62nd Annual Greenville Postgraduate Seminar
Spotlight: Primary Care
Opioids and the Family

Jennifer A. Hudson, MD
Medical Director, Newborn Services
Department of Pediatrics
Prisma Health–Upstate
Disclosures

• The presenter has no significant financial or commercial interests to disclose.

• Today’s discussion will include the use of oral methadone solution to prevent and treat neonatal opioid withdrawal, which is an “off-label” use. There are no FDA-approved medications for treating withdrawal in children, but the American Academy of Pediatrics supports the use of oral methadone and morphine solutions for this purpose.

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Objectives

- Assist families in minimizing negative effects of fetal substance exposures on infants and children
- Comply with mandated reporting law in SC to prevent child neglect and abuse
- Recognize and address risks to children and adolescents related to an opioid presence in the home
"Indeed, the world children are being born into now is in many ways enormously different from the era in which we were raising our children."
Kabat-Zinn, Everyday Blessings
Point 1

- Fetal opioid/substance exposures can lead to a wide range of negative birth outcomes.

- Women of child-bearing age who routinely take controlled substances need...
  - Effective contraception
  - Specialized care during pregnancy
Substance use disorders affect women across all racial and ethnic groups and all socioeconomic groups, and affect women in rural, urban, and suburban populations.

ACOG Committee Opinion 524, Aug 2017
Definitions

• Opiate? Opioid? Narcotic?
  • Opiate: natural derivative of opium, such as morphine or heroin
  • Opioid: synthetic or semi-synthetic opiate-like substance
    • Term currently used to refer to all categories acting on the brain’s opioid receptors
  • Narcotic: produces “narcosis” or insensibility
    • Implies illegal substances
    • Term not generally used in medical practice

• Addiction: chronic behavioral disease characterized by one or more of the following “three Cs”
  • Compulsive drug use
  • Continued use despite harm
  • Craving

• Dependence: state of adaptation characterized by a withdrawal syndrome when a drug is suddenly stopped
Hospitals work to wean babies born addicted to drugs

Dr. Robert DiGiuseppe is a doctor who often deals with infants who are born dependent on narcotics.

Photo by Chris Conway

By Brian Freskos
Brian.Freskos@StarNewsOnline.com

Newborns Addicted to Pain Pills Up 300%
HOSPITALS TRYING TO INVENT TREATMENT PROGRAMS

By Neal Colgrass, Newser Staff
Posted Dec 29, 2012 3:43 PM CST

(NEWSER) – Heartbreaking medical news: Cases of babies born addicted to pain pills are up more than 300% over the past decade, forcing doctors and nurses to invent treatