

**Landscape Scan of Services for Pregnant Women and People for Substance Use/ Opioid
Use Disorder in Allegheny County**

by

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Abstract

The opioid epidemic has become a major public health concern, with opioid use disorder (OUD) in pregnancy significantly increasing in the past two decades. Opioid use during pregnancy is associated with negative health outcomes for mother and child, such as maternal mortality, low birthweight, preterm birth, intrauterine fetal death, specific birth defects, and neonatal abstinence syndrome.

This essay explores service availability and the factors that influence treatment seeking and maintenance in treatment among birthing people with OUD. The author conducted semi-structured interviews with 12 local healthcare providers and administrators who work with this population, and also conducted unstructured interviews with six local researchers whose expertise is in OUD and maternal health. This essay uses the information gathered from those interviews to describe the local landscape of OUD services and to better understand how these services could be improved to better serve pregnant individuals with OUD. The essay also explores any gaps in the current offerings that are suggested by people who work closely with birthing people with OUD.

Participants identified numerous barriers that make it challenging for pregnant people with OUD to remain in recovery. Housing is a significant barrier for pregnant people and in postpartum period, as they may not have a stable place to live or may face discrimination when seeking housing due to their history of substance use. Lack of stable housing can lead to increased stress and anxiety, making it challenging to maintain recovery. Also, the interviewees noted that many

people with OUD are unaware that Medicaid covers the cost of medication-assisted treatment. This is a significant barrier to accessing care for those who may not have the financial means to pay for treatment out of pocket.

The public health relevance of this exploration and description of local OUD service availability and capacity is that accidental poisonings including drug-related overdoses were the leading cause of maternal mortality in Pennsylvania in 2018. This essay provides insights into factors influencing recovery of birthing people with OUD to better support this population with future public health interventions.

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Preface

To begin with, I would like to thank Yassi and Navid who encouraged me every step of the way in pursuing this degree. My appreciation is also going to my family for their unwavering support throughout my life. Their encouragement and faith in me have been instrumental in enabling me to pursue my dreams and reach this milestone. I am also deeply grateful to Kara McFadden, my supervisor at Allegheny County Department of Human Services, who provided invaluable guidance and support in conducting the landscape scan that forms the basis of this essay. I would like to extend special thanks to my committee member Dr. Guyon-Harris, whose extensive experience in working with families struggling with substance use brought a unique perspective to my research. Her feedback and advice have been invaluable in shaping this essay.

Lastly, I would like to thank Dr. Salter, whose academic and emotional support proved crucial during a difficult time in my life.

To all those who have contributed to my growth and development, I extend my deepest gratitude. Without their support and encouragement, this essay would not have been possible.

1.0 Introduction

The opioid epidemic has brought to light the need for effective interventions to support the health and wellbeing of people with opioid use disorder (OUD) and their families. Among the population of birthing people in the United States, the prevalence of OUD has increased significantly (Patrick et al., 2012, 2015; Hirai et al., 2021) leading to a rise in maternal and neonatal morbidity and mortality related to substance use. In 2018, more than 50 % of all maternal deaths in Pennsylvania were attributed to accidental poisonings including drug overdoses, making it the leading cause of maternal mortality in the state (Pennsylvania Department of Health, 2022). Substance use while pregnant is considered one of the most avoidable risks to maternal and child health (Krans et al., 2019), although challenges remain in making comprehensive OUD treatment services available and acceptable to all those who need them.

1.1 Public Health Significance

The opioid epidemic is a major public health issue. More than half a million people died in the United States from overdoses involving opioids over the past two decades (CDC, 2021). In addition to increased prevalence in the general population, opioid use disorder (OUD) in pregnancy has also risen significantly in the past two decades. From 1999 to 2014, the rate of opioid use disorder among pregnant women increased from 1.5 to 6.5 per 1,000 hospital births per year (Haight et al., 2018), representing a four-fold increase over just 15 years.

Opioid use in pregnancy is associated with many negative health effects for both birthing people and their infants, including maternal mortality, poor fetal growth, preterm birth, stillbirth, specific birth defects, and neonatal abstinence syndrome (CDC, 2022a).

Neonatal abstinence syndrome (NAS) is a withdrawal syndrome resulting from prenatal exposure to certain substances, including opioids (CDC, 2022a). This condition is also on the rise, in association with the increase in OUD during pregnancy. Between 2000 and 2009, there was a significant increase in the percentage of newborns diagnosed with NAS, rising from 1.20 per 1000 hospital births per year to 3.39 per 1000 hospital births per year (Patrick et al., 2012). That study also reported that the proportion of mothers who were dependent on or using opioids during pregnancy had increased from 1.19 per 1000 hospital births per year to 5.63 per 1000 hospital births per year. The same study estimated the hospital charges for NAS to be \$53,400 per infant in 2009, highlighting the negative economic outcomes and cost burden effects in addition to the negative health effects. By 2009, the majority of charges for NAS (77.6%) were covered by state Medicaid programs (Patrick et al, 2012).

In Allegheny County, the rate of hospital discharges for NAS in 2017, was 3.2 per 100,000 population, while the US rate and Pennsylvania (PA) rate for the same time period were lower, at 1.2 and 2.8 per 100,000 population, respectively (Healthcare Cost and Utilization Project, 2017). The local rate in Allegheny County is higher than both the national and state levels, merits further exploration.

To understand the local context of the high Allegheny County NAS rate, it is necessary to explore many factors that contribute to the scope of the problem, ranging from factors at the individual level to the policy level that will be later discussed throughout this essay. Physical and mental comorbidities, intimate partner violence, fear of law enforcement and stigma are among

some of barriers faced by birthing people with OUD seeking to access the help they need (O’Donnell et al., 2009). Additionally, there is evidence that maternal and paternal substance use has a positive association with the need for child protection services and foster care placement (Smith et al., 2007). This essay will explore and describe the public health significance of OUD in Allegheny County, including its role in NAS and maternal mortality.

1.1.1 Maternal Death

The World Health Organization (WHO) defines maternal deaths as death that are caused or aggravated by pregnancies during pregnancy, childbirth and with 42 days of the delivery (WHO, 2023). Also, late maternal death is defined as death between 42 days and one year after childbirth by direct or indirect obstetric cause. This definition, however, excludes accidental and incidental deaths including deaths related to opioid/ substance use.

Maternal mortality is an indicator of public health and socioeconomic development (Wilmoth et al., 2012). The level of maternal mortality reflects the health infrastructure of a country. Not only does the maternal mortality rate (MMR) reflect the clinical aspects of a health system, it also provides context for evaluation of health systems at sociocultural, economic, and political levels (Sajedinejad, 2015). Maternal mortality trends are monitored nationally and reported to international health agencies like the World Health Organization (WHO, 2023). Reducing maternal mortality is part of the United Nations’ Millennium Development Goals (MDGs). In the 2000 United Nations’ Health Summit, 189 countries agreed to reduce the global maternal deaths by seventy five percent by 2015 (United Nations, 2000). Although the 2015 MDG report stated a 45% decrease in worldwide maternal mortality (United Nations, 2015), maternal mortality remains an important public health concern.

Maternal mortality in the United States remains a significant concern, with rates that are higher than those of many other high-income countries (Tikkanen et al, 2020). As described earlier, maternal mortality data typically includes only deaths that occur during pregnancy, childbirth, or within a year of giving birth, therefore, accidental deaths, including overdoses, are not always reflected in the trends (WHO,2023; CDC, 2022b). While there have been efforts to reduce maternal mortality in recent years, information about deaths resulting from accidental drug overdoses after childbirth may not be captured in these statistics. This limitation could lead to an underestimation of the scope of substance use during pregnancy and the potential risks it poses to both mother and child.

