

Delaware State Epidemiological Outcomes Work Group (SEOW)



Behavioral Health Disparities among People with Disabilities

Gap Report 10 November 2019

The Delaware State Epidemiological Outcomes Workgroup (SEOW) is charged with providing assessments on gaps in services and programs for Delaware residents across the lifespan, as well as gaps in research and data to inform these services. These gaps are commonly framed in terms of disparities or inequities across populations. This Gap Report highlights challenges in data collection regarding disability status, behavioral health disparities experienced by people with disabilities in Delaware, barriers to access and inclusion within healthcare settings, and potential strategies for public health practitioners and policy makers for achieving health equity.

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Across the multiple definitions of health disparities and inequities, there is general agreement that health disparities refer to differences in health outcomes at the population level, that these differences are linked to a history of social, economic, or environmental disadvantages, and that these differences are regarded as avoidable (Krahn, et al. 2015).

Why this Issue Requires Special Consideration

As this gap report highlights, available research indicates that people who experience disabilities also experience disproportionate risk for substance use and other behavioral health issues. Barriers to accessibility within healthcare settings often compound these challenges. However, the U.S. General Accountability Office has identified people with mental and/or physical disabilities as one of many “hard-to-count” groups in the U.S. Census that are consistently undercounted in official government statistics (U.S. General Accountability Office, 2018). Accurate counting of disadvantaged populations is vital to social science research, to influence the distribution of federal funding, and to aide in policy development to improve conditions, including civil rights protections, for health disparity populations (O’Hare, 2019). There are a number of reasons for this underestimate, including varying definitions of disability, and a reluctance among some to disclose their disability status for fear of discrimination, or because they do not think it is necessary. For example, one study found that disability following work injury was often underreported by employees (Evanoff et al., 2002). Many surveillance systems do not survey individuals living in institutions such as long-term care facilities, prisons, and psychiatric institutions.

The purpose of this report is to summarize available data regarding Delawareans with disabilities and their report of behavioral health challenges. The report also considers practices to improve data collection as part of a broader strategy to increase health equity for this population.

Models of Disability and General Prevalence

There are differing and at times overlapping conceptual models of disability. The **medical model**, sometimes referred to as the individual model, asserts that a person's disability is the result of individual impairments, whether those are physiological, cognitive, or emotional. Disability, in this case, is determined by medical diagnosis. In contrast, the **social model** of disability argues that impairments are not solely individual phenomena, but rather are the result of complex interactions between the person, their physical environment, and social contexts (Goering, 2015). The social model of disability raises the question: if the barriers to accessibility were to be removed from a person's environment, would their impairment still be a disability? The social model promotes thinking of people with disabilities as a minority group that is disempowered and disenfranchised by society (Hahn, 1985).

The **functional model** of disability encompasses components of both the medical and social models by defining disabilities as conditions that impede functioning across different domains, particularly in areas of daily living. The functional model is the dominant framework used by state and federal government in data collection related to disability status. Given the evolving models of disability, different measurement instruments and data collection strategies, and the wide variety of types of disabilities across the life course that impact the domains of

functioning, the precise estimation of disability prevalence across the population is difficult to accomplish. As a result, there are variations in prevalence estimates depending on the data source and the population being surveyed.

Using the International Classification of Functioning, Disability, and Health (ICF) the World Health Organization (WHO) estimates that 15% of the worldwide population experiences some type of disability, and that as life expectancies increase, the global prevalence of disability will also continue to increase (World Health Organization, 2001 and 2018). According to data drawn from the Center for Disease Control and Prevention (CDC) Behavioral Risk Factor Surveillance System, approximately one in four adult Americans report experiencing a disability. The data collection standards established by the U.S. Department of Health and Human Services for the identification of disability status include questions focused on six areas of difficulty in functioning¹: vision, hearing, cognition, ambulating, self-care, and independent living (U.S. Department of Health and Human Services, n.d.). Using these standards, the U.S. Census Bureau's American Community Survey estimates a disability prevalence rate of one in eight persons among the general population (National [Institute](#) on Disability, Independent Living, and Rehabilitation Research, 2017) . (Data specific to Delaware from these and other resources are presented later in this report.)

¹ These questions include: 1. Are you deaf or do you have serious difficulty hearing?; 2. Are you blind or do you have serious difficulty seeing, even when wearing glasses?; 3. Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions? (5 years old or older); 4. Do you have serious difficulty walking or climbing stairs? (5 years old or older); 5. Do you have difficulty dressing or bathing? (5 years old or older); 6. Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping? (15 years old or older).

Types of Disability

There are many types of disabilities that impair functioning in different domains and that can be acquired throughout all stages of life. Disabilities can be congenital disorders that are genetic or chromosomal in origin or the result of conditions during pregnancy. They may also be acquired during the life course through injury or chronic disease.

Intellectual and developmental disabilities (IDD) are typically present at birth or become apparent during the stages of development prior to reaching adulthood and may include limited cognitive capacity as well as impairments in adaptive behavior, or everyday social and life skills. Developmental disabilities are a slightly broader category that can encompass intellectual disabilities, physical disabilities, or both (National Institutes of Health [NIH], 2016; NIH, n.d.).

Physical disabilities typically impair an individual's mobility and/or ability to participate in life activities, but not their intellectual capacity. Physical disabilities may also include sensory disabilities that affect a person's vision or hearing abilities.

Disabilities of aging can manifest as a progressive loss of function over time (Manini, 2011). While aging itself is often not the cause of disability, it is associated with higher rates of other health conditions that carry greater risk for acquiring functional impairments. The two most common conditions are hypertension and osteoarthritis which, combined, account for nearly

80% of disabilities among adults over 65 (Federal Interagency Forum on Agency Statistics, 2008).

Mental illness is another source of disability that may impede a person's ability to function and complete necessary tasks on a daily basis (Chaudhury, Deka, and Chetia, 2006). For example, the symptoms of schizophrenia can be disabling and may create extreme psychosocial difficulties or prevent a person from maintaining stable employment (Świtaj et al., 2012). In the US, there are nine categories of mental disorders that can qualify an individual to receive Social Security Disability Benefits if that person can provide evidence that their symptoms remain severe enough to prevent them from maintaining employment and that they have sought treatment (Social Security Administration, n.d.).

Individuals may have multiple disabilities, and multiple types of disabilities. For example, some people with cerebral palsy have both intellectual and physical disabilities. Secondary conditions are those health conditions that emerge as the result of another disability. The CDC's Healthy People 2010 initiative identified the prevention of secondary conditions related to disabilities as a primary goal (Centers for Disease Control and Prevention, 2011). Increasing access to preventive health services across multiple health domains can help reduce the possibility of secondary conditions and secondary disabilities.

Disability and Behavioral Health

In its 2009 report, *the Current State of Health Care for People with Disabilities*, the National Council on Disability identified significant health disparities and barriers to health care for this

population, including insufficient coverage for necessary services, no recognition as a disparity population in research initiatives, absence of professional training on disability competency issues for health care professionals, and the limited impact of the Americans with Disabilities Act on health care (National Council on Disability, 2009). Research indicates that regardless of disability types, clients with disabilities face common barriers to accessibility of substance use and mental health services (Carey, Purnine, Maisto, Carey, & Simons, 2000; Foster, LeFauve, Kresky-Wolff, & Rickards, 2010; Green, 2007; Voss, Cesar, Tymus, & Fiedler, 2002). These barriers include limited practitioner cultural competency, communication barriers, accessibility, and insurance coverage. The high comorbidity rate between mental health and substance use disorders can confound these problems and present challenges when trying to specify disparate outcomes for people with disability.

