

Sarah Bagley:

Hi, I'm doctor Sarah Bagley. I'd like to talk to you today about the importance of addressing substance use in adolescence and young adulthood. Teens and young adults are wired to take risks and to experiment. That means that teens and young adults are more likely to use drugs. Adolescents and young adults are susceptible to boredom, to peer pressure, and so this puts them at a higher risk of using alcohol and other drugs. Adolescents and young adults may also be experiencing feelings of depression or anxiety or potentially bullying at school, and those are some other reasons that they may decide to experiment with alcohol and other drugs.

Well experimentation with drug and alcohol use during adolescence and young adulthood doesn't necessarily lead to addiction. We know that most people who develop an addiction later on started to use substances before they were 18 years old. Even for those adolescents and young adults who do not develop addiction, there's still risks associated with using substances such as engaging in unsafe sex practices, getting in motor vehicle accidents, and being vulnerable to other kinds of injuries.

Alcohol and marijuana are the most commonly used substances by adolescents. According to Monitoring the Future, a national survey conducted every year with high school students, we know that about 55% of all 12th graders have used alcohol in the last year and about 36% of all 12th graders have used marijuana in the last year.

Importantly, although there is a high prevalence of alcohol and marijuana use in teenagers, we also know that these rates are the lowest that they have been in years. And that's really encouraging news. It means that the prevention programs that have been implemented over the past decade or so are making a real difference.

We also know that it means that when we're talking to teens who may say to us, "It feels like everyone is using," we can actually use data and statistics to tell them that not all of their friends are drinking and not all of their friends are smoking marijuana.

Adolescence is a critical time for brain development and we know that addiction is a brain disease. All drugs work a little bit differently, but there's a similarity. They all increase the amount of dopamine in our brain, and dopamine is the chemical that affects our reward system and makes us feel good. It's normal to want to feel good. So our dopamine may increase if we eat or we do something that's enjoyable. It also increases if we use a drug or use alcohol. The adolescent brain, which is immature and is seeking sensations, responds really positively when the dopamine increases in their brain, and that adolescent is going to seek to repeat that experience and over time those repeated exposures can lead to addiction.

There's certain factors that we consider when treating adolescents and young adults who have substance use disorder. We're trying to prevent the

downstream effects of addiction and development of other chronic medical problems associated with addiction, and we have good treatment. So we know that if we intervene early, we engage adolescents and young adults in treatment, we can prevent those long-term effects. It's also important because it allows us to intervene and try to prevent any of the short-term effects like unwanted pregnancy, transmission of sexually transmitted infections, or other infections that might be associated with injection drug use.

It's important to understand that many adolescents and young adults who have substance use disorder also may have other mental health diagnoses like anxiety or depression. When we treat adolescents and young adults we have to consider the other diagnosis they may have and want to make sure that we're treating both of those conditions together. We know that adolescents and young adults who are treated for both their substance use and their mental health disorders do better. That means that they're able to go back to school, go back to jobs, and rejoin the lives that they want to have.

Addiction is a highly stigmatized disease, and we even find that some of the treatments that we use for addiction are also stigmatized. Some of the stigma is associated with having an addiction and a general perception in the public that this is, the addiction is the result of lack of willpower, poor choices, or just bad habits that people have. We often find too that there's stigma associated with the medications we use to treat an opioid use disorder. So we hear in the community sometimes that we're just substituting one drug for another.

One really easy way that we can all try to reduce the stigma associated with addiction is to change the language that we use. For example, using person first language, so trying to get rid of terms like addict or alcoholic or terms like abuse, and instead say person with a substance use disorder or person with an alcoholic use disorder or someone who is misusing substances.

Another way that we can reduce the stigma associated with addiction is to use medically accurate terminology. We know that addiction is a brain disease, it's a chronic illness, and so that we should use terms like we do when talking about asthma or COPD or diabetes or other chronic medical illnesses when talking about patients who have addiction.

For a really long time people who had substance use or alcohol use disorders were viewed as being weak, that they had a habit that they couldn't get rid of, and that they just needed to have the willpower in order to overcome what was going on and change their lives. Over the last couple of decades we have had definitive research showing that in fact addiction is a brain disease, it's a chronic relapsing disease, and that people need more than just willpower in order to recover from their alcohol or substance use disorder.

