

DRUG FREE MOMS + BABIES PROJECT

2020-2021 Biennial Report

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The terms woman, mother, she, or her are used in reference to the birthing person throughout the report. The West Virginia Perinatal Partnership recognizes that not all birthing people identify as mothers or women, and we believe all birthing people are equally deserving of patient-centered, respectful care.

*If I had a heart, I would trade it for you.
With guilt and sadness it broke in two.
With every breath I plead for release.
I've come to realize I'm not in so deep.
With stitches being slowly sewn.
I realize now my heart is my own.*

–poem by a DFMB participant

A MESSAGE FROM THE EXECUTIVE DIRECTOR



The West Virginia Perinatal Partnership is happy to share the 2020 - 2021 Biennial Report of the Drug Free Moms and Babies (DFMB) Project. The DFMB Project was launched in 2011 and first enrolled participants in 2012 at four pilot sites. Since that time the project has expanded to 16 sites across the state of West Virginia. This project is a critical component of the work we are doing to help improve health outcomes for pregnant women and their babies throughout the state.

Pregnancy is a unique time in a woman's life. For women with substance use disorders, pregnancy is perhaps one of the only times some women can gain access to health care coverage for their medical care. The increased motivation

for improved health that often comes with pregnancy coupled with access to health care coverage makes the prenatal and postpartum periods ideal for addressing substance use. Research repeatedly demonstrates that women who use substances but who receive prenatal care experience improved birth outcomes and have greater opportunities for other health promoting interventions than women who do not receive such care.¹ Further, research also demonstrates that maternal, fetal, and child outcomes are improved when pregnant and parenting women receive care that addresses physical, mental, and care coordination needs.² That is why the DFMB Project was structured using an integrated approach that combines the medical and nursing team, behavioral health providers, substance use treatment providers, and community resources into a seamless partnership to provide the best care for mothers and their babies.

As detailed in this report, the DFMB Project effectively serves women who are disenfranchised. During 2020 and 2021, 1,666 pregnant and postpartum women misusing substances were served across the state of West Virginia. Since the first patient was enrolled in 2012, more than 3000 women and their babies have received care under this program. This report outlines the overwhelming need for services supporting pregnant and postpartum women with substance use disorders; the history, structure, and components of the project and service sites; demographics of the women served; outcomes; and a discussion of where we go from here.

Through this project, we have shown that together we can improve outcomes for pregnant women and their babies.

Amy N. Tolliver
Executive Director

“

Our Perinatal Transition Program provides a wonderful system for both identifying patients as well as supporting them prenatally and after the baby is born. Our families have greatly benefited from the program's services. The number of infants requiring pharmacologic intervention has steadily decreased.

– Pediatric Provider, Wheeling Hospital

NEED FOR SERVICES

No state has been as profoundly affected by the epidemic of substance use and misuse, especially opioid abuse, as West Virginia. For the last several years, the state's rate of overdose deaths has been the highest per capita in the country and over double the national rate. In 2019, West Virginia had a drug overdose death rate of 52.8 per 100,000 people compared to the national rate of 21.6 per 100,000.³ The epidemic has devastated individuals, families, and entire communities across the Mountain State.^{4, 5, 6, 7}

Substance use disorder knows no boundaries and the epidemic has not spared West Virginia's expectant mothers and women of reproductive age. Substance use in pregnancy (including the use of tobacco, alcohol, prescription, and illicit drugs) has long been identified by West Virginia healthcare professionals as a major factor contributing to poor health outcomes for mothers and babies. The following 2020-2021 statistics paint a troubling picture:

14% of West Virginia infants are born with intrauterine substance exposure.⁸

5.5% of West Virginia infants are diagnosed with Neonatal Abstinence Syndrome (NAS). This is significantly higher than the national prevalence of 0.68%.^{9, 10}

West Virginia has the highest percentage of pregnant smokers in the nation. Approximately 23% of West Virginia mothers smoke during their pregnancy, which is nearly four times the national average of 6% and well above the Healthy People 2020 target of less than 1%.¹¹

The number of children in foster care has risen from an average of 4,000 children a year in care to over 6,870 in December 2020.¹² Substance use disorders are a significant contributing factor to this increase.

In 2019, substance use was the cause of 4 maternal deaths, but drug use was noted in 8 of the 16 deaths that year.¹³

Addressing the significant problems of substance use and substance use disorders has been a major focus of the West Virginia Perinatal Partnership since it was founded in 2006. To reduce substance use and substance use disorders in pregnancy, and the alarming rise in rates of NAS, the West Virginia Perinatal Partnership's Substance Use During Pregnancy Committee identified the need for a collaborative and coordinated approach to improve identification and care of pregnant women using substances. The Committee developed the Drug Free Moms and Babies (DFMB) Project to establish an integrated and comprehensive care model for pregnant and postpartum women with substance use disorders.

DRUG FREE MOMS AND BABIES PROJECT

HISTORY

In 2012, the Drug Free Moms and Babies (DFMB) Project, with funding from the West Virginia Department of Health and Human Resources and the Claude Worthington Benedum Foundation, was initiated as a pilot at four sites across the state of West Virginia. The key components of the project included screening, integration of maternity and behavioral healthcare services, comprehensive needs assessment, coordination of care, long-term follow-up, provider outreach, and program evaluation.

The pilot sites represented diverse geographic and delivery care settings:

Greenbrier Physicians, Inc.: a rural, small group physician practice in Greenbrier County;

Shenandoah Health System: a federally qualified health center in Berkeley County;

Thomas Health: an urban delivery hospital with comprehensive behavioral health services in Kanawha County; and

West Virginia University Ob-Gyn Department: a university-affiliated Ob-Gyn practice within a tertiary care hospital in Monongalia County.

From commencement of services in 2012, through March 2018, the pilot sites served 550 women.¹⁴

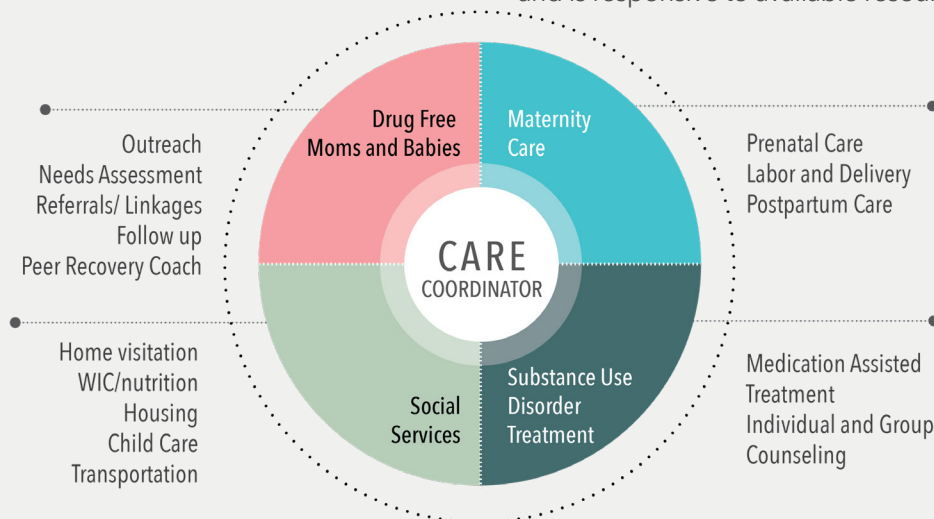
The qualitative and quantitative evaluation of the programs demonstrated a significant reduction in illicit substance use of the participants, as well as improved birth outcomes for their children. Urine drug screen data showed a decrease of non-prescribed positive screens from 81% positive in the first trimester to 22% positive at delivery. With an effective and tested model, by 2020 the DFMB project had expanded to 12 additional sites across the state with the support from a variety of state, federal, and private foundation funds. The program continues to grow and add new sites.

