2020 Report to the General Assembly

Virginia Neonatal Perinatal Collaborative

VNPC
Virginia Neonatal
Perinatal Collaborative

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Appendices

Executive Summary

The Virginia General Assembly enacted the 2021 Appropriation Act, which authorized $124,470 from the general fund and $82,980 from non-general funds the fourth year for the Virginia Department of Health (VDH) to establish an a Memorandum of Understanding with Virginia Commonwealth University, Children's Hospital to provide the General Assembly funds to administer a Perinatal Quality Collaborative. In 2019, the Virginia Assembly awarded an additional $315,000 to address health disparities and inequities in maternal health across the Commonwealth. The Act mandated that the Perinatal Quality Collaborative shall work to improve pregnancy outcomes for women and newborns by advancing evidence-based clinical practices and processes through continuous quality improvement with an initial focus on pregnant women with substance use disorder and infants impacted by neonatal abstinence syndrome (Appendix A).

Since the establishment of the Virginia Neonatal Perinatal Collaborative (VNPC) in 2017, the statewide collaborative has quickly attracted interest from hospital systems, health care professionals, professional organizations, state agencies, and community stakeholders and partners that have a mission to improve outcomes for mothers and babies across the Commonwealth.

The VNPC has selected three initial quality improvement (QI) projects: (1) reduce the use of inpatient intravenous antibiotics at hospital nurseries/NICUs; (2) decrease the rate of severe maternal morbidity attributable to obstetric hemorrhage; and (3) care coordination from delivery to the post-partum visit and then transition to annual women's health, also known as the fourth trimester. . Virginia's statewide perinatal quality collaborative is committed to including each of the 54 birth hospitals across the Commonwealth in these quality improvement projects.

The VNPC has experienced several early successes, due to the commitment of community partners and stakeholders, healthcare professionals from various organizations, and state agencies coming together and working toward shared goals and visions. Funding from the General Assembly continuously for FY18 through FY21 to sustain ongoing efforts. This report will summarize the evolution of the VNPC, current projects, ongoing efforts and fourth year accomplishments.

Background

In the early 1980's, the 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: (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 better 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 born and cared for in Virginia. In 2013, the Virginia Neonatal Practice Collaborative became more formalized and began 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, state agencies, and community organizations that all worked on shared goals related to improving maternal and infant health.

The 2018 Appropriation Act appropriated $124,470 from the general fund and $82,980 from non-general funds the second year for VDH to establish and administer a Perinatal Quality Collaborative (PQC). The Act mandated that the PQC shall work to improve pregnancy outcomes for women and newborns by advancing evidence-based clinical practices and processes through continuous quality improvement with an initial focus on pregnant women with substance use disorder and infants impacted by neonatal abstinence syndrome. The collaborative rapidly grew to include additional health care providers and professionals, state agencies, and community organizations that are all working on shared goals related to improving maternal and infant health.

Out of this appropriation, $315,000 from the general fund shall be provided to support efforts by the Virginia Neonatal Perinatal Collaborative (VNPC) to decrease maternal mortality and morbidity. Funding shall be used for a coordinator position for community engagement, training and education; the development of a pilot program of the Centers for Disease Control's levels of care assessment (LOCATe) tool in the Richmond metropolitan region and Tidewater region; and development of a Project ECHO tele-education model for education and training. Funding shall also be used to assist the VNPC with expanding capacity to address these issues using software to advance data analytics.

According to the Centers for Disease Control and Prevention (CDC), 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 this report, 46 states have formed PQCs, which consist of physicians, nurses, public health and other invested professionals, lay people, and families. PQCs have been able to impact system changes to decrease preterm birth rates and decrease maternal morbidity and mortality (CDC, 2018).

The vision of the VNPC is to ensure that every mother has the best possible perinatal care, and that every infant cared for in Virginia has the best possible start to life. The mission of the VNPC is to ensure 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 decreasing maternal mortality by 50%;

2. To enhance the quality of statewide perinatal data and 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 related to 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; and

5. To narrow racial and ethnic disparities by achieving health equity in pregnancy and neonatal outcomes.

In 2017, the General Assembly made the commitment to the formal development of a statewide collaborative by appropriating funds to establish and administer a PQC. That same year, Virginia was recognized as the 42nd state PQC by the CDC. Currently, the only authority that exists for the PQC is in the state budget. The VNPC also because an AIM (Alliance for Innovation on Maternal Health) State this same year. As an AIM state, Virginia is working collectively with over 30 states across the nation to implement Patient Safety Bundles to improve maternal health.

