Virginia Neonatal Perinatal Collaborative Progress Report

Division of Child and Family Health

Virginia Department of Health

December 2017

EXECUTIVE SUMMARY

The Commonwealth of Virginia has a population of 8.3 million people and approximately 100,000 births occur here each year. Virginia has always been committed to improving maternal and infant birth outcomes through many partnerships and initiatives across the state, such as Regional Perinatal Councils in the early 1980s, but with the formation of the Virginia Neonatal Perinatal Collaborative (VNPC) in early 2017 the Commonwealth recognized the benefit of the formal development of a statewide collaborative.

The statewide collaborative has quickly gained interest and excitement from many health care professionals who work with mothers and babies across the Commonwealth, as well as other state agencies and community organizations who work with young families.

Virginia's perinatal quality collaborative is committed to including all 54 maternity hospitals across the Commonwealth in quality improvement projects aimed at improving the inpatient care of infants and pregnant women. The VNPC has selected four initial projects: (1) Improve management of obstetric hemorrhage through implementation of the obstetric hemorrhage bundle provided by the Alliance for Innovation in Maternal Health (AIM) at participating hospitals, (2) Reduce inpatient length of stay of infants diagnosed with Neonatal Abstinence Syndrome (NAS) at participating hospital nurseries/NICUs, (3) Improve administration rates of 17-hydroxyprogesterone for women at risk for preterm birth, and (4) Reduce the use of inpatient intravenous antibiotics at participating hospital nurseries/NICUs.

The VNPC is determined to identify best practice models through data collection, practice comparisons, and shared outcomes for each project. By determining the best practice models for common problems facing families in the Commonwealth and implementing quality

improvement projects based on these best practices, overall maternal and infant health will be improved and healthcare care expenditures reduced.

Introduction:

The purpose of this report is to highlight the work that has been started by the newly formed VNPC with funding provided by the 2017 General Assembly in FY 2018 (. Item 294G from the current budget appropriated $124,470 (general funds) and $82,980 (nongeneral funds) to the Virginia Department of Health (VDH) to establish and administer the VNPC.

Background:

For approximately twenty-five years, beginning in the early 1980's, VDH received funding from the General Assembly to establish and maintain five Regional Perinatal Councils (RPCs), across the Commonwealth, with a goal of improving maternal and infant health. While the RPCs are no longer in existence today, there were lessons learned from their existence: (1) a need for statewide collaboration to address maternal and infant health outcomes, (2) a need for better data collection surrounding maternal and infant health outcomes, and (3) a need for improved and consistent communication among all partners and stakeholders working on improving maternal and infant health outcomes.

In 2006, the Virginia Neonatal Practice Collaborative was initially created by a group of neonatologists from across the State, with the aim of improving care for neonates (a newborn child) born and cared for in Virginia. In 2013 the Virginia Neonatal Practice Collaborative became more formalized and started holding semi-annual meetings attended by neonatologists, neonatal-perinatal fellows, registered nurses, respiratory therapists, neonatal nurse practitioners, and other healthcare professionals.

In 2017 the Virginia Neonatal Practice Collaborative partnered with the Virginia Hospital and Healthcare Association (VHHA), March of Dimes (MOD), VDH, and a Maternal Fetal Medicine Provider at the University of Virginia (UVA) and adopted the new name of Virginia Neonatal Perinatal Collaborative to better encompass the mission and goals of the new partnership. The collaborative rapidly grew to include additional health care providers and professionals, additional state agencies, and community organizations who are all working on shared goals related to improving maternal and infant health.

According to the Centers for Disease Control and Prevention (CDC), Perinatal Quality Collaboratives (PQCs) are state or multi-state networks of teams working to improve health outcomes for mothers and babies. PQC members identify health care processes that need to be improved and use the best available methods to make changes as quickly as possible. As of late 2016, 43 states had formed PQCs. Virginia was one of seven states that did not have a PQC when this review was conducted. PQCs consist of physicians; nurses; public health; and other invested professionals, such as social workers, policy makers, state government, payers;, lay people; and families. PQCs have been able to impact system changes to decrease preterm birth rates and decrease maternal morbidity and mortality. (CDC, 2017)

A formalized organizational structure has been developed for the VNPC (see Appendix A). The Executive Leadership Committee (ELC) of the VNPC, consisting of a multi-disciplinary group of representatives from professional organizations across Virginia, has met once in person and has continued to hold monthly meetings since the initial meeting on June 20, 2017. This group has also established a charter and governance document for the VNPC (Appendix A).