GOAL

The goal of the DFMB Project is to develop, evaluate, document, and replicate programs that support healthy baby outcomes by providing prevention, early intervention, treatment, and recovery services for pregnant and postpartum women with substance use disorders.

DESIGN OVERVIEW

The DFMB Project works in communities by integrating medical and behavioral healthcare through a strong care coordination model that incorporates wrap around recovery support services and social services. While all sites are built upon the central hub of care coordination and provide required service components, they have the flexibility to provide services in a way that meets local needs and demands and is responsive to available resources.



2020 – 2021 PROJECT SITES

AccessHealth, Associates in OB/GYN: Mommy and Me, As Healthy as Can Be, Beckley

Charleston Area Medical Center, Women and Children's Hospital, Family Resource Center: Baby First, Charleston

David Patton, MD: Drug Free Moms and Babies, Charleston

Davis Medical Center: Treatment for Two, Elkins

Greenbrier Physicians, Inc.: Drug Free Mother/Baby, Ronceverte

Logan Regional Medical Center: Drug Free Moms and Babies, Logan

Marshall Health: Healthy Connections, Huntington

Southern Highlands Community Mental Health Center and Brandon Lingenfelter, DO, PhD: BIBS Program, Princeton

Tug River Health Association: Drug Free Mother/Baby, Northfork

Valley Health Systems, Inc: MAT Maternal Care Program, Huntington

Weirton Medical Center: The Perinatal Recovery Center, Weirton

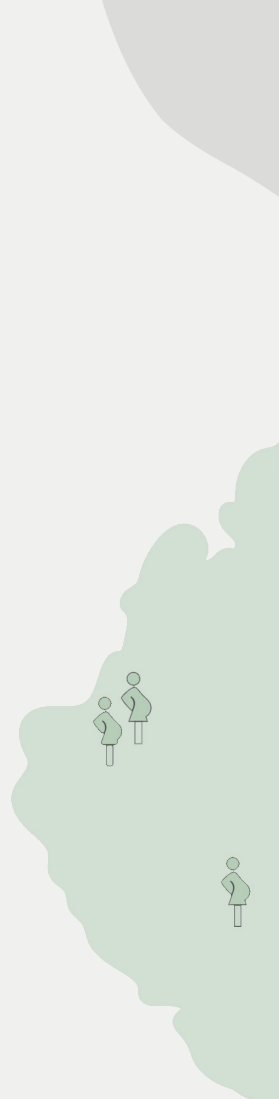
WVU Medicine Camden Clark Medical Center: CARE Program, Parkersburg

WVU Medicine Children's Hospital: ACE Program, Morgantown

WVU Medicine St. Joseph's Hospital, Center for Women's Health: Baby on Board, Buckhannon

WVU Medicine Thomas Health: Pregnancy Connections, South Charleston

WVU Medicine Wheeling Hospital: Perinatal Transitions Program, Wheeling



PROJECT COMPONENTS

1

Integration of behavioral health and maternity care;

2

Incorporation of the Screening, Brief Intervention, and Referral to Treatment (SBIRT) model into existing service delivery;

3

Long-term follow-up with participants from pregnancy through their infant's 2nd birthday;

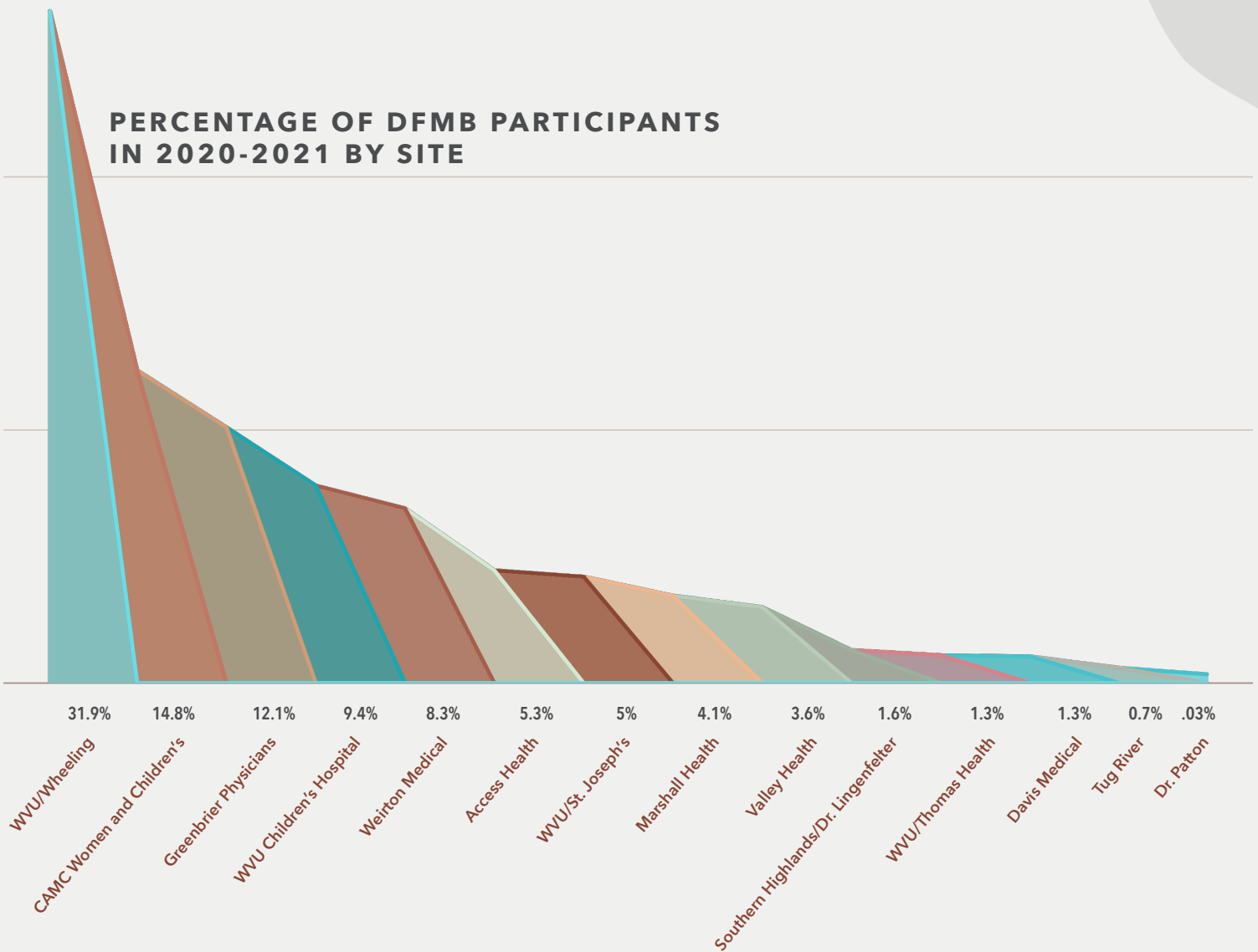
4

A commitment to work with statewide and/or local committees to address the issue of substance use in pregnancy.