The Center for Disease Control and Prevention (CDC) conducts a Pregnancy Mortality Surveillance System (PMSS) to monitor the trends in maternal deaths. Maternal mortality is defined slightly differently in the PMSS, as the death of a woman while pregnant or within one year of the end of pregnancy by any cause related to or aggravated by the pregnancy or its management (CDC, 2022b). This definition, although it extends the scope of the maternal death definition to one year, also does not reflect deaths caused by injury including overdoses.

In addition, the CDC supports states and localities which are coordinating and managing Maternal Mortality Review Committees (MMRCs). MMRCs are multidisciplinary committees that assemble at state and local levels to review deaths during and within 12 months of pregnancy (CDC, 2022b). The term “pregnancy-associated death” is used by MMRCs, and that term reflects maternal deaths due to any cause during or within one year of pregnancy, including overdoses. (Review to Action, 2023). According to the 2008-2017 data from 14 MMRCs, 14.9 percent of pregnancy-associated deaths in individuals identified as non-Hispanic White were attributed to mental health conditions including deaths to overdose/poisoning (Davis et al., 2019). Also,

according to reports from MMRCs in 36 US states, mental health conditions accounted for 34.8 percent of pregnancy-associated deaths among non-Hispanic Whites in 2017-2019. The proportion of pregnancy-associated deaths due to mental health conditions for Hispanic and non-Hispanic Blacks were 24.1 % and 7%, respectively (Trost et al., 2022).

1.1.2 Neonatal Abstinence Syndrome

Neonatal abstinence syndrome (NAS) is defined as a withdrawal syndrome that can happen in newborns who have prenatal exposure to certain substances, including opioids (CDC, 2022a). The symptoms of neonatal abstinence syndrome can vary widely, from mild tremors and irritability to more severe symptoms like fever, weight loss, and seizures (Kaltenbach & Jones, 2016). These symptoms in general advance within a few days after birth, but the timing and severity can vary depending on the type of opioid, dose, and timing of exposure (McQueen et al., 2016). Other factors that might contribute to the development of the syndrome include exposure to other substances, maternal and neonatal health conditions, genetic factors, and environmental factors like early care practices (Desai et al., 2015).

Fifty-five to 94 percent of neonates exposed to opioids will develop signs of withdrawal (Hudak et al., 2012). Neurologic irritability and gastrointestinal dysfunction are the predominant symptoms of opioid withdrawal in neonates (Kocherlakota, 2014). Infants with neonatal abstinence syndrome are at a higher risk of complications such as admission to the neonatal intensive care unit (NICU), need for pharmacologic treatment, and prolonged hospital stays (Lee et al., 2015). NICU admission can result in the separation of the mother and infant during a critical time for bonding and development of parent-child relationship, potentially creating additional health challenges for both. Infants with the syndrome also tend to have longer hospital stays and

require more healthcare resources than those without the syndrome (Patrick et al., 2015). For example, it is recommended that infants at risk of drug withdrawal be monitored for 4 to 7 days after birth (Hudak et al., 2012). A 2014 retrospective evaluation of 210 neonates treated for NAS in a tertiary perinatal center in Australia over a nine-year span found that a period of 5 days would be sufficient to observe neonates for detection and treatment of NAS (Smirk et al., 2014).

Along with the increase in OUD seen among pregnant people and in the U.S. population in general, there was a significant increase in the percentage of newborns diagnosed with NAS, between 2000 and 2009, rising from 1.20 per 1000 hospital births per year to 3.39 per 1000 hospital births per year (Patrick et al, 2012). In a representative sample of hospital discharges, NAS incidence increased by a factor of 10 from 2004 to 2014 among Medicaid beneficiaries (Winkelman et al., 2018).

Because of NICU admission and the need for additional monitoring over multiple days, costs for medical care for infants with NAS are substantial, both individually and nationally. One study determined that the average cost per infant with NAS was \$22,552 in 2016 and estimated the national NAS incidence to be 6.6 per 1000 live births, bringing national cost estimates for NAS to \$ 572.7 million (Strahan et al., 2020). Total hospital costs for NAS among Medicaid enrollees increased from \$65.4 million in 2004 to \$462 million in 2014 after adjusting for inflation. Winkelman approximated that hospital costs of infants with NAS who were covered by Medicaid resulted in around \$2 billion excess costs over the 10-year period from 2004 to 2014 (Winkelman et al., 2018).

1.2 Objective and Goal

This essay will explore the availability and capacity of OUD treatment services in Allegheny County, as well as factors that influence the seeking of substance use treatment and maintenance in recovery among birthing people with OUD. Throughout this essay, it is important to note that sometimes there is not a clear distinction drawn between substance use disorder (SUD) and OUD, as many individuals may be impacted by the use of multiple substances. The data for this exploration was gathered through semi-structured interviews with healthcare providers who work with this population. Interviews were completed during a public health practicum experience. By describing the availability and capacity of available services and describing the factors that providers identified as influencing recovery among birthing people with OUD, this essay aims to provide insights into how we can better support this population and improve treatment outcomes from the lens of providers and researchers in this area. The study also explores gaps in the current local and regional treatment and care offerings and aims to better understand how these OUD services in Allegheny County could be improved to better serve pregnant individuals with opioid use disorder.

2.0 Background

Many top medical, public health and mental health organizations, including the American College of Obstetricians and Gynecologists (ACOG), the World Health Organization (WHO), the United States Health and Human Services (US HHS), the American Society of Addiction Medicine (ASAM), the American Academy of Pediatrics (AAP), and Substance Abuse and Mental Health Services Administration (SAMHSA), have issued recommendations for the best practices in caring for pregnant women with opioid use disorders and their infants (Johnson, 2019). The latter (SAMHSA) has comprehensive guidelines for the treatment of pregnant and parenting women with opioid use disorders. These guidelines recommend that pregnant women who have opioid use disorders should undergo medication maintenance therapy to treat their opioid use disorder and to minimize the substantial dangers to both the mother and the fetus resulting from illicit drug use and repeated withdrawal during pregnancy (Substance Abuse and Mental Health Services Administration, 2018). This regimen of care is referred to as Medication-Assisted Treatment (MAT), which will be described in the following section.

2.1 Medication-Assisted Treatment

Medication for Opioid Use Disorder (MOUD) has been shown to be an effective approach for treating OUD during pregnancy and postpartum. MOUD involves medications such as methadone (full opioid agonist) and buprenorphine (partial opioid agonist) both of which have proved to be effective in alleviating the harms of opioid use during pregnancy (Sujan et al., 2022).

Additionally, MOUD reduces the risk of relapse into active opioid use, and it can improve birth outcomes (Sujan et al., 2022). However, maintaining treatment during pregnancy is key to achieving the health benefits of MOUD, and not all birthing people with OUD maintain their treatment with MOUD, which can lead to poor outcomes for themselves and their infants (Yazdy et al., 2015).

A growing body of evidence suggests the underlying safety of these treatment options for both mother and child (Noormohammadi et al., 2016). For example, a retrospective cohort analysis of claims, encounters, and pharmacy data that examined health outcomes associated with MOUD use during pregnancy among Pennsylvania Medicaid enrollees from 2009 to 2017 found that the odds of maternal overdoses during pregnancy or first 12 weeks postpartum for each additional week duration of MOUD decreased by 2% and the odds of preterm birth decreased by 1% for each additional week duration of MOUD (Krans et al., 2021). This study also predicted that for women with OUD, continuous MOUD during pregnancy will result in a decline by 57% in overdose and a 25% decline in preterm birth, compared to women with OUD who did not use MOUD during pregnancy. Additionally, with an additional week of MOUD prior to delivery, postpartum MOUD continuation increased by 95 percent. Another important finding of the Krans et al. study (2021) was that with longer duration of MOUD the probability of NAS did not increase, affirming that sustained MOUD during pregnancy does not create additional negative health effects for infants.

