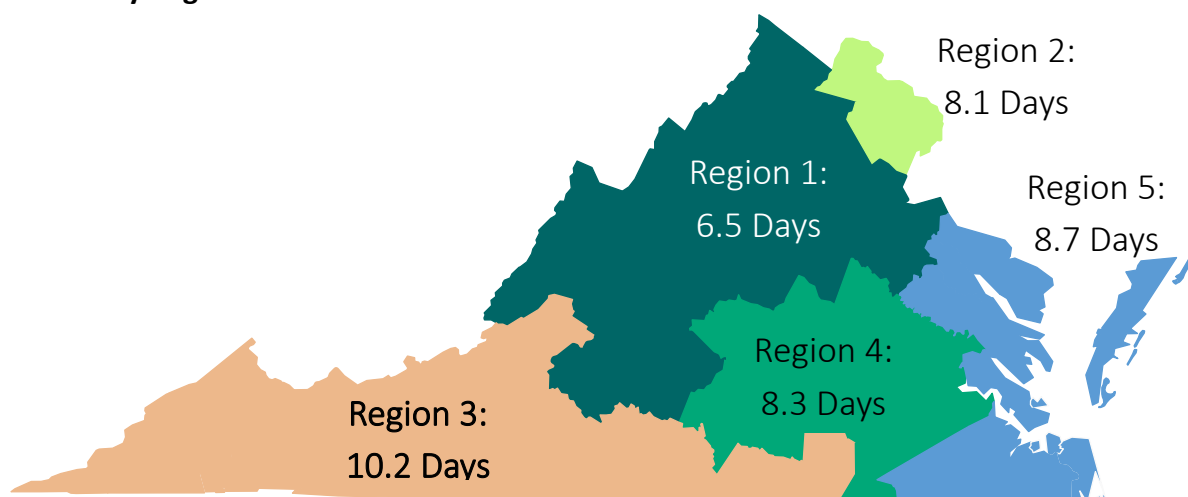
- ★ In 2021, **1,205 women died during childbirth** (a rate of roughly 33 women per 100,000 women in the United States; Hoyert, 2023)
- ★ **Non-Hispanic Black mothers have maintained the highest rate of deaths** (69.9) per 100,000 live births of any racial group (Hispanic = 28, Non-Hispanic White = 26.6; Hoyert, 2023)
- ★ Pregnant persons aged 40 years and older have the highest mortality rate (138.5) per 100,000 live births of any age group in within the United States. **The mortality rate among this group nearly doubled from 2019 to 2021** (75.5 versus 138.5; Hoyert, 2023).
- ★ In 2022, **roughly three-quarters (75%-78%) of pregnant people were able to access prenatal care** beginning in the first trimester of pregnancy. About seven percent of pregnant people received late or no prenatal care throughout the entirety of their pregnancy (CDC, 2023c).

In the Commonwealth of Virginia, data shows a stark picture of the potential outcomes of inaccessible or underprepared maternal healthcare (VNPC, 2023b):

- ★ In 2022, 474 pregnant people received a **severe maternal morbidity flag** during their delivery.
- ★ Between 2017 and 2022, **over 200,000 children were born pre-term (before 39 weeks)**, with a disproportionate number of those pre-term births involving pregnant people of color.
- ★ In the same period, **141,266 total deliveries involved a pregnant person who was diagnosed with a chronic condition** including, but not limited to, acquired hypothyroidism, anemia, obesity, and drug use disorders.

Regionally, this data varies, with the most chronic condition and severe maternal morbidity cases taking place in Virginia Department of Behavioral Health and Developmental Services' (DBHDS) most populous regions, 2 (Northern Virginia, over 2.5 million people) and 5 (Southeast Virginia, over 1.8 million people). Although the highly populous areas of the Commonwealth have the highest numbers of maternal conditions that might impact pregnancies, the more rural areas of the Commonwealth also report thousands of deliveries involving maternal chronic conditions (DBHDS region 3, Southwestern Virginia, approximately 1.1 million people). The potential dangers associated with pregnancy and delivery require hospitals, birthing centers, and other medical providers to be prepared for all situations which may arise.

DBHDS region 3 had the longest length of stay for pregnant people with severe maternal morbidity flags.



Project LOCATe (Levels of Care Assessment Tool), developed by the CDC, is a web-based assessment tool aimed at creating a standard of maternal healthcare availability and preparation across the United States (CDC, 2023a). LOCATe functions by being championed by a state-level agency or organization that works with birth facilities in the adoption of LOCATe. Once a facility has agreed to participate, they receive a link to the tool which collects data such as hospital equipment and staffing, hospital transportation, and policies/procedures (VNPC, 2023a). Once collected, this data is then sent to the CDC for analysis where they provide a score that indicates each facility's level of preparedness. **This information can then be used to develop medical center protocols and state-level funding and policy which strengthens maternal and infant health outcomes. To date, Project LOCATe has been found to be extremely successful in highlighting discrepancies between medical providers' perceived level of care and their actual ability to provide care to pregnant parents and their newborns (Madni et al., 2022; Wilkers et al., 2023).**

In late 2022, the VNPC launched their first Project LOCATe survey intended to gather data from birth facilities across the Commonwealth. Sixteen facilities participated in the first wave of the survey providing information on: hospital equipment and staffing, sub-specialists and their availability, self-assessment level of care, volume of procedures, drills and protocols for maternal emergencies, and transportation and facility-level statistics. The second wave of the survey closed in May 2023, which included an additional 18 hospitals. The third wave closed in July 2023 with four additional hospitals participating, bringing the total to 38 hospitals who have received an assessment of their level of care for maternity and newborn capacities. Below are a list of the facilities that participated in all three waves.

Wave 1: Late 2022	Wave 2: Spring 2023	Wave 3: Summer 2023
<p>Participating Facilities:</p> <ul style="list-style-type: none"> • Carilion Roanoke Memorial Hospital • Carilion New River Valley Hospital • Winchester • Mary Washington • INOVA – Fair Oaks • INOVA – Fairfax • INOVA – Alexandria • INOVA – Loudoun • University of Virginia • Augusta Health • VCU Community Memorial • Bon Secours-St. Francis • Bon Secours – Memorial Regional • Bon Secours – South Side • Bon Secours – Mary Immaculate • Bon Secours – St. Mary’s 	<p>Participating Facilities:</p> <ul style="list-style-type: none"> • Riverside Regional • Sentara Obici • Sentara CarePlex • Sentara Princess Anne • Sentara Norfolk • Sentara Williamsburg Regional • Sentara Martha Jefferson • Sentara Northern Virginia Medical Center • Sentara Rockingham • Children’s Hospital of the King’s Daughters • VCU Medical Center • Virginia Baptist • Virginia Hospital Center Health • Henrico Doctor’s Hospital • Wythe County Community Hospital • Stafford Hospital • Sentara Leigh • UVA Health Culpepper 	<p>Participating Facilities:</p> <ul style="list-style-type: none"> • Centra Southside Community Hospital-Farmville • Chesapeake Regional Medical Center • UVA Community Health – Prince William Medical Center • Riverside Shore Memorial Hospital – Onancock

Upon completion of the data collection, the VNPC shared the results of the CDC’s analysis with the providers. **These results provided crucial information for hospitals and providers regarding their ability to provide the proper level of maternal and infant care.** LOCATE worked successfully as many of the hospitals had self-assessed themselves at a level of care higher than the level of the assessment by the CDC.

- ★ Ten of the eleven hospitals that self-assessed as level III maternal care were assessed lower by the CDC (eight were placed at level II while two were placed at level I),
- ★ Half of the hospitals that self-assessed at level III (eight out of sixteen) were assessed lower by the CDC,
- ★ Nearly all of the hospitals that self-assessed at level II maternal care (13 out of 15) were assessed lower by the CDC, and
- ★ Five out of the eleven hospital that self-assessed at level II infant care were assessed lower by the CDC.

With this, hospitals and the VNPC are working to promote patient and public awareness of the levels of care that each hospital can offer at the time of data collection. Such information allows pregnant and parenting people to determine the best choice of hospital to fit their healthcare and birthing needs. Further, these results are being used to inform providers on their facilities care offerings. Through this provider education, doctors and other staff can better understand the instances in which their patients should be referred to other facilities that meet their care needs.

