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Delaware Substance Use Disorder Treatment System Needs Assessment

Prepared for **New Castle County**, in collaboration with **Kent and Sussex Counties**

By HMA Institute on Addiction

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EXECUTIVE SUMMARY

Health Management Associates Institute on Addiction (HMA IOA) conducted a statewide three-county substance use disorder (SUD) treatment system needs assessment in Delaware. This project began in November 2021 and was primarily funded by New Castle County with contributions from Kent and Sussex counties. The goal was to review the current state of the SUD treatment ecosystem and collect input from as many Delawareans across multiple sectors as possible.

HMA IOA conducted many multi-sector stakeholder interviews and held in-person town halls in all three counties, plus an additional virtual town hall. The team also sent surveys to all Division of Substance Abuse and Mental Health (DSAMH) licensed SUD providers and agencies. The provider surveys collected qualitative and quantitative data regarding workforce, telehealth, current services provided, medication assisted treatment (MAT), hours of operation, languages spoken, the impact of COVID-19 on services, perceived population gaps, and other areas. Approximately 61% of the provider surveys from all SUD levels of care (LOC) provided in the state were completed and returned. The HMA IOA team also analyzed four years of de-identified claims data from the Delaware Health Information Network (DHIN), which was split approximately 60/40 between public and commercial/self-funded sources. The analyses examined what types of services Delawareans access most frequently and identified potential gaps in the treatment system.

The final analysis compared Delaware's public (e.g., Medicaid) outpatient and residential SUD reimbursement rates with selected regional states. This approach provided a unique cross-sector view of where the most significant opportunities for improvement and investment may rest. This report concludes with HMA IOA's recommendations for Delaware's future SUD treatment system to better meet the identified SUD treatment needs.

Policymakers, communities, health leaders, systems, and providers must make targeted investments dedicated to fully addressing the drug overdose epidemic to provide evidence-based treatment for those suffering from SUD and prevent further harm. The HMA IOA team used the National Academy of Medicine (NAM) Framework[1] for the future of SUD and Opioid Use Disorder (OUD) treatment systems and the four C's with an additional fifth "C" for Community, to assess the needs of the existing SUD treatment system in Delaware, measure the results, and make recommendations for the future system needed to treat Delawareans with SUD and, ultimately, save lives. To create a more robust and equitable SUD treatment ecosystem, immediate, targeted, and strategic investments must address the four C's of Capacity, Competency, Consistency, and Compensation.[2]

The qualitative and quantitative data and information gathered informed the findings presented here. It is critical to note that this report is not an outcome-based evaluation of past or current programs, initiatives, committees, or commissions. Instead, this needs assessment intends to identify strengths, needs, and opportunities for investments that will adequately, effectively, and efficiently address the SUD treatment system needs and the overdose crisis in Delaware to promote better and healthier outcomes.

[1] R. Corey Waller, Kelly J. Clark, Alex Woodruff, Jean Glossa, and Andrey Ostrovsky. "Guide for Future Directions for the Addiction and OUD Treatment Ecosystem." *National Academy of Medicine*, April 5, 2021. https://doi.org/10.31478/202104b

[2] Ibid.

KEY FINDINGS

STAKEHOLDER INTERVIEWS, STATE-WIDE TOWN HALLS, AND FOCUS GROUPS

HMA IOA designed and implemented a qualitative interview guide for stakeholder interviews. The intent was to interview a representative sample of key community stakeholders, including treatment providers, law enforcement, legislators, government officials, community leaders, activists or advocacy groups, judges, consumers of services, emergency room physicians, peer support specialists, school-based service providers, healthcare providers, and family members. HMA IOA interviewed 38 individual stakeholders statewide.

HMA IOA also completed eight town hall sessions that included a morning and evening session in each county, a virtual town hall on Zoom, and interviews at the Hope Center interacting with 57 respondents, all invested in creating a better SUD treatment system of care for Delawareans. Participants included treatment providers, peer support specialists, community members, grieving parents, emergency department staff, teachers, individuals representing law enforcement, FQHCs, DSAMH representatives, individuals experiencing homelessness with SUD and co-occurring conditions, and hospital system employees. Participants were also eager to talk with each other and share their experiences in their respective counties. Additionally, HMA IOA conducted four separate focus groups with Attack Addiction, Mental Health Association, Sussex County Health Coalition, and members of the school-based wellness centers affiliated with Christiana Care.

CROSS-SECTOR PARTNER INTERVIEWS INCLUDED:

Corrections	Judges	Law Enforcement	EMS	EDs	SUD providers
Community Healthcare Providers (FQHCs) and Coalitions	Harm Reduction Organizations	Legislators	County-Focused Healthcare Workgroups	Division of Substance Abuse and Mental Health	Division of Public Health
State and County Administrators	Community Activists	School-Based Service Providers	Peer Support Specialist	MAT providers	Children's Behavioral Health

KEY SUMMARY FOR STAKEHOLDER INTERVIEWS, TOWN HALLS, AND FOCUS GROUPS

The areas of greatest experienced need in the system were reported as: inadequate treatment beds, especially for some populations, like children and youth; lack of residential services for adults, especially those on Medicare and without insurance; needed supports for those experiencing negative impacts from social determinants of health (SDOH), like transportation and housing needs; lack of consistent access and care coordination; lack of adequate reimbursement to sustain the system or expand the treatment system; the need for trauma-informed care (TIC); and the need for

more harm reduction and prevention strategies, including greater access specifically to Narcan 4mg Nasal Spray or its generic equivalent.

The results also showed an apparent discrepancy between what the state is working hard to implement to address the SUD and overdose crisis in Delaware and the community's perception of, or lived experience with, those SUD treatment services and supports.

- For example, the state has been working with the EDs regarding initiating MAT. Although progress is being made, much more is needed to ensure that every individual needing SUD care is screened, assessed, treated, and referred to an appropriate follow-up level of care (LOC). Evidence-based policies, procedures, and workflows must be designed and implemented expeditiously. EDs are critical gateways for initiating, or re-starting MAT, and engaging EDs as actual access points to the SUD treatment system is crucial. ***Ensuring penetration and positive impact with the state initiatives is important and measuring and reporting outcomes to support continuous improvement is vital.***
- Also, providers say there are minimal wait times with available beds and slots. Still, individuals on the ground struggle to connect those needing treatment to services and think there are often too few available slots or beds.

Additionally, HMA IOA heard many treatment system strengths from interviewees, town hall participants, and focus groups.

- Treatment Access Center (TASC) was identified as providing excellent care coordination in their work with justice-involved individuals.
- The Delaware Treatment and Referral Network (DTRN) was identified as an improvement to the SUD treatment eco-system. Many providers report they use it often and find it helpful and user-friendly. Many also indicated that DTRN could be improved by including additional providers, including those in neighboring states who could provide treatment services to Delaware's citizens.
- The increase in peer recovery specialists within treatment programs and some EDs was identified as a strength, with the added caveat expressed by many that best practices need to be implemented with and for peers. Because of the risk of relapse due to this work, a protracted period of stable recovery should be in place for an individual before engaging in peer work, and peers should be certified at the time of hire or before they begin working with clients. Expanding the Peer Model in Delaware by employing best practices will be beneficial and could serve as a model to other states.

> "Everyone is on their own trying to navigate a system that doesn't exist."
>
> – *Town Hall Participant*

- Multiple respondents acknowledged the ongoing efforts and intentions from all stakeholders, government and advocacy groups included; however, many also voiced great concern that the impact of SUD, and specifically the high rate of overdose plaguing the community, were not treated with a sense of "urgency" commensurate with the crisis.

PROVIDER SURVEY

HMA IOA designed an electronic survey in Qualtrics that was sent by email to all DSAMH licensed SUD providers (agencies). The qualitative and quantitative survey collected data on the type of services provided, current workforce and challenges, access to care, evidence-based practices, the impact of COVID-19, and more. HMA IOA received 24 of 39 (approximately 61%) completed surveys, and the results were analyzed for patterns and themes. Overall, providers reported similar challenges and themes in all three counties, such as the impact of COVID-19, the benefits of expanded use of telehealth, workforce concerns, and the increased demand for services.

In particular, COVID-19 has significantly impacted the hiring and retaining of behavioral health providers in the workforce. Outpatient treatment agencies reported experiencing current workforce shortages and could not fill open positions. Six agencies from New Castle County and one from Sussex County reported filling master's level behavioral health staff as "very difficult"; four respondents from New Castle County and one from Sussex reported filling medical providers as "very difficult;" and one hundred percent (100%) of respondents said filling bachelor's level behavioral health, SUD counselors, and administrative staff positions as "difficult."

Other findings included little uniformity in screening and assessment with SUD-focused instruments. Although some evidence-based practices appear to be implemented, the survey clearly shows that therapeutic approaches are more eclectic than focused on proven and evidence-based interventions. Similarly, there seems to be a significant need for initial and sustained continuing education and training opportunities for treatment staff.

DELAWARE HEALTH INFORMATION NETWORK (DHIN) CLAIMS ANALYSIS SUMMARY

HMA IOA received a data extract from the All-Payer Claims Database housed at DHIN for 2017 through 2020. The extract included a membership file, medical claims files with a SUD diagnosis, and all prescription data for any member with a medical claim with a SUD diagnosis and provider reference data. HMA IOA also supplemented the data with public data sets, including the American Community Survey (ACS) data, National Provider Identifier (NPI), and Medicare Provider Taxonomy Reference Data. Leveraging those data and data from a national sample of approximately 2,500 individuals seeking SUD care, evaluated using the ASAM Continuum, the HMA IOA team determined the relative need for each ASAM LOC within the Delaware SUD treatment ecosystem.

Capacity to Treat Related to ASAM LOCs: HMA IOA estimates that the Delaware treatment ***system operates at approximately 15% of the current need.*** While this number is low, it is consistent with the states and counties HMA IOA has studied for other projects.

Notably, the HMA IOA finds ***that if only considering ASAM LOCs 2-4, the Delaware treatment system is operating at approximately 5% of the current need.***

One impetus for the needs assessment was whether there was more or less capacity for treatment in any one county. It has long been believed that Sussex County was particularly bereft of SUD and co-occurring treatment services. As shown in the assessment, the results suggest that adequate treatment capacity is not available in any Delaware region.

- **Delivery of MAT** Overall, the utilization of MAT is up between 2017 and 2020 in Delaware. The uptake of buprenorphine has been notable between 2017 (4,307 scripts) and 2020 (29,336), reflecting a 581% increase.
- **Buprenorphine Trends** Utilizing the trend pattern in calendar years 2017 through 2019, HMA IOA estimates that there should have been approximately 39,500 buprenorphine prescriptions dispensed in 2020, when around 26,300 prescriptions were actually dispensed. January 2020 was on target to keep with the pre-existing trend, but in February and March, data indicates a steep decline, presumably because of COVID-19, and reflects a slow return to pre-pandemic levels throughout the remainder of 2020.
- **Buprenorphine Waiver Capacity** HMA IOA also examined the Buprenorphine Waiver Capacity in the State of Delaware and noted that in October of 2020, the monthly statewide capacity to deliver buprenorphine was about 22,000 unique individuals. However, in 2020, HMA IOA found that 25% or less of that total capacity to prescribe was used. As Delaware considers a recruitment and retention strategy for buprenorphine providers, they might also need to consider how to ensure optimization of the buprenorphine providers who are currently waivered.

In 2020, Delaware buprenorphine providers did not prescribe more than 25% of their total Buprenorphine prescription capacity.

SUD REIMBURSEMENT RATES

Unequivocally, the state's low Medicaid rates for SUD services have long been a problem for the treatment system in Delaware. This single issue was emphasized in nearly every stakeholder interview, town hall, and focus group, as well as comments on the provider surveys. A comparative reimbursement analysis of regional rates supports this concern, but does not address how to actually "right-size" reimbursement rates. Work must be done to thoroughly study the actual cost of SUD care and then reimburse appropriately to ensure that necessary and adequate care is available. Although there is a movement now to research and increase these rates, ***this must be considered one of the highest priorities and requires immediate action if Delaware is going to steady its current provider network and mitigate further erosion, address the significant gaps in care, and build a sustainable, robust treatment network for the future.*** That said, simply increasing rates to provide a more predictable and accountable system will not solely fix the SUD system of care. SUD treatment is complex, requires thoughtful integration of needed services and will require clearly defined and aligned funding solutions that benchmark to desired outcomes.

Competitive rates impact the ability of the state to expand the number of qualified and innovative treatment providers, maintain talent in the workforce, develop the necessary workforce, implement evidence-based treatment, and operate programs with systems that collect and produce measurable outcomes. Reporting those outcomes on a shared public dashboard will further drive a more responsive and effective system of care.

RECOMMENDATIONS

Building a successful SUD treatment system of care for Delaware to effectively treat those with SUD and overcome the drug overdose epidemic will require identifying and addressing strengths and gaps across the existing SUD treatment system and leveraging investments to create an evidence-based treatment system integrating medications for addiction treatment (MAT) as the standard of care. Establishing clear and predictable pathways for individuals seeking treatment, ensuring timely access to care, and providing SUD care that is fully integrated with physical and mental healthcare and includes effective coordination of care or care management must be prioritized.

Despite the state and its partners' significant efforts and deployment of considerable resources to combat the opioid crisis and reduce SUD, the number of overdose deaths, broken families, and losses to the community continue to climb each year. It is clear that state and county leaders, treatment providers, legislators, advocacy groups, and concerned citizens want and need a prevention and treatment system that better addresses SUD and the attendant overdose crisis in the state to reverse the trajectory of this public health crisis. Delaware is certainly not unique in experiencing the ongoing scourge of the opioid and SUD epidemic. That said, the state must take meaningful action to improve the treatment ecosystem, mandate improved outcomes, measure performance, and prioritize evidence-based treatment at all LOCs for all in need of SUD treatment. The level of cooperation and collaboration from all partners and stakeholders for this needs assessment project is encouraging; Delaware needs to take action today to unify efforts, set specific targets for improvement, and implement necessary changes.

Recognizing there has been a lot of innovation, investments, and targeted efforts to address the SUD crisis in Delaware and the attendant and deeply troubling overdose and overdose death rates, the needs assessment findings support the following recommendations within the National Academy of Medicine framework. For the Executive Summary, HMA IOA presents the essential recommendations for each "C" (Capacity, Competency, Consistency, Compensation, and Community) that are critical to stabilizing the current treatment system and planning, designing, and implementing an evidence-based future SUD treatment system. The report also offers a crosswalk to the proposed ASAM 4th Edition, scheduled to be released in 2023. Additional recommendations and state-of-the-art research, gap analyses, capacity, and cost estimates for the state and each county follow in the report.

CAPACITY: PREVENTION/HARM (RISK) REDUCTION

NARCAN (NALOXONE) DISTRIBUTION

- Delaware should update the current standing order for naloxone to authorize the distribution of the 4mg single-step nasal spray and intramuscular autoinjector for all stakeholders, including community members, providers, and all first responders, including law enforcement and EMS. The 2mg two-step nasal spray should be removed from the standing order, and the 8mg nasal spray should be considered for inclusion as an additional nasal spray formulation on the standing order.

  Note: *The HMA IOA Team was informed (7/11/22) that DSAMH has made the decision in July 2022 to switch to 4mg nasal spray naloxone/Narcan. The HMA IOA subject matter experts also recommend including the newly available 8mg dosing in the state's standing order.*

- Continue the state's strategy to aggressively distribute Narcan (naloxone) in the community and provide cost-reduced or free Narcan spray for distribution in multiple settings, including EDs, homeless shelters, community resource centers, and to addiction treatment providers.
- Delaware has also just approved Emergency Medical Services (EMS) policies to allow EMS providers to initiate buprenorphine post-overdose and use the developing community pathways to refer patients to a provider. Although this will not be in place until November 2022, this is a positive step in "bringing treatment to those who need it." It will be critical to evaluate the data on treatment retention following linkages and identify and implement any process improvements that may be needed.
- The Naloxone Subcommittee of the Overdose System of Care (OSOC) needs to closely evaluate matching distribution and "leave behind" programs where overdoses occur most frequently to ensure maximum distribution where it is most needed.

SYRINGE SERVICES PROVIDERS (SSPS)

- Provide access to SSPs in each county near the epicenters of overdose. As the epicenters may shift, the state must develop a system to monitor data and adjust the location and details of these programs, as needed. Additional sites providing services eight hours daily in every county to increase access are needed. These sites also increase opportunities for engagement and education. For example, some models in other states integrate peers and primary care screenings to maximize outreach and engagement opportunities.
- Provide take-home kits to EDs and homeless shelters.

STREET MEDICINE

- Two to three street medicine teams should be deployed in Wilmington (at a minimum) and one each in Dover, Milford, and Georgetown; it will be critical to measure and report outcomes tracking to the latest available overdose data and increase services, as warranted.

JAIL/PRISON-BASED PROGRAMS

- All DOC-based SUD services should be reviewed for fidelity to evidence-based practice (EBP) and upgraded to meet the community standard of care.
- Re-entry programs should be evaluated and improved to yield the highest retention in treatment rates. Transitions back into the community need to be supported, including linkages to appropriate community-based care, insurance coverage, and housing supports.
- DDOC should continue closely tracking the numbers of incarcerated individuals receiving MAT, particularly with the opening of the in-house OTPs, and report outcomes.

SCHOOL-BASED PROGRAMS

- Every school should have at least one evidence-based program that focuses on the prevention and identification of SUD. Several models are presented in this report for consideration (see Appendix F).
- Considering overdose deaths and SUD continue to significantly impact the entire state and its demographics, it is critical that all of Delaware's public, parochial, and private schools be part of systemic efforts to reduce long-term use and mortality from SUD. The Department of Education must be an active partner, along with each of the school districts and parochial and private schools, in the prevention and early intervention for children and adolescents with SUD and OUD and those exposed to SUD in their homes.
- The Department of Services for Children, Youth and Their Families (DSCYF) and its Division of Prevention and Behavioral Health Services (DPBHS) should lead coordination efforts with the Department of Education and local school districts to strategically plan for implementing evidence-based prevention programs for children and adolescents. The collective focus must be on utilizing proven programs with demonstratable results. Obtaining prevention funding through SAMSHA and other federal agencies that mandate interagency collaboration will be critical for creating sustainable and measurable programs.

CAPACITY: TREATMENT SERVICES AND SUPPORTS

- Each county should have a full continuum of care that reaches at least 50% of the clinical need.
- Recruiting and retention programs must be developed to add to the workforce to serve each LOC adequately.
- Partnerships should be pursued with colleges and universities to develop additional clinical programs (master's level and doctoral level) to increase workforce (to work with children, adolescents, and adults) in the SUD treatment field.

"Telehealth has allowed clients who normally would feel shamed or embarrassed continue to seek treatment through telehealth versus coming into an office."

- Additional partnerships with area medical schools in Pennsylvania, Maryland and New Jersey might also be considered to bring physicians and midlevel providers to the state.
- Support and expand the use of telemedicine (including commensurate payment like is received for face-to-face intervention) to expand coverage of specialty care access and expand the capacity of the existing workforce. Many states have successful models that can be easily replicated for telemedicine in both individual and group SUD treatment.

Advance provision of SUD treatment services via telemedicine, including screening for compliance. Group and individual SUD treatment is commonly and successfully done in many states.

Advance provider skills and reimbursement capability for telehealth service providers.

- Implement technology solutions for contingency management programs statewide.
- Improve coordination and integration of care statewide. SUD is a chronic, treatable, relapsing medical condition, like high blood pressure and diabetes. It is often accompanied by other co-morbid physical and mental health conditions, which can significantly complicate treatment. Innovative and integrated care coordination models are showing promising results for successfully treating SUD[3] and deserve dedicated and directed investigation and consideration for implementation. Additionally, current best practice in SUD treatment requires multidisciplinary care teams, including peer support specialists.
- Public transportation is a challenge in the state, particularly in Sussex County, and stakeholders have repeatedly noted the challenges with current Medicaid-approved transportation programs. DSAMH has recently started a program in Sussex County that allows (and reimburses) clients to use ride-share programs, such as Uber or Lyft, for transportation to treatment. If this program's outcome data shows improved treatment access, this should be expanded to the other two counties.
- DTRN has been a very useful tool for the system for referral management and finding treatment openings (available beds/slots). Admittedly, the platform is only accurate if the partners continually update their openings in as close to real-time as possible. The state should strongly consider opening up access (e.g., allowing providers to buy in to the system) for those who may not contract with the DSAMH and/or out-of-state providers (right over the state border) who are available to accept patients from Delaware.

[3] "Care Coordination Strategies for Patients Can Improve Substance Use Disorder Outcomes." The Pew Charitable Trusts, April 23, 2020. https://www.pewtrusts.org/research-and-analysis/issue-briefs/2020/04/care-coordination-strategies-for-patients-can-improve-substance-use-disorder-outcomes

- New programs should prioritize their sites to locations with public transportation routes within walking distance of the treatment program. Consider locating programs near major highways in the state and intersections. Priority may necessarily be given to using space that can readily be converted to full service and continuum treatment services.
- All health systems must serve as the gateway for SUD treatment services and are central to an efficient, effective system of SUD care. The EDs must continue to expand their treatment services, including induction and connection to community-based MAT providers. The state has been working on this issue, and three of the five hospital systems now have algorithms in place to identify individuals needing treatment, induct and obtain a follow-up appointment with a community-based MAT provider within several days of discharge from the ED. These ED programs are very encouraging, but must be fully operationalized (and evaluated) as soon as possible. Continued efforts to expedite like services in the other two health systems are critical. While these efforts are commendable, Delaware should consider more forceful action in the form of requiring participation and adoption of induction protocols and other efforts to ensure patients seen in EDs are connected to services. MAT is the community standard of care for OUD and, as such, earlier MAT interventions starting in the ED should be a matter of standard of care.
- Given the DHIN data that showed significant high-frequency visitation to the EDs and inpatient units of Delaware hospitals, all hospitals must play a much larger part in screening, assessment, and initiation of treatment for Delawareans. There is an urgent need to build (and enhance) policies, procedures, pathways, and order sets for every hospital in Delaware to address and treat SUD. ***The team strongly recommends that medication initiation happen consistently in every ED, standalone medical clinic, FQHC, and inpatient ward.*** Consistent with other recommendations, it is critical to capture data for induction in all settings and to consistently ensure warm/hot handoffs to community treatment providers.
- Hospitals must also provide appropriate harm reduction tools, such as naloxone distribution (not prescription only) and syringe services programs for ED patients who inject drugs.
- While no specific data for the “appropriate” number of recovery residency beds exists, this population has a high risk of being unstably housed for extended periods. Given this, starting with 50+ beds per county and scaling to need would be a logical place to start.
- Identify the density of adolescent SUD burden in Delaware in conjunction with the DPBHS and public and private stakeholders. Build the system to match the need. ***Currently, most adolescents across the state have little or no access to evidence-based SUD treatment.***
- Develop specific, family-focused programming for pregnant and parenting patients with SUD.

HMA IOA ESTIMATES THE NUMBER OF MINORS WHO NEEDED OUD CARE IN 2020 AS 564, AND THE NUMBER WHO DID RECEIVE (PER CLAIMS DATA) OUD CARE WAS 17.

COMPETENCY

- The state should fully identify and establish the competencies required for each provider type at each LOC for proficiency in all SUD (not just opioids). The system can be enhanced by creating benchmarks and standards for its SUD treatment system workforce and tying those competencies to training and certification programs.
- Support the universities, Delaware's health systems, FQHCs, DSAMH and DPBHS in developing and delivering free or heavily discounted:

Training programs to teach and reinforce necessary skills annually to new and existing providers; and

Certification programs for specific behavioral health interventions, such as cognitive behavioral therapy (CBT), eye movement desensitization and reprocessing (EMDR), dialectical behavioral therapy (DBT), contingency management (CM), and others that have shown positive outcomes in the peer-reviewed literature for successful SUD treatment.

- It is also critical that DSAMH (adults) and DPBHS (children) coordinate comprehensive and ongoing clinical training for SUD and co-occurring disorders. Consider ongoing partnerships with the universities, health systems, and FQHCs to support the necessary training needs.

CONSISTENCY

- Choose universal tools for screening, brief assessment, and LOC determination for use statewide. National Institute on Drug Abuse (NIDA) recommendations are provided in the report on page 115-116.
- All DSAMH licensed SUD programs must develop robust quality assurance (QA) programs that assure fidelity to evidence-based practices and measure and report outcomes. HEDIS and Medicaid's Child, Adult, and Health Home Core Set measures should also be routinely collected, analyzed, and reported. It is recommended that the state consider alternative funding sources for implementing QA programs, such as State Opioid Response (SOR) or Opioid Settlement Funding to decrease the burden on an already underfunded SUD treatment system.

Funding should be made available to expand and improve the electronic health records (EHRs) for treatment programs, particularly for programs with antiquated electronic health records or still working from paper charting. This will boost payment efficiency and data collection efforts.

Multiple federal programs, including the ACA, provided funds to incentivize the implementation of EHRs in hospitals and outpatient medical settings, but did not include behavioral health or SUD programs. A granting program should be set up to either enhance or replace a program's current EHR that does not meet certain functionality or interoperability requirements.

- Reimbursement for peer support specialists should be contingent upon certification. Delaware has an excellent peer training and certification model, but not all programs using peers require certification.
- Develop a statewide learning collaborative dedicated to preparing for and completing CARF LOC certification for residential treatment providers. CARF certification ensures that the programs adhere to the ASAM criteria for levels 3.1, 3.5, 3.7, and 3.7 withdrawal management (WM). This certification would dramatically improve predictability and quality of care and should be completed by 2024.
- To adequately measure strategic success, it would be ideal for DHIN to receive individually identifiable data for claims with a Behavioral Health component. One of the state's significant payers (blinded as Payer 8) to this study does not contribute individually identifiable BH claims to the DHIN APCD database. With individually identifiable data, it is possible to develop a set of metrics that measure the success of policy initiatives utilizing claims data.

COMPENSATION

- Reimbursement rates need to be increased for outpatient, residential, and withdrawal management and be regionally competitive, at a minimum. There is an urgent need to study and define the reimbursement rates to "right-size them" and then implement rates that "actually pay for" the treatment that is needed. Delaware's reimbursement rates are among the worst in the nation (and most often when compared to neighboring states), but simply matching neighboring states is not the whole answer, while perhaps a needed first step. Truly understanding what rates need to be established to pay for the required care is paramount.

Determine the actual cost to deliver evidence-based care at each level of care and implement strategies to design and build the needed system and reimburse providers appropriately.	Rates should be modified to accommodate the identified financial need.	Rate "balancing" should occur so that each service delivered is covered at or above the actual cost.

- Value-based arrangements/incentives must be provided for providers who can track outcomes for their interventions to incentivize evidence-based practices and outcome-based care delivery.
- Value-based payment incentives should be offered to those offering multiple LOCs in a common location.
- Reimburse adolescent prevention and treatment programs at the same level as adult prevention and treatment programs.

COMMUNITY

- Continue to develop and fund statewide educational campaigns; all educational and marketing campaigns must be evidence-based. ***Prevention is treatment, especially for youth, and all efforts to expand the existing prevention work must be evidence-based.*** Several SUD and opioid educational programs (e.g., prevention) are currently being implemented across the state, but there is no outcome data available to report.
- Explore opportunities to expand the "Help is Here" website as an anchor in these educational campaigns.
- Delaware should provide additional education on the following topics, such as:
    - Appropriate treatment of pain
    - Anti-stigma campaign covering SUD
    - Evidence-based interventions for opioid use disorder (OUD)
    - Prevention of SUD in youth
- Review local zoning laws for discriminatory language and pass local ordinances that incentivize communities to support SUD treatment facilities and housing options.
- Solidify public transportation capabilities, so those needing treatment can get to treatment with vouchers and/or local alternatives.
- Continue the support and development of additional partnerships between law enforcement and behavioral health clinicians (e.g., embedded clinician and co-responder models).
- Hold local health care institutions and providers accountable for their efforts in treating those with SUD. This will require a sense of urgency from all involved and a shared commitment to measure outcomes. A common theme throughout the assessment process was the message that ***there is no time to waste. SUD is an urgent public health matter.***
- Document and make detailed lists of services that support social determinants of health (e.g., food pantries, job training, parenting classes, rent support programs, etc.) to increase access and utilization.

CAPACITY, COMPETENCY, CONSISTENCY, COMPENSATION, AND COMMUNITY

The recommendations in this report following the Needs Assessment and all ongoing efforts must be integrated into a straightforward action plan that is coordinated, accountable, and includes measurable outcomes that are evaluated and reported regularly. Delaware should strongly consider a "single point of control and oversight" for addressing the OUD/SUD public health crisis and the SUD treatment system. This body should, at a minimum, directly report to the governor or governor's agent and be supported by legislative mandates for action and include:

- Budget authority
- Legislative authority for:
    - A plan of action (for children, adolescents, and adults) that has clear timelines and deliverables
    - Quality oversight to develop metrics, measure outcomes, and publicly report them
    - Developing a statewide data strategy to maximize opportunities to leverage data, including data from external sources for evaluation, quality improvement, and accountability. A central data dashboard and information center should be considered.
    - Creating and maintaining collaboration of efforts and initiatives for all publicly funded efforts, committees, and commissions to ensure they:
        - Do not inappropriately overlap;
        - Are focused on actionable solutions;
        - Are evaluated through data; and
        - Inform a public dashboard for all stakeholders to monitor that, at a minimum, includes outcomes and trends.
- Ensuring reimbursement rates are adequate to incentivize desired SUD treatment and improve outcomes
- Providing for workforce development and training
- Expanding the use of telemedicine and include considerations for accommodations for those that may not have devices, broadband access, or private locations for telehealth appointments
- Developing and implementing a strategic plan for fully integrated and coordinated evidence-based SUD care to include equity measures to address traditionally marginalized groups (e.g., People of Color, Veterans, undocumented individuals, those living in poverty (including unhoused individuals), and those that are incarcerated or have been previously incarcerated)
    - Prioritize implementing evidence-based practices systemwide
    - Address access issues, transportation, and transitions of care
    - Consider universal standardized tools
    - Engage all care providers and care locations
    - Educate across the system and in communities so all understand the system design and how to access and navigate the system

Delaware is a small state, and a single point of control to address the SUD treatment system is needed to drive cohesion and positive results systemwide.

End of Executive Summary

INTRODUCTION

EPIDEMIOLOGY

The United States continues to experience an ongoing SUD and OUD crisis. "In 2020, 40.3 million people aged 12 or older (or 14.5%) had a SUD in the past year, including 28.3 million with alcohol use disorder (AUD), 18.4 million with an illicit drug use disorder, and 6.5 million with both AUD and an illicit drug use disorder."[4] According to the most recent CDC provisional report, over 107,000 overdose deaths in the US were reported in 2021.[5] Rates of overdose deaths have been climbing for many years, but have markedly increased during the pandemic, with annual deaths nearly 50% higher in 2021 than in 2019.[6] Overall, this is a 500% increase since 2001. Fentanyl or another synthetic opioid was a factor in 77% of overdoses in 2021. According to a recent analysis of the provisional CDC data on drug overdose deaths in 2021, fentanyl overdoses now comprise the leading cause of death for adults between 18 and 45, surpassing motor vehicle accidents, COVID-19, suicide, and cancer.[7]

Additionally, the COVID-19 pandemic has exacerbated the SUD/OUD crisis nationwide. Recent data from the National Survey of Drug Use and Health (NSDUH) for Q4 in 2020 indicates that most adults aged 18 or older felt the COVID-19 pandemic negatively impacted their mental health significantly.[8] For people aged 12 or older who drank alcohol in the past year, about 15% (or 26 million people) felt that they drank more or much more due to the COVID-19 pandemic, with the percentage of young adult alcohol users aged 18 to 25 rising from 15% the previous year to 18%. Among people aged 12 or older who used drugs other than alcohol, 10% (or 11 million people) perceived that they used these drugs more or much more.[9] As the pandemic continues, the direct effect on substance use and mental health is evolving daily.

The gravity and persistence of the COVID-19 pandemic has made a significant impact on the severity and prevalence of mental health exacerbations and SUD/OUD. A 2020 study from the Well Being Trust showed high levels of stress, isolation, and unemployment from the pandemic could cause up to 75,000 "deaths of despair" directly related to drug and alcohol use and suicide.[10] "In general, states such as Maryland, Connecticut, New Jersey, Delaware, and New Hampshire, all located in the Northeast region, are experiencing the highest growth in despair mortality in recent years."[11]

Two years ago, the Centers for Disease Control and Prevention found that 13% of Americans reported starting or increasing substance use to cope with stress or emotions related to COVID-19.[12]

4 "U.S. Overdose Deaths in 2021 Increased Half as Much as in 2020 - But Are Still up 15%." Centers for Disease Control and Prevention, May 11, 2022. https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/202205.htm

5 Ibid.

6 Ibid.

7 Ibid.

8 Panchal, Nirmita, Rabah Kamal, Rachel Garfield, and Cynthia Cox. "The Implications of COVID-19 for Mental Health and Substance Use." KFF, April 28, 2022. https://www.kff.org/coronavirus-covid-19/issue-brief/the-implications-of-covid-19-for-mental-health-and-substance-use/

9 Ibid.

10 Petterson, Steve, Westfall, John, and Miller, Benjamin. "Projected Deaths of Despair During the Coronavirus Recession," Well Being Trust. May 8, 2020. https://wellbeingtrust.org/wp-content/uploads/2020/05/WBT_Deaths-of-Despair_COVID-19-FINAL-FINAL.pdf

11 Etemadifar, Amin, "Deaths of Despair in the United States" (2021). Utah State University, 2021.

12 "U.S. Overdose Deaths in 2021 Increased Half as Much as in 2020 - But Are Still up 15%." Centers for Disease Control and Prevention, May 11, 2022. https://www.cdc.gov/nchs/pressroom/nchs_press_releases/2022/202205.htm

Overdoses have also spiked since the onset of the pandemic. In the early months, the nation experienced an 18% increase in overdoses compared with those same months in 2019.[13] The trend continued through 2021. The American Medical Association has reported that every state saw increases in opioid-related mortality[14] during this period. The Neilsen Company noted a 54% increase in alcohol sales in six weeks between March 1, 2020 and April 18, 2020; overall, there was a 21% in-store and 234% online increase in alcohol sales in 2020 compared to 2019.[15] A 2020 study published in the JAMA Network Open found evidence of changes in alcohol use and related consequences during the periods measured during the pandemic (Wave 1 measured April 29 to June 9, 2019, and Wave 2 measured May 28 to June 16, 2020).[16] The findings noted the increased use of alcohol likely worsens pre-existing mental health (MH) conditions, which have increased during the pandemic.[17]

DELAWARE'S OVERDOSE RATES

The COVID-19 pandemic has acted as an accelerant on an already established crisis of SUD/OUD nationwide. Delaware is no exception, with the annual number of overdose deaths increasing from 447 in 2020 to 515 in 2021.[18] Unfortunately, at the time of this writing, there was an additional report of the state setting a new one-month record of 42 overdose deaths – 25 in New Castle County (NCC), 5 in Kent County (KC), and 12 in Sussex County (SC) in May 2022. This topped the previous high of 39 in August of 2018.[19]

Delaware's Drug Monitoring Initiative (DMI) is the interagency collaboration between The Department of Health and Social Services (DHSS), which includes the Division of Substance Abuse and Mental Health (DSAMH) and the Division of Public Health (DPH), Delaware Information Analysis Center (DIAC) and the Division of Forensic Sciences (DFS), whose purpose is "to share consistent, actionable information to address the issues related to the drug epidemic affecting Delaware." Data from DMI represents close to real-time aggregate data that can be used to analyze trends and target strategies for intervention. The 2021 DMI Annual Report describes continued sobering findings on the effect of the opioid epidemic on the state.[20]

[13] Volkow, Nora. "COVID-19: Potential Implications for Individuals with Substance Use Disorders." National Institute on Drug Abuse (2022). https://www.drugabuse.gov/about-nida/noras-blog/2020/04/COVID-19-potential-implications-individuals-substance-use-disorders

[14] "Issue Brief: Nation's Drug-Related Overdose and Death Epidemic Continues to Worsen." American Medical Association. Advocacy Resource Center (2022). https://www.ama-assn.org/system/files/issue-brief-increases-in-opioid-related-overdose.pdf?las=1&lag=Display

[15] Elyse R Grossman, Sara E Benjamin-Neelon, and Susan Sonnenschein. "Alcohol Consumption During the COVID-19 Pandemic: A Cross-Sectional Survey of US Adults," *International Journal of Environmental Research and Public Health* 17, no. 24: 9189 (2020). https://doi.org/10.3390/ijerph17249189

[16] Grossman, Elyse R., Sara E. Benjamin-Neelon, and Susan Sonnenschein. "Alcohol Consumption During the COVID-19 Pandemic: A Cross-Sectional Survey of US Adults." *International Journal of Environmental Research and Public Health* 17, no. 24 (2020): 9189. https://doi.org/10.3390/ijerph17249189

[17] Pollard, Michael S., Joan S. Tucker, and Harold D. Green. "Changes in Adult Alcohol Use and Consequences During the COVID-19 Pandemic in the US." *JAMA Network Open 3*, no. 9 (2020). https://doi.org/10.1001/jamanetworkopen.2020.22942

[18] Delaware Drug Monitoring Initiative 2021 Report.

[19] "Suspected Overdose Deaths for May in Delaware Set New Monthly High Total." DHSS Press Release - Delaware Health and Social Services - State of Delaware, 2022. https://dhss.delaware.gov/dhss/pressreleases/2022/overdosedth_060822.html

[20] Delaware Drug Monitoring Initiative 2021 Annual Report.

- The total number of accidental overdose deaths during 2021 was 515, with 334 deaths in NCC, 87 in KC, and 94 in SC, a 15% increase from 2020 at 447 deaths.
- In 2021, overdose death ages ranged from 15 to 95 years old – 225 males and 109 females died in NCC, 55 males and 32 females died in KC, and 69 males and 25 females died in SC.

2021 Overdose Data by County						
Race	Baseline NCC population	Deaths Due to overdose - NCC	Baseline KC population	Deaths Due to overdose - KC	Baseline SC population	Deaths Due to overdose – SC
White Non-Hispanic/White	56.3%/ 64.6%	68.8%	60.4%/ 65.6%	71.2%	75.4%/83%	86.1%
Black	26.4%	26.6%	27.3%	25.2%	12.2%	11.7%
Hispanic	10.4%	5.1%	7.4%	3.4%	9.3%	2%

- Arrests for opioids in 2021 increased by 10% over 2020.
- Compared to the third quarter of 2021, the fourth quarter saw a 16% increase in overdose deaths in NCC (69 to 80), 138% increase in KC (13 to 31), and 30% increase in SC (23 to 30).
- Narcan administrations by EMS increased by 7.8% from 2020 to 2021 (3,240 to 3,512), with 51.8% of those in NCC, 21.6% in KC, and 16.6% in SC.
- DSAMH admission data showed a net reduction in admissions in 2021; however, it is critical to note that there were “significant data submission issues by contracted providers” (e.g., staffing shortages), and the largest community provider transitioned to new ownership and made changes in their electronic health record system during this period.
- Heroin remains the primary drug recorded at the time of admission.
- However, fentanyl continues to be the primary substance identified in the toxicology reports of overdose deaths (fentanyl was present in 81% of deaths in Q4).