However, despite the potential for successful treatment, the National Survey on Drug Use and Health conducted in 2019 revealed that there was a low utilization of treatment services for substance use including self-help group, outpatient rehabilitation, and inpatient facilities. Out of the 21 million-plus individuals who required substance use services, only 13 percent of them accessed such services (Substance Abuse and Mental Health Services Administration, 2020). In

the locally completed study cited earlier about MOUD during pregnancy, a notable proportion of people with OUD (41.8%) did not have claims for MOUD during pregnancy, meaning the pregnant person did not receive treatment (Krans et al., 2021). This study provides some insight into the local need for MOUD services.

For birthing people with OUD/SUD and in postpartum period, Medicaid covers MAT costs in all states, under federal law, while the coverage for other levels of care depends on the State's Medicaid policy (Ranji et al., 2022). The American Society of Addiction Medicine (ASAM) describes a Continuum of Care that will be discussed in the following sections. Pennsylvania Medicaid is offering full ASAM continuum of SUD services (Ranji et al., 2022).

2.2 Integrated Care Models

Integrated care approaches for birthing people with OUD generally involve a team of healthcare professionals with diverse backgrounds in family medicine, obstetrics, midwifery, advanced practice nursing, and nursing. Alongside the medical team, there are typically professionals in psychiatry, counseling, and substance abuse treatment to tackle the intricate needs of this population (Johnson, 2019). Because of the complexity of OUD, as well as the need to maintain treatment throughout the pregnancy and postpartum period, an integrated care approach can offer a broad base of treatment support to increase the potential success of treatment. A review of the related literature shows two programs that have been introduced as examples of successful implementation of an integrated care model for MOUD focused on treating pregnant people. These two programs, Early Start Program and Pregnancy Recovery Center, will be described in the following section.

2.2.1 Early Start Program

Early Start is a prenatal substance use treatment program, which is part of the comprehensive prenatal care program offered by Kaiser Permanente Northern California (KPNC). Initially introduced as a pilot program in 1990, Early Start was gradually implemented over the years across almost all 40 outpatient obstetric clinics in the region, screening close to 40,000 women annually. Because of its longevity, broad reach and success, Early Start has become the standard of care for MOUD among pregnant women. The Early Start program has three primary components:

- The appointment of a licensed substance use expert (the Early Start Specialist) in the Ob/Gyn department, whose appointments for evaluation and treatment are synchronized with the patients' prenatal care appointments,
- Screening of all women for drug and alcohol use via questionnaire, and with signed consent, through urine toxicology testing, and
- Education for all healthcare providers and patients on the effects of drugs, alcohol, and cigarette use during pregnancy (Goler et al, 2008).

The Early Start website describes a range of services, with some patients having only a single visit while others receive ongoing assistance throughout their pregnancy. Appointments for Early Start interventions usually range between from 30 to 60 minutes. The program involves pregnancy counselors who offer prenatal and postpartum support resources and review a pre-pregnancy substance use questionnaire with the patients.

A study by Goler et al. (2008) that evaluated the Early Start integrated program of KPNC concluded that pregnant women who received concurrent prenatal care and substance use treatment (including therapy and medication) had lower chances of experiencing placental

abruption or preterm labor. Furthermore, Early Start program participants' babies were less likely to be born prematurely or to be identified as low birth weight. The Early Start program was able to address SUD/OD in pregnant women and contribute to improved infant outcomes among program participants.

2.2.2 The Pregnancy Recovery Center

Magee-Womens Hospital (MWH) is a Pittsburgh maternity care hospital that handles around 10,000 deliveries every year. It is part of the University of Pittsburgh Medical Center (UPMC), which is a large medical center affiliated with the University of Pittsburgh.

The Pregnancy Recovery Center (PRC) at Magee-Womens Hospital was established in 2014 to enhance the availability and accessibility of buprenorphine treatment by providing buprenorphine treatment to pregnant and postpartum women with opioid use disorder (OUD). The PRC employs a team of healthcare professionals, including five obstetrician/gynecologists who are licensed to provide buprenorphine, a registered nurse with addiction medicine training, and a clinical social worker. In addition to providing outpatient buprenorphine inductions and maintenance dosing, the PRC offers various women-centered services, such as trauma-informed care, childcare, prenatal and postpartum care, pregnancy-specific dosing, housing and transportation assistance, breastfeeding education and support, family planning counseling, sexually transmitted infection screening, and parenting skills training. The PRC sees patients weekly to biweekly and provides a minimum of 2.5 hours of individual and/or group behavioral health counseling per month (Krans et al., 2018).

A study by Krans et al. (2018) investigated and evaluated the impact of PRC programming on outcomes among 248 pregnant women with OUD. They compared the results from a cohort of

71 PRC patients with another cohort of 177 pregnant people with OUD who were not part of an Integrated Care Model and utilized other medication-assisted treatment. The study found that PRC patients:

- Were more likely to start taking buprenorphine during pregnancy,
- Had a higher dose at delivery,
- Were more likely to attend postpartum visits, and
- Were more likely to receive long-acting reversible contraception after delivery compared to non-PRC patients.

Additionally, PRC patients experienced a smaller decrease in the rate of breastfeeding during their hospital stay. The study suggests that providing Integrated Care model and women-centered services, like those offered at the PRC, can improve outcomes for pregnant women with OUD.

2.3 American Society of Addiction Medicine Level of Care

The American Society of Addiction Medicine (ASAM) provides a set of guidelines for performing a multidimensional assessment of patients and assigning treatment plans based on the results (ASAM, 2023). The ASAM framework categorize levels of treatment into five broad categories of Prevention/ Early Intervention, Outpatient, Intensive Outpatient/ Partial Hospitalization, Residential/ Inpatient, and Intensive Inpatient. This categorization is based on the degree of medical management provided, the setting, safety and security and the intensity of treatment services. The table below summarizes the ASAM-recommended continuum of care in adults with OUD. This framework is useful for understanding the range of services provided to

and required by patients with OUD. The framework also is useful for exploring, describing, and categorizing the landscape of OUD treatment services available in Allegheny County, which is the subject of this essay.

Table 1 Summary of ASAM Continuum Of Care in Adults

Level of Care	Definition
0.5	Prevention/ Early Intervention
1	Outpatient Services
2.1	Intensive Outpatient Services
2.5	Partial Hospitalization Services
3.1	Clinically Managed Low Intensity Residential Services
3.3	Clinically Managed Population-Specific-High-Intensity Residential Services
3.5	Clinically Managed High-Intensity Residential Services
3.7	Medically Monitored Intensive Inpatient Services
4	Medically Managed Intensive Inpatient Services

2.4 Factors Influencing Treatment Seeking or Likelihood of Remaining in Recovery for SUD/OUD during Perinatal Periods

This section reviews the available literature on factors that influence seeking substance/opioid use treatment and maintenance in recovery among birthing people with opioid use disorder, using the social ecological framework. The social ecological framework takes into account the

interplay between individual factors, relationship factors, and community, social and political factors that influence health behaviors and outcomes. (Sallis & Owen, 2015). This approach, of exploring and understanding the contextual factors related to a health problem can provide insight into viable treatment opportunities and pathways, and can help clinicians and practitioners position their interventions and services where patients most need support and on-going care. Figure-1 summarizes the factors that are discussed throughout this section.