Substance Use

Prevalence of overall substance use, with the exception of alcohol, is higher for people with disabilities than for people without disabilities (Glazier & King, 2013). Researchers have found disparate health outcomes for people with disabilities related to substance use, particularly increased use of tobacco and opioids (Beitchman, Wilson, Douglas, Young, & Adlaf, 2001; Carroll Chapman & Wu, 2012; Compton, Thomas, Stinson, & Grant, 2007; Turner, Lloyd, & Taylor, 2006).

Since the mid-2000s in the U.S., there has been a sharp increase in the misuse of prescription opioid painkillers, as well as rates of opioid use disorder (OUD) and overdose deaths related to

prescription misuse and other opioid drugs such as heroin or the more powerful fentanyl (NIDA, 2017; Rudd, Aleshire, Zibbell, & Gladden, 2016). Adverse outcomes related to prescription opioids occur with both medical and nonmedical users. Kolodny, et al. (2015) demonstrate that in 2011, the majority of overdose deaths that were attributed to opioid prescription medicines were in the age group of 45-54, with rates that increased dramatically in the 55-64 age group. In most cases, these legitimate prescriptions were associated with chronic pain. Some chronic pain patients with high dosage opioid prescriptions may meet the criteria for substance use disorder and may be in need of treatment options (Kolodny et al., 2015). For those individuals who are currently prescribed high doses of opioids, a gradual tapering off of medication is preferred; a sudden change in prescription dosage may lead to symptoms of withdrawal and a sudden increase in pain, and may lead patients to underground channels to maintain their current level of functioning (the Academies, 2017). Data from the National Survey on Drug Use and Health (NSDUH) indicates that people who report having a work-related disability or receive Medicare under the age of 65, which in most cases implies that the person has a disability, report higher rates of substance use, particularly heroin or oxycodone, than other populations (Glazier & Kling, 2013). This may be likely because people with disabilities experience chronic pain at higher rates than the general population, as pain is often a secondary condition of certain disabilities such as traumatic brain injuries (Ehde, Jensen, Engel, Turner, Hoffman, and Cardenas, 2003, Nampiaparampil, 2008).

Additional studies have also found higher rates of opioid prescribing for people with disabilities (Hong, Geraci, Turk, Love, McDermott, 2019) as well as adverse outcomes from use, such as

opioid and other prescription drug misuse (Ford, Hinojosa, Nicholson, 2018; Lauer, Henly & Brucker, 2019), opioid use disorders (Lauer, Henly, & Brucker, 2019) and fatal overdoses (Song, 2017). Kennedy et al. (2018) found this disparity in rates of illicit opioid use as well, with adults with disabilities reporting using heroin at more than twice the rate of people without disabilities. Although numerous research studies show that people with disabilities are more likely to misuse opioids, studies have also found that this same population is less likely to receive treatment (National Institute on Disabilities, Independent Living, and Rehabilitation Research, 2018; Lauer, Henly & Brucker, 2019; Krahn, 2009). While more research is needed, available evidence suggests people with disabilities experience disparate risks and outcomes from substance use that may be specifically related to their disabilities.

Mental health

In addition to substance use disorders, nationally, people with disabilities report higher rates of depression and are also more likely to report experiencing 14 or more mentally unhealthy days in the past 30 days than those without disabilities (CDC, Disability and Health Data System, n.d.). Scholars have identified two occurrences that may lead to an inaccurate diagnosis of mental health disorders for those with disabilities: diagnostic masking and diagnostic overshadowing (Manohar, et al., 2016; Reiss, Levitan, Szyszko, 1982). Diagnostic masking occurs when some characteristics of the disability make it challenging to identify other conditions – for example, a person with an autism spectrum disorder may also suffer from an anxiety disorder, but anxiety is commonly associated with autism. Diagnostic overshadowing occurs when clinicians determine that behaviors or symptoms that are expressed are a result of the

disability, without considering other options; a person with an intellectual disability may be experiencing depression, but the clinician may determine that their flat affect is a symptom of their disability rather than an aspect of their depression.

People with serious mental illness are also subject to diagnostic overshadowing. In this case, medical illness complaints are seen as symptoms of mental illness, and necessary medical interventions are delayed or not provided as a result. While patient behavior and the social determinants of health are also associated with the 25-year mortality gap between those with serious mental illness and those without (Viron & Stern, 2010), diagnostic overshadowing is also attributed to this wide health disparity.

Delaware Specific Data

Delaware Prevalence

As discussed earlier in this report, disability prevalence estimates can vary widely depending on the data source. Recent surveys suggest that somewhere between one in eight (ACS, 2013-2017) to nearly one in three (BRFSS, 2017) of Delaware's residents have a disability. According to data drawn from the American Community Survey (2013-2017 5-Year Estimates) an estimated 12% of the Delaware state population has a disability (Figure 1). Furthermore, disability prevalence increases as people age; two out of three people who report having a disability are over the age of 65 (Figure 2). The CDC's Behavioral Risk Factor Surveillance System (BRFSS) uses the same six core disability questions as the American Community Survey but surveys only an adult

population. The BRFSS estimated that in 2017, 30.3% of Delaware’s adult population reported having some sort of disability (CDC, [Disability and Health Data System](#), n.d.).

DISABILITY BY TYPE	%
TOTAL DISABILITIES	12
AMBULATORY DIFFICULTY	6.8
INDEPENDENT LIVING DIFFICULTY	5.4
COGNITIVE DIFFICULTY	4.9
HEARING DIFFICULTY	3.1
SELF-CARE DIFFICULTY	2.6
VISION DIFFICULTY	2.1

Figure 1: Prevalence of disability status by type (2013-2017 American Community Survey)

DISABILITY BY AGE

AGE	%
UNDER 5 YEARS	0.9
5 TO 17 YEARS	5.4
18 TO 34 YEARS	6.2
35 TO 64 YEARS	11.7
65 TO 74 YEARS	22.0
75 YEARS AND OVER	44.0

Figure 2: Prevalence of disability status by age (2013-2017 American Community Survey)

The [National Survey of Children’s Health, a survey of parents reporting on the health status of their children](#), provides additional context for Delaware youth. In 2017, one in four children were identified as having at least one functional difficulty²; 14.8% reported one functional difficulty and 13% reported two or more difficulties. Similarly, 23.2% of children were identified with special health care needs. One in ten children were identified as currently or previously diagnosed with ADHD. Nearly 14% of children ages 3-17 received mental health treatment in the past year, with an additional 4% of children identified by their parents as needing to see a mental

² Functional difficulty is defined by the NSCH as one of 12 of the following conditions: frequent or chronic respiratory problems (past year); difficulty eating or swallowing (past year); stomach/intestinal problems (past year); repeated or chronic pain, including headaches (past year); difficulty using hands (0-5 years); difficulty with coordination and movement (0-5 years); serious difficulty concentrating, remembering, or making decisions (6-17 years); serious difficulty walking or climbing stairs (6-17 years); difficulty dressing or bathing (6-17 years); difficulty doing errands alone (12-17 years); deafness/hearing problems; and blindness or vision difficulties even when wearing glasses.

health professional. Approximately 5% of children ages 3-17 were identified as having Autism Spectrum Disorder.

The Delaware Department of Education reports that 16.15% of students currently enrolled in public schools have a disability. As required by the Individuals with Disabilities Education Act, the DOE provides additional data related to this population. During the 2017-2018 school year, 20,580 children and youth with disabilities ages 6-21 were enrolled in Delaware schools; nearly 66% of these students spent 80% or more of their school day in a general education classroom setting. Nearly half of the students, ages 6-21, enrolled with a disability have a specific learning disability which entails having difficulties with listening, speaking, reading, writing, and understanding math (e.g., dyslexia, dysgraphia) that are not a result of some other disability. An additional 2,616 students with disabilities, ages 3-5, were enrolled in public schools during this time period (Delaware Department of Education, IDEA Child Count and Educational Environment, Ages [6-21](#) and [3-5](#)).