NATIONAL ACADEMY OF MEDICINE (NAM) FRAMEWORK: ***GUIDE FOR FUTURE DIRECTIONS FOR THE ADDICTION AND OUD TREATMENT ECOSYSTEM***

The data is unequivocal; Delaware needs to take dramatic and decisive action to build a SUD treatment system that works reliably at every level of care (LOC) and provides for effective transitions between LOCs to treat those with SUD and prevent overdose deaths. The devastating impact is experienced in all three counties and does not discriminate along racial lines or by age or gender; this is everyone’s problem. State leaders need to take decisive action to reverse the trajectory of disease and deaths.

Despite the State's many new and ongoing initiatives to address SUD and, in particular, OUD, incidents of overdose and overdose deaths continue to increase, indicating that the ongoing initiatives are not achieving the desired penetration and efficacy that is needed to drive improved outcomes. HMA IOA undertook this project to understand the current state of the SUD treatment system and recommend improvements required for the desired future state of the treatment system in Delaware. If implemented, these improvements will create changes that are proven by research and supported by data and science to improve outcomes for individuals struggling with the disease of addiction.

To organize the findings and recommendations in this report, the HMA IOA team used the National Academy of Medicine (NAM) Framework for the future of SUD and OUD treatment systems that acknowledges the complexity and multifaceted nature of building out a coordinated and effective SUD treatment system. Coordinated, compassionate, and evidence-based care that addresses SUD as a chronic, relapsing, treatable disease like many others (e.g., heart disease and diabetes as examples) must be built into any sustainable treatment ecosystem framework for every state and community in the nation. Without needed expansion at all appropriate LOCs, modeling predicts another 400,000 people will die in the US from overdose by 2025. Overcoming the epidemic will require leadership and investment to identify the strengths and gaps in a given system with purposeful action to address critical needs and build out predictable, accessible, and effective treatment pathways.[21] Strategic planning to distribute funding aligned with identified needs and investing in training adequate numbers of new providers across multiple disciplines will also be crucial to the success of the SUD treatment ecosystem.[22]

The disease of SUD is complex and affected by issues, such as early life trauma, behavioral health needs, physical health needs, psychiatric needs, chronic pain, and social needs, like housing, food, transportation, communication tools, access, cognitive capability, cultural factors, justice system involvement, structural racism, and numerous other factors.[23] Addressing the individualized needs of every person needing treatment is paramount, and developing pathways to treat those that represent specialized populations specifically is also critical to improve outcomes. Examples are:

- Justice involved individuals
- People of Color and all marginalized or minority groups
- Native Americans
- Individuals living with chronic pain
- Pregnant and parenting women
- Children and Youth, perhaps especially children and youth in the custody and care of the state
- Veterans

[21] R. Corey Waller, Kelly J. Clark, Alex Woodruff, Jean Glossa, and Andrey Ostrovsky. "Guide for Future Directions for the Addiction and OUD Treatment Ecosystem." *National Academy of Medicine*, April 5, 2021. https://doi.org/10.31478/202104b

[22] Ibid.

[23] Ibid.

- Individuals that identify as LGBTQIA+
- Those living in poverty and often unhoused experiencing a high impact from social needs or social determinants of health (SDOH)
- Undocumented individuals

NAM FRAMEWORK COMPONENTS

Policymakers, communities, and health leaders must make targeted investments dedicated to repairing the damage done by the drug overdose epidemic, providing evidence-based treatment for those suffering from SUD, and preventing further harm. To create a more robust and equitable SUD treatment ecosystem, immediate, targeted, and strategic investments must address the four C's of Capacity, Competency, Consistency, and Compensation.[24] The four C's (with an additional C for Community added) create the framework for the results and recommendations herein.

CAPACITY

SUD is a treatable, chronic, relapsing, and remitting disease. The needs of patients may vary over time, requiring changing LOCs. Therefore, the entire continuum of care must accommodate individuals who will likely require higher or lower LOCs as their disease progresses or is better controlled. It is critical to build a sustainable system of care that is right-sized and adaptable to the needs of the community it serves.[25]

COMPETENCY

Providers in the SUD treatment system must have the education and training to ensure person-centered care, interdisciplinary and evidence-based practice, continuous quality improvement (CQI), and outcome measure tracking. Unfortunately, SUD has long been treated as a behavioral or moral failure, rather than a treatable medical condition. Education and training that align with current best practices are critical to building and sustaining an effective SUD treatment ecosystem.[26]

[24] R. Corey Waller, Kelly J. Clark, Alex Woodruff, Jean Glossa, and Andrey Ostrovsky. "Guide for Future Directions for the Addiction and OUD Treatment Ecosystem." *National Academy of Medicine*, April 5, 2021. https://doi.org/10.31478/202104b

[25] Ibid.

[26] Ibid.

CONSISTENCY

The ideal treatment system empowers providers to provide high-quality care and maintain professional standards across the systems of care for individuals with all types of medical conditions, including SUD. The quality of care is often assessed based on fidelity to best practices and appropriate use of the system's infrastructure. While the ASAM Criteria specifies a tailored treatment plan and LOC for individuals, the care provided must also maintain best treatment practices.[27]

COMPENSATION

Adequate compensation for SUD treatment services is critical to establishing a durable, effective, and sustainable system of care. Consistency, competency, and capacity all require reimbursements that align with best practices and desired outcomes. Adequate funding is necessary for the delivery of services in a reliable and sustainable way; unfortunately, the existing payment model for SUD often marginalizes people and can be unreliable and unpredictable.[28]

COMMUNITY

A fifth "C" might necessarily be contemplated. Creating communities that can better engage and support individuals needing treatment, their families, providers, and others to overcome stigma and ensure widespread access to treatment require targeted investments.[29]

With this framework serving as the foundation, the HMA IOA team first addresses the state's extensive efforts over the past five years, including the data analyzed for this needs assessment and makes recommendations for the ideal future state for the Delaware SUD treatment system of care.

[27] Ibid.

[28] Ibid.

[29] Ibid.

BROAD EFFORTS TO ADDRESS THE OPIOID EPIDEMIC IN DELAWARE

The State of Delaware, through DHSS, DPH, and DSAMH, DSCYF, and its advocacy partners (atTAcK Addiction, NAMI, and MHA) continue to be very diligent in addressing the prevention and treatment of SUD in the state. DHSS, through its divisions, has been working hard, particularly on the implications of OUD in the state, seeking to address and increase access to treatment and reduce the deleterious impact of the opioid epidemic on the citizens and families of Delaware and limit deaths due to overdose.

Key local and statewide initiatives, including commissions, committees, and community alliances with advocacy groups across the three counties are working to abate the opioid epidemic and enhance the SUD services and system of care; many are listed and described in greater detail in **Appendix C**.

Table 1 represents where some of the state's current public and private efforts to address SUD and OUD fall within the five C's framework. The table is meant to be a high-level representation and does not detail the intersectionality of the many initiatives, programs and/or committees, but may serve to highlight where there are gaps that still need to be addressed (e.g., compensation, consistency, and competency).

Table 1: Delaware's Previous and Ongoing Initiatives to Address SUD/OUD

State Initiative	Applicable Framework Category				
	Capacity	Competency	Consistency	Compensation	Community
Overdose System of Care (OSOC)	X	X	X		X
State Opioid Response (SOR2)	X	X	X		X
Behavioral Health Consortium (BHC)	X	X			X
Sussex County Health Coalition	X		X		X
Addiction Action Committee	X	X			X
Attack Addiction	X				X
Delaware Overdose Fatality Review Commission	X				X
Help is Here	X				X
Opioid Impact Fee	X				X
Prescription Opioid Distribution Committee	X				X
Project Engage	X				X
START, including Delaware Treatment and Referral Network (DTRN)	X				X
Substance Overdose Support (SOS)	X				X
Bridge Clinics	X				X
Law Enforcement w/MH Clinician					X
Syringe Services Program					X

BACKGROUND FOR DE SUD TREATMENT SYSTEM NEEDS ASSESSMENT

SCOPE OF WORK

In November 2021, New Castle County, in partnership with Kent and Sussex Counties, contracted with HMA IOA to conduct a comprehensive statewide SUD treatment system needs assessment to study the current state of Delaware's public and commercial SUD treatment system and help inform the planning of a future state SUD treatment continuum in Delaware to better address the ongoing SUD and overdose crisis in the state. To better understand the current state of SUD prevalence and treatment in Delaware and to inform the needs of the future state system, the analysis considers:

- Demographics;
- Geographic locations for treatment provision and treatment needs;
- Service utilization;
- The known capacity of the existing system;
- First-person direct feedback from community and system stakeholders; and
- The impact of the COVID-19 pandemic on the treatment ecosystem.

The report also includes recommendations for the build-out of a successful future state SUD system of care in Delaware.

Public services in Delaware are primarily provided by state agencies, rather than counties or townships, like in many other states. For this needs assessment, specific services are noted when county-based findings and recommendations can be made. Hopefully, the findings and recommendations from this report can be included in the state's overall behavioral health strategic activities, including planning for the use of the state's anticipated additional State Opioid Response (SOR) and significant Opioid Settlement funds.

OVERALL METHODOLOGY

HMA IOA set out to conduct an in-depth needs analysis to assist in the planning for the future state SUD treatment continuum in New Castle, Kent, and Sussex Counties in Delaware. Although the data remain fluid and the pandemic continues to impact individuals experiencing SUD, this SUD needs assessment is meant to be a point-in-time study to understand the treatment system capacity more completely at present and develop recommendations to address both the current state and plan for the future state of Delawareans with SUD.

STAKEHOLDER INTERVIEWS, FOCUS GROUPS, AND TOWN HALLS

The HMA IOA team conducted interviews with critical stakeholders across state agencies, stakeholder groups, and provider types; conducted multiple focus group interviews; and held eight town hall style

meetings, two in each county, one at the HOPE Center (located in NCC), and one on Zoom (available to all statewide who could not make the in-person town halls) to gather firsthand feedback from those with lived experience with SUD and recovery or supporting others with their treatment needs.

The HMA IOA team designed and implemented a qualitative interview guide for stakeholder interviews and focus groups to serve as a basis for those conversations with a range of questions, understanding that many key stakeholders would have feedback for some, but often not all, of the questions. Interviewers also welcomed input that was not necessarily directed by the interview guide but was important to assess the current state of the treatment system.

- The HMA IOA team conducted 38 individual interviews of key stakeholders working within or with the SUD treatment system statewide, most with decades of experience. The intent was to interview a representative sample of key stakeholders across multiple sectors that intersect with the SUD treatment system in Delaware. Individual stakeholder interviews and focus groups were conducted with leaders of local law enforcement agencies, several retired law enforcement officers, Superior Court judges from all three counties, a representative from the Attorney General's Office, legislators, SUD providers, advocates, physicians, and administrative/clinical staff from all three FQHC's, an emergency room physician and an addiction physician specialist, state delivery system representatives (adults and children), parents of individuals in need of treatment or in recovery, state government leaders, representatives from the Department of Correction, social workers, and individuals with lived experience with SUD and the recovery systems. Most interviewees had experience working statewide, but five (5) were primarily based in Kent County, twelve (12) in New Castle County, and eight (8) in Sussex County.
- The HMA IOA team also completed eight town hall sessions that included a morning and afternoon session in each county, a virtual town hall on Zoom, and one at the Hope Center. There was a total of 57 respondents, all of whom are invested in creating a better SUD system of care for Delawareans. The town halls provided an opportunity for the HMA IOA team to get input from participants on the strengths and barriers of the current SUD system from those most directly involved in using the system themselves or on behalf of individuals in need of treatment and offered unique insights for each county.

  Recruitment efforts for the town halls were broad (and overlapping). Participants included treatment providers, peer support specialists, community members, grieving parents, peers working in EDs, teachers, law enforcement, FQHCs, DSAMH representatives, and hospital system employees. A $25 gift card was used to incentivize participation in town hall forums.
- Additionally, HMA IOA conducted four separate focus groups with the atTAcK Addiction, Mental Health Association, Sussex County Health Coalition, and members of school-based wellness centers (Christiana Care).

All feedback from town halls and focus groups was aggregated with the stakeholder interview responses, recorded, entered into Qualtrics, and further filtered by NVivo to provide quantitative and qualitative analyses and identify general themes. NVivo is a software program that facilitates qualitative data coding by using an interface that organizes codes and subcodes that correspond to themes. After themes were identified, the responses were coded to determine how many responses could be appropriately assigned or allocated to the identified themes. These results were then disaggregated and reported by category within the NAM framework.

PROVIDER SURVEYS

The HMA IOA team simultaneously designed and implemented the provider survey to assess the capacity of the existing DSAMH licensed SUD treatment provider organizations (agencies) across all LOCs to include provider numbers and types, all services provided, including payers accepted, client type, wait times, treatment length, and more. HMA IOA sent a link to the provider survey to each SUD provider licensed by DSAMH for all LOCs, including Sober Living providers. Multiple follow-up inquiries were made through email and phone outreach to maximize the response rate.

Providers completed the online survey, developed and implemented using Qualtrics software. This allowed branching logic to reduce the number of questions presented to each survey participant. Survey responses were tabulated and analyzed using Qualtrics and manual data manipulation to organize by geographic location and LOC. Questions deemed flawed due to missing information and other reasons were eliminated for consideration in this report. The complete set of responses are too lengthy to include here but are available upon request.

DHIN CLAIMS DATA

HMA IOA also received a data extract from the All-Payer Claims Database housed at the Delaware Health Information Network (DHIN), inclusive of data from 2017-2020. HMA IOA data analysts worked with DHIN to obtain a useable data extract to better understand SUD trends and service delivery. HMA IOA also supplemented the data with multiple public data sets, including the American Community Survey (ACS) data set, National Provider Identifier (NPI) data, and Medicare Provider Taxonomy Reference Data.

All data were loaded to a single database in HMA IOA's SQL Server platform HMA IOA DataPlus, where the data could be combined to answer a variety of database questions. The database is secured and only two individuals from HMA IOA had direct access to the database. The DHIN technical team provided guidance on how to manipulate the data, and after loading the data, DHIN and HMA IOA jointly conducted a reconciliation exercise to ensure that the number of claims matched across systems. Once the data were loaded, HMA IOA ran a series of descriptive statistics focused on the demographics of individuals utilizing SUD services, utilization characteristics of the same individuals and identification of pharmaceuticals received.

MEDICAID REIMBURSEMENT RATE COMPARISON

Finally, a Medicaid reimbursement rate comparison for SUD treatment services was done. The analysis looked at the most frequent publicly available community-based and residential rates utilized. When comparable rates were available, they were noted.

DELAWARE MEDICAID BENEFICIARIES AND SUD

Delaware Medicaid Beneficiaries and The University of Delaware Center for Community Research and Service released a brief in February 2022 addressing SUD among Medicaid beneficiaries in Delaware.[30] During the five-year pre-pandemic analysis (2014-2019), over 300,000 unique individuals were enrolled in Medicaid for at least one month (approximately 180,000-190,00 per year). They report that one in five members had a SUD service claim at least once per year over the period measured. Across Medicaid populations in other states, Delaware had the fifth highest rate of SUD in 2018 (tied with Oregon), and the third highest rate of OUD. Of particular importance, the rate of SUD for these beneficiaries was at 10.6% and increased to 14.7% in 2019.

Delaware also had the fifth highest rate of pregnant females with a SUD, and third highest ratio of babies born with Neonatal Abstinence Syndrome at 5.7% of births. Black and non-Hispanic rate of SUD increased 147% over five years (2014-2019) compared to White and non-Hispanic groups at a 56% increase. In terms of frequency of diagnoses, OUD, AUD, Cannabis Disorder and then Cocaine and Stimulant Use Disorder (StUD) were the most frequent diagnoses related to these services. Co-occurring mental health diagnoses and polysubstance use were also common. Across the state of Delaware, the rate of SUD for Medicaid beneficiaries ranged from 8-20%, with OUD at 4-15%. The highest areas of SUD were found in Harrington, then Marydel, Wilmington, and Delaware City.[31]

RECENT REPORTS ON DELAWARE'S SUD SYSTEM AND THE IMPACT OF OUD

Over the past four to five years, several organizations have looked at Delaware's SUD system and response to the opioid crisis and provided recommendations; the HMA IOA needs assessment will touch upon the work of these reports and include the findings for additional and future recommendations. Select summaries follow:

A BLUEPRINT FOR TRANSFORMING OPIOID USE DISORDER TREATMENT

In 2018, the Bloomberg School of Public Health at Johns Hopkins and the Bloomberg American Health Initiative[32] presented a blueprint designed to improve Delaware's provision of OUD treatment to DHSS. This blueprint assessed the status of OUD treatment and trends in use and mortality, as well as the barriers to care and support systems that prevented those with OUD from accessing existing services or recovery supports.

[30] Gifford, Katie, Erin Lynch, Eli Turkel, and Mary Joan McDuffie. Rep. *Substance Use Disorder Among Delaware Medicaid Clients Annual Prevalence Report, 2014 - 2019*, 2022.

[31] Gifford, Katie, Erin Lynch, Eli Turkel, and Mary Joan McDuffie. Rep. *Substance Use Disorder Among Delaware Medicaid Clients Annual Prevalence Report, 2014 - 2019*, 2022.

[32] Johns Hopkins Bloomberg School of Public Health and the Bloomberg American Health Initiative, "A Blueprint for Transforming Opioid Use Disorder Treatment in Delaware." (July 2018) https://dhss.delaware.gov/dhss/files/johnshopkinsrep.pdf

The report recommended an increase in the capacity of the treatment system, noting there is inadequate access to medication treatments for OUD and a lack of services for people in crisis. Insecure housing and employment were identified as key barriers to treatment in this blueprint, which recommends that employment supports, housing, and treatment be co-located, if feasible. The report also highlighted that abstinence requirements from substance use pose a barrier to accessing existing housing and employment programs.

The report recommended that Delaware focus on engaging high-risk populations in treatment, such as those that are incarcerated with SUD. Additionally, the report recommended a focus on improving treatment services in the EDs and increasing outreach efforts by trained peer mentors and social service agencies to vulnerable populations. Bloomberg further recommended creating incentives for providing quality care, including instituting value-based care, and reviewing "current rates to ensure that there is adequate and consistent reimbursement for high quality care and [to] create a framework for measuring and rewarding value."[33] ***Finally, a recommendation was made to use data to guide reform and monitor progress through the creation of a dashboard to measure treatment capacity, utilization, and quality indicators.***

SUBSTANCE USE DISORDER TREATMENT POLICY RECOMMENDATIONS FOR THE STATE OF DELAWARE

The Pew Charitable Trusts (Pew) issued an essential report to the Behavioral Health Commission in March 2019.[34] Delaware contracted with Pew for technical assistance to make recommendations on a "timely, comprehensive, evidence-based and sustainable treatment for OUD."[35] Although the final report can provide more detail, in brief, Pew made eight policy recommendations in four areas: Treatment System Transformation; SUD Workforce; Coverage and Reimbursement; and Underserved populations.

- Treatment System Transformation
  - Recommended Delaware's General Assembly direct DMMA and DSAMH to fund care coordination at a rate comparable to surrounding states.
  - Recommended DSAMH issue regulations for medication units and dosing sites associated with OTPs and integrate methadone into other healthcare settings.
  - Recommended amending the state's MCO contracts to mandate a common assessment tool based on the ASAM criteria.
- SUD Workforce
  - Recommended the General Assembly amend the Medical Practice Act to ensure that all waivered physician assistants can prescribe buprenorphine, regardless of the waiver status of their supervising physicians.
  - Recommended that the Board of Medical Licensure and Discipline remove the requirement for providers to obtain a waiver to prescribe buprenorphine via telemedicine to mirror national practice standards.

[33] Ibid

[34] The Pew Charitable Trusts. Rep. *Substance Use Disorder Treatment Policy Recommendations for the State of Delaware*, 2019.

[35] The Pew Charitable Trusts. Rep. *Substance Use Disorder Treatment Policy Recommendations for the State of Delaware*, 2019. Rep.

- Coverage and Reimbursement
  - Recommended the BHC form a task force of private insurers, employers, and stakeholders to provide suggestions on policies that private payers can adopt with the goal of increasing SUD access for privately insured citizens.
- Underserved populations
  - Recommended the General Assembly appropriate sufficient funding for the Department of Correction (DOC) to expand its provision of full MAT in its population.
  - Recommended that DMMA, with input from DOC, amend its contracts with MCOs to require care management for people with high care needs re-entering the community.

SUBSTANCE USE DISORDER TREATMENT SYSTEM CAPACITY ASSESSMENT FOR SUSSEX COUNTY, DELAWARE

The Sussex County Health Coalition commissioned a study[36] and issued a report in June 2018 to better understand the capacity of SUD treatment services in Sussex County. Their study was broad in that it looked at the social and community conditions that increase the risk for SUD hospitalization, identified gaps and redundancies in the treatment system, and documented opioid-specific interventions (and gaps) in Sussex County.

The report highlighted several SUD-focused treatment recommendations, including training clergy and 32 primary care providers on SUD, adding eight inpatient detox beds, 39 inpatient and/or outpatient detoxification clinical service units, and adding 13 long-term (greater than 30 days) rehabilitation beds. In addition, the report suggested consideration for the county to set up an opioid overdose response team, work to expand the number of needle exchange locations, and expand access to MAT by increasing waivered providers and methadone clinics.

RESULTS OF THE SUD NEEDS ASSESSMENT

This section details the results from the 1) stakeholder interviews, town halls, focus groups, and medical leader input; 2) provider surveys; 3) claims data analysis; and 4) regional comparison of Medicaid reimbursement rates for SUD services. For each of the groupings of data (when possible), the HMA IOA team organized the findings into the five C's framework: capacity, competency, consistency, compensation, and community.

CONSOLIDATED RESULTS FROM STAKEHOLDER INTERVIEWS/FOCUS GROUPS/TOWN HALLS

The following are excerpted highlighted responses from the team's interviews and engagement events and represent feedback from individuals in Delaware that have lived experience working with the treatment system, needing treatment for themselves or family members, or in many cases both. While many responses and take away messages fall into multiple categories, the HMA IOA team has selected the responses that were heard most often and represent best the feedback received from all the interviews and listening sessions. The complete results are too lengthy to include in this report but are available upon request.

[36] *Substance Use Disorder Treatment System Capacity Assessment for Sussex County, DE*. Sussex County Health Coalition, 2018.

CAPACITY (PREVENTION): TAKE AWAY POINT

- Respondents indicate a need for a uniform approach for the community, state agencies, law enforcement, and emergency response services regarding medication for reversing overdoses. They recommend all stakeholders use the Narcan 4mg or 8mg one step nasal spray. This is strongly supported by the HMA IOA subject matter experts (SMEs).

CAPACITY (TREATMENT): TAKE AWAY POINT

- There is a clearly identified gap in SUD services for children and youth in Delaware, and it will be important to build a robust systemic approach with new educational campaigns, interventions, and established treatment options for children and youth. One town hall participant indicated that many children and youth in need of SUD services must find treatment in other states and also made the important point that this poses a real challenge for families to stay engaged with necessary parent education and treatment engagement priorities, as well.
- There is a notable need for services that accommodate individuals who are struggling with SDOH, particularly those experiencing homelessness. Treatment programs that address access, transportation, and social supports will be important to establish in order to truly tackle SUD for this population. Programs that co-locate treatment with housing or supportive housing and other services (educational and employment supports, as examples) will be important to consider.
- Telemedicine has been leveraged nationwide, including in Delaware successfully during the public health emergency (PHE), but perhaps not as successfully for those that do not have reliable access to devices, broadband services, or privacy for appointments and group sessions, such as those experiencing homelessness. A strategy to expand access by providing devices and broadband access at drop-in locations conveniently located where they are most needed could be an option to explore; there are, of course, many models that will be worth considering to increase access and engagement for individuals in need that are also experiencing homelessness – all should be considered.
- COVID-19 has dramatically impacted the treatment system and increased the need for services; some of the lessons learned from the flexibilities exercised during the PHE can help bolster the future system.

IDENTIFIED SUD TREATMENT SERVICE NEEDS IN DELAWARE
■ Full continuum of SUD services for children, youth, and adolescents
■ Residential treatment for men
■ Treatment services for the entire family where families can access therapy, and SUD care
■ Treatment services for those with Medicare
■ Culturally appropriate treatment options, including Spanish speaking services
■ Reimbursement rate improvements for sustainable services
■ Established and supported transitions systemwide, including and especially the DOC for returning citizens to avoid disruptions in care.

"COVID-19 was disruptive, but the system wasn't in good shape prior to COVID-19."

- Telehealth can improve access and adherence to treatment for many, and Delaware should build that capacity out to the fullest.
- The service continuum needs to be addressed and built out statewide, so that appropriate LOCs are available to all in need. Importantly, care coordination and leveraging peer supports appropriately were highlighted. Many town hall attendees and interviewees noted that peers are used at times when they may not yet be firmly established in their own recovery. Because of the risk of relapse due to this work, a protracted period of stable recovery should be in place before engaging in peer work, and peers should be certified at the time of hire or before they begin working with clients.
- There is also a need to develop a connected, effective system of care across LOCs to ***ensure all stakeholders understand the way the system works and how to connect themselves or others to the right care at the right time.*** Many respondents expressed a disconnect between their own experiences getting care for themselves or loved ones and the resources providers and state authorities communicate are available.
- The SUD treatment continuum has to be well planned and implemented to ensure broad coverage statewide with appropriate and needed ASAM LOCs located throughout the state with appropriate linkages to ensure a true continuum of care and one that considers transportation distances and transportation supports to minimize transportation as a barrier.
- The Bridge Clinics were reported as the right idea and welcome, but perhaps not yet consistent across the state (e.g., availability of hours) and in need of additional build-out to include informational campaigns, so their purpose is well understood and better utilized. The Bridge Clinics have an important role to play in establishing the needed continuum of care; this model has been successfully used in many states and should be considered for robust build-out in Delaware. As transportation is often a challenge, deployment of "mobile" bridge clinics should be expanded to bring services to those at locations where they may need it most.
- There are notable gaps in service for some special populations. Service gaps and need for services for children and youth, Medicare recipients, the uninsured, pregnant and parenting women, and justice-involved individuals were noted often. The HMA IOA team notes that a new program for pregnant women with addictions (and their children) will be opening up in July 2022.[37]
- The HMA IOA team repeatedly heard that, in practice, EDs are not initiating people on MAT or engaging them in treatment when seen in the ED, even post overdose event. However, the HMA IOA team also separately heard that EDs are considered a primary access point for the treatment system of care by state agencies. This is a disconnect and gap that needs to be addressed and rectified by the hospitals and state leaders, so every person seen in the ED is appropriately screened and assessed for SUD, especially for a post-overdose event. ***There truly needs to be "no wrong door" to SUD treatment in Delaware, and EDs play a critical role.*** If EDs are not fully engaged in screening, assessing, and initiating SUD care, the system of care will either fail for those in need or certainly not be as effective as necessary.

[37] https://www.wdel.com/news/new-addiction-treatment-facility-for-women-with-children-set-to-open-its-doors-in-claymont/article_79ad389c-e5bc-11ec-89e1-133a26bc2f03.html

Primary care, OB/GYN, inpatient hospitalists, ED physicians, pharmacists, FQHCs, stand-alone medical clinics, and more also need to be fully engaged in screening, assessing, and connecting individuals in need of care to include immediate initiation of MAT when clinically indicated.

- Primary care providers also need to engage in developing the treatment continuum and support the full integration of SUD care in primary care.
- Transportation in the state of Delaware has been a longstanding issue across the board negatively impacting access to services. With few bus lines and not enough routes, there is a significant burden on an individual that is reliant upon the transportation system in Delaware. For example: a mid-day appointment for a Sussex County client that takes place in Wilmington can mean an entire day of travel with bus rides, bus changes, and route changes.
- Services for those experiencing co-occurring mental illness are experienced as a gap and need to be addressed. Crisis services must be provided, regardless of the primary presenting diagnosis of SUD or mental illness.
- Pregnant and parenting women also need specialized treatment options and supports, including childcare.
- Non-English speakers and immigrants also need specialized culturally competent services.

CAPACITY (WORKFORCE): **TAKE AWAY POINT**

- Paired with poor rates and a shortage of behavioral health workers, the providers who do remain in Delaware are struggling.

CONSISTENCY: **TAKE AWAY POINT**

- Quality assurance: payers need to mandate evidence-based practices with fidelity to those approaches and require outcome measures with attendant reporting requirements to drive quality improvement and improved outcomes.

COMPENSATION: **TAKE AWAY POINT**

- Reimbursement rates must be immediately addressed to ensure a qualified workforce and a sustainable treatment system.
- Reimbursement rates need to be reconsidered at least annually to ensure an effective and sustainable system that will also allow for the workforce to be incentivized and trained.

COMMUNITY: **TAKE AWAY POINT**

- There often exists community resistance to needed treatment centers and supportive housing locations; every effort should be made to include community leaders in the conversations and negotiations to find workable solutions and perhaps incentivize communities to create greater opportunities for services in individual communities statewide.

CAPACITY

PREVENTION

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Prevention Programs*	
Response Category	**Excerpted Responses**
Successes	**Naloxone** ▪ Getting Naloxone out. ▪ Only thing that has worked is getting Naloxone out to the community, harm reduction strategies. ▪ Community training for Naloxone has been effective to get it out into the community. ▪ Promote the use of Narcan to lower overdoses and warn the public about warning signs of overdose – look for signs: spoons, lighters, etc.
Education	▪ Intervention with schools has fallen short. Required 10 or 15 hours of SUD education isn't happening as required by law. Not sure why. Stigma, lack of qualified educators, or not seen as a priority? ▪ Need SUD education materials for people. ▪ Engage the community in stages of change, education of clients that are unaware of resources that will support the road to recovery.

TREATMENT (CAPACITY)

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 1 of 8*	
Response Category	**Excerpted Responses**
Homelessness/Need for Services/ Recovery & Supported Housing	▪ 85% of our residents and patients are homeless. ▪ Chronically homeless people that have nowhere to go are constantly cycling through the system. ▪ Poverty and homelessness. ▪ Programs serve a high number of those that are homeless. ▪ Housing across the state - lack of affordable housing. ▪ Not enough housing – people end up on the street – minimal halfway houses – communities fight them (supportive housing) – some supportive housing have sex offenders living there.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 2 of 8*	
Response Category	**Excerpted Responses**
Homelessness/Need for Services/ Recovery & Supported Housing	▪ We do not provide housing. Individuals need the basic necessity of housing to stay off the street and not be faced with using substances to survive. ▪ A gap in transitional housing, sober living housing.
Limited Service Continuum	▪ Minimal service continuum. Probation and Treatment Access Center (TASC) does a lot of leg work to help patients. ▪ Need for more Medicaid-funded treatment beds available for priority populations. ▪ Programs we used to use are now gone. ▪ No local residential – not a lot of beds in general are open. ▪ Not enough places to get help or follow up after inpatient is a problem – difficult getting records from providers. ▪ MAT only emphasis: medication only. A lot of stress on getting buprenorphine to the community. Definitely saving lives, but seems less effective than services combined with medications for quality-of-life improvement. ▪ Need more robust care coordination. There is no bridge from detox units. ▪ Our patients sometimes refuse referral and collaboration. However, they will return and request another referral at times. ▪ The significant need is care and case coordination. Can't have police waiting in the ER for six plus hours while people get medically cleared. ▪ Interventions that don't emphasize creating connectedness. ▪ Need more short-term treatment spans that insurance will pay for – IOP. ▪ Further, there are not many options for residential treatment services throughout the state; many Delawareans end up seeking residential treatment outside of the state, simply because there are limited service providers. ▪ Nearby out-of-state providers are NOT on DTRN.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 3 of 8*	
Response Category	**Excerpted Responses**
Drivers of a Successful Treatment System	▪ Collaborations and support from both state and community-based providers. ▪ Coordinating with other agencies. ▪ Helping individual get services – people may not know where to get help – need the care and case coordination for all points of contact (EMS, Law Enforcement, hospitals) – need to have dialogue regarding the different processes. All systems need to know what others are doing and have capacity for. Need a modern audit function to see if the system is working – how do we know anything is working? ▪ People need an array of treatment options. ▪ Must have follow-up care. ▪ Individualized care. ▪ Continued effort to integrate SUD and physical medicine. **ED Induction** There is a need for more induction at all EDs. **Narcan Distribution Programs** Narcan leave behind program – picked up steam in the last 8-10 months – getting more police department participation. **Peer Support Model** ▪ Dedicated clinicians and peer support within a treatment model are key indicators to successful interventions. ▪ Greatest driver is the involvement of peers and those who are most impacted. ▪ Meet them where they are; peer support is critical – need people who have been through it. ▪ Our peers have had a high level of success.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 4 of 8*	
Response Category	**Excerpted Responses**
Access	**DHSS Hotline** ▪ 2-1-1 system. ▪ 24/7 hotline that guides people to services. ▪ Our Help 302 team engages with referral services to not only Banyan Delaware, but to various other agencies as needed by the caller's care requests, clinical presentation on the call, or service interests. **Bridge Clinic** ▪ Bridge Clinic is also available for access to services. ▪ The state's Bridge Clinics should play a larger role in serving ASAM assessment sites. **Legal System, Courts** ▪ Peoples' path to treatment is often through the courts. ▪ TASC clients are court-ordered to us. ▪ A person has to plead guilty to get diverted to treatment. ▪ Screening for pretrial people and sentenced are given a risk needs assessment within the first six months. Patients can self-identify, come in on MAT, or be identified by screening and assessment. **Help is Here** ▪ Helpishere.com is a great, great portal – people can follow the link to find services – helps them connect to services – having enough providers is another matter. **Hospitals and Emergency Departments (EDs)** ▪ 9-1-1 most often the access or first responder happens upon the person in need. If it is 9-1-1, a co-response model is needed with law enforcement and mental health provider. ▪ Delawareans often times end up in EDs when detox services for SUD are clinically needed, that results in hospital social workers or peer support representatives in ED's contacting our Help 302 team, or the Banyan call center (from Google search) and reaching out to us that way.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 5 of 8*	
Response Category	**Excerpted Responses**
Access	**Primary Care** ▪ Most of our referrals come from Primary Care. ▪ Occasionally a provider, like an FQHC. **Open Bed System** ▪ They are referred directly by another provider or through the Open Beds System. **Self-referral** ▪ Gaudenzia accepts both referred and self-referred clients. It is not uncommon for clients to call us directly for treatment.
COVID-19 Impact	▪ We are thousands of cases behind. ▪ Isolation has distressed people beyond measure. **Increased Risk of Overdose** ▪ Overdoses have sky-rocketed. **AUD** ▪ Increased alcohol use disorders (AUD). **Less Access and Services** ▪ Closed for outbreaks which limits access to services. ▪ Going to virtual is NOT helpful for intensive programming - easy for patient to turn off. ▪ Made access more difficult for some, because not everyone has access to Zoom. ▪ No ability to do drug screens, only able to connect via Zoom. ▪ For this population, it often did not feel as effective using Zoom. ▪ Zoom groups were a disaster. **Reluctance to Access Services** ▪ People are afraid to leave home to get treatment. ▪ Pandemic may have scared them into their homes – access gets more challenging.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 6 of 8*	
Response Category	**Excerpted Responses**
How Did the Treatment System	**Fair**
Hold Up During the COVID-19 PHE?	▪ Outreach has slowed down. ▪ Community residential treatment (CRT) is where we have risen to the challenge, but there is so much first responder burn out. ▪ Feeling that things are even more confusing now. There have been significant changes, but don't have an understanding what those changes have been. ▪ Partial hospitalization programs (PHP) have been strained, limited availability and social restrictions, virtual sessions can compromise the quality of services. **Good** ▪ All things considered, it has done a good job of altering operations and processes to continue to increase access to care. ▪ Held up pretty well - issue is getting people to come for treatment. We need more case management. **Poor** ▪ Overwhelmed. We tried to prepare, but we are overwhelmed. We don't have personnel and capacity for MH and SUD; this area is no different –sadly it is life or death.
Improvement to the SUD System	**Specialty Populations** ▪ Need men and children residential treatment program. ▪ We need family services in treatment programs, like parenting classes. ▪ We need treatment for the entire family where families can go for therapy and SUD care. ▪ We need more treatment capacity for adolescents in Delaware. ▪ Need more facilities for Medicare patients. ▪ More Spanish speaking therapists needed in Sussex.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 7 of 8*	
Response Category	**Excerpted Responses**
Improvement to the SUD System	**Service Expansion** ▪ Need more MAT prescribers. ▪ Mobile treatment services. ▪ More residential beds. Bed placement is a big problem. ▪ More services across the continuum of care. ▪ More housing supports, including safe recovery residences. ▪ Expanded telehealth services, immediate access to tele-psych. ▪ Need to address reimbursement rates.
Strengths of the SUD System	▪ Committed, compassionate workforce. ▪ Dedicated professionals driven to overcome this health crisis. ▪ Open mindedness of those involved in planning and system management. ▪ TASC has really stepped up. ▪ Organizations like atTAcK addiction. ▪ Greater awareness of SUD as a chronic disease. ▪ Naloxone distribution programs. ▪ Access to public insurance. ▪ Knowledge and experience of the workforce. ▪ Specialty courts. ▪ Support from elected officials.
Barriers for People Seeking Treatment	**Cost** ▪ High deductibles, out-of-pocket expenses, copays and services not covered by insurance. ▪ Delaware has the worst reimbursement rates – can't get good Medicaid services.

STATEWIDE STAKEHOLDER INTERVIEWS, FOCUS GROUPS, and TOWN HALLS *Capacity: Treatment and/or Treatment Programs 8 of 8*	
Response Category	**Excerpted Responses**
Barriers for People Seeking Treatment	▪ Cost is a barrier for the disabled and elderly. ▪ No sliding fee scale for out-of-pocket expenses. **Child Care** ▪ No childcare available at treatment programs. ▪ Hard for parents to have to travel to go to SUD treatment, can't afford daycare and can't bring children with them. **Transportation** ▪ Families don't want to drive 30-40 minutes one way. ▪ Not having transportation and the amount of time it takes to get to services. **Stigma** ▪ MAT is still stigmatized. ▪ Providers "cherry pick" patients. ▪ A lot of stigma in the hospital and Eds. **Self-Referral Knowledge and Ability** ▪ Can be difficult to find appropriate services. ▪ The system is difficult to navigate, and it can be humiliating trying. ▪ It [the system] is still a mystery for a lot of people.