PROJECT SITES SERVICE CHARACTERISTICS

- Screening, Brief Intervention, and Referral to Treatment (SBIRT) Model.
- Comprehensive needs assessment.
- Individualized plan of care identifying prenatal and postpartum care needs, substance use treatment, mental health care, social services, and identification of pediatric providers.
- Care coordination (including monitoring and follow up), identification of community resources, individual and family supports (referrals and navigation assistance), and communication across multiple service providers.
- Direct services or referrals to tobacco cessation programs, lactation counseling/support, contraceptive counseling, childbirth education, nutrition counseling, infant care (including NAS symptoms and management), parenting education, child development, home visitation programs, peer recovery support specialists, and individual and group behavioral health counseling.
- Medication for opioid use disorder (MOUD). For pregnant women with an opioid use disorder, the standard of care is MOUD and is preferable to medically supervised withdrawal. High rates of a return to illicit opioid use is associated with withdrawal, which leads to worse outcomes for mother and baby.
- Referrals and linkages to social supports such as housing, education, clothing, utilities, and other forms of assistance.

PERCENTAGE OF DFMB PARTICIPANTS IN 2020-2021 BY SITE



WOMEN SERVED

DEMOGRAPHICS

The DFMB Project reaches a low-income, at-risk population. A “typical participant” is a white, 27 year-old woman who uses tobacco and one or more illicit substances. She is single, has one or two other children, is unemployed with a high school diploma or GED, and is covered by Medicaid. Her pregnancy is unplanned. She most likely is identified as using illicit substances during an initial prenatal visit.

During 2020 and 2021, 1,666 women were served by the DFMB Project statewide. Most enrolled in the program during 2020 and 2021 (79%) with the remaining joining prior to 2020 (21%). The percentage of DFMB participants served in each site during 2020-21 is displayed in the figure above, with the most served in programs at WVU Wheeling Hospital, Charleston Area Medical Center, and Greenbrier Physicians. Programs at AccessHealth in Raleigh County, WVU Medicine Camden Clark Medical Center, and Dr. Patton’s practice first enrolled patients in 2020.



88%

Medicaid Coverage

91%

White

53%

Intend to Breastfeed

68%

Unemployed

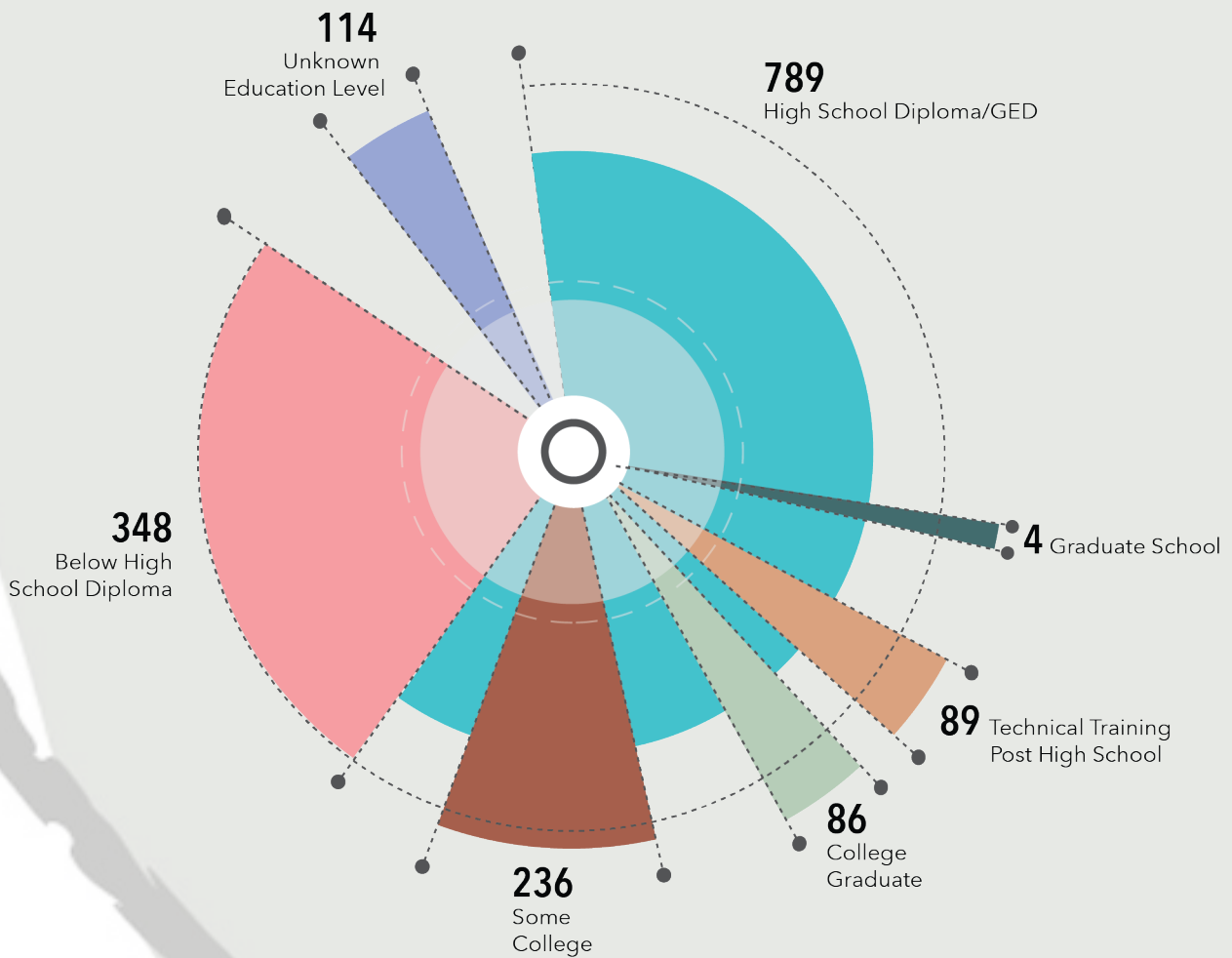
87%

Unplanned Pregnancy

73%

Never Married

DFMB PARTICIPANTS 2020-21:



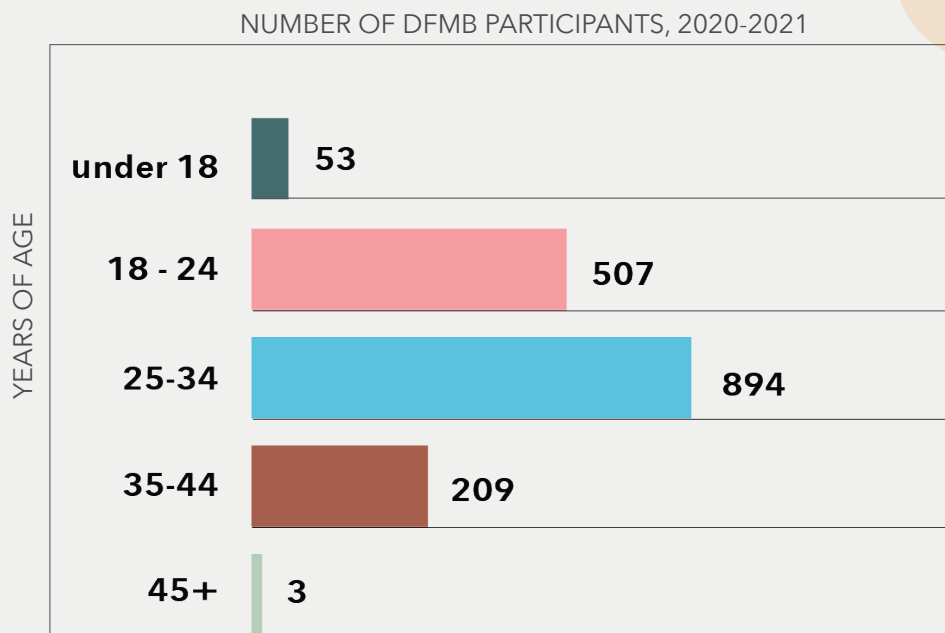
EDUCATION

While education levels ranged from below a high school diploma to graduate degrees, the majority (51%) of participants had a high school diploma or equivalent and over one-fourth (26.7%) had post high school education. More than one in five had less than a high school education. West Virginia has one of the lowest rates in the country of individuals aged 25 and older with a bachelor’s degree or higher at 19.7%,¹⁵ and program participants are far below that at 6%.

While earning a bachelor’s degree is not the only avenue for financial stability, bachelor’s degree holders earn an average of 66% more than high school graduates and will add \$1 million to their total lifetime earnings compared to someone without a degree.¹⁶ The DFMB sites all work with participants to help them advance their level of education if they have an interest or desire to continue their education.

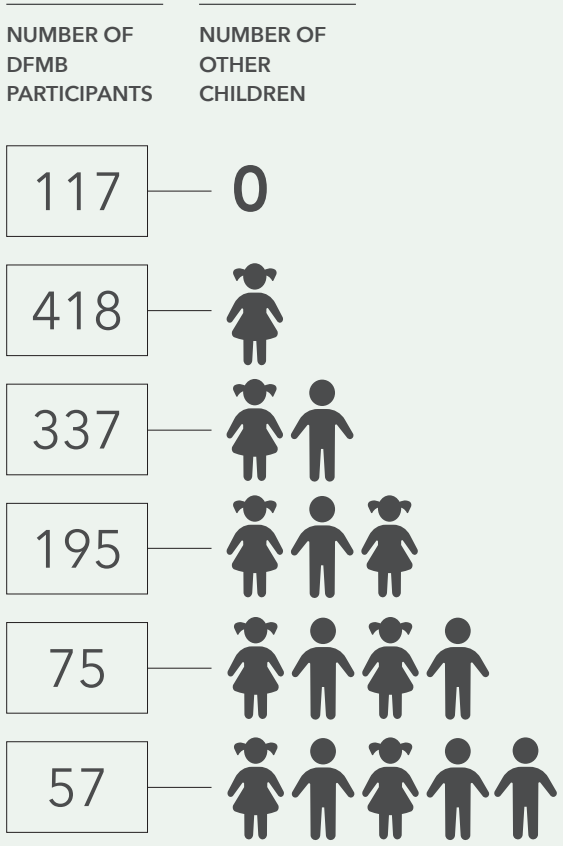
AGE AT PROGRAM ENTRY

Program participants ranged in age from 14 to 45 years old. The average was 27.5. Most participants (54%) were between the ages of 25 and 34.



I thought that I was hiding it (my drug use) well, but ya'll knew how much I was struggling.

– DFMB Participant



OTHER CHILDREN

The vast majority (90%) of participants had given birth to one or more children prior to entering the program. DFMB participants often have numerous demands on their time and child rearing responsibilities may interfere with their ability to make it to all the appointments needed to access the range of services they and their children need. Child care is a barrier to care for many women. Additionally, in many WV counties, once a parent has her rights terminated to one child, the child protective services (CPS) system can use that decision to justify the termination of parental rights to another child. It is often traumatic to mothers to have one or more children removed from their care, which often compounds multiple and complex existing problems. It is also distressing to children as it affects bonding and attachment. The WV foster care system is overwhelmed and under resourced. DFMB programs work with participants to locate child care resources and help them navigate multiple systems of care for them and their children. They also seek to maximize the parent-child relationship by working closely with CPS to reduce the number of infants placed in foster care and help reunite mothers with their children who are in out-of-home placement when it is safe to do so.



“You were one of the main reasons I got to keep my baby. You told me everything I needed to do, and you were right.”

– DFMB Participant

“

Tomorrow is my fresh clean day. Say some prayers for me please because I know I can do this. I just needed a slight push.

—DFMB Participant

HOUSEHOLD COMPOSITION

Most participants lived with others, but only 68% reported living in permanent housing. The DFMB sites work with participants to help them find stable housing when needed. They also work with participants to assess their living environments and make referrals to substance use disorder treatment programs for household members also using substances, to ensure participants have the best environments to succeed in their recovery.

NUMBER IN HOUSEHOLD

NUMBER OF DFMB PARTICIPANTS



41



276



271



186

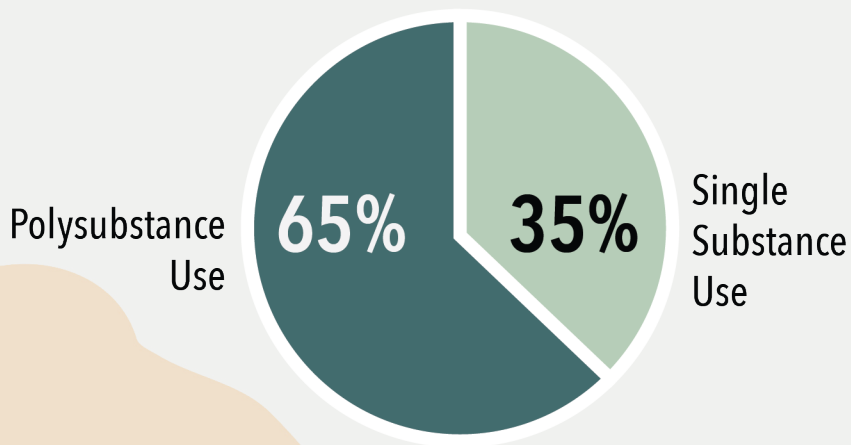


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PROGRAM ENTRY CHARACTERISTICS

SUBSTANCE USE

Research suggests that the use of more than one substance, polysubstance use, during pregnancy is common. At program entry, 65% of participants were polysubstance users. For individuals using only one substance, cannabis and opioids were the most common. Of the 1,055 individuals served who were polysubstance users, cannabis, opioids, and tobacco were the most common. Polysubstance use can complicate treatment because the combined effects on infants are not as well-known. Further, the risk of adverse health outcomes may be higher for newborns of mothers who used multiple substances during pregnancy than for newborns of mothers using a single substance.



I didn't have an OB. When I was in the ER a doctor came to see me and said he wanted to be my doctor. No one has ever told me that.

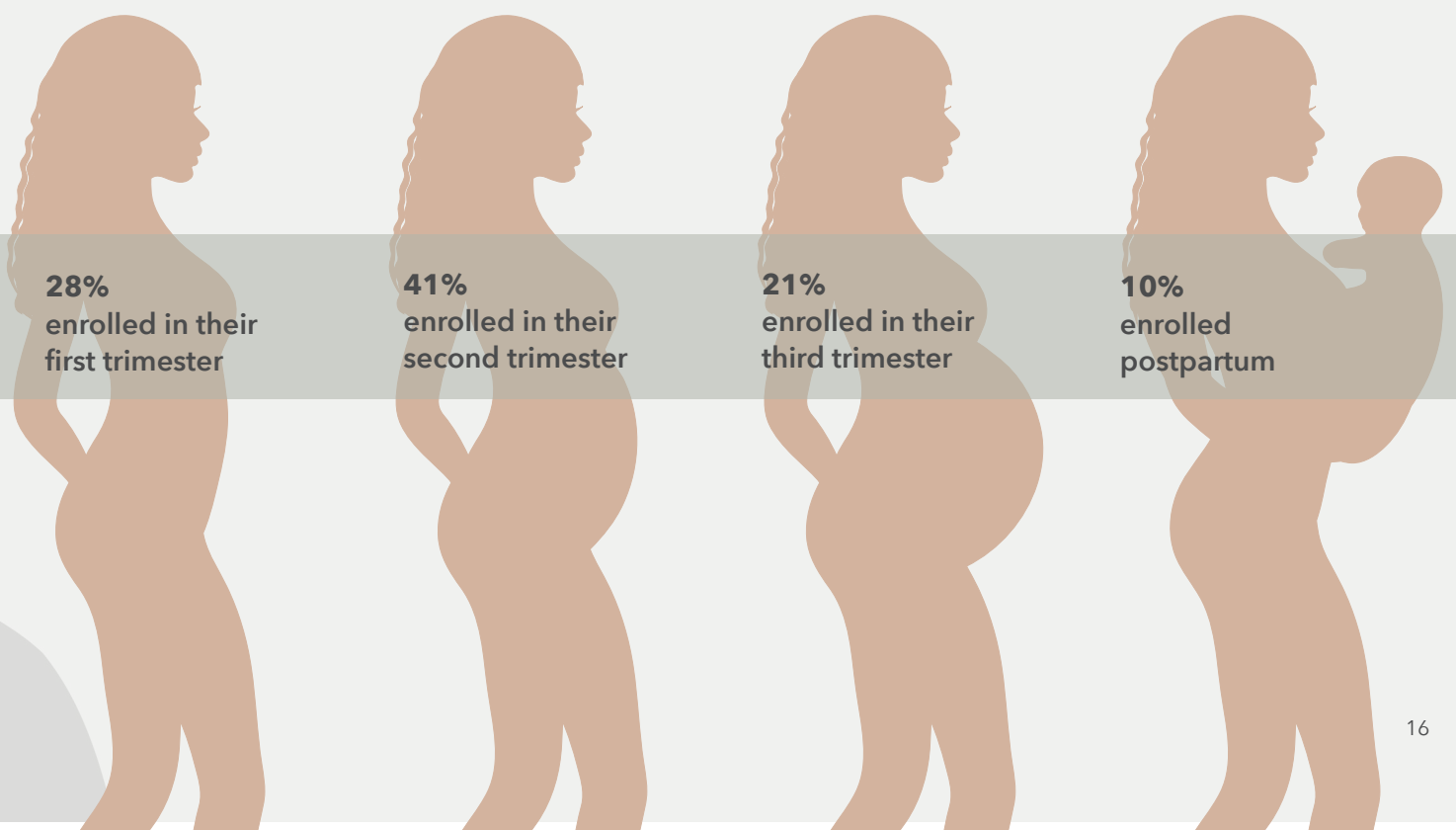
– DFMB Participant

TRIMESTER ENTRY IN DFMB PROGRAM

DFMB site staff seek to enroll women in their programs as early in pregnancy as possible. This is especially important as recent evidence suggests that polysubstance use is highest during early pregnancy. Scientific evidence indicates that substance misuse and substance use disorders can be reliably and easily identified through screening. Patients with less severe forms of substance misuse often respond to brief provider advice and other types of brief interventions.¹⁷ For those with more severe substance use disorders, evidence shows that behavioral therapies can be effective. Finally, the

most severe cases require referrals to residential and in-patient services.

Women can enter the DFMB program throughout pregnancy and postpartum, and almost one-third enroll in DFMB in the 3rd trimester or the postpartum period. Challenges to early identification and enrollment include stigma/fear of judgment and CPS, unplanned pregnancy, and access to care, including transportation barriers. A foundational goal of the DFMB program is to provide care in a non-judgmental setting which reduces stigma and removes barriers to care.

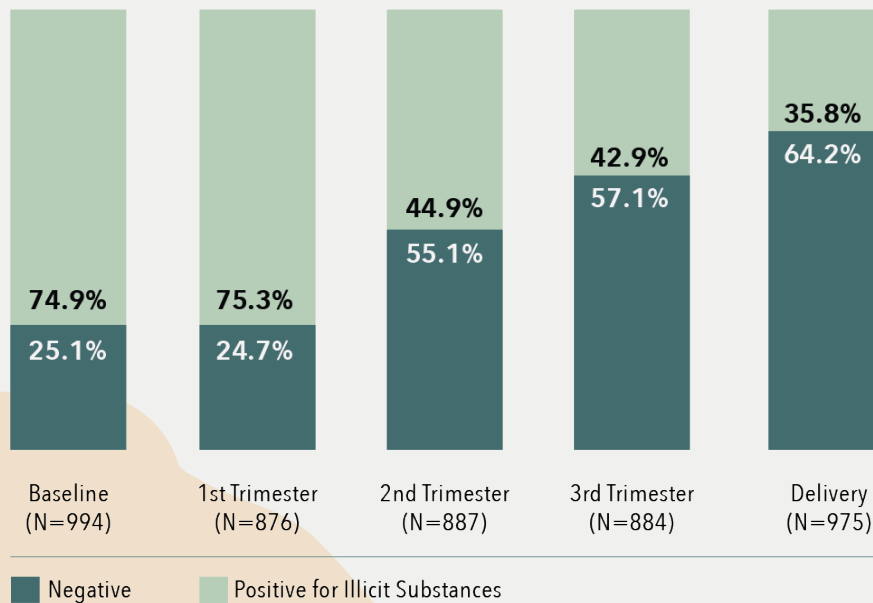


OUTCOMES

DRUG SCREENING BY TRIMESTER

DFMB participants are required to undergo drug tests at a minimum of once per trimester. Negative drug screens rose from 25.1% at baseline to 64.2% at delivery. Women positive for illicit substances decreased from 74.9% at baseline to 35.8% at delivery. This is significant evidence of the ability of the DFMB program to affect behavior changes in participants and help them remain free from substance use.