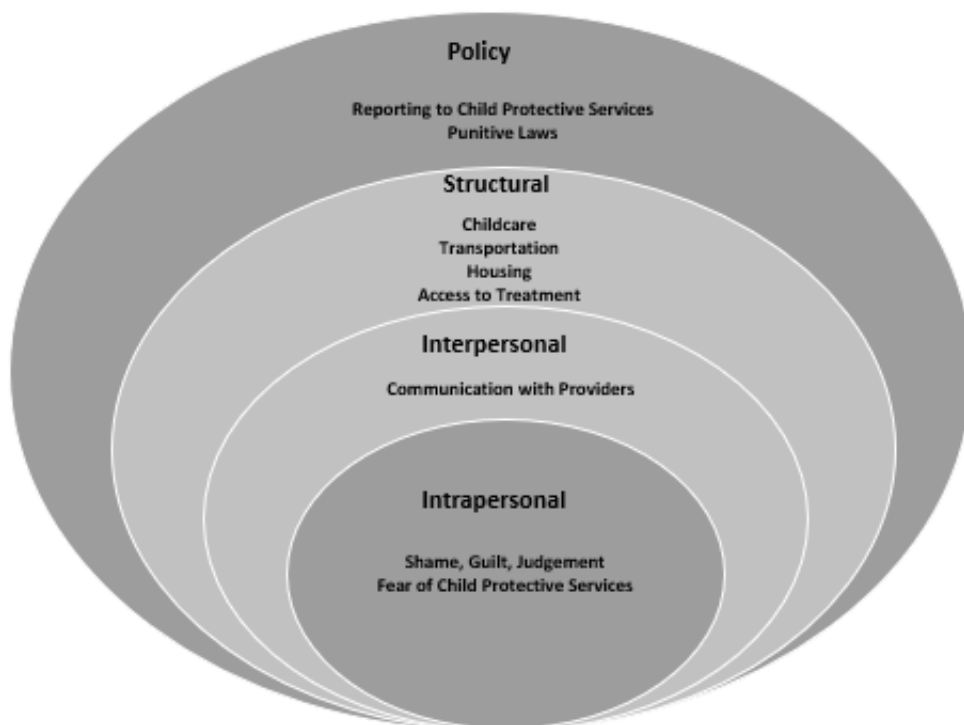


Figure 1 Factors Influencing Treatment Seeking in Pregnant People with SUD/OD in Social Ecological Framework

For example, using the social ecological framework to examine OUD would start at the individual level and work out. This should show that at the individual level, stigma and fear of judgement can prevent pregnant people with opioid use disorder from seeking care. For example,

in a 2020 qualitative study in the northeast US that investigated the perspective of women with substance use disorder to whether or not reveal their substance use to their healthcare provider, researchers found that shame, guilt, and judgement were among the reasons why women chose to keep their substance use a secret from their doctors (Paris et al., 2020). Another risk factor for not seeking treatment is fear of intervention from Child Protective Services that could result in loss of custody of their child(ren) (Roberts & Pie, 2011). This individual-level factor has a close interaction with policies regarding substance use during pregnancy, which are discussed later throughout the essay. Fear of losing custody of their child may also be a concern that prevents pregnant people from engaging in either treatment services like MOUD or sometimes leads to interruptions of prenatal care altogether. Observational studies suggested that women with substance use history are less likely to receive prenatal care (Maupins, 2004; Funkhousar, 1993).

At the interpersonal level, the next level described in the social ecological framework, the role of providers in effective communication and rapport-building plays an important role. For example, a qualitative study examining, patient-provider communication about substance use during prenatal visits, concluded that providers are less attentive to use of alcohol and drugs and their responses were limited to general statements regarding risks and referral to genetics (Chang et al., 2008). These interpersonal communication barriers with clinicians can be compounded by community level factors such as limited access to transportation and childcare, which can make it difficult for individuals with OUD to physically access needed treatment (Roberts & Pie., 2011).

At the societal and policy level, lack of stable housing can jeopardize access or use of health care and contribute to poor health outcomes. For example, homelessness during pregnancy, independent of prenatal characteristics and other socioeconomic factors, is associated with greater adverse perinatal outcomes including low birth weight and premature delivery (Little et al., 2005).

Coexisting substance use and homelessness increases the odds of low birth weight (Cutts et al., 2015). One retrospective study that examined the intersection of drug use and prenatal care in respect to social determinants of health found out that women who lived in public housing, and moved more than two times during pregnancy were less likely to attend prenatal care (Schempf et al., 2009).

At the policy level, punitive policies can prevent women with OUD during pregnancy from acknowledging their disorder and/or seeking care. For example, according to Guttmacher (2023), 24 states and the District of Columbia classify substance use during pregnancy as child abuse. Recent scientific evidence suggests that such punitive civil policies may exacerbate the negative effects of substance use. For example, one cross-sectional study of 4.6 million births in eight states and found that in states with policies that criminalize substance use during pregnancy, such as considering it grounds for civil commitment, child abuse, or neglect, rates of neonatal abstinence syndrome (NAS) were significantly higher, both in the first year and more than one year after enactment (Faherty, 2019).

According to the Child Abuse Prevention and Treatment Act (CAPTA), healthcare providers who care for infants born with and affected by substance use or withdrawal symptoms, or Fetal Alcohol Spectrum Disorder, are obligated to report to the child protective services system (Office of the Administration for Children & Families, 2016). Mandated reporting can contribute to a culture of fear and shame (Paris et al., 2020) and may prevent some individuals from disclosing their OUD to clinicians and make clinicians uncomfortable with focusing on a patient's possible OUD. As described in the Chang et al. (2008) study referenced earlier, some providers are less attentive to alcohol and drug use. Additionally, a recent mixed-methods study found that there are racial disparities in reporting to child welfare services (Olaniyan, 2021), and that Black women

are more likely to be tested for illicit drug use, and consequently more likely to face punitive actions of drug use during pregnancy (Harp et al., 2020).

States are also required to develop a Plan of Safe Care for infants (Act of Public Law, 2016) whose parent is diagnosed with OUD. A Plan of Safe Care is a document which lists the services and resources to support the affected infants and their caregivers to initiate care coordination services between healthcare providers, child welfare agencies, and other community programs and services (Child Welfare Information Gateway, 2020).

Pennsylvania, where this landscape review is being completed, requires healthcare professionals to report suspected prenatal drug use, but Pennsylvania does not prosecute women for substance use during pregnancy on charge of child abuse or neglect. However, prenatal substance use can be evidence for child-welfare proceedings after childbirth (Guttmacher, 2023). Pennsylvania defines affected infants as “Infant with detectable physical, developmental, cognitive, or emotional delay or harm that is associated with maternal substance use or withdrawal, as assessed by a health care provider.” (Pennsylvania Department of Human Services, 2019). At the birthing hospitals healthcare professionals should report affected infants and notify the Pennsylvania Department of Human Services to coordinate a Plan of Safe Care (Pennsylvania Department of Human Services, 2019). Though the notifications for infants with prenatal exposure to MAT and legally prescribed medication are reporting only information and do not require General Protective Service (Walsh, 2022). However, a qualitative evaluation of the Plan of Safe Care in North Carolina demonstrated gaps in information sharing and communication between agencies as major challenges in implementation (Austin, 2022). Also, social workers, health care providers, and care managers who participated in the evaluation questioned whether the program had benefits for infants and families.

Understanding the contextual factors that influence treatment-seeking for substance use from the individual level through the societal and policy level, can assist those interested in addressing OUD, providing effective treatment and improving health outcomes, in developing effective interventions that benefit birthing people and their infants.