Project LOCATe Results to Date (based on CDC Assessment)

Participants	Levels of Maternal Care	Levels of Infant Care
★ Round 1 = 16	★ Level <I: 4	★ Level <II: 8
★ Round 2 = 18	★ Level I: 17	★ Level II: 19
★ Round 3 = 4	★ Level II: 12	★ Level III: 8
★ Total = 38 of 50 birthing hospitals	★ Level III: 2	★ Level IV: 1
	★ Level IV: 2	

VNPC’s use of Project LOCATe does not end in 2023. Looking forward, the VNPC will continue to use the results of the 2023 LOCATe assessment to further collaborate with hospitals and increase awareness of and access to care across the Commonwealth of Virginia. Starting in 2024, the VNPC will work with hospitals from around Virginia to identify which medical facilities are in their region for transferring purposes. For example, the goal is that all level II hospitals will be made aware of the level III and IV hospitals that are in their region. In collaboration, existing level III and IV hospitals will develop mentorship networks with level II hospitals to establish protocols and identify at what time and under which circumstances a patient should be transferred to a higher-level facility.

Finally, beginning in late summer 2024, all hospitals will begin the first annual reevaluation of their care and service capabilities. These annual evaluations will assist in ensuring the transfer protocols and plans remain accurate and can assist hospitals in determining their progress towards program and service implementation. In addition, the VNPC, providers, and the public can rest assured that pregnant and parenting people know where to go for services and treatment when it is needed. To further support these efforts, the VNPC is in the process of developing virtual badges that signify on an annual basis the rating level of each hospital. These badges, to be included on hospital websites, offer patients an easy-to-understand identifier of that hospital’s level of care capabilities.

The VNPC continues to investigate more ways to use the results of Project LOCATe to strengthen providers’ and pregnant and parenting peoples’ knowledge of service access across the Commonwealth. Through Project LOCATe, the VNPC, and its care provider partners, will ensure that every pregnant and parenting person has the best perinatal care and that every infant cared for in Virginia has the best possible start to life.

Next steps for Project LOCATE:

- ✳ Increase education and awareness about levels of care among health systems/providers and community,
- ✳ Provide technical support and guidance to assist hospitals with achieving and/or maintaining their desired level of care, and
- ✳ Implement regional pilot QI project.

Turn the Page

The Turn the Page project focuses on collecting stories of times when birthing people overcame challenges or received exceptional support during their journey with the maternal health system and then shares those stories on social media.

Turn the Page stands for Tracing Unheard Real-life Narratives to Pay Attention to Great Examples of patient-provider interactions, patient education and empowerment, and other events in maternal health. The project seeks to gather stories from birthing people and their experiences with prenatal, labor, and postpartum stages of care in Virginia’s maternal health system. **These stories shine light on times when birthing people overcame challenges or received exceptional support from someone during their prenatal, perinatal, and postpartum journeys.** By gathering these stories together, the VNPC hopes that these stories will lead by example and provide examples of ways to improve the maternal health system.

Kate's Story
Kate Dudley VNPC 2023 Turn the Page Project Round 1
Virginia Neonatal Perinatal Collaborative • 114 views • 6 months ago

Emily's Story
Emily Carlin VNPC 2023 Turn the Page Project Round 1
Virginia Neonatal Perinatal Collaborative • 68 views • 6 months ago

Shannon's Story
Shannon Pursell VNPC 2023 Turn the Page Project Round 1
Virginia Neonatal Perinatal Collaborative • 95 views • 6 months ago

Alison's Story
Alison Hicks VNPC 2023 Turn the Page Project Round 1
Virginia Neonatal Perinatal Collaborative • 50 views • 6 months ago

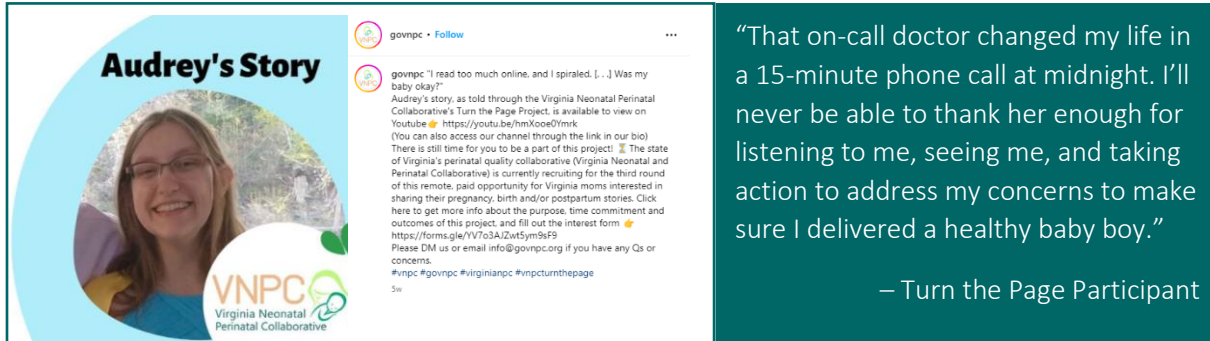
Freda's Story
Freda Williams VNPC 2023 Turn the Page Project Round 1
Virginia Neonatal Perinatal Collaborative • 51 views • 6 months ago

Audrey's Story
Audrey McDaniel VNPC 2023 Turn the Page Project Round 2
Virginia Neonatal Perinatal Collaborative • 19 views • 1 month ago

“No one told me about the things that would calm my fears, other mom stories, and here my doctor was holding my hands, looking me in the eye and providing hope. Her soft clipped Philadelphia dialect mixed with a calm demeanor somehow soothed my trepidation about motherhood, even just a little.”

– Turn the Page Participant

Several rounds of Turn the Page were held with a total of 12 stories shared. In order to participate in Turn the Page, participants fill out an interest form. Selected participants are invited to participate in an online workshop where they work on finalizing a written draft of their stories. All stories are shared via social media with permission from the participants.



Audrey's Story

govnpc • Follow

govnpc "I read too much online, and I spiraled. I. . . Was my baby okay?"

Audrey's story, as told through the Virginia Neonatal Perinatal Collaborative's Turn the Page Project, is available to view on YouTube <https://youtu.be/nmXoe0Ymrk> (You can also access our channel through the link in our bio) There is still time for you to be a part of this project! 🙌 The state of Virginia's perinatal quality collaborative (Virginia Neonatal and Perinatal Collaborative) is currently recruiting for the third round of this remote, paid opportunity for Virginia moms interested in sharing their pregnancy, birth and/or postpartum stories. Click here to get more info about the purpose, time commitment and outcomes of this project, and fill out the interest form <https://forms.gle/VV7o3AZwt5ym9sF9> Please DM us or email info@govnpc.org if you have any Qs or concerns.

#vnpcc #govnpc #virginiapnc #vnpcturnthepage

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“That on-call doctor changed my life in a 15-minute phone call at midnight. I’ll never be able to thank her enough for listening to me, seeing me, and taking action to address my concerns to make sure I delivered a healthy baby boy.”

– Turn the Page Participant

In addition to the virtual presentation of the stories, all five of the Turn the Page participants were able to share their stories to the audience at the VNPC’s Day of Learning in March 2023. In addition, two individuals from round 2 and three participants from round 3 presented their stories at the VNPC’s 7th Annual Summit in October 2023. The participants, pictured below, were able to share their stories of successful patient-provider interactions and highlight the experiences of their prenatal, perinatal, and postnatal journeys. Through this project, the VNPC hopes to continue to provide support and inspiration to pregnant and parenting people across Virginia.



Project EMBRACE

Project EMBRACE is a data-driven quality improvement project that works with birthing facilities to implement educational programming based on the needs of their facilities and populations.

Project EMBRACE (Equitable care for Mothers and Babies through Readiness, Access, and Community Expansion) works with birthing facilities throughout the Commonwealth of Virginia to address specific topics across six phases, from the early prenatal period up to 364 days after birth. Topic areas include maternal health, perinatal mental health, prevention care and counseling, human milk feeding, reproductive health.

Topic Options



Project EMBRACE also works with pregnant people and their infants throughout the six phases of pregnancy and birth which are: early prenatal, late prenatal, delivery, early postpartum, late postpartum, and transition.

