>> Good morning, and welcome to Day 3 of the ASAM Review Course.

I'm Jonathan Avery. I'm the Director of Addiction Psychiatry

at New York Presbyterian Hospital,

as well as the Incoming Chair for the ASAM Review Course

Program Planning Committee.

So hopefully I'll be able to see

those repeat takers of this course next year in person.

I didn't talk about it
this week in my course,

but most of my research
is on the stigma

that providers
have towards patients

with substance-use disorders.

And so I think one thing that's happening through this course

is you guys are getting knowledge and skills,

but you're also part
of a community now of people

interested in taking care of

those with substance-use
disorders.

And if you made it to Day 3,
you certainly have less stigma

and you're motivated
more than anyone else.

So let's get going.
Let's see.

Thank you for attending this course.

The course provides a look across all aspects

of addiction medicine for those interested in learning more about

treating patients with addiction.

The review course and board exam study tool have been carefully mapped for

the 2021 exam blueprint. As a reminder,

in your syllabus you will find a copy of the blueprint and

review course content map which outlines which chapters of ASAM principles

are covered in each session, and then you can

find the course syllabus on the virtual event platform and in the ASAM Learning

Center. We have a lot of good topics today. Genetics and gender,

pain and addiction, patient

interventions, common to

behavioral therapy and motivational interviewing,

and then different patient interventions like mutual help, psychotherapy

and social support. So it will be a worthwhile agenda

and talks today.

Remember, new this year is a virtual exhibit hall.

We encourage you to network

virtually with staff and exhibitors during the break

today. That will be at 11:30 AM Eastern time. Definitely submit

questions as you watch the talks today. During the session

you can submit questions using the Q&A box on the right-hand side of the

screen.

Additional instructions will be provided at the beginning of each session.

Some questions will be answered during the

sessions and others will be answered during the final expert panel discussion,

which is today at 1:30 PM Eastern time.

For those preparing for the exam, we encourage you to take advantage

of the board exam study tool. If you have

not reregistered for it and would like to learn more,

please visit the Learning Center in search for board exam study tool. In terms

of CMA content, information on how

to obtain this for the review course can be found in the syllabus

or under the CME and more section of the virtual event platform. You will

also find a how-to video that walks you through the steps. Please note, CME cannot

be claimed until after the session.

The recordings will be on-demand for the next three years

with you like it or not.

Please contact staff by emailing us for assistance or to learn more about

the programs and initiatives.

Thank you again for joining us for day

three of the ASAM review course. The first session

is genetics and gender, impact on treatment for women

and newborns with Dr. Leslie Hayes that will begin promptly at

10:00 a.m. It will see you all later.

>> This presentation is entitled pregnancy, genetics and women's health. And one El Pasoan

off to Leslie Hayes to begin the session.

>> I will talk about

pregnancy, genetics and women's health.

I hope you find this topic as interesting and important

as I do.

I have no financial disclosures. Learning objectives

for this talk include being able to interact with patients

and professional colleagues, explain professionalism,

identify feelings and attitudes

that promote or prevent therapeutic responses to

patients with substance use disorder, describe addictive disorders as

development of biopsychosocial disorders,

and implement evidence-based

approaches to detecting substance use disorders,

especially in the pregnant population.

Be able to conduct a biopsychosocial and

develop mental ambulatory assessment of an adult with a suspected substance use

disorder and match the patient to the appropriate level of care,

and list the indications, contraindications and duration of treatment of evidence-based

pharmacotherapy for our call, tobacco and opioid use disorders and refer patients

to special care where appropriate.

I will talk about the following. And will start with talking

about genetics and substance use disorder, I will talk

about gender differences, pregnancy and the postpartum period, the effects

of substance use during pregnancy on the newborn, and I will

finish by talking about neonatal opioid withdrawal syndrome. First

off, genetics.

There are three different ways that genetics influence substance use disorder.

The first is a direct

effect of genes on the susceptibility to substance use disorder.

Pharmacogenetics also affects how drugs affect

an individual, and that can make a big difference in their likelihood to

develop a substance use disorder from a certain drug. And epigenetics, a fairly new field that affects which genes are expressed, and that in turn affects the likelihood of a individual to develop substance use disorder.

We talk about genetics, we often talk about nature versus nurture.

Is in somebody's nature to develop a disorder or nurture with how they were raised. However, for substance Trinh --it is both nature and nurture. A persons likelihood of developing substance use disorder really is a result of a dynamic interaction between their genes and the environment. When you talk about the genetics, they refer to the heritability is.

The heritability of zero means there is absolutely no effect of the genetics, something like speaking Spanish, whereas heritability of one would be something like blood type.

For substance use disorders, the heritability ranges from 0.39 for his diligence in endurance hallucinogens 20.72 for cocaine.

There were two different twin studies that look specifically a substance use disorder. With genetics, if you have monozygotic twins you're more likely to have the same disorder show up.

They found there was much higher rates in monozygotic twins.

As far as pharmacogenetics, there are a couple of different genes. The ADH1 B2-His47 ARG allele of Dehydrogenase

and the Dehydrogenase 2. Both affect
metabolism of alcohol into acetaldehyde.
They can cause people to accumulate it, which in
turn causes flushing, nausea, headache it is much more
common the people of South Asian dissent and those of Jewish ancestry.
Homozygotes really accumulate a lot of acyl high the date
are protected from alcoholism because they get so sick if
they drink. In addition, the SNP of the
opioid receptor, which is more commonly known as OPR in one,
enhances therapeutic response to naltrexone. This is also
much more common in people with heroin use disorder. So
in addition, babies who have a certain variation of the
SNP have much longer length of stay
and much more likelihood to meet pharmacotherapy for neonatal
opioid withdrawal.
Also, their various single nucleotide polymorphisms
in the COM T that affects
the likelihood of withdrawal. In addition, various streams
can affect how rapidly medications or drugs are metabolized. This is
most commonly seen with methadone, which is metabolized in part
by CYP 2 D 6 and ultra-rapid metabolizes don't do well in
methadone because they use up all the methadone within 48 hours. Very
common
during pregnancy, which we will talk about
later. Epigenetics is the study of Appa genomes that turns genes on her
offer expresses them more or less strongly. Changes
can be passed down anywhere from 2 to 12
generations. Stress or substance use will actually bring out

some of these epigenetics.

If a mother uses drugs while pregnant, this can actually cause changes in

the Appa genomes and make the baby more prone to substance

use disorder when they get older.

I would not necessarily memorize this particular gene, but I thought it was interesting

how it worked.

Within the OPRM1 region which was affected with opioid

use disorder, if it is

methylated, this can be passed from mother to baby and babies with this epigenetic change

were more likely to need treatment for neonatal opioid withdrawal. In addition, it

can down regulate the OPRM1 gene

expression, which leads to decreased levels of opioid receptor,

which means the baby needs more opioids to

control withdrawal.

Next we move on to gender differences in

substance use disorder. I think we all know this is kind of intuitively.

Men are more likely than women to use almost all types of

illicit drugs.

Women probably use prescription drugs at greater rates than

men. There has been some disagreement among the studies I

looked at. Mentor almost 2 times more likely to have drug dependence than

women. Men have higher rates of alcohol use,

including binge drinking, except for teenagers where the

rates are fairly similar.

As far as starting to use, women are more likely to be introduced to injection drug

use by their mere sexual partner.

Men are likely to be injected initially by a friend.

Women are more likely to use discretion opioids to self medicate

for anxiety or stress. Men are more likely to

use prescription opioids for experimentation or to get high. Women are more likely to

drink in response to stress and negative emotions and men are more likely to

drink to enhance positive emotions or conform to a group. This is not going

to be true for all men or all women, but this does mean we need

to look at women and find other ways for them to deal with anxiety

and stress and for men we need to look at having them have other

ways they can have fun and enjoy themselves. It is a real issue

for many men with substance use disorder that they have really no way to enjoy themselves

once they stop drinking

or using drugs because they just don't know how to

have friends. As far as alcohol, women who drink

get drunk faster than men. That wonderful scene from

Raiders of the lost Ark where she drinks a man under the table, unlikely

to happen because women just do not handle alcohol as well in general.

Women tend to weigh less than men do, women do not have as much alcohol

Dehydrogenase, they have decrease volume of

water compartment distribution so the alcohol is more concentrated,

and they also have less muscle than men, which

tends to metabolize the alcohol.

Women also have what we call a
[Indiscernible], which

means when women start to drink, they developed the bad effects much more rapidly

than men.

Women have a 50% to 100% higher death rate

from alcohol use disorder, including deaths from suicide,

alcohol related accidents, heart disease, stroke and liver

damage. Alcohol affects women much worse than it affects men.

Because of this, the CDC guidelines for risky drinking are different for men

and women. Excessive drinking or risky drinking are at risk,

all are defined as the following.

Binge drinking, the most common form of excessive. It, defined as consuming four

or more drinks during a single occasion

for a woman or man over 55 and for men drinking five or more drinks

during a single occasion. Heavy drinking is defined as

consuming eight or more drinks per week for women and 15 or more drinks

for men under 65. It is important to remember most people who drink

excessively are actually not alcoholics or alcohol dependent.

But it still can have an effect on their

health in terms of increased risk of liver disease, heart disease, car

accident, all of those. I do want to comment, don't look at this before you

take the addiction boards because this will

confuse you. The CDC guidelines for risky drinking are fairly well defined,

but there was an interesting comment in the Journal of addiction

medicine last year that discussed why perhaps these

guidelines need adjustments.

Incarceration, there are actually huge differences between

men and women. This really can affect both development of substance use disorder and treatment. Population studies show that 22% of patients with substance use disorder have been incarcerated before and 10% of the general population reported a history of incarceration. Men was men with substance use disorder are much more likely to have a history of incarceration than women.

I had a lot of trouble finding any actual statistics on this, but the one study I did find said I believe 30% of men with substance use disorder were likely to have a history of incarceration and with women it was 5% to 10%. Blacks and Latinos are far more likely to be incarcerated for drug law violations than whites, even though the rates for both drug use and drug selling are quite similar.

Women are very likely to have a history of childhood sexual abuse if they have substance use disorder.

Girls with a history of childhood sexual abuse or three times as likely develop an addictive disorder as girls without that history.

One study showed that lifetime intimate partner violence victimization, domestic violence, was reported by 40 6.7% women and 9.5% men entering substance use disorder treatment. We do tend to think of both childhood sexual abuse and intimate partner violence as affecting women, but we do need to ask about [Indiscernible] as well. Now we switch over to pregnancy and substance use disorder.

I am not going to go through these, but for

people who are not doing obstetric care, I have some definitions of pregnancy related

terms to look through.

I have a couple of case studies. First is

a 33-year-old who had been stable on Naloxone for four years. She presented to

her provider for routine appointment and was discovered to be

pregnant. Because of this her provider refused to give

her a prescription. She relapsed to heroin. She presented to

my clinic at 25 weeks gestation. We had transportation difficulties

in a rural area. We tend to start women

anymore major center. Because of this she was

unable to get restarted and ended up delivering

a premature infant at 31 weeks.

I am sure come at least in part related to her continued use of drugs.

She ended up restarting postpartum and both

she and the baby did quite well.

If you're prescribing Pernod Frain to a pregnant patient,

make sure you get them into someone to have a way to deal

with this. This is one of my favorite patients.

A 21-year-old who presented at nine

weeks gestation who was actively using heroin.

She desperately wanted to keep the pregnancy

and also wanted to keep the baby once the baby was born. She was

started on maintenance and did well.

Never had a positive drug screen after starting.

No signs of neonatal withdrawal

syndrome and the child is currently seven years old and

doing well. Every time I see her or the child it makes me so

happy. It is such a rewarding part of the job.

Substance use in pregnancy. Use of alcohol,

tobacco drugs during pregnancy is the leading preventable cause of mental, physical

and psychological impairments in children.

If we could find a way to prevent this, we

could dramatically decrease the number of children with long-term problems.

Between 1998 and 2011 there was 127% increase in opioid dependent pregnant women presenting

for delivery. Opioid dependent pregnant women have an

unintended pregnancy rate of 86%. When you see a pregnant

woman, Everywoman needs to be screened for substance use disorder.

The screen actually is one we recommend using.

Parents did either parent have a problem with alcohol or drugs, does your

partner have a problem with alcohol or drugs, have you had a problem with

alcohol or drugs in the past, and in the past month have

you drunk or used any substances?

We're going to talk about the medical implications of substance

use disorder with pregnancy and the significance of pregnancy

for any substance use disorder. If you look at

the percentage of the women who abuse drugs, illicit

drugs in the last month for both pregnant and nonpregnant,

we find just being pregnant actually

has a substantial effect on drug use.

This is just a population-based survey saying are you pregnant,

have used drugs? What they found was that for women from ages 15 to

25 the rate of women using drugs dropped by half.

For women over age 25, it dropped by almost three quarters.

This was true for all racial groups.

The reason we don't recommend pregnancy as a treatment for substance use disorders,

unfortunately, because of this.

While the numbers don't go quite back to

where they were postpartum, there is a huge rate of relapse postpartum.

For illicit drug use, this particular study went from

10% to 4% of women using drugs. Before pregnancy and while

pregnant. Unfortunately, it goes up to almost 9% the year after pregnancy. Same

thing for alcohol from a little over half down

to 10% while pregnant and back up to 43% afterwards. Binge alcohol use

also goes up afterwards.

Heavy alcohol use and cigarette use, all of them go back up

after pregnancy. There is definitely a tendency,

we get the woman through pregnancy

and she is not having any drugs or alcohol, and we tend to pat

ourselves on the back and say our work is done. But it is really important

to think about the postpartum period.

Will talk more about that later. Opioids

and neonatal opioid withdrawal has gotten so

much press. Because alcohol is legal in common

we tend to think of it as much, but it is actually the

drug that has the most teratogenic potential. Fetal alcohol syndrome,

they need to have evidence of growth restriction were the baby is less

than the 10th percentile for either weight or

height. That needs to be evidence of deficient brain growth or abnormal growth of the brain. And the head circumference needs to be less than 10 percentile or the needs to be structural brain anomalies. There is a characteristic pattern of minor facial anomalies, palpebral fissures, thin vermilion border of the lip, the smooth thing between --or the little notch between the nose and lip is smooth. I will tell you, I see a lot of babies where I am worried about this and I find it hard to diagnose. The small head and small baby are easy to do, but the facial features are difficult because they often do not show up at birth and may disappear as the baby gets older. The important thing is to identify these women when they are pregnant and get the babies into a specialty clinic for evaluation. Fetal alcohol effects are much more common than fetal alcohol syndrome. Syndrome is six to nine per 1000 children were as partial fetal alcohol syndrome or spectrum disorder where children will have some of these features but not all are much higher.

One of the ways that show up is that often these children will show up as having problems with executive dysfunction. They just can't do things like figure out how to apply for a driver's license. Somebody pointed out they will have trouble making and keeping medical appointments. But these are just children who just can't quite figure out how to do a lot of the things people need to do. It is very common.

Next we will move on to tobacco,

also very important. Babies born to mothers who smoke whenever to 200 grams

less than babies born to mothers who don't

smoke. We think that up to 22% of sudden unexpected infant deaths can

be directly attributed to maternal smoking

during pregnancy. Often we get so focused on the illicit drugs

we don't worry about the tobacco.

But I think it is also important to talk to mothers about

tobacco. In addition, tobacco can worsen neonatal

alcohol syndrome.

Marijuana and pregnancy is one that there is still a lot

of disagreement about. There is not a pattern of birth defects related

to cannabis. There has been a lot of meta-analysis

on cannabis. They disagree as to whether or not it affects birth weight.

The one adjuster for tobacco and alcohol use did

not show an effect. The most important thing is there definitely seems to be neurodevelopmental

deficits associated with cannabis use. When I talk to

moms about this, I talk about how it affects the

canal Benoit system which can affect emotional regulation, especially in

the teenage years.

Nobody wants a teenager who will have trouble

with emotional regulation. I find people actually do

listen when I talk about that.

Opioid use disorder is obviously the one

that got the most press in the last few years. I think it is very important

to be looking at this. It is important to realize both abuse and withdrawal have affects, but withdrawal is considered more serious. We really want to try to prevent these women from going into withdrawal, if it all possible. Withdrawal causes a state where you have a huge amount of norepinephrine and epinephrine circulating in the bloodstream which in turn causes construction of all the blood vessels in the body, but in particular causes construction of blood vessels in the placenta. Often I find that my patients will, if they can't get heroin or their opioid of choice, we use a little cocaine or methamphetamine to take the edge off. But fortunately, this makes it worse. When the blood vessels in the placenta constrict, it can cause several different things. It can make the woman more likely to go into early labor. Can also cause placental abruption. It can also chronically cause the baby to not grow very well. The biggest direct effect of opioid use is neonatal opioid withdrawal syndrome at birth. Next we are going to move into psychosocial function and pregnancy with substance use disorder. A 28-year-old who have been a methadone maintenance and have been fairly stable. She disappeared from care halfway through her pregnancy. I found that later she had actually found her father overdosed during that time. She returned at 38 weeks in labor. She told me she had been following a methadone clinic in an of the community,

but her urine was negative for methadone a positive for opioids.