DRUG SCREENING RESULTS



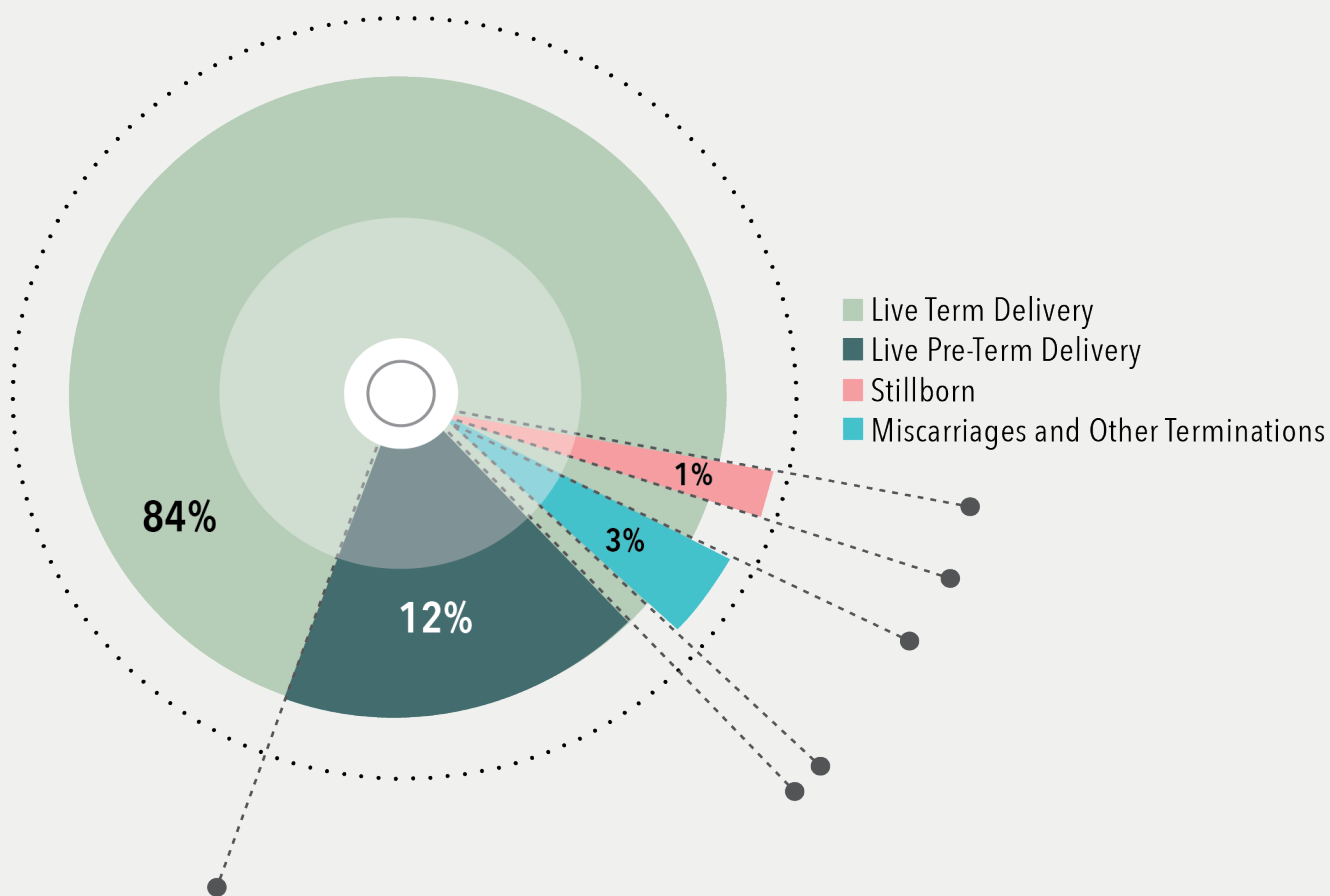
Pregnant women who smoke, who drink, who use prescription or illegal drugs are as deserving of compassion, comprehensive support, interventions and treatment—and perhaps even more so—as anyone else presenting with an addiction issue.

– DFMB Program Provider

DELIVERY OUTCOME

The vast majority of women (84%) in the DFMB program who delivered a baby during 2020 and 2021 gave birth to a full-term infant.

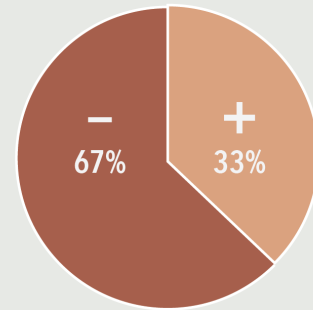
The rate of pre-term birth for DFMB participants was 12%, the same rate as the general population in West Virginia in 2020.¹⁸ According to an analysis of statewide data of the infants identified with intrauterine substance exposure in 2020, 19.4% were born prematurely. This data highlights the healthy delivery outcomes achieved through the DFMB Program.¹⁹ Prematurity and its complications are the number one cause of infant death in the United States, and those who survive may have long-term health problems, including cerebral palsy, intellectual disabilities, chronic lung disease, blindness, and hearing loss.²⁰



UMBILICAL CORD TEST RESULTS

Critical to the program evaluation, all DFMB sites are required to collect and test the umbilical cord tissue of each infant born to a program participant. Of the 795 tests returned in 2020 and 2021, 67% were negative for illicit substances. Two-thirds of women in the program were successful in delivering babies free of illicit substances.

UMBILICAL CORD TESTING RESULTS

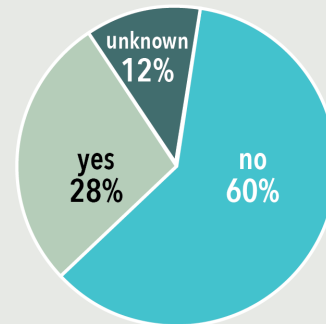


266 | Positive for Illicit Substances
549 | Negative for Illicit Substances

DIAGNOSIS OF NEONATAL ABSTINENCE SYNDROME (NAS)

All infants born to a DFMB participant are screened for NAS at birth. For women using medication for opioid use disorders, NAS is an expected and treatable outcome that is discussed by program providers during the prenatal period so mothers are prepared to deal with the diagnosis and treatment of their babies. Twenty-eight percent (28%) of the babies born to women in the DFMB Program were diagnosed with NAS. Of those, over half (57.1%) of the babies' umbilical cord tissue was positive for prescribed substances only. Symptoms of NAS may vary in severity depending on the type of substance(s) used, the last time it was used, and whether the baby was born full-term or premature.