WORKFORCE

STATEWIDE STAKEHOLDER INTERVIEWS *Capacity: Workforce 1 of 4*	
Response Category	**Excerpted Responses**
Barriers	▪ Available staff – shortage of SUD qualified LCSW's. ▪ Not enough providers and not enough training for workforce.

STATEWIDE STAKEHOLDER INTERVIEWS *Capacity: Workforce 2 of 4*	
Response Category	**Excerpted Responses**
COVID-19 Impact	▪ Also, staffing is a struggle for current providers, thus making it difficult to serve the increased number of patients. ▪ Paired with poor rates and a shortage of behavioral health workers, the providers who do remain are struggling. ▪ Workforce issues and staff stress have increased.
SUD Workforce Competency	▪ Peer model is effective ▪ Peer staff in need of ongoing intense supervision. ▪ More emphasis on lived experience vs. training. ▪ SUD workforce can benefit from using individuals in recovery. ▪ There are too many programs that employ peers too early in recovery and thus not stable yet.
Low Penetration of PCPs	▪ Have minimal connectivity to PCPs and/or support networks. ▪ PCPs needed.
Workforce Shortages	▪ Can't hire people, woefully underpaid workforce going to other industries. ▪ The system needs more providers; workforce access means many things. ▪ Turnover in providers – lots of turnover, in general. ▪ Workforce issues have impacted our ability to do timely community follow up. ▪ Aging workforce. ▪ Staffing shortages. **Down State** ▪ Identified as a Medically Underserved Area (MUA) under the criteria of the U.S. Department of Health and Human Services (DHHS) and the Health Resources and Services Administration (HRSA). ▪ Population is unique because they are often underserved.

STATEWIDE STAKEHOLDER INTERVIEWS *Capacity: Workforce 3 of 4*	
Response Category	**Excerpted Responses**
Successes	▪ Expanded access to MAT with primary care. ▪ Telehealth has been good - silver lining of the pandemic – people who did not have cars could get services or couldn't leave house because kids or health conditions. ▪ We have a great relationship with TASC. ▪ Expanded peer model, increase of certified peers.
EDs Ineffective as Hub for Treatment	▪ Bringing folks out to get medical clearance – EDs have become dumping grounds – EMS shows up at night and weekends when there is no administration staff at the treatment centers. We have to take them out – we hear "patient got worse...."
Drivers of Success	▪ Continue telehealth at level we have now. ▪ Technology should also be considered a driver to success, as it increases access to care opportunities for some that would not otherwise be there. However, that, too, creates barriers to care when individuals may not have access to technology. ▪ Systems are built, but resources are just not there – need more beds and more providers – need more MH specialists, as well – we can build the blueprint, but need to implement. ▪ Good communication. ▪ Warm handoffs.
Barriers	▪ Available staff – shortage of SUD qualified LCSW's. ▪ Need more providers – human resources. ▪ Not enough providers and not enough training for workforce.
COVID-19 Impact	▪ Also, staffing is a struggle for current providers, thus making it difficult to serve the increased number of patients. ▪ Staffing shortages leading to a reduction in the number of available treatment beds. ▪ Staffing shortages overwhelming the clinicians. ▪ Paired with poor rates and a shortage of behavioral health workers, the providers who do remain are struggling. ▪ Workforce issues and staff stress have increased.

STATEWIDE STAKEHOLDER INTERVIEWS *Capacity: Workforce 4 of 4*	
Response Category	**Excerpted Responses**
SUD Workforce Competency	**Peer Model** ▪ Peer staff in need of ongoing intense supervision. ▪ More emphasis on lived experience vs training. ▪ SUD workforce can benefit from using individuals in recovery. ▪ There are too many programs that employ peers too early in recovery and thus not stable yet. ▪ Peer model is effective.

COMPETENCY

WORKFORCE FOR SPECIALTY LEVELS OF CARE (LOCS)

STATEWIDE STAKEHOLDER INTERVIEWS *Competency: Workforce for Specialty LOCs (COE, BIO, Pregnant & Parenting, Adolescent, etc.) 1 of 3*	
Response Category	**Responses**
Co-occurring Enhanced (COE)	▪ High rate of medical comorbidities. ▪ Especially those with co-occurring MH diagnoses.
Justice Involved	▪ Many are justice involved. ▪ DOC asked judges to stop referring to specific programs and to refer for DOC to do assessment and appropriate treatment. There have been several problems with this. ▪ Criminalizing of drug use resulting in incarceration (with poor treatment options and outcomes) vs. treatment was another approach that was ineffective.
Drivers of Success	Trusted Partner Program with Feds – notified early before drug raids so we can get Narcan kits out in anticipation – happened in Sussex County.
Barriers	Organizational resources to hire and maintain highly skilled clinicians.
Pregnant and Parenting	▪ Pregnant and parenting women face unique barriers to treatment, including lack of childcare and fear their children will be taken away if they seek help for SUD. Dedicated residential programs where children can accompany their mothers to treatment and outpatient programs with a childcare component would be helpful in overcoming these barriers.

STATEWIDE STAKEHOLDER INTERVIEWS *Competency: Workforce for Specialty LOCs (COE, BIO, Pregnant & Parenting, Adolescent, etc.) 2 of 3*	
Response Category	**Responses**
Pregnant and Parenting	▪ Doing better with the exception of those in abusive relationships. ▪ Pregnant women were being seen by Connections – now I don't know. They used to have lots of sober living. ▪ Pregnant/parenting women because they do not have childcare to enter treatment or fear of losing their children if they admit to having a problem, lack of available resources. Managing pregnant SUD patients are also a high-risk population, many facilities do not openly engage in things like detox services for pregnant females, by means of inclusion and exclusionary practices that make it nearly impossible for some cases to be treated. ▪ Services exist but coordination with providers outside SUD could improve – stigma impacts this, as well as access for the pregnant SUD women to these outside services. ▪ This is one of the most difficult programs to run and the most expensive. The program must be a long-term one. Years ago, Hudson ran a CSAP [Center for Substance Abuse Prevention] program for five years for women and children. The grant ended and Medicaid took over, but only offered one unit of reimbursement. The program was not viable after that. ▪ Trouble with providing support to children who came from the system. Still "crappy" at times with pregnancy.
Youth	▪ There are no kid SUD providers anymore. ▪ Need treatment options for adolescents.
Non-English Speakers	▪ It is a challenge for non-English speaking individuals who oftentimes struggle with accessing care from a cultural and system perspective. ▪ Hard to reach the immigrant population. ▪ May have lack of ID and funding. ▪ Many non-English speakers will not look for treatment because of cultural complexities. ▪ Due to communication barriers, unless an agency employs a language specific staff member or provides contracted services for translation which is not often seen due to cost or sporadic use (circles back to access to care) [reduced access and engagement].

STATEWIDE STAKEHOLDER INTERVIEWS *Competency: Workforce for Specialty LOCs (COE, BIO, Pregnant & Parenting, Adolescent, etc.) 3 of 3*	
Response Category	**Responses**
Those Experiencing Homelessness	▪ Must address their unique needs – available and affordable housing. ▪ May not have knowledge, support, resources – may also struggle with MH and other health problems and often uninsured. ▪ Were being seen by Recovery Innovations, Aquila.
LGBTQ+	▪ There are resources in schools for them. ▪ Cultural and system issues still exist across most healthcare services. There are cultural considerations related to access to care, services, cultural competencies in treatment. Gaining more attention to assist and support in these potential areas; however, we still have work to do for assisting all individuals seeking treatment.
People of Color (POC)	▪ Criminal justice system bias that impacts POC results in more treatment difficulties. ▪ This has increased over the years. During the crack epidemic, services were almost non-existent. The era did not get the attention that SUD is getting now. Some say race and status had a lot to do with that. Could be debated.
Veterans	▪ Veterans Administration is doing a lot of outreach to providers for help. ▪ Veterans still struggle to gain proper support and assistance and have higher rate of need for SUD treatment. There are systems barriers that are at the core of antiquated approaches or processes for access to care for veterans. ▪ Not well served, even though we have Veterans Court.
Older Adults	▪ Problems with SUD and the elderly is becoming more of a problem. ▪ Medicare SUD services are very hard to find.

CONSISTENCY

STATEWIDE STAKEHOLDER INTERVIEWS *Consistency: Standardization*	
Response Category	**Responses**
Data Driven Outcomes	▪ "We give so much money for interventions – are they working? We need to look at the data, the outcomes, and look at the reports from the organizations – are they effective? Are things changing? We don't do that." ▪ Lack of data.
Barriers	**Communication** ▪ All communicating - example: we didn't hear about the 988 system for one year. ▪ Communication. ▪ Lack of communication. ▪ Lack of information and communication. **Care Coordination/Transitions of Care** ▪ Big barrier on handoff for someone involuntarily committed to a community provider may be an issue for MH, but many have MH and SUD. ▪ Continuity of services establishes foundations for individuals and families that are desperately needed and, for some, have never experienced that before in their lives. ▪ Coordination and communication – many people struggle to get their loved ones in treatment – detainees leaving incarceration without services – all of the parties involved (fire, EMS, police) NOT being able to communicate and share information about a person.

COMPENSATION

STATEWIDE STAKEHOLDER INTERVIEWS *Compensation: Reimbursement*	
Response Category	**Responses**
High Rates of Uninsured	▪ Large number of patients from rural areas that are uninsured/underinsured. ▪ Medicare coverage for treatment services is always difficult. ▪ Mostly uninsured or Medicaid. ▪ No information on how to obtain Medicaid. ▪ Predominantly uninsured/underinsured. ▪ Works with primarily uninsured/publicly insured clients.
Reimbursement Rates	▪ Not enough compensation to support OP [outpatient] program for clients to have quality services. ▪ Reimbursement rates are appallingly low. ▪ Among the worst compared to other states. ▪ At the bottom compared to other states. ▪ Delaware near the top of the opioid overdose crisis and at the bottom for reimbursement rates.
What are Barriers for People Accessing Services?	**Underinsured** ▪ Medicaid and DSAMH provide great coverage. ▪ Unsure. ▪ Private insurance remains challenging due to the different plans. ▪ Yes (eight responses) [being underinsured is a barrier]. **Uninsured** ▪ DSAMH does a good job paying for services for those without insurance. ▪ Not sure. ▪ Yes (seven responses) [being uninsured is a barrier]. ▪ They are covered in Maryland.

MEDICAL LEADER INTERVIEWS

A small sample of medical leaders of hospital systems and SUD treatment providers were interviewed 1:1. Below are the consolidated results.

CAPACITY

MEDICAL LEADER INTERVIEWS *Capacity*	
Response Category	**Responses**
Withdrawal Management	▪ A waiting list for detox beds. ▪ Hospitals are unpredictable for whom they will detox and poor referral after detox. ▪ No standard pharmacological approach. ▪ No one on the weekends. ▪ No "crisis" 24/7 location that can start treatment. ▪ Prevention programs that don't seem as effective or scalable, as needed.
Screening and Assessment	▪ No "hospital standard" for how to evaluate patients at risk for SUD. ▪ No consistent tools are used for screening or assessment. ▪ No "continuous record" exists, so patients get multiple assessments.
Treatment	▪ All LOCs not available. ▪ Little to no adolescent care. ▪ No care for eating disorders. ▪ Continuation of medications is difficult. Treatment facilities often have policies that are not informed by the realities of SUD (example: miss two appointments and you're fired).
Monitoring	▪ Computer systems do not communicate. ▪ No information from DOC.

Take away point:	The continuum of care is limited with access being a barrier, and there is no consistent screening for SUD.

COMPETENCY

MEDICAL LEADER INTERVIEWS *Competency*	
Response Category	**Responses**
Withdrawal Management	▪ Nursing and social workers would benefit from additional education on the neurobiology of SUD. ▪ Concerns with withdrawal management practices of outside providers, including DOC. ▪ Limited Addiction Medicine/Addiction Psychiatry specialists.
Screening and Assessment	▪ Clear lack of empathy and customer service upon initial evaluation (“Chick-fil-A does a better job.”). ▪ Trauma informed care is not a typical part of the real-world initial assessment. ▪ Still handwritten intakes that have significant gaps in their contents.
Treatment	▪ High level of variability in care provided by physicians. ▪ ED care depends on the provider, although most don’t do the “right thing.” ▪ Rare that treatment starts in the ED. ▪ Very few co-occurring programs.
Monitoring	▪ Computer systems do not communicate. ▪ No information from DOC.

Take away point:	Need more training on SUDs and trauma informed care. There is too much variability across the eco system in physician care for persons experiencing SUDs.

CONSISTENCY

MEDICAL LEADER INTERVIEWS *Consistency 1 of 2*	
Response Category	**Responses**
Withdrawal Management	▪ Different approaches to withdrawal management at each location. ▪ No standard medication regimen,

MEDICAL LEADER INTERVIEWS *Consistency 2 of 2*	
Response Category	**Responses**
Screening and Assessment	▪ Multiple "tools" used for initial intake and assessment. ▪ Documentation quality is highly variable. ▪ No statewide standard that is evidence-based.
Treatment	▪ "Flip of a 5-sided coin" when it comes to medication dose and continuation. ▪ Little to no quality oversite. ▪ Little to no guidance from state or county.
Monitoring	▪ Significant difficulties with transitions, often resulting in significant difficulties for patients. ▪ Lack of outcomes tracking and reporting.

Take away point:	There is minimal to no consistency across the continuum on medication use and dosage, WM protocols, quality oversite, and transitions of care.

COMPENSATION

MEDICAL LEADER INTERVIEWS *Compensation 1 of 2*	
Response Category	**Responses**
Withdrawal Management	▪ Too few days approved for alcohol withdrawal. ▪ Payment very low for required services. ▪ Poly-substance use not considered in extension requests. ▪ Mental health not considered in extension requests. ▪ UM reviewers lack medical expertise for evaluation of need.
Screening and Assessment	▪ 24-hour access is only available on paper, not in real life. ▪ Reassessment not really covered.

MEDICAL LEADER INTERVIEWS *Compensation 2 of 2*	
Response Category	**Responses**
Treatment	▪ Grossly underpaid. ▪ Too many paperwork barriers. ▪ Transportation paperwork is too complicated. ▪ Collaborative codes not properly reimbursed. ▪ SLOW to pay.
Monitoring	▪ Payment too small to set up long-term monitoring. ▪ Insurance provider doesn't notify when patient goes to other provider, ED or has aberrant prescriptions.

Take away point:	Reimbursement is very low, and there are barriers for service extensions and burdensome paperwork.

COMMUNITY

MEDICAL LEADER INTERVIEWS *Community*	
Response Category	**Responses**
Withdrawal Management	▪ Little community education on where to go. ▪ Community providers also lack understanding of available treatments and resources. ▪ NIMBY ("not in my backyard").
Screening and Assessment	▪ No sense from hospitals that they know overdose is the number one cause of death for people under 50 years old. ▪ State work groups rarely involve those with current lived experience.
Treatment	▪ NIMBY is a huge problem. ▪ Minimal community business understanding or support. ▪ Chambers of Commerce don't see this as "their" problem.
Monitoring	▪ Little to no data visibility at the community level. ▪ Stigma makes patients hide in the community.

Take away point:	Stigma continues to be a barrier to care within communities.

PROVIDER SURVEY

A detailed provider survey was developed to better understand the current state of the licensed outpatient and residential treatment providers in Delaware. The surveys were sent via email to all DSAMH licensed SUD treatment providers/agencies in the state of Delaware. The surveys asked detailed questions about services provided, including co-occurring needs, substances or behavioral addictions addressed, payers accepted, hours of access, staffing levels, staff training, use of MAT, telehealth services, the impact of the COVID-19 PHE, access to language translation or interpretation services, assessments used, LOCs provided, common reasons for discharge and more. After the surveys were sent out, DSAMH proactively followed up with an email explaining the need for provider agencies to fill them out and return them. Reminder phone calls and follow-up emails with support from DSAMH ensured a good return. When informative, outpatient (ASAM Level 1 and 2) and residential (Level 3 and 4) results and responses are presented here in the main report. Some questions did not produce reliable or informative data, so they were omitted from the report. The complete results are too lengthy to include here but are available upon request. Excerpted comments from associated provider survey questions are included here as well.

Response Rate: All licensed SUD providers and agencies listed in the DSAMH Provider Directory were sent the provider survey. For purposes of this needs assessment, providers surveyed were delivering either ASAM Level 1 or 2 services or ambulatory withdrawal management, ASAM Level 3 or 4 services, with some providers providing both levels of services. Some providers or agencies served one, two, or all three counties. This assessment was focused on the total number of provider agencies, and not individual programs. Of the 39 agencies that received surveys, 24 responded, yielding a 61.5% return rate.

Potential limitations of the provider survey and survey tool include:

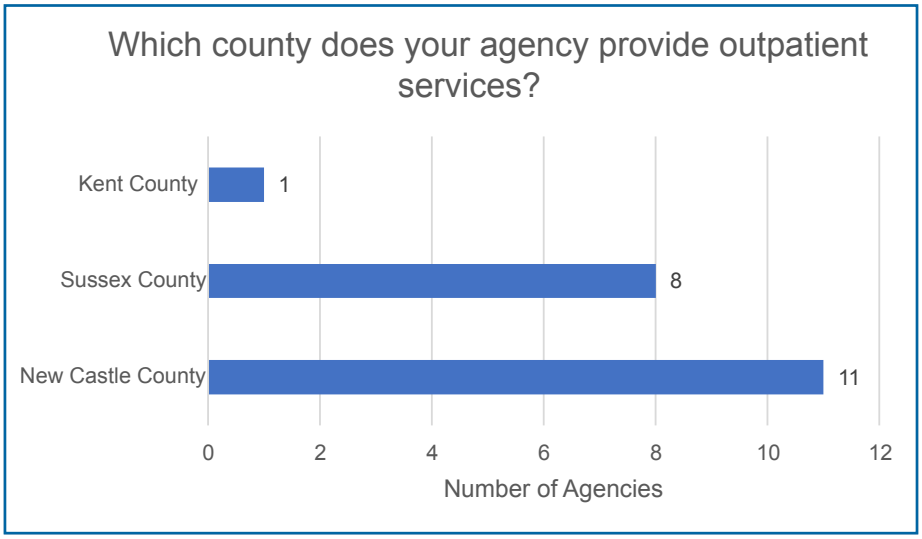
- Provider agencies with multiple sites did not receive separate surveys for each site. Thus, responses from one agency may only reflect the current state of one site for a particular agency. The IOA team felt that asking one agency to fill out multiple surveys would be too onerous and potentially limit responses, but that level of information will be helpful in building out the future state of the treatment system.
- Individual providers or staff members were asked to report quantitatively on details that represent their organization as a whole, such as average wait times or average length of stay; responses may only provide estimates of these data.
- For questions with multiple parts in follow-on questions, the survey does not capture which follow-on answers correlate to a unique responder to connect the related parts of a question. For example, the survey asks if a provider has staff that is multi-lingual and asks if the provider offers access to translation services but does not delineate in the response mechanism if the same provider has answered yes or no to each part of the question.

CAPACITY

It is critical to build a sustainable system of care that is both right-sized and adaptable to the needs of the community it is serving. SUD is a treatable, chronic, relapsing and remitting disease, so the needs of patients may vary over time, requiring changing LOCs. Therefore, the entire continuum of care must accommodate individuals who will likely require higher or lower LOCs as their disease progresses or is better controlled.[38]

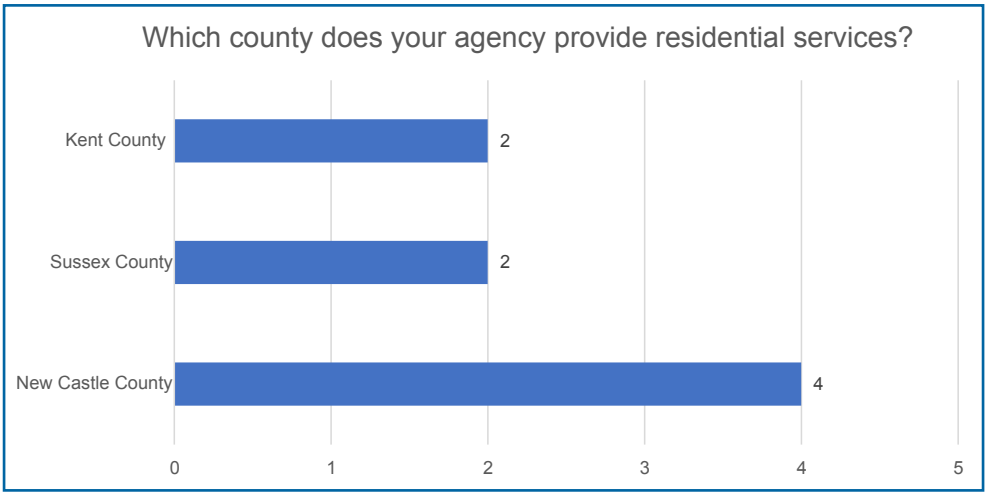
IN WHICH COUNTY DOES YOUR AGENCY RESIDE?

PROVIDERS BY COUNTY: OUTPATIENT



Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

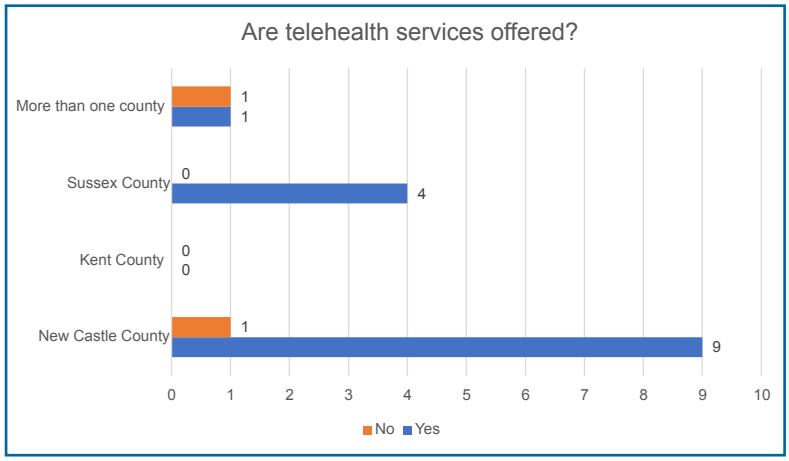
PROVIDERS BY COUNTY: RESIDENTIAL



[38] Ibid.

TELEHEALTH

OUTPATIENT: DO YOU PROVIDE TELEHEALTH?



Notes: Generally, offering telehealth has reportedly improved no show rates and access to treatment during the pandemic. For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

"Clients that regularly live in Kent County would not be able to be seen since we no longer have an office in Dover. Doing telehealth allows us to continue seeing these individuals regardless of where they live."

- While many providers were able to pivot and maintain access to treatment using telehealth, for those experiencing homelessness and other SDOH impacts, this was not always true.
- Many individuals appreciated the convenience and the safety of accessing services from home, especially the elderly, the physically impaired, and at-risk individuals.
- There was difficulty experienced in measuring client adherence.
- Telehealth can mitigate transportation concerns, as well as provide convenient services without concerns for distance to travel.
- No show rates improved. Even those that may have forgotten their appointment could be contacted in real-time and still log-in for the appointment.
- Rescheduling appointments is easier.
- Telehealth has increased appointment options for individuals, because they do not have to schedule time to travel. This is also helpful for custodial parents who also have to factor in travel to and from school to pick up their child for in-person appointments.
- "It has assisted in providing our current clients an alternative form of communication when limited by in-person interaction. In the future, it is our hope the technology continues to expand to be used in a clinical setting (telehealth) and as a mechanism to expand opportunities for members of the sobriety community to communicate and educate (i.e., educational webinars for alumni and family members impacted by addiction)."

- "As much as Telehealth has undeniably provided needed platform of service during this pandemic, it has its negative effects on SUD, such as: not every client has access to internet services and not everyone is technology savvy. The physical connection with clients is lost, as well. Some clients do not even have a safe place to stay and often are not in the most secure place where their confidentiality can be maintained, since they may be sharing a space with someone. So, effective SUD treatment may be impossible in some situations, while telehealth may as well be very suitable for other categories of clients. I cannot say that it has provided the same level of positive outcome for all clients, nor can I say that it has not for some other clients."
- "While telehealth offers some ways to overcome a few barriers to attending treatment, we have received feedback from clients who have struggled during the pandemic with what they reported as increased isolation contributing to relapses. Clients suffering from substance use issues often seem to really need an in-person connection to be able to maintain their recovery. Having telehealth as a temporary option as a part of treatment when a client does not have transportation for a day or it could be a valuable tool for giving a client a way to continue their treatment when obstacles may arise, but we do not see this being a successful option as a regular approach to substance use treatment."
- Note: there is some concern among providers (expressed during interviews) about whether telehealth will continue to be reimbursed at the same rate beyond the state of emergency.
- In circumstances where services would have needed to be eliminated due to COVID-19 exposure, either on behalf of the facility or the client, telehealth has enabled an alternative form of service to continue treating clients.

RESIDENTIAL: DO YOU PROVIDE TELEHEALTH?

- Telehealth is in at least one program in each county (both programs in Sussex County).
- Comment in New Castle County detox: "Many of the clients are homeless, and telehealth not helpful."
- Some programs are largely "unsure" if telehealth will be part of their future.
- Reportedly, telehealth helped adherence, the barrier of transportation, and reduced no-show rates; it also helped as people feared contracting COVID-19; reduced anxiety in treatment; increased the volume of numbers served, but there were some challenges due to technology.
- Two providers in two different counties noted reimbursement challenges with telehealth.
- Distance and transportation issues are alleviated.
- "The consumer had a very difficult time with the virtual groups. They requested to return in person as soon as it was permitted."
- Comment from a Kent County provider: "The positive impact was that the persons served were able to utilize the systems that were set up to conduct the visits, and they were given the opportunity to experience a different method of care and yet received quality care services via telehealth. It really helped to ease some of the worry from the persons served in the SUD programs and definitely decreased missed appointments."
- Telehealth allowed the doctors to treat patients from home, in turn reducing the amount of exposure to our staff and patients.

- Higher compliance for prescriber visits which ensures no lapse in medication. Counselors prefer in-person visits to better gauge body language overall and seem to have some difficulty keeping the client from being distracted during the session. Internal clinical supervision and discussions to develop engagement strategies were useful. Overall, it was a positive impact during the pandemic, but made obtaining UDS [urine drug screens] on a regular basis more difficult.

"Many experiencing homelessness or extreme poverty do not have access to technology or broadband to use for telehealth services. "It was more difficult for our consumers [those experiencing homelessness] to attend groups via telehealth."

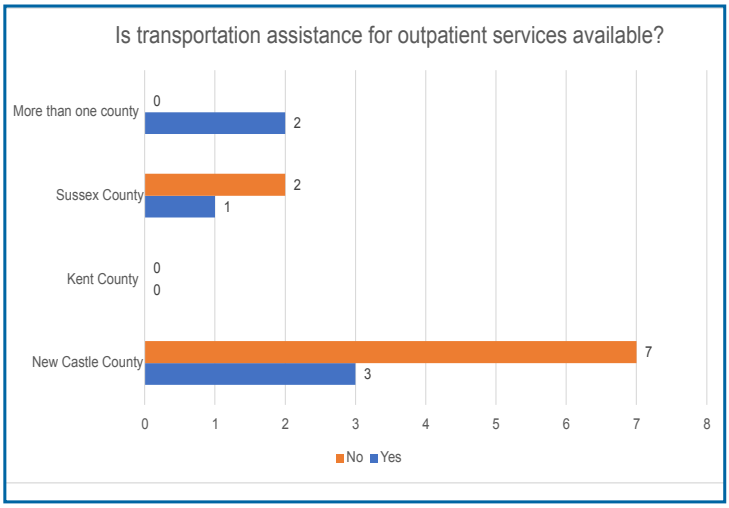
"Telemedicine has expanded during COVID-19 and should be supported long after. However, it has limited efficacy for impoverished or homeless populations."

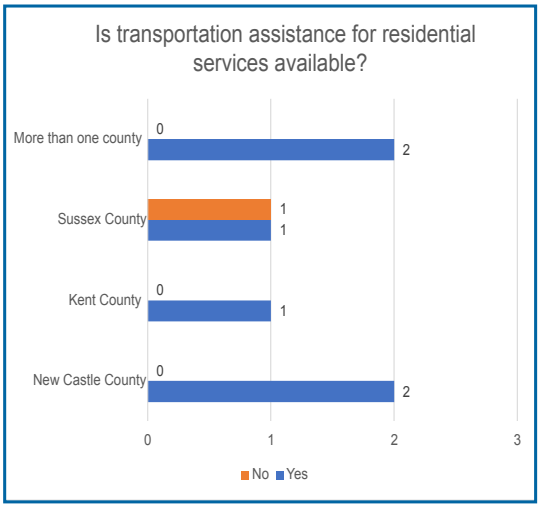
TRANSPORTATION

OUTPATIENT: IS TRANSPORTATION ASSISTANCE FOR SERVICES AVAILABLE?

Notes: There are a variety of ways transportation services are provided or made available – grant funding, company-owned automobiles, partnership with Medicaid-funded services, and access to public transportation.

- Company-owned auto funded by company for transportation directly to/from service/place of residence within greater Wilmington area.
- Transportation services were funded by a grant from Christiana Care Health Systems.





Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

- "Most with the grant and during waking hours we have staff to provide transportation to and from Kirkwood for inpatient and outpatient treatment." (same comment for residential)
- Claymont coordinates with LogistiCare, which is also funded by Medicaid. Claymont is also less than a block away from two separate bus routes and about one mile away from a Septa train line.
- The agency presently supplies transportation through its own finances.
- Company car and company staffed until medical transportation is accessible.

RESIDENTIAL: IS TRANSPORTATION ASSISTANCE FOR SERVICES AVAILABLE?

- Most of the providers offer transportation; however, one of two providers do NOT in Sussex County. There is a real need identified there.

> We just discontinued transportation for Sussex County due to costs and liability associated without a funding source.

- Transportation services were funded by a grant from Christiana Care Health Systems. A vehicle was purchased with the grant and during waking hours we have staff to provide transportation to and from Kirkwood for inpatient and outpatient treatment.
- The PSI SUD programs provide transportation. This service is provided and was included in the RFP response so then allocated in the SUD budget.
- Transportation for clients in residential programs for medical appointments is considered a cost of doing business if they are ineligible for Medicaid transportation.
- Staff work with clients to coordinate transportation options.

Take away point:	Most of the providers offer transportation; however, in Sussex County, one of two providers do not. There is a real need identified there.

COVID-19 IMPACT

OUTPATIENT: Has COVID-19 increased the need for SUD services in your county? If yes, please elaborate.

Further impacts noted included increased isolation and depression, increased incidence of relapse and worsening rates of SUD, increased need for system navigation supports for clients, MH needs are harder to access supports for, and referrals are down. Additionally, negative coping habits and SUD numbers are increasing, while staffing shortages are also increasing. Possible delays with first contact appointments were also noted.

- Possible delays with first contact appointments.
- Complicated first appointments because of necessary paperwork.

- Decrease in available bed capacity.
- Without telehealth we would have been forced to close permanently.
- Some issues with dropped calls, slow internet, limited access to technology.
- Eleven respondents assert that COVID-19 has impacted their ability to hire or maintain employees, two responded that it hasn't, and one was unsure.
- Reimbursement challenges were greater using telehealth.

> COVID-19 has caused a significant back log in cases and exacerbated the already difficult workforce issues

RESIDENTIAL: Has COVID-19 increased the need for SUD services in your county? If yes, please elaborate.

- COVID-19 generally increased the SUD needs for services.
- Two agencies were unsure.
- Increased isolation and relapse were highlighted.
- SUN reported an increase in referrals because of COVID-19 closures and EDs sending clients to them.
- Comments included that there were delays with first appointments.
- Reportedly decreased availability of beds and appointments in all three counties.

> Difficulty with hiring is not isolated to the doctors and nurses. The entire workforce is lacking.

HIRING DIFFICULTIES

OUTPATIENT: Please rank in order of difficulty the employees that are difficult to find/fill.

MASTERS LEVEL

- **New Castle County:** Seven respondents indicate that it is very difficult or difficult to hire Masters level staff.
- **Sussex County:** One respondent indicates that it is very difficult to hire Masters level staff.
- **Multi-county:** Two respondents indicate that it is very difficult or difficult to hire Masters level staff.

BACHELORS LEVEL

- **New Castle County:** Five respondents indicate that it is very difficult or difficult to hire Bachelors level staff, and one reported some difficulty.
- **Sussex County:** One respondent indicates that it is very difficult to hire Bachelors level staff.
- **Multi-county:** Two respondents indicate that it is very difficult or difficult to hire Bachelors level staff.

SUD COUNSELORS

- **New Castle County:** Five respondents indicate that it is very difficult or difficult to hire SUDs counselors, and two reported some difficulty.
- **Sussex County:** One respondent indicates that it is very difficult to hire SUDs counselors.
- **Multi-county:** Two respondents indicate that it is very difficult or difficult to hire SUDs counselors.

MEDICAL PROVIDERS

- **New Castle County:** Five respondents indicate that it is very difficult or difficult to hire medical providers, one reports some difficulty, and one has minimal or no difficulty.
- **Sussex County:** One respondent indicates that it is very difficult to hire medical providers.
- **Multi-county:** Two respondents indicate that it is very difficult or difficult to hire medical providers.

ADMINISTRATIVE STAFF

- **New Castle County:** Three respondents indicate that it is difficult to hire administrative staff, two report some difficulty, and one minimal or no difficulty.
- **Sussex County:** One respondent indicates that it is very difficult to hire administrative staff.
- **Multi-county:** Two respondents indicate that it is difficult to hire administrative staff.

PEERS

- **New Castle County:** Two respondents indicate that it is very difficult or difficult to hire peers, two report some difficulty, and one minimal or no difficulty.
- **Multi-county:** Two respondents indicate that it is difficult, or they have some difficulty hiring peers.

CASE MANAGERS

"The use of fentanyl has skyrocketed as have mental health issues. With that said, during COVID-19, the treatment flexibility that was granted allowed many more patients to seek treatment. We saw a dramatic decrease in AWOLs and an increase in average length of stay. Almost all of the patients admitted in the last year were for fentanyl related issues. Many patients reported boredom, frustration, and mental health as reasons to fuel illicit use."

- **New Castle County:** Two respondents indicate that it is very difficult or difficult to hire case managers and three report some difficulty.
- **Multi-county:** Two respondents indicate that it is difficult, or they have some difficulty hiring peers.

RESIDENTIAL: Please rank in order of difficulty the employees that are difficult to find/fill.

Masters Level

- All three counties report some difficulty to very difficult.

Bachelors Level

- All three counties report some difficulty to very difficult.

SUD Counselors

- All three counties report some difficulty to very difficult.

Medical Providers

- All three counties report difficult to very difficult.

Administrative Staff

- All three counties report some difficulty to very difficult.

Peers

- New Castle County and Kent County report some difficulty to difficult.

Case Managers

- All three counties report some difficulty (Sussex County) to very difficult (Kent County).
- Recruitment, staffing, and changing expectations of the workforce present challenges.

MAT PROVIDED

MAT by Number of Providers, County, and Substance Treated – Outpatient and Residential				
Question	**NCC**	**KC**	**SC**	**Multi-county**
Do you provide MAT?	5 Yes 4 No		2 Yes 1 No	1 Yes 1 No
Opportunity for same day induction?	3 Yes 1 No 1 Unsure		2 Yes	1 Yes
What substances are treated with medication?	AUD (2) OUD (5) Tobacco use (1) Stimulant use (1) Cannabis use (1)		AUD (2) OUD (2) Stimulant Use (1)	1 AUD (1) OUD (1)
Do you provide MAT to adolescents?	No		No	No
Do you provide MAT to pregnant patients?	4 Yes		1 Yes	No
Do you provide MAT to older adults (60+)	3 Yes		2 Yes	1 Yes
Do you provide MAT to adults?	4 Yes		2 Yes	1 Yes

Note: Kent County agencies are represented in Multi-county column

MAT by Number of Providers, County, and Substance Treated - Residential				
Question	**NCC**	**KC**	**SC**	**Multi-county**
Do you provide MAT?	2 Yes	1 No	2 Yes	
Opportunity for same day induction?	2 Yes*		2 Yes*	1 Yes
What substances are treated with medication?	AUD (2) OUD (2) Tobacco use (2)		AUD (2), OUD (2) Tobacco use (1) Stimulant use (2) Cannabis use (1)	AUD (1) OUD (1)
Do you provide MAT to adolescents?	No	No	1 Yes	No
Do you provide MAT to pregnant patients?	1 Yes	No	1 Yes	No
Do you provide MAT to older adults (60+)	2 Yes	No	2 Yes	1 Yes

*If not started same day, seven day wait to start in New Castle County and three day wait in Kent County

OTHER ADDICTIONS

OUTPATIENT: What behavioral addictions do you treat?

- **New Castle County:** gambling (4 providers), sex addiction (3 providers), gaming and internet (3 providers), none (3 providers), other (3 providers: refer out or treat all), and unsure (1 provider)
- **Sussex County:** gambling (1 provider), gaming and internet (1 provider), and unsure (2 providers)
- **Multi-county:** gambling (1 provider), sex addiction (1 provider), gaming and internet (1 provider), and none (1 provider)

RESIDENTIAL: What behavioral addictions do you treat?

- **New Castle County:** None or unsure
- **Kent County:** gambling (1 provider) and other (co-occurring 1 provider)
- **Sussex County:** Unsure
- **Multi-county:** gambling (1 provider), sex addiction (1 provider), gaming and internet (1 provider)

PATIENT POPULATIONS SERVED OUTPATIENT AND RESIDENTIAL

Population Served by County (number of providers) - Outpatient				
Population	**NCC**	**KC**	**SC**	**Multi-county**
Child/Adolescent (0-17)	1		0	0
Young Adults (18-26)	9		3	2
Adults (27-59)	9		3	2
Older Adults (60+)	9		3	2
Foster Children/Youth	1		0	0
Families	4		0	0
Pregnant/Parenting Mothers	7		2	1
Persons Experiencing Homelessness	6		2	1
Veterans	7		3	1
LGBTQIA+	8		3	1
Students at Risk of School Failure	2		0	0
Justice Involved	9		3	1
Undocumented	3		1	1
Uninsured	6		1	2
Other	0		0	0

Note: Kent County agencies are represented in Multi-county column

Population Served by County (number of providers) - Residential				
Population	**NCC**	**KC**	**SC**	**Multi-county**
Child/Adolescent (0-17)			1	
Young Adults (18-26)	2	1	2	2
Adults (27-59)	2	1	2	2
Older Adults (60+)	2	1	2	2
Foster Children/Youth			1	
Families		1		
Pregnant/Parenting Mothers	2	1	1	1
Persons Experiencing Homelessness	2	1	2	1
Veterans	2	1	2	1
LGBTQIA+	2	1	2	1
Students at Risk of School Failure			1	
Justice Involved	1	1	2	1
Undocumented			1	1
Uninsured	1			2
Other	1			

Take away point:	There is a significant gap in SUD services for children and adolescents.