The VNPC was formed 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 believes in an

evidence-based, data-driven collaborative process that involves care providers for women, infants and families as well as state and local leaders. The VNPC believes that working together now will create a stronger, healthier Virginia in the future.

The VNPC has established the following goals:

1. To provide assistance to hospitals and obstetric providers in performing quality improvement initiatives designed to improve pregnancy outcomes, including decreasing the preterm birth rate to Healthy People 2030 Goals and to decrease maternal mortality by 50%,

2. To enhance the quality of state-wide perinatal data and to provide hospital-specific data back to participating hospitals promptly to accomplish quality improvement goals,

3. To provide assistance to hospitals and newborn care providers in performing quality improvement initiatives designed to improve neonatal outcomes, including decreasing morbidity and mortality as well as decreasing length of stay,

4. To inform and involve the community, including health care providers, nurses, ancillary medical staff, payers, hospital administrators, and, most importantly, patients in efforts to make Virginia the safest state to deliver babies,

5. To narrow racial and ethnic disparities with the achievement of health equity in pregnancy and neonatal outcomes.

Initial Projects

Neonatal Abstinence Syndrome (NAS)

The ongoing opioid crisis, with the corresponding increase in cases of NAS, is an example of where pregnancy and neonatal conditions can be addressed collectively by the VNPC. In late 2016, the State Health Commissioner declared the opioid crisis a public health emergency. According to Virginia Health Information (VHI) hospital discharge data, the

incidence of NAS doubled in just five years with 2.9 and 6.1 diagnoses per 1,000 live births in 2011 and 2015, respectively. The annual total of NAS discharges in 2015 was 626 and the provisional hospital discharge data for the first three quarters of 2016 total 507 NAS discharges. Should the fourth quarter data continue the same trend, Virginia will again see an increase in NAS discharges.

In response to the alarming and continuing increase of NAS, the Governor signed four bills in February 2017 to address the opioid crisis. Two are specific to infants and NAS:

1. HB2162: Creates a taskforce to identify barriers to treatment of substance exposed infants across the Commonwealth, and
2. HB1467: Requires the Board of Health to adopt regulations to include NAS on the list of diseases that shall be required to be reported to the Department of Health

Another legislative action is a budget amendment (HB1500 item 294G) that provided funds to the VNPC to address NAS as an initial quality improvement project.

Mothers suffering from opioid overuse or Substance Use Disorder (SUD) are a significant issue especially problematic in the far Southwest part of the state. As compared to the aforementioned statewide incidence of 6.1 diagnoses per 1,000 live births in 2015, the three-year average incidence rate in Lenowisco for 2013-2015 was 39.2 NAS inpatient discharges per 1,000 live births, for Cumberland Plateau (2013-2015) 26.1 NAS inpatient discharges per 1,000 live births, and for New River (2013-2015) 25.5 NAS inpatient discharges per 1,000 live births. Of the 626 cases diagnosed in 2015, 76.8% (481) were white, non-Hispanic and 77% (482) were enrolled in Medicaid.

The Substance Abuse and Mental Health Services Administration's (SAMHSA), National Survey of Drug Use and Health estimated that in 2016, 1.2% of pregnant women nationwide used prescription opioids or heroin during pregnancy. A current prevalence estimate for opioid use during pregnancy in Virginia is not available.

The VNPC has chosen the Vermont Oxford Network (VON) web-based Newborn Improvement Collaborative for Quality (iNICQ) focused on NAS to improve the care of infants and families affected by NAS. Currently 17 maternity hospitals in Virginia report data to VON. As of the end of August 2017, the VNPC has received a verbal commitment of participation from 39 of the 54 maternity hospitals in Virginia for enrollment in the VON iNICQ universal training and education program. Maternity centers will use the evidence-based content of the VON iNICQ on NAS to undertake rapid cycle quality improvement initiatives to implement the American Academy of Pediatrics (AAP) guidelines for standardizing the care of infants with NAS. As a result of these efforts, the VNPC anticipates that the length of inpatient stay for infants with NAS will be reduced and healthcare costs decreased.

Key outcome variables will include:

1. Number of participating hospitals,
2. Number of NAS-focused guidelines (per participating hospital),
3. Length of pharmacologic treatment,
4. Length of stay, and
5. Proportion of infants discharged on medication.