As soon as the baby was born, he took the first cry and went into

pretty horrible withdrawal. Child

protective services became involved. They took custody of the child.

The custody was given to the moms cousin.

The mom was actually not allowed back on the floor because of some issues.

She came back anyway and she and her cousin,

who was the foster mother, got a physical fight

and the mother ended up being arrested.

It was quite a nightmare. 23-year-old

who presented using heroin. She started on

buprenorphine and did quite well. We did metabolite

testing that confirmed she was taking the medication and not using anything else.

She ended up being incarcerated over summer for

drug offenses and was found to have large quantities of both methamphetamine and heroin

and drug paraphernalia and her cell.

The jail said they needed to stop her buprenorphine, and I said

we can't do this because she needs it for her pregnancy. She ended up

spending her entire pregnancy in solitary confinement because of

this. So what are the psychosocial indications of substance use disorder

with pregnancy?

The co-occurring disorders you get with pregnancy and substance

use disorder, depression is very common.

Both substance use disorder and depression cause very poor self-care. It

is important that we treat the depression in addition to

substance use disorder because we're going to have trouble getting them to

do the things they need to do to take care of themselves

and their pregnancy. In addition, domestic violence is very

common with substance use disorder.

Domestic violence is actually the second leading cause

of trauma related death and pregnancy behind car accidents. I have been told if

you have any one of the three substance use disorders,

depression and domestic violence,

you need to screen for the other two. That is a good rule of thumb

to remember.

In addition, during pregnancy most mothers have a high

motivation to change. As I noted earlier, even without treatment,

women often will quit using on their own.

But coupled with
[Indiscernible] there
is a lot of guilt and shame

from anyone. It is important to be very supportive because it is easy

to set off guilt and shame which can set women back and cause relapse. There is

often a lot of legal implications around custody the baby and the

older children.

In addition, moe substance using pregnant women have very poor

self-care behaviors. If they keep using drugs, there very unlikely to take

good care of themselves during pregnancy. There

maybe history of childhood sexual abuse or physical abuse. This can have an implication

for parenting and have huge applications during

labor when women with sexual abuse may be very

anxious around pelvic exams or other issues. Certainly, delivery can

set off triggers for many of them.

There is a very high incidence of PTSD we need to be talking about and treating.

As I mentioned above, most women who use drugs start using because their partners

were using.

If they are still with that partner, it can be really difficult

for them to quit less he quits as well. The talking to them about their partner

in making sure either that you or someone else's treating that partner

will be helpful for getting these women drug-free.

Comorbid conditions. 25-year-old presented a 26 week stating I'm addicted to

heroin. She was really scared she would lose the baby to child

protective services or have medical competitions. She wanted to get into treatment.

Is medication therapy an option for her?

Which is better, buprenorphine or methadone? What about weaning off heroin

and using abstinence-based therapy and does she need any special

care for her pregnancy? The first thing I want to stress is

prenatal care.

Often we get so focused on drug use we forget the basic things we

do for all pregnant women. We need to make sure these women are getting

prenatal care. In addition to just being important in general, it is especially

important for women with substance use disorder. There is a great study

in the journal apparent Otology and what they found

for women using illicit drugs, the ones he had no

prenatal care actually had the highest risk for

prematurity, low birth weight and small babies.

Even if they did not stop using drugs, the camp using the

same amount of drugs, just getting prenatal care made the risk for prematurity,

low birth weight and small babies drop. Really important

we give these women prenatal care. Often women are free to get prenatal

care both because of stigma because they are afraid the OB

provider will yell at them or make them feel bad,

and they're also very afraid of being reported

to child protective services. Many women have this

magical thinking that if they just wait until later in the pregnancy

they will have stopped using and could go in and

not talk about this. We need to make our office is a place where women

can feel comfortable getting prenatal care even if they are using drugs. This

is one of the most important points of this talk.

Even if you don't remember anything else, this is one of the ones I want

you to remember. Abstinence-based therapy is not recommended during pregnancy for anyone who

is actively using opioids. Medication therapy for

opioid use disorder is the standard of care for pregnancy.

We can do medication therapy with either methadone or buprenorphine.