3.0 Methodology

This essay describes a review and evaluation completed by the author as part of an internship and practicum for Allegheny County Department of Human Services (DHS) in the Summer and Fall of 2022. The author worked as a planning team intern and as part of her responsibilities with DHS, investigated the availability and capacity of services in Allegheny County for pregnant individuals with opioid use disorder. A series of semi-structured key informant interviews was conducted with service providers, researchers, and administrators who work with this population, to develop a landscape scan of the available services and to gain insight into the factors that influence treatment seeking and maintenance in treatment among birthing people with OUD in Allegheny County.

3.1 Materials and Design

3.1.1 Participants and Recruitment

For this study a combination of convenience and snow-ball sampling was used. An initial list of key informants was suggested by a planning analyst at DHS for the purposes of a program evaluation. An invitation for the interviews was sent out to the people on the list via email. Other participants were later identified either through snow-ball sampling, with potential participants suggested by participants from the initial list, or by internet search. Furthermore, local researchers who are researching intersections of maternal and child health and substance/opioid use were

identified by PubMed Search or through the University of Pittsburgh Repository (D-Scholarship) and contacted for their input. Participation in this landscape scan of available services for OUD was voluntary.

Participant interviews were conducted via Zoom or Teams, based on the participants' preference, and virtual interviews lasted 30 to 60 minutes. The interviews were not recorded. Hand-written notes were taken by the author during the interviews. This study was part of an evaluation, and no IRB review was requested.

3.1.2 Interview Guide Development

Because the availability of services for pregnant individuals with opioid use disorder (OUD) is a pressing public health concern in the US, the interviews were designed to elicit detailed information about the available services, program capacity, inclusion and exclusion criteria, funding, health and other outcomes, facilitators and barriers for accessing and engaging in services, racial disparities, political/policy issues, and social/stigma associated with services, as well as economic, technological, logistical barriers, and recommendations for next steps.

The author of this essay drafted an interview questionnaire, based on her work with DHS, a literature review, and the input from her supervisor and peers at DHS. The interview guide (Appendix 1) was semi-structured, with open-ended questions, and was divided into five sections, each with a series of related questions.

The first set of questions focused on the availability of services for pregnant individuals with OUD. Participants were asked about the types of services available, the current capacity of these services, the appropriateness of the capacity, the inclusion and exclusion criteria, the funding sources, any cost to the clients, and the description of activities and outcomes.

The second set of questions focused on the facilitators and barriers that people with OUD face to accessing and engaging in services. Participants were asked about the strengths of the available services, as well as racial disparities in access, political/policy barriers, social/stigma barriers, economic barriers, technological barriers, logistical barriers, and recommendations for next steps.

The third set of questions focused on any perceived gaps in the service array in Allegheny County. Participants were asked about the missing services that are needed to effectively and adequately address the needs of pregnant individuals with OUD.

The fourth set of questions focused on the priorities in addressing the gaps in the current services to help link pregnant individuals with OUD to prenatal care and medication for opioid use disorder (MOUD).

The final set of questions focused on identifying other individuals or organizations doing great work in serving this population in Allegheny County. This final set of questions allowed for snowball sampling, where participants were able to suggest other potential individuals or organizations that could provide valuable insights about the local situation and the services available.

3.1.3 Data Analysis

The author took hand-written notes during all interviews, and these notes were reviewed multiple times. Content analysis was performed based on the sections of the questionnaire: 1) availability and type of services; 2) facilitators engagement with services; 3) barriers to service engagement; 4) gaps in the services in Allegheny County. Within the context of questions asked in the interviews, participant responses were grouped by similarities and differences. The content

of participant responses to each set of questions was then further reviewed to identify common themes and patterns. This process involved reading through the participant responses to each set of questions and identifying similar opinions or experiences that were expressed across multiple participants. Once key content for each set of questions was identified, example quotations were selected to illustrate the content whenever possible.

4.0 Results

A total of 12 respondents participated in key informant semi-structured interviews, lasting between 30 minutes to one-hour. The participants included five clinical directors or program managers, one OB/GYN, one therapist, one peer-certified recovery specialist, and one senior social worker, three administrative staff from the local government, all of whom were interviewed using the Interview Guide developed for this landscape scan. All the participants were involved in programs which are based in Allegheny County, PA. Another six respondents participated in unstructured interviews that also lasted 30 minutes to one hour. These remaining six participants were local researchers identified as described earlier, who were interviewed about their current research in relation to the topic, which included their thoughts about barriers, facilitators, and gaps. The interview guide was not used for these six interviews (See Table 2 for list of participants).

Table 2 Summary of Participants

Role of Participants	Count
Clinical Director/ Program Manager	5
OB/GYN	1
Therapist	1
Certified Recovery Specialist (Peer)	1
Social Worker	1
Administrative Role	3
Researcher	6*
*Interviews completed without Interview Guide	

4.1 The Scan of Available Services

The American Society of Addiction Medicine (ASAM) framework was used to categorize the available services for birthing people with OUD in Allegheny by care level. Overall, three levels of care categories are available in Allegheny County, ranging from outpatient (level 2), residential/inpatient services (level 3.5), and medically managed intensive inpatient services (level 3.7 and higher). Table 3 provides a summary of the available services across the ASAM level of care categories.

Table 3 Summary of Available Services

Provider/Program	ASAM Level / Model of Care	Residential capacity	Residential waitlist	Total Clients Served by the Program
FamilyLinks	3.5	16	6-10	~ Annual 25-35
Sojourner House	3.5	14	10-50	~ Annual 60
POWER^a House	3.1	26	They do not maintain a waitlist	~ Annual 100
POWER^a Restore	3.5	21		
PWRC^b	2.1 to 4 ^c	Not applicable		~ Monthly 100-115
Perinatal Hope	2.1 to 4 ^c	Not applicable		~ Annual 100
Hello Baby Priorities	Not applicable	Not applicable		150 Families since establishment in 2020 until August 2022
a. Pennsylvania Organization for Women in Early Recovery b. Pregnancy and Women Recovery Center at Magee Women Hospital c. Integrated Model of Care				

One of the OUD services providers identified in the study is FamilyLinks offering a range of services including inpatient/outpatient services, access to a therapist and nurse and court-ordered treatments. FamilyLinks is a 3.5 level of care inpatient facility with a capacity of 16 women and 32 children under 12 years old. The facility has a waitlist of around 6-10 individuals

on average and receives 15-30 referrals monthly. The director noted a recent increase in referrals in Fall 2022. The facility serves around 25-35 families annually.

In addition to FamilyLinks, the study also identifies Sojourner House as another service provider agency for pregnant individuals with SUD/ODU in Allegheny County. Sojourner House is a 3.5-level of care inpatient facility with a capacity of 14 women and up to 2 children under 12 years of age. The facility has a waitlist of 10-50 individuals depending on the time of the year, which suggests that there may be high demand for their services and also that availability of services falls short of local demand. According to their website, one possible explanation for the lengthy waitlist and the higher than usual demand is that Sojourner House is “the only program in Allegheny County that provides each family with their own apartment while the mother receives treatment” (2023). The interviewee did not provide the annual estimate for the served clients during the interview but according to Sojourner House’ annual report 2020-2021, the agency served 60 women (Sojourner House, 2023). However, the report does not specify if all the 60 women received inpatient services or not.