Health Disparities Experienced by Delawareans with Disabilities

Adults

In line with national research, one public health assessment of the Delaware population with disabilities found that these individuals face significant health disparities compared to the general population, including: heart disease, dental problems, diabetes, current smoking, and depression. They also report reduced health care access and decreased preventive screening rates for some cancers (Sparling et al., 2015). Data from the 2017 BRFSS indicates significantly

higher prevalence for smoking status and e-cigarette use among Delaware adults who self-report having one or more disabilities (Figure 3) (CDC, [Disability and Health Data System](#), n.d.). Adults with disabilities were also four times as likely to report experiencing depression than respondents without disabilities. Data shows disparities across multiple domains of health and well-being in addition to tobacco use and mental health (Figure 4).

Smoking Status by Disability Status (Delaware, percentages)		
	Adults with Disability	Adults without Disability
Current Smoker	29.8	13.3
Former Smoker	25.3	22.1
Never Smoker	44.9	64.6

Current E-Cigarette Use by Disability Status (Delaware, percentages)		
	Adults with Disability	Adults without Disability
Yes	10.4	3.6
No	89.6	96.4

Depression by Disability Status (Delaware, percentages)		
	Adults with Disability	Adults without Disability
Yes	42.1	11.7
No	57.9	88.3

Figure 3: Prevalence of Smoking, E-Cigarette Use, and Depression among adults with disabilities in Delaware (2017 Delaware Risk Factor Surveillance System)

Health Status and Health Outcomes by Age-Adjusted Prevalence (Delaware)

Variables	Disability (%)	No Disability (%)
General Health Status (Fair or Poor Self-Rated)	38.5	8.9
Physically Unhealthy Days in Past 30 Days (14+ Days)	27.8	4.3
Mentally Unhealthy Days in Past 30 Days (14+ Days)	31.2	7.9
Depression	42.1	11.7
Current Smoker	29.8	13.3
Current E-Cigarette User	10.4	3.6
Arthritis	38.0	14.3
Asthma	17.0	7.8
Cancer (excluding skin cancer)	7.4	5.7
Chronic Obstructive Pulmonary Disease	14.5	3.6
Diabetes	12.5	7.7
Stroke	5.6	1.7
Heart Disease	10.2	3.0

Figure 4: Health status and health outcomes by age-adjusted prevalence (2017 Delaware BRFSS)

Youth

Data from Delaware youth surveys also show alarming disparities for respondents who report disabilities. Responses from the youngest of children surveyed by the Delaware School Survey (DSS) show that fifth graders who take medicine to concentrate better in school (approximately 13%) are bullied more than other students who do not take these medications, and have higher lifetime rates of drinking alcohol, smoking marijuana, and smoking most of a cigarette (Figure 5).

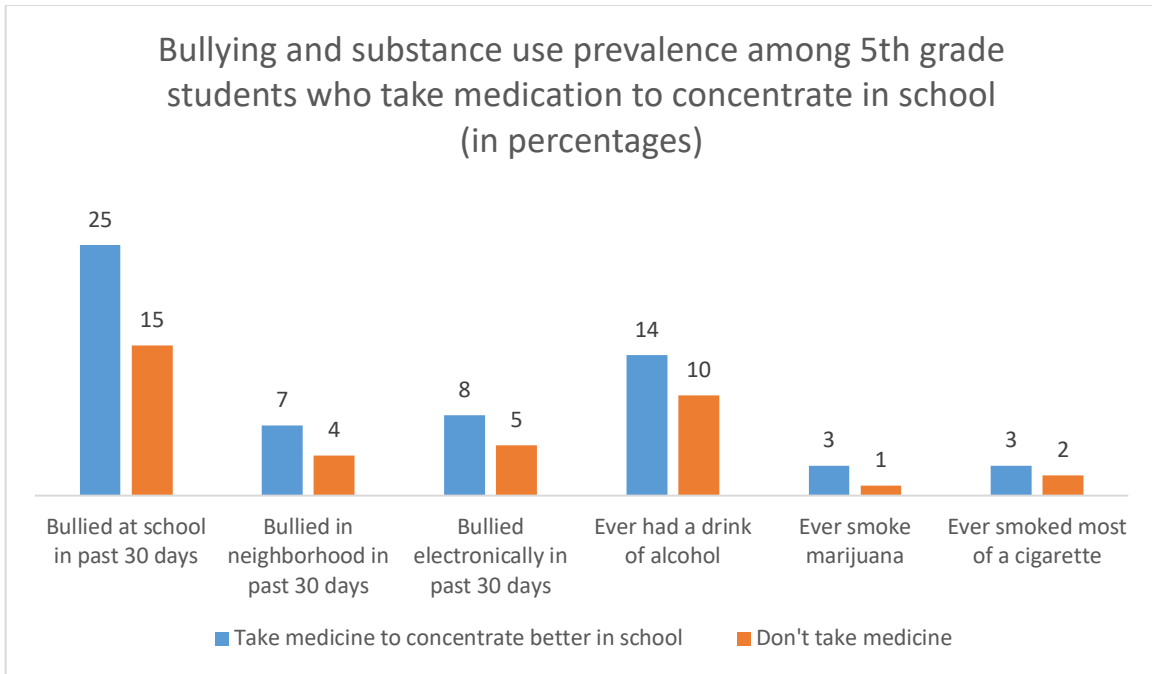


Figure 5: Bullying and substance use prevalence estimates among 5th grade students who take medication to concentrate better in school (2018 Delaware School Survey)

Thirty percent of middle school students surveyed by the Delaware Youth Risk Behavior Survey (YRBS) reported having a disability (Figure 6). Disability, in this case, is defined as difficulty seeing, hearing, walking, or climbing stairs, or having a serious difficulty concentrating, remembering, or making decisions because of a physical, mental or emotional disability. Data is reported from both students who self-identify as having a disability and those who report that they have been diagnosed with a physical, mental, or emotional disability by a medical professional. Middle school students responding to the YRBS who report having a disability also report higher rates of substance use, sexual activity, reports of bullying, and poorer mental health outcomes than their peers (Figures 7-9). Middle school students who stated that they have a disability reported double the rates of past month alcohol use, marijuana use, prescription painkiller use, and cigarette use, as well as higher rates of past month vaping, than students without disabilities.

These students were also more likely to have ever had sexual intercourse than students without disabilities, and also less likely to use a condom during intercourse. In terms of mental health indicators, they were nearly three times as likely to report self-harm, ever making a plan to commit suicide, and attempting suicide than other students.