Members of the VNPC have contacted the administration and medical directors of the newborn nurseries and neonatal intensive care units of every delivery hospital within Virginia. The purpose was an introduction to the VNPC, to discuss the aims and goals of the collaborative,

explain the benefits to the care of mothers and their newborns, and to offer participation in the VON NAS quality improvement project. The VNPC goal for every delivery hospital in the Commonwealth is the opportunity to contribute to the collective effort to improve the healthcare of our families in Virginia. The response from those contacted was overwhelmingly positive with a lot of enthusiasm shown towards joining the collaborative. There are 50 delivery hospitals currently committed to participating in the VON NAS quality improvement project; additional efforts to recruit the remaining four hospitals that have not committed to participate will resume once the initial 50 hospitals have completed their IRB process, completed the baseline survey and have begun collecting quarterly data audits.

In addition to the newborn component of this project, the VNPC will support implementation of the opioid use in pregnancy safety bundle recently published by the Alliance for Innovation in Maternal Health (AIM). In this manner, the VNPC will adopt a holistic approach to the problem of NAS incorporating best practices prior to and after birth. Virginia has been selected as one of ten states to participate in the pilot implementation of this bundle. We will receive technical assistance from the national AIM team to help us with implementation both at the hospital system level and community level. The VNPC recognizes that in order to be successful with reducing the NAS incidence among newborns, it needs to work with women who are pregnant to address their needs and refer them to resources for management of their substance use. A more thorough description of AIM is provided in the next section.

Improve Maternal Health

The United States has the highest maternal mortality rate of any high-resource country and is the only country besides Afghanistan and Sudan where the rate is rising. The Alliance for Innovation in Maternal Health (AIM) is a national, data-driven maternal safety and quality

improvement initiative based on proven implementation approaches to improving maternal safety and outcomes in the U.S.

AIM works through state quality improvement teams and health systems to align national, state, and hospital level quality improvement efforts to improve overall maternal health outcomes. Any United States hospital in a participating AIM state or hospital system can join the growing AIM community of multidisciplinary healthcare providers, public health professionals, and a cross-sector group of stakeholders who are committed to improving maternal outcomes in the U.S.

AIM is funded through a cooperative agreement with the Maternal and Child Health Bureau (MCHB) of the Health Resource Services Administration. Virginia has completed an application and officially became one of 12 AIM member states nationwide. The kick-off was October 16, 2017, and Virginia was formally recognized as an AIM state. The first patient safety bundle that the VNPC will institute is Obstetric Hemorrhage.

Obstetric hemorrhage is a major cause of maternal morbidity, and one of the top three causes of maternal mortality in both high and low per capita income countries. With timely diagnosis, appropriate resources, and appropriate management, however, obstetric hemorrhage may be the most preventable cause of maternal mortality. Despite the use of uterotonics and the more widespread availability of blood products, obstetric hemorrhage continues to account for a significant proportion of adverse maternal outcomes, often requiring the use of blood products and potentially resulting in prolonged hospitalizations, disability, or even maternal death.

In recognition of the critical need to address the problem of obstetric hemorrhage, the AIM produced an obstetric hemorrhage bundle that provides resources to streamline and

standardize the approach to obstetric hemorrhage through the use of this bundle. By adopting the best clinical practices, hospitals may be able to decrease maternal morbidity and mortality.

The VNPC will be participating in the obstetric hemorrhage bundle provided by AIM to assist hospital systems in their readiness, recognition and prevention, response and reporting/systems learning related to obstetric hemorrhage. Through the standardization of health care processes and reduced variations, the bundle has been shown to improve outcomes and quality of care. The commitment of our academic centers and other tertiary care hospitals will provide mentorship and educational opportunities for community hospitals in their referral base. The VNPC goal is to have every hospital in Virginia adopt the AIM obstetric hemorrhage bundle.

The Prevention of Preterm Birth with 17-OH Progesterone

Of the approximately 100,000 babies born annually, about 9,200 (9.2%) are born preterm. Prematurity is the leading cause of infant mortality in Virginia, resulting in over 600 deaths annually of infants before they reach their first birthday. Each premature or low birthweight baby costs employers an additional $49,760 in newborn health care costs. When maternal costs are added, employers and their employees pay $58,917 more when a baby is born premature. (March of Dimes, 2017)

17α-Hydroxyprogesterone caproate (17P) is a synthetic formulation of progesterone administered by weekly injections (250 mg IM) beginning at 15 to 21 weeks of gestation and continuing through 36 completed weeks of gestation or until delivery, whichever occurs first. According to the American Congress of Obstetricians and Gynecologists (ACOG), intramuscular injection of 17P is proven and medically necessary for the prevention of spontaneous preterm birth when all of the following criteria are met: current singleton pregnancy

(pregnancy with one baby) with a history of a prior spontaneous preterm birth of a singleton pregnancy; treatment is initiated between 16 weeks, 0 days of gestation and 26 weeks, 6 days of gestation; and administration is to continue weekly until week 37 (through 36 weeks, 6 days) of gestation or delivery.