NAS DIAGNOSIS

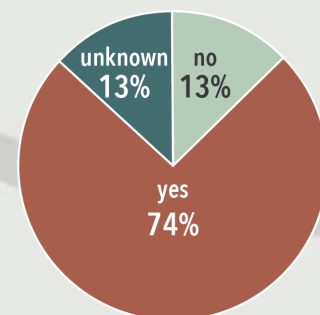


602 | No
276 | Yes
118 | Unknown

INFANTS DISCHARGED TO MOTHER'S CARE

DFMB sites work closely with Child Protective Services before and after birth to ensure the safety and wellbeing of babies. According to attachment theory, humans are born with a need to form a close emotional bond with a caregiver. Starting in infancy, humans develop mental representations of the caregiving relationship based on their early experiences. These mental representations of the caregiving relationship are thought to influence expectations and interactions in relationships, including parent-child relationships in the next generation.²¹ Supporting secure mother-infant bonds are critical for healthy development. The vast majority (74%) of infants born to DFMB participants were discharged to their mother's care, giving the best chance for parent-child bonding.

NUMBER OF INFANTS DISCHARGED TO MOTHER'S CARE



131 | No
739 | Yes
126 | Unknown

COVID-19 IMPACT

To combat the spread of COVID-19 in West Virginia, Governor Jim Justice issued a Stay-at-Home order effective March 24, 2020. The order directed all West Virginians to limit their movements outside of their homes beyond essential needs. The Stay-at-Home order was replaced by a Safer at Home plan on May 4, 2020.

Some DFMB program sites were able to continue providing services in-person with no disruption, following all mask mandates and social distancing guidelines. Most sites were forced to become creative in how they offered care and added new services.

TELEHEALTH

Several programs transitioned all group and individual therapy sessions to a telehealth platform.

DRIVE THRU DRUG TESTING

One DFMB site created a mobile drug testing lab in their parking lot to provide ongoing and efficient drug screens using a blood micro serum process to assess patient adherence to medication maintenance protocols.



“

I was afraid that I would be alone if I decided to get clean.

– DFMB Participant



LOOKING TOWARD THE FUTURE

The DFMB program began as a pilot in four sites to test the effectiveness of new treatment models in addressing substance use disorders in pregnancy and postpartum. Since this modest start, the DFMB Program continues to grow and incorporate new models of care for this vulnerable and hard-to-reach population. As one provider said, “Pregnant women who smoke, who drink, who use prescription or illegal drugs are as deserving of compassion, comprehensive support, interventions and treatment—and perhaps even more so—as anyone else presenting with an addiction issue.” This program makes critical services available and accessible to pregnant and postpartum women.

Addressing stigma and providing screening and brief interventions for all prenatal patients are critical to improving care for this population. Stigma and blame have prevented many women from seeking help and receiving the care they need. Many DFMB sites provide stigma education about substance use in pregnancy in both the clinical setting and in their communities. All DFMB sites provide screening to all patients and provide brief interventions and referrals to treatment for women using substances during pregnancy.

The program is structured to remove barriers to care that many individuals with addictions experience—especially pregnant women. As one participant remarked, “I was afraid that I would be alone if I decided to get clean.” Another participant explained, “The Drug Free Moms & Babies Project has helped me connect with other moms in recovery and with resources to use as a mom in recovery.” The program is life changing for participants and their families.

The West Virginia Perinatal Partnership consistently monitors and evaluates the impact of our efforts and continually seeks to develop resources to drive program expansion and enhancements. Current initiatives designed to advance the work of the DFMB program include an emphasis on tobacco cessation, comprehensive contraceptive services, program sustainability, advancement of Peer Recovery Support Specialists, and building capacity to support family-centered care.

The program has helped prepare moms prior to delivery. It has helped us as nurses taking care of the babies. The moms know what to expect when they come in to deliver which enables them to work with us to help their baby and themselves through this difficult period.

—Clinical Nurse Specialist, Newborn Nursery

“

TOBACCO CESSATION

As the state with the highest rate of smoking in the nation, and the highest rate of pregnant and parenting women who smoke, West Virginia medical practitioners have witnessed the negative impact that smoking during pregnancy has on birth outcomes. The West Virginia Perinatal Partnership provides education and skill building to healthcare and social service providers to help their patients quit using tobacco and nicotine products. As part of this work the Partnership is partnering with the Baby & Me Tobacco Free Program. Baby & Me Tobacco Free is an evidence-based, smoking cessation program created to reduce the burden of tobacco on the pregnant and postpartum population. The program incorporates education and support for quitting smoking and staying quit and provides incentives for staying tobacco free and nicotine free. Smokers who live with pregnant women are also eligible to enroll into the program and receive the same supports provided to pregnant women.

COMPREHENSIVE CONTRACEPTIVE SERVICES

Studies have found that individuals with substance use disorders have higher rates of unintended pregnancies than the non-drug using population, and they use less reliable forms of contraception.²² In West Virginia, 87% of the DFMB participants' pregnancies were unplanned, compared to 28.8% of all WV pregnancies.²³ Unintended pregnancies may be associated with adverse health outcomes for mothers and babies.²⁴ The West Virginia Perinatal Partnership is focusing on expanding access to comprehensive, noncoercive and shared decision making contraceptive counseling through the *Love Your Birth Control* project. The project provides trainings and materials to health care, social service, and behavioral health providers, and aims to reduce barriers and improve access

to the full spectrum of contraception options available to women of childbearing age as well as increasing patient satisfaction with their choice of contraception.

SUSTAINABILITY

Since the establishment of the DFMB project, sustainability has been a foremost goal of the West Virginia Perinatal Partnership. Over the last decade we have continued to seek funding for the program, as well as develop strategies for financing the critical services delivered as part of the model. We have collaborated with national and state partners to explore multiple avenues for sustainability.

In 2020 West Virginia became one of eight states chosen to participate in the national Maternal Opioid Misuse (MOM) model. The West Virginia Department of Health and Human Resources, Bureau for Medical Services is building upon the success of the DFMB Program to improve quality and reduce spending utilizing the MOM Model. The cooperative agreement with the Centers for Medicare and Medicaid Services Innovation Center provides funding to test this model of care. The proposed model extends care for one year postpartum, transitions postpartum women to well-woman care, and fully integrates the model into West Virginia's maternity care system. Under the MOM model mother-baby dyads receive ongoing comprehensive care, including care coordination services, and are aligned with a specialized community health worker. A key component of this initiative is the addition of the DFMB service as a covered benefit of the West Virginia Medicaid program.

The West Virginia Perinatal Partnership has also worked with an outcomes-based capital firm to analyze the investment potential of the program. The consulting firm Quantified Ventures provided

an outcome-based financing model that can sustain DFMB programs. As part of this work, Quantified Ventures developed a cost-benefit analysis. This work is intended to help the West Virginia Perinatal Partnership accelerate the impact of the DFMB Program through innovative financing.

PEER RECOVERY SUPPORT SPECIALIST

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), a peer recovery coach (referred to as a Peer Recovery Support Specialist [PRSS] in West Virginia) “brings the lived experience of recovery, combined with training and supervision, to assist others in initiating and maintaining recovery, helping to enhance the quality of personal and family life in long-term recovery.” Within this framework, a PRSS engages with her clients in the areas of self-help, system advocacy, individual advocacy, recovery planning, crisis support, relapse prevention, housing, and education/employment. A PRSS working in a DFMB program also brings a personal understanding of pregnancy and

motherhood in a recovery context. Since 2018, at least seven DFMB programs have added a PRSS and by 2022, it is expected that most of the DFMB sites will utilize the PRSS position in their model of care.