Infrastructure

The VNPC has developed a formalized organizational structure, which is comprised of a steering committee, an executive committee, data committee, maternal quality care alliance (MQCA), birth equity network (BEN), stakeholder advisory panel and five project workgroups (Appendix B).

The steering committee consists of the VNPC Director of Operations, the only full time, paid position, an obstetric co-chair; a pediatric co-chair; and a representative from each of these organizations: VDH, VHHA, VHHF and an advanced practioner who represents the National Association of Neonatal Nurse Practitioners (NANNP). The steering committee meets weekly to ensure projects and committees are moving forward; discuss new business, challenges and/or barriers; and maintain ongoing operations for the VNPC.

The executive committee includes a representative that has been appointed by the steering committee from the following organizations or groups involved in the care of pregnant women and infants:

- American Academy of Family Physicians (AAFP)
- American College of Obstetricians and Gynecologist (ACOG);
- American Academy of Pediatricians (AAP);
- American Association of Family Practice (AAFP);
- American College of Nurse Midwives (ACNM);
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN);
- Virginia Midwives Alliance (VMA);
- Non-Profit Organization that represents paraprofessionals and the community voice;
- Office of Chief Medical Examiner (OCME);
- Office of the Secretary of Health and Human Resources (OSHHR);
- Quality Improvement Subject Matter Expert; and
- Title V representative from Virginia Department of Health
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The Executive Committee holds monthly meetings via Zoom conference calls to provide updates from each of the advisory committees and workgroups, identify challenges to getting the work accomplished, and discuss new business. Quarterly in-person meetings happen in January, April, and July with our Annual Summit held in October each year. This year, our last in person quarterly meeting was held in January 2020, April and July were held via zoom due to COVID-19. During the first portion of the quarterly meetings, co-chairs of each committee and workgroup participate to enhance communication and further understanding of ongoing activities and new business opportunities. The second portion of the meeting is devoted to workgroup projects and advisory committee breakout sessions, affording teams the opportunity to move their work plans forward. Meeting minutes are maintained and disseminated to all members. These meetings are still essential to the Executive Committee for networking, understanding the value each role brings to the VNPC and to keep the forward momentum of the work.

Advisory Committees

The Data Management Committee is working to create mechanisms and processes to acquire and manage data needed for each VNPC project. As a member of AIM, Virginia has access to a dashboard to input structure, process and outcome measures by hospital. This dashboard also contains maternal mortality and morbidity data from 2015-2018 for Virginia. This year, the VNPC began entering quarterly structure and process data and annual outcome data. This dashboard allows hospitals to see how they are doing compared to other hospitals across the Commonwealth on shared measures. All hospital measures are viewed by the Director of Operations and co-chairs of each project. Hospitals can view other hospitals "blinded" but grouped by level, number of births, and/or region. The committee works with

VDH's maternal and child health (MCH) epidemiologist to disseminate existing MCH-related data to workgroups and help them utilize data specific to each project. This committee also identifies additional data needs either by adding questions to existing surveys or contacting other state PQCs to assess what data they are collecting. Members on this committee include healthcare providers, nurses, health educators, epidemiologists, insurance company representatives, hospital administrators, and lay members concerned with improving maternal and infant health outcomes data.

The community engagement committee has undergone some changes this year, the first is a name change to better reflect the work and vision that they are working towards, Maternal Quality Care Alliance (MQCA). It is not just community engagement that this committee is focused on, they want to engage hospitals and healthcare providers to participate in community-based projects; gather data to establish a better understanding of common clinical challenges; and determine best-practice models for engaging communities and families to work with health systems and providers to collectively improve maternal and infant health outcomes. The make up of the MQCA is being constructed, along with a vision and goals of this committee. COVID-19 has delayed this work, but the goal is to have a completed roster by organization, vision and goals for this committee by the end of 2020. The first meeting for the MQCA is planned for early 2021, to establish a workplan and clear direction on how to move their work forward. One main part of the workplan for the MQCA will be to establish a Birth Equity Network (BEN), separate from the MQCA but will work closely together. The BEN will also have an established roster by organization, vision, goals and workplan. This will be completed by next year's report.

The advocacy and sustainability committee has also morphed this year, the sustainability portion now falls on the Director of Operations for the VNPC. The director will actively seek out grants, funding opportunities and other streams to ensure the sustainability of the work underway. The advocacy of the VNPC work and initiatives will be to educate members of the general assembly before and during session each year. Working closely with a members of the "former" committee to provide education and logistics of how general assembly session work, what new legislation is purposed and areas that the VNPC can have an impact. These members will work with both the steering and executive committees to promote and sustain activities of the VNPC. Members of this committee include government affairs staff from hospitals and professional organizations, healthcare providers, nurses, community partners, and lay members invested in advocating on behalf of and determining mechanisms to sustain the VNPC.