The March of Dimes has identified increasing use of progesterone for women with a history of prior preterm birth as an established intervention (or best practice) based on the available evidence regarding its potential contribution to reducing preterm birth and is highlighted in the March of Dimes Roadmap to Prevent Preterm Birth. Weekly progesterone injections for at-risk women are proven to reduce preterm birth in women with a prior preterm birth, but this therapy is dramatically under-utilized. There are many reasons for failure to appropriately utilize 17OHP-C including patient-, provider-, and systems-level barriers. The Virginia-specific 17P data is presented in Appendix C. The VNPC has developed an improving pregnancy outcome committee that will be focused on identifying barriers to receiving 17P and identify steps on how to improve utilization of 17P for mothers who have a history of preterm delivery within Virginia.

Antibiotic Stewardship

Antibiotic stewardship across all disciplines of medicine has become a focal point for the Centers for Disease Control and Prevention (CDC), with wide variation in antibiotics usage reported in newborn intensive care units. Neonatal medicine certainly has benefitted from the use of antibiotics in treating infectious processes. However, it is now realized that the overuse of antibiotics can lead to development of resistant strains of organisms, along with additional effects of antibiotic courses that make these vulnerable infants at risk for other complications of prematurity, including NEC (necrotizing enterocolitis).

Several single NICUs and a few state perinatal collaboratives have made antibiotic stewardship a quality improvement initiative to reduce the use of inappropriate antibiotic courses. By utilizing evidence-based guidelines, these NICUs are able to implement changes in practice that will lead to a reduction in overall antibiotic exposure while also continuing to address and treat neonatal infections in a safe manner.

Recognizing that the NICU is a special population within inpatient medicine, the CDC has partnered with the Vermont Oxford Network on a collaborative titled: iNICQ 2016/7: Choosing Antibiotics Wisely. Building upon the vast quality improvement experience of the Vermont Oxford Network and their partnership with hospitals and state perinatal collaboratives, this initiative will provide a structural framework in which NICUs and high-risk nurseries that participate in a perinatal collaborative can develop and implement standardized evidence-based guidelines for antimicrobial stewardship in this high-risk population.

With sustained funding, the VNPC would like to participate in VON's antibiotic quality collaborative to address overuse of intravenous antibiotics in hospital NICU/nurseries by using the CDC's Core Elements of Hospital Antibiotic Stewardship Program. The goal is to reduce intravenous antibiotic use by 10%. This project is not underway as of yet, but, with secured funding and assistance from the hospital systems in Virginia that are currently participating in the VON quality improvement project (Choosing Antibiotics Wisely), best practices will be shared through the VNPC to improve care in the NICUs within Virginia.

Communications

The VNPC has been successfully reaching out to all 54 maternity hospitals in Virginia to identify a contact person at each hospital to share data collected, new information about the VNPC, meeting updates, and other important information set out by the State and the VNPC

pertaining to active projects. Information will also be disseminated via the VNPC website (www.virginianpc.org) that is currently under development, with an anticipated go live date at the end of December 2017. It will contain updated information regarding all four projects, data reports, webinars, meeting minutes, and much more. This will allow members and the general public to see the highlights and work accomplished through the VNPC.

The VNPC Kickoff Summit was held in Richmond, Virginia, on October 16, 2017. The gathering brought together leading obstetric, neonatal, perinatal, and related practitioners, as well as members of the health care community for an informative and educational program promoting best practices to enhance pregnancy and neonatal outcomes. There was a strong turnout at the VNPC summit, which drew an estimated crowd of 250 health care providers and other stakeholders, along with representation from eight local health departments, is a clear indication of the importance of its mission. The conference keynote address was delivered by Dr. Jay Iams, MD, Emeritus Professor of Obstetrics and Gynecology at the Ohio State University Wexner Medical Center. Dr. Iams' presentation focused on "The Power of the Perinatal Collaborative: A Personal Journey." He is currently the Obstetrical Lead for the Ohio Perinatal Quality Collaborative.