Phases



The VNPC supports birthing facilities participating in Project EMBRACE to develop and implement programming based on the needs of their facilities and populations. Currently, there are 18 hospitals participating in Project EMBRACE with most participants choosing perinatal mental health as their topic. The VNPC can work with these facilities to encourage mothers to report their depressive symptoms and work with mothers to decrease their postpartum depressive symptoms. **On the next page, there is a list of participating hospitals and the topics that they have chosen to discuss for Project EMBRACE.**



Hospitals Focused on Perinatal Mental Health

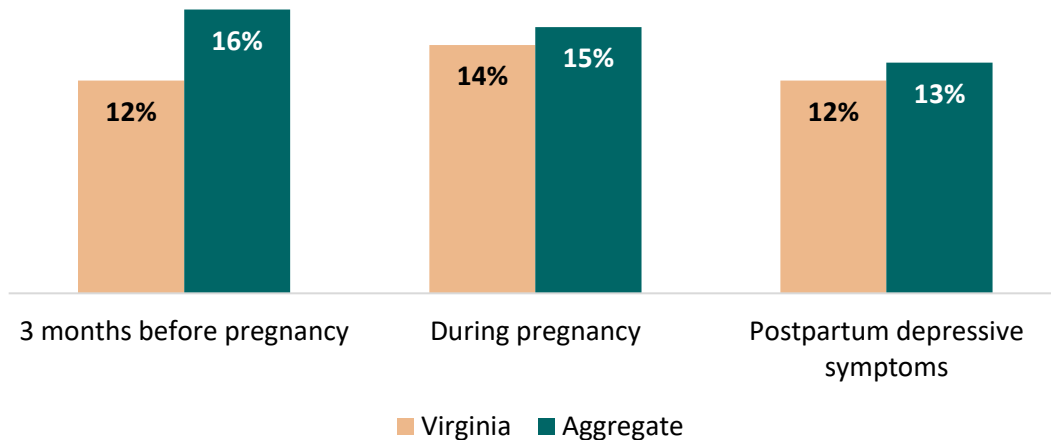
- * UVA Health
- * Bon Secours
 - * St. Mary's
 - * Mary Immaculate
 - * Memorial Regional Medical Center
 - * Southside Medical Center
 - * St. Francis
- * Carilion Roanoke Memorial Hospital
- * Carilion New River Valley Hospital
- * Sentara
 - * Sentara Leigh
 - * Sentara Norfolk General
 - * Sentara Albemarle
 - * Sentara Careplex
 - * Sentara Martha Jefferson
 - * Sentara Northern Virginia Medical Center
 - * Sentara Obici
 - * Sentara Princess Anne
 - * Sentara Williamsburg Regional Medical Center
 - * Sentara Rockingham Memorial Hospital



Hospitals Focused on Human Milk Feeding

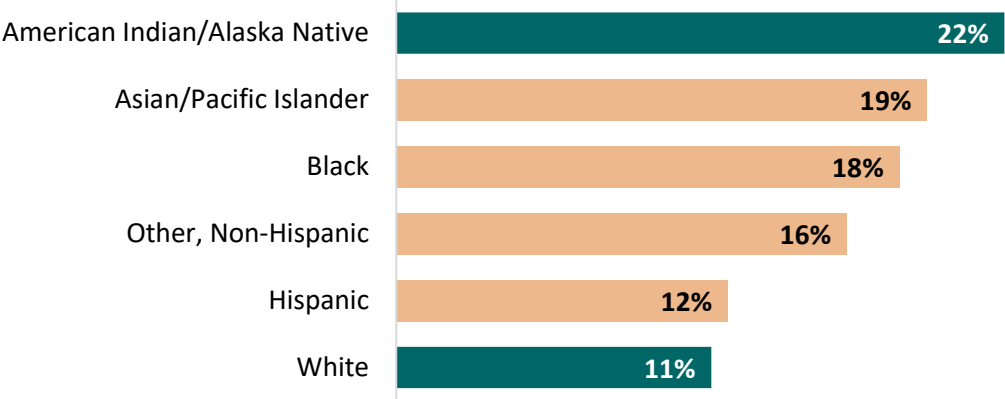
- * Ballad Health
- * Virginia Commonwealth University

According to the CDC's Pregnancy Risk Assessment Monitoring System (PRAMS), **Virginia mothers were less likely to self-report depression 3 months before pregnancy, during pregnancy, and postpartum than the rest of the country (CDC, 2021b).**



Postpartum depressive symptoms are more prevalent among BIPOC mothers than white mothers across the country. Project EMBRACE’s focus on equitable care can address the disparities in Virginia.

Across the United States, American Indian/Alaska Native mothers self-reported having postpartum depressive symptoms at double (22%) the frequency of White mothers (11%) (Bauman et al., 2020).



Project EMBRACE has already had several successes since its start in March 2023:

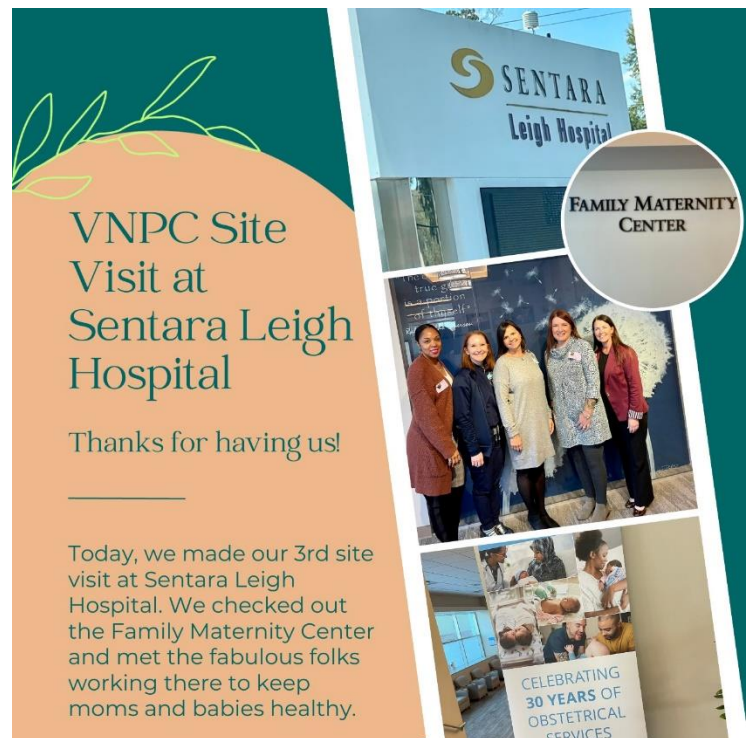
- ★ The majority of hospitals have submitted a completed workplan and baseline data for LifeQI (a medical quality improvement program),
- ★ All hospitals have attended at least 4-5 of the monthly TA meetings,
- ★ Most hospitals have submitted monthly data for analysis,
- ★ The majority of hospitals have scheduled a site visit to be held sometime between Winter 2023 and Spring 2024 (as of November 2023, three site visits have been conducted),
- ★ Carillion Roanoke provided a presentation of their Year 1 work for hospitals at the October TA meeting which included information on successes and challenges, and
- ★ All hospital points of contact have been educated about the LifeQI platform and the Maternal Health Dashboard – with the ability to access and input their data.

Although there were many successes over the past year, there were challenges to overcome, particularly related to data collection and project acclimation. Overcoming these challenges led the VNPC to take a hands-on collaboration with hospital partners which included:

- ✳ Working with facilities to identify what data they can collect (e.g., discharge paperwork),
- ✳ Facilitating problem solving sessions during site visits to develop more efficient data collection processes,
- ✳ Completing data analysis monthly with the information entered into LifeQI,
- ✳ Holding 1:1 check-ins for troubleshooting,
- ✳ Creating a handbook with helpful items and tutorials related to data collection,
- ✳ Holding orientation sessions to acclimate participants to the project,
- ✳ Holding office hours and consultations as needed, and
- ✳ Providing monthly TA calls to allow for facilities to collaborate and learn from each other.

While Project EMBRACE has already found great success, the VNPC is still actively recruiting hospitals to participate. Currently, the VNPC is working with the Virginia Hospital and Healthcare Association (VHHA) to identify potential hospitals. In addition to these efforts, the VNPC has developed a social media campaign and provides information on its website for hospitals to learn how to get involved with Project EMBRACE.

There is still much work planned for Project EMBRACE. The VNPC, in collaboration with participating hospitals, finished its first plan-do-study-act (PDSA) cycle using data provided by participants from September through November. From this session, participants are provided with their run charts (consisting of monthly plotted data) to identify the successes and challenges they are facing in their facilities. This information will allow them to identify what needs to be maintained and which services/programming need to be improved to increase care options.



In 2024, the VNPC plans to grow Project EMBRACE by:

- ✳ Continuing to collect monthly data and data summaries at the annual Day of Learning Event and presenting those summaries at the VNPC's 8th Annual Summit in October 2024,
- ✳ Continuing to support, mentor, and provide technical assistance to participating hospitals,
- ✳ Continuing site visits with a goal of completing the remaining 17 site visits in 2024,
- ✳ Adding the remaining birth hospitals as active participants in Project EMBRACE, and
- ✳ Building a toolkit of resources and documents for this project, to live on the VNPC website, to allow for easy access by hospitals and communities.

Through Project EMBRACE, the VNPC continues to drive evidence-based, data-driven collaborative change that improves the health and care of all pregnant and parenting people, their children, and their families across the Commonwealth of Virginia.

Eliminating Bias in the Dyad Care (EBDC)

Eliminating Bias in the Dyad Care (EBDC) is a quality improvement (QI) project that will focus on improving outcomes for Virginia's pregnant and parenting families and infants impacted by substance use disorder.