Project Workgroups

Neonatal Abstinence Syndrome (NAS) and Maternal Opioid Use Disorder (OUD)

Neonatal abstinence syndrome (also called NAS) is a group of conditions caused when a baby withdraws from certain drugs that the baby is exposed to in the womb before birth. NAS is most often caused when a woman takes opioid drugs during pregnancy. The combined ongoing

opioid crisis and corresponding increase in cases of NAS is a prime example of how pregnancy and neonatal conditions can be addressed collectively by the VNPC.

The VNPC launched the Vermont Oxford Network's (VON) NAS Universal Training Program in early 2018 to standardize care and improve outcomes for infants and families affected by substance use. The VNPC partnered with VHHA, VDH, VON and MOD to host five training webinars. As a result, 37 neonatal intensive care units and birthing hospitals across the state enrolled and committed to implementing the training and audit package provided by VON in an effort to improve care related to NAS.

VON offers translational science and implementation expertise in the systematic rapid-cycle adoption of potentially better practices. The statewide NAS Universal Training Program evolved from VON's quality improvement collaborative that brought together more than 200 individual hospitals over three years to implement evidence-based practices and develop innovative service models. Virginia was one of seven states, including Alaska, Massachusetts, Michigan, New Hampshire, Vermont, and Wisconsin, to work on a VON NAS quality improvement project to address the opioid epidemic's effects on newborns and families at the statewide level.

The final data collection for VON was conducted in October 2019 and 32 birth hospitals submitted data. In addition to the newborn component of this project, the NAS workgroup and co-chairs will support and work closely with the Maternal Opioid Use Disorder workgroup through implementation of the *Obstetric Care for Women with Opioid Use Disorder* patient safety bundle published by the Alliance for Innovation in Maternal Health.

After review of the VNPC first quality improvement project and working with VON, several lessons were learned as the VNPC moves forward with future projects. The need to go through an outside vendor, isn't necessary based on lessons learned. During the time with VON, they lost two employees who were essential to the project we were conducting, so their support was limited. Reviewing the entire process from start to finish with VON, here are some of the take-aways and lessons learned:

1. Clear understanding provided to the hospital about what is involved in the project, including defined roles, deliverables, webinar frequency, timeline of project, and the amount of work that will be expected from the hospital;
2. Scheduled monthly webinars for questions and answers, lessons learned from other hospitals, identification of barriers and suggestions to overcome;
3. Provide to hospital data champion, what the data collection will entail with all the data points provided, how often data collection will be and when data will be provided back to hospitals.

Based on these lessons learned, the VNPC has decided to continue its work with the hospitals across the Commonwealth but first we need to better understand what is currently happening and where is the opportunity for improvement. In fall 2020, the VNPC will begin onboarding hospitals who will be entering data into Redcap, the data tool has been built off of a similar one from Illinois Perinatal Quality Collaborative. Hospitals will be invited to join and is

open to any hospital, however, the data tool contains about 50 questions and will require some chart abstractions. Once enough data is obtain, the hospitals and co-chairs will work on determine the area of opportunity to develop a quality improvement project for both NAS and OUD.

Antibiotic Stewardship

Antibiotic stewardship across all disciplines of medicine has become a focal point for the 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 necrotizing enterocolitis, which is a devastating disease that affects the intestines of premature infants.

Several single NICUs and a few state perinatal collaboratives have made antibiotic stewardship a quality improvement initiative aimed at reducing 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.

The VNPC Director of Operations and Co-chairs of this project have been working closely together to develop the quality improvement project. The project will launch on Sept 30 via a webinar to explain the project, how to enroll, data collection and answer any questions. The first data collection will be early 2021 and monthly webinars will be held with a calendar of topics available to all participants. The project will run for 15-18 months.

Obstetric Hemorrhage

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. AIM is funded through a cooperative agreement with the Maternal and Child Health Bureau (MCHB) of the Health Resource Services Administration (HRSA). Virginia is one of eighteen AIM member states nationwide. Virginia was formally recognized as an AIM state in October 2017. The first patient safety bundle that the VNPC will institute is *Obstetric Hemorrhage*.