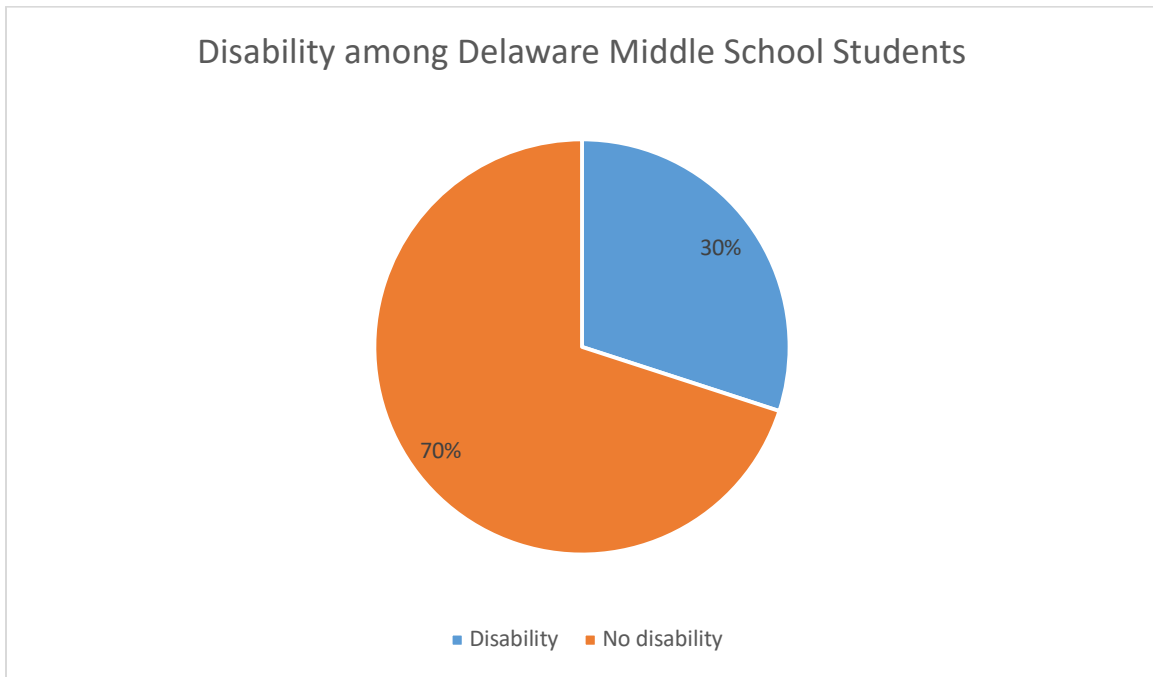


Figure 6: Disability³ prevalence among middle school students (2017 Delaware YRBS⁴)

³ Note: "Disability" in the YRBS includes both self-identified and medical professional-identified disabilities.

⁴ Estimates from the Delaware YRBS are weighted.

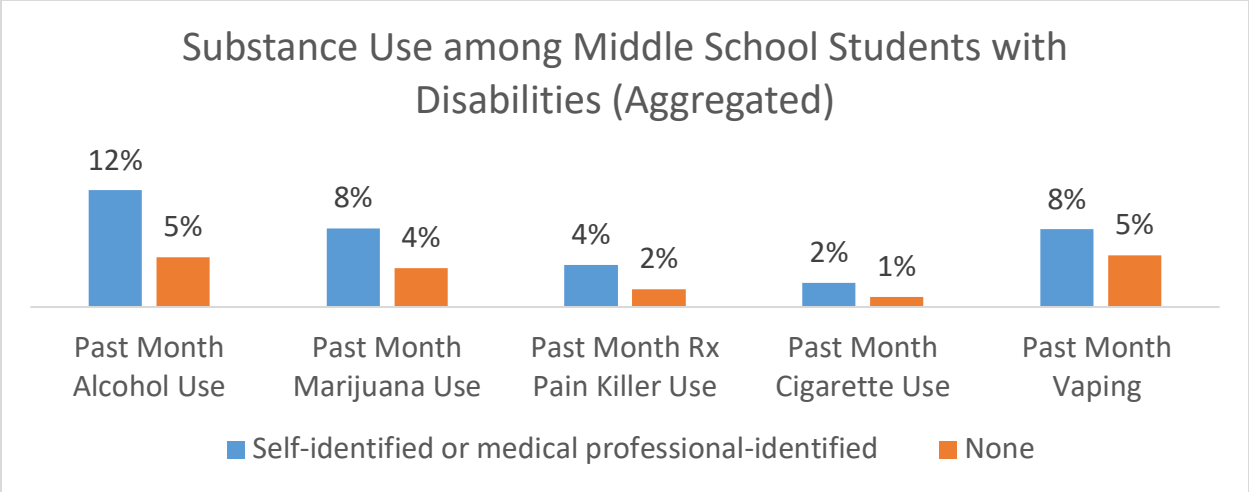


Figure 7: Substance use among middle school students with disabilities (2017 Delaware YRBS)

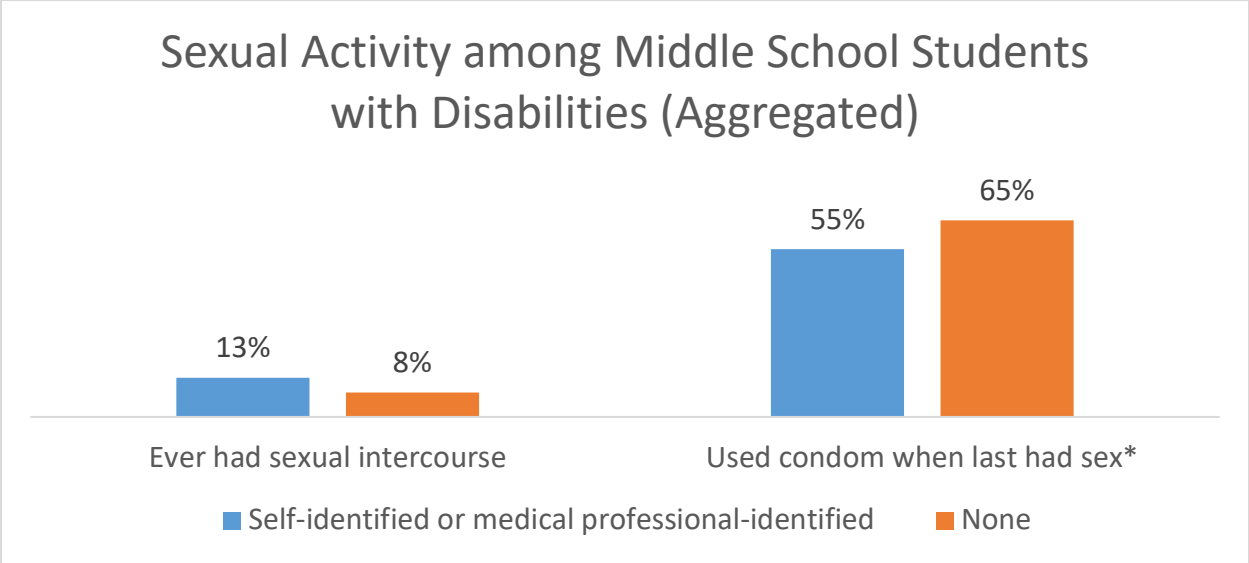


Figure 8: Sexual activity⁵ among middle school students with disabilities (2017 Delaware YRBS)

⁵ Used condom when last had sex is estimates among students who reported ever having sexual intercourse.

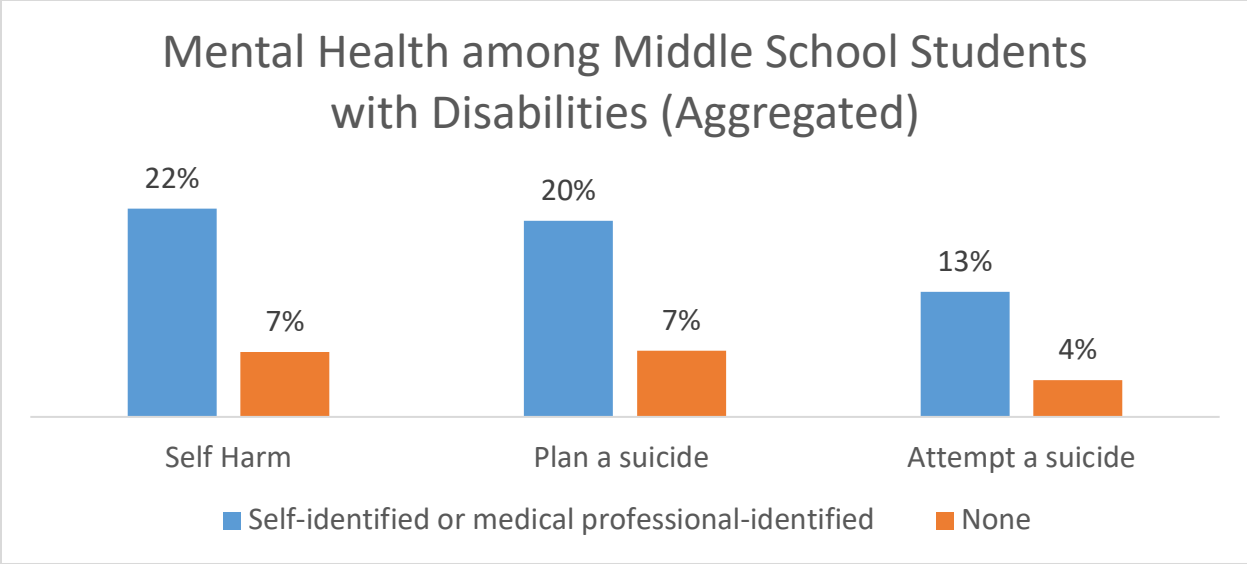


Figure 9: Mental health among middle school students with disabilities (2017 Delaware YRBS)