OUTPATIENT: Populations NOT Effectively Addressed

- Underinsured, uninsured
- Justice involved juveniles and adults
- Medicare recipients
- Pregnant/pre-natal

- Mental health: “The need for better and more mental health referrals/facilities/providers is in dire need. Oftentimes patients hit roadblocks when seeking proper psychiatric care. When it is obtained, oftentimes the care is not top quality, which could be do (sic) to many factors, such as high volume of patients, understaffed, staff burnout, etc.”
- Those with Stimulant Use Disorder (STUD) AND insurance
- Unhoused
- Sex offenders – most residential programs cannot accept. Outpatient programs that also serve youth can’t accept.
- Transgender programs, especially residential treatment Sober Living with emphasis on Family Therapy for married couples who are both in treatment.

RESIDENTIAL: Populations NOT Effectively Addressed

- Pregnant and parenting women in New Castle County
- Homelessness in Kent County
- Lack of OP prescribers

Take away point:	Adolescents, foster children, families, and the uninsured are significantly underserved. Issues related to homelessness are critical factors that must be incorporated into treatment plans and aftercare as well.

PEERS

OUTPATIENT: Peer/Recovery Coaches

- New Castle County: 2 mostly not-certified, mostly supervised by RN, clinical supervisor, Masters level, LMSW, CSPS, CAADC
- Sussex County: 1 CADC, PhD/ Masters level supervises
- Multi-county: 41 some certified, CPRS/SUD Counselor supervises and Program Assistants who are supervised by Director of Residential Services

RESIDENTIAL: Peer/Recovery Coaches

- Only 1 in Kent County: Supervised by SUD Counselor
- 1 certified peer in Kent County

Take away point:	Currently there is a lack of trained and certified peer supports and recovery coaches who are clinically supervised to assist clients with transitions and recovery supports.

COMPETENCY

FULL TIME EQUIVALENTS

Outpatient FTEs				
Discipline	**NCC**	**KC**	**SC**	**Multi-county**
MD/DOs	6		2.1	1
PAs	5			
NPs	2		3-5	
Nurses	10			2
Pharmacists			1	
Waivered prescribers	9		2-5	1
Up to 30 pts	6		1-4	
Up to 100 pts	8		2-5	1
Up to 275	6		1-4	

Note: Kent County agencies represented in multi-county column for Outpatient

Residential FTEs				
Discipline	**NCC**	**KC**	**SC**	**Multi County**
MD/DOs	6		3	1
PAs		1		
NPs	4	1	6-8	
Nurses	22	2	50	
Pharmacists			5	
Waivered prescribers	1		5-10	1
Up to 30 pts	1	Unsure	5-9	
Up to 100 pts	1	Unsure	1-4	1
Up to 275	6	Unsure	1-5	

HOW MANY MASTERS OR PH.D. LEVEL PROVIDERS DELIVER SUD CARE?

Masters or Ph.D. Level Providers That Deliver SUD Care - Outpatient				
	NCC	KC	SC	Multi-county
How many Masters or PhD level providers?	8		2	1
How many Masters or PhD level providers are licensed?	7		2	1
How many certified in cognitive behavioral therapy (CBT)?	5		1	
How many certified in dialectical behavioral therapy (DBT)?	4		1	
How many certified in eye movement desensitization and reprocessing (EMDR)?	4		1	
How many are certified by NAADAC (MAC certification)?	7		1	
How many have trauma certification?	5		1	
Other?	3 - CADC			2-3 – in process for CADC

Note: Kent County agencies are represented in Multi-county column

Masters or PhD Level Providers That Deliver SUD Care - Residential				
	NCC	KC	SC	Multi-county
How many Masters or PhD level providers?	3	3	1-6	2
How many Masters or PhD level providers are licensed?		3	1-4	2
How many certified in CBT?			6	
How many certified in DBT?			4	
How many certified in EMDR?				
How many are certified by NAADAC (MAC certification)?				
How many have trauma certification?			2	
Other?	1 – CADC 1 – currently hiring		Unsure or No	Sober living – peer based CADC – 2-3 in process

ADDICTION COUNSELORS WORKING

Addiction Counselors - Outpatient				
	NCC	KC	SC	Multi-county
How many?	43		5	9
How many are certified by NAADC (NCAC 1)?	4			
How many are certified by NAADC (NCAC 2)?	3		Unsure	None
How many have other certifications?	6		Unsure	Unsure
How many deliver individualized psychoeducation?	7		1	1
Do they deliver group-based psychoeducation?	8 - Yes		1 - Yes	1 - Yes

Note: Kent County agencies are represented in Multi-county column

Addiction Counselors - Residential				
	NCC	KC	SC	Multi-county
How many?	2	2	2	9
How many are certified by NAADC (NCAC 1)?			1	
How many are certified by NAADC (NCAC 2)?				
How many have other certifications?	1			
How many deliver individualized psychoeducation?	1 - Yes	Unsure	1 - Yes	1 - Yes
Do they deliver group-based psychoeducation?				

Take away point:	There is not enough training available to enhance competency in the system, and many noted that programs cannot afford to pay for training with the current rate structure.

OUTPATIENT: Specialty Designated LOC

- COE with high integration MH and SUD Services: NCC-3, SC-1, Multi-county-1
- Co-Occurring: NCC-3, SC-1, Multi-county-1
- Bio Enhanced: NCC-1, SC-1

RESIDENTIAL: Specialty Designated LOC

- BIO Enhanced: KC-1, SC-1
- COE: 1 in each county
- NOTE: no indication how or why they self-identify this way

Take away point:	Clearly not enough capacity or competency for specialty treatment needs.

CONSISTENCY

EVIDENCE-BASED PRACTICES

OUTPATIENT: Use of evidence-based practices

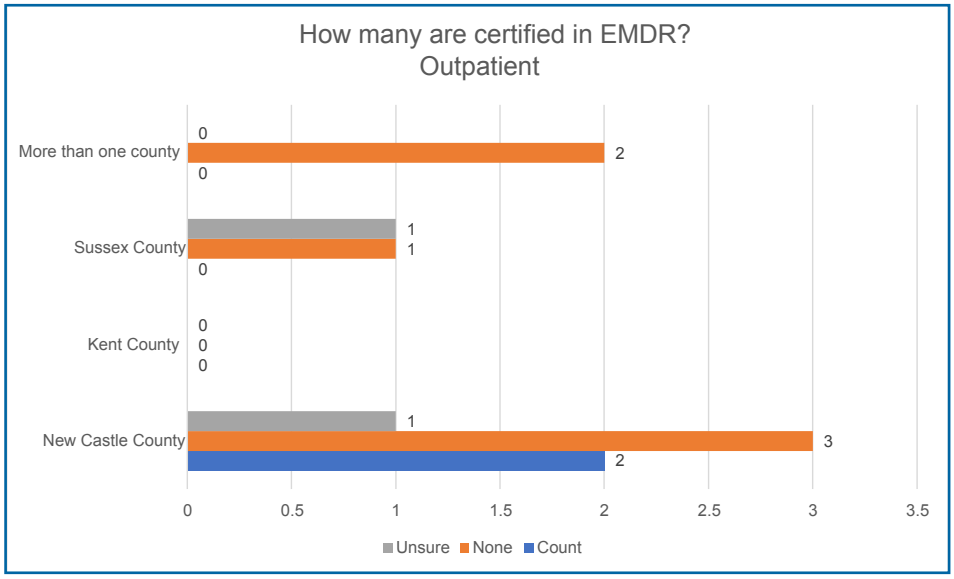
- NCC: contingency management (CM), motivational interviewing (MI), motivational enhancement therapy (MET), CBT, trauma recovery, and empowerment model (TREM)
- SC: MI, CBT
- Multi-county: MI, CBT, Trauma informed DBT

RESIDENTIAL: Use of evidence-based practices

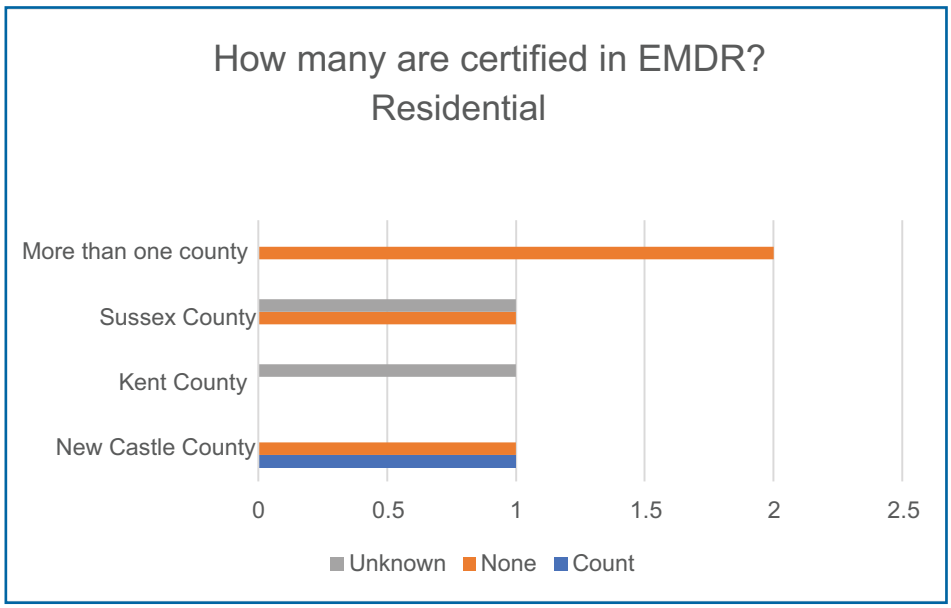
- 2 in NCC (CBT, MI)
- 1 in SC (Living in Balance)
- MI, CBT, “TF DBT” working in “more than one county”

Take away point:	There is a very CLEAR Gap in use of evidence-based practices across the system. The system is lacking in evidence-based training and, subsequently, measurement to fidelity. This finding is likely tied both to poor reimbursement rates and lack of training opportunities.

CERTIFIED IN EMDR



Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.



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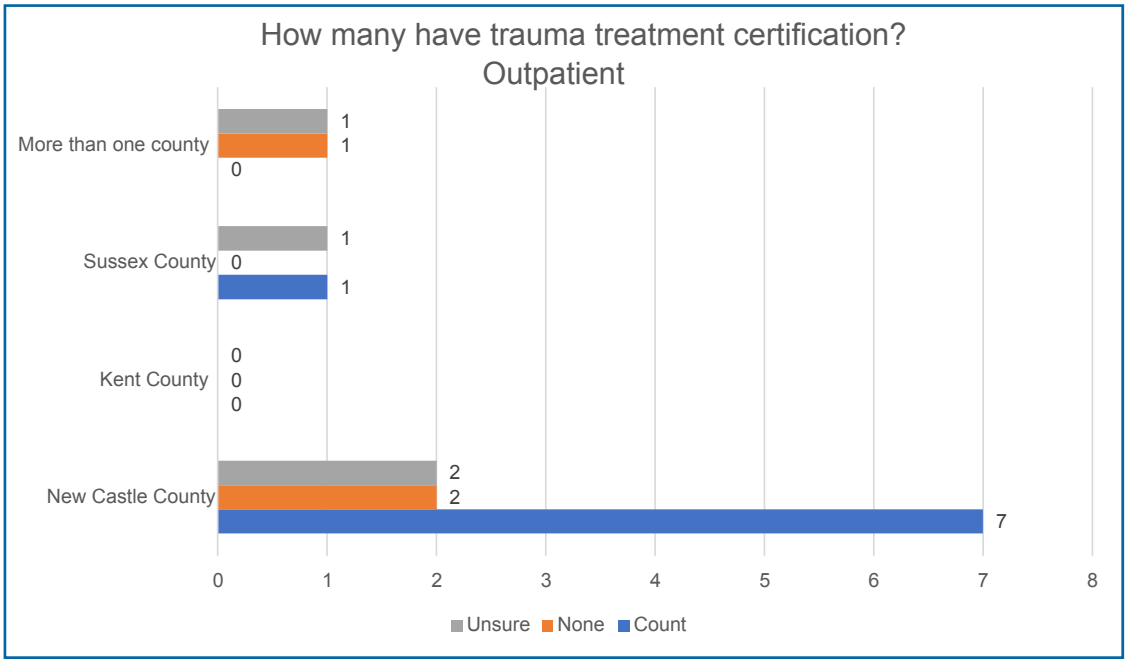
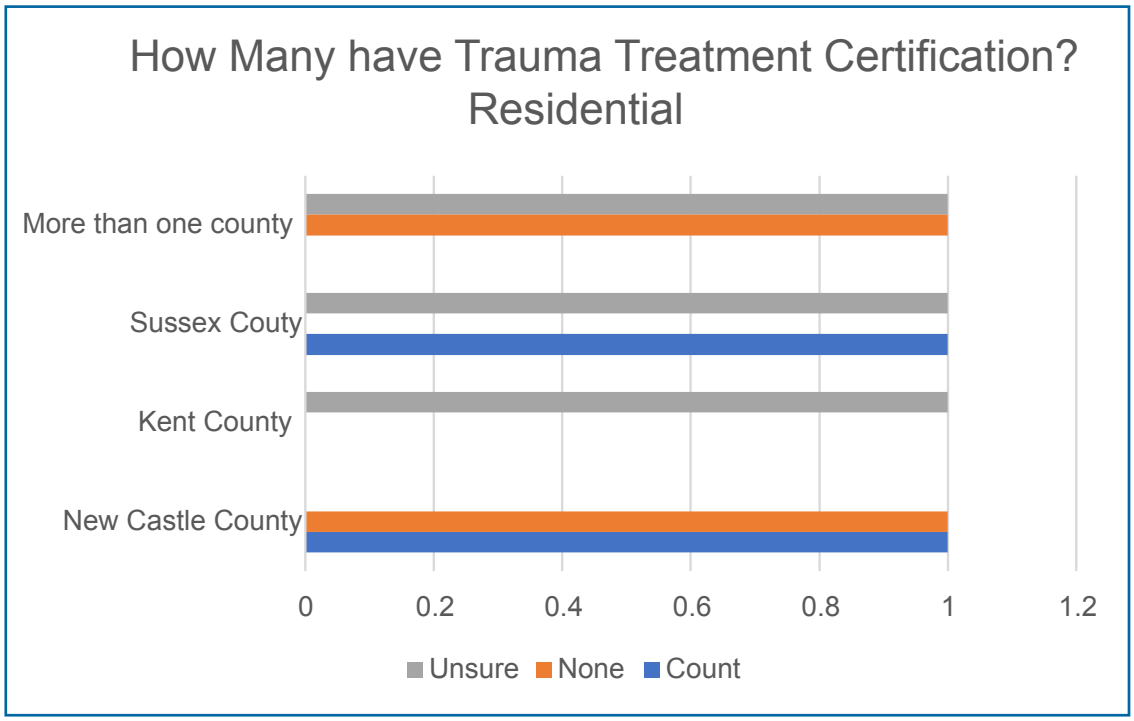


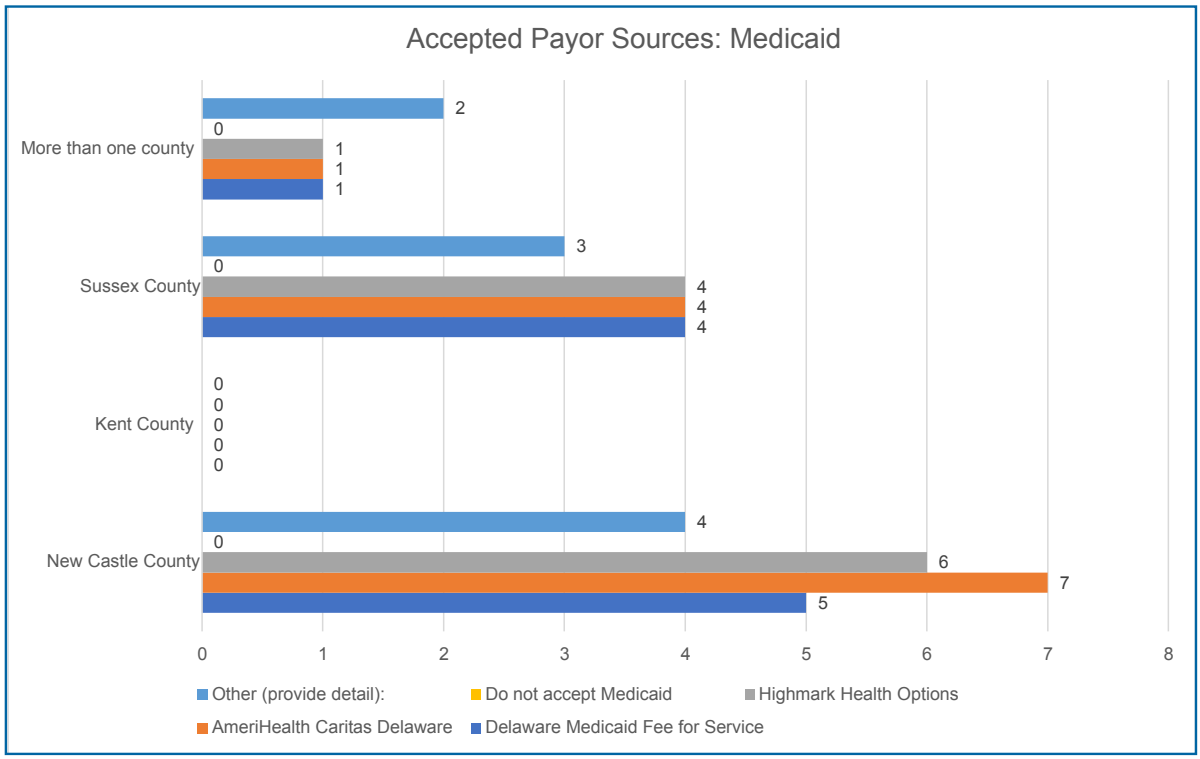
Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.



COMPENSATION

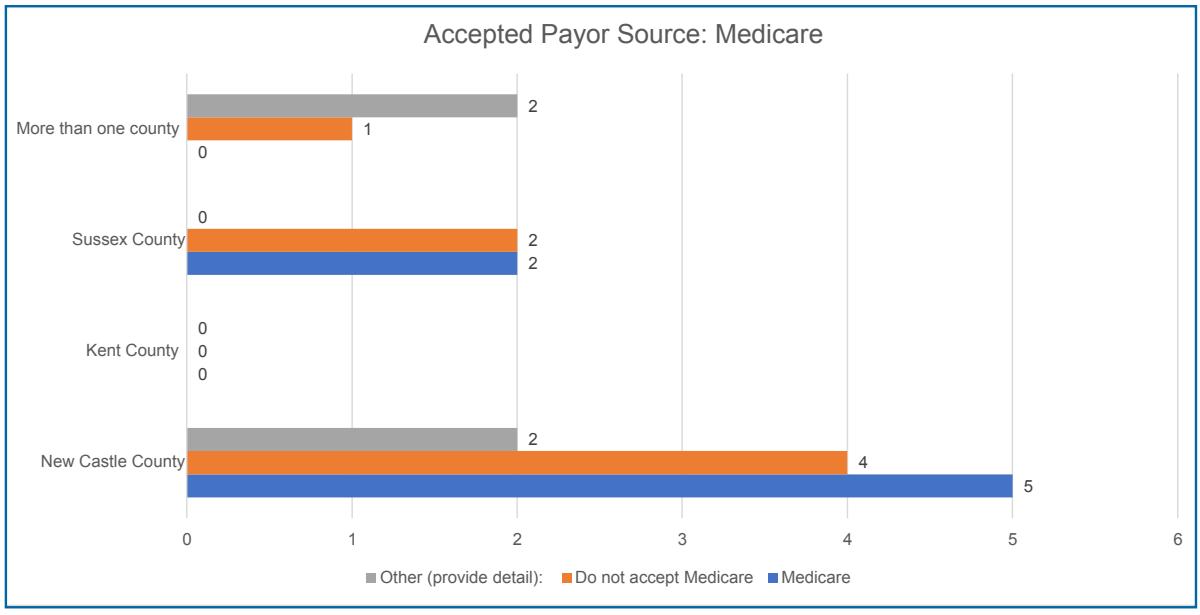
OUTPATIENT: PAYER TYPES AND DENSITIES

Medicaid



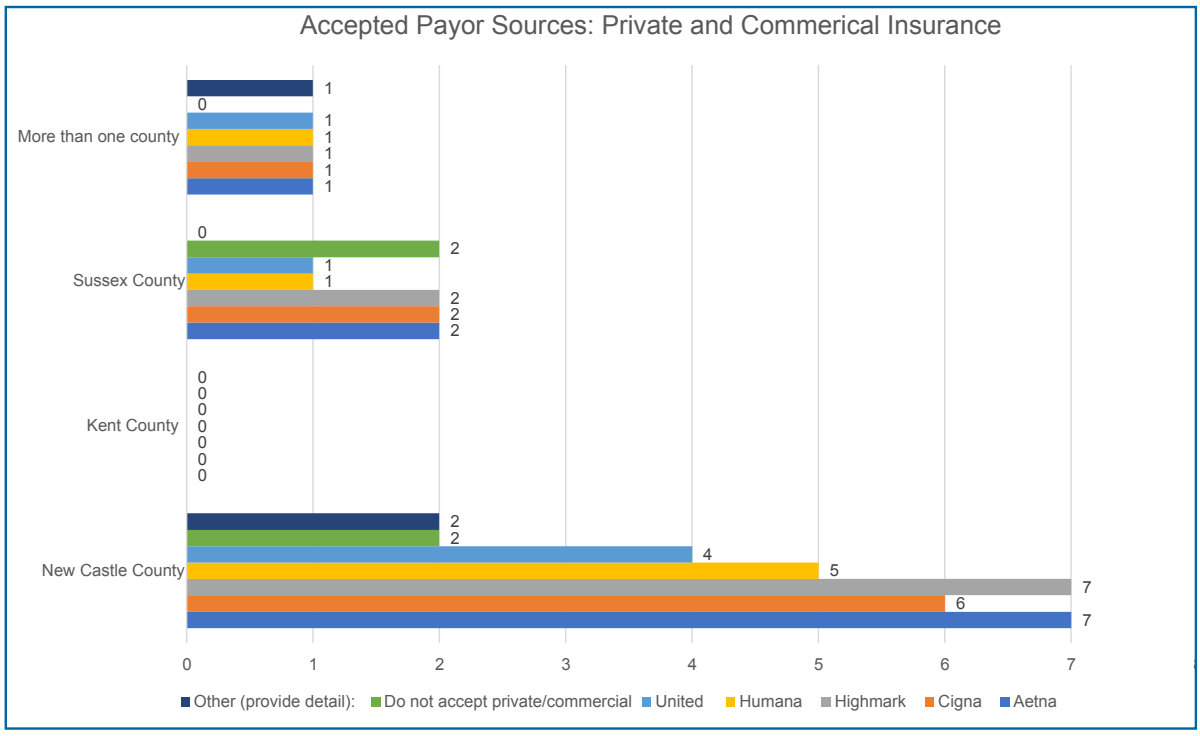
Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

Medicare



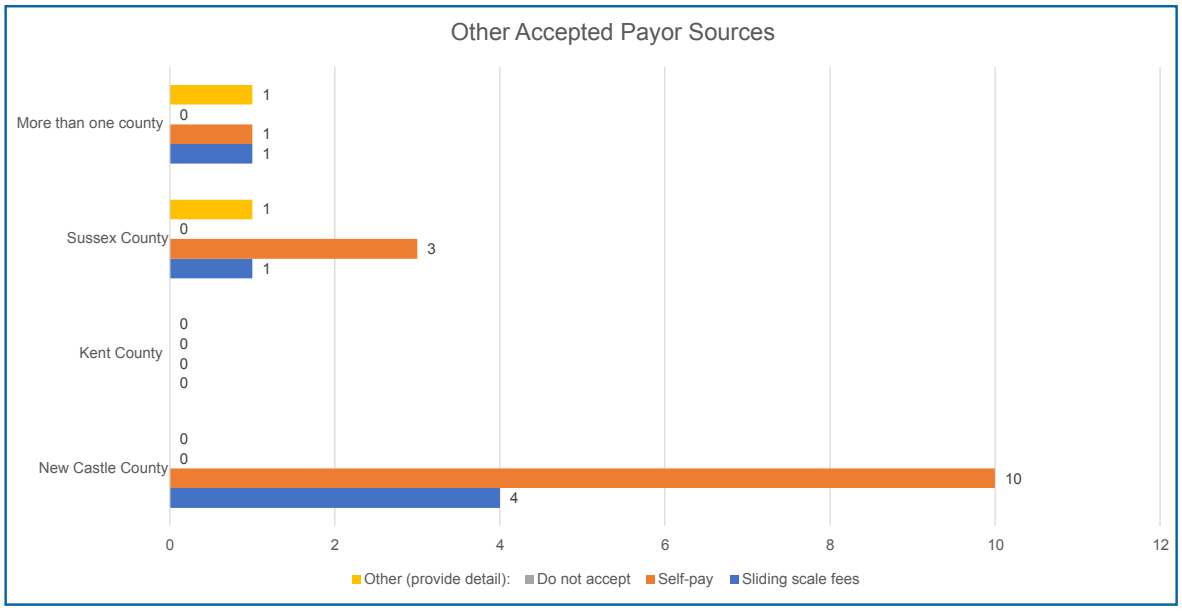
Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

Private/Commercial



Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

Other Accepted Payer Sources



Note: For Kent County, all the outpatient providers who responded were reflected in the "more than one county" bar.

Take away point:	Medicaid coverage is broad, but not across all providers. This is critical to remedy. ***Every single provider that is licensed By DSAMH should be required to accept Medicaid.*** There are currently no Medicare eligible inpatient providers in Delaware.

CLAIMS DATA EVALUATION

DATA ANALYSIS BACKGROUND

In addition to the previously detailed methods of evaluation, including interviews and provider survey, the HMA IOA received a data extract from the All-Payer Claims Database housed at DHIN. HMA IOA performed a quantitative analysis of the claims and prescription data to identify trends in utilization. The following data files were obtained from DHIN:

- A de-identified membership file across all payers from 2017-2020, irrespective of whether someone had a SUD diagnosis.
- A de-identified claims file across all payers from 2017-2020. Only claims with a SUD diagnosis were included.
- A de-identified pharmacy file across all payers from 2017-2020. HMA IOA received all pharmacy claims for anyone with a SUD diagnosis between 2017 and 2020.
- A provider reference file.
- HMA IOA also supplemented the data with multiple public data sets, including the American Community Survey (ACS) data, National Provider Identifier (NPI), and Medicare Provider Taxonomy Reference Data, and publicly available rate information from Delaware and surrounding states.

Significant Caveats and Potential Limitations: HMA IOA's analysis has several caveats and known or potential limitations which must be cited and highlighted.

- Identified payer information was blinded at the request of the payers. This was a requirement of the payers to allow the study to proceed. This makes it more difficult to identify observed patterns by payer.
- One payer blinds all member information within a medical claim when sending to DHIN. This blinding eliminates the ability to perform any member level analysis of claims data even though the data are de-identified. This is a significant hinderance to adequately calculating utilization statistics of individuals at the payer level.
- Some payers have significantly less information in the data extract from 2019 to 2020. HMA IOA has examined data between January/February 2019 and January/February 2020 (pre-pandemic) and found significant drop-offs Year over Year (YoY). HMA IOA tried to account for this using regression techniques, where appropriate. Nationally, there was a reduction in regular prescription refills and outpatient utilization in 2020.

A deeper discussion about the methodology with associated examples is available in **Appendix A**.

ANALYSIS OF SIGNIFICANT SUD TREATMENT DRUGS

A key component in the treatment of Opioid and Alcohol Use Disorders is the use of MAT. These medications have considerable benefits, including reducing overdose deaths and improving engagement in treatment. A significant area of the data evaluation involved the use of MAT in Delaware. Data from the DHIN datasets was used for this analysis.

OVERALL MEDICATION ASSISTED TREATMENT

The below **Chart 1** shows all MAT Prescriptions By Drug Type By Year. Overall, the use of MAT, with the exception of treatment with methadone in OTP's, grew significantly from 2017 – 2018 and then again from 2018 – 2019. There was a flattening effect from 2019 to 2020, which is likely related to the COVID-19 pandemic.

Chart 1: Overall MAT Prescriptions By Drug Type By Year

Year 1					
Drug Type	**2017**	**2018**	**2019**	**2020**	**Grand Total**
Buprenorphine	2,967	17,349	27,751	26,313	**74,380**
Sublocade		53	239	303	**595**
Vivitrol	1,340	1,695	2,836	2,720	**8,591**
Grand Total	**4,307**	**19,097**	**30,826**	**29,336**	**83,566**

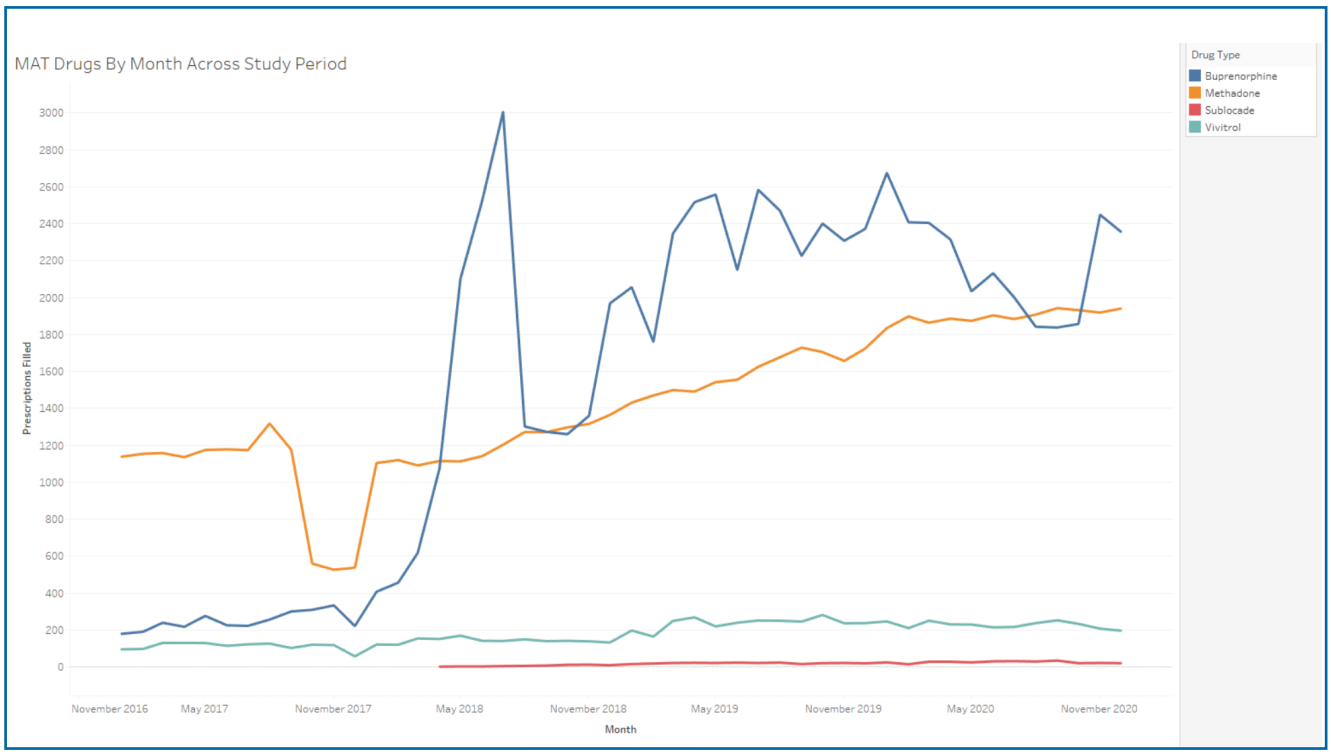
Graphic 1 shows the number of unique individuals receiving one of the three prominent MAT therapies for OUD and shows a significant drop in buprenorphine distribution in February and March 2020 and a slow return to normal. Due to COVID-19, there was a significant drop-off in the delivery of buprenorphine in Q1 and Q2. When the rate of buprenorphine prescriptions is extrapolated from 2017-2019 data to 2020, we would expect 39,505 prescriptions to have been written in 2020.[39] In fact, only 26,313 buprenorphine prescriptions were actually written in 2020. These numbers indicated a 33% shortfall in expected buprenorphine prescriptions in 2020.

When reviewing the 2021 data, it will be essential to examine if the use of buprenorphine resumes pre-pandemic trends. As shown in **Table 2**, in Delaware, the total buprenorphine prescription capacity is significantly underutilized compared to the actual prescriptions written.

THERE IS A 33% DISCREPANCY BETWEEN HOW MANY BUPRENORPHINE PRESCRIPTIONS WERE EXPECTED IN 2020 AND HOW MANY PRESCRIPTIONS GOT FILLED.

[39] In databases, dates are stored as a numerical value behind the scenes to the user. For example, March 1, 2020 is 43891 and April 1, 2020 is 43922. It is important to note that from 2017 through 2019, the regression line for buprenorphine prescriptions per month was 2.68037*Month-114638. The regression line then predicts that in March 2020, the number of prescriptions would be 2.68037*43891 –

Graphic 1: *MAT Drugs by Month Across Study Period*



BUPRENORPHINE

ORAL BUPRENORPHINE

Below, Chart 2 shows oral buprenorphine prescriptions by payer by year. Overall, the trend is that a significantly larger number of patients are being treated with buprenorphine from 2017 to 2020.

IN 2020, 75% OF THE STATE'S TOTAL BUPRENORPHINE CAPACITY WENT UNUSED EVERY MONTH.

Chart 2: Buprenorphine Prescriptions By Payer By Year

Year					
Entity	**2017**	**2018**	**2019**	**2020**	**Grand Total**
Payor 02		15,254	18,227	11,583	**45,064**
Payor 03			4		**4**
Payor 04	682				**682**
Payor 05	140	197	991	1,871	**3,199**
Payor 06	161	168	1,068	768	**2,165**
Payor 07	22	73	193	379	**667**
Payor 08	166	52	554	754	**1,526**
Payor 09	53	112	330	327	**822**
Payor 10	70	111	878	1,467	**2,526**
Payor 11	74	160	519	763	**1,516**
Payor 13	363	615	3,635	6,305	**10,918**
Payor 17	52	62	820	635	**1,569**
Payor 18	18	17	119	265	**419**
Payor 19		11	142	650	**803**
Payor 20	1,166	517	271	546	**2,500**
Grand Total	**2,967**	**17,349**	**27,751**	**26,313**	**74,380**

Table 2 below shows the number of buprenorphine prescriptions by month in 2020. Since prescribers are required to have a waiver from the DEA to prescribe buprenorphine, a maximum number of patients can be treated with buprenorphine by an individual provider at a given time. HMA IOA has calculated a theoretical maximum capacity for treatment with buprenorphine based on data from the DEA. This data was available until October 2020, so the calculated maximum capacity is based on the data set from this date. Ideally, a monthly comparison could be calculated using the number of prescriptions for buprenorphine and the updated data from the DEA, which is no longer publicly available, but would be accessible by state agencies.

Table 2: Sum of Buprenorphine Prescriptions from DHIN ("Prescriptions") Against Capacity Calculated Using October 2020 Data From DEA ("Capacity")

Month	Prescriptions	Capacity	Percent Used
Jan-2020	5309	22155	24%
Feb-2020	3666	22155	17%
Mar-2020	3347	22155	15%
Apr-2020	4672	22155	21%
May-2020	4455	22155	20%
Jun-2020	4833	22155	22%
Jul-2020	4814	22155	22%
Aug-2020	4447	22155	20%
Sep-2020	4834	22155	22%
Oct-2020	4201	22155	19%
Nov-2020	4759	22155	21%
Dec-2020	5032	22155	23%

INJECTABLE LONG-ACTING BUPRENORPHINE (SUBLOCADE)

Sublocade is a long-acting buprenorphine injection which is therapeutically effective for 28 days with one injection and available only from a medical provider, not as a self-injection. **Chart 3** below shows Sublocade Prescriptions by Payer by Year. Overall, the utilization of Sublocade is growing.

Chart 3: Sublocade Prescriptions By Payer By Year

Year *1of 2*				
Entity	**2018**	**2019**	**2020**	**Grand Total**
Payor 02	10	91	134	**235**
Payor 03			0	**0**
Payor 05		20	50	**70**
Payor 06	1	12	21	**34**
Payor 08	36	98	91	**225**
Payor 13	3	8		**11**
Payor 17	3			**3**

Year *2 of 2*				
Entity	**2018**	**2019**	**2020**	**Grand Total**
Payor 18		10	6	**16**
Payor 20			1	**1**
Grand Total	**53**	**239**	**303**	**595**

The below **Chart 4** shows Vivitrol Prescriptions By Payer By Year. Overall, the utilization of Vivitrol has grown from 2017 to 2020, but flattened between 2019 and 2020. This flattening of the curve is similar to that seen with buprenorphine during the same period and is very likely related to the treatment challenges during COVID-19.

Chart 4: Vivitrol Prescriptions By Payer By Year

Year					
Entity	**2017**	**2018**	**2019**	**2020**	**Grand Total**
Payor 02		677	1,275	1,411	**3,363**
Payor 03				0	**0**
Payor 04	878				**878**
Payor 05	17	49	90	117	**273**
Payor 06	75	79	101	97	**352**
Payor 07	4	1	8	15	**28**
Payor 08	280	749	966	704	**2,699**
Payor 09	1	4	1	4	**10**
Payor 10		17	37	26	**80**
Payor 13	43	72	178	218	**511**
Payor 14			1		**1**
Payor 17	18		17	15	**50**
Payor 18	3	9	5	18	**35**
Payor 19		4	10	27	**41**
Payor 20	21	34	147	68	**270**
Grand Total	**1,340**	**1,695**	**2,836**	**2,720**	**8,591**

INPATIENT AND EMERGENCY DEPARTMENT VISITS

ED VISITS

In **Table 2** below, HMA IOA identifies the primary substance used upon admission for ED visits for SUD in the study period. The data is derived from DHIN Data Extract.