Obstetric hemorrhage has been defined as the loss of more than 1000 mL of blood in the first 24 hours after delivery. Obstetric hemorrhage is a major cause of maternal morbidity worldwide and is one of the top three causes of maternal mortality in both high and low per

capita income countries. Obstetric hemorrhage is the cause of approximately 11% of maternal deaths in the US. However, with timely diagnosis, appropriate resources, and appropriate management, obstetric hemorrhage may be the most preventable cause of maternal mortality. Despite the use of medications to reduce obstetric hemorrhage and the more widespread availability of blood products, obstetric hemorrhage continues to account for a significant proportion of adverse maternal outcomes. Management of obstetric hemorrhage often require the use of blood products and potentially result in prolonged hospitalizations, disability, or even maternal death. Recently, The Joint Commission has defined the transfusion of four or more units of blood in the first 24 hours after delivery as a sentinel event, drawing additional attention to the preventable nature of at least some episodes of obstetric hemorrhage. (Baker, 2018)

Recognizing the critical need to address the problem of obstetric hemorrhage, AIM produced an *Obstetric Hemorrhage* patient safety bundle that provides resources to streamline and standardize the approach to obstetric hemorrhage (Appendix D). The AIM obstetric hemorrhage patient safety bundle provides guidance to hospital systems related to their readiness, recognition and prevention, response and reporting/systems learning related to obstetric hemorrhage. By adopting best clinical practices, hospitals may be able to decrease maternal morbidity and mortality 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. (AIM, 2017)

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The first data collection for Obstetric Hemorrhage was be conducted in June 2020, with the results of the 34 hospitals who participated were uploaded to the Virginia AIM dashboard for all hospitals to view their results compared to deidentified hospitals of similar size, location, and/or other filters they want to apply. The next data collection will be Dec 2020. Then for 2021 data will be collected in June and Dec 2021 and then annually after that in June of each year, to ensure sustainability of efforts. The VNPC began holding monthly webinars in August 2020 to present the data back to the hospitals and discuss areas of improvement and how to improve based on best evidence strategies and lessons learned from other hospitals who have been successful for a specific measure. The monthly webinars will continue through December 2020. Then joint commission will require this as a reportable task for their visits.

VNPC Operations

Transition to VCU

In March 2020, a fully executed MOU was completed between VDH and VCU, moving the VNPC over to VCU. The funding from General Assembly will still pass through VDH to

VCU, but otherwise, the VNPC is fully functional under VCU. VCU has graciously welcomed the VNPC under the Children's hospital.

Staff

Once the VNPC was moved to VCU, it was determined that there was a need for a full time position to ensure the daily operations of the VNPC continued, along with an opportunity to grow the VNPC. The VNPC Director of Operations was hired in early May 2020 and began working full time shortly after being hired.

Communications

The VNPC website www.virginianpc.org, launched in March 2018 and is under development to refresh the appearance and ensure the website is Section 508 compliant on both a computer and phone when viewing. The relaunch of the new website will be the end of 2020.

The VNPC Fourth Annual Summit is scheduled for October 26, 2020. Due to COVID-19, it will look a little different this year, the Summit will be held virtually for 4.5 hours in the afternoon and will be open to anyone that wants to participate. The Summit will be recorded and available to view at a later date on the VNPC website. CEU/CME/CNEs will also be available to those who want them this year. As this is the first year it will be held virtually, it is hard to estimate attendance. The topic for the Summit is respectful care, what is respectful care, how do you implement respectful care in your profession, success stories, and break-out session on takeaways and how will the attendee take back what they learned and apply respectful care in their daily operations.

Partnerships

The Office of the Chief Medical Examiner (OCME) and the VNPC Director of Operations both attended the virtual attend the annual Maternal Mortality Review Information (MMRIA) User Meeting, which was sponsored by CDC. The project manager for the Maternal Mortality Review Committee was added to the VNPC Steering Committee in July 2020, to ensure the partnership and implementation of recommendations from the Maternal Mortality Review Committee Reports are known and are a focus of the VNPC work.

A representative from the Department of Medical Assistance Services (DMAS) will serve on the Stakeholder Advisory panel to provide valuable information related to payer sources and services provided to women and infants covered by Medicaid in Virginia. DMAS has been a valuable partner and has helped to promote the VNPC among its providers and managed care organizations. The 2018 Appropriation Act authorized $82,980 from non-general funds the second year to be provided by DMAS. These funds have not been received by the VNPC due to barriers in providing the necessary data requested by DMAS to meet the Centers for Medicare and Medicaid Services (CMS) requirements for reimbursement. The data required by CMS is patient level data, which is not collected in the management information systems currently used for VNPC quality improvement efforts. Given the VNPC's inability to meet the data

deliverables, VDH will not pursue payment from DMAS. The partnership remains strong and the VNPC is working to secure additional funding streams in lieu of these funds.

Early Wins

The VNPC continues to be recognized by the CDC and the National Institute for Children's Health Quality (NICHQ) as a state PQC. Virginia as an AIM state, received $9,000 annually from 2018-2023 from a HRSA grant that AIM was awarded, to continue to work alongside of other states committed to align national, state, and hospital level quality improvement efforts to improve overall maternal health outcomes. In addition to the $9,000 annually, the VNPC was awarded an additional $30,000 to be used on our continued work to improve maternal health outcomes across the Commonwealth, to be used by 2023.