This project will focus on the dyad, both mom and baby, recognizing the unique needs for both mom, baby and the dyad. **All this work will be rooted in a framework of respectful care and eliminating bias. This will ensure that pregnant and parenting families experiencing substance use disorder receive optimal care to improve outcomes among this population.**

The EBDC project will provide strategies and activities that incorporate:

- ✳ Education
- ✳ Care Coordination
- ✳ Communication
- ✳ Data
- ✳ Screening

EBDC has three aims:

Aim 1 - Improve the care for birthing persons who use substances

Aim 2 - Improve the care of newborns exposed to substances prior to birth

Aim 3 - Eliminate the bias and stigma associated with perinatal substance use and exposure

The VNPC has selected **six hospitals** to pilot this QI project, to learn and ensure that the best version of the project is developed and implemented for communities across the Commonwealth. Hospitals participating in this pilot include:

- ★ VCU
- ★ Sentara Norfolk General
- ★ UVA
- ★ Carilion Roanoke Memorial Hospital
- ★ Centra
- ★ Winchester Medical Center

An introductory meeting was held in mid-October 2023 to provide hospitals with information about the project and gain their buy-in. In the next year, the EBDC Project will continue to grow. The next steps for this project include:

- ★ Developing a workplan, driver diagram, and metrics
- ★ Developing learning materials and short videos for provider and patient education
- ★ Collecting baseline data
- ★ Collecting monthly data, which will begin by mid-2024.

Once the pilot phase is complete, the EBDC project will be open to any hospital that would like to participate in the project.

Key Events

Webinars

The VNPC holds monthly webinars on the third Tuesday of the month at noon Eastern Standard Time. On average, there are 50-60 attendees each month, and attendees are providers, midwives, doulas, nurses from local health districts and health systems, community partners and state agencies. All webinars are recorded and placed on the VNPC [YouTube channel](#) for viewing later if anyone misses the live webinar.

A survey is sent to the VNPC list serves annually to gauge areas of interest among maternal and infant health professionals across Virginia to determine the webinar topics. Topics discussed this year include infant and early childhood mental health, menstrual equity, and 2SLGBTQIA+ communities and the perinatal experience.

Month	Topic
January	VNPC Year in Review
February	Infant & Early Childhood Mental Health
March	Federal Resources for Maternal Health
April	Family Physicians and Maternal Health
May	Menstrual Equity
June	2SLGBTQIA+ Communities and the Perinatal Experience
July	Implementation Science
August	Balancing Safe Sleep and Breastfeeding Recommendations: Strategies to Reduce Infant Mortality
September	Cardio Obstetrics
October	Limits of Viability: Reviews of Provider Knowledge

Continuing provider education is important to improve maternal and infant healthcare. Research shows that healthcare professionals participating in a perinatal continuing education program significantly increased their knowledge, and they saw significant changes in health care practices one year after completion of the program.

The continuous education and collaboration of Perinatal Quality Collaboratives have contributed to improving maternal and infant outcomes, for example:

- ★ Illinois Perinatal Collaborative **increased the percentage of patients treated for severe high blood pressure within 60 minutes from 41% to 79%** in the first year of the project (Centers for Disease Control and Prevention, 2022).
- ★ Northern New England Perinatal Quality Improvement Network **increased access to medication-assisted treatment from 11% to 36%** and increased breastfeeding counseling from 51% to 72% (Centers for Disease Control and Prevention, 2022).
- ★ California Maternal Quality Care Collaborative **decreased rates of serious pregnancy complications among women with severe bleeding during pregnancy or delivery from 22.7% to 18%** in 14 months (Centers for Disease Control and Prevention, 2022).

As noted above, the Illinois Perinatal Quality Collaborative improved timely treatment for pregnant people with severe blood pressure. Part of the organization’s strategic plan to achieve this was to hold two face-to-face meetings and 18 monthly one-hour collaborative learning webinars. The inclusion of these learning webinars in the strategic plan to reduce pregnancy complications in pregnant people with severe high blood pressure shows the importance of these learning collaboratives to improve maternal and infant outcomes.

Fourth Annual Day of Learning

The VNPC's Fourth Annual Day of Learning was held March 19 - 20, 2023 at The Westin in Richmond, Virginia. The VNPC welcomed 162 guests, 16 speakers, 10 vendors, and two poster presentations. The Conference's theme was "Reframing the Why." **The day was designed to best fit the participants' needs and professional path, to allow them time to network and learn from their peers, and to challenge themselves to look at maternal and infant health in a new way.** Participants learned about the Virginia Neonatal Perinatal Collaborative, the organization's strategic plan and projects, the role and benefits of perinatal quality collaboratives, reviewed maternal and infant data in Virginia, and participated in activities to develop and reframe their why.

Seventh Annual VNPC Summit

The VNPC held its Seventh Annual Summit from October 22-23, 2023 in Williamsburg, Virginia. The Summit was an immersive and collaborative experience designed for clinical and community care providers. The Summit included updates from the VNPC as well as sessions with topics including perinatal mental health, General Assembly updates, Department of Corrections and maternal health, and Project Rebyrth®.

It's notable that this was the VNPC's first ever two-day Summit, which speaks to the growth in attendance! In total, there were 89 attendees on Sunday, 47 reception attendees on Sunday evening, and 164 attendees on Monday.

"The personal stories were so impactful to see our healthcare system through a different and more personal lens."

-Summit Attendee

Also new to this year's VNPC Summit was the first ever Donald Dudley Awards for maternal and infant health leaders. This year, the VNPC awarded two awards: the Donald Dudley Community Recognition Iced Tea Award and the Donald Dudley Hospital Recognition Bacon Award. **Roxanne Harris, MSN, RN, IBCLC, CCE from August Health was this year's Iced Tea Award winner.** The Iced Tea Award recognizes someone who has improved maternal and/or infant healthcare in a community setting. Roxanne was recognized for her work with the Candy Wrapper Girls. She identified the treatment, care, and education needs for pregnant and parenting formerly incarcerated or recently released women in her community. Through

"I am now aware of a variety of existing services and organizations I can fine ways to connect with my own hospital system to better serve my community."

-Summit Attendee

her own hard drive and dedication, Roxanne developed a program that provides these women with maternity clothes, resources, and connections to much-needed services. She also wrote and was successfully awarded a grant that allows pregnant and/or recently delivered mothers to have a maternity/newborn photoshoot. Roxanne's work is making great strides in ensuring that all pregnant and parenting people are provided the respect and dignity that they deserve.

The winner of the 2023 Donald Dudley Hospital Recognition Bacon Award was Chris Chisholm, MD. This award honors an individual who has made a significant impact on maternal and/or infant health in a hospital setting. Dr. Chisholm was selected due to his long-standing

support of the VNPC’s AIM Patient Safety Bundles and his dedication to their adoption in clinical settings. Not only has he been a supporter of the VNPC’s Patient Safety Bundles, but he has help lay the foundation for the VNPC’s current LifeQI work.

The VNPC’s 7th Annual Summit was a resounding success and speaks to the growth of the organization and their impact on the maternal/infant health landscape across the Commonwealth. **The VNPC team hopes to see you in October 2024 at the next summit!**

Association of Maternal and Child Health Programs 2023 Conference Presentation

The 2023 Association of Maternal and Child Health Programs (AMCHP) Conference took place in May 2023 in New Orleans, LA. This conference, themed around cultivating diverse leaders in maternal and child health, was a three-day long event that brought together practitioners and community leaders from across the county to showcase their work and discuss diversity in experiences, cultures, and abilities to nurture future leaders that can build healthier communities.