Methadone has been used for a lot longer. Most

providers prefer to start with buprenorphine if available. One of the basic reasons

is that, although some patients are going to do well

on buprenorphine but not methadone, and some

will do well vice versa. If we start buprenorphine

they do poorly, it is easy to switch to methadone. If we

start methadone and they don't will do well, it is also possible to switch to

buprenorphine. The data regarding naltrexone is limited. It is probably

safe to continue a pregnancy the patient wants. Should not be started

and pregnancy. It needs to have a seven-day washout from opioids and you

do not want to put a pregnant woman into withdrawal that long.

Another reason we tend to start with buprenorphine first during pregnancy

is that the 2010 study showed a lot less neonatal opioid

withdrawal syndrome in buprenorphine

then methadone.

In this study the babies exposed to buprenorphine

had 89% less morphing, a 43% shorter hospital stay and

shorter duration of treatment the babies

exposed to methadone. Interestingly, there was a 2016

study where they split the use of methadone for

all pregnant women. Pregnant women tend

to metabolize methadone much more quickly than people who are not pregnant.

In general, when they split the dosage befell much better outcomes

with the rate of withdrawal syndrome at 29%.

A few differences. If you're treating a pregnant patient with buprenorphine and methadone,

the first is that the dose may need to be increased.

There is increased metabolism,

especially in the third trimester. If at all possible,

we should not interrupt therapy. I will get prescriptions

over the phone in all sorts of circumstances and I might not in a patient who is

not pregnant. We really want to continue the

buprenorphine if at all possible and do everything we can to make it easy

for them to stay on the methadone.

I generally recommend starting buprenorphine in a

monitored environment. If the woman has a viable fetus, 22

weeks or beyond, I recommend starting them in the hospital. There times where

we don't do it just because of difficulty, but

if possible, I think they're better off doing that.

The mono product,

it is still in the tips. I do this mostly because

I don't ever want a woman to think if she has a stillbirth or

miscarriage that it was because she was on the buprenorphine or Naloxone

because there is still many places that recommend this. A recent study

showed the commendation product to be safe.

I hope somebody comes up within official recommendation that we can

use this at some point. What about medically monitored withdrawal?

The patient is a 36-year-old at 36 weeks. She wanted to start

on buprenorphine.

Were going to do this in the local hospital. She was told to stop heroin about

12 hours before.

She stopped 48 hours before.

She came into the hospital in Ford withdrawal.

At that time they put her on the monitor and

noted she was having contractions.

Her cervix was completely dilated and she actually delivered 30

minutes later.

Thank goodness she was 36 weeks and not 26

weeks. Being in withdrawal can do a lot of bad things during pregnancy.

We want to be very cautious about it. one

of the most important reasons I think for not doing medically monitored withdrawal

is a high relapse to opioids that ranges anywhere

from even the best study showing a 17% relapse. We were study was up

to 96%.

The relapse rate is much lower on medication therapy. I cannot imagine

any other condition with his high mortality and morbidity

rate as opioid use disorder where we would stop a medication that

is very effective with few side effects.

In addition, I mentioned the problems postpartum. There are

no studies a medically monitored withdrawal that has examined

maternal outcomes postpartum.

Before we even consider recommending this, we need

to look at the postpartum.

The previous patient made it to term and is about to go into

labor. To we need to do anything special to manage her labor?

What can we expect for the baby? Can she breast-feed and what can she expect

postpartum? Method of delivery should be based solely

on obstetric considerations. Just because someone is

actively using heroin is not a reason to consider

a C-section.

Epidural is the preferred method of pain relief.

If you do want to use opioids, you really need to use a full agonist

with strong binding potential. Stayed all is a partial agonist

and you may actually make their pain relief less.

Fentanyl is the preferred agent for opioid use,

opioid treatment of pain during labor. But again, if you

can, epidural is what we prefer. Postpartum,

these women have a high risk of relapse.

You want to encourage them to continue with the recovery behaviors

and their medication. Often these women just had to get so focused

on the baby that they don't take care of themselves. It is really important to remind

them to take care of themselves. These women often don't have good parenting

skills. They may have come from a very

dysfunctional family of origin.

Consider home nursing and parenting classes. Even if

the baby doesn't have

significant neonatal opioid withdrawal, the babies are often more fussy than

average. These women need a lot of support.

This was one of my first patients who I followed through her

pregnancy. A 34-year-old --I'm going to get rid of the cat.

I'm sorry.

Next case study is 34-year-old

who I followed through her pregnancy after I started

prescribing buprenorphine.