The VNPC held it's second Perinatal and Infant Mortality Summit with over 425healthcare providers, stakeholders and paraprofessionals in attendance on January 6, 2020 in Richmond, VA. The overwhelming response of the Summit was excellent, allowing a vast variety of professionals, providers and partners to work together on as shared vision to advance the discussion on how to improve maternal health across the Commonwealth.

While the VNPC has only formally been up and running for less than three years, it has made significant strides in this time and is committed to continuing to improve maternal and infant health across the Commonwealth. The work of the VNPC has been made possible through the support and appropriation provided through the General Assembly. (Appendix F, FY20 budget).

Conclusion and Recommendation

Based on the accomplishments of the VNPC to date, it is evident that support is present throughout Virginia and there is momentum to achieve even more in the coming years. The creation of multidisciplinary partnerships across government agencies, healthcare providers, hospital systems, communities and families have been instrumental to the VNPC's success. As these partnerships continue to grow, data collection is improved across systems, and evidence-based clinical practices and processes are implemented, the VNPC will contribute to improving the health of mothers, infants, and families in the Commonwealth.

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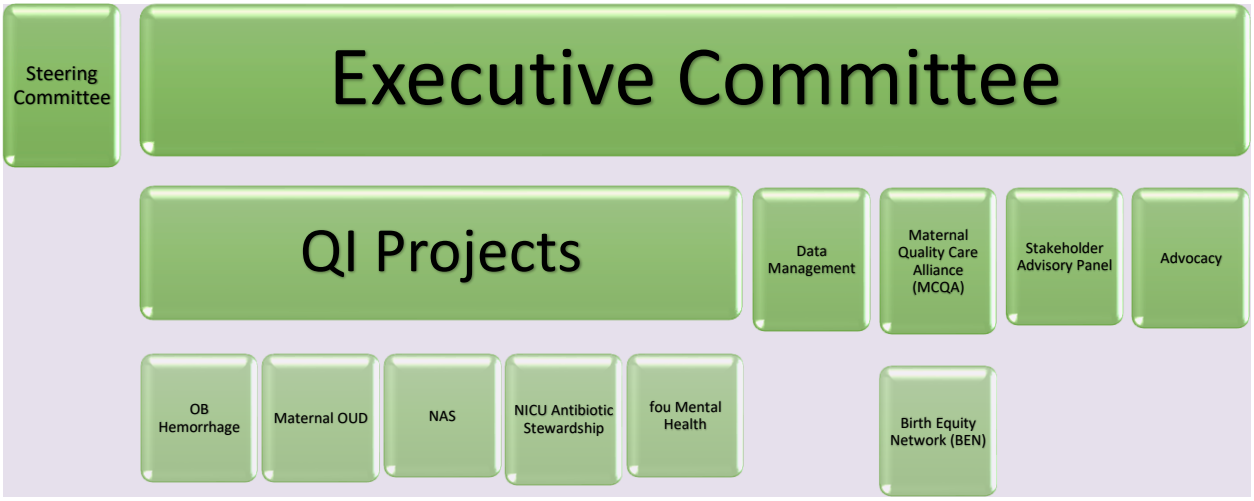
Appendix A – Budget Bill – HB1700

2019 Session
Budget Bill-HB1700 (Chapter 854)
Bill Order » Office of Health and Human Resources » Item 291

F.1. Out of this appropriation, $124,470 the first year and $124,470 the second year from the general fund and $82,980 the first year and $82,980 the second year from nongeneral funds shall be provided for the Virginia Department of Health to establish and administer a Perinatal Quality Collaborative. The Perinatal Quality Collaborative shall work to improve pregnancy outcomes for women and newborns by advancing evidence-based clinical practices and processes through continuous quality improvement with an initial focus on pregnant women with substance use disorder and infants impacted by neonatal abstinence syndrome.

2. Out of this appropriation, $315,000 the second year from the general fund shall be provided to support efforts by the Virginia Neonatal Perinatal Collaborative (VNPC) to decrease maternal mortality and morbidity. Funding shall be used for a coordinator position for community engagement, training and education; the development of a pilot program of the Centers for Disease Control's levels of care assessment (LOCATe) tool in the Richmond metropolitan region and Tidewater region; and development of a Project ECHO tele-education model for education and training. Funding shall also be used to assist the VNPC with expanding capacity to address these issues through the use of software to advance data analytics.