Another service provider for individuals with SUD/ODU in Allegheny County is POWER (Pennsylvania Organization for Women in Early Recovery). POWER offers a range of inpatient and outpatient services, including screening and assessment, detox and rehab, residential treatment, and peer mentoring. POWER has two residential treatment facilities: POWER House, a 3.1 level care facility with residential/inpatient services, which has a capacity of 26 individuals and a 90-day limit of stay, and POWER Restore, a 3.5 level care rehab facility for detox (3-5 days) and inpatient services (28 days), which has a capacity of 21 beds. Based on POWER's annual report 2021, POWER House served 98 women in that year. There is no estimate on the number of clients served in POWER Restore because it is a recently-established facility. For pregnant

individuals, POWER has a partnership with the Allegheny Health Network (AHN) program Perinatal Hope (reviewed in detail below). According to POWER's annual report, Perinatal Hope served 43 individuals with OUD in 2019 and 35 in 2020 (POWER, 2023).

The landscape scan also found that the Pregnancy and Women's Recovery Center (PWRC) at Magee Women Hospital (a program reviewed earlier as the Pregnancy Recovery Center (PRC), the program's initial name) is a major service provider for pregnant individuals with SUD/OUD in Allegheny County. PWRC offers a wide range of in-patient and out-patient services, including methadone conversion, peer support, and consultations with pregnant women with OUD in the Emergency Department through their Perinatal Addiction Consultation and Education Services (PACES) program. The Integrated Model of Care at PWRC offers all level of care from 2.1 to 4. The capacity of this program is approximately 100-115 individuals monthly, indicating that the program is well-equipped to serve a substantial number of individuals. With a focus on integrated care and a variety of services offered, the Pregnancy and Women Recovery Center appears to be a much-used resource for pregnant individuals with SUD/OUD in Allegheny County.

The Allegheny Health Network's Perinatal Hope Program was identified as another provider in Allegheny County that offers integrated medical home services for pregnant people with OUD. The Integrated Model of Care offers all level of cares from 2.1 to 4. The program provides OB/GYN services and medication-assisted treatment (MAT) in a single visit. Perinatal Hope has a partnership with POWER for drug and alcohol counseling and with service at West Penn Hospital for in-patient care. The Perinatal Hope Program has a capacity of approximately 100 clients annually, although not all clients are residents of Allegheny County. The Perinatal Hope Program's integrated approach to care makes it a resource for pregnant people in need of comprehensive care for their substance use disorder.

Another provider for families with OUD complex needs in Allegheny County is the Hello Baby Priority program, which is part of the Hello Baby collaborative led by Healthy Start Inc. Hello Baby Priority is a resource for families in Allegheny County with a focus on providing support for families with complex needs, including those affected by substance use disorders. A team of social workers, community nurses, fatherhood coordinators and mental health therapists provide wrap-around support. They help families to meet their goals and connect them with other services. Because Hello Baby is not a substance use disorder treatment program, it does not get rated with an ASAM level of care. While the program may offer some services related to substance use disorder treatment, its primary focus is on providing support for families with complex needs, and it does not provide the full range of services required to be rated with an ASAM level of care. The Hello Baby Priority program offers services for families referred to the program by the Office of Children, Youth and Families, including parents with OUD. Since its inception in 2020, Hello Baby Priority has served approximately 150 families, with 35-40 families receiving services on a weekly basis

4.2 Facilitators and Strengths of Available Services

During the interviews, participants were invited to identify factors that can serve as facilitators for pregnant people with SUD/ODU to remain in recovery. Table-4 summarizes these factors according to the interviewees and provides further details on the content within each factor. Firstly, programs setting their goals based on the entire family and not just focusing on the child can be a significant motivator for pregnant people with SUD/ODU to remain in recovery. This kind of broad goal usually involves engaging the entire family unit and emphasizing the

importance of a healthy and supportive home environment. A second factor identified by participants that facilitates pregnant people with SUD/ODU remaining in recovery is peer support. Peer support/ peer navigators in the context of integrated health model of care for pregnant women with OUD, according to some interviewees, can be an essential factor in promoting recovery, as they can provide guidance and emotional support for navigating the healthcare system, including accessing prenatal care and MAT. It also creates a sense of community and provides a supportive network of individuals who share similar experiences. One interviewee described:

“Other people doubt the women but peers [do] not”

A third facilitator to recovery program engagement and maintenance, is adopting a harm reduction approach. This mindset, according to interviewees, can help pregnant people with SUD/ODU to take small but significant steps towards recovery, rather than feeling overwhelmed by the prospect of complete abstinence.

A fourth retention facilitator identified in the interviews is the program’s activity and efforts at educating patients about the disease of addiction and how it affects the body and mind, which may help individuals understand the importance of maintaining their recovery. As one interviewee described it, education about addiction can help those with OUD better understand their disorder and can facilitate willingness to engage in treatment:

“Educating patients about the disease, that it has a genetic component and it’s a brain disease. Let them understand the characteristic of the disease.”

Finally, interviewees noted that having an integrated health system that encourages active communication between medical providers and behavioral health providers can provide comprehensive care and support to pregnant people with SUD/ODU.

Table 4 Facilitators and Strengths of Programs

Facilitators and strengths	Quotes, sentiments, and keywords learned from interviewees (direct participant quotations noted in italics)
Family-centered goals	<ul style="list-style-type: none"> • <i>“Having family-centered goals and not just focus on children”</i> • Support family • Family support network • Complex needs of patients and families • Fatherhood-dyad
Peer support	<ul style="list-style-type: none"> • Peer Navigators • Support network • <i>“Other people doubt the women but peers [do] not”</i>
Educating individuals about the recovery stages and underlying disease	<ul style="list-style-type: none"> • <i>“Educating patients about the disease, that it has a genetic component and it’s a brain disease. Let them understand the characteristic of the disease.”</i> • Educate moms • Coach patients • Connect to resources
Harm Reduction Approach	<ul style="list-style-type: none"> • Harm Reduction • Reducing Stigma • Safe environment • <i>“Meet People where they are.”</i>
Integrated Health System	<ul style="list-style-type: none"> • Good care coordinator • Better communication between providers and patients • One example is when medical providers inform the social work team about patients who return to using so they can provide support

4.3 Barriers for Pregnant People with OUD to Engage with Treatment Services

Participants identified numerous barriers that make it difficult for pregnant people with SUD/ODU to remain in recovery. These barriers can be categorized into several factors including housing, childcare, transportation, intimate partner violence, trauma, lack of social support, stigma, fear of law enforcement, child welfare system involvement, financial instability, poly-substance use, fentanyl use, unemployment, and other comorbidities such as mental health disorders (Table 5).

Table 5 Barriers for Pregnant People with OUD/SUD to Remain in Recovery

Barriers	Quotes, sentiments, and keywords learned from interviewees (direct participant quotations noted in italics)
Housing	<ul style="list-style-type: none"> • <i>“There is an urgent need for transitional housing... women after graduating from the program have no safe place to go.”</i> • <i>“Many times, patients prefer to stay with a friend who is actively using instead of going to shelter.”</i> • Landlords require background checks as part of the rental application process and history of OUD can lead to denied applications. • Stress of homelessness can be a trigger for substance use

Table 5 Barriers for Pregnant People with OUD/SUD to Remain in Recovery (Continued)

Childcare	<ul style="list-style-type: none"> • <i>“Women need someone to look after their kids while in residential.”</i> • <i>“Many of our clients lack access to reliable childcare, which can make it difficult for them to attend appointments, therapy sessions, and support group meetings.”</i>
Transportation	<ul style="list-style-type: none"> • <i>“Medical Assistance Transportation Program does not cover transportation needs related to picking up medications from the pharmacy or attending case management meetings.”</i>
Intimate Partner Violence	<ul style="list-style-type: none"> • History of trauma • Some of the clients were sex workers who experienced substantial trauma
Lack of Social Support	<ul style="list-style-type: none"> • Not having support • Independence from young age
Stigma	<ul style="list-style-type: none"> • Fear of stigma in doctor offices • Societal stigma • <i>“Institutional stigma hurts women more. In hospital, other nursing staff that are not involved in treatment but interact with them and also in pharmacy when they go to fill-in their MOUD”</i>