She had been on buprenorphine and Naloxone for heroin use disorder. She

moved away and got pregnant and weaned herself off the

buprenorphine at that time. She

moved back we talked about restarting the buprenorphine

and she said she didn't need to do it

because "I am not going to ever go back to drugs." She had eventual delivery

of a healthy baby.

The pregnancy went well. She ended up dying of an overdose

about one year postpartum. It was pretty devastating. This is not isolated.

Many states have found postpartum overdoses one of

the top causes of maternal mortality. Causing anywhere from 15%

to 33% of maternal mortality. Currently I have studies from

Maryland, Tennessee, Colorado, Utah, Ohio in Massachusetts and there are

more coming all the time. Suicide is also

a substantial contributor to post Porter mortality. It is important

to realize the risk factors for postpartum opioid

overdose and suicide that have significant overlap.

Most common include depression, intimate partner

violence and substance use disorder. And so, very

similar. We need to be monitoring for postpartum depression. The Edinburg

postpartum depression screen or another tool. I think

this is very important to do for pregnant women and to ask about this.

It is really also important to remember the increased

maternal mortality does not end after year. There is

a study out of Ontario where they looked at mothers who had

babies with neonatal abstinence syndrome. What

they found was the mortality rate over the next

10 years was 10 times as high as for mothers who did not have an affected baby.

Roughly, one in 20 mothers died over the next decade, which considering

these are generally young and healthy women, is

horrible. The top cause of death for these women it was actually unintentional

injuries. It was not drug overdoses.

There are also high rates of murder, drug related deaths and what they

call unavoidable test, which is clearly

not completely unavoidable, and if we could work with women on

decreasing drug and alcohol use, I think we could go down. It is very important

that we look at these women

for long-term, not just making it through the end of the pregnancy or six

months postpartum. One of the small things I've taken

to doing is asking all my buprenorphine

patients if they are wearing their seatbelt. There is no evidence

behind us, but I think since

unintentional injuries, especially car accidents is so

high, I want to make sure they are at least wearing their seatbelts.

Next we will move into neonatal opioid withdrawal syndrome.

I want to make this point very clear.

Neonatal opioid withdrawal syndrome is physical withdrawal. It

is not meeting the baby is

addicted to drugs. I read a lot of news stories where they refer to addicted

newborns newborns do not have the behavioral capacity to be addicted.

I was giving a version of this talk

to a community group at one point and there was an 11-year-old

boy who had come with his mother who was a community health

worker. Afterwards, he told his mom that

he had spent his entire life thinking he was addicted to drugs

because everyone or that

he was a drug addict because everyone always told him he was an addict when he was born. He said he finally realized he was not an addict and just had physical withdrawal and that he was going to try to grow to be a counselor said nobody else had to go through what he went through. I think this is extremely important and require everyone to take an oath at this point.

Raise your right hand and the correct answer is I do. Do solemnly swear you would never refer to a baby with opioid withdrawal syndrome as an addicted newborn? Okay. Great.

There are social determinants of neonatal opioid withdrawal syndrome. An area that has long-term unemployment and a shortage of mental health clinicians is going to be much more likely to have abstinence syndrome. Not surprisingly, poverty is also associated with withdrawal. This one is a little counterintuitive initially but states with potentially punitive policies, policies are considered child abuse or neglect, show a significant increase in the rates of neonatal opioid withdrawal syndrome in the years after these policies were put in place.

We think the reason for this is that women become afraid to get prenatal care and become afraid to come in for treatment. And so, being very punitive is actually fairly counterproductive.

The symptoms for a baby withdrawing from opiates are actually fairly similar.

There's a lot of G.I. symptoms such as emesis, diarrhea, poor feeding. Autonomic over reactivity with sneezing, runny nose, yawning, rapid heart rate, increased metabolic rate.

Their very irritable and have a classic high-pitched cry.

They have increased tones. They

can be hypersensitive to stimuli. There's concern about

seizures. Babies with the above have very poor weight gain.

This is often measured using the Finnigan score, but at this point we're trying to

get away from that and go more towards

the ESC, which are three symptoms, can the

baby eat, if they can take in at least one ounce for 10 minutes. Can the baby sleep

undisturbed for at least an hour? And can the baby can

be consoled in 10 minutes or less. What they

found is babies were measured on these criteria rather than Finnigan or other scales

were given a lot less morphine. They had less time in the hospital and

no adverse outcomes.