Behavioral health disparities were also reported among older students. Thirty-four percent of high school students responding to the 2017 YRBS reported having a disability (Figure 10). Students with disabilities reported higher rates of substance use and sexual activity, as well as far poorer mental health outcomes than peers who did not report having a disability (Figures 11-13). They were also less likely to report experiencing protective factors, such as their parents showing they are proud of them, taking an interest in them, or listening when they talk (Figure 14). These indicators of family connectedness for youth are considered protective factors against negative health outcomes (Steiner, Sheremenko, Lessesne, Dittus, Sieving, and Ethier, 2019; CDC, Division of Adolescent and School Health, n.d.).

Of particular concern, high school students with disabilities (either self-identified or medical professional-identified) reported misusing prescription drugs at more than three times the rate of their peers without disabilities (Figure 11). They were three times more likely to report feeling

sad or hopeless for two or more weeks, and about four times more likely to report self-harm, planning a suicide, or attempting a suicide than students without disabilities (Figure 12). These students were more likely to have ever had sexual intercourse, drink or use drugs before sex, and less likely to have used a condom when they last had sex (Figure 13).

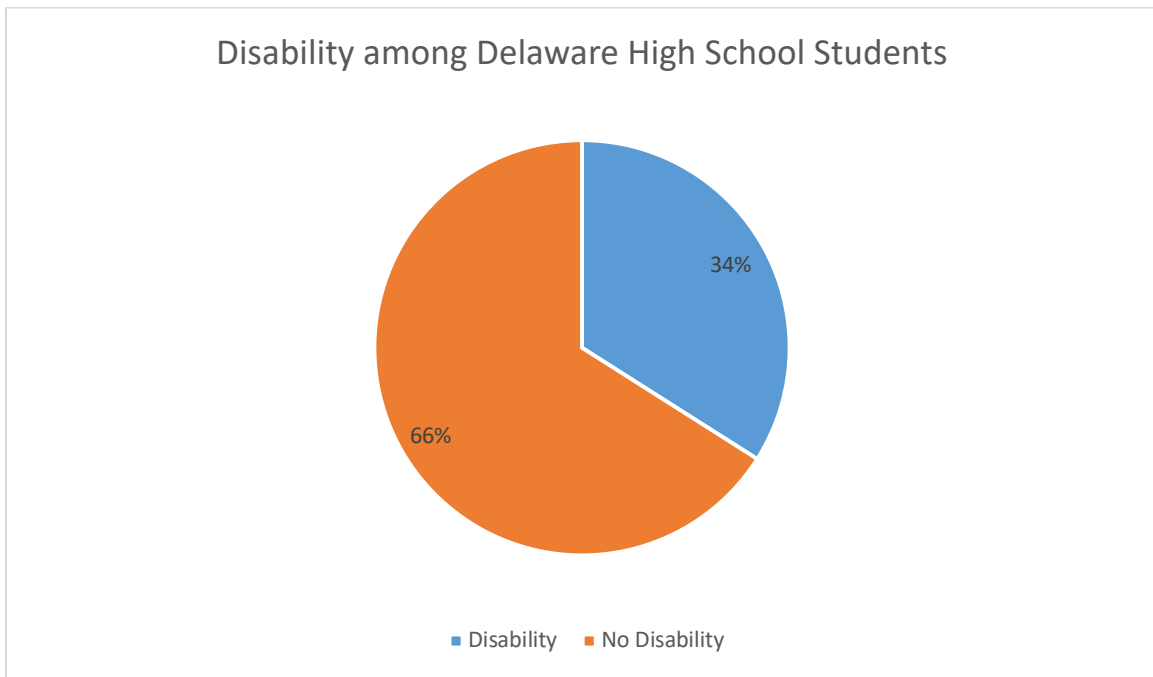


Figure 10: Disability prevalence among high school students (2017 Delaware YRBS)

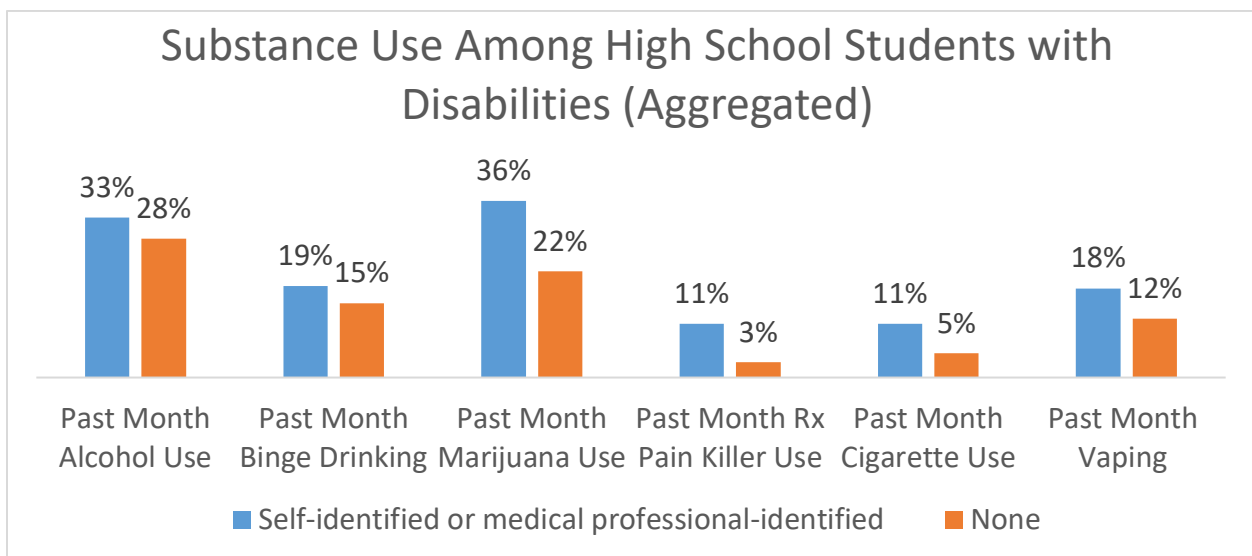


Figure 11: Substance use among high school students with disabilities (2017 Delaware YRBS)