Table 5 Barriers for Pregnant People with OUD/SUD to Remain in Recovery (Continued)

Fear of Law Enforcement/ Child Welfare	<ul style="list-style-type: none"> • Fear of criminal justice • Fear of Children, Youth, Family (CYF) • Risk of separation from kids • <i>“I have seen that the Plan of Safe Care can be incredibly frustrating for pregnant women who are doing everything right, including being on MOUD, but still find themselves being involved in the system.”</i>
Unemployment	<ul style="list-style-type: none"> • <i>“Without employment, it can be difficult to stay motivated and focused on recovery goals.”</i> • Financial instability
Other medical issues	<ul style="list-style-type: none"> • Polysubstance use • Other Comorbidities, Mental Health Disorders

Interviewees noted that housing is a significant barrier for pregnant people and new mothers with SUD/ODU, as they may not have a stable place to live or may face discrimination when seeking housing due to their history of substance use. Additionally, interviewees noted that lack of stable housing can lead to increased stress and anxiety, making it challenging to maintain recovery. Thus, unstable housing acts as a barrier to different levels of care and at different stages of recovery. For example, one interviewee noted that in an outpatient setting, pregnant individuals with SUD/ODU have difficulty initiating or continuing treatment when they are having challenges with housing.

“Many times, patients prefer to stay with a friend who is actively using instead of going to shelter.”

In a residential setting, the need for stable housing shows itself differently, in the sense that pregnant people with SUD/ODU often cannot maintain recovery after discharge, as one interviewee described:

“There is an urgent need for transitional housing... women after graduating from the program have no safe place to go.”

Additionally, several participants mentioned that childcare can be a significant barrier for new mothers with SUD/ODU, as they may not have access to affordable or reliable childcare options. Without adequate childcare, new mothers may struggle to attend appointments or access treatment, hindering their ability to remain in recovery.

Transportation is another factor that was brought up in the interviews, that can create a barrier for pregnant people and new mothers with SUD/ODU. They may not have access to reliable transportation to attend appointments or receive treatment. This can also impact their ability to access other essential services, such as childcare or employment opportunities.

Intimate partner violence and trauma can also be significant barriers for pregnant people with SUD/ODU, as they may not feel safe or supported in their home environment, making it challenging to maintain recovery.

Lack of social support, stigma, fear of law enforcement, and child welfare system involvement can also hinder the recovery process for pregnant people and new mothers with SUD/ODU. Without adequate social support, pregnant people and new mothers may feel isolated and may not have access to resources that could help them in their recovery. Stigma and fear of law enforcement can also create a significant barrier, as individuals may be hesitant to seek treatment due to the potential legal consequences. Additionally, involvement with the child welfare system can cause significant stress and anxiety, leading to relapse and hindering the recovery process.

Financial instability is another significant barrier for pregnant people with SUD/ODU, as they may not have access to adequate financial resources to support their recovery. This can impact

their ability to access essential services, such as housing or childcare. Poly-substance use, fentanyl use, unemployment, and other comorbidities such as mental health disorders can also make addiction treatment more complicated for pregnant people with SUD/ODU.

4.4 Gaps in the Services in the Allegheny County

The providers identified several gaps in the service array for pregnant people with SUD/ODU that need to be addressed to provide effective care. Gaps in service can contribute to the barriers mentioned above to prevent birthing people with OUD from accessing services or prevent them from remaining in service. These gaps in service are grouped into major categories of vacancies in behavioral workforce and available services, lack of multi-disciplinary collaboration and problems with performance of current services, and lack of awareness about available services (Table 6).

Table 6 Gaps in the Services for Pregnant People with SUD/OD

Gaps in the Services	Quotes, sentiments, and keywords learned from interviewees (direct participant quotations noted in italics)
Vacancies in behavioral workforce and available Services	<ul style="list-style-type: none"> • Inadequate number of behavioral health providers offering services for pregnant people • Pregnant people with OUD/SUD in Allegheny County are generally referred to just one center (PWRC) • Increase in number of referrals and waitlists • <i>“a gap between number of people identified in intake assessment needing inpatient service and number of available beds”</i>
Lack of multi-disciplinary collaboration	<ul style="list-style-type: none"> • Lack of communication of healthcare, behavioral health provider and child welfare • Ineffective implementation of the Plan of Safe Care • <i>“Only the reporting is being done”</i>
Problems with performance of current services	<ul style="list-style-type: none"> • Exclusion of clients for non-compliance • Some peer support services advocate for abstinence and not support MAT • <i>“Ninety percent of my clients are not interested in having a peer mentor as they are not supportive of MAT.”</i>
Lack of awareness about available services	<ul style="list-style-type: none"> • Pregnant women with SUD/OD not knowing where to go for addiction treatment • Pregnant women with SUD/OD not knowing that Medicaid has coverage for medication-assisted treatment

One significant gap is the inadequate number of behavioral health providers for pregnant people, which can result in long wait times for treatment and limited access to essential services.

One interviewee noted that there is an inadequate capacity in the continuum of care (ASAM categories), which means that there are not enough treatment beds available for those seeking care. Additionally, some interviewees marked ineffective implementation of the Plan of Safe Care. This lack of coordination can lead to gaps in care and poor outcomes for both mothers and infants. According to interviewees after the initial reporting to Child Line, there is a lack of communication between healthcare providers, behavioral health providers, and the child welfare system. One interviewee noted:

“Only the reporting is being done.”

This can lead to a lack of coordinated care and can result in adverse outcomes for families struggling with substance use.

While peer support can act as a strength for some programs, during the interviews, it was found that some peer support services have a narrow focus on abstinence-only programs or the 12-step model, which may not be the best fit for pregnant individuals with OUD. This focus on abstinence-only programs by some peer mentors makes pregnant people with OUD to not want to engage in peer support programs. One interviewee described it this way:

“Ninety percent of my clients are not interested in having a peer mentor as they are not supportive of MAT.”

Another gap that came out through the interviews was that some providers may exclude clients from treatment due to non-compliance, which can perpetuate a cycle of addiction and have negative effects on the health of the individual.

Finally, interview participants noted that many people with SUD/OUD are unaware of available services and Medicaid coverage for medication-assisted therapy and full ASAM

continuum of care in Pennsylvania, and this remains a significant barrier to accessing care for those who may not have the financial means to pay for treatment out of pocket.

5.0 Discussion

Pittsburgh and Allegheny County have several engaged programs offering services to pregnant people experiencing OUD, however, service availability may not be keeping pace with local need, as evidenced by the wait lists that programs have and that interview participants described. This gap in service availability presents a critical need for Allegheny County given that deaths due to overdose have emerged in recent years as the leading cause of maternal deaths in Pennsylvania (Pennsylvania Department of Health, 2022).

The findings of this landscape scan of services confirm that understanding of the scope of this gap in service continues to emerge. While traditional definitions of maternal mortality may not fully capture the impact of the opioid epidemic and the recent rise in maternal deaths related to OUD, the Maternal Mortality Review Committees (MMRCs) across the country have begun to collect data on pregnancy-associated deaths, which include deaths due to opioid overdoses. This approach, using the broader definition of pregnancy-associated deaths, is even more relevant for Pennsylvania and Allegheny County and can help to identify the full scope of the consequences of the opioid epidemic among the population of birthing people with OUD.