Table 2: Primary Diagnosis for SUD ED Admission

Diagnosis	2017	2018	2019	2020	Grand Total
Alcohol related disorders	6704	7828	8640	7860	31032
Cannabis related disorders	191	299	392	465	1347
Cocaine related disorders	337	508	510	364	1719
Hallucinogen related disorders	241	387	383	555	1566
Inhalant related disorders	5	6	10	9	30
Nicotine dependence	42	39	41	31	153
Opioid related disorders	2792	3930	3658	3218	13598
Other psychoactive substance related disorders	618	664	683	755	2720
Other stimulant related disorders	72	63	112	120	367
Sedative, hypnotic, or anxiolytic related disorders	121	121	114	103	459
Grand Total	**11,115**	**13,845**	**14,543**	**13,480**	**52,983**

In **Table 3** below, HMA IOA identified individuals who were in the ED with a primary diagnosis of SUD and whether they received a follow-up service at all, within 3 days, within 7 days, or within 30 days for the SUD diagnosis using the follow-up definition from the Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence HEDIS measure.[40] **Table 4** shows the percentages for those receiving follow-up care within 3 days, 7 days, or 30 days for the SUD diagnosis using the follow-up definition from the Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence measure. Plan 8 had to be excluded from both tables, because they do not submit data on SUD claims at an individually identifiable level.

[40] Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence - NCQA

Table 3: Counts of Follow-Up Care by Category

Reporting Entity Code	ED Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 day Follow-Up
2	14617	10017	1119	990	2491
3	35	35			
4	4044	3417	168	112	347
6	818	677	43	21	77
7	41	41			
8	0	N/A	N/A	N/A	N/A
9	103	89	9	1	4
10	450	405	15	12	18
12	59	12	3	11	33
13	6504	5495	319	192	498
17	355	304	23	9	19
18	129	104	5	5	15
19	356	304	30	10	12
20	3393	2932	142	82	237

Table 4: Percentages of Follow-Up Care by Category 1 of 2

Reporting Entity Code	ED Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 day Follow-Up
2	14617	68.5%	7.7%	6.8%	17.0%
3	35	100.0%	0.0%	0.0%	0.0%
4	4044	84.5%	4.2%	2.8%	8.6%
6	818	82.8%	5.3%	2.6%	9.4%
7	41	100.0%	0.0%	0.0%	0.0%
8	0	N/A	N/A	N/A	N/A
9	103	86.4%	8.7%	1.0%	3.9%
10	450	90.0%	3.3%	2.7%	4.0%
12	59	20.3%	5.1%	18.6%	55.9%

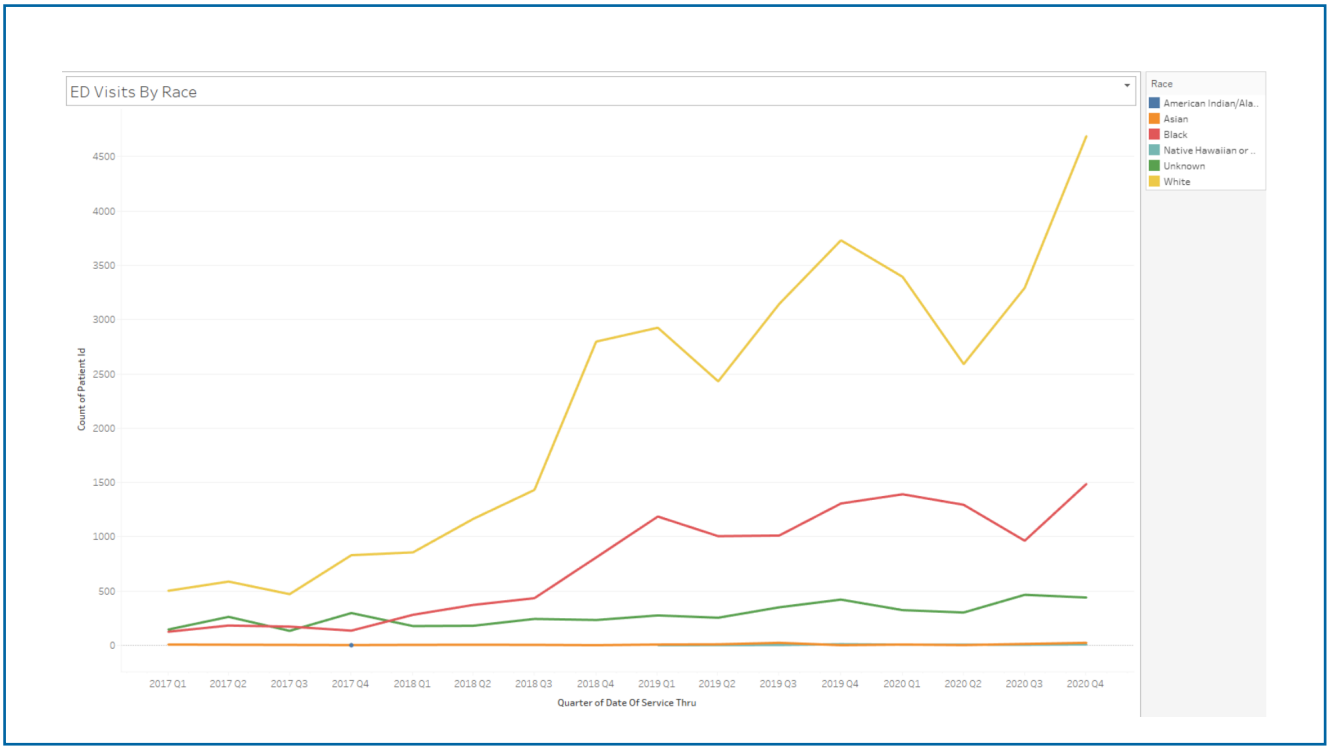
Table 4: Percentages of Follow-Up Care by Category 2 of 2

Reporting Entity Code	ED Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 day Follow-Up
13	6504	84.5%	4.9%	3.0%	7.7%
17	355	85.6%	6.5%	2.5%	5.4%
18	129	80.6%	3.9%	3.9%	11.6%
19	356	85.4%	8.4%	2.8%	3.4%
20	3393	86.4%	4.2%	2.4%	7.0%

Clearly shown above, the follow-up rates for these claims were quite poor, with many payers failing to achieve better than a 20% follow-up rate overall.

Graphic 2 shows ED visits by reported race values in the DHIN data. Overall, the trend appears to be flattening. However, one notable thing about the below graphic is that the gap between the White and Black population is approximately 2:1 throughout the life of the study period. From a health equity perspective, Delaware is approximately 67% White and about 22% Black (approximately 3:1). As such, data results support estimates that individuals reporting their race as Black are utilizing the ED at approximately a 50% higher rate than expected, controlling for all other factors.

Graphic 2: *ED Visits By Reported Race*



IP HOSPITAL VISITS

Below is a **Table 5** of inpatient (IP) visits by year with their principal SUD diagnoses.

Table 5: Primary Diagnosis for SUD IP Admission

Service Year					
Diagnosis	**2017**	**2018**	**2019**	**2020**	**Grand Total**
Alcohol related disorders	6704	7828	8640	7860	31032
Cannabis related disorders	191	299	392	465	1347
Cocaine related disorders	337	508	510	364	1719
Hallucinogen related disorders	241	387	383	555	1566
Inhalant related disorders	5	6	10	9	30
Nicotine dependence	42	39	41	31	153
Opioid related disorders	2792	3930	3658	3218	13598
Other psychoactive substance related disorders	618	664	683	755	2720
Other stimulant related disorders	72	63	112	120	367
Sedative, hypnotic, or anxiolytic related disorders	121	121	114	103	459
Grand Total	**11115**	**13845**	**14543**	**13480**	**52983**

In the below **Table 6**, HMA IOA identified individuals who were hospitalized with a primary diagnosis of SUD and whether they received a follow-up service at all, within 3 days, within 7 days, or within 30 days for a SUD diagnosis using the follow-up definition from the Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence measure. **Table 7** shows the percentages for those that received follow-up care within 3 days, within 7 days, or within 30 days for the SUD diagnosis using the follow-up definition from the Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence measure. Plan 8 had to be excluded from this calculation, because they do not submit data on SUD claims at an individually identifiable level.

Table 6: Counts of Follow-Up Care by Category

Payer Code	Total Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 Day Follow-Up
2	9164	7005	796	377	986
3	57	57			
4	237	194	14	5	24
6	1257	656	162	99	340
7	19	19			
8	22366	N/A	N/A	N/A	N/A
9	192	102	23	23	44
10	187	163	13	3	8
12	6	6			
13	2259	2027	63	44	125
17	129	105	4	7	13
18	231	125	17	23	66
19	102	94	2	2	4

Table 7: Percentages of Follow-Up Care by Category 1 of 2

Payer Code	Total Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 Day Follow-Up
2	9164	76.4%	8.7%	4.1%	10.8%
3	57	100.0%	0.0%	0.0%	0.0%
4	237	81.9%	5.9%	2.1%	10.1%
6	1257	52.2%	12.9%	7.9%	27.0%
7	19	100.0%	0.0%	0.0%	0.0%
8	22366	N/A	N/A	N/A	N/A
9	192	53.1%	12.0%	12.0%	22.9%
10	187	87.2%	7.0%	1.6%	4.3%

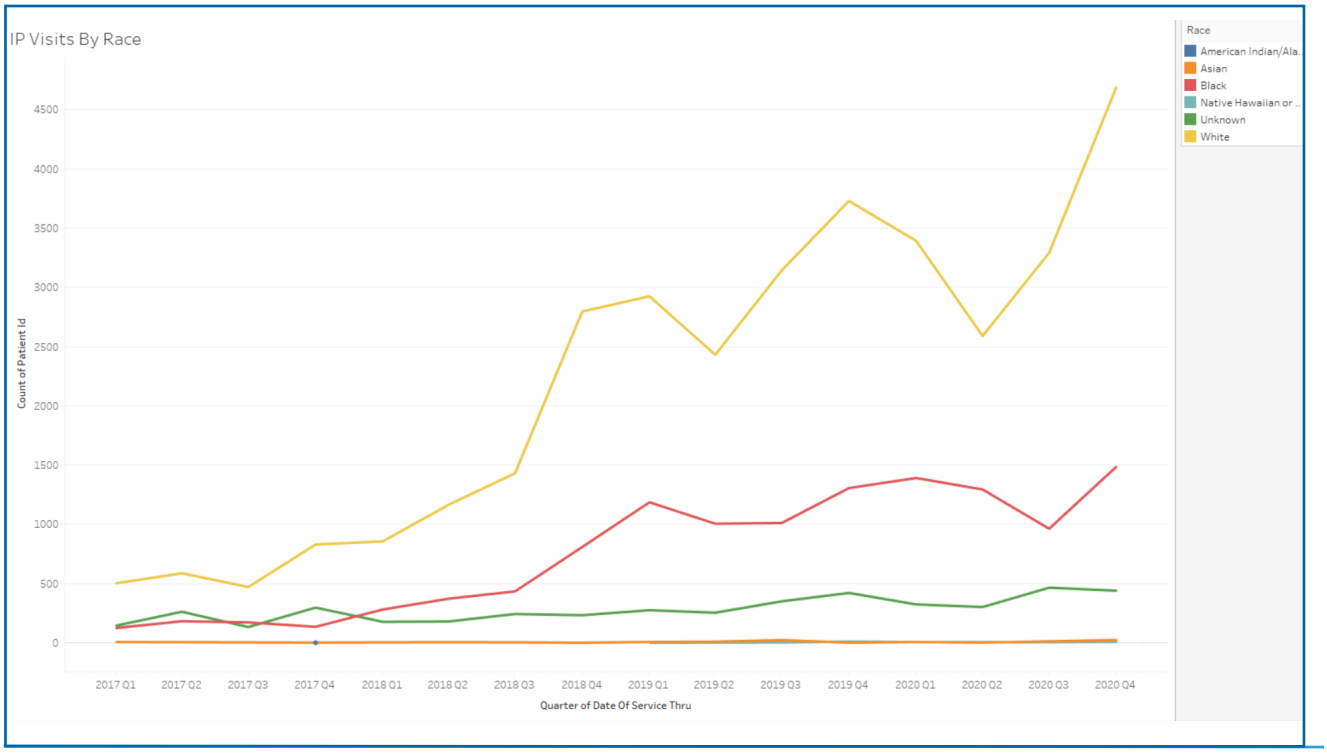
Table 7: Percentages of Follow-Up Care by Category 2 of 2

Payer Code	Total Visits	No Follow-Up	3 Day Follow-Up	7 Day Follow-Up	30 Day Follow-Up
12	6	100.0%	0.0%	0.0%	0.0%
13	2259	89.7%	2.8%	1.9%	5.5%
17	129	81.4%	3.1%	5.4%	10.1%
18	231	54.1%	7.4%	10.0%	28.6%
19	102	92.2%	2.0%	2.0%	3.9%

As shown in the tables above, the follow-up rate for care for individuals hospitalized for their SUD diagnoses is really quite poor, with only three plans even exceeding a 40% follow-up rate over 30 days. Appropriate follow-up care should serve as a point of emphasis for initiation or re-initiation of SUD care for these patients.

The below **Graphic 3** shows IP visits by reported race values in the DHIN data. Overall hospitalization for a primary diagnosis of SUD appears to be growing. The same trend between the White and Black population of approximately 2:1 holds throughout the life of the study period until late 2020; however, in late 2020, the gap between White Admissions and Black Admissions looks more like a 3:1 ratio. From a health equity perspective, Delaware is approximately 67% White and about 22% Black (approximately 3:1).

Graphic 3: *IP Visits By Reported Race*



RATES for SUD SERVICES

Public and commercial SUD providers have long noted that SUD treatment services fees are extremely low, impacting the ability to hire and retain workforce and operate quality programs. Delaware's Medicaid SUD reimbursement rates are among the lowest in the region and nation for many procedure codes. It is essential to note that every state has idiosyncrasies to their terms of coverage, providers that participate, whether agencies are county or state run, and qualifications for those who provide services, so for SUD treatment systems, rates only tell part of the story. In order to gain a complete picture, the state needs to make visible the allocation of block grant funding, SOR funding, tax allocation, property tax off-sets, federal pass-throughs, and any other treatment system support levied. This should then be weighed against the actual cost to deliver evidence-based care at parity to other medical interventions. If the costs are not covered, then the treatments cannot be delivered. An overview of Delaware's Medicaid and SUD Waiver coverage is available in **Appendix C**.

However, for this needs assessment, Delaware's public Medicaid rates were compared (when possible) with those of MD, NJ, VA, and PA. DHSS, through DMMA, has recently begun studying these rates with some provider input and making suggested changes. At the time of this report, DMMA had raised its daily methadone rate from $4 to $12. As can be seen in **Appendix D**, Delaware has considerable work to do to raise the public SUD rates to a competitive level. Although available public (Medicaid) rates are listed in the analysis, commercial rates are not public and were not available for the analysis. It is conservative to assume that the public rates serve as a proxy for the lower end of any commercial rates. Delaware's current SUD rates were last set in 2016 and have been widely noted in this assessment as being the most significant concern for providers in being able to sustainably operate SUD treatment in the state.

It is important to note that not all codes and services were able to be compared either because of differences in services or rates not published. Rates are sometimes revised by jurisdictions and those listed in **Appendix D** were the most current found for this assessment.

Overall, Delaware's current residential rates for medically monitored intensive services (ASAM 3.7) and withdrawal management/detox rates (ASAM 3.7 WM) are lower than most other regional states. The proposed rate increases in high intensity residential (ASAM 3.7), albeit improved, are lower than those in Maryland and Virginia. Withdrawal management/detox rates currently in Delaware are from $40-$73 per day lower than Maryland and New Jersey. The proposed rate increase lowers the difference to $15-$48/day less than Maryland and New Jersey. Virginia's 3.7 WM is based on the psychiatric per diem at that level, but is most likely at $393.50 rate for 3.7 WM. Therefore, it is safe to assume that Delaware's proposed rates for 3.7 WM remain $13/day lower than Virginia's.

Delaware's clinically managed high-intensity services (ASAM 3.5) current rates are lower than those of Maryland and Virginia (but higher than New Jersey) by $21-$204/day, respectively. The proposed rate surpasses Maryland by about $29 day but remains $153/day lower than Virginia. Delaware's

current (and proposed) clinically managed low-intensity residential services (ASAM 3.1) remain higher than both Maryland and New Jersey, but $20-$24/day less than Virginia's rates.

Delaware's current and proposed community-based SUD rates and supportive services, such as intensive outpatient (IOP) (ASAM 2.1) rates exceed that only of New Jersey, but up to $50-$140/day (for proposed rates) less than that of Maryland and Virginia. Methadone dosing, with Delaware's recent change to $12/day, is now fairly consistent with comparable states.

Delaware's current outpatient (individual) rates (using combination of licensed and unlicensed fees as reference) are lower than in comparable states, although the proposed rates would make them competitive. Individual rates would be about $2/15 minute rate higher than New Jersey but remains $1-$3/15 minute rate less than Virginia and Maryland, respectively. Delaware's current SUD assessment is $102 less than Maryland's and the proposed fee remains $83 less. The current and proposed rates are higher than those from New Jersey.

Higher and competitive rates (compensation) should be seen as a core driver of being able to recruit and retain necessary workforce (capacity), bring in additional providers to the continuum (capacity), allow providers to train to evidence-based practices (competency) and improve the individual and community's functioning (community). DHSS has recently initiated efforts for rate restructuring and, along with provider input, are now considering and proposing increases in many of the procedure codes.

DSAMH appears committed, along with its sister division, DMMA, to make Delaware's public SUD (and mental health) system one of the more progressive systems in the country. Level setting reimbursement with those jurisdictions with more advanced systems (and higher fees) will ultimately serve as an incentive to stabilize its current provider network and entice providers to come to and remain in Delaware.

FUTURE STATE

INTRODUCTION

Walk into any ED in the United States and complain of chest pain, and it will set off a cascade of predictable events designed to assure placement in the right LOC, for the shortest amount of time, and with the correct array of services. This was not developed by mistake or happenstance, but rather by utilizing evidence to determine the best course of treatment in response to the severity of illness. It is common for all medical specialties to determine what location of care will best stabilize and improve the patient. For some this may mean immediate transfer for a heart catheterization and into an intensive care unit; while others may be found to have low-risk chest pain and be discharged for a follow-up outpatient stress test. These interventions and pathways are not the imaginations of a single provider, but rather the product of hard-fought evidence-based clinical practice guidelines and decision rules. As the science changes over time, so do the clinical practice guidelines affecting

laboratory testing or technology; however, providers, whether in primary care, EDs, or inpatient keep up with these rule changes by creating algorithms, checklists, and order sets that are programmed into their electronic medical records (EMRs) and in-house training.

Now imagine if that same person walked into an ED or primary care office and complained of SUD. This person would likely have significant issues receiving a standardized assessment, a consistent LOC placement, or predictable array of available services. They would likely have difficulty with transportation, finding acute withdrawal management services, and be lucky to find a provider willing to continue treatment for an extended period of time. In short, they would most likely be lost to follow-up care and have a significant risk of disease-related mortality. This is clearly not acceptable to Delawareans.

Despite the state and its partners' significant efforts and considerable resources to combat the opioid crisis and reduce SUD, the numbers of overdose deaths, broken families and losses to the community continue to climb each year. It is clear that state and county leaders, treatment providers, legislators, advocacy groups, and concerned citizens want and need a prevention and treatment system that addresses the SUD and attendant overdose crisis in the state to eventually reverse the trajectory of this public health crisis. Delaware is certainly not unique in experiencing the ongoing scourge of the opioid and SUD epidemic. Nevertheless, the state must take meaningful action to improve the treatment ecosystem, mandate improved outcomes, measure performance, and prioritize evidence-based treatment at all LOCs for all in need of SUD treatment. The level of cooperation and collaboration from all partners and stakeholders for this needs assessment project is encouraging. Delaware needs to take action today to unify efforts, set specific targets for improvement, and implement needed changes.

Based on the identified gaps in and barriers to care identified by the above needs assessment report, HMA IOA outlines an evidence-based "ideal future-State" that offers a right-sized, knowledgeable, high quality, and sustainable ecosystem of care that addresses the true needs of the communities across Delaware. The proposed interventions are grouped into the 5 Cs of the NAM Framework for addiction and OUD treatment ecosystems and, where helpful, into several more specific components of care that are critical to consider.

The components of care, no matter what the diseases are: 1. Prevention/harm reduction, 2. Screening, 3. Assessment, 4. Treatment, 5. Monitoring, and 6. Long-term recovery.

The following are evidence-based approaches to each of these components and how they apply specifically to treating SUD in Delaware. These recommendations are based on the expertise of those delivering care in Delaware, the patients being served, and the HMA IOA subject matter experts.

CAPACITY

PREVENTION/HARM REDUCTION (RISK REDUCTION)

NALOXONE

Rapid and substantial expansion of naloxone distribution programs, both by professionals and laypeople, has proven to save lives and reduce the mortality associated with OUD in areas hardest hit by the epidemic. In the face of the exponentially increasing mortality associated with this crisis, and despite the state's and advocacy groups' substantial efforts to distribute naloxone to date, it is critical that access to 4-8mg single-step nasal naloxone be prioritized and widespread. The prevalence of fentanyl in the community makes this even more critical. These efforts must include funding of both the medications themselves, as well as the distribution programs, including operations and personnel. Naloxone distribution programs have proven to save lives.[41]

Naloxone distribution efforts can also be cost-effective:

- Medical Cost of a Fatal Drug Overdose: $2,980 (Ohio DAWN presentation - 2016).[42]
- The average cost to treat overdose patients admitted to hospital intensive care was found to be $92,408 in 2015.[43]

Data gathered from 20 cities and counties across five states considered to be on the front lines of the crisis – Kentucky, Maryland, Massachusetts, Ohio, and Pennsylvania – found that for every three fatal overdoses, a local government's public safety costs can increase by an average of 1%, or $150,000. What's more, once deaths started spiking, government costs tended to steadily increase at that rate for about three years until they begin to plateau.[44] An evaluation in Britain suggested that the distribution of take-home naloxone decreased overdose deaths by around 6.6% and was cost-effective with an incremental cost per Quality-adjusted life year (QALY) gained well below a £20,000 ($26,308) willingness-to-pay threshold set by UK decision-makers.[45]

RECOMMENDATIONS:

- Delaware should update the current standing order for naloxone to authorize the distribution of the 4mg single-step nasal spray and intramuscular autoinjector for all stakeholders, including community members, providers, and all first responders, including law enforcement and EMS. The 2 mg two-step nasal spray should be removed from the standing order, and the 8mg nasal spray should be considered for inclusion as an additional nasal spray formulation on the standing order.

41 "Community-Based Opioid Overdose Prevention Programs Providing Naloxone - United States, 2010." Centers for Disease Control and Prevention. https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6106a1.htm

42 "Project DAWN." Project Dawn. Accessed June 22, 2022. https://odh.ohio.gov/know-our-programs/project-dawn/

43 Stevens, Jennifer P., Michael J. Wall, Lena Novack, John Marshall, Douglas J. Hsu, and Michael D. Howell. "The Critical Care Crisis of Opioid Overdoses in the United States." *Annals of the American Thoracic Society* 14, no. 12 (2017): 1803–9. https://doi.org/10.1513/annalsats.201701-022oc

44 "Quantifying How Much the Opioid Epidemic Costs Governments." OpenGov Research Team: Opioid Research. Accessed June 16, 2022. https://stories.opengov.com/jwu-demo/published/SJ0phpWkm

45 Langham, Sue, Antony Wright, James Kenworthy, Richard Grieve, and William C.N. Dunlop. "Cost-Effectiveness of Take-Home Naloxone for the Prevention of Overdose Fatalities among Heroin Users in the United Kingdom." *Value in Health* 21, no. 4 (2018): 407–15. https://doi.org/10.1016/j.jval.2017.07.014

- Continue the state's strategy to aggressively distribute Narcan (naloxone) in the community and provide cost-reduced or free Narcan spray for distribution in multiple settings, including EDs, homeless shelters, addiction treatment providers, and community resource centers.
- Delaware has also just approved Emergency Medical Services (EMS) policies to allow EMS providers to initiate buprenorphine post-overdose and use the developing community pathways to refer patients to a provider. Although this will not be in place until November 2022, this is a positive step in "bringing treatment to those who need it." It will be critical to evaluate the data on treatment retention following linkages and identify and implement any process improvements that may be needed.
- The Naloxone Subcommittee of the Overdose System of Care (OSOC) will need to closely evaluate matching distribution and "leave behind" programs where overdoses are occurring most frequently. See similar recommendation below pertaining to Syringe Services Programs.

SYRINGE SERVICES PROGRAMS

Syringe Services Programs (SSPs) or needle exchanges are another important and effective harm reduction component which have demonstrated substantial impact in reducing the consequences of OUD and the spread of infectious diseases. SSPs are programs that have significant benefits to those people who inject drugs, including reduction in communicable disease, improved linkage to treatment, naloxone distribution and, ultimately, a reduction in mortality.[46,47,48,49] Research consistently demonstrates the effectiveness of syringe access in preventing transmission of infectious disease and skin and soft tissue infections, while also supporting the overall health and wellbeing of drug users through linkages to drug treatment, medical care, housing, overdose prevention and other vital social services. SSPs respect, value, and prioritize the human rights and dignity of people who use drugs, mitigating drug-related stigma. Often these services are not covered by medical insurance and require ongoing support through grants, donations, and volunteers in order to survive.

Delaware has been operating a SSP through Brandywine Counseling since 2007, has enrolled over 5,200 individuals in the program and has exchanged nearly 1.5 million syringes. The program was originally only located in the city of Wilmington in New Castle County, but is now statewide; however, there is a complex, rotating schedule for the SSP service weekly and additional programs that offer services for additional hours in each county daily would be extremely beneficial.

[46] Platt, Lucy, Silvia Minozzi, Jennifer Reed, Peter Vickerman, Holly Hagan, Clare French, Ashly Jordan, et al. "Needle Syringe Programmes and Opioid Substitution Therapy for Preventing Hepatitis C Transmission in People Who Inject Drugs." *Cochrane Database of Systematic Reviews* 2017, no. 9 (2017). https://doi.org/10.1002/14651858.cd012021.pub2

[47] Fernandes, Ricardo M, Maria Cary, Gonçalo Duarte, Gonçalo Jesus, Joana Alarcão, Carla Torre, Suzete Costa, João Costa, and António Vaz Carneiro. "Effectiveness of Needle and Syringe Programmes in People Who Inject Drugs – an Overview of Systematic Reviews." *BMC Public Health* 17, no. 1 (2017). https://doi.org/10.1186/s12889-017-4210-2

[48] Des Jarlais, Don C., Ann Nugent, Alisa Solberg, Jonathan Feelemyer, Jonathan Mermin, and Deborah Holtzman. "Syringe Service Programs for Persons Who Inject Drugs in Urban, Suburban, and Rural Areas — United States, 2013." MMWR. *Morbidity and Mortality Weekly Report 64*, no. 48 (2015): 1337–41. https://doi.org/10.15585/mmwr.mm6448a3

[49] Tobin, Karin E., Susan G. Sherman, Peter Beilenson, Christopher Welsh, and Carl A. Latkin. "Evaluation of the Staying Alive Programme: Training Injection Drug Users to Properly Administer Naloxone and Save Lives." *International Journal of Drug Policy* 20, no. 2 (2009): 131–36. https://doi.org/10.1016/j.drugpo.2008.03.002

RECOMMENDATIONS:

- Provide access to SSPs in each county near the epicenters of overdose. As the epicenters may shift, the state must develop a system to monitor data and adjust the location and details of these programs, as needed. Additional sites providing services eight hours daily in every county to increase access are needed. These sites also increase opportunities for engagement and education. For example, some in other states integrate peers and primary care screenings to maximize outreach and engagement opportunities.
- Provide take-home kits to EDs and homeless shelters.

STREET MEDICINE

Many with the diagnosis of SUD/OUD are unsheltered or experiencing homelessness. For this population, treatment in a standard setting is often not practical or effective, so the care needs to be delivered directly to them by "bringing treatment to those who need it." This is typically done in the form of street and shelter medicine, such as is currently being done at the Hope Center through the Christiana Care Health System. Street medicine providers will generally provide SUD treatment services, primary care interventions and connection to peers, case management, and other social supports to meet people where they are in the community.

Street medicine research is showing decreased ED and hospital utilization, cost savings, improved patient satisfaction, better provider/patient relationships, and longer retention in treatments. There have also been improvements in housing placement through the use of street medicine.[50,51,52,53]

One factor in identifying where street medicine teams should be deployed is intensity of overdoses in geographic areas. Shown here is a map[54] showing overdose rates in Delaware in 2020. Typically, the outreach team consists of a prescriber, an RN, a social worker, and peers. This is also the staffing model commonly found in standard SUD treatment. Given the need to "find" patients, the team can only have a small panel of patients, averaging about 50-75 per team. Per an NPR investigative reporting piece, Mercy Care in Atlanta spends about $900,000 a year on its street medicine program that treats about 300 individuals annually.[55] While this seems expensive, it pales in comparison to the financial and human cost of repeated ED visits, EMS encounters, and jail time of this same population.

Based on overdose data highlighted earlier in this report and the map, the HMA IOA team recommends implementation of street medicine teams strategically deployed in areas of most intense overdose occurrence and risk.

50 Bright Research Group. Rep. Street Medicine Models in Other Counties: White Paper, 2018

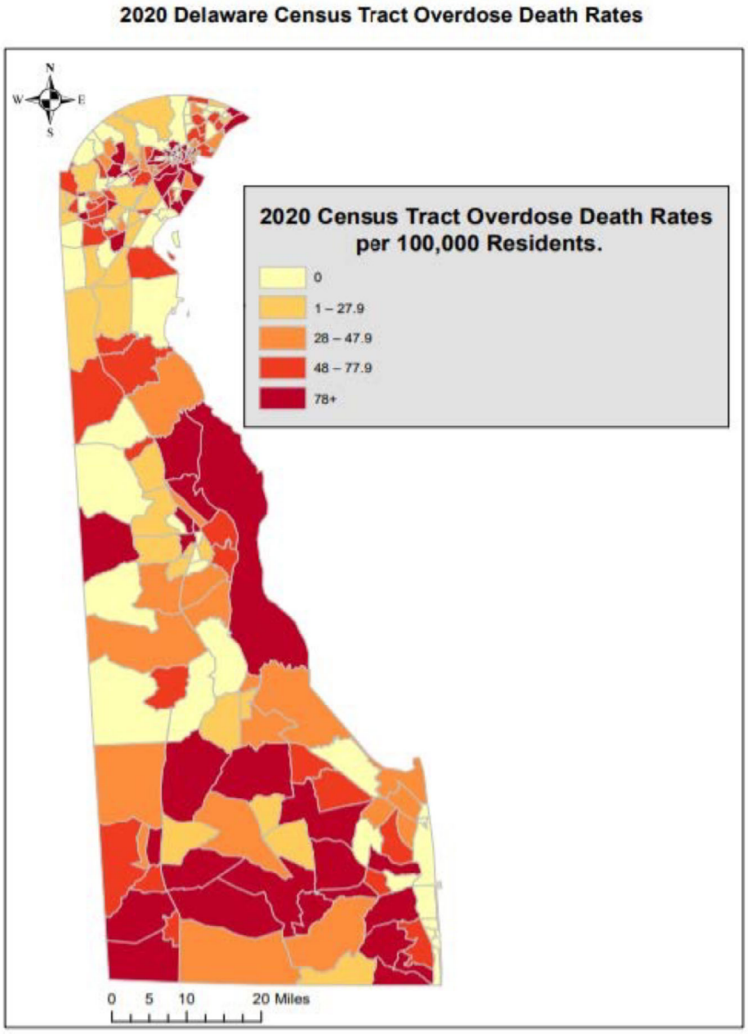
51 Avis, Ed. "Street Medicine' Helps a Community and the Hospital's Bottom Line." Healthcare Financial Management Association, 2016.

52 "How 'Street Medicine' Saved One Hospital $3.7M in Ed Costs." Advisory Board, December 1, 2017. https://www.advisory.com/daily-briefing/2017/12/01/street-medicine

53 Christensen, Aleta. "Patient Satisfaction & Knowledge of Services: An Evaluation of A Street Medicine Program." Georgia State University. Accessed June 16, 2022. https://doi.org/10.57709/7393281

54 Delaware State Epidemiological Outcomes Workgroup The 2021 Delaware Epidemiological Profile Substance Use, Mental Health and Related Issues, pp 6-18. found at: www.cdhs.udel.edu/content-sub-site/Documents/2021%20Epi%20Report%20and%20Exec%20Summary/

55 Whitehead, Sam. "They Bring Medical Care to the Homeless and Build Relationships to Save Lives." NPR, November 22, 2019. https://www.npr.org/sections/health-shots/2019/11/21/771059522/they-bring-medical-care-to-the-homeless-and-build-relationships-to-save-lives



Overdose death data was provided by the Delaware Department of Forensic Science 2010 data from the US Census Bureau for age adjustments. The Delaware Opioid Metric Intelligence Project (DOMIP) is funded by the NIJ.

RECOMMENDATIONS:

Two to three street medicine teams should be deployed in Wilmington, at a minimum, and one each in Dover, Milford, and Georgetown; it will be critical to measure and report outcomes tracking to the latest available overdose data and increase services, as warranted.

JAIL/PRISON-BASED PROGRAMMING

The risk of overdose post-release can be reduced significantly (by about 61%) if those individuals with OUD are treated while incarcerated.[56] Prison and jail-based interventions need to be done by a team of professionals that include prescribers, BH specialists, case managers, and peers.

[56] Green, Traci C., Jennifer Clarke, Lauren Brinkley-Rubinstein, Brandon D. Marshall, Nicole Alexander-Scott, Rebecca Boss, and Josiah D. Rich. "Post incarceration Fatal Overdoses after Implementing Medications for Addiction Treatment in a Statewide Correctional System." *JAMA Psychiatry* 75, no. 4 (2018): 405. https://doi.org/10.1001/jamapsychiatry.2017.4614

This population also has a high density of early life trauma and psychiatric needs that may put them at a higher LOC need than the average individual seeking SUD treatment. The staffing of a jail or facility-based program should closely mirror that of an opioid treatment program in the community.

Delaware has an integrated and unified corrections program. The Delaware Department of Correction houses over 3,000 sentenced individuals and 1,300 detainees. Given that up to 85% of those incarcerated have a SUD, that means at least 3,000 individuals likely need evidence-based assessment and treatment for SUD and related issues.[57]

DDOC has been providing all forms of FDA approved MAT for the past three years and has focused largely on continuing those that are incarcerated while on prescribed MAT and providing appropriate withdrawal management through MAT. Although DDOC has made progress treating inmates and detainees with MAT (currently estimated to be 9% of the average daily population), this still does not meet the predicted need. It will be critical that DDOC examine its data to assure intake screening is identifying those in need of MAT, either through continuation of valid prescriptions or for those taking illicit substances in the community when detained. ***It is important to emphasize that the risk of mortality skyrockets after release from custody and is as high as 74 times the average rate in the community*** for those with untreated SUD when released from jail or prison.[58] Ensuring DDOC continues to work hard at linking those being released to Medicaid and providing transitions ("warm handoffs") to treatment providers on release is extremely important.

As noted in the Pew report in 2019 referenced earlier in this report, recommendations were made to assure funding to continue to DDOCs MAT program. Additionally, the DDOC was recently approved for federal funding to operate a full Opioid Treatment Program (OTP) in two facilities (one for men and one for women). This is a significant step forward in appropriately treating those with OUD while incarcerated; ensuring appropriate connections are made to community-based treatment upon release are crucial next steps.

RECOMMENDATIONS:

- All DDOC-based SUD services should be reviewed for fidelity to evidence-based practice and upgraded to meet the community standard of care.
- Re-entry programs should be evaluated and improved to yield the highest retention in treatment rates. Transitions back into the community need to be supported, including linkages to appropriate community-based care, insurance coverage, and housing supports.
- DDOC should continue to closely track the numbers of incarcerated individuals receiving MAT, particularly with the opening of the in-house OTPs and then report outcomes.

[57] SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2002 to 2005, 2006 to 2010 (revised March 2012), and 2011 to 2012.

[58] Ranapurwala, Shabbar I., Meghan E. Shanahan, Apostolos A. Alexandridis, Scott K. Proescholdbell, Rebecca B. Naumann, Daniel Edwards, and Stephen W. Marshall. "Opioid Overdose Mortality among Former North Carolina Inmates: 2000–2015." *American Journal of Public Health* 108, no. 9 (2018): 1207–13. https://doi.org/10.2105/ajph.2018.304514

SCHOOL-BASED PROGRAMMING (PREVENTION SERVICES)

Approximately 12.3% of children aged 17 years old or younger in the United States reside with at least one parent who has a SUD. These children are more likely to experience higher rates of SUD and MH disorders.[59,60] Given the high percentage of children impacted by parents with SUD, a larger scale approach to prevention and early identification is needed. This approach would include programs in middle and high school that focus on identification and intervention of experienced trauma, SUD, and MH needs. Numerous drug prevention programs have been shown to have positive results. Research and evaluation literature indicate that select components of school-based drug prevention programs are proving promising and have shown their worth in different school environments over time.[61,62,63,64]

In addition to those programs offered through DPBHS, the HMA IOA team recommends a few evidence-based school prevention programs for the state's consideration; more complete and detailed information on each program, including the research that supports their efficacy, can be found in **Appendix F**.

PROJECT SUCCESS

The Hanley Foundation's Project SUCCESS (Schools Using Coordinated Community Efforts to Strengthen Students)[65] is a targeted intervention specifically designed for high-risk youth. The program places highly trained professionals in schools to provide a range of substance use prevention and early intervention services. Project SUCCESS was tested with 14 to 18-year-old adolescents who attended an alternative school that separated them from the general school population. Participants typically came from low to middle income, multi-ethnic families.

Project SUCCESS works by building partnerships established between a prevention agency and alternative school. A trained individual who is experienced in providing substance use prevention counseling to adolescents is recruited to work in the alternative school as a Project SUCCESS Counselor (PSC). This individual provides the school with substance use prevention and early intervention services to help decrease risk factors and enhance protective factors related to substance use.