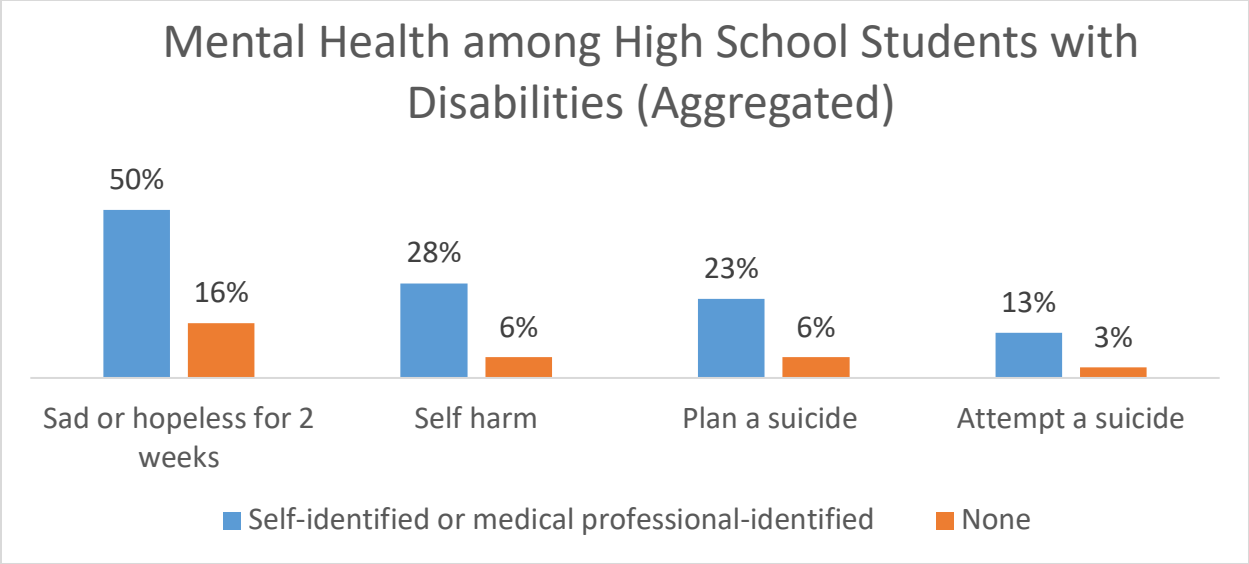


Figure 12: Mental health among high school students with disabilities (2017 Delaware YRBS)

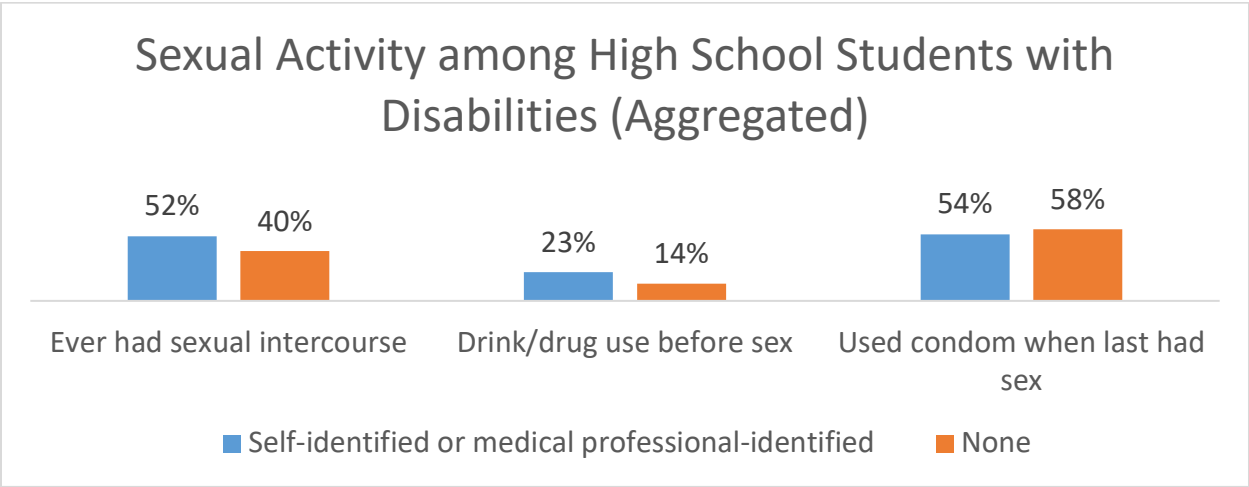


Figure 13: Sexual activity⁶ among high school students with disabilities (2017 Delaware YRBS)

⁶ Drinking/drug use before sex and condom use before sex are estimated among students who report ever having sexual intercourse

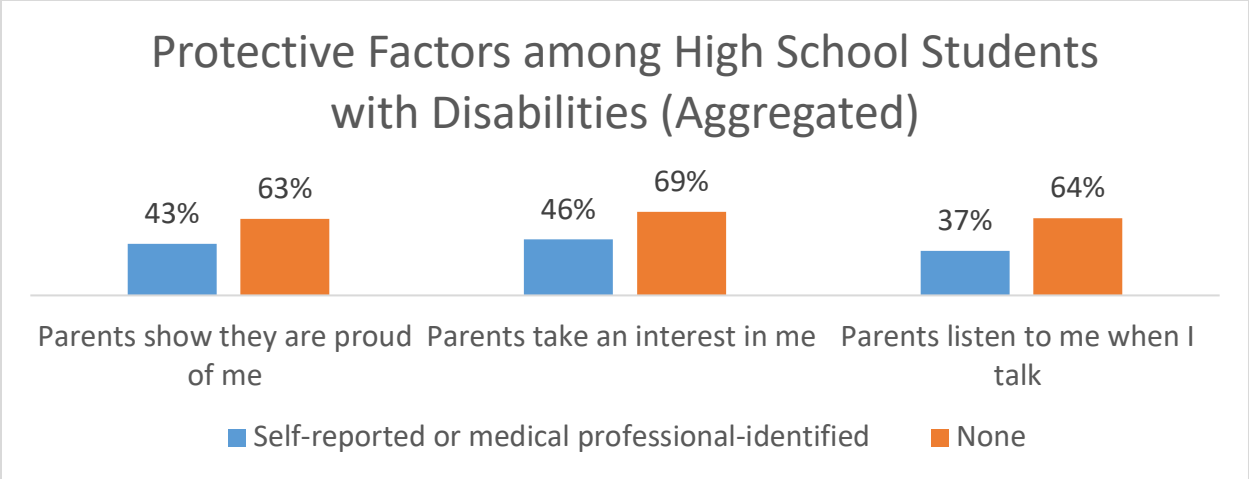


Figure 14: Protective factors⁷ among high school students with disabilities (2017 Delaware YRBS)

High school students diagnosed with ADD/ADHD, anxiety, or depression also had higher rates of past month cigarette, alcohol, and marijuana use, as well as lifetime misuse of prescription pain medication (Figure 15). These youth had more than double the rates of past month cigarette use, and for youth with anxiety and depression, more than double the rates of life-time prescription pain medication use than their peers without these diagnoses. These students reported higher frequencies of multiple forms of bullying, and mental health outcomes were also poorer for this group compared to other students (Figures 16-17). For those students diagnosed with depression, nearly one in four had ever attempted suicide; for those diagnosed with anxiety, nearly one in five had attempted suicide.

⁷ When asked how often their parents show they are proud, take an interest, or listen when they talk, students responded “always” as opposed to “sometimes” or “never”.