Resource Allocation

In its first year, the VNPC sought to establish governance and infrastructure to support the successful implementation of quality improvement projects to improve the care of infants and pregnant women. Table 1 details budget to projected expenses for state fiscal year 2018 and proposes expenses for state fiscal years 2019 and 2020 in light of the VNPC's expansion of scope beyond pregnant women with substance use disorder and infants with neonatal abstinence

syndrome to include obstetric hemorrhage, a major cause of maternal mortality; 17-progesterone, a key factor in preventing preterm births; and antibiotic stewardship in the NICU and newborn nursery.

			SFY18	**SFY19**	**SFY20**
	Salary/Cost	**Fringe/extra cost**	**Total**		
Epidemiologist to assist with NAS data/project at 25%	$60,000/4=$15,000	$19,800/4=$4950	$19,950	$19,950	$19,950
Epidemiologist to assist with additional data/projects at 50%	$60,000/2=$30,000	$19,800/2=$9950	N/A	$39,950	$39,950
Vermont Oxford Data Access state-wide subscription to NAS training program	$55,000	N/A	$55,000	N/A	N/A
Vermont Oxford Data Access state-wide subscription to Antibiotic Stewardship in the NICU program	$55,000	N/A	N/A	$55,000	N/A
Website Development and maintenance	$3,000	N/A	$3,000	$3,000	$3,000
Data system and Management, infrastructure for all VNPC projects	$55,000	N/A	N/A	N/A	$55,000
VNPC Program specialist Wage	$26*1500=$39,000	N/A	$39,000	N/A	N/A
VNPC Program Specialist FTE	$54,070	$17,850	N/A	$71,920	$71,920
Computer, Phone, Space Rent for FTE	$6,000	N/A	N/A	$6,000	$6,000
Travel	Will comply with state rates for reimbursement due to travel for meetings and Technical Assistance across the state	N/A	$1520	$4180	$4180
		Total:	$124,470	$200,000	$200,000

Recommendation

1. Appropriate $200,000 from general fund and $82,980 from nongeneral funds for FY19 and FY20 to support the work of the Virginia Neonatal Perinatal Collaborative to improve pregnancy outcomes for women and newborns by advancing evidence-based clinical practices and processes through continuous quality improvement efforts related to pregnant women with substance use disorder and infants impacted by neonatal abstinence syndrome; and by advancing evidence based practices surrounding 17-hydroxyprogesterone, antibiotic stewardship, and maternal hemorrhage.

Conclusion

With Virginia being one of the few states in the country without a perinatal collaborative until early this year, VDH is pleased that the new VNPC is starting strong with a large group of enthusiastic volunteers, both professional and lay, who understand the importance of this effort. Creating multidisciplinary partnerships with government agencies, healthcare providers, and families, the VNPC will allow for organized efforts to improve care. Based on sound research, data collection, and shared outcome measures, the VNPC will improve the health of mothers, infants, and families in the Commonwealth.

References

1. Centers for Disease Prevention and Control (CDC). (2017). Perinatal Quality Collaboratives. Retrieved from https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pqc.htm

2. Council on Patient Safety in Women's Health Care. (2017). Alliance for Innovation on Maternal Health (AIM). Retrieved from http://safehealthcareforeverywoman.org/aim-program/

3. March of Dimes. (2017). Prematurity Campaign Collaborative. Retrieved from http://www.marchofdimes.org/professionals/prematurity-campaign-collaborative.aspx

4. Raab, C. A., Brown Will, S. E., Richards, S. L., & O'Mara, E. (2013), The Effect of Collaboration on Obstetric Patient Safety in Three Academic Facilities, Journal of Obstetric, Gynecologic, & Neonatal Nursing, 42:606-616. DOI: 10.1111/1552-6909.12234

5. Virginia Neonatal Perinatal Collaborative (VNCP). (2017). Retrieved from www.virginianpc.org

Appendix A—Administrative Structure of The VNPC

1. Executive Committee: The VNPC will be led by an Executive Committee (EC) that will include representatives from a variety of key groups involved in the care of pregnant women and their newborns. EC members will be selected by the lead of each organization represented (President, supervisor, etc). The leader can self-designate. If a member cannot attend a meeting, they may delegate attendance to another person in their organization.

a. Executive Committee membership: The EC will consist of representatives from the following organizations.