Retrospective Analysis of the Virginia Maternal Mortality Review Team’s Recommendations from Previous Reports



Shannon Pursell, MPH (she/her/hers) and Melanie J. Rouse, PhD (she/her/hers)

<p>INTRODUCTION</p> <p>Maternal Mortality Review teams (MMRT) have long been established. Through CDC efforts and the collective focus on maternal health, programs and states now rely on the findings gleaned from MMRT. MMRT develops reports with recommendations based on cases reviewed.</p>  <p>There is significant research and literature on the implementation of MMRT recommendations. However, there is little research or literature on which recommendations weren't implemented and why, or what barriers or challenges were identified with implementation. This presentation touches on work done so far in meeting our first objective of a 3-pronged project:</p> <p>OBJECTIVES</p> <ol style="list-style-type: none"> 1) RESEARCH: Use retrospective analysis to review past reports' recommendations 2) Gauge the true impact of these recommendations with surveys 3) Identify areas of improvement in implementation, make recommendations 	<p>RESEARCH: OBJECTIVE 1</p> <p>MATERIAL</p> <p>Ten MMRT reports were published between 2007 and 2019.</p> <p>ANALYSIS</p> <p>Reviewing recommendations in MMRT reports in the 12-year span revealed the following themes:</p> <ul style="list-style-type: none"> Improve public education and awareness Improve clinician training and education Improve data collection Strengthen systems Encourage collaboration Establish partnerships Improve access to care <p>Recommendations vary in composition across reports. Components not present in all recommendations:</p> <ul style="list-style-type: none"> Agency and department names Timeline details Goals, objectives Deliverables Metrics 	<p>METHODOLOGY</p> <ul style="list-style-type: none"> Review key findings of reports. Identify recommendations of reports. Compare recommendations across reports. Analyze language of recommendations and potential effectiveness of recommendations. <p>RESULTS</p> <p>Recommendations from the reports varied in language, specificity, and achievability. As a result, potential implementations' effectiveness is variable. Across the reports, several themes were constant and ranged from improving education to creating policy, to strengthening state and community systems and collaborations.</p> <p>CONCLUSION</p> <p>Virginia has much left to do in improving maternal health outcomes and equity. Therefore, MMRT recommendations that are specific, measurable, timely and relatable to each impacted community or population are crucial. Recommendations such as these will pave the way for VNPC to catalyze the strengthening of program designs, policies and facilitate positive change.</p> <p>RECOMMENDATIONS</p> <ul style="list-style-type: none"> Future MMRT report recommendations should include more specific language Create reports that follow up on outcomes of implemented recommendations after a certain time period. <p>ACKNOWLEDGEMENTS</p> <p>Maternal Mortality Review Team Virginia Office of the Chief Medical Examiner Virginia Neonatal Perinatal Collaborative</p> <p>CONTACT</p> <p>Shannon Pursell, Executive Director Virginia Neonatal Perinatal Collaborative shannon.pursell@vcuhealth.org</p>
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The VNPC had a presence at AMCHP this year as the VNPC’s Senior Director, Shannon Pursell, and Dr. Melanie J. Rouse presented a poster titled, “Retrospective Analysis of the Virginia Maternal Mortality Review Team’s Recommendations from Previous Reports.” This poster presented an analysis of ten Maternal Mortality Review Team (MMRT) reports published between 2007 and 2019 with a goal of better understanding what MMRTs recommend be implemented to increase maternal and infant healthcare. Broadly, MMRT reports recommend the following efforts:

- ★ Improve public education and awareness,
- ★ Improve clinician training and education,
- ★ Improve data collection,
- ★ Strengthen systems,
- ★ Encourage collaboration,
- ★ Establish partnerships, and
- ★ Improve access to care.

While there is much left to do to improve maternal and infant health outcomes and equity, the VNPC is at the frontlines of developing programming, policies, and legislature to ensure that every infant cared for in Virginia, and their parents, receive the best perinatal care and have the best possible start to life. **The VNPC’s various initiatives, such as Project LOCATe, Project EMBRACE, and EBDC aim to take these MMRT recommendations and make them a reality.**

Infrastructure Changes

New VNPC Infrastructure

Responsibilities

The VNPC has made a series of updates to the responsibilities of their various agency structures. These new responsibilities govern who may participate in council membership, advisory chairs, the Board of Directors, and project-based workgroups. These changes were approved in June 2023 and adopted in August 2023. They are described in detail below.

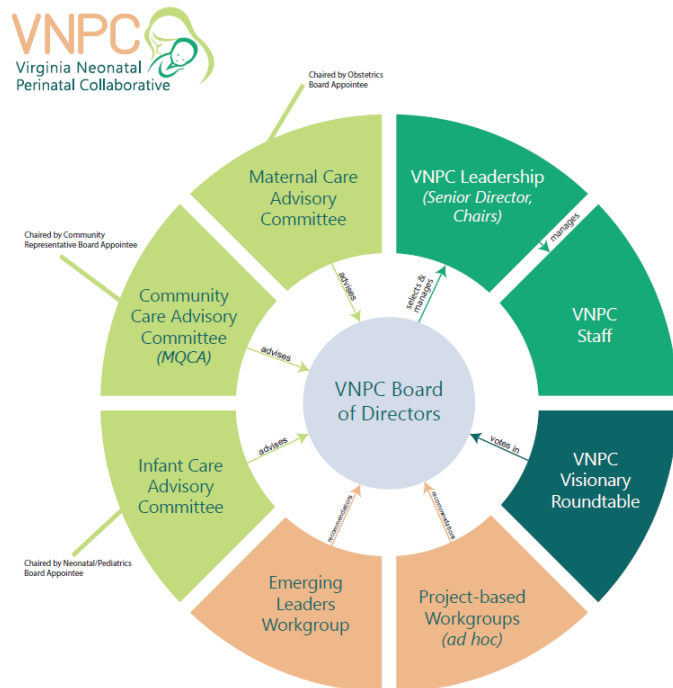
VNPC Vision Alignment Champion Execution (VACE) Roundtable

In August of 2023, the VNPC developed a new governance structure which includes the VNPC Vision Alignment Champion Execution (VACE) Roundtable. The VACE Roundtable is tasked with electing and voting on Board of Director members as well as determining upcoming quality improvement projects. **VACE consists of 80-100 representatives who are involved in the care of those who are pregnant and their infants.** These subject matter experts may consist of, but are not limited to, physicians, advanced practice nurses, midwives, doulas, community health workers, staff nurses, pharmacists, social workers, respiratory therapists, hospital administrators, public health personnel, epidemiologists, and patient advocates.

VACE Roundtable membership is ongoing, but to stay in good standing, Roundtable members are required to attend the Annual Summit every October. If attendance is not possible, they must participate in no less than two VNPC events each year. Not only do VACE members get to contribute to the VNPC and the state of perinatal and infant health, but they receive access to various educational and networking opportunities including webinars, training, and in-person meetings.

Board of Directors

VNPC's Board of Directors is comprised of **9-15 volunteer voting members that represent vested partners who actively participate in the care of people who are pregnant, those who are parenting, and their infants (up to their first birthday).** Members of the Board of Directors are tasked with selecting and managing VNPC leadership including the Chairs and the VNPC Senior Director. Board members represent



the diverse needs of pregnant and parenting people across the Commonwealth with a specific focus on racial, ethnic, geographic, and socioeconomic diversity. **The Board of Directors are guided by three duties:**

- ★ **Duty of Care** – Each Board Member has a responsibility to participate actively in making decisions on behalf of the organization and to exercise their best judgment while doing so.
- ★ **Duty of Loyalty** – Each Board Member must put the interests of the organization before their personal and professional interests when acting on behalf of the organization in a decision-making capacity. The organization’s needs come first.
- ★ **Duty of Obedience** – Board Members bear the responsibility of ensuring that the organization complies with the applicable federal, state, and local laws and adheres to its mission.

Board Members are selected from active Council Members (see below). New Board Members are recruited and vetted by current members of the Board. The active Board of Directors then generates a list of recommended Council Members who should be considered to move up to the Board. This list is then voted on at the annual summit, held every October, by Council Members who hold good standing with the VNPC. If the recommended list is voted down by Council Members, then the Board of Directors generates a second list of potential candidates who are voted on shortly after. If the second list is voted down by the Council, then the board votes on the selections and makes the final decision. Newly elected Board Members serve three-year terms. Upon completion of the first term, the individual may elect to apply for a second consecutive three-year term. Board Members may only serve two terms.

The Board of Directors is required to meet every quarter (January, April, July, October) for a total of four times in a calendar year. These meetings are three hours in length, with at least one meeting held in person. Meetings cover the current VNPC initiatives and other related topics. To maintain a good standing, Board Members must attend all quarterly meetings and treat all members of the Council and Board with respect. Board Members may also choose to participate in ongoing project workgroups, but such participation is not required. Those who fail to uphold these requirements are subject to a warning on the first offense and immediate, permanent removal on the second offense.

Advisory Chairs

Three members of the Board of Directors serve as non-voting Advisory Chairs who specialize in obstetrics, pediatrics/neonatology, and community care. These representatives are either respected high-level health professionals or community leaders who have relevant knowledge of community care. This level of expertise is necessary as Advisory Chairs are tasked with listening to the membership council and identifying and advocating for the VNPC’s projects, initiatives, and strategic priorities.

Advisory Chairs are recruited directly by the VNPC’s Senior Director. Like members of the Board of Directors, Advisory Chairs serve a three-year term with the option of a second consecutive three-year term with approval. **Three advisory committees exist each focused on a different level of care, including:**

- ★ Maternal Care,
- ★ Infant Care, and
- ★ Community Care.