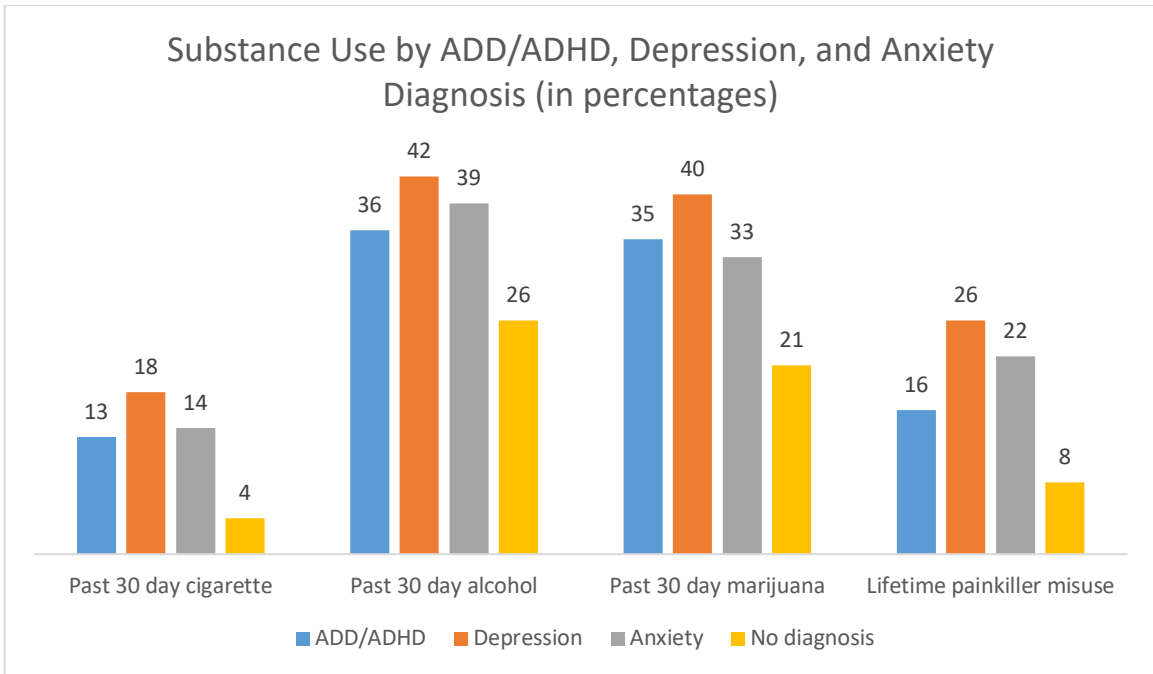


Figure 15: Self-reported substance use by ADD/ADHD, depression, and anxiety among high school students (2017 Delaware YRBS)

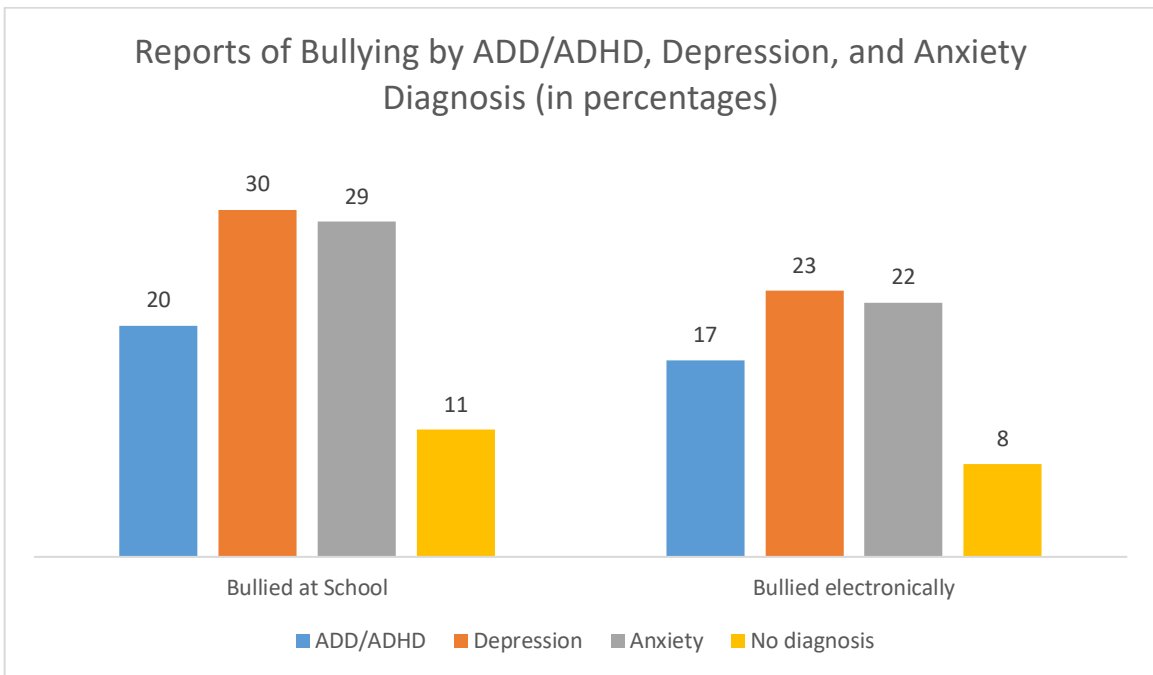


Figure 11: Reports of bullying in the past year by ADD/ADHD, depression, and anxiety diagnosis among high school students (2017 Delaware YRBS)

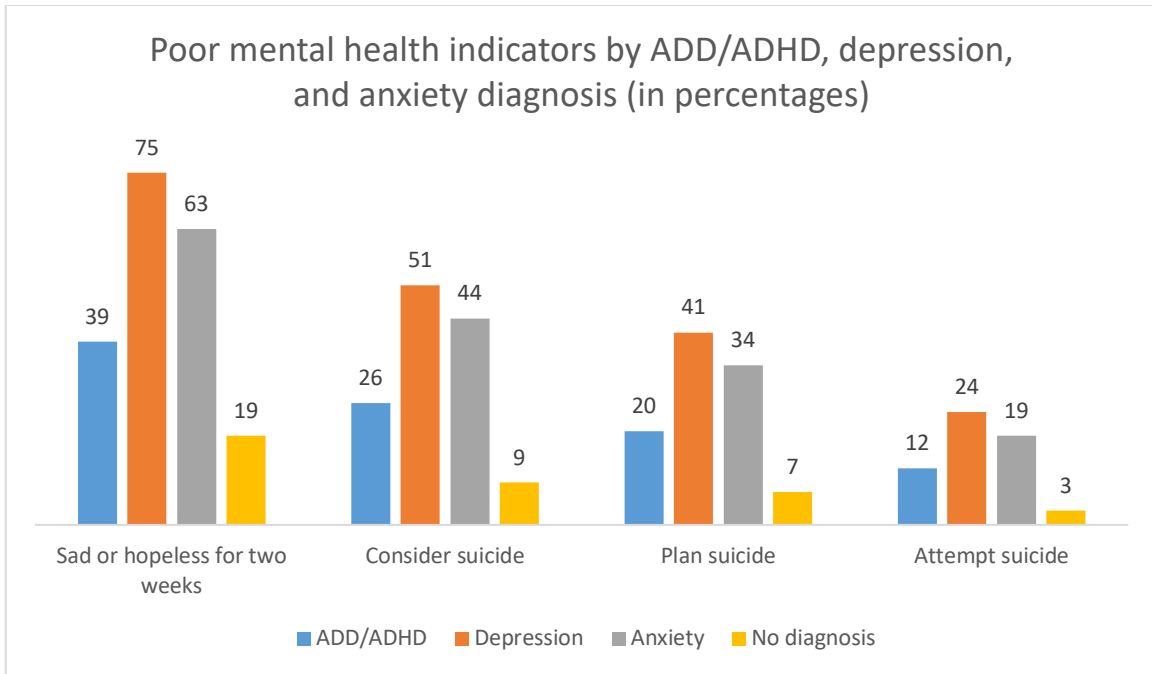


Figure 12: Poor mental health indicators by ADD/ADHD, depression, and anxiety diagnosis among high school students (2017 Delaware YRBS)

Factors Influencing Equity

Practitioner Competency

Interactions between medical service providers and their patients can shape the diagnosis and treatment process. Due to a lack of experience and/or knowledge, practitioners may be unfamiliar with the diverse needs of the disability community and ill equipped to fully meet their needs (Carroll Chapman & Wu, 2012; Krahn et al, 2006). Researchers have found that due to lack of resources, providers are often unable to hire staff who are competent and trained to work with individuals with disabilities (Krahn, Hammond, & Turner, 2006). Many disabilities are not readily apparent; without proper screening for disability, providers may be unaware that their clients have a disability. Due to lack of training, practitioners might fail to identify the co-occurrence of mental health and substance use disorders in persons with disabilities (Carey,

Purnine, Maisto, Carey, & Simons, 2000; Foster et al., 2010; Green, 2007; Priester et al., 2016).