59 Peleg-Oren, Neta, and Meir Teichman. "Young Children of Parents with Substance Use Disorders (SUD): A Review of the Literature and Implications for Social Work Practice." *Journal of Social Work Practice in the Addictions* 6, no. 1-2 (2006): 49–61. https://doi.org/10.1300/j160v06n01_03

60 Biederman, Joseph, Stephen V. Faraone, Michael C. Monuteaux, and Jennifer A. Feighner. "Patterns of Alcohol and Drug Use in Adolescents Can Be Predicted by Parental Substance Use Disorders." *Pediatrics* 106, no. 4 (2000): 792–97

61 Dusenbury, Linda, and Mathea Falco. "Eleven Components of Effective Drug Abuse Prevention Curricula." *Journal of School Health* 65, no. 10 (1995): 420–25. https://doi.org/10.1111/j.1746-1561.1995.tb08205

62 Botvin, Gilbert J. "Long-Term Follow-up Results of a Randomized Drug Abuse Prevention Trial in a White Middle-Class Population." JAMA: *The Journal of the American Medical Association* 273, no. 14 (1995): 1106. https://doi.org/10.1001/jama.1995.03520380042033

63 Tobler, Nancy S., Michael R. Roona, Peter Ochshorn, Diana G. Marshall, Andrei V. Streke, and Kimberly M. Stackpole. "School-Based Adolescent Drug Prevention Programs: 1998 Meta-Analysis." *The Journal of Primary Prevention* 20, no. 4 (2000): 275–336. https://doi.org/10.1023/a:1021314704811

64 Skara, Silvana, and Steve Sussman. "A Review of 25 Long-Term Adolescent Tobacco and Other Drug Use Prevention Program Evaluations." *Preventive Medicine* 37, no. 5 (2003): 451–74. https://doi.org/10.1016/s0091-7435(03)00166-x

65 "Project Success." Hanley Foundation, May 25, 2020. https://hanleyfoundation.org/prevention/project-success/

PROJECT TND

Project Toward No Drug Abuse (TND) is a targeted intervention and interactive program designed to help high school youths (ages 14–19) resist substance use. This school-based program consists of twelve 40- to 50-minute lessons that include motivational activities, social skills training, and decision-making components that are delivered through group discussions, games, role-playing exercises, videos, and student worksheets over a four-week period. The program was originally designed for high-risk youth in alternative high schools and consisted of nine lessons developed using a motivation-skills-decision-making model. It addresses topics such as active listening skills, effective communication skills, stress management, coping skills, tobacco cessation techniques, and self-control—all to counteract risk factors for drug use relevant to older teens. Project TND has been rigorously evaluated and proven successful.

PROJECT ALERT

ALERT is a widely used middle-school drug prevention program that was originally a universal prevention program. ALERT claims to curb cigarette, marijuana, and alcohol misuse and help even high-risk youth.[66] Like Project SUCCESS and TND, ALERT has been evaluated and found to have promising results.[67,68,69,70] ALERT is a two-year classroom curriculum of eleven lessons, plus three booster lessons that should be delivered the following year. It targets alcohol, marijuana, and cigarette use and is designed to help students identify and resist pro-drug pressures and understand the social, emotional, and physical consequences of harmful substances. It aims to motivate students against using drugs and give them the skills they need to translate that motivation into effective resistance behavior, an approach that is widely viewed as the state of the art in drug-use prevention.[71]

ALERT and many other school-based drug prevention programs draw on the tenets of social learning theory. Social learning theory focuses on the learning that occurs within a social context, and considers that people learn from one another through observation, imitation, and modeling. Basically, social learning theory says that people can learn by observing others' behavior and the outcomes of those behaviors; that learning may or may not result in a behavior change; and that cognition plays a role in learning. Accordingly, awareness and expectations of future reinforcements and consequences can have a major effect on the person's behaviors.

66 Tucker, Joan S., Phyllis L. Ellickson, David J. Klein, Daniel F. McCaffrey, Bonnie Ghosh-Dastidar, and Douglas L. Longshore, Classroom Drug Prevention Works: But Left Unchecked, Early Substance Use Haunts Older Teens and Young Adults. Santa Monica, CA: RAND Corporation, 2004. https://www.rand.org/pubs/research_briefs/RB4560.html

67 Faggiano, Fabrizio, Federica Vigna-Taglianti, Elisabetta Versino, Alessio Zambon, Alberto Borraccino, and Patrizia Lemma. "School-Based Prevention for Illicit Drugs' Use." *Cochrane Database of Systematic Reviews*, 2005. https://doi.org/10.1002/14651858.cd003020.pub2

68 Ringwalt, Christopher L., Susan Ennett, Amy Vincus, Judy Thorne, Louise Ann Rohrbach, and Ashley Simons-Rudolph. "The Prevalence of Effective Substance Use Prevention Curricula in U.S. Middle Schools." *Prevention Science* 3, no. 4 (2002): 257–65. https://doi.org/10.1023/a:1020872424136

69 National Institute on Drug Abuse (NIDA). Preventing Drug Use Among Children and Adolescents: A Research-Based Guide for Parents, Educators and Community Leaders. 2nd ed. Washington, D.C.: National Institute on Drug Abuse, National Institutes of Health, 2003.

70 Ghosh-Dastidar, Bonnie, Douglas L. Longshore, Phyllis L. Ellickson, and Daniel F. McCaffrey. "Modifying pro-Drug Risk Factors in Adolescents: Results from Project Alert." *Health Education & Behavior* 31, no. 3 (2004): 318–34. https://doi.org/10.1177/1090198104263333

71 Ennett, Susan T., Christopher L. Ringwalt, Judy Thorne, Louise Ann Rohrbach, Amy Vincus, Ashley Simons-Rudolph, and Shelton Jones. "A Comparison of Current Practice in School-Based Substance Use Prevention Programs with Meta-Analysis Findings." *Prevention Science* 4, no. 1 (2003): 1–14. https://doi.org/10.1023/a:1021777109369

PROJECT LST (LIFE SKILLS TRAINING)

The LST prevention program is a three-year intervention designed to be conducted in school classrooms. LST targets tobacco, alcohol, and marijuana and offers the potential for interrupting the normal developmental progression from use of these substances to other riskier forms of drug use.[72] The LST program is designed to target the psychosocial factors associated with the onset of drug involvement. The program addresses drug-related knowledge, attitudes and norms, drug-related resistance skills, and personal self-management and social skills.

Evaluation research has demonstrated that this prevention approach is effective with a broad range of students. It has not only demonstrated reductions in the use of tobacco, alcohol, or marijuana by up to 80%, but evaluation studies show that it also can reduce more serious forms of drug involvement, such as the weekly use of multiple drugs or reductions in the prevalence of pack-a-day smoking, heavy drinking, or episodes of drunkenness. Given the high percentage of adult OUD and the risks of OUD and SUD, a number of tactics should be employed to mitigate the highly predictable negative outcomes for school aged populations without intervention.

RECOMMENDATIONS:

- Every school should have at least one evidence-based program that focuses on the prevention and identification of SUD. Several additional models are presented in this report for consideration (see Appendix E).
- Considering overdose deaths and SUD continue to significantly impact the entire state and its demographics, it is critical that all of Delaware's public, parochial, and private schools be part of systemic efforts to reduce long-term use and mortality from SUD. The Department of Education must be an active partner, along with each of the school districts, parochial and private schools in prevention and early intervention for children and adolescents with SUD and OUD and for those exposed to SUD in their homes.
- DSCYF and its DPBHS should lead coordination efforts with the Department of Education and local school districts to strategically plan for implementing evidence-based prevention programs for children and adolescents. The collective focus must be on utilizing proven programs with demonstratable results. Obtaining prevention funding through SAMSHA and other federal agencies that mandate interagency collaboration will be critical for creating sustainable and measurable programs.

[72] Botvin, Gilbert J., and Kenneth W. Griffin. "Life Skills Training: Empirical Findings and Future Directions." The Journal of Primary Prevention 25, no. 2 (2004): 211–32. https://doi.org/10.1023/b:jopp.0000042391.58573.5b

TREATMENT SERVICES, THE ASAM CRITERIA STRUCTURE, ACCESS, AND SPECIAL POPULATIONS

For this SUD needs assessment work and subsequent recommendations for Delaware's future SUD treatment system (adults and children), the HMA IOA team leverages Delaware's ongoing commitment to ground its treatment system in the ASAM Criteria.[73] The ASAM Criteria provides a research and evidence-based assessment of patient's strengths and needs to ensure they are being treated at the most appropriate level of care. The ASAM Criteria is fundamental to many evidence-based SUD treatment systems and is written into many state's codes, including Delaware.

The 3rd edition (most current) of the ASAM Criteria was published in 2013 and has a continuum of care with outpatient LOCs, intensive outpatient levels, and residential treatment levels. However, there is a 4th edition of the Criteria in development which realigns the LOCs to better suit the current evidence and align with modern healthcare systems. The state and treatment providers can benefit from this pre-published (2023) information as they prepare for future improvements in the Delaware SUD treatment system.[74]

Along with the changes shown in the following **Table 8** and **Graphics 4 and 5**, ASAM will be adding a Recovery Residency LOC that is benchmarked to NARR level 2. This will deliver safe therapeutic housing without formal psychotherapy or psychoeducation. It will be based in a SUD treatment milieu and focused on those that are precariously housed that need ongoing support for reintegrating back into a stable lifestyle.

Table 8: Crosswalk From the 3rd Edition to the Proposed 4th Edition of the ASAM Criteria 1of 2

3rd Edition LOC	4th Edition LOC
0.5	0.5
Not in 3rd Edition	1 (recovery)
1	1.5
1.5 + 1WM +OTS and Bio	1.7
2.1	2.1
2.5	2.5
2.5 + 2.7WM + OTS/OTP and Bio	2.7
3.1	3.1
3.2 WM	Incorporated into all levels
3.3	Cognitively Enhanced
3.5	3.5

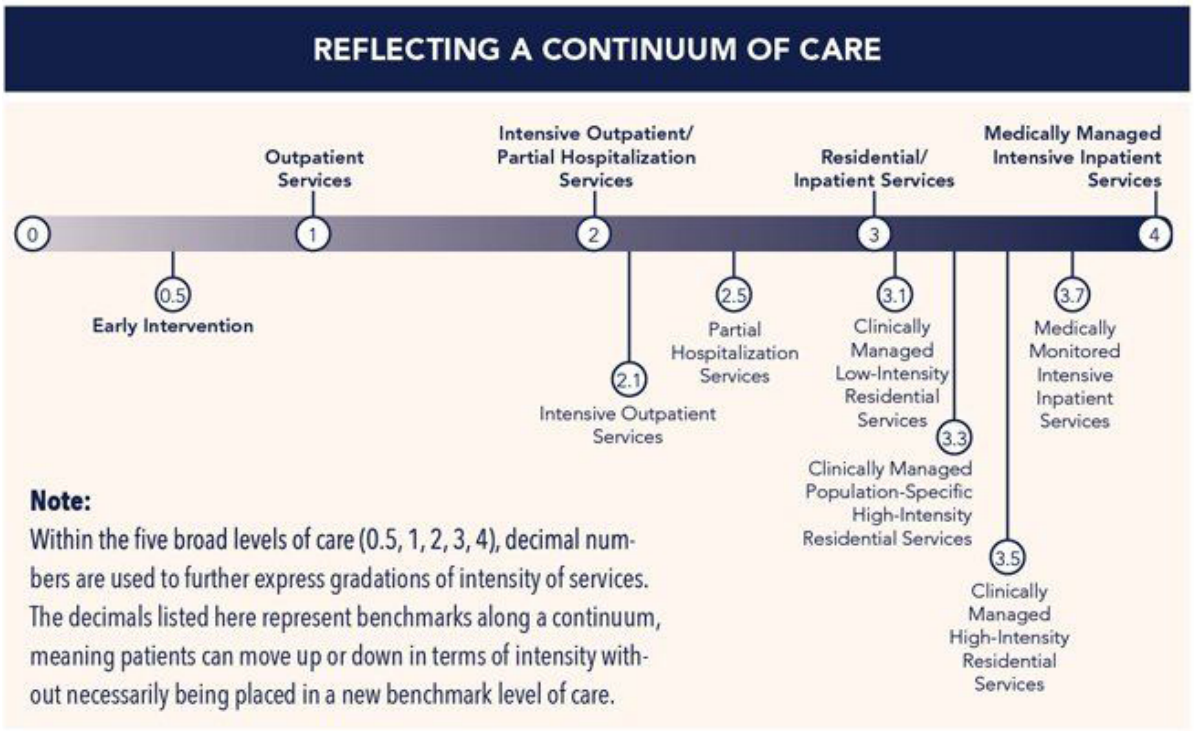
[73] Mee-Lee, David. *The ASAM Criteria: Treatment Criteria for Addictive, Substance-Related, and Co-Occurring Conditions*. Carson City, NV: The Change Companies, 2013.

[74] ASAM. *Proposed updates to the 4th Edition of The ASAM Criteria*, 2022. *Available at:* https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/publications/criteria-4th-edition/updated-major-changes.pdf?sfvrsn=41c62057_3

Table 8: Crosswalk From the 3rd Edition to the Proposed 4th Edition of the ASAM Criteria 2 of 2

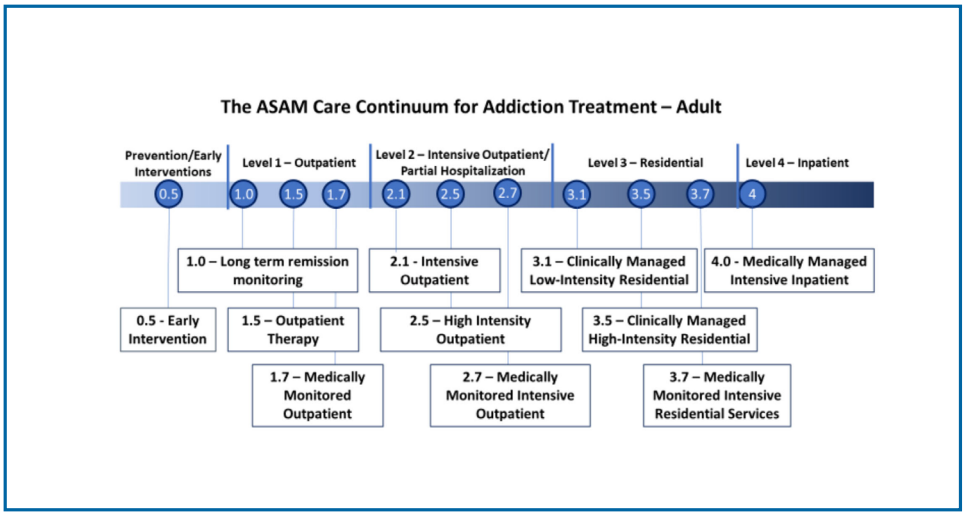
3rd Edition LOC	4th Edition LOC
3.5 + 3.7WM + OTS and Bio	3.7
4 + 4WM	4
COE	COE
COC	Incorporated into all levels

Graphic 4: *The Existing ASAM Levels of Care for the ASAM Criteria*[75]



[75] ASAM, *The ASAM criteria, third edition*, 2013. American Society of Addiction Medicine, Inc, MD.

Graphic 5: *The Proposed New Levels of Care for the ASAM Criteria's 4th Edition*[76]



THE ASAM CONTINUUM DATA

Appropriate patient assessment using the ASAM Criteria requires application of the multi-dimensional criteria by a trained clinician. This requires considerable clinical insight and is subject to moderate interrater variability. One way to significantly reduce this variability is by use of the ASAM Continuum. The ASAM Continuum is an online assessment that is built as an asymmetric branching algorithm that incorporates the multi-dimensional assessment and the LOC decision rules outlined in the ASAM Criteria. It has a standard set of questions that significantly improve the fidelity of care and LOC determination when delivered by different individuals at multiple locations. Once the interview is completed, a LOC is calculated by applying the decision rules. The ASAM Continuum also provides the needed "modifiers" to care, such as cognitively enhanced care, along with the LOC designation. This information allows providers to see what patients qualify for on the "front-end" of their treatment, independent of what is available. This is different from utilizing Treatment Episode Data Set from SAMHSA (TEDS) data, in that it is a true representation of what should happen, rather than ***what did happen*****.**

Delineating the specific needs for each LOC is complex. It can be dependent on the local population, the prevailing substances, and the age of the population. In order to attempt to quantify the need per level of care, the database from the ASAM Continuum Assessment Platform was used to identify the most probable distribution of service needs. Below are data from a national sample of approximately 2,500 individuals seeking SUD care, evaluated using the ASAM Continuum. This sample was utilized to determine the percentage of the SUD population requiring treatment at each LOC. This was then applied to the population of Delaware to determine the relative need for each ASAM LOC within the Delaware SUD treatment ecosystem. **Table 9** below shows the data from the ASAM continuum population used for the calculations.

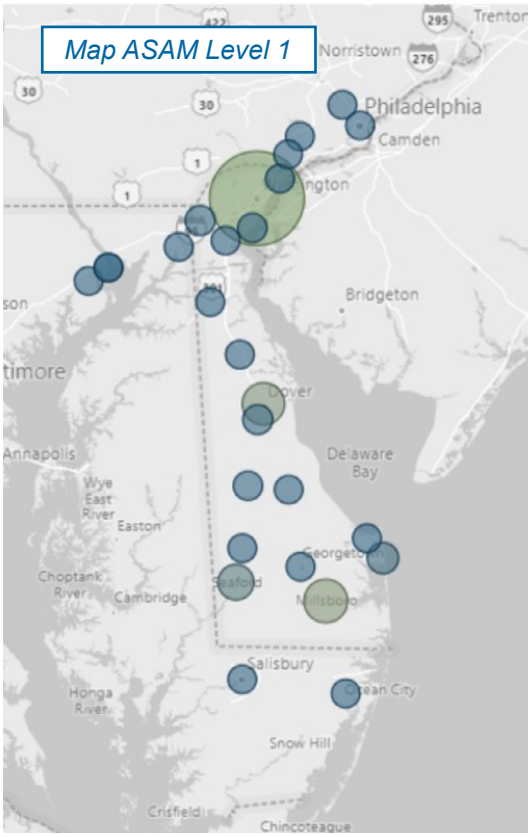
[76] ASAM. *Proposed updates to the 4th Edition of The ASAM Criteria*, 2022. *Available at: https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/publications/criteria-4th-edition/updated-major-changes.pdf?sfvrsn=41c62057_3*

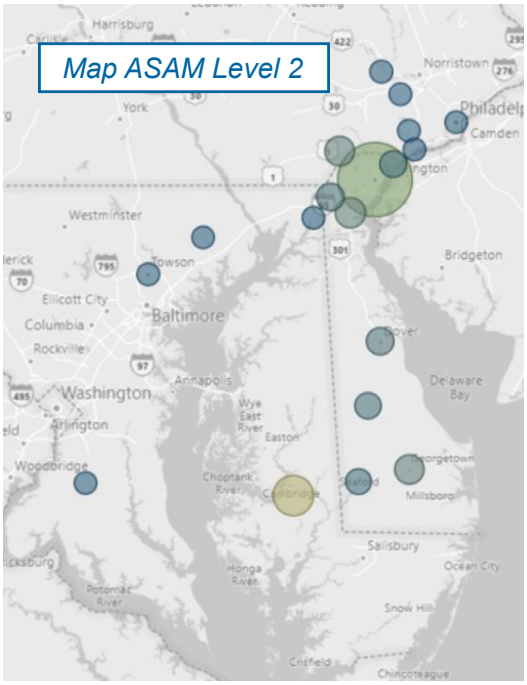
Table 9: Baseline Data for LOC Needs Calculations

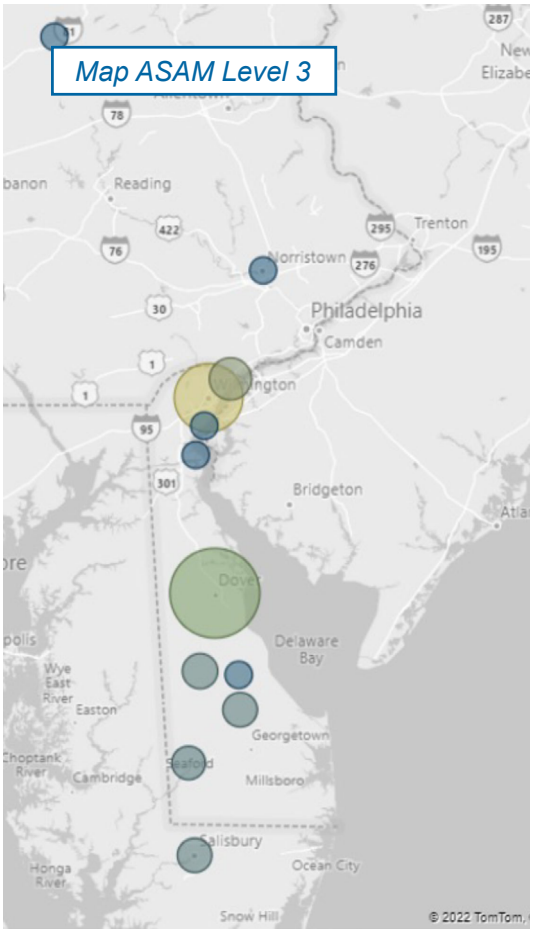
Rehab LOC Rec Only-Collapsed By Level		
Final LOC	**Count**	**Percentage of Patients with Rec'n**
WM/OTS/OTP only (no Rehab recommendation)	745	29.91%
L1	236	9.47%
L2.1	733	29.43%
L2.5	128	5.14%
L2.5+3.1	10	0.40%
L3.1	14	0.56%
L3.3	8	0.32%
L3.5	63	2.53%
L3.7	377	15.13%
L4	177	7.11%
Total	**2491**	**100%**

ASAM LOC HEAT MAPS

The below heat map shows the zip codes where the ASAM LOC services are currently being provided.







PROJECTED TREATMENT CAPACITY NEEDS

The numbers listed in **Tables 10-12** below are calculated using the total needs identified by the population and the percentage attributed to each LOC by the ASAM Continuum data. The number of beds are calculated based on appropriate length of stay within each LOC to reach stability and readiness to transfer to a lower LOC. LOC expansion per county should increase as listed below (using the Criteria's upcoming 4th edition LOCs):

Table 10: New Castle County Needs

LOC	Number of Patients Who Need Service Per Year	Number of Beds (Residential Treatment)
Level 1 (Long-term Remission Monitoring)	5,000	NA
Level 1.5 (Outpatient Therapy)	9,400	NA
Level 1.7 (Medically Monitored Outpatient)	15,000	NA
Level 2.1 (Intensive Outpatient)	5,000	NA
Level 2.5 (High Intensity Outpatient)	2,000	NA
Level 2.7 (Medically Monitored Intensive Outpatient)	15,000	NA
Level 3.1 (Clinically Managed Low-Intensity Residential)	6,000	300-400 (average 45 days stay)
Level 3.5 (Clinically Managed High-Intensity Residential)	3,500	200 (average 30 days stay)
Level 3.7 (Medically Monitored Intensive Residential Services)	2,000	100 (average 5 days stay)
Level 4 (Medically Managed Intensive Inpatient)	4,410	Hospital-based

Table 11: Kent County Needs

LOC	Number of Patients Who Need Service Per Year	Number of Beds (Residential Treatment)
Level 1 (Long-term Remission Monitoring)	1,100	NA
Level 1.5 (Outpatient Therapy)	2,068	NA
Level 1.7 (Medically Monitored Outpatient)	3,300	NA
Level 2.1 (Intensive Outpatient)	1,100	NA
Level 2.5 (High Intensity Outpatient)	440	NA
Level 2.7 (Medically Monitored Intensive Outpatient)	3,300	NA
Level 3.1 (Clinically Managed Low-Intensity Residential)	1,320	60-90 (average 45 days stay)
Level 3.5 (Clinically Managed High-Intensity Residential)	770	45 (average 30 days stay)
Level 3.7 (Medically Monitored Intensive Residential Services)	440	20-30 (average 5 days stay)
Level 4 (Medically Managed Intensive Inpatient)	4,410	Hospital-based

Table 12: Sussex County Needs 1of 2

LOC	Number of Patients Who Need Service Per Year	Number of Beds (Residential Treatment)
Level 1 (Long-term Remission Monitoring)	2,200	NA
Level 1.5 (Outpatient Therapy)	4,100	NA
Level 1.7 (Medically Monitored Outpatient)	6,600	NA
Level 2.1 (Intensive Outpatient)	2,200	NA

Table 12: Sussex County Needs 2 of 2

LOC	Number of Patients Who Need Service Per Year	Number of Beds (Residential Treatment)
Level 2.5 (High Intensity Outpatient)	880	NA
Level 2.7 (Medically Monitored Intensive Outpatient)	6,600	NA
Level 3.1 (Clinically Managed Low-Intensity Residential)	2,640	130-175 (average 45 days stay)
Level 3.5 (Clinically Managed High-Intensity Residential)	1,540	70-90 (average 30 days stay)
Level 3.7 (Medically Monitored Intensive Residential Services)	880	40-50 (average 5 days stay)
Level 4 (Medically Managed Intensive Inpatient)	4,410	Hospital-based

The following **Tables 13-16** also utilize a standard calculation that assumes a minimum 10% of the population has a treatable SUD. While this is a significant underestimation of the total needs of a population for all addictions (as it does not consider nicotine or behavioral addictions), it allows us to use benchmark numbers without actual prevalence data in Delaware for the general population. Then, the HMA IOA team used the continuum data to stratify by ASAM LOCs to identify how many people need to be treated at each ASAM level and compare that to the DHIN data for numbers served (via claims) at each LOC (statewide and by county) in 2020. This yielded a gap number that helps indicate what capacity is needed to be added to the system to meet the actual needs.

Table 13: Statewide Needs

LOC	Projected Individual Needs (2020)	DHIN Served (2020)	Gap
Level 1	39,426	18,979	**20,447 (52%)**
Level 2	35,004	2,325	**32,679 (93%)**
Level 3	18,568	1,001	**17,567 (95%)**
Level 4	7,113	0	**7,113 (100%)**
Total	**100,111**	**22,305**	**77,806 (78%)**

Table 14: New Castle County Needs

LOC	Projected Individual Needs (2020)	DHIN Served (2020)	Gap
Level 1	24,444	10,305	**14,139 (58%)**
Level 2	21,703	1,116	**20,587 (95%)**
Level 3	11,512	529	**10,983 (95%)**
Level 4	4,410	0	**4,410 (100%)**
Total	**62,068**	**11,950**	**82,237 (81%)**

Table 15: Kent County Needs

LOC	Projected Individual Needs (2020)	DHIN Served (2020)	Gap
Level 1	4,410	3,678	**732 (17%)**
Level 2	3,915	547	**3,368 (86%)**
Level 3	2,077	225	**1,852 (89%)**
Level 4	796	0	**796 (100%)**
Total	**14,081**	**4,550**	**9,531 (68%)**

Table 16: Sussex County Needs

LOC	Projected Individual Needs (2020)	DHIN Served (2020)	Gap
Level 1	10,761	4,996	**5,765 (54%)**
Level 2	9,553	662	**8,892 (93%)**
Level 3	5,068	247	**4,821 (95%)**
Level 4	1,941	0	**1,941 (100%)**
Total	**27,323**	**5,905**	**21,418 (78%)**

STAFFING COST CALCULATION

As is demonstrated in the tables above, the system today does not adequately meet treatment needs for ASAM Level 1, and the inability to meet the treatment needs grows with more complex LOCs. HMA IOA has built a capacity calculator, based on the National Academy Framework, which utilizes the number of those needing treatment to calculate an overall need for a geographic area. The calculator then subtracts existing capacity to estimate the cost of bringing the treatment system to the necessary future state. The below tables estimate the staffing costs of adequately funding the SUD treatment ecosystem by county.

One impetus for this needs assessment was whether there was more capacity or less capacity for treatment in any one county, as it has long been assumed that Sussex County was particularly bereft of needed SUD and co-occurring treatment services. The above calculations clearly indicate there is not adequate treatment available in any region of Delaware.

HMA IOA further estimates the overall staffing costs to enhance the treatment ecosystem at 25%, 50%, 75% and 100% of estimated needs (see **Table 17** below). Presently, it is estimated that the Delaware treatment system (public and commercial) is operating at approximately 15% of the current need. Although, it should be noted that if only examining ASAM LOCs 2-4, that number drops to approximately 5%. For the purposes of this estimate, the team used the benchmark that 15% of the current need is met.

Table 17: Staffing Costs (10 Year Projection) in Millions

Area	25% of Needs	50% of Needs	75% of Needs	100% of Needs
New Castle	$449	$898	$1,347	$1,796
Kent	$82	$163	$245	$327
Sussex	$199	$398	$598	$797
Delaware	$730	$1,460	$2,190	$2,920

It should be noted that any increase in medical spending creates an increase in medical field employment and generates positive tax revenue for the state. This also leads to entry level employment for those who are in long-term recovery as peers.

PROVIDER RECRUITMENT AND RETENTION

As discussed previously, there are certainly opportunities to better maximize the capacity of providers who are already treating OUD; however, the calculator also provides an estimate of how many of each of these providers will be needed to adequately staff the SUD treatment ecosystem.

The estimates below in **Table 18** are based on the calculation developed by the National Academy of Medicine framework used throughout this report.[77]

Table 18: Projected Staffing Needs

	Prescriber	MSW	AOD	RNCW	Peer
Year 1 Staffing Needs	44	78	33	123	75
Year 2 Staffing Needs	100	176	64	241	159
Year 3 Staffing Needs	166	291	91	356	250
Year 4 Staffing Needs	241	422	116	467	347
Year 5 Staffing Needs	323	564	139	576	449
Year 6 Staffing Needs	343	596	133	569	463
Year 7 Staffing Needs	360	625	128	563	476
Year 8 Staffing Needs	375	653	124	556	487
Year 9 Staffing Needs	389	676	120	552	498
Year 10 Staffing Needs	402	698	117	546	507

Delaware will need to invest significantly in workforce development and training to attract and retain Prescribers, Masters' level Social Workers (MSWs), Alcohol and Other Drug counselors (AOD), Registered Nurse Case Workers, and Peer Support Specialists.

RECOMMENDATIONS:

- Each county should have a full continuum of care that reaches at least 50% of the clinical needs.
- Recruiting and retention programs must be developed to add to the workforce to serve each LOC adequately.
- Partnerships should be pursued with colleges and universities to develop additional clinical programs (Master's level and Doctoral level) to increase workforce (to work with children, adolescents and adults) in the SUD treatment field.
- Additional partnerships with area medical schools in Pennsylvania, New Jersey and Maryland might also be considered to bring physicians and midlevel providers to the state.
- Support and expand the use of telemedicine (including commensurate payment like is received for face-to-face intervention) to expand coverage of specialty care access and expand the capacity of the existing workforce. Many states have models that can be easily replicated for telemedicine in both individual and group SUD treatment.

[77] ASAM. *Proposed updates to the 4th Edition of The ASAM Criteria*, 2022. *Available at:* https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/publications/criteria-4th-edition/updated-major-changes.pdf?sfvrsn=41c62057_3

    - Advance provision of SUD treatment services via telemedicine, including screening for compliance. Group and individual SUD treatment is commonly and successfully done in many states.
    - Advance provider skills and reimbursement capability for telehealth service providers.
- Implement technology solutions for contingency management programs statewide.
- Public transportation is a challenge in the state, particularly in Sussex County, and stakeholders have repeatedly noted the challenges with current Medicaid approved transportation programs. DSAMH has recently started a program in Sussex County that allows (and reimburses) clients to use ride-share programs, such as Uber or Lyft, for transportation to treatment. If the outcome data from this program shows improved access to treatment, this should be expanded to the other two counties.
- DTRN has been a very useful tool for the system for referral management and finding treatment openings (available beds/slots). Admittedly, the platform is only accurate if the partners continually update their openings in as close to real-time as possible. The state should strongly consider opening up access (e.g., allowing providers to buy into the system) for those who may not contract with the DSAMH and/or out-of-state providers (right over the state border) who are available to accept patients from Delaware.
- New programs should prioritize their sites to locations with public transportation routes within walking distance of the treatment program. Consider locating programs near major highways in the state and intersections. Priority may necessarily be given to using space that can readily be converted to full service and continuum treatment services.
- All health systems must serve as the gateway for SUD treatment services and are central to an efficient, effective system of SUD care. The EDs must continue to expand their treatment services, including induction and connection to community-based MAT providers. The state has been working on this issue and three of the five hospital systems now have algorithms in place to identify individuals in need of treatment, induct, and obtain a follow-up appointment with a community-based MAT provider within several days of discharge from the ED. This is very encouraging but must be fully operationalized (and evaluated) as soon as possible. Continued efforts to expedite like services in the other two health systems are critical. While these efforts are commendable, Delaware should consider more forceful action in the form of requiring participation and adoption of induction protocols and other efforts to ensure patients seen in EDs are connected to services. MAT is the community standard of care for OUD and, as such, earlier MAT interventions starting in the ED should be a matter of standard care.
- Improve coordination and integration of care statewide. SUD is a chronic, treatable, relapsing medical condition like high blood pressure and diabetes and often accompanied by other co-morbid physical and mental health conditions which can greatly complicate treatment. Innovative integrated care coordination models are showing promising results for successfully treating SUD[78] and deserve dedicated and directed investigation and consideration for implementation. Additionally, current best practice in SUD treatment requires multidisciplinary care teams, including peer support specialists.

[78] "Care Coordination Strategies for Patients Can Improve Substance Use Disorder Outcomes." The Pew Charitable Trusts, April 23, 2020. https://www.pewtrusts.org/research-and-analysis/issue-briefs/2020/04/care-coordination-strategies-for-patients-can-improve-substance-use-disorder-outcomes

- Given the DHIN data that showed significant high frequency visitation to the EDs and inpatient units of Delaware hospitals, it is imperative that hospitals play a much larger part in screening, assessment, and initiation of treatment for Delawareans. There is an urgent need to build (and enhance) policies, procedures, pathways, and order sets for every hospital in Delaware to address and treat SUD. ***The team strongly recommends that medication initiation happens consistently in every ED, standalone medical clinic, FQHC, and inpatient ward.*** Consistent with other recommendations, it is critical to capture data for induction in all settings and to ensure warm/hot handoffs to community treatment providers are consistently made.
- Hospitals must also provide appropriate harm reduction tools, such as naloxone distribution (not prescription only) and SSPs for ED patients with an injection use disorder.

HMA IOA ESTIMATES THE NUMBER OF MINORS WHO NEEDED OUD CARE IN 2020 AS 564, AND THE NUMBER WHO DID RECEIVE (PER CLAIMS DATA) OUD CARE WAS 17

- While no specific data for the "appropriate" number of recovery residency beds exists, this population has a high risk of being unstably housed for extended periods. Given this, starting with 50+ beds per county and scaling to need would be a logical place to start.
- Identify the density of adolescent SUD burden in Delaware in conjunction with the DPBHS and public and private stakeholders. Build the system to match the need. Currently, most adolescents have ***little or no access to evidence-based SUD treatment in the state of Delaware.***
- Develop specific, family focused programming for pregnant and parenting patients with SUD.
- Reimbursement for peer support specialists should be contingent upon certification. Delaware has an excellent peer training and certification model, but not all programs using peers require certification.

COMPETENCY

There will also need to be a large increase in the workforce that is responsible for delivering care to those with SUD. To improve the quality of care, that workforce also must be trained to fidelity and be able to deliver the specialty level of care needed to best serve individuals with SUD. Competencies are not just about SUD, but about the specific LOC where someone works, the co-occurring illness the client may have, and the local determinants of health that may be barriers to stabilization. Each provider must be trained in the core concepts and specifics of their field.

Core concepts:

- Structure of care
- Density of care
- Array of services
- Competencies for Prescribers
- Competencies for Therapists

- Competencies for Counselors/BH Support Staff
- Competencies for Care Coordinators
- Competencies for Peer Support
- Competencies for Administrative and Billing Staff

SPECIFIC COMPETENCY RECOMMENDATIONS FROM THE NATIONAL ACADEMY OF MEDICINE[79]

Below are the critical areas of competency (training and proficiency) recommended by the NAM. The HMA IOA team recommends that these areas are the foundation for workforce training and the provision of SUD treatment.

STRUCTURE OF SUD INTERVENTIONS

- Use the ASAM Criteria
- Outpatient approaches to care
- Telehealth approaches to care
- Residential approaches to care
- Hospital-based approaches to care

TEAM-BASED CARE

- Components of high functioning teams[80]
- Care implementation
- Payment structures

ARRAY OF SERVICES

- Biomedical services (MOUD/MAT, infectious disease, etc.)
- Co-occurring enhanced services
- Pain evaluation and treatment
- Withdrawal management
- Housing
- Case management, including consideration of SDOH
- Behavioral therapy services

[79] Ibid.

[80] Beaulieu-Volk, Debra. "7 Qualities of High-Functioning Healthcare Teams." Fierce Healthcare, April 10, 2015. https://www.fiercehealthcare.com/healthcare/7-qualities-high-functioning-healthcare-teams

COMPETENCIES FOR PRESCRIBERS AND HEALTHCARE PROFESSIONAL STAFF SUPPORTING THEM (RNS, MAS, ETC.)[81]

- Prevalence and demography of SUDs
- Neuroscience and pathophysiology of SUDs
- Motivational interviewing
- Toxicological evaluation of SUDs
- Assessment, physical examination, and diagnosis of SUDs and other addictions
- Medications used for the treatment of SUDs
- Recognition and treatment of withdrawal from substances
- Effect of stigma and structural racism in treatment
- Approaches to special populations with SUDs (patients with chronic pain, pregnancy, etc.)
- The SUD treatment system

COMPETENCIES FOR THERAPISTS (PSYCHOLOGISTS, LCSWS, LICENSED PROFESSIONAL COUNSELORS, FAMILY THERAPISTS, ETC.)[82]

- Prevalence and demography of SUDs
- The six dimensions of the ASAM assessment
- Psychiatric screening and assessment tools
- Motivational interviewing
- Evidence-based behavioral treatments for SUDs and other addictions
- Adverse childhood experiences (ACEs) and their correlation with behavior
- Effect of stigma and structural racism in treatment
- Benefits of medications for SUD treatment
- SDOH and how they relate to SUD treatment

COMPETENCIES FOR COUNSELORS AND BEHAVIORAL HEALTH SUPPORT STAFF (ALCOHOL AND OTHER DRUG COUNSELORS, BSWS, ETC.)[83]

- Prevalence and demography of SUD
- Screening and brief assessment of SUDs and other addictions
- Psychiatric screening and assessment tools
- Motivational interviewing
- Evidence-based behavioral treatments for SUDs and other addictions

[81] "Core Competencies for Addiction Medicine." Accessed June 22, 2022. https://acaam.memberclicks.net/assets/docs/Core-Competencies-for-Addiction-Medicine.pdf

[82] "Addiction Counseling Competencies." Substance Abuse and Mental Health Services Administration. Accessed January 27, 2021. https://store.samhsa.gov/sites/default/files/d7/priv/sma12-4171.pdf

[83] Ibid.