Appendix B – VNPC Organization Chart



The Steering Committee consists of six members who represent these organizations and the VNPC Director of Operations:

- Obstetric Co-Chair
- Pediatric Co-Chair
- Virginia Department of Health (VDH)
- Virginia Hospital and Healthcare Association (VHHA)
- National Association of Neonatal Nurse Practitioners
- Maternal Health Collaborative through VHHF

The Executive Committee consists of the Steering Committee plus these organizations:

- American College of Obstetricians and Gynecologist (ACOG)
- Virginia Midwives Alliance (VMA)
- American Association of Pediatrics (AAP)
- Office of the Secretary of Health & Human Resources
- Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)
- Family Members
- Association of Certified Nurse Midwives (ACNM)
- Urban Baby Beginnings (UBB)
- American Association of Family Practice (AAFP)
- Maternal Mortality Review Team Manager (MMRT)

Appendix C –

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SAFETY BUNDLE

Obstetric Hemorrhage

Appendix D – Obstetric Hemorrhage Patient Safety Bundle

READINESS

Every unit

- Hemorrhage cart with supplies, checklist, and instruction cards for intrauterine balloons and compressions stitches
- Immediate access to hemorrhage medications (kit or equivalent)
- Establish a response team - who to call when help is needed (blood bank, advanced gynecologic surgery, other support and tertiary services)
- Establish massive and emergency release transfusion protocols (type-O negative/uncrossmatched)
- Unit education on protocols, unit-based drills (with post-drill debriefs)

RECOGNITION & PREVENTION

Every patient

- Assessment of hemorrhage risk (prenatal, on admission, and at other appropriate times)
- Measurement of cumulative blood loss (formal, as quantitative as possible)
- Active management of the 3rd stage of labor (department-wide protocol)

RESPONSE

Every hemorrhage

- Unit-standard, stage-based, obstetric hemorrhage emergency management plan with checklists
- Support program for patients, families, and staff for all significant hemorrhages

REPORTING/SYSTEMS LEARNING

Every unit

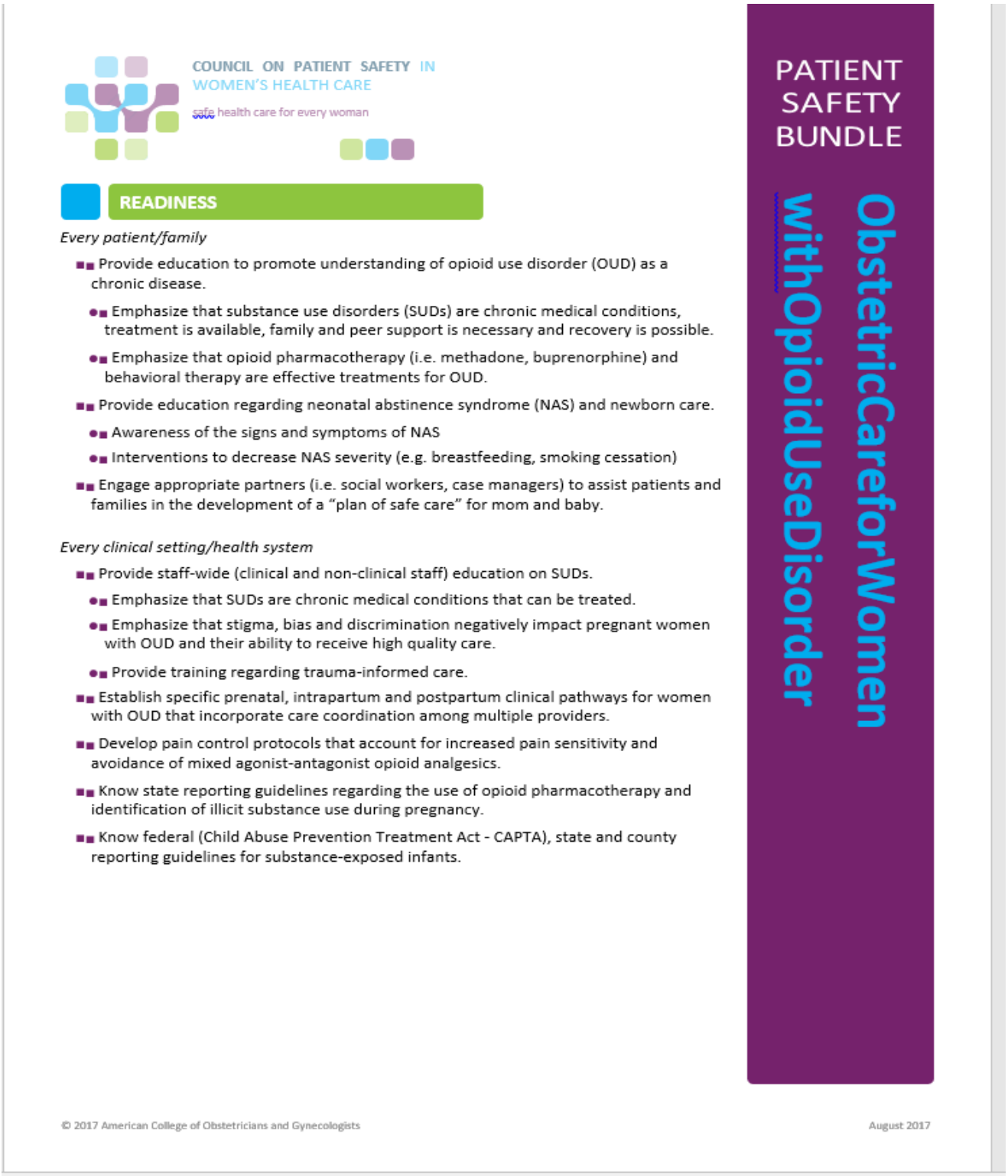
- Establish a culture of huddles for high risk patients and post-event debriefs to identify successes and opportunities
- Multidisciplinary review of serious hemorrhages for systems issues
- Monitor outcomes and process metrics in perinatal quality improvement (QI) committee