One thing I think is really important is

that neonatal opioid withdrawal is highly treatable if we diagnose an early.

It is limited in duration and as far as we

know has limited long-term effects compared to the effects of untreated opioid

use disorder. I often hear

not wanting to put women on methadone are trying to talk

them out of using buprenorphine because of the possibility of neonatal opioid withdrawal,

which I think is a completely incorrect

approach. We need to treat opioid use disorder

the risk of opioid use disorder are so significant. We also

need to make sure that all

[Indiscernible]

understand they may have a baby with withdrawal, but also know they are

doing the best possible thing for the baby. Woman often home have so much

guilt and shame if they have a baby with withdrawal. We

are also leaning towards nonpharmacological treatment for neonatal opioid withdrawal including

small and secret feeds, freaking burping, quiet and dim

lights, skin to skin, swaddling.

We do a lot of prenatal education around

neonatal opioid withdrawal and frequent fees and high-calorie formulas may

help with nutritional needs. There have been

to amazing studies out of Dartmouth and Yale.

Dartmouth and when they did the nonpharmacologic treatment they decrease

the number of babies needing treatment from 46% to 27%

with the latest staying decreasing four days.

The hospital cost went from $19,000-$8000 with no bad effects.

The Yale study showed 100% of the babies

in the I.C.U. within our birth all ended up needing

to be treated.

Once they started keeping them in the room with

mom and went from 98% out of 14%. The average cost went from $45,000-$10,000

with the length of stay decreasing from 22

days down to 60s.

Breast-feeding. All the cool kids.

The American Academy of pediatrics, substance abuse and mental health

service administration, the American Society for addiction

medicine recommend breast-feeding for women who

have substance use disorder who are in treatment and have

had negative drug screens for two months prior to delivery. This includes women

on medication for opioid use disorder.

Encourage these women to breast-feed.

We don't really know the long-term effects of methadone

and buprenorphine. Is very hard to control for other factors

such as other drug use, poor socioeconomic status and in the acquitted and

adequate prenatal care. One study found babies born to mothers who receive

methadone or buprenorphine did not have more problems than

those without substance use disorder.

We do know neonatal outcome is improved mothers get on

methadone early in the pregnancy. So again, we encourage treatment

with this.

Child protective services buprenorphine.

A study in Manitoba showed losing custody of a child to

child protective services, the compared women who lost custody of

a child to child protective services to women who lost a child

to death and what they found, and I think for most

of us, losing a child to death is the worst thing we

can imagine, but the mental health outcomes are much

worse for women who lose a child to child protective services. They did whatever

they needed to do to take away for the pre-existing conditions. What they found

was the risk of depression was almost 2 times greater for women who lost

a child to child protective services and the risk of substance use disorder

was 8 1/2 times greater. A couple of important
messages from this. One is that we want to be careful taking children
away. The second is that we want to
really be supportive of these women. There's a tendency to
be like, you were using cocaine, of course they
were going to take your child pick what we need to give women support.
These women have such grief over this. In addition, we
should never retrospectively say it is a good thing we took the baby
away, look how much heroin she is using now because it may be she
is using heroin because she lost
custody of the baby.
[Indiscernible] and
to create a plan of care for these babies and make sure the
plan of care is appropriately implemented.
As far as calling child protective services, I can't give a general
recommendation. You need to know your state laws.
There is information on this.
I think it is very important that we talk about
child protective services with patients. Often we
are really scared to do this and prefer the mothers --
but I think we do this in a supportive way, it can actually help
build our bond with them and help them do better. Know what your hospital
and state are going to require and discuss what is going
to trigger referral and what is likely to happen with the referral.
Also, I think it is really important to tell
your patients what to do if a referral is made. They need to be
honest with child protective services.

Women often, their first instinct is to lie, but

tell them to be honest. Tell them to have a plan for substance use disorder

treatment have a plan to make sure the baby is safe. Take-home messages.

There is a substantial genetic component to

substance use disorder. Women are less likely than men

to use drugs and alcohol but have worse outcomes when they do.

Alcohol and tobacco are the most dangerous drugs for the fetus

during pregnancy. Medication treatment is recommended for

opioid use disorder and pregnancy.

The postpartum period and after is a high risk

time for relapse and death in women with substance use

disorder. And we do want to use nonmedical treatments first for neonatal opioid withdrawal

syndrome. That is all I have.