- ACEs and their correlation with behavior
- Motivational interviewing
- Evidence-based behavioral treatments for SUDs and other addictions
- Effect of stigma and structural racism in treatment
- Benefits of medications for SUD treatment
- SDOH and how they relate to SUD treatment

COMPETENCIES FOR CARE COORDINATORS[84]

- Prevalence and demography of SUD
- Screening and brief assessment of SUDs and other addictions
- Motivational interviewing
- Documentation and utilization management
- Effect of stigma and structural racism in treatment

COMPETENCIES FOR PEER SUPPORT[85]

- Building caring and collaborative relationships
- How to share lived experience
- How to provide support
- How to support recovery planning
- Motivational interviewing
- Crisis mitigation
- How to communicate with empathy

RECOMMENDATIONS:

- The state should fully identify and establish the competencies required for each provider type at each LOC for proficiency in all SUDs (not just opioids). The system can be enhanced by creating benchmarks and standards for its SUD treatment system workforce and tie those competencies to training and certification programs.
- Support the universities, Delaware's health systems, and FQHCs in developing and delivering free or heavily discounted:
  - Training programs to teach and reinforce necessary skills annually to new and existing providers; and
  - Certification programs for specific behavioral health interventions, such as cognitive behavioral therapy (CBT), eye movement desensitization and reprocessing (EMDR),

[84] Hoge, M.A., J.A. Morris, M. Laraia, A. Pomerantz, and T. Farley. "Core Competencies for Integrated Behavioral Health and Primary Care." SAMHSA-HRSA Center For Integrated Health Solutions. Accessed January 27, 2021. https://www.thenationalcouncil.org/wp-content/uploads/2020/01/Integration_Competencies_Final.pdf

[85] "Core Competencies for Peer Workers in Behavioral Health Services." Substance Abuse and Mental Health Services. Accessed January 27, 2021. https://www.samhsa.gov/sites/default/files/programs_campaigns/brss_tacs/core-competencies_508_12_13_18.pdf

- dialectical behavioral therapy (DBT), contingency management (CM), and the many others that have shown positive outcomes in the peer-reviewed literature for successful SUD treatment.

- It is also critical that the Divisions of Substance Abuse and Mental Health (adults) and Prevention and Behavioral Health Services (children) coordinate comprehensive and ongoing clinical trainings for SUD and co-occurring disorders. Consider ongoing partnerships with the universities, health systems and FQHCs to support the necessary training needs.

CONSISTENCY

In order to improve the consistency and predictability of SUD care, Delaware needs to improve (and measure) the quality of SUD care. This starts by utilizing standard validated tools that yield predictable and measurable outcomes. It was evident from the provider survey that several different tools are being utilized for screening, assessment, and LOC determination throughout the state. Most of these are either not evidence-based (often internally developed tools), are being used for inappropriate means (Addiction Severity Index being used as a LOC tool) or being inconsistently applied (patient answered vs. provider administered). There are also many different electronic health records used that do not communicate with each other, and there is no centralized database to monitor disease burden.

RECOMMENDATIONS:

- Choose statewide tools for screening, brief assessment, and LOC determination. NIDA recommends the following:
  - Screening (primary care settings, hospitals, and schools)
    - Adults – TAPS[86,87]
    - Adolescents – S2BI or BSTAD[88]
    - Pregnant patients – SURP-P or 4P's Plus[89]
  - Brief Assessment (primary care, hospitals, schools, and specialty treatment facilities)
    - Adult – TAPS
    - Adolescents – CRAFFT or DAST + Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide
    - Pregnant patients – TAPS

[86] Gryczynski, Jan, Jennifer McNeely, Li-Tzy Wu, Geetha A. Subramaniam, Dace S. Svikis, Lauretta A. Cathers, Gaurav Sharma, et al. "Validation of the TAPS-1: A Four-Item Screening Tool to Identify Unhealthy Substance Use in Primary Care." *Journal of General Internal Medicine* 32, no. 9 (2017): 990–96. https://doi.org/10.1007/s11606-017-4079-x

[87] Kelly, Sharon M., Jan Gryczynski, Shannon Gwin Mitchell, Arethusa Kirk, Kevin E. O'Grady, and Robert P. Schwartz. "Validity of Brief Screening Instrument for Adolescent Tobacco, Alcohol, and Drug Use." *Pediatrics* 133, no. 5 (2014): 819–26. https://doi.org/10.1542/peds.2013-2346

[88] Levy, Sharon, Roger Weiss, Lon Sherritt, Rosemary Ziemnik, Allegra Spalding, Shari Van Hook, and Lydia A. Shrier. "An Electronic Screen for Triaging Adolescent Substance Use by Risk Levels." *JAMA Pediatrics* 168, no. 9 (2014): 822. https://doi.org/10.1001/jamapediatrics.2014.774

[89] Coleman-Cowger, Victoria H., Emmanuel A. Oga, Erica N. Peters, Kathleen E. Trocin, Bartosz Koszowski, and Katrina Mark. "Accuracy of Three Screening Tools for Prenatal Substance Use." *Obstetrics & Gynecology* 133, no. 5 (2019): 952–61. https://doi.org/10.1097/aog.0000000000003230

- LOC Determination (ASAM endorsed) (hospitals and specialty care settings)
  - ASAM Co-Triage (provisional LOC)
  - ASAM Criteria Assessment Interview Guide (paper-based, free)[90]
  - The ASAM Continuum (computer, licensing fee)[91]

The utilization of the same tools will help improve transition of patients between providers, decrease utilization management conflicts, and create a common language across the provider network. For example, the State of Michigan has expanded and implemented the ASAM Continuum and allowed for electronic transfer of information, data analysis, and more efficient care to be delivered. Choosing specific universal tools also allows for statewide training to enhance fidelity of care delivery.

- Mandate that those responsible for utilization management are licensed to the same standards as those delivering the care. Many conflicts arise when there is a distinct difference in training between the provider and the payer.
- All DSAMH licensed SUD programs must develop robust quality assurance (QA) programs that assure fidelity to evidence-based practices and measure and report outcomes. HEDIS and Medicaid's Child, Adult, and Health Home Core Set measures should also be routinely collected, analyzed, and reported. It is recommended that the state consider alternative funding sources for implementing QA programs, such as State Opioid Response (SOR) or Opioid Settlement Funding to decrease the burden on an already underfunded SUD treatment system.
  - Funding should be made available to expand and improve the electronic health records (EHRs) for treatment programs, particularly for programs with antiquated electronic health records or still working from paper charting. This will boost payment efficiency and data collection efforts.
  - Multiple federal programs, including the ACA, provided funds to incentivize implementation of EHR's in hospitals and outpatient medical settings but did not include behavioral health or SUD programs. There should be a granting program set up to either enhance or replace a program's current EHR that does not meet certain functionality or interoperability requirements.
- Reimbursement for peer support specialists should be contingent upon certification. Delaware has an excellent peer training and certification model, but not all programs using peers require certification.
- Develop a statewide learning collaborative dedicated to preparing for and completing CARF LOC certification for residential treatment providers. CARF certification ensures that the programs adhere to the ASAM criteria for levels 3.1, 3.5, 3.7, and 3.7 WM. This certification would dramatically improve predictability and quality of care and should be completed by 2024.
- To adequately measure strategic success, it would be ideal for DHIN to receive individually identifiable data for claims with a Behavioral Health component. One of the state's significant payers (blinded as Payer 8) to this study does not contribute individually identifiable BH claims to the DHIN APCD database. With individually identifiable data, it is possible to develop a set of metrics that measure the success of policy initiatives utilizing claims data.

[90] "The Asam Criteria Assessment Interview Guide." American Society of Addiction Medicine. https://sitefinitystorage.blob.core.windows.net/sitefinity-production-blobs/docs/default-source/quality-science/asam-paper-criteria---edtitable-final-form.pdf?sfvrsn=5b7e2a32_11

[91] "ASAM Continuum." American Society of Addiction Medicine. Accessed June 22, 2022. https://www.asam.org/asam-criteria/asam-criteria-software/asam-continuum

COMPENSATION

Reimbursement rates must be immediately made regionally competitive. There is no time to waste, and this must be prioritized. New providers will not likely consider coming into the state and turnover will continue to be a problem if rates are not made competitive. Programs cannot be expected to be able to hire a well-trained and competent workforce without being able to pay competitive regional wages, which are directly linked to competitive reimbursement for services. It is strongly recommended that the public rates be evaluated annually and adjusted, at a minimum, to reflect regional averages.

While health systems have the advantage of blending different insurances to create a neutral or positive margin, SUD treatment providers generally cater to either public or private payers. This is patient, not provider choice. This means that the reimbursement for Medicaid will need to cover the entire cost to deliver the services. It cannot be benchmarked to a fraction of commercial rates if Delaware wants to have a sustainable SUD delivery system. Other forms of sustainable funds such as block grant or tax allocation can be used to enhance; however, these will need to be "protected" if providers are to rely on them.

RECOMMENDATIONS:

- Reimbursement rates need to be increased for outpatient, residential, and withdrawal management and be regionally competitive, at a minimum. There is an urgent need to study and define the reimbursement rates to "right-size them" and then implement rates that "actually pay for" the treatment that is needed. Delaware's reimbursement rates are among the worst in the nation (certainly when compared to neighboring states), but simply matching neighboring states is not the whole answer, while perhaps a needed first step. Truly understanding what rates need to be established to pay for the required care is paramount.
    - Determine the actual cost to deliver evidence-based care at each level of care and implement strategies to design and build the needed system and reimburse providers appropriately.
    - Rates should be modified to accommodate the identified financial need.
    - Rate "balancing" should occur so that each service delivered is covered at or above the actual cost.
- Value-based arrangements/incentives must be provided for those providers that are able to track outcomes for their interventions to incentivize evidence-based practices and outcome-based care delivery.
- Value-based payment incentives should be offered to those offering multiple LOCs in a common location.
- Reimburse adolescent prevention and treatment programs at the same level as adult prevention and treatment programs.

COMMUNITY

In order for any of the above interventions to reach peak implementation, Delaware communities – health and social care providers, the businesses, the faith organizations, the educational institutions, law enforcement, and individuals – must support the development of an integrated statewide SUD treatment system. This support can come in many forms, such as property tax allocation for treatment system supports, zoning rules that do not discriminate against SUD treatment providers and the clinics needed for treatment, support for positive policing strategies that utilize jail diversion approaches to care for those with SUD and, most importantly, working together to decrease stigma around SUD and SUD treatment.

RECOMMENDATIONS:

- Continue to develop and fund statewide educational and prevention campaigns; all educational and marketing campaigns must be evidence-based. ***Prevention is treatment, especially for youth, and all efforts to expand the existing prevention work must be evidence-based.*** Several SUD and opioid educational programs (e.g., prevention) are currently being implemented across the state, but there is no outcome data available to report.
- Explore opportunities to expand the "Help is Here" website (stakeholders like the website) as an anchor in these educational campaigns. Strategic educational campaigns and technical assistance delivery structure and cost were developed utilizing previous analyses in the State of California. While the research was completed in California, the extrapolated data is applicable to Delaware.
- With a similar costing methodology, Delaware could deliver education on the following topics:
  - Appropriate treatment of pain
  - Anti-stigma campaign covering SUD
  - Evidence-based approach to OUD
  - Prevention of SUD in youth
- Review local zoning laws for discriminatory language and pass local ordinances that incentivize communities to support SUD treatment facilities and housing options.
- Solidify public transportation capabilities so that those needing treatment can get to treatment with vouchers and local capabilities.
- Continue the support and development of additional partnerships between law enforcement and behavioral health clinicians (e.g., embedded clinician and co-responder model).
- Hold local health care institutions and providers accountable for their efforts in treating those with SUD. This will require a sense of urgency from all involved and a shared commitment to measure outcomes. A common theme throughout the assessment process was the message that ***there is no time to waste. SUD is an urgent public health matter and must be treated as such.***
- Document and make public detailed lists of services that provide support for SDOH (e.g., food pantries, job training, parenting classes, rent support programs, etc.).

Finally, the recommendations in this report following the Needs Assessment and all ongoing efforts must be integrated into a straightforward action plan that is coordinated, accountable, and includes measurable outcomes that are evaluated and reported regularly. Delaware should strongly consider

a “single point of control and oversight” for addressing the OUD/SUD public health crisis and the SUD treatment system. This body should, at a minimum, directly report to the governor or governor’s agent and be supported by legislative mandates for action and include:

- Budget authority
- Legislative authority for:
  - Plan of action (for children, adolescents, and adults) that has clear timelines and deliverables
  - Quality oversight to develop metrics, measure outcomes, and publicly report them
  - Developing a statewide data strategy to maximize opportunities to leverage data, including data from external sources for evaluation, quality improvement, and accountability. A central data dashboard and information center should be considered.
  - Creating and maintaining collaboration of efforts and initiatives for all publicly funded efforts, committees, and commissions to make sure they:
    - Do not inappropriately overlap;
    - Are focused on actionable solutions;
    - Are evaluated through data; and
    - Inform a public dashboard for all stakeholders to monitor that, at a minimum, includes outcomes and trends.
  - Ensuring reimbursement rates are adequate to incentivize desired SUD treatment and improve outcomes
  - Providing for workforce development and training
  - Expanding the use of telemedicine and include considerations for accommodations for those that may not have devices, broadband access, or private locations for telehealth appointments
  - Developing and implementing a strategic plan for fully integrated and coordinated evidence-based SUD care to include equity measures to address traditionally marginalized groups (e.g., People of Color, Veterans, undocumented individuals, those living in poverty (including unhoused individuals), and those that are incarcerated or have been previously incarcerated)
    - Prioritize implementing evidence-based practices systemwide
    - Address access issues, transportation, and transitions of care
    - Consider universal standardized tools
    - Engage all care providers and care locations
    - Educate across the system and in communities, so all understand the system design and how to access and navigate the system

Delaware is a small state, and a single point of control to address the SUD treatment system is needed to drive cohesion and positive results systemwide.

APPENDIX A: CLAIMS DATA ANALYSIS

METHODOLOGY

DATA

HMA IOA received a data extract from the All-Payer Claims Database housed at DHIN. The extract included the following files:

- A de-identified membership file across all payers from 2017-2020, irrespective of whether someone had a SUD diagnosis.
- A de-identified claims file across all payers from 2017-2020. Only claims with a SUD diagnosis were included.
- A de-identified pharmacy file across all payers from 2017-2020. HMA IOA received all pharmacy claims for anyone with a SUD diagnosis between 2017 and 2020.
- A provider reference file.

HMA IOA also supplemented the data with multiple public data sets, including the American Community Survey (ACS) data, National Provider Identifier (NPI), and Medicare Provider Taxonomy Reference Data.

Significant Caveats and Potential Limitations: HMA IOA's analysis has several caveats and known or potential limitations which must be cited and highlighted:

- Identified payer information was blinded at the request of the payers. This was a requirement of the payers to allow the study to proceed. This makes it more difficult to identify observed patterns by payer.
- One payer blinds all member information within a medical claim when sending to DHIN. This blinding eliminates the ability to perform any member level analysis of claims data, even though the data are de-identified.
- Some payers have significantly less information in the data extract from 2019 to 2020. HMA IOA has examined data between January/February 2019 and January/February 2020 (pre-pandemic) and found significant drop-offs Year over Year (YoY). HMA IOA tried to account for this using regression techniques, where appropriate. Nationally, there was a reduction in outpatient and pharmacy data.

Data Methodology: All data were loaded to a single database in HMA IOA's SQL Server platform HMA IOA DataPlus, where the data could be combined to answer a variety of database questions. The database is secured and only two individuals from HMA IOA had direct access to the database. The DHIN technical team provided guidance on how to manipulate the data and, after loading the data, DHIN and HMA IOA jointly conducted a reconciliation exercise to ensure that the number of claims matched across systems.

Once the data were loaded, HMA IOA ran a series of descriptive statistics focused on the demographics of individuals utilizing SUD services, utilization characteristics of the same individuals and identification of pharmaceuticals received. HMA IOA also utilized CDC WONDER data to identify patterns in adverse drug and alcohol outcomes. The CDC WONDER database tracks Cause of Death information, including diagnoses on drug and alcohol causes of death.

Where HMA IOA needed to run analyses which looked at individual utilization, they accommodated for the absence of identifiable payer information using the below methodology.

Example Table (Pre-Methodology)			
Payer	**Unique Individuals Served**	**Unique Claims**	**Ratio**
2	300	3000	10
8	1	35000	N/A
17	1000	8000	8
Weighted Average Total	**1300**	**11000**	**8.46**

Example Table (Post-Methodology)			
Payer	**Unique Individuals Served**	**Unique Claims**	**Ratio**
2	300	3000	10
8	4137	35000	8.46
17	1000	8000	8
Weighted Average Total	**5437**	**46000**	**8.46**

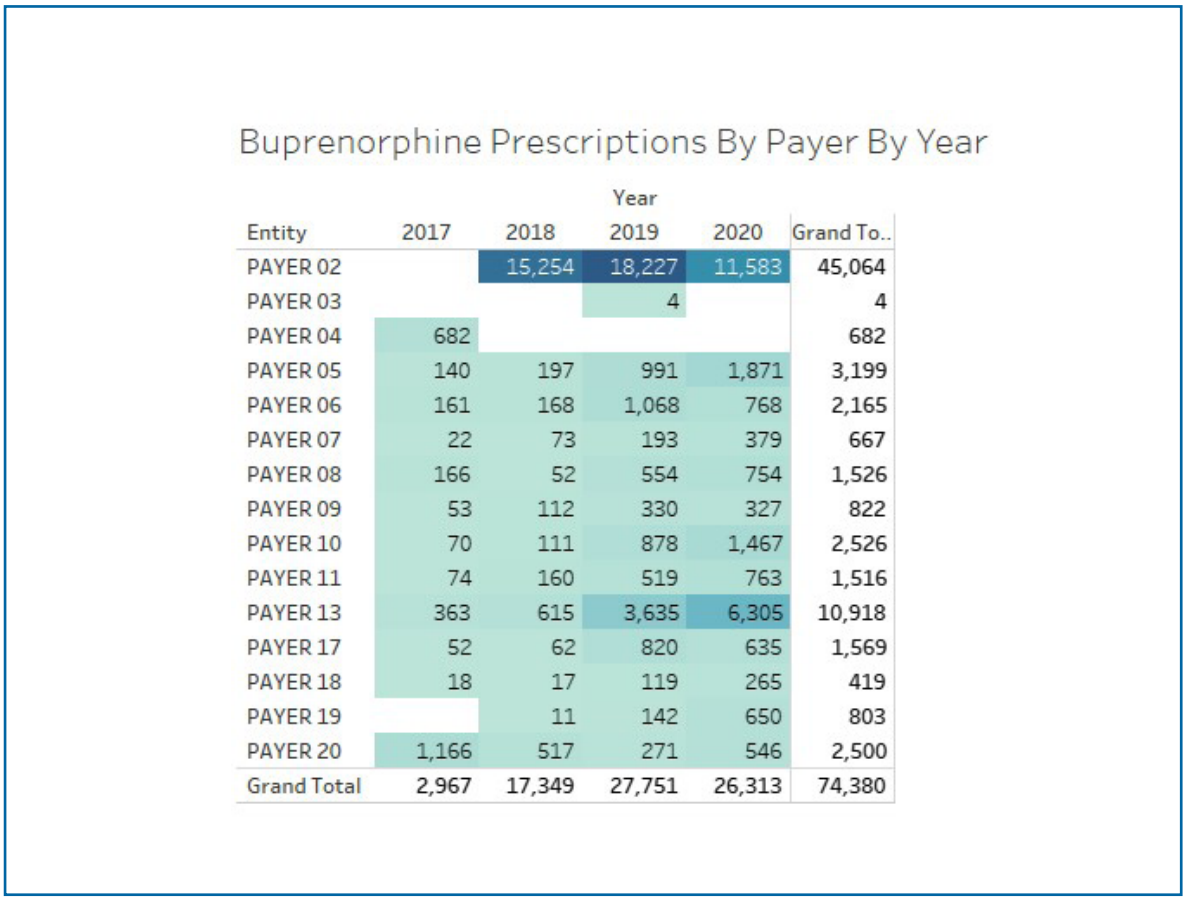
Obviously, this is an imperfect solution for calculating a unique number of individuals served. A more perfect solution would have involved intense cohort stratification and propensity matching; however, due to the fact that there are no population characteristics for Payer 8, this was not possible.

ANALYSIS OF SIGNIFICANT SUD TREATMENT DRUGS

BUPRENORPHINE

Chart 1 below shows buprenorphine Prescriptions By Payer By Year. Overall, the number of prescriptions for buprenorphine consistently increased until 2020, which coincides with the beginning of the COVID-19 pandemic. It will be important to monitor future prescribing data as it becomes available to confirm a return to an increasing trend of patients being treated with buprenorphine.

Chart 1: Buprenorphine Prescriptions By Payer By Year



Buprenorphine Prescriptions By Payer By Year

	Year				
Entity	2017	2018	2019	2020	Grand To..
PAYER 02		15,254	18,227	11,583	45,064
PAYER 03			4		4
PAYER 04	682				682
PAYER 05	140	197	991	1,871	3,199
PAYER 06	161	168	1,068	768	2,165
PAYER 07	22	73	193	379	667
PAYER 08	166	52	554	754	1,526
PAYER 09	53	112	330	327	822
PAYER 10	70	111	878	1,467	2,526
PAYER 11	74	160	519	763	1,516
PAYER 13	363	615	3,635	6,305	10,918
PAYER 17	52	62	820	635	1,569
PAYER 18	18	17	119	265	419
PAYER 19		11	142	650	803
PAYER 20	1,166	517	271	546	2,500
Grand Total	2,967	17,349	27,751	26,313	74,380

Table 1 below shows the number of buprenorphine Prescriptions by Month in 2020 vs. the theoretical capacity of buprenorphine providers utilizing the DEA waiver data from October 2020. The DEA data are available monthly; however, October 2020 was the most recent data that HMA IOA had available. Ideally, the below table would be calculated monthly against the DEA data. HMA IOA can calculate the theoretical capacity of buprenorphine providers by adding the total number of X-Waiver slots for each provider. Providers can be licensed to prescribe to 30, 100 or 275 patients per month. By summing the total number of possible prescriptions, it is possible to calculate a “total buprenorphine capacity.” As such, the theoretical capacity of buprenorphine providers to prescribe and treat is significantly higher than what is being utilized. When working to encourage providers to take on more OUD patients, it is important to note this is both an issue of recruitment and maximization. Delaware certainly could incent more providers to get their X-waiver, but it is also important to understand whether all providers are currently maximizing their ability to prescribe and what incentives or supports might encourage additional appropriate prescribing to meet the treatment needs in the state.

IN **2020, 79%** OF THE STATE'S TOTAL BUPRENORPHINE CAPACITY WENT UNUSED EVERY MONTH.

Table 1: Sum of Buprenorphine Prescriptions from DHIN ("Prescriptions") against Capacity calculated using October 2020 data from DEA ("Capacity")

Month	Prescriptions	Capacity	Percent Used
Jan-2020	4315	**22155**	19%
Feb-2020	3701	**22155**	17%
Mar-2020	2913	**22155**	13%
Apr-2020	2339	**22155**	11%
May-2020	2332	**22155**	11%
Jun-2020	4663	**22155**	21%
Jul-2020	2374	**22155**	11%
Aug-2020	2407	**22155**	11%
Sep-2020	2279	**22155**	10%
Oct-2020	2172	**22155**	10%
Nov-2020	2689	**22155**	12%
Dec-2020	3017	**22155**	14%

IN THREE YEARS, OVER **88%** OF ALL PRESCRIBERS WROTE **5** OR FEWER BUPRENORPHINE PRESCRIPTIONS PER MONTH.

Table 2: Monthly Average Number of Buprenorphine Prescriptions, 2018

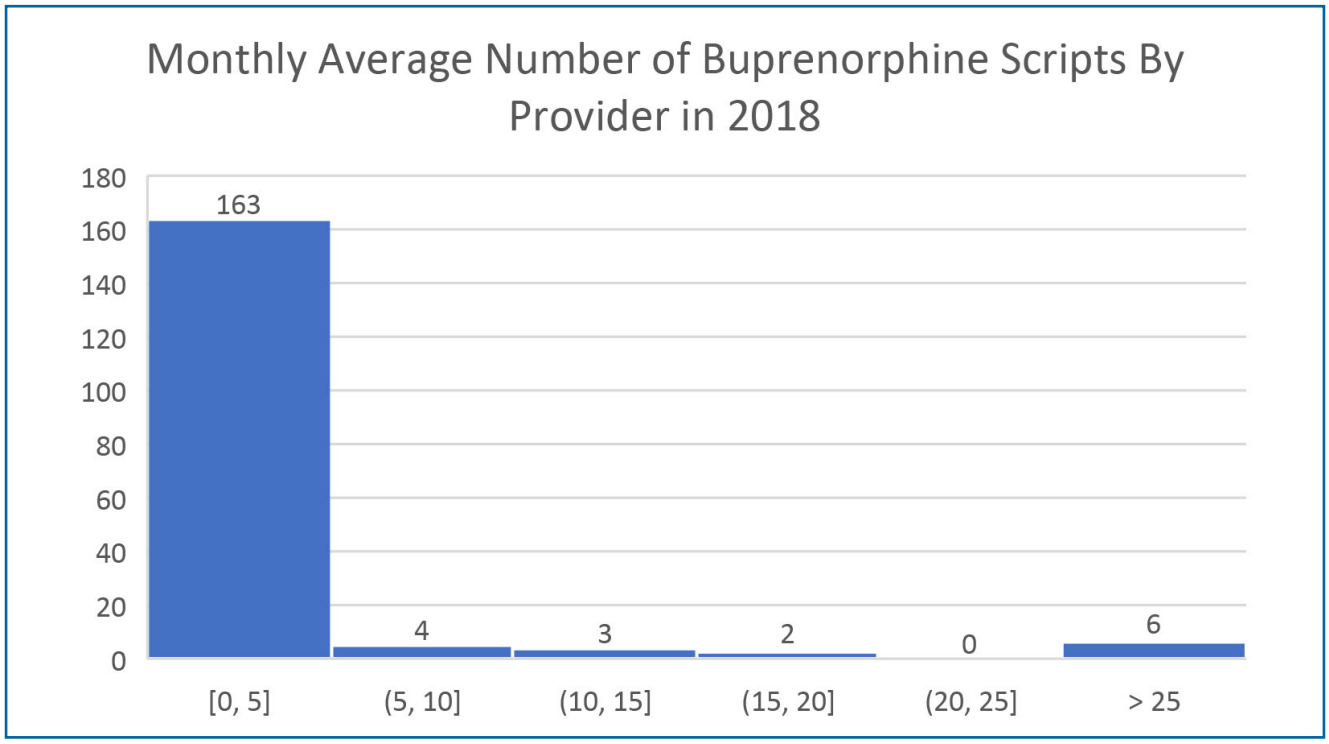


Table 3: Monthly Average Number of Buprenorphine Prescriptions 2019

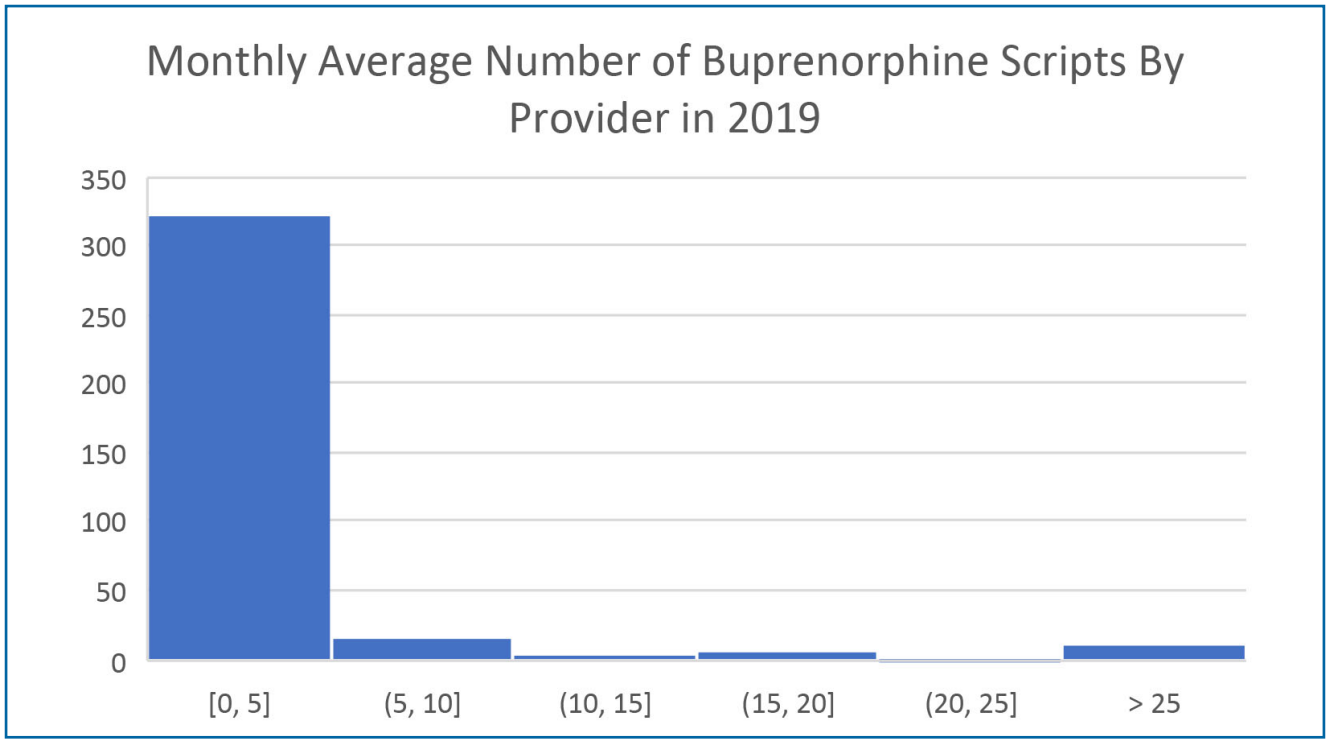
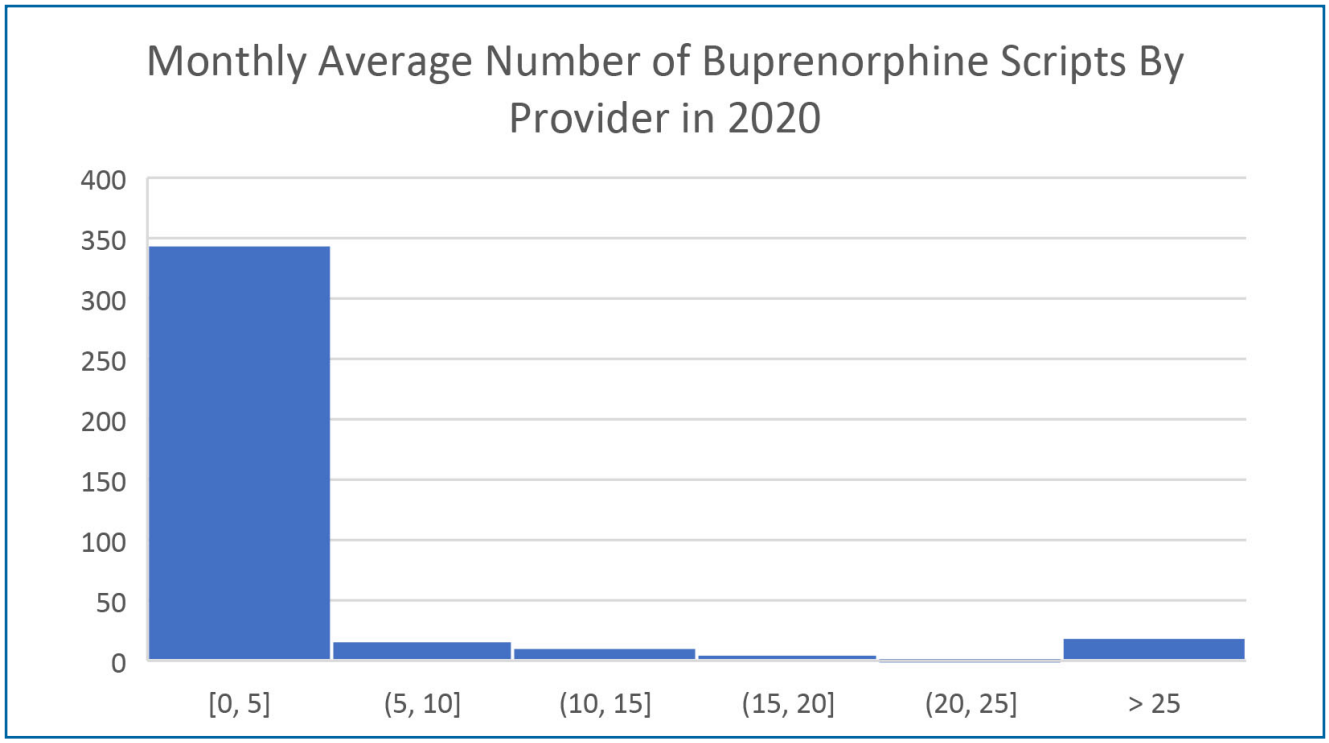
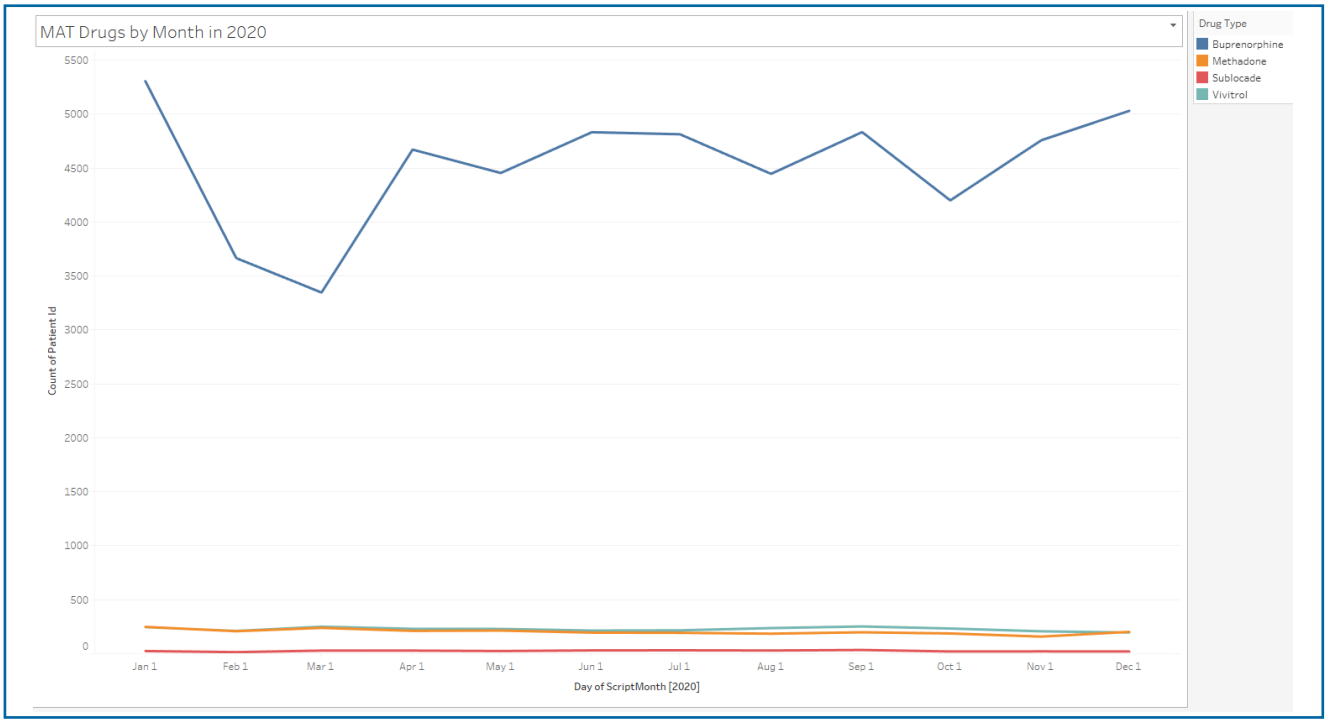


Table 4: Monthly Average Number of Buprenorphine Prescriptions 2020



Buprenorphine capacity to prescribe is significantly underutilized vs. the actual prescriptions written. **Graphic 1** below initially looks encouraging, because it shows a significant drop in buprenorphine distribution in February and March of 2020 and then a slow return to normal, but it has not likely completely normalized to where it might have been if not for the pandemic.

Graphic 1: MAT Drugs by Month in 2020



SUBLOCADE

Chart 2 below shows Sublocade prescriptions By Payer By Year. Sublocade is a long-acting buprenorphine injection, which is effective for 28 days and is available only from a medical provider, not as a self-injection. Overall, the utilization of Sublocade is growing throughout Delaware. This medication provides another option for treating OUD where access to daily dosing may be more difficult.

Chart 2: Sublocade Prescriptions By Payer By Year

Entity	2018	2019	2020	Grand Total
Payor 02	10	91	134	**235**
Payor 03			0	**0**
Payor 05		20	50	**70**
Payor 06	1	12	21	**34**
Payor 08	36	98	91	**225**
Payor 13	3	8		**11**
Payor 17	3			**3**
Payor 18		10	6	**16**
Payor 20			1	**1**
Grand Total	**53**	**239**	**303**	**595**

VIVITROL

Chart 3 below shows Vivitrol Prescriptions By Payer By Year. Overall, the utilization of Vivitrol grew from 2017 to 2020 but flattened between 2019 and 2020.

Chart 3: Vivitrol Prescriptions By Payer By Year 1 of 2

Entity	2017	2018	2019	2020	Grand Total
Payor 02		677	1,275	1,411	**3,363**
Payor 03				0	**0**
Payor 04	878				**878**

Chart 3: Vivitrol Prescriptions By Payer By Year 2 of 2

Entity	2017	2018	2019	2020	Grand Total
Payor 05	17	49	90	117	**273**
Payor 06	75	79	101	97	**352**
Payor 07	4	1	8	15	**28**
Payor 08	280	749	966	704	**2,699**
Payor 09	1	4	1	4	**10**
Payor 10		17	37	26	**80**
Payor 13	43	72	178	218	**511**
Payor 14			1		**1**
Payor 17	18		17	15	**50**
Payor 18	3	9	5	18	**35**
Payor 19		4	10	27	**41**
Payor 20	21	34	147	68	**270**
Grand Total	**1,340**	**1,695**	**2,836**	**2,720**	**8,591**

GABAPENTIN FOR ALCOHOL USE DISORDER

Chart 4 below shows gabapentin Prescriptions By Payer By Year. Overall, the trend is that payers are beginning to utilize gabapentin more frequently than they have in the past. **Table 5** below reviews gabapentin.