Standardization of health care processes and reduced variation has been shown to improve outcomes and quality of care. The Council on Patient Safety in Women's Health Care disseminates patient safety bundles to help facilitate the standardization process. This bundle reflects emerging clinical, scientific, and patient safety advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Although the components of a particular bundle may be adapted to local resources, standardization within an institution is strongly encouraged.

The Council on Patient Safety in Women's Health Care is a broad consortium of organizations across the spectrum of women's health for the promotion of safe health care for every woman.

For more information visit the Council's website at www.safehealthcareforeverywoman.org

Appendix E – Obstetric Care for Women with Opioid Use Disorder Patient Safety Bundle



COUNCIL ON PATIENT SAFETY IN WOMEN'S HEALTH CARE

safe health care for every woman

PATIENT SAFETY BUNDLE

Obstetric Care for Women with Opioid Use Disorder

READINESS

Every patient/family

- Provide education to promote understanding of opioid use disorder (OUD) as a chronic disease.
  - Emphasize that substance use disorders (SUDs) are chronic medical conditions, treatment is available, family and peer support is necessary and recovery is possible.
  - Emphasize that opioid pharmacotherapy (i.e. methadone, buprenorphine) and behavioral therapy are effective treatments for OUD.
- Provide education regarding neonatal abstinence syndrome (NAS) and newborn care.
  - Awareness of the signs and symptoms of NAS
  - Interventions to decrease NAS severity (e.g. breastfeeding, smoking cessation)
- Engage appropriate partners (i.e. social workers, case managers) to assist patients and families in the development of a "plan of safe care" for mom and baby.

Every clinical setting/health system

- Provide staff-wide (clinical and non-clinical staff) education on SUDs.
  - Emphasize that SUDs are chronic medical conditions that can be treated.
  - Emphasize that stigma, bias and discrimination negatively impact pregnant women with OUD and their ability to receive high quality care.
  - Provide training regarding trauma-informed care.
- Establish specific prenatal, intrapartum and postpartum clinical pathways for women with OUD that incorporate care coordination among multiple providers.
- Develop pain control protocols that account for increased pain sensitivity and avoidance of mixed agonist-antagonist opioid analgesics.
- Know state reporting guidelines regarding the use of opioid pharmacotherapy and identification of illicit substance use during pregnancy.
- Know federal (Child Abuse Prevention Treatment Act - CAPTA), state and county reporting guidelines for substance-exposed infants.

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COUNCIL ON PATIENT SAFETY IN WOMEN'S HEALTH CARE
safe health care for every woman

PATIENT SAFETY BUNDLE

Obstetric Care for Women with Opioid Use Disorder

- Know federal (Child Abuse Prevention Treatment Act - CAPTA), state and county reporting guidelines for substance-exposed infants.
  - Understand "Plan of Safe Care" requirements.
- Know state, legal and regulatory requirements for SUD care.
- Identify local SUD treatment facilities that provide women-centered care.
  - Ensure that OUD treatment programs meet patient and family resource needs (i.e. wrap-around services such as housing, child care, transportation and home visitation).
  - Ensure that drug and alcohol counseling and/or behavioral health services are provided.
- Investigate partnerships with other providers (i.e. social work, addiction treatment, behavioral health) and state public health agencies to assist in bundle implementation.