In our program we handle this a couple of ways. One is just being really upfront with our patients and telling them that we recognize that this is a stigmatizing disease and we recognize that there might have been a lot of places in their life

that they have been where they felt judged. And just by showing them that we understand that, patients often will literally just relax in our offices and we can see that they feel like they're in a safe place.

We know both through research and from talking to patients that because of the stigma associated with addiction, people are less likely to seek treatment or ask for help. That's because they're worried about being judged or they maybe have family members who are concerned about what it's going to mean if they find themselves in treatment for an alcohol or substance abuse disorder.

If you have any questions about what the right terms are to use, or what stigma might mean when we're talking about stigma associated with addiction, feel free to ask. People who are experts or people who maybe have a substance use disorder would be happy to talk to you about that, and the humility you show by asking expresses the empathy that you have for patients who have substance use disorder.

The first step to identify substance use in an adolescent is to recognize some of the warning signs as early as possible. Parents and all adults who interact with adolescents and young adults should be aware of some of the warning signs of substance use. These might include changes in behavior like becoming more withdrawn, or seeming more depressed, changes in grades, maybe dropping out of school or losing a job, changes in friends, becoming less interested in activities or in sports that the adolescent or young adult used to be excited about.

Some other signs that substance use may be a problem for an adolescent or a young adult is not been able to stop using when after having a conversation with a parent or other adult about stopping use, trying to hide alcohol or substance use, or becoming really defensive in conversations around substance use.

These signs can be really subtle, and it's important to recognize that some of these signs might be symptoms of having a mental health diagnosis like depression or anxiety. And so it's really important that parents or other adults involved in an adolescent or young adult's life is able to have an open and honest conversation about what's going on and ensure that that adolescent and young adult have access to an assessment to figure out whether or not is substance use or other mental health problems that may be causing their symptoms.

It's also important to realize that a lot of these signs can be subtle and sometimes they don't exist at all or may not show up until later on when substance use has become more problematic and parents shouldn't feel guilty if they missed these signs in their adolescent.

Physicians such as primary care providers are trained to ask adolescents in a confidential way at their annual exam about substance use, and parents can ask their primary care providers to make sure that that assessment is happening every year.

When a substance use disorder is identified in an adolescent or in a young adult, it's important that the first message that that teen or young adult is receiving is that no matter what happens, the parent or the other caregiver is going to be there for them. This can be a really difficult time and the teen or young adult may feel really alienated. And if they feel like they can't have an open and honest conversation, then it's going to be really difficult to engage that person in any kind of treatment.

It's important then to find substance use disorder services that are appropriate for teenagers and young adults. A lot of the treatments available for people with substance use disorder are tailored towards adult, and teens and young adults have different needs. You should make sure that you look for treatment that has professionals who are trained in taking care of teens and young adults, and you can always talk to your primary care provider to ensure that that treatment is appropriate.

Parents should look for treatment that addresses both the physical and the mental health needs of their teen or their young adult. Treatment should also include support for both the patient and also the family. For example, at the CATALYST Clinic where I work at Boston Medical Center, we have a team-based approach where our team is composed of physicians, social workers, nurses, recovery coach, and so that way we're able to really wrap around our patients and make sure that all of their needs are being addressed.

Part of support for a family whose adolescent or young adult is going through substance use disorder treatment is helping the family realize that this isn't their fault. A lot of the families that we meet feel guilty or they wonder whether or not they missed any signs or symptoms of what was going on with their child. We try to be really clear that addiction is a really complicated disease and it's easy to miss the signs, and that the parents shouldn't feel guilty about that and moving forward it's important to make sure that we're supporting them in figuring out how to communicate and support their child struggling with a substance use disorder.

We offer our services in a primary care clinic which allow us to address both the physical and the mental health needs of all of our patients and their families. We offer primary care. We offer assessment and diagnosis of substance use disorder. We treat patients with medications for alcohol and opioid use disorder. We offer our patients therapy and recovery support. In addition, we screen our patients for HIV and hepatitis C and link them to treatment as needed and also link them to psychiatry care if indicated.