Council Members

Council members for the VNPC represent various racial, ethnic, geographical, and socioeconomic demographics across the Commonwealth. **Broadly, council membership is open to anyone involved in the care of people who are pregnant, those who are parenting, and their infants (up to their first birthday).** While council members may include medical professionals, including physicians, nurses, and midwives, any interested layperson or family member may serve on the council. In this role, council members serve as guides for the VNPC and its work by offering recommendations to advisory chairs on ongoing and new VNPC projects and strategies. Council members also play a role in selecting new members for the VNPC's Board of Directors. To stay in good standing, council members must attend the annual conference. When such attendance is not possible, they are required to participate in at least two VNPC events annually. All council members who maintain good standing will receive educational and networking benefits through the VNPC which include webinars, trainings, and access to in-person meetings.

Emerging Leaders Workgroup and Project-Based Workgroups

The Emerging Leaders Workgroup and the project-based workgroups are created by the VNPC Senior Director and are tasked with creating goals, workplans, and supporting documents for Board-approved projects. Each workgroup is given a timeline with a definitive start and end date. **Workgroups consist of a staff-appointed chair who leads the workgroup, as well as Council Members that are in good standing and have either subject matter expertise or a specific interest in the project.** Should the chair be unavailable for any given meeting, the VNPC Senior Director may appoint a proxy for that meeting.

Once formed, the workgroup will provide quarterly updates on the project to the Board of Directors and is tasked with ensuring that their workgroup is fully staffed. Should a workgroup member need to leave the group, the workgroup is required to collaborate with the VNPC staff to recruit and retain workgroup members. Each workgroup is tasked with setting their own meeting schedule, either in-person or virtually, based on the needs of the project. Once the workgroup has successfully prepared the project for launch, it is then disbanded.

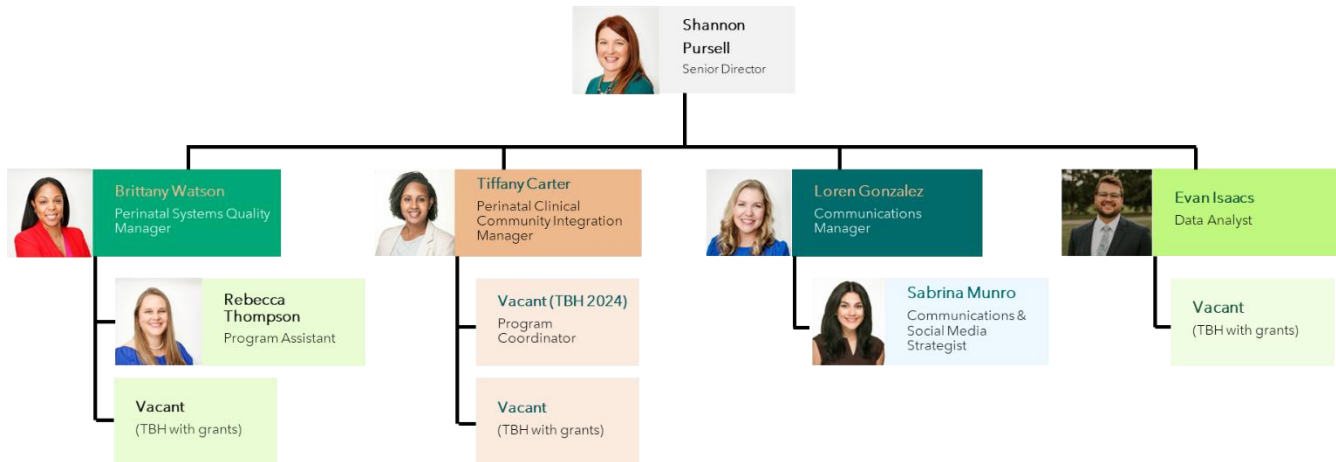
Staff

In the six years since the VNPC was established, it has been successful in increasing funding, expanding program offerings, and growing its staff. **The VNPC staff grew from two in 2022 to six full-time staff, one consultant, and three student interns by the end of 2023.**

In 2022, the VNPC had two full-time employees (the VNPC Senior Director and the VNPC Program Coordinator). In January 2023, the VNPC hired Brittany Watson as the Perinatal Systems Quality Manager.



In April 2023, Loren Gonzalez was hired full-time as Communications Manager. Sabrina Munro, the previous Program Specialist received a full scholarship to pursue her master’s in nursing at the University of Virginia and moved into a consultant role as Communications Coordinator. Then, in August 2023, Tiffany Carter was hired as the Perinatal Clinical Community Integration Manager. Evan Isaacs joined the team in October 2023 as a Data Analyst. Shortly after, Rebecca Thompson started as a Program Assistant in November 2023.



In addition to growing its staff, the VNPC has also started to work closely with students from various universities and schools across the Commonwealth. Currently, the VNPC has two University of Richmond Bonners Scholars, a sophomore and a senior, and an intern from Virginia Commonwealth University who is currently working on her Ph.D. Additionally, the VNPC worked with a master’s student on a capstone project that fulfilled her degree requirements at George Mason University. The VNPC Senior Director is also currently working with a student at Henrico County School in an AP research course and another master’s student from Old Dominion University.

Funding

As of 2023, the VNPC is funded by several grants provided by various funding sources. Details of each of these grants are included below.

CDC Perinatal Quality Collaborative Grant

The VNPC was awarded the CDC Perinatal Quality Collaborative grant on September 30, 2022. This five-year grant provides the VNPC \$250,000 annually to support its various initiatives and expenditures. The VNPC is currently in year two of this grant and applied for an additional \$83,000 in supplemental funding.

Funds for this grant are being used to:

- ★ **Implement Project EMBRACE** in all 50 birth hospitals through monthly technical assistance calls and monthly data submissions,
- ★ **Implement the pilot for the “Eliminate Bias in the Dyad of Care Project”** during 2023, focusing on improving substance use in the dyad, and
- ★ **Hold bimonthly QI calls with all hospitals** allowing them to learn from each other and work towards a common goal of eliminating health disparities, through the use of the Maternal Health Dashboard, tailoring their work to areas of opportunity within their communities.

Enhancing Reviews and Surveillance to Eliminate Maternal Mortality

The VNPC is a subrecipient of the CDC Enhancing Reviews and Surveillance to Eliminate Maternal Mortality (ERASE MM), from the Virginia Department of Health's, Office of the Chief Medical Examiner through the Division of Death Prevention, which houses Maternal Mortality programs, including Virginia's Maternal Mortality Review Team. The VNPC is currently in the second year of this two-year grant in which it receives \$164,000 annually. These funds support various endeavors including:

- ★ Implementing recommendations from the [maternal mortality reports](#),
- ★ **Conducting a retrospective analysis** of previous recommendations from 20+ years of past maternal mortality reports and their outcomes,
- ★ Advertising and distributing data widely,
- ★ Evaluating **the performance and usefulness** of the system for purposes of prevention strategies, and
- ★ Evaluating the implementation of **prevention strategies** from the team's recommendations.

HRSA State Innovation Grant

The VNPC was awarded the HRSA State Innovation Grant on September 30, 2023 which provides an annual award of \$1.5 million over a five-year period. The majority of the State Innovation Grant funds will be distributed to Urban Baby Beginnings (UBB) to implement activities at the community level. This collaboration between the VNPC, UBB, and their key partners is to:

- ★ Foster an inclusive and diverse workforce **that promotes equity, effectiveness, and retention in maternal health**, ensuring equitable access to high-quality care, and addressing the unique needs of diverse populations,
- ★ Drive innovation in maternal health service delivery by **promoting and implementing forward-thinking approaches, technologies, and practices** that enhance the quality, accessibility, and effectiveness of care for pregnant individuals and new mothers,
- ★ Enhance state-level maternal health data and surveillance systems to **improve the collection, analysis, and reporting of comprehensive and accurate data** to better understand maternal health trends, disparities, and outcomes, and
- ★ **Establish a state-focused maternal health task force** that fosters collaboration and engagement among all relevant partners, promoting cross-system alignment and integration while working towards improved maternal health outcomes in Virginia.

The Pathways Project Grant

The VNPC is partnering with Eastern Virginia Medical School to implement the Pathways Project with a focus on working with pregnant and parenting women impacted by substance use disorder. As a part of the implementation and assisting with the data workgroup, the VNPC received \$20,000 as a subaward.

Communication

To foster communications and engagement, the VNPC embarked on a rebrand to reflect the growth of the organization and its vision for what the future holds more accurately. As a part of this effort, a new website was designed, developed, and launched between April and May of 2023. This new website, govnpc.org, houses all of the VNPC's active initiatives, resources, events, webinar recordings, and reports. The website also includes a narrative describing the VNPC's role as the Commonwealth of Virginia's PQC and how they serve pregnant and parenting people and their infants. The website has been overwhelmingly positively received since its development. The previous VNPC website had an average of 111 users a month and 158 sessions in 2022. The new website's traffic averages 230 users a month and 356 sessions.