1) Obstetric co-chair
2) Pediatric co-chair
3) Virginia Department of Health (VDH)
4) Virginia Hospital and Healthcare Association
5) March of Dimes
6) American College of Obstetricians and Gynecologists
7) American Association of Pediatricians
8) American Association of Family Practice
9) Association of Certified Nurse Midwives
10) National Association of Neonatal Nurse Practitioners
11) Department of Medical Assistance Services
12) Association of Women's Health, Obstetric and Neonatal Nurses
13) Managed Care Organizations
14) Third Party Payers
15) Patient (lay member)

b. Term: Each committee member will serve a three-year term. Terms shall commence on July 1 and end on June 30 of respective state fiscal years.

c. Term Limits: The maximum number of consecutive terms that a committee member may serve is two consecutive three-year terms. After serving two consecutive three-year terms, the committee member shall rotate off the committee for one year before consideration for reappointment to the committee. Committee member may serve no more than 6 total years.

d. Executive Committee Functions. Activities of members of the EC may include the following:

1. Participation in all EC meetings (either in person or via teleconference). Participation may be delegated to another person representing that specific organization.
2. Develop and approve projects or protocols to be performed by the VNP
3. Make recommendations, develop, and approve efforts to obtain funding and ensure VNPC sustainability and viability
4. Recommend ad hoc members to the EC when needed
5. Lead advisory and project committees
6. Develop programs for VNPC General Meetings

e. Executive Committee Steering Sub-committee. The EC Leadership sub-committee will consist of 5 members, to include the following:

1. Obstetric co-chair
2. Pediatric co-chair

3. Virginia Department of Health (VDH) representative
4. Virginia Hospital and Healthcare Association representative
5. March of Dimes representative

The EC Steering sub-committee will meet weekly via teleconference to work to develop agendas for meetings, follow progress of projects, supervise development of grant applications, and guide development of projects.

f. Executive Director. The VNPC EC will hire an administrative director with available funding to perform key administrative tasks required for success of the collaborative. The executive director will be supervised by and respond to the EC.

1. Activities of the Executive Director: organize meetings, create and distribute minutes, maintain the VNPC website, engage hospitals and practitioners to participate in the VNPC activities, communicate messaging and reports to the VNPC membership

Appendix B—Charter and Governance

A. VISION

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. We believe in an evidence-based, data-driven collaborative process that involves care providers for women, infants and families as well as state and local leaders. We believe that working together now will create a stronger, healthier Virginia in the future.

B. GOALS

1. To provide assistance to hospitals and obstetric providers in performing quality improvement initiatives designed to improve pregnancy outcomes, including decreasing the preterm birth rate to Healthy People 2030 Goals and to decrease maternal mortality by 50%

2. To enhance the quality of state-wide perinatal data and to provide hospital-specific data back to participating hospitals promptly so as to accomplish quality improvement goals

3. To provide assistance to hospitals and newborn care providers in performing quality improvement initiatives designed to improve neonatal outcomes, including decreasing morbidity and mortality as well as decreasing length of stay

4. To inform and involve the community, including health care providers, nurses, ancillary medical staff, payers, hospital administrators, and, most importantly, families in efforts to make Virginia the safest and best place to deliver babies.

5. To narrow the racial and ethnic disparities with the achievement of health equity in pregnancy and neonatal outcomes

C. MEMBERSHIP

1. General Membership: Membership in the VNPC is open to everyone involved in the care of pregnant women and their newborns. These members may be physicians, advanced practice nurses, staff nurses, pharmacists, social workers, respiratory therapists, hospital administrators, public health personnel, epidemiologists, elected officials, patient advocates and any interested lay person/family.

a. Dues: At this time, no dues are required to participate in the VNPC. In the

future, dues may be necessary, either from individuals or institutions, to ensure the sustainability of the VNPC.

D. ADMINISTRATIVE STRUCTURE OF THE VNPC

1. Executive Committee: The VNPC will be led by an Executive Committee (EC) that will include representatives from a variety of key groups involved in the care of pregnant women and their newborns. Volunteers will be solicited from the following organizations:

a. Executive **Committee membership**: The EC will consist of representatives from the following organizations.