Some additional components of the substance use disorder treatment that we offer at CATALYST may include monitoring for drug use with urine drug testing, offering overdose education and naloxone for patients and their families, and also offering recovery support through outreach services. We have found that a lot of our patients have barriers that are related to social issues such as housing and transportation, and we recognize that it's critical to address those issues too if we want our patients to meet the recovery and have the recovery that they want.

Substance use disorder services offered to teens and to young adults are different than those services that are offered to older adults. Some of the key differences are that oftentimes involvement of family is critical to the success of a teen and a young adult with a substance use disorder. It's also important that we recognize that peers play a major role in the lives of teens and young adults, and for some teens and young adults, they may rely on their peers more than their family. Part of the work that we have to do is to help them find sober networks of friends so that they can find ways to enjoy activities without substances.

Another component of treatment that's different is that some of these teens and young adults may have dropped out of school are having trouble finishing school. In order for them to go on, to get the job that they want, and again, have the lives that they want and the full recovery, means that our services have to address getting them back into school or helping them finish school or finding employment.

An additional key difference between treating adolescents and young adults compared to older adults is that we have to sometimes go into the community to find them where they are. Older adults may be more likely to actually come to a clinic or come to a program to receive treatment. But teens and young adults have a lot of ambivalence. They may not want to go to the doctor's office. So part of the work we do is going to find them where they are, which might be in schools, might be in community centers, or in other places where teens and young adults congregate.

We've all heard a lot about the increase in opioid related overdose deaths in the United States. But you may be wondering, "How do those relate to adolescents?" Well, there's some good news and some bad news. Some of the good news is that prescription opioid use among adolescents continues to decrease, and we know that from the National Survey on Drug Use and Health and the Monitoring The Future study, both surveys that are conducted among youth every year.

However, there was a study that came out in 2016 that looked at opioid related poisonings in youth during the time period where we've seen opioid deaths rise in adults. In that study, there was 176% increase in opioid related admissions for poisonings in 15 to 19 year-olds. There was also a data brief released by the National Center on Health Statistics in the middle of August 2017 that showed a

significant increase in overdose deaths from opioids among teenagers in the last couple of years.

Then you may wonder, "Well, what's going on with young adults?" We know that young adults use substances at higher rates than other age groups and that holds true for opioids as well. From 2002 to 2013 there was 108% increase in past year heroin use in 18 to 25 year-olds. However, we also know that opioid related overdose deaths are lower in emerging adults or young adults compared to older age groups. Driving home the point that intervening early with this group is really important so that we try to prevent those deaths later on in life.

Teens and young adults use opioids for a lot of the same reasons that they may decide to try other substances. It might be because it's sensations seeking and they like the high that they get when they try a pill. It might be because they're feeling depressed or hopeless, and taking the opioid relieves that feeling that they have. It may also be because they're bored and it's what their friends are doing and so that's why they decide to do it.

It can be difficult to engage an adolescent or a young adult in treatment, and that might even mean it can be difficult for them to remember to come in. There are a couple of things that we do in our program that we think increases the likelihood that our patients will show up for their appointments and for their care.

One of the things that we do is we do a lot of reminder calls. We'll do multiple reminder calls. We also will tell our patients that if they're having trouble with transportation, we'll help subsidize that, and so we might give them a public pass for public transportation or try to help pay some of their parking fees as well. In addition, for patients who might not have access to food, we'll try to make sure that they have access to snacks or other meals when they come to the visit. And for some patients who may be trying to visit family who are far away, we may even pay for a bus ticket.

All of these things we feel like are important to demonstrate to our patients that their engagement with us is important and that we also recognize that they are more than just their disease and have other things going on in their lives, and really showing them that we recognize that unless we're addressing those it's going to be hard for them to show up.

Treatment for opioid use disorder in adolescents and young adults really falls into two buckets. One is behavioral health treatment and that can include different kinds of manualized but evidence based therapy like cognitive behavioral therapy, motivational enhancement therapy, and the adolescent community reinforcement approach among others. Importantly, any kind of behavioral health treatment that's offered to adolescents and young adults should also involve the family and should include family therapy and potentially support for families like mutual help groups.