As a part of these rebranding efforts, **all social media channel graphics and handles were changed to @govnpc to match the new web domain.** Further, the VNPC newsletter was restructured and renamed to now be a “Monthly Delivery” and “Quick Kicks” for ad hoc emails. This rebranding was also successful as the newsletter open rate has increased by 3.2% compared to the previous audience average. The quantity of emails sent also increased by 45% and the click rate along from August through October of 2023 increased by 7%. In August 2023, the VNPC also invested in a dynamic QR code tool that can direct users to more information about the VNPC. In this short time, the QR code has resulted in 267 scans across 136 unique users. **Finally, the VNPC designed a new mascot, the VNPC bears (shown to the right), that has increased engagement with all of the VNPC's content.**



In addition to the many communications updates to the VNPC, the Maternal Quality Care Alliance (MQCA), the community arm of the VNPC, launched a new website, mqcalliance.org, in October 2023. This website provides an overview of the MQCA's goals and information and resources to the community.

Looking forward to 2024, the VNPC is developing a comprehensive 2024 strategic communications plan for the first time since its inception. This plan will guide all communications initiatives for 2024 and will look for new and innovative ways for the VNPC to connect with communities across the Commonwealth.

Legislation Follow-Up

The VNPC has been involved with legislative efforts throughout the year. Below are descriptions of the four main bills that have impacted the work that the VNPC does.

Senate Bill 1275: Midwives' Ability to Administer Medication

Introduced in January 2023, this bill was sought to adopt regulations governing the practice of midwifery in the Commonwealth, particularly related to the administration of medications and medical devices by midwives.

This bill allows midwives to administer a limited set of medications to patients while prohibiting prescriptive authority. The administration of drugs is extremely limited for midwives as SB1275 (2023) prohibits midwives' obtainment, possession, and administration of drugs that fall under Schedules I through V of the Drug Control Act in Virginia (1970). Therefore, midwives may only administer certain substances which are not drugs in the conventional sense but may have some medical use. These "drugs" might include, but are not limited to, inhalants, such as nitrous oxide, for the use of calming patients during delivery.

As this bill affords more authority to midwives, it also places a number of new regulations including:

- ★ Addressing the **requirements for licensure to practice midwifery, including the establishment of standards of care;**
- ★ Ensuring **consistency with the North American Registry of Midwives' current job description for the profession and the National Association of Certified Professional Midwives' standards of practice,** except that prescriptive authority is limited;
- ★ Ensuring **independent practice;**
- ★ Requiring midwives to **disclose to their patients, when appropriate, options for consultation and referral to a physician and evidence-based information on health risks associated with birth of a child outside of a hospital or birthing center,** including risks associated with vaginal births after a prior cesarean section, breech births, births by women experiencing high-risk pregnancies, and births involving multiple gestation;
- ★ Providing for an **appropriate licensing fee,** and;
- ★ Requirements for **licensure renewal and continuing education.**

Perhaps most important to the VNPC, is that SB1275 requires that any licensed midwife who obtains, possesses, and administers drugs and devices within the scope of their practice complete all Alliance for Innovation on Maternal Health patient safety bundles as advanced by the VNPC. A substitute for SB1275 was presented by the Virginia Senate in February 2023 which made minimal changes to the original bill.

The bill passed the Virginia House of Delegates in mid-February and was formally adopted by Governor Youngkin in March 2023. The passing of SB1275 solidifies another triumph for the VNPC as more practitioners will be required to complete the Alliance for Innovation on Maternal Health patient safety bundles. This marks one step closer to ensuring that every mother has the best possible perinatal care across the Commonwealth.

In partnership with the Alliance for Innovation on Maternal Health, the American College of Nurse-Midwives, and the Centers for Disease Control and Prevention, the VNPC participated in a two-hour webinar, with over 200 people registered nationally. This webinar was recorded and will be available with Continuing Education Units for two years. The VNPC's next step is to develop an additional webinar about medication that midwives can carry and administer within their scope of practice, how to administer, contraindications of the meds, dosing, etc.

Senate Bill 1531: Mandated Use of the Maternal Health Patient Safety Bundle; Secretary of Health and Human Services to Convene Workgroup

Introduced in January of 2023, this bill directed the Virginia Department of Health and all other agencies of the Commonwealth to support the efforts of VNPC to the fullest extent practicable and to pursue opportunities to maximize public-private partnerships with the VNPC.

In addition to garnering support for the VNPC, SB1531 also dispensed language requiring that the Virginia Board of Health amend its regulations to require that all hospitals participate in the Alliance for Innovation on Maternal Health patient safety bundle as was being championed by the VNPC. Further, SB1531 advances the VNPC's ability to develop evidence-based best practices and recommendations across Virginia through guaranteed state funds to the VNPC by November 1 of each calendar year.

SB1531 was unanimously agreed upon by the general State Senate in early February of 2023. The bill was then passed to and unanimously agreed upon by the House Committee on Health, Welfare and Institutions and then referred to the House Committee on Appropriations. The House Committee on Appropriations then offered a substitute for the bill which tasks "the Secretary of Health and Human Resources to convene a work group to facilitate strengthening collaboration on neonatal and perinatal care of women and infants to positively impact maternal and child health care outcomes in the Commonwealth" (S.B. 1531, 2023). This substitute bill that included the work group was unanimously approved by the House and Senate and was formally approved by Governor Youngkin in March of 2023.

The work group consists of representatives from the Virginia Department of Health, the Department of Medical Assistance Services, the VNPC's leadership and partner organizations, the Virginia Hospital and Healthcare Association, the Virginia Association of Health Plans, the Medical Society of Virginia, and other relevant vested partners and seeks to examine public-private partnerships to support the VNPC and make various recommendations to guide the VNPC in their ability to accomplish several goals. **These recommendations include:**

- ★ The **successful implementation of the Alliance for Innovation on Maternal Health patient safety bundles and other newborn quality improvement initiatives** on a statewide basis;

- ✳ Maximization of **public and private funding**;
- ✳ Distribution of **grants on an efficient, effective, and equitable basis**; and
- ✳ Determining **the best structure and placement for the Collaborative**.

These new recommendations are due to be reported by November 1, 2023. This bill is seen as a major victory for the VNPC as it allows the VNPC to collaborate with state vested partners more readily and provides support for ongoing projects including, but not limited to, the implementation of the Alliance for Innovation on Maternal Health patient safety bundles across the Commonwealth.

House Bill 1567: Virginia Department of Health to Convene Workgroup to Reduce Maternal and Infant Mortality Rates

Introduced in January 2023, HB 1567 requires that the Virginia Department of Health convene a work group in collaboration with the VNPC, the Virginia Maternal Quality Care Alliance, and Urban Baby Beginnings to evaluate strategies intended to reduce maternal and infant mortality rates.

From these evaluations, the work group will provide recommendations aimed at enhancing the current maternal and public health systems by expanding the perinatal health hub model. The proposed work group would be “guided by the Virginia Health Care Foundation and must include representatives from the Department of Medical Assistance Services, managed care organizations, and the Maternal Mortality Review Team, along with licensed and unlicensed providers of maternal and child health services, community health care workers, vested partner groups, faith-based organizations, and community-based organizations” (H.B. 1567, 2023). HB1567 was reviewed by the Virginia House of Delegates in January of 2023 and was amended to remove one of the evaluation goals from the bill. The revised bill was then approved unanimously by both the Virginia House of Delegates and the Senate in February 2023. HB1567 was formally approved and adopted by Governor Youngkin in March 2023.

HB1567 sets forth specific evaluation goals including:

- ✳ **Analyzing federal/state regulations and funding mechanisms** impacting the establishment of perinatal health hubs;
- ✳ Reviewing **evidence-based strategies for the implementation of perinatal health hubs** and the community impact of existing perinatal health hubs;
- ✳ Projecting **estimated costs of implementing the work group’s recommendations** for the next five years.

Once evaluation is completed, the Virginia Department of Health will report on the results and recommendations of the group to the Chairman of the House Committee on Appropriations and the Senate Committee on Finance and Appropriations by December 1, 2023.

The signing of HB1567 not only supports the VNPC’s strategic priority of mobilizing the community to action and change, but also positions the VNPC to lead state efforts in improving perinatal healthcare across the Commonwealth.

House Bill 2111: State Health Commissioner to Establish Task Force on Maternal Health Data and Quality Measures

Introduced in January 2021, HB2111 directs the State Health Commission to establish a task force to evaluate maternal health data collection processes and improve maternal care, quality, and outcomes for all birthing people in the Commonwealth.

This collaborative task force must include three members of the Senate, five members of the House of Delegates, the Director of the Department of Medical Assistance Services (or their designee), the Director of the Office of Health Equity (or their designee), the VNPC Senior Director (or their designee), and the Chief Executive Officer of Virginia Health Information (or their designee).