These barriers may be more prevalent across different socio-economic categories and disability types. For example, researchers have found that individuals with intellectual disabilities with co-occurring substance use disorders and serious mental illness requiring treatment across domains experience significant barriers to treatment due to providers' lack of knowledge, experience, skill, and negative attitudes and beliefs (Krahn et al, 2006; Lin E et al., 2016; Slayter, 2010). In addition, individuals of lower socioeconomic status and/or racial and ethnic minorities are more likely to be affected by providers' inability to identify co-occurring disorders (Priester et al., 2016).

Research by Drainoni et al. (2006) found that some clients reported their providers lacked adequate knowledge about people with disabilities and held stigmatizing beliefs that influenced both provider-client interactions and the provision of healthcare services. In another study, clients with psychiatric disabilities reported their reluctance to seek services because of providers' stigmas and attitudes that they perceived led to paternalistic or degrading treatment (Knaak, Mantler, Szeto, 2017; Mesidor, Gidugu, Rogers, Kash-MacDonald, & Boardman, 2011). The lack of culturally sensitive services may dissuade individuals with disabilities to follow posttreatment requirements (Drainoni et al., 2006).

Communication barriers

Individuals with sensory disabilities such as hearing or vision impairments might face communication barriers which could lead to diagnostic errors (Berman, 2010; Diaz,

Landsberger, Povlinski, Sheward, & Sculley, 2013). In order to get quality treatment, deaf and hard of hearing individuals need treatment programs to provide assistive listening devices and qualified interpreters who are fluent in American Sign Language and can assess potential substance use problems (Diaz et al., 2013; Guthmann & Blozis, 2001; Guthmann & Graham; 2008; Titus & Guthmann, 2010). Similarly, individuals with visual disability reported that treatment programs not only fail to provide trained counselors, but they also fail to provide alternative media for the program's material and appropriate signage for these clients (Center for Substance Abuse Treatment (U.S.) & Moore, 1998; Koch, Nelipovich, Sneed, 2002).

Individuals with intellectual disabilities might experience difficulties understanding treatment concepts due to various reasons, such as having a limited vocabulary or difficulties in processing information (Carroll Chapman & Wu, 2012; SAMHSA, 1998).

Accessibility

Physical access is another issue that individuals with physical and intellectual disabilities have identified as a barrier to public and private services (West, Graham, & Cifu, 2009), and may contribute to the under-utilization of substance use treatment resources by this group (Krahn, 2009). In some cases, inadequate physical accommodations, such as inaccessible parking, bathroom stalls that cannot accommodate wheelchairs, doors that are not ADA compliant, buildings without elevators, and entrances without ramps might lead to mistrust in the efficacy of treatments in addition to restricting access to services (Krahn et al., 2006; Voss et al., 2002; West, in press). Access and utilization of services may vary based on the type of disabilities experienced (Krahn et. al, 2006; West et al., 2009). For example, West et al. (2009) found that

individuals with physical mobility are less likely to find accessible substance use treatment facilities than individuals with other types of disabilities. Furthermore, people with disabilities have raised concerns about restricted access to substance use treatment services due to specialized transportation needs (Okoro, Dhingra, & Li, 2014; Krahn, Deck, Gabriel, & Farrell, 2007; Scheer, Kroll, Neri, & Beatty, 2003, West et al., 2009). For example, clients reported that public transportation is far from treatment centers (Krahan et al., 2010; Scheer et al., 2003). Although publicly funded door-to-door transportation has been offered to overcome the accessibility issue in some areas, clients stated that this service did not solve the problem because transportation services are often unreliable (Scheer et al., 2003). Moreover, sometimes these vehicles do not have the equipment required for loading or attaching wheelchairs (Scheer et al., 2003).

Insurance Coverage

Finally, research indicates that health insurance plans can function as a barrier to accessing substance use and mental health treatment. Although individuals with disabilities are more likely to be insured (Fouts, Andersen, & Hagglund, 2000), often through publicly funded insurance such as Medicare or Medicaid, some Medicaid and Medicare programs limit the types of substance use treatment options that are available (Foster et al., 2010) and some health plans only partially cover services (Drainoni et al., 2006). For example, Medicare Part D prescription coverage does not allow for methadone assisted treatment, but does allow for other medication assisted treatment options, as long as they are available through a prescription from a pharmacy. Publicly funded substance use treatment services can have long

waiting lists and limited resources, while Medicaid is often not accepted by private treatment providers (Carroll Chapman & Wu, 2012). Insurance plans may cover mental health services more generously than substance use disorder services, (Priester et al., 2016), though there is variation on services covered. Even if insurance plans cover most of the needed services, clients with limited income or means cannot always afford the associated copay or deductible cost (Scheer et al., 2003; Sterling et al., 2010). Passage of the *Affordable Care Act* in 2010 decreased some health disparities for people with disabilities, although disparities persist for some subpopulations that have disabilities, such as those with mental health disabilities, lower-income individuals, and individuals from the Latino community (Kaye, 2019).

Implications for Practitioners and Policy Makers

There are several areas in which policy and practice could be enhanced to improve data collection and service delivery as part of a broader strategy to promote health equity for people with disabilities.

- **Public health surveillance systems require routine data collection and identification of the target population.** The data presented in this report emphasizes that adults and youth in Delaware report significant disparities in behavioral health outcomes. However, gaps persist in data collection to identify the needs and outcomes for this population. Although in recent years there has been a greater emphasis on addressing health disparities, disability status has not been broadly included as a demographic characteristic essential to monitor. As part of a recent initiative for the Delaware Division of Substance Abuse and Mental Health, the Center for Drug and Health Studies

reviewed multiple behavioral health screening and assessment tools used in Delaware, finding that most tools do not include disability indicator questions. Without ongoing monitoring of the number of people in Delaware with disabilities that use behavioral health services, it is not possible to assess whether the services available meet client needs.

- **Targeted and accessible evidence-based public health promotion and disease prevention programs can impact health disparities experienced by people with disabilities.** A disproportionate share of health care expenditures points to an opportunity for more effective, targeted resources for this population. Medical services for people with disabilities make up a significant portion of public health expenditures. Data from 2014 showed that while persons with disabilities comprised 12% of the Medicaid population, they accounted for 32% of Medicaid expenditures in Delaware (Kaiser Family Foundation, n.d.). A more thorough understanding of the behavioral health needs of people with disabilities, through enhanced data collection, may provide opportunities for increasing prevention programming and services to these populations. Including people with disabilities in strategic planning and decision-making can help practitioners and policymakers have a better understanding of the diverse needs of the disability community and identify ways to increase accessibility and inclusion in treatment programs.
- **Enhanced accessibility in service delivery will impact outcomes.** Understanding the access and functional needs of clients can lead to improved service delivery and improved health outcomes for this population. Efforts to ensure the use of accessible

facilities and health promotion materials can enhance the reach of public health programs to this population.

- **Comprehensive health policy is in place in Delaware** that can address the identified issues of surveillance, accessibility, and representation. The Delaware Department of Health and Social Services (DHSS) adopted [Policy Memorandum #70](#) in July of 2015 as part of the 25th anniversary celebration of the passage of the Americans with Disabilities Act. The policy is intended to “...provide uniform standards for the incorporation of inclusive practices in all State Plans, Federal grants, sub-grants, DHSS service specifications and contracts with vendors originating from DHSS...” (page 1). Among other guidelines, the memorandum states that data collection should include disability status whenever possible. Education and enforcement around the existence of this policy will strengthen the State’s ability to address disparities and achieve health equity for Delawareans of all abilities.

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