Chart 4: Gabapentin Prescriptions By Payer By Year 1 of 2

Entity	2017	2018	2019	2020
Payor 02		9,158	13,250	15,038
Payor 03	35	23	17	21
Payor 04	11,599			
Payor 05	3,343	3,863	3,695	4,787
Payor 06	329	231	254	276

Chart 4: Gabapentin Prescriptions By Payer By Year 2 of 2

Entity	2017	2018	2019	2020
Payor 07	1,714	1,756	1,741	1,636
Payor 08	6,128	15,573	13,737	10,544
Payor 09	103	145	134	216
Payor 10	3,114	3,610	4,196	4,564
Payor 11	747	783	837	856
Payor 13	15,163	17,045	18,068	18,915
Payor 14			17	31
Payor 17	1,966	2,139	2,305	1,474
Payor 18	852	832	1,201	1,059
Payor 19	84	361	930	1,562
Payor 20	647	532	505	431

Overall, the use of gabapentin for managing Alcohol Use Disorder has increased substantially from 2017 to 2020. Indeed, the number of gabapentin fills has gone up by 34% from 2017 to 2020, while the number of individuals taking gabapentin with an Alcohol Use Disorder claim has grown by 124%. HMA IOA had to adjust the numbers to accommodate the lack of identifiable payer data submitted by Payer 8.

Table 5: Gabapentin Use Irrespective of AUD

	2017	2018	2019	2020
Gabapentin Fills	**45,824**	**56,051**	**60,887**	**61,410**
Alcohol Use Disorder	3,546	5,481	7,111	7,701
Alcohol Use Disorder Adjusted	4,020	7,004	8,715	9,023

ED HIGH UTILIZERS

Table 6 below shows unique individuals who have 10 or more ED visits for SUD in the same calendar year. Due to the omission of Payer 8 data at the member level, HMA IOA applied an adjusted number of super utilizers based on the proportional rate of ED visits submitted by Payer 8 over the overall ED visits. From a trending perspective, it appears that repeat super utilizers have fallen significantly since 2018.

Table 6: ED High Utilizers

	2017	2018	2019	2020
ED Super utilizers (Raw)	**83**	**223**	**198**	**146**
ED Super utilizers (Adj)	132	352	315	245
Payer 8 ED Visits	4,291	6,227	6,244	6,452
Total ED Visits	11,502	17,029	16,777	15,930

IP HIGH UTILIZERS

Table 7 below shows unique individuals who have two or more IP visits for SUD in the same calendar year. Due to the omission of Payer 8 data at the member level, HMA IOA applied an adjusted number of super utilizers based on the proportional rate of ED visits submitted by Payer 8 over the overall ED visits. From a trending perspective, it appears that repeat super utilizers have fallen significantly since 2018.

Table 7: IP High Utilizers

	2017	2018	2019	2020
IP Super utilizers (Raw)	**404**	**948**	**1236**	**1415**
IP Super utilizers (Adj)	1,507	2,025	2,649	2,346
Payer 8 Claims	10,259	10,217	20,433	13,561
Total Claims	14,016	19,213	38304	34,172

DEFINITIONS:

- BIO – Biomedically Enhanced
- COC- Co-occurring Capable
- COE – Co-occurring Enhanced
- L1 – Outpatient
- L2.1 – Intensive Outpatient
- L2.5 – Partial Hospitalization
- L3.1 – Clinically Managed Low Intensity Residential
- L3.3 – Clinically Managed Population Specific High Intensity Residential Services
- L3.5 – Clinically Managed High Intensity Residential Services
- L3.7 – Medically Monitored Intensive Inpatient Services
- OBOT - Office Based Opioid Treatment
- OTP - Opioid Treatment Program “methadone clinic”
- OTPa – New to This Treatment
- OTPr - Returning to This Treatment
- OTS - Opioid Treatment Services
- WM - Withdrawal Management

While the following data are not Delaware specific, they are a representative example from a number of states. This analysis allows us, with some confidence, to extrapolate to a “capacity” calculation for Delaware’s SUD patients.

Table 9: Baseline Data for LOC Needs Calculations 1 of 2

Rehab LOC Rec Only		
Final LOC	**Count**	**Percentage of Patients with Rec'n**
WM/OTS/OTP only (no Rehab recommendation)	745	29.91%
L1,	169	6.78%
L1COE,	67	2.69%
L2.1,	273	10.96%
L2.1COC,	236	9.47%
L2.1COE,	224	8.99%
L2.5,	97	3.89%
L2.5COC,	10	0.40%
L2.5COE,	21	0.84%
L2.5COE+3.1,	10	0.40%
L3.1,	14	0.56%
L3.3,	2	0.08%
L3.3BIO,	3	0.12%
L3.3COE,	3	0.12%
L3.5,	5	0.20%
L3.5BIO,	45	1.81%
L3.5COC,	8	0.32%
L3.5COE,	5	0.20%
L3.7,	3	0.12%
L3.7BIO	270	10.84%
L3.7COC	6	0.24%
L3.COC+BIO	1	0.04%
L3.7COE	63	2.53%
L3.7COE+BIO	34	1.36%

Table 9: Baseline Data for LOC Needs Calculations 2 of 2

Rehab LOC Rec Only		
Final LOC	**Count**	**Percentage of Patients with Rec'n**
L4	30	1.20%
L4COC	124	4.98%
L4COE	23	0.92%
Total	**2491**	**100%**

APPENDIX B: BROAD EFFORTS TO ADDRESS THE OPIOID EPIDEMIC IN DE

Behavioral Health Consortium.[92]

- The Behavioral Health Consortium (BHC), established in 2017, is an advisory body, led by Lt. Gov. Bethany Hall-Long and is comprised of community advocates, law enforcement, healthcare professionals, and state leaders that assesses and outlines an integrated plan for action to address prevention, treatment, and recovery for mental health, substance use, and co-occurring disorders. The BHC addresses areas from "Alzheimer's through Autism" and centrally focuses on conditions involving brain health.
- The BHC consists of six committees: Corrections and Law Enforcement; Family and Community Services; Stigma; Education; Access to Treatment; and Policy. They have been working to develop short-term and long-term strategies and initiatives to address the major SUD and mental health challenges faced in Delaware. The BHC is now in their fourth fourth year and the committees are re-tooling and preparing 2022 actions and priorities.

Opioid Impact Fee (SB 176)

- In 2019, Delaware passed an Opioid Impact Fee (SB 176), revenues from which go toward efforts to prevent overdose deaths and provide treatment services.[93] This fee is paid by the manufacturers of prescription opioid medications (not including buprenorphine because of its use in OUD treatments) in the amount of $0.01 for each amount of the active ingredient equal to one milligram of morphine and is paid quarterly to a fund set up by state government. The funding is then distributed by the treasury on the advice and recommendations of the Addiction Action Committee and the Behavioral Health Consortium. The spending authority for FY 22 was 700k and, as of 4/13/22, almost 500k was spent (1372 requests among 746 people). The most common categories for the funds expended were housing, food security, connectivity (phone and tablets), transportation, and legal services. The funds can additionally be used for counseling to individuals leaving hospitalizations and transitioning to treatment programs, to address transportation and transitional housing needs of people in recovery, to purchase Narcan kits for the community, and to cover administrative overhead. Providers would pay for the requests, and then be reimbursed by DSAMH.

Prescription Opioid Distribution Commission

- The Commission, which is a subcommittee of the BHC, was established in January 2022 through Senate Bill 166. The Commission will oversee the funds coming from the national opioid settlements and ensure they are used to reduce the harm caused by the opioid epidemic, as well as those from the Opioid Impact Fund. The Commission is chaired by the Lt. Governor and Attorney General. The Commission has recently assumed oversight of the Opioid Impact Fee. The funds will be administered separately.

Addiction Action Committee (Title 16, Ch. 51, Subchapter IX)

- Formalized as HB 220 and subsequently signed by the Governor in 2017. It is a public-private partnership started by DPH and the Medical Society of Delaware.

92 "Behavioral Health Consortium." Lieutenant Governor Bethany Hall Long - State of Delaware, December 30, 2021. https://ltgov.delaware.gov/behavioral-health-consortium/

93 Etemadifar, Amin, "Deaths of Despair in the United States." All Graduate Theses and Dissertations, 2021.

- The Committee began under the Prescription Drug Action Committee auspices in 2012 and has changed over the years to address the contemporary issues relating to SUD. The Committee makes annual recommendations to the Governor and General Assembly regarding "progress and recommendations to improve rates of mortality and morbidity from addictive drugs." Due to the work of the BH Consortium and the pandemic, in March 2021, the Committee voted to narrow its focus primarily to prescription drugs.

Overdose Systems of Care Committee[94]

- State legislation was enacted in 2018 to create the Delaware Overdose System of Care Committee. The Committee was designed on the model the state has already used for other state driven systems of care (Trauma and Stroke). OSOC is made up of informed professionals serving as advisors to the overdose system of care in the state. The goal is to produce recommendations to improve operations, availability, and delivery of services and to create or modify policies and protocols of the overdose system of care to improve outcomes.
- Legislatively enacted, it consists of four subcommittees: a) Acute OUD Stabilization; b) Data and Evaluation; c) Rural; and d) Narcan Leave Behind.
- Critical initiatives include emergency room MAT induction training; coordination and distribution of Narcan to EDs (over 813 kits distributed), providers, Department of Correction (over 1400 distributed) and elsewhere; work toward a common data and information platform; wider dissemination of available community providers to provide warm-handoffs for individuals discharged from EDs following evaluation and overdose; and increasing the number of X-waivered providers through enhanced engagement and training of prescribers. Regarding the latter, approximately 129 additional prescribers are X-waivered since 2021.
- The Acute OUD Stabilization Committee will be focused on increasing community medication for opioid disorder (MOUD) capacity; continued education and support for ED MOUD initiation and prescribing; identifying more efficient referral pathways; providing training on buprenorphine for paramedics and a pilot for EMS staff to initiate buprenorphine; Narcan distribution education with pharmacists; and putting in place transportation pilots with EDs for linkage to treatment. ED induction is in the early phases across the hospital systems. As induction in the ED is new for some of the leadership and prescriber staff, each hospital has been working on their internal buy-in, staffing and processes.
- Plans for the OSOC's Narcan Leave Behind Committee include recruiting and onboarding additional first responder agencies and providers, integrating data from all community Narcan distribution programs, and developing a sustainability plan with Medicaid for continued distribution of Narcan.

Project Engage

- Initiated in 2008 by Christiana Care, this project aims to provide early intervention in SUD treatment through connecting hospital patients with problematic alcohol or drug use to services. They utilize a peer-to-peer collaborative approach to embrace healing with motivational interviewing and peer support through the challenging decision to seek help and navigate the available resources. Staff sees all patients in the hospital where substance use may be part of the clinical presentation. In addition, staff are assigned to work with those with substance use challenges in the ED.

[94] Delaware General Assembly, House, An Act to Amend Title 16 of the *Delaware Code Relating to the Creation of an Overdose System of Care, HB 440, 149th General Assembly, Introduced in House on June 5, 2018,* https://legis.delaware.gov/BillDetail/26746

START- Delaware START (Substance Use Treatment and Recovery Transformation) Initiative

- DSAMH's START (Substance Use Treatment and Recovery Transformation) began in 2018 and was designed to engage individuals suffering from SUD in treatment, while also aiding in needs of housing, employment, education, and other wraparound services. Through START, DSAMH worked with stakeholders across the state, including primary care physicians and hospitals, to offer a large number of services, such as psychiatric centers, prevention programs, and treatment access centers.
- DTRN is made up of START participants, with the goal of speeding up the referral process so those seeking care receive it appropriately and efficiently. DTRN is an e-referral system for behavioral health for 65 participating organizations. Per DSAMH data, as of March 2022, DTRN had received over 112,000 referrals from its start in October 2018. DTRN system allows DSAMH to track and monitor what services are in demand and how many referrals result in a successful connection to care. In March 2022, the behavioral health hospitals and crisis services in Delaware (Dover Behavioral Health, MeadowWood, Recovery International, SUN, and Rockford Center, as well as a large community behavioral health organization (Coras/ Conexio-formerly Connections) had received the large majority of referrals (2761) from other organizations.
- DSAMH has recently launched a transportation request feature in DTRN so that providers can request a ride for their clients to and from treatment appointments. This program has recently been launched in Sussex County.

Bridge Clinics

- Bridge Clinics are a partnership between DSAMH and community partners that connects patients with mental health and SUD screening and treatment recommendations, on-site clinicians, assistance with navigating the system of care, and training for Narcan use (overdose reversal medication, also known as naloxone). Transportation services are available for those seeking care to increase accessibility, especially among those in high-risk populations. There are four Bridge Clinics in the state. The main New Castle County Bridge Clinic is open 7 days a week (24-7), and there is another satellite office open in the Hope Center. DSAMH has reported an 82% increase in demand in the New Castle County clinic from 2020-2021, with 1,500 clients served last year. There is one clinic in Kent County and one in Sussex County that are open Monday through Friday. It is DSAMH's intention to make the clinics in the lower two counties open 7 days a week (24-7) in the future.

State Opioid Response (SOR) 2.0 Grant

- Through SOR 2 funds, DHSS (via DSAMH and DPH) embarked on key initiatives for FY 2021-22. They included: a) building infrastructure to oversee and implement grant activities; b) developing a framework to engage the Opioid Response Provider Network in providing effective and accountable treatment services; c) promoting universal screening for OUD/ STUD; d) decreasing opioid overdoses statewide through low threshold access to Narcan medication for OUD and SUD treatment services; e) expanding OUD/STUD treatment engagement strategies and reducing barriers to accessing services; f) promoting evidence-based referral and linkage to treatment; g) improving treatment retention strategies for individuals and special populations with OUD/STUD; and h) collecting high quality data to track program and performance and reach.

- Toward achieving these goals, DHSS has developed several ongoing strategies which include: developing a cross divisional grant oversight team; focusing on evidence-based SUD screening; developing referral pathways and MOUD implementation; creating accountability structures for the use of grant money; creating incentive services for high-need populations; and providing flexible technical assistance to providers.
- Launched in 2021 from federal (CMS) funds, the OBOT Fellowship (DMMA) and OBOT Fast Track (DSAMH) streamlined efforts to support implementation of office-based treatment for Medicaid beneficiaries with OUD. The fellowship was a six-month training initiative for prescribers and practice managers and focused on primary care, women's health, infectious disease and psychiatric providers. Providers were incentivized $3,000 and practice managers were incentivized $2,000 for participating. Seventy-six (76) clinicians participated in the clinical track, which represented 40 practices. Within the practice implementation track, 44 fellows participated, representing 27 practices. At this point in time, no data was yet available on numbers of clients served stemming from this innovative program.
- OBOT Fast Track consisted of performance payment for those above specialties in the Fellowship and provided financial awards to practice meeting specific operational and service delivery benchmarks. Practices can earn up to $49,000 for completing and adhering to conditions in all seven phases. DSAMH intends to use additional State Opioid Response money for OBOT expansion and quality improvement. The OBOT Fast Track has transitioned to inviting the OBOT Fellowship practices to apply for the DSAMH Tier Award Payment (TAP) funded program. At the time of this writing, approximately ten of the OBOT Fellowship practices have received TAP funds to implement SUD screening, enhance referral and active engagement practices with SUD to provide MOUD/OBOT. DSAMH and HMA IOA, one of its consultant partners, are offering technical assistance, hosting quarterly learning collaborates, cohort calls and hosting other TA events.

Delaware Drug Overdose Fatality Review Commission (DOFRC)[95]

- The DOFRC is charged under Title 16 4799 to review opioid overdose deaths in Delaware. According to the 2020 annual reports, analysis (103 of 431 cases) of the 2019 overdose deaths found 38% were unhoused or lived in unstable housing. Recommendations included creating a Housing First model for unhoused or unstably housed individuals; expanding training for licensed clinicians on Trauma Intervention; interventions for those in contact with law enforcement; establishing a notification system for the PMP to alert prescribers of patient-specific non-fatal overdoses; and improving outreach and follow-up with individuals who are using substances. In addition, DOFRC is recommending expanding programs that are providing parents with Narcan. DOFRC's 2021 annual report is expected to be available soon.

Help is Here (www.helpisherede.com)

- The Help is Here website is a database of mental health, prevention, addiction, treatment, recovery, and provider resources that helps clients find and utilize local services. During the COVID-19 pandemic, urgent messages from the portal's homepage have advised clients where to go if experiencing an overdose crisis, or to contact 833-9-HOPEDE. Resources regarding Narcan distribution, education on addiction, overdose prevention, mental health and healthcare providers are all featured.

[95] "Overdose Review Commission Releases Annual Report." State of Delaware News, February 9, 2021. https://news.delaware.gov/2021/02/09/overdose-review-commission-releases-annual-report-2/#:~:text=The%20Delaware%20Drug%20Overdose%20Fatality,fatalities%20that%20occurred%20in%202019

Partnerships with Law Enforcement-Clinicians (both licensed and unlicensed) riding along with law enforcement and/or providing screening and follow-up services for individuals with some criminal justice contact and suspected behavioral health challenges.

- Hero Help (a partnership between New Castle County Police, Christiana Care, the Delaware Department of Justice, and DSAMH) allows an officer to offer either treatment or arrest when responding to a possession charge or overdose.
- Partners in Public Safety Solutions-A non-profit agency that partners with Milford PD, Elsmere PD, and Smyrna PD.
- DSAMH Mobile Crisis Intervention Service fields crisis calls and makes crisis visits in the community. Crisis does work with law enforcement but serves the entire community regardless of law enforcement involvement.
- Delaware State Police Diversion Program, a partnership between DSAMH, the State Police, and the Attorney General's office that provides clinicians and peers at six of Delaware's State Police Troops who take referrals from Troopers for individuals they contact with perceived behavioral health needs and a willingness to explore recovery.
- Dover Behavioral Health will be partnering with Dover PD
- Other licensed clinicians partnering with Georgetown PD, Seaford PD and Laurel PD

Community and Advocacy Coalitions:

- **atTAcK Addiction** is a 501(c)(3) non-profit group whose overarching goals is to educate and bring awareness of addiction as a disease, rather than the stigma that is suffered in shame by the person with the disease and their loved ones. atTAcK Addiction seeks to educate by speaking at schools, prisons, and any other venues where there is an interest in learning more about the disease of addiction. atTAcK Addiction has played a significant role in Delaware's existing drug policy and has played a central role in getting the 911 Good Samaritan Law enacted and the Opioid Impact Fee.
- **Sussex County Health Coalition and Committees**-The Sussex County Health Coalition was founded in 2006 in conjunction with Nemours Health and Prevention Services. In recent years, the Coalition's successes have extended from serving the child to the entire family and the community they live in by focusing on the overall goal of a healthier Sussex County. The Coalition's main role is to build Sussex's capacity and align its social capital to address Sussex's complex social and health-related issues. The SCHC's purpose is to engage the entire community in a collaborative family-focused effort to improve the health of children, youth and families in Sussex County, Delaware. Through several of their committees, Behavioral Health Task Force, Drug Free Communities and Health Committee, the SCHC has taken a leading role in Delaware's most southern county in bringing together community partners in education about the opioid epidemic, working to increase treatment for SUD and OUD, coordinating providers, and improving the health of the county's citizens.

SOS

- Christiana Care, Connections and New Castle County created the Community Substance Overdose Support (SOS) Program to offer support to those with OUD. Community SOS engagement specialists connect with individuals via phone and, when necessary, in person to discuss how they can help support their recovery through education, opioid antagonist (Narcan/naloxone) trainings, and connection to counseling resources, referrals to medically assisted treatment programs, and transportation arrangements to facilitate access to treatment.

Tertiary Prevention

- Narcan-Delaware revised its law (16 Del.C. 3001G) to allow Narcan to be administered by peace officers, emergency responders, school nurses, and community members.
- Good Samaritan Law-Passed in 2013 (16 Del.C. 4769), allows for someone who provides medical attention for an individual in the midst of a life-threatening emergency, such as an overdose (including for him or herself) and assures they will not be arrested or prosecuted.
- Sterile Needle and Exchange Program-This program was originally limited to the city of Wilmington. The Delaware law was amended (16 Del.C. 7990) to remove the geographic restriction to allow for statewide access.

Prescription Drug Monitoring Program (PMP)

- The Delaware Prescription Monitoring Act (16 Del.C. 4787) authorized the Delaware Division of Professional Regulation to establish and maintain the PMP. The goal of the PMP is to reduce the misuse of controlled substances and improve patient care.

Syringe Services Program

- The Syringe Services Program (SSP) started on February 1st, 2007, after Senate Bill 60, a five-year pilot program, was authorized by the state legislature in June of 2006. Prior to the implementation of the SSP, Brandywine Counseling and Community Services (BCCS) provided HIV prevention services since 1988. These services included street-based outreach, education, risk reduction counseling, and HIV testing. The SSP program now incorporates all the existing HIV prevention services. Since 2007 through April 2022, the SSP has enrolled over 5,200 individuals in the program and has exchanged nearly 1.5M syringes. Over 41,000 “safer sex” kits and nearly 13,000 fentanyl test strips have been distributed. Over 5,800 individuals were screened for HIV and 630 for HCV. As important, nearly 65,000 individuals were referred to treatment (e.g., Methadone, outpatient or other treatment) or withdrawal management services. SSP staff connected nearly 1,500 individuals directly to treatment.

APPENDIX C: OVERVIEW OF DELAWARE'S MEDICAID SUD SERVICES

Overview of Medicaid's SUD Services:

Delaware's Medicaid covered SUD services, as referenced in its 2016 Reimbursement Manual, cover an array of outpatient residential services. All SUDs (including Gambling Disorders) referenced under the DSM 5 are eligible conditions for "purposes of certification and reimbursement for services."

Outpatient services include assessment, treatment planning, counseling, and Medication Assisted Treatment (MAT). Services can be provided at a site-based facility, community or in a beneficiary's residence. Covered residential services also include assessment, treatment plan development, counseling, and MAT for those beneficiaries clinically determined to be in need of a higher LOC (dictated by ASAM criteria), including withdrawal management/detox. Twelve-step programs run by peers are not eligible.

Covered Public SUD Services Through Delaware's 1115 Waiver

Delaware has made strides in its efforts to increase access to SUD services for its Medicaid beneficiaries. Effective August 1, 2019 (through December 31, 2023), Delaware's Department of Health and Social Services received CMS' approval of their SUD Implementation Protocol. This is the demonstration benefit package for Delaware Medicaid recipients that includes SUD treatment services, including short term residential services provided in residential and inpatient treatment settings that qualify as an IMD (Institute for Medical Disease), which are not otherwise matchable expenditures under Section 1903 of the Act. Delaware is eligible to receive Federal Financial Participation (FFP) for Delaware Medicaid recipients who are short-term residents in IMDs under the terms of this demonstration for coverage of medical assistance, including SUD benefits that would otherwise be matchable if the beneficiary were not residing in an IMD. Delaware's IMDs that provide addiction services are Rockford Center (New Castle County), MeadowWood Behavioral Health (New Castle County), Dover Behavioral Health (Kent County), and SUN Behavioral Health (Sussex County).

According to the program, Delaware must aim for a statewide average length of stay of 30 days in residential treatment settings, to be monitored pursuant to the SUD Monitoring Protocol J (as outlined in STC 31(b)), to ensure short-term residential treatment stays. The Monitoring Protocol defines the qualitative and quantitative elements the state will monitor and report on (methods of data collection and timeframes for progress). Delaware, like all states, is to base its reporting on state data and will be benchmarked against best practice settings. Under this demonstration, beneficiaries will have access to high quality, evidence-based SUD treatment services ranging from medically supervised withdrawal management to on-going chronic care for these conditions in cost-effective settings, while also improving care coordination and care for comorbid physical and

mental health conditions. The coverage of SUD treatment services and withdrawal management during short-term residential and inpatient stays in IMDs will expand Delaware's current SUD benefit package available to all Delaware Medicaid recipients. Room and board costs are not considered allowable costs for residential treatment service providers, unless they qualify as inpatient facilities under Section 1905(a) of the Act.

APPENDIX D: RATE ANALYSIS

Reimbursement Rate Comparison for Delaware and Neighboring States 1 of 2

Code	Description	DE[96]	Proposed[97] rate DE	MD[98]	PA[99]	NJ[100, 101]	VA[102, 103]
H0001	AOD Assessment	$77.30/ 60 min	$95.91/ 60 min	$179.55		$24.50/ 30 min	
H0004/ 90832	Individual Outpatient (unlicensed)	$19.33/ 15 min	$22.29/ 15 min	$25.29 / 15 min		$81.23 / 45-50 min $20.20/ 15 min (c)	
H0004	Individual Outpatient (licensed)	$19.33	$26.08/ 15 min		$26.00		$27/ 15 min
H0005	Group Outpatient	$9.66/ 45 min	$13.04/ 45 min	$49.32/ 60-90 min		$24.75/ 90 min	$8.16/ 15 min
H0038	Peer Supports	$14.75/ 15min	$19.45/ 15 min			TBD	$7.31/ 15min
H0012	ASAM 2.0 Ambulatory Detox	$334.27	$370.17				
H0014	Ambulatory Withdrawal Management					$198.00	
	AOD testing, collection and handling only	$8.20	$10.00			$8.00	
H0015	ASAM 2.1 IOP (group-unlicensed)	$103.09	$109.43	$158.05 (c)		$98.53	$250.00
H0015	ASAM 2.1 IOP (group-licensed)	$126.79	$116.82				
H0020	Methadone Maintenance	$12/day	$12/day	$78.10/week ($11.15/day)		$82.04/week ($11.72/day)	
H0047	Buprenorphine			$63.64/week			
H2036	ASAM 2.5 Partial Hospitalization			$150.68/day		$500.00	
	ASAM 3.1	$150.53/day	$154.65/day	$94.70/day	Average $138.16 ($99.00-$246/day)	$85.50/ day (called Short Term Residential) (H2034)	$175.00
	ASAM 3.2	$290.70/day	$344.36/day				
	ASAM 3.3 (under 11 beds)	$273.25	$357.69	$211.05/ day (b)			$393.50 (b)
	ASAM 3.3 (11-16 beds)	$189.44	$232.67				

Reimbursement Rate Comparison for Delaware and Neighboring States 2 of 2

Code	Description	DE[96]	Proposed[97] rate DE	MD[98]	PA[99]	NJ[100, 101]	VA[102, 103]
H2036	ASAM 3.5	$189.44	$240.04	$211.05/day	Average $270.76 ($111-$583)	$147.60 (called Long Term Residential) (H0026)	$393.50
	ASAM 3.7	$291.65	$330.23	$324.92/day	Average $348.01 ($276-$470)	$220.50 (called Short Term Residential) (HH0018)	$393.50
	ASAM 3.7 WM	$354.67	$379.76	$395.12/day	Average $337.19 ($243-$543.33)	$428.28/day	(d)
H0006/ G9012	Case Management						$273.38/ month
	ASAM 4.0				Average $599.10 ($525.81-$723.20)		
	ASAM 4.0 WM				Average $653.42 ($525.81-$766.11)		

a, c-No notation for licensed vs. unlicensed

b-No notation for how many beds

d-Based on Psychiatric Per Diem or DRG

*Not available

96 "Delaware Adult Behavioral Health DHSS Service Certification and Reimbursement Model." Accessed June 22, 2022. https://dhss.delaware.gov/dhss/dsamh/files/ReimbursementManual.pdf

97 Burns & Associates, a Division of Health Management Associates. Rep. Summary of Methodology for Setting Rates for SUD Services and Potential Fiscal Impact, 2022. https://dhss.delaware.gov/dhss/dmma/files/sud_summary_of_fiscal_impact_of_potential_new_sud_rates_20220126.pdf

98 Community-Based Substance Use Disorder Fee Schedule. 2022. https://maryland.optum.com/content/dam/ops-maryland/documents/provider/information/pbhs/fee-schedules-eff-1-1-22/PBHS%20FY2022%20-%20SUD%20Rates.pdf

99 "Single County Authority Rate Setting." PACDAA. Accessed June 16, 2022. http://www.pacdaa.org/Pages/Facility-Rate-Information-Menu.aspx

100 SFY 2021 Fee for Service Rates, Units, Types and Codes. 2021. https://njsams.rutgers.edu/njsams/Documents/BenefitPackage/SFY%202021/SFY%202021%20FFS%20-%20Services%20Rates%20Units%20Codes%20-%20revised%20050620.pdf

101 New Jersey: State Residential Treatment for Behavioral Health Conditions: Regulation and Policy. 2021. https://aspe.hhs.gov/sites/default/files/2021-08/StateBHCond-NewJersey.pdf

102 Addiction and Recovery Treatment Services (ARTS) Reimbursement Structure. 2021. https://www.dmas.virginia.gov/media/3624/arts-reimbursement-structure-07-01-2021.pdf

103 Addiction and Recovery Treatment Services (ARTS) Reimbursement Structure. 2022. https://www.dmas.virginia.gov/media/4040/arts-reimbursement-structure-03-09-2022.pdf

APPENDIX E: SCHOOL BASED PREVENTION PROGRAMS

PROJECT SUCCESS (Schools Using Coordinated Community Efforts to Strengthen Students)[104] Project SUCCESS - Hanley Foundation is a targeted intervention specifically designed for high-risk youth. The program places highly trained professionals in schools to provide a range of substance use prevention and early intervention services. Project SUCCESS was tested with 14 to 18-year-old adolescents who attended an alternative school that separated them from the general school population. Participants typically came from low to middle income, multi-ethnic families. Project SUCCESS claims to prevent and reduce substance use among high-risk, multi-problem high school adolescents.

Project SUCCESS works by building partnerships established between a prevention agency and alternative school. A trained individual who is experienced in providing substance use prevention counseling to adolescents is recruited to work in the alternative school as a Project SUCCESS Counselor (PSC). This individual provides the school with substance use prevention and early intervention services to help decrease risk factors and enhance protective factors related to substance use. Program components include:

- Prevention Education Series—An eight-session substance use prevention education program conducted by the PSC.
- Individual and Group Counseling—Following assessment, a series of eight to twelve time-limited individual or group sessions is conducted in the school.
- Parent Programs—Project SUCCESS includes parents as collaborative partners in prevention through parent education programs.
- Referral—Students and parents who require treatment, more intensive counseling, or other services are referred to appropriate agencies or practitioners in the community.

Evaluation studies of Project SUCCESS[105] have been conducted and Project SUCCESS was found to be effective with both genders, students from various ethnic groups, and across grade levels from the 9th to 12th grades. The first study began in September 1995 in Westchester County, New York and used a pre-test and post-test comparison group design with a sample of 425 students in three alternative secondary schools serving high-risk, multi-problem adolescents. The post-test data was gathered in the second year of Project SUCCESS and asked for 'previous 30-day use' of the students who were "users" at pre-test. After one year, the evaluation showed decreases in substance use and reductions in negative attitudes and behaviors among students participating in Project SUCCESS, including:

- A 37% decrease in substance use;
- 23% of Project SUCCESS students quit using substances (compared with 5% in the comparison group);
- Decreased problem behavior; and
- Decreased associations with peers who use substances.[106]

[104] "Project Success." Hanley Foundation, May 25, 2020. https://hanleyfoundation.org/prevention/project-success/

[105] CDC Promising Practices:Project SUCCESS (thehcn.net)

[106] Student Assistance Services (sascorp.org)

PROJECT TND

Project Toward No Drug Abuse (TND) is a targeted intervention and interactive program designed to help high school youths (ages 14–19) resist substance use. This school-based program consists of twelve 40- to 50-minute lessons that include motivational activities, social skills training, and decision-making components that are delivered through group discussions, games, role playing exercises, videos, and student worksheets over a four-week period. The program was originally designed for high-risk youth in alternative high schools and consisted of nine lessons developed using a motivation-skills-decision-making model. It addresses topics, such as active listening skills, effective communication skills, stress management, coping skills, tobacco cessation techniques, and self-control—all to counteract risk factors for drug use relevant to older teens.

Project TND has been rigorously evaluated. Results show that TND led to significant reductions in hard drug and alcohol use.[107] An evaluation of approximately 2,500 alternative high school students from 42 high schools in Southern California revealed that those who received the intervention showed roughly half the monthly drug use frequency at follow-up as those in the control condition.[108] The evaluation conducted on mainstream high school students also showed a significant reduction in hard drug and alcohol use among intervention students at the one year follow-up.[109]

PROJECT ALERT

ALERT is a widely used middle-school drug prevention program that was originally a universal prevention program. ALERT claims to curb cigarette, marijuana and alcohol misuse and help even high-risk youth.[110] Like Project SUCCESS and TND, ALERT has been evaluated and found to have promising results.[111,112,113,114] ALERT is a two-year classroom curriculum of eleven lessons, plus three booster lessons that should be delivered the following year. It targets alcohol, marijuana, and cigarette use and is designed to help students identify and resist pro-drug pressures and understand the social, emotional, and physical consequences of harmful substances. It aims to motivate students against using drugs and give them the skills they need to translate that motivation into effective resistance behavior, an approach that is widely viewed as the state of the art in drug use prevention.[115]

[107] TND – Project Towards No Drug Abuse (usc.edu)

[108] TND_Executive_Summary_Paper.pdf (usc.edu)

[109] Ibid.

[110] Tucker, Joan S., Phyllis L. Ellickson, David J. Klein, Daniel F. McCaffrey, Bonnie Ghosh-Dastidar, and Douglas L. Longshore, Classroom Drug Prevention Works: But Left Unchecked, Early Substance Use Haunts Older Teens and Young Adults. Santa Monica, CA: RAND Corporation, 2004. https://www.rand.org/pubs/research_briefs/RB4560.html

[111] Faggiano, Fabrizio, Federica Vigna-Taglianti, Elisabetta Versino, Alessio Zambon, Alberto Borraccino, and Patrizia Lemma. "School-Based Prevention for Illicit Drugs' Use." *Cochrane Database of Systematic Reviews*, 2005. https://doi.org/10.1002/14651858.cd003020.pub2

[112] Ringwalt, Christopher L., Susan Ennett, Amy Vincus, Judy Thorne, Louise Ann Rohrbach, and Ashley Simons-Rudolph. "The Prevalence of Effective Substance Use Prevention Curricula in U.S. Middle Schools." *Prevention Science* 3, no. 4 (2002): 257–65. https://doi.org/10.1023/a:1020872424136

[113] National Institute on Drug Abuse (NIDA). Preventing Drug Use Among Children and Adolescents: A Research-Based Guide for Parents, Educators and Community Leaders. 2nd ed. Washington, D.C.: National Institute on Drug Abuse, National Institutes of Health, 2003.

[114] Ghosh-Dastidar, Bonnie, Douglas L. Longshore, Phyllis L. Ellickson, and Daniel F. McCaffrey. "Modifying Pro-Drug Risk Factors in Adolescents: Results from Project Alert." *Health Education & Behavior* 31, no. 3 (2004): 318–34. https://doi.org/10.1177/1090198104263333

[115] Ennett, Susan T., Christopher L. Ringwalt, Judy Thorne, Louise Ann Rohrbach, Amy Vincus, Ashley Simons-Rudolph, and Shelton Jones. "A Comparison of Current Practice in School-Based Substance Use Prevention Programs With Meta-Analysis Findings." *Prevention Science* 4, no. 1 (2003): 1–14. https://doi.org/10.1023/a:1021777109369

ALERT and many other school-based drug prevention programs draw on the tenets of social learning theory. Social learning theory focuses on the learning that occurs within a social context, and considers that people learn from one another through observation, imitation, and modeling. Basically, social learning theory says that people can learn by observing others' behavior and the outcomes of those behaviors; that learning may or may not result in a behavior change; and that cognition plays a role in learning. Accordingly, awareness and expectations of future reinforcements and consequences can have a major effect on the person's behaviors.

PROJECT LST (LIFE SKILLS TRAINING)

The LST prevention program is a three-year intervention designed to be conducted in school classrooms. LST targets tobacco, alcohol, and marijuana and offers the potential for interrupting the normal developmental progression from use of these substances to other riskier forms of drug use.[116] The LST program is designed to target the psychosocial factors associated with the onset of drug involvement. The program addresses drug-related knowledge, attitudes and norms, drug-related resistance skills, and personal self-management and social skills.

The LST program consists of 15 class periods of 45 minutes each and is intended for junior high school students. A booster intervention has also been developed which consists of ten class periods in the second year and five class periods in the third year. The rationale for implementing the LST program at this point relates to the developmental progression of drug use, normal cognitive and psychosocial changes occurring at this time, the increasing prominence of peer groups, and issues related to the transition from primary to secondary school.

While the program is effective with just the one year of primary intervention, research has shown that prevention effects are greatly enhanced when booster sessions are included.[117] For example, Botvin et al.[118] have shown that one year of the primary intervention of LST produced reductions of 56-67% in smoking without any additional booster sessions. But for those students receiving booster sessions, these reductions were as high as 87%. In addition, the booster sessions enhance the durability of prevention effects, so that they do not diminish as much over time.

Research has shown that participation in the LST program can cut drug use in half.[119] These reductions (in both the prevalence and incidence) of drug use have primarily been with respect to tobacco, alcohol, and marijuana use. For example, long-term follow-up data indicate that reductions in drug use produced with seventh graders can last up to the end of high school.

[116] Botvin, Gilbert J., and Kenneth W. Griffin. "Life Skills Training: Empirical Findings and Future Directions." *The Journal of Primary Prevention* 25, no. 2 (2004): 211–32. https://doi.org/10.1023/b:jopp.0000042391.58573.5b

[117] Botvin, G.J. & Griffin, K.W. (2012). Long-term outcomes from Blueprints model programs: Life Skills Training. Presented at 2012 Blueprints for Violence Prevention conference. San Antonio, TX, April 11-14, 2012. - Botvin LifeSkills TrainingBotvin LifeSkills Training

[118] Botvin, Gilbert J., and Kenneth W. Griffin. "Life Skills Training: Empirical Findings and Future Directions." *The Journal of Primary Prevention* 25, no. 2 (2004): 211–32. https://doi.org/10.1023/b:jopp.0000042391.58573.5b

[119] Botvin, G.J. & Griffin, K.W. (2012). Long-term outcomes from Blueprints model programs: Life Skills Training. Presented at 2012 Blueprints for Violence Prevention conference. San Antonio, TX, April 11-14, 2012. - Botvin LifeSkills TrainingBotvin LifeSkills Training

Evaluation research has demonstrated that this prevention approach is effective with a broad range of students. It has not only demonstrated reductions in the use of tobacco, alcohol, or marijuana of up to 80%, but evaluation studies show that it also can reduce more serious forms of drug involvement, such as the weekly use of multiple drugs or reductions in the prevalence of pack-a-day smoking, heavy drinking, or episodes of drunkenness.

Given the high percentage of adult OUD and the risks of OUD and SUD, a number of tactics should be employed to mitigate the highly predictable negative outcomes for this population without intervention.

APPENDIX F: ACKNOWLEDGEMENTS

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