The findings of these interviews also confirm that it is crucial to identify effective interventions as well as the factors that serve as obstacles or enablers for birthing individuals with OUD to access appropriate care and support. For example, participants highlighted that the lack of access to stable housing is a significant barrier that prevents birthing people with SUD/OUD from engaging in treatment services, which is consistent with findings in the literature cited earlier in this essay. Stable housing can have a considerable impact on the well-being of both the mother and child, as well as their likelihood of return to use. As noted earlier, homelessness during

pregnancy is associated with greater adverse perinatal outcomes including low birth weight and preterm delivery (Little et al., 2005) while coexisting substance use and homelessness increases the odds of low birth weight (Cutts et al., 2015). As seen in the literature, the interviewees in this study called the need for housing “urgent” and emphasized the significant role that the lack of stable housing plays as a barrier to accessing treatment services.

The lack of stable housing is not merely the most influential barrier that birthing individuals with SUD/OD face. As described in the Introduction section, and confirmed by the interviewees for this study, structural stigma and punitive regulations, coupled with the fear of law enforcement and child welfare services, can also prevent individuals with OUD from accessing necessary care and support. Criminalization of OUD can create fear and shame among pregnant people with OUD and thus discourage individuals seeking help, as interviewees noted. As described earlier, healthcare providers who care for infants born with and affected by substance use or withdrawal symptoms, or Fetal Alcohol Spectrum Disorder, are obligated to report to the child protective services system and Pennsylvania's latest update, in 2018, mandates healthcare professionals to report affected infants and notify the Pennsylvania Department of Human Services to coordinate a Plan of Safe Care (Pennsylvania Department of Human Services, 2019). Interviewees noted that, despite being a practical strategy, mandated reporting can overlook the needs of the family and discourage mothers with OUD from seeking recovery. The context of mandated reporting and the fear it creates for pregnant people, as well as the hesitancy it creates among clinicians, remains a very real and complex challenge for programs seeking to provide services to pregnant people with OUD.

Another important finding of this landscape scan which can provide insights for future interventions for public awareness was that interviewees noted that many individuals are not aware of Medicaid coverage for addiction treatment. As noted in the Introduction, the National Survey on Drug Use and Health conducted in 2019 revealed low utilization of treatment services, with only 13% of those who needed services accessing any services (Substance Abuse and Mental Health Services Administration, 2020). Although stigma and fear may play a role in hesitancy to seek MOUD services, concerns about costs could also be a factor, when, as interviewees stated, many people do not realize that services can be covered by Medicaid. The Center on Budget and Policy Priorities in a policy brief (Bailey, 2021), considered Medicaid as a cornerstone of providing an infrastructure to build a system of comprehensive substance use care, and this would require making more people aware of the coverage for MOUD services. For example, after Medicaid expansion in Pennsylvania, a greater proportion of women diagnosed with OUD during pregnancy continued their Medicaid coverage post-expansion, but there was no change in the rates of utilization of preventive care services (Patton et al., 2019). The recent expansion of postpartum coverage in Pennsylvania in 2022 covers all conditions that cause morbidity and mortality including substance use disorder treatment (Kaiser Family Foundation, 2023). Public awareness campaigns and education initiatives can help to increase awareness and understanding of available resources, including Medicaid coverage, and encourage individuals to seek the care they need.

5.1 Limitations

The information reported in this landscape scan of OUD services and programs available in Allegheny County should be considered within the context of several important limitations.

First, this landscape scan is based solely on the information provided by participant interviews and background information about programs and services available on public websites. No detailed program reports, budgets or service records were accessed for this landscape scan. All participants worked in programs and services serving people with OUD and provided their first-hand knowledge of the landscape in Pittsburgh and Allegheny County. Additionally, the interviews with the six local researchers were conducted without the Interview Guide, introducing some variability in the way the data was collected.

Second, it is important to note that the identified gaps in the service array for pregnant people and new mothers with OUD described here are based on the perspective of providers. Providers are uniquely positioned to identify gaps in the system, given their experience in delivering care and their interactions with patients. However, it is essential to recognize that the perspectives of pregnant people and new mothers with OUD may differ from those of providers, and that those perspectives are not captured first-hand in this essay.

6.0 Conclusions

Pittsburgh and Allegheny County have several engaged programs offering services to pregnant people experiencing OUD, however, service availability may not be keeping pace with local need, as evidenced by the wait lists that programs have. Additionally, mandated reporting for health care clinicians may keep some pregnant people from disclosing their condition. Other local barriers to OUD treatment and maintenance include lack of stable housing for people with OUD, stigma, lack of childcare and lack of transportation. Thus, addressing OUD during pregnancy and in the postpartum period remains a challenge for Allegheny County, although several active and engaged programs exist.

During pregnancy, there is a chance to detect opioid dependence and start treatment using opioid maintenance therapy. This treatment also presents an opportunity for physical clinicians to collaborate with behavioral health, and social services to provide comprehensive care. Additionally, providing financial assistance to families with SUD/OUD can help them to address barriers with childcare or transportation and can thus help to improve access to healthcare and make it easier for families to participate in treatment services.

However, lack of coordination and communication between agencies is a major challenge that can arise in the implementation of the Plan of Safe Care. Without effective communication and collaboration between healthcare providers, social services agencies, and community organizations, the Plan of Safe Care may not be fully implemented. Families often have privacy concerns about sharing diagnosis or treatment information with different agencies, also making it difficult to implement the Plan of Safe Care.

In conclusion, there are significant opportunities for future investment in addressing the needs of pregnant and with OUD/SUD. These opportunities include investing in wrap-around support services, effective coordination of healthcare providers, behavioral health services, social workers and child welfare, and harm reduction education at all levels of the social ecological framework. By investing in these areas, we can create a comprehensive and coordinated system of care that addresses the complex needs of this population, improves access to services and resources, and ultimately improves outcomes for mothers and their children. Additionally, investment in these areas can help to reduce stigma surrounding substance use disorders and improve awareness and understanding of the unique challenges faced by pregnant people with OUD/SUD. Overall, continued investment in these areas can play a vital role in improving maternal and child health outcomes, reducing healthcare costs, and improving the health and well-being of families and communities.

Lastly, to address the identified gaps effectively, it is important to engage pregnant people with OUD in the development of policies and programs that aim to support their recovery. Doing so can ensure that their perspectives and experiences are considered, and their voices are heard in efforts to improve the service array. Ultimately, addressing these gaps requires a collaborative effort that involves input from all stakeholders, including providers, patients, and policymakers, to ensure that the needs of pregnant people and new mothers with OUD are effectively met. Future studies like concept mapping and community based participatory research is needed to involve all those invested in the care and support of pregnant and parenting people in recovery.

Appendix A Interview Guide

Questions for Perinatal Service Array

1. What services are available for pregnant people with OUD in Allegheny County to promote the health and well-being of the mother and child?

- What is the current capacity? To what extent is this capacity appropriate? (Any indication of underutilization or waitlist)
- Who can they serve? What are the inclusion and exclusion criteria?
- How is the program funded? Is there a cost to the client?
- Brief description of activities? What are the outcomes?

2. What are the facilitators, barriers for pregnant women with OUD to access or engage in these services in Allegheny County?

- Strengths?
- Racial disparity in access?
- Political/policy barriers?
- Social/stigma barriers?
- Economic barriers?
- Technological barriers?
- Logistic barriers like transportation or child-care?

2. Recommendations for next steps?

- What are the gaps in the service array in Allegheny County? What services are missing to address the needs of this population?
- What are the priorities in addressing the gaps in current services to help linking pregnant people with OUD to prenatal care and MOUD?

3. Who else should I talk to? Who is doing great work in serving this population in Allegheny County?

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