RECOGNITION & PREVENTION

Every provider/clinical setting

- Assess all pregnant women for SUDs.
  - Utilize validated screening tools to identify drug and alcohol use.
  - Incorporate a screening, brief intervention and referral to treatment (SBIRT) approach in the maternity care setting.
  - Ensure screening for polysubstance use among women with OUD.
- Screen and evaluate all pregnant women with OUD for commonly occurring co-morbidities.
  - Ensure the ability to screen for infectious disease (e.g. HIV, Hepatitis and sexually transmitted infections (STIs)).
  - Ensure the ability to screen for psychiatric disorders, physical and sexual violence.
  - Provide resources and interventions for smoking cessation.
- Match treatment response to each woman's stage of recovery and/or readiness to change.

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Obstetric Care for Women with Opioid Use Disorder

RESPONSE

Every provider/clinical setting/health system

- Ensure that all patients with OUD are enrolled in a woman-centered OUD treatment program.
  - Establish communication with OUD treatment providers and obtain consents for sharing patient information.
  - Assist in linking to local resources (e.g. peer navigator programs, narcotics anonymous (NA), support groups) that support recovery.
- Incorporate family planning, breastfeeding, pain management and infant care counseling, education and resources into prenatal, intrapartum and postpartum clinical pathways.
  - Provide breastfeeding and lactation support for all postpartum women on pharmacotherapy.
  - Provide immediate postpartum contraceptive options (e.g. long acting reversible contraception (LARC)) prior to hospital discharge.
- Ensure coordination among providers during pregnancy, postpartum and the inter-conception period.
  - Provide referrals to providers (e.g. social workers, psychiatry, and infectious disease) for identified co-morbid conditions.
  - Identify a lead provider responsible for care coordination, specify the duration of coordination and assure a "warm handoff" with any change in the lead provider.
  - Develop a communication strategy to facilitate coordination among the obstetric provider, OUD treatment provider, health system clinical staff (i.e. inpatient maternity staff, social services) and child welfare services.
- Engage child welfare services in developing safe care protocols tailored to the patient and family's OUD treatment and resource needs.
  - Ensure priority access to quality home visiting services for families affected by SUDs.

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Appendix F

Virginia Neonatal Perinatal Collaborative

FY21 BUDGET
July 1, 2020 through June 30, 2021
GA Funds (Jul 1, 2020-June 30, 2021): $124,470
GA Funds (Jul 1, 2020—June 30, 2021): $315,000
AIM 2.0 HRSA Grant (Sep 1, 2020-Aug 31, 2021): $9,000
AIM Supplemental Funding HRSA Grant (Aug 1, 2020-Aug 31, 2023): $30,000

Title/What	Salary/Cost	Fringe/extra cost	Total
Staff			
Principal Investigator/Co-Chair	$233,167 at 1% ($2,332)	$935	$3266.67
Program Supervisor (FTE)	$85,000	$34,085 (Fringe @40.1%)	$119,085
		$5000 (travel & training)	$5000
Epidemiologist II	$70,000 at 25% ($17,500)	$23,100 at 25% ($5,775)	$23,275
		$5000 (travel & academic)	$5000
Epidemiologist II	$70,000 at 25% ($17,500)	$23,100 at 25% ($5,775)	$23,275
		$5000 (travel & academic)	$5000
Projects			
AIM Projects	$28,759.38(Travel and Technical Assistance, educational tools, webinars, CME/CNEs)	(Will comply with state rates for reimbursement due to travel for meetings across the state)	$28,759.38
IHI Training for Steering Committee members	$3608.25 each for 3 people ($10,824.75), received scholarship for 3 additional people; total of 6 trained		$10,824.75
Maternal Disparities Dashboard	$28,508.20		$28,508.20
LOCATe-survey, meetings, webinars & travel	$48,476		$48,476
Meetings and Conferences			
Annual VNPC Summit Oct 26, 2020 Virtual	$15,000		$15,000
Maternal Mortality Conference in Feb 2021	$35,000		$35,000
Quarterly in-person meeting Jan 2021, April 2021	$2000		$2000

Materials/IT/Data			
Office Supplies	$15,000		$15,000
Statistical Data Software	$7,000 (SPS license/annual)		$7,000
Statistical Data Software	$7,000 (STATA license/annual)		$7,000
Statistical Data Software	$6,000 (SAS license/annual)		$6,000
Website maintenance and support	$10,000		$10,000
Health Education Communication/Media Campaign/Promotion	$25,000	N/A	$25,000
Zoom Account for Weekly Committee/ Workgroup Meetings	$200	N/A	$200
Formsite account renewal for registration of all events	$300		$300
Postage	$500		$500
Total			$439,470