FAMILY CENTERED CARE

In 2021, The West Virginia Department of Health and Human Resources (DHHR), Bureau for Behavioral Health was awarded one of four grants under the State Pilot Grant Program for Treatment for Pregnant and Postpartum Women (PPW-PLT). The new project builds upon the work of the DFMB program and will propel a statewide coordinated continuum of care with a focus on collaborative family-centered approaches and evidence-based service delivery. The West Virginia Perinatal Partnership will work closely with our state partners to build capacity by increasing the knowledge, skills, partnerships, connections, and networks of the DFMB sites and other service providers, in order to provide more family-centered services inclusive of this population.

“

I have always felt embarrassed of my addiction. Like I was a bad mom in other people's eyes even though I have done the work to become sober. I'm proud of myself, but I wish others knew how much I would appreciate them to be proud of me too.

– DFMB participant

CONCLUSION

DFMB programs throughout the state have effectively helped their patients to reduce substance use during pregnancy leading to more babies being born substance free in West Virginia. This results in healthier babies, intact families, and more resilient communities. The benefits of the program are many: dollars saved by keeping newborns out of neonatal intensive care units, stronger bonds between mothers and babies, decreased strain on the foster care system, less emotional and physical damage, and the movement of mothers and babies from survival mode to thriving. The DFMB program has been a lifeline for hundreds of women, infants, and their families.



“

The Drug Free Moms & Babies Project has helped me connect with other moms in recovery and with resources to use as a mom in recovery.

– DFMB participant

ACKNOWLEDGMENTS

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ENDNOTES

- ¹ Stone R. *Pregnant women and substance use: fear, stigma, and barriers to care*. Health Justice. 2015;3:2. Published 2015 Feb 12. doi:10.1186/s40352-015-0015-5.
- ² Substance Abuse and Mental Health Services Administration. *A Collaborative Approach to the Treatment of Pregnant Women with Opioid Use Disorders*. HHS Publication No. (SMA) 16- 4978. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2016. Available at: <http://store.samhsa.gov/>.
- ³ Miniño AM, Hedegaard H. *Drug poisoning mortality, by state and by race and ethnicity: United States, 2019*. NCHS Health E-Stats. 2021. DOI: <https://doi.org/10.15620/cdc:103967>external icon.
- ⁴ Vallejo MC, Shapiro RE, Lippy MW, Lilly CL, Brancazio LR. *Independent risk factors for chronic illicit substance use during pregnancy*. J Opioid Manag. 2020 Sep-Oct;16(5):351-356. doi: 10.5055/jom.2020.0590.
- ⁵ Durr AJ, Critch EA, Fitzgerald MP, Devlin KM, Fuller KA, Renzelli-Cain RI. *Untangling the roots of the West Virginia opioid crisis: relationships in adolescent pregnancy, drug misuse, and future outcomes*. J Osteopath Med. 2021 Feb 1;121(2):191-198.
- ⁶ Warfield S, Pollini R, Stokes CM, Bossarte R. *Opioid-Related Outcomes in West Virginia, 2008-2016*. Am J Public Health. 2019 Feb;109(2):303-305.
- ⁷ Winstanley EL, Stover AN. *The Impact of the Opioid Epidemic on Children and Adolescents*. Clin Ther. 2019 Sep;41(9):1655-1662. doi: 10.1016/j.clinthera.2019.06.003. Epub 2019 Jul 11.
- ⁸ 2021 data from Project WATCH/WV Birth Score Program. West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Maternal, Child, and Family Health. <https://www.wvdhhr.org/birthscore/>
- ⁹ 2021 data from Project WATCH/WV Birth Score Program. West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Maternal, Child, and Family Health. <https://www.wvdhhr.org/birthscore/>
- ¹⁰ HCUP Fast Stats. *Healthcare Cost and Utilization Project (HCUP)*. September 2021. Agency for Healthcare Research and Quality, Rockville, MD. www.hcup-us.ahrq.gov/faststats/nas/nasmap.jsp<https://www.hcup-us.ahrq.gov/faststats/NASMap>
- ¹¹ *America's Health Rankings analysis of CDC WONDER, Natality Public Use Files*, United Health Foundation, AmericasHealthRankings.org, accessed 2022.
- ¹² West Virginia Department of Health and Human Resources. Bureau for Children and Families. *Legislative Foster Care Reports* January 2021. Retrieved from <https://dhr.wv.gov/bcf/Reports/Pages/Legislative-Foster-Care-Reports.aspx>

- ¹³ *WV Infant and Maternal Mortality Review*, Legislative Report 2019. WV Office of Maternal, Child and Family Health, WV Department of Health and Human Resources.
- ¹⁴ Lilly, C., Ruhnke, A., Breyel, J., Umer, A., Leonard, C. *Drug Free Moms and Babies: Qualitative and quantitative program evaluation results from a rural Appalachian state*. *Preventive Medicine Reports* 15(2019) 100919.
- ¹⁵ United States Census Bureau: *2019 American Community Survey 1-Year Estimates*
- ¹⁶ *Can You Succeed Without College? Yes, But It's Complicated*. November 2018. <https://www.northeastern.edu/bachelors-completion/news/succeeding-without-college/>
- ¹⁷ U.S. Department of Health and Human Services (HHS), Office of the Surgeon General, *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*. Washington, DC: HHS, November 2016.
- ¹⁸ Peristats. *Premature Birth: Data for West Virginia*. March of Dimes. <https://www.marchofdimes.org/peristats/data?reg=99&top=3&stop=66&lev=1&slev=4&obj=1&sreg=54>. Accessed 10 May 2022.
- ¹⁹ 2020 data from Project WATCH/WV Birth Score Program. West Virginia Department of Health and Human Resources, Bureau for Public Health, Office of Maternal, Child, and Family Health. <https://www.wvdhhr.org/birthscore/>
- ²⁰ *Fighting Premature Birth: The Prematurity Campaign*. March of Dimes. <https://www.marchofdimes.org/mission/prematurity-campaign.aspx>. Accessed 10 May 2022.
- ²¹ Bowlby J. *Attachment and loss: Vol. 1. Attachment*. 2. New York: Basic Books; 1982. [Google Scholar]
- ²² Terplan M, Hand DJ, Hutchinson M, Salisbury-Afshar E, & Heil SH (2015). *Contraceptive use and method choice among women with opioid and other substance use disorders: A systematic review*. *Preventive Medicine*, 80, 23-3.
- ²³ *CDC Pregnancy Risk Assessment Monitoring System*, 2018 data.
- ²⁴ Kost, K., Lindberg, L. *Pregnancy Intentions, Maternal Behaviors, and Infant Health: Investigating Relationships With New Measures and Propensity Score Analysis*. *Demography* 52, 83-111 (2015). <https://doi.org/10.1007/s13524-014-0359-9>. Accessed 10 May 2022