1) Obstetric co-chair
2) Pediatric co-chair
3) Virginia Department of Health
4) Virginia Hospital and Healthcare Association
5) March of Dimes
6) American College of Obstetricians and Gynecologists
7) American Association of Pediatricians
8) American Association of Family Practice
9) Association of Certified Nurse Midwives
10) National Association of Neonatal Nurse Practitioners
11) Department of Medical Assistance Services
12) Association of Women's Health, Obstetric and Neonatal Nurses
13) Managed Care Organizations
14) Third Party Payers
15) Interested family members

b. Term: Each committee member will serve a three-year term. Terms shall commence on July 1 and end on June 30 of respective state fiscal years.

c. Term Limits: The maximum number of consecutive terms that a committee member may serve is two consecutive three-year terms. After serving two consecutive three-year terms, the committee member shall rotate off the committee for one year before consideration for reappointment to the committee.

d. Executive Committee Functions. Activities of members of the EC may include the following:

1. Participation in all EC meetings (either in person or via teleconference). If a member cannot attend a meeting, they may delegate a knowledgeable representative to take their place.
2. Develop and approve projects or protocols to be performed by the VNPC
3. Make recommendations, develop, and approve efforts to obtain funding to ensure VNPC sustainability and viability
4. Recommend ad hoc members to the EC when needed
5. Lead advisory and project committees
6. Develop programs for VNPC General Meetings

e. Executive Committee Steering Sub-committee. The EC Leadership sub-committee will consist of the following members:

1. Obstetric co-chair
2. Pediatric co-chair
3. Virginia Department of Health (VDH) representative
4. Virginia Hospital and Healthcare Association representative
5. March of Dimes representative
6. Other representatives as required

The EC Steering sub-committee will meet weekly, or as determined, via teleconference to develop agendas for meetings, follow the progress of projects, supervise development of grant applications, and guide development of new projects.

f. Executive Director. The VNPC EC will hire an administrative director with available funding to perform key administrative tasks required for success of the collaborative. The executive director will be supervised by and respond to the EC.

1. Activities of the Executive Director: Organize meetings, create and distribute minutes, maintain the VNPC website, engage hospitals and practitioners to participate in the VNPC activities, communicate messaging and reports to the VNPC membership

2. Advisory Committees: Advisory Committees will be formed from interested members of the VNPC. Advisory Committees will be led by one member of the EC and one VNPC member. The size of each committee will be approximately 15 to 20 members and will be selected from volunteers by the Advisory Committees co-chairs with Executive Committee approval.

There will be five Advisory Committees, including:

a. Committee on Improving Pregnancy Outcomes: This committee will be devoted to identifying key problems in obstetric care and outcomes, designing quality improvement projects to address these problems, supervising implementation of projects, and then summarizing and reporting on project data.

1. Examples of key activities of this committee: Prevention of preterm birth, prevention and management of severe maternal morbidity and mortality
2. Members may include obstetricians, maternal-fetal medicine specialists, midwives, family medicine physicians, nursing staff from prenatal clinics, labor and delivery and postpartum units, pharmacists, public health workers, lay members, and anyone else with an interest in improving pregnancy outcomes

b. Committee on Improving Neonatal Outcomes: This committee will be devoted to identifying key problems in neonatal care and outcomes, designing quality improvement projects to address these problems,

supervising implementation of projects, and then summarizing and reporting on project data.

1. Examples of key activities of this committee: Management of neonatal abstinence syndrome, antibiotic stewardship, enhancing nurse-directed healthcare outcomes, promoting safe sleep practices
2. Members may include pediatricians, neonatologists, neonatal and pediatric nurse practitioners, NICU and nursery nursing staff, public health workers, lay members, and anyone else with interest in improving child health outcomes

c. Committee on Data Acquisition and Management: This committee will work to create mechanisms and processes to acquire and manage data needed for each VNPC project. These critical activities will use common data elements and web-based data collection platforms, working with hospitals and care providers to acquire data efficiently with the lowest possible cost.

1. Members may include epidemiologists, public health workers, data managers, hospital administrators, lay members, and anyone else with an interest in collecting and managing data

d. Committee on Community Engagement: The VNPC will engage hospitals and healthcare providers to participate in community-based projects, conduct surveys to create a better understanding of common clinical problems, determine best-practice models, and distribute VNPC outcomes to key stakeholders and the general public. The committee will also work to educate the community at-large on the barriers women face seeking healthcare for themselves and their newborns.

1. Members may include physicians, midwives, nurse practitioners, nurses, hospital and clinical practice staff, hospital administrators, and lay members

e. Committee on Advocacy and Sustainability: This committee will work to promote and sustain activities of the VNPC. Actions will include engaging key stakeholders and financial supporters (including identification of grant and foundation funding opportunities), delineating activities, reporting positive outcomes, and publishing the important findings of the VNPC.