The task force must also include several other representatives including:

- ★ Two individuals who are **licensed obstetricians or gynecologists practicing** in the Commonwealth;
- ★ Two individuals who are **licensed nurse practitioners or registered nurses who work in the area of maternal health** in the Commonwealth;
- ★ Two **experts in postpartum care and depression** in the Commonwealth;
- ★ At least one individual who is an **expert in maternal health data collection processes**;
- ★ Four representatives from organization or groups in the Commonwealth that **specialize in serving vulnerable populations and improving equity and outcomes in maternal health**;
- ★ Individuals who are **licensed in neonatal and premature infant care and nutrition**;
- ★ A **representative in maternal health from each of the health care payers** in the Commonwealth;
- ★ Health care experts who **serve underserved and minority populations** in the Commonwealth;
- ★ Two members of the **Virginia Hospital and Healthcare Association**;
- ★ The **Program Manager for the Maternal Mortality Review Team**; and
- ★ Any other **stakeholders as may be appropriate** (H.B. 2111, 2021).

Together, this task force is required to accomplish a series of data collection and evaluation goals including:

- ★ Monitoring progress and evaluating **all data from state-level stakeholders to examine current quality of care with regard to race, ethnicity, and other demographic and clinical outcome data**;
- ★ Monitoring progress and evaluating **all data from existing state-level sources mandated for maternal care**, including Healthcare Effectiveness Data and Information Set (HEDIS) measure updates to Prenatal and Postpartum Care and Postpartum Depression;
- ★ Examining the **barriers preventing the collection and reporting of timely maternal health data from all stakeholders**, including payers;
- ★ Examining current maternal health benefit requirements and **determine the need for additional benefits** to protect the health of birthing people;
- ★ Evaluating the **impact of Social Determinants of Health screening on pregnant women and its impact on outcomes data**;
- ★ Collecting and analyzing data **one year after delivery**; and
- ★ Developing **recommendations for standard quality metrics on maternal care** (H.B. 2111, 2021).

HB2111, having been unanimously approved by the Virginia House of Delegates in 2021, establishes a two-year timeline for this work to be completed, with an update to the Governor and General Assembly by December 1 of each year. The task force's work is set to conclude December 1, 2023.

Looking Forward

In 2023, the VNPC experienced significant growth, not only by increasing staff and launching new programs and educational opportunities but also through their ongoing engagement with legislation. The VNPC is poised to continue to tackle its strategic priorities into 2024 and beyond.



References

Bauman, B. L., Ko, J. Y., Cox, S., D'Angelo, MPH, D. V., Warner, L., Folger, S., Tevendale, H. D., Coy, K. C., Harrison, L., & Barfield, W. D. (2020). Vital Signs: Postpartum Depressive Symptoms and Provider Discussions About Perinatal Depression — United States, 2018. *MMWR. Morbidity and Mortality Weekly Report*, 69(19), 575–581. <https://doi.org/10.15585/mmwr.mm6919a2>

Centers for Disease Control and Prevention. (2020). *Pregnancy Mortality Surveillance System*. <https://www.cdc.gov/reproductivehealth/maternal-mortality/pregnancy-mortality-surveillance-system.htm>

Centers for Disease Control and Prevention. (2021a). *Infant mortality rates by state*. CDC.gov. https://www.cdc.gov/nchs/pressroom/sosmap/infant_mortality_rates/infant_mortality.htm

Centers for Disease Control and Prevention, Pregnancy Risk Assessment Monitoring System (PRAMS) 2016-2020. (2021b). *Prevalence of selected maternal and child health indicators for Virginia*. <https://www.cdc.gov/prams/prams-data/mch-indicators/states/pdf/2020/Virginia-PRAMS-MCH-Indicators-508.pdf>

Centers for Disease Control and Prevention. (2022a). *Maternal deaths and mortality rates: Each state, the District of Columbia, United States, 2018-2021*. CDC.gov. <https://www.cdc.gov/nchs/maternal-mortality/mmr-2018-2021-state-data.pdf>

Centers for Disease Control and Prevention. (2022b, September 21). *Perinatal quality collaboratives: Working together to improve maternal outcomes*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc/working-together-improve-maternal-outcomes/index.html>

Centers for Disease Control and Prevention. (2023a, April 26). *CDC Levels of Care Assessment Tool (CDC LOCATE)*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/cdc-locate/index.html>

Centers for Disease Control and Prevention. *Illinois Perinatal Quality Collaborative Reduces Severe Pregnancy Complications from High Blood Pressure*. (2023b, March 7). <http://www.cdc.gov>. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc/success-stories/illinois/index.htm>

Centers for Disease Control and Prevention. (2023c, January 6). *Provisional estimates for selected maternal and infant outcomes by month, 2019-2022*. <https://www.cdc.gov/nchs/covid19/technical-notes-outcomes.htm>

Drug Control Act, c. 650 § 54-524.1 (1970). <https://law.lis.virginia.gov/vacodepopularnames/drug-control-act/>

Harris, J. K., Yates, B., & Crosby, W. M. (1995). A Perinatal Continuing Education Program: Its Effects on the Knowledge and Practices of Health Professionals. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, 24(9), 829–835. <https://doi.org/10.1111/j.1552-6909.1995.tb02567.x>

H.B. 1567, 2023 Session, 2023 Reg. Sess. (Va. 2023). <https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+CHAP0654>

H.B. 2111, 2021 Session, 2021 Reg. Sess. (Va. 2021). <https://lis.virginia.gov/cgi-bin/legp604.exe?211+ful+HB2111E>

Healthy People 2030, National Vital Statistics System - Natality (NVSS-N). (2023). *Pregnant women receiving early and adequate prenatal care, 2018-2021*. <https://health.gov/healthypeople/objectives-and-data/browse-objectives/pregnancy-and-childbirth/increase-proportion-pregnant-women-who-receive-early-and-adequate-prenatal-care-mich-08/data>

Hoyert, D. L. (2023). *Maternal mortality rates in the United States, 2021*. Centers for Disease Control and Prevention. <https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2021/maternal-mortality-rates-2021.pdf>

Hwang, S. S., Melvin, P., Diop, H., Settle, M., Mourad, J., & Gupta, M. (2018). Implementation of safe sleep practices in Massachusetts NICUs: A state-wide QI collaborative. *Journal of Perinatology*, 38, 593-59. <https://doi.org/10.1038/s41372-018-0046-6>

Madni, S. A., Ewing, A. C., Beauregard, J. L., Brantley, M. D., Menard, M. K., & Goodman, D. A. (2022). CDC LOCATe: Discrepancies between self-reported level of maternal care and LOCATe-assessed level of maternal care among 462 birth facilities. *Journal of Perinatology*, 42, 589-594. <https://doi.org/10.1038/s41372-021-01268-3>

National Institute for Children's Health Equity. (2023). *Initiatives: National Network of Perinatal Quality Collaboratives*. <https://nichq.org/project/national-network-perinatal-quality-collaboratives#:~:text=is%20a%20PQC%3F-,What%20is%20a%20PQC%3F,for%20maternal%20and%20infant%20health>.

S.B. 1275, 2023 Session, 2023 Reg. Sess. (Va. 2023). <https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+SB1275ER>

S.B. 1531, 2023 Session, 2023 Reg. Sess. (Va. 2023). <https://lis.virginia.gov/cgi-bin/legp604.exe?231+ful+SB1531+pdf>

Virginia Maternal Mortality Review Team. (2023). *Virginia Maternal Mortality Review Team triennial report: 2018-2020*. Virginia Department of Health. <https://www.vdh.virginia.gov/content/uploads/sites/18/2023/07/VDH-32.1-283.8G-Maternal-Mortality-Team-FINAL.pdf>

Virginia Neonatal Perinatal Collaborative. (2023a). *Initiatives*. <https://gothe.VNPC.org/initiatives/>

Virginia Neonatal Perinatal Collaborative. (2023b). *Virginia Hospital & Healthcare Association Dashboard*. <https://vhha.okta.com/app/tableau/exk12hqe3bkKd0oTt4x6/sso/saml>

Virginia Pregnancy Risk Monitoring System. (2022). *Virginia PRAMS FACTS- 2021*. Virginia Department of Health. <https://www.vdh.virginia.gov/content/uploads/sites/67/2023/08/Virginia-PRAMS-Facts-2021.pdf>

Wilkens, J. L., DeSisto, C. L., Ewing, A. C., Madni, S. A., Beauregard, J. L., Brantley, M. D., & Goodman, D. A. (2023). Levels of neonatal care among birth facilities in 20 states and other jurisdictions: CDC levels of care assessment tool (CDC LOCATe). *Journal of Perinatology*, 43(4), 484-489. <https://doi.org/10.1038/s41372-022-01512-4>