Best practice currently calls for medication to be added to behavioral therapy for patients who have opioid use disorder. What I often tell my patients is that the medication is going to help calm their brain down so they're able to focus on the recovery, but that it's going to be really hard to talk about their depression or anxiety or think about relapse prevention and how they can not go out and use again if they're having a lot of cravings. And that's what medication can do. But that it's really important the patients also engage in behavioral health treatment because it takes a lot of work to get sober and getting extra help from trained professionals is going to lead to better success for them.

With adolescents and young adults it's critical to intervene early because we're trying to prevent the downstream effects of longstanding addiction. That means that we're trying to prevent transmission of HIV, of hepatitis C, of complications from injection like skin infections or infections in the blood stream or the heart, and we know that some of these medications can help prevent those diseases from occurring. We're also trying to ensure that adolescents and young adults are able to stay engaged with school or work, with their other goals that they have with their life and that medications can help them to do that.

Although there have been fewer studies conducted in adolescents and young adults compared to older adults, the evidence that we do have shows that treatment with these medications does work. Importantly, a statement from the American Academy of Pediatrics came out in 2016 and recommended that providers offer medication treatment to adolescents and young adults with opioid addiction. This statement from the American Academy of Pediatrics was the first statement of its kind from a pediatric organization recommending treatment with medication for opioid use disorder in adolescents and young adults and represented a real paradigm shift in how we're thinking about caring for this age group with opioid use disorder.

Oftentimes we hear from patients and families and sometimes other treatment providers that medication should be used as a last resort. However, when we think about other chronic illnesses like asthma or diabetes we would never wait until someone hit bottom before starting treatment. We think that it's important to offer medication for opioid use disorder to adolescents and young adults as soon as we have a diagnosis.

There are three medications that we use to treat opioid use disorder in adolescents and young adults. Two of the medications, methadone and buprenorphine, work by controlling withdrawal symptoms or treating the withdrawal symptoms someone may have after stopping opioid use. They also help control cravings that people have for using the drug. For example, if someone is spending a lot of time sort of thinking about how they're going to go get heroine, taking methadone or taking buprenorphine helps take away some of those thoughts. Methadone and buprenorphine also go to that opioid receptor and sit on it really tightly. So if someone tries to use heroin or another opioid while they're taking their medication, that heroin or other opioid isn't able to cause a high.

Naltrexone works a little bit differently. Naltrexone goes to the opioid receptor and sits on it and blocks any other opioid from coming and causing a high. Naltrexone doesn't necessarily help with cravings with all patients but it helps for some. You may have heard of naloxone or NARCAN. This is the medication that's used to reverse an acute opioid overdose and is being distributed to people who use drugs and also to family members and anyone else who may be around someone who's at risk for an overdose. Naloxone can be given different ways. It can be given as a spray in the nose and can also be given intramuscularly, and once administered it can reverse an opioid overdose and save a life.

In addition to medication and behavioral healthcare it's important to recognize that there may be other barriers to care that teens and young adults may be facing, and these are related to social issues they might be having. A lot of our patients are faced with homelessness or housing insecurity, might have a hard time accessing healthy food, might also have hard time with transportation and being able to get around to their appointments or to school or to their jobs. We recognize that it's going to be really hard for them to do all they need to do to get sober if we're not also addressing their needs.

The CATALYST program is a multidisciplinary program at Boston Medical Center that developed because Boston Medical Center has this long history of taking care of adults with substance use disorder and primary care and does an excellent job in doing that. They care for patients in primary care and the emergency department and in OB and obstetrics.

There was really a gap though in terms of the services that were being offered to adolescents and young adults. We recognize that that was actually a gap that was felt across our city. So CATALYST was created to address the need of ongoing substance use in adolescents and young adults.

We have a team that's composed of physicians, social workers, nurses, program manager. We also work really closely with our child and adolescents psychiatrist. Importantly we have added a recovery coach to our model which is a little bit different so that individual has a background in what's called, recovery coaching and can address patients specific needs to their recovery in addition to their social determinant.