1. Members may include physicians, midwives, nurse practitioners, nurses, hospital and clinical practice staff, hospital administrators, and lay members

3. Project Committees: The Executive Committee will decide which projects will be accepted by the VNPC. Based upon the advice and recommendations of the Advisory Committee(s), a separate Project Committee will be created. This sub-committee will determine the project protocol for their project, the data elements to be collected, create operational protocols (which

will include progress reports submitted biannually to the EC) and develop strategies to engage key hospitals and providers.

a. Membership of Project Committees: Each Project Committee will draw two members from each of the Advisory Committees for a core group of 10 members. Other key subject matter experts will be recruited to participate on an ad hoc basis. A Project Committee chair and co-chair will be selected by the committee with approval by the Executive Committee. The co-chairs will determine the core activities of the committee and the conduct of the project from start to completion.

E. QUALITY IMPROVEMENT PROJECTS

1. General Concept: The VNPC will organize and perform statewide-based quality improvement projects that are designed to improve pregnancy outcomes, pediatric outcomes, plus provider and patient education. Specific projects to decrease rates of severe maternal morbidity, maternal mortality, infant mortality, and neonatal complications will be emphasized. These may be in-patient, out-patient, and/or community-focused. See Appendix A for a listing of projects successfully implemented in other Perinatal Quality Collaboratives.

2. Development of QI Projects: Concepts for a specific project may be developed by any member of the VNPC. These ideas will be reviewed and discussed in the appropriate Advisory Subcommittee. A brief overview will then be submitted to the EC, and after approval, will move to full concept development and a project sub-committee will be organized.

3. Implementation of Quality Improvement Projects: Quality improvement projects will be developed by Advisory Subcommittees and approved by the EC. As projects will require expertise in all five advisory areas to be successful, project committees will include members from each Advisory Subcommittee. Project committees are required to develop work plans, timelines, and file quarterly reports to a designated Advisory Subcommittee.

4. Dissemination of QI Results: Progress reports and final summary reports will be created by the Project Committees and then submitted to the Executive Committee. When deemed appropriate by the EC, final summary reports will be assigned to a writing group to create a manuscript for submission to a peer reviewed publication. Additionally, reports may be submitted to professional social media sites and/or print publications, and the results may be presented at local, regional, and national meetings. Reports will also be made available to funding agencies as required.

F. SUSTAINABILITY OF THE VNPC

1. Accomplishing Sustainability: The VNPC will work to establish and maintain independent funding in order to complete specific projects. The VNPC will create a 501c3 non-profit organization for management of funding accomplished through grant submissions and foundation grants. The VNPC will seek to receive support from multiple sources so as to not rely on a single resource. Multiple funding streams will be sought as noted below:

a. Public funding/state sources

1. General Assembly/State Legislature
2. Virginia Department of Health
3. Department of Medical Assistance Services
4. Other pertinent state organizations
5. Center for Disease Control
6. Agency for Healthcare Research and Quality
7. National Institutes of Health

b. Private funding sources

1) March of Dimes
2) Virginia Hospital Association
3) Private payers
4) Other foundations

2. Submission of Funding Requests: The EC, with the advice and recommendations of the Committee on Advocacy and Sustainability, will identify potential sources of income through grants and contracts. A writing group will be formed with members from key Advisory Committees and the EC. Final proposals will be approved by the EC before submission.

Potential Quality Improvements Projects

a. Obstetric-specific Projects (hospital-based, provider-based)

1) Severe maternal morbidity/maternal mortality
2) Eliminating early elective deliveries
3) Enhancing 17OH progesterone utilization
4) Obstetric Hemorrhage Safety Bundle
5) Hypertension Safety Bundle
6) Supporting Vaginal Delivery Bundle
7) VTE prophylaxis Safety Bundle
8) Enhancing antenatal steroid utilization
9) Stillbirth prevention strategies
10) Smoking cessation
11) Delivering Right Place, Right Time

b. Neonatal-specific Projects

1) Golden Hour
2) Nurse-directed healthcare outcomes
3) Neonatal Abstinence Syndrome
4) Antibiotic usage
5) Modeling safe sleep
6) Improving breastfeeding rates

c. Community Engagement Projects

1) Uptake of Long Acting Reversible Contraception Program (LARC)
2) Delivering Right Place and Right Time

Appendix C—Snapshot of 17P in Virginia

Snapshot of 17P in Virginia Data (2016)	
Total number of births	94,938
Estimated 17P eligible patients (total births x presumptive 3.5% history of preterm birth)	3,366
# of women started treatment with 17P	314 = 9% of eligible patients
33 inj. (Fee for service) + 4,677 inj. (Managed Medicaid)	4,710 total 17P injections