We see patients in both the adolescent center of Boston Medical Center and also in adult primary care. So we're able to match our patients to sort of where they fit developmentally.

When a patient calls or a family member calls or we receive a referral for a new patient, we set up an appointment with a physician and a social worker so we can do a first visit and an assessment of what's going on with the patient.

We then, the following week develop a treatment plan. We meet every week as a team to talk about what's going on with our patients and there we'll discuss new patients and ongoing issues with existing patients.

We feel like the team base approach that we have is really important. I think another really important part of our model is that there we try to have basically no hierarchy and everyone's really contributing to the treatment plan in an equal way.

We recognize that addiction is a complicated disease and although it's a brain disease there are a lot of other things going on in that person's life that need to be addressed. That each team member's specific training is there to be able to address those different issues.

We started seeing patients in the CATALYST program in May of 2016. At this point we are putting together a database so that we can start to track out outcomes because we recognize that there's so few programs like this in the United States that it's important that we figure out what we're doing well but also different things that we need to do to improve so that we can share our models with other programs.

I'm gonna talk about some of the biggest challenges that we face in treating teens and young adults with substance use disorder. The first is ambivalence. So the teenage years and young adulthood is really characterized by ambivalence and difficulty in making decisions. So we find that it can be very difficult to engage our patients and have them agree with us that they may need treatment for their substance use disorder and this can be a huge barrier to care.

Another significant challenge that we face everyday in our work is the stigma associated with both the disease of addiction and the medications that we're using to treat addiction. This can be ... make it difficult to get patients to come into care for the first place or it can make patients and families resistant to accepting the kind of treatment that when we wanna offer them.

The third challenge that we see commonly and this is particular to my practice are issues around social determinant of health. So such as housing and employment, school issues, transportation, being able to pay for bills. We've heard from our patients and their families time and time again that if those basic needs aren't being met, it's really hard for them to focus on their recovery. So we do everything that we can in our program to try to address those needs, but we're an outpatient based program and there are limited resources.

There are different ways that you can involve parents and family members and treatment for a substance use disorder with their teen or their young adult. We invite all parents or family members into visits and sometimes have family meetings. This is of course done with the permission of the patient. The patients can provide guidelines for how those visits are gonna go and what information

is gonna be shared. But we try to explain to our patients that it's really important and it's really critical to their success to have their families involved as much as possible. We also provide referrals for families to mutual help groups which really means support groups that are led by other parents and family members who have loved ones who are struggling with addiction, or to family therapy. In our program, we plan to start parent groups and so these are gonna be educational sessions for parents and other family members who are affected by substance use, specifically targeted for those who have loved ones not willing to engage in treatment.

It can be a lot to be telling a 18 or 19 year old that they have a chronic illness that they're gonna be living with for the rest of their life. Once they start to hear that message, they may not wanna come into clinic to receive treatment.

What we try to do is we tell our patients from the start that we're there for them no matter what. We try to identify other things that are going on in their lives that might be challenging. So issues around school or a job or with transportation and sometimes by addressing some of the other challenges that they have going on in their life we're able to then engage them in treatment for their substance use.

When caveat to this is that when we're taking care of patients who are less than 18 years old, sometimes other challenges come up and because of their age. So for example, if we have a patient who is 16 and we know that that person may be injecting heroin or other opioids and is really at acute risk, then sometimes we may have to break confidentiality and engage other agencies to assure the safety of that child.

It's really important when working with teens and young adults who have substance use disorder or who are using substances, to spend a lot of time building trust and building rapport. A lot of these teens and young adults might be coming from families where there are issues around communication or they might have a lot of other experiences in their life where their trust was broken. So spending some concentrated time, really explaining, reassuring and demonstrating through having open doors, calling back quickly, having other members of the team sort of address their other social needs, can make a real difference in terms of engaging with them.

I think it's also important to recognize with teens and young adults because they may be ambivalent. That they might not show up initially to an appointment or they might stay engaged and then drop out of care. But we have also found that by giving them this message that we're there no matter what. That a lot of our patients, even if it's been a couple of months will come back to us and they will tell us and their parents will tell us, that they felt that it was important to come back to us because we were safe, we had told them that no matter what was going on, this was a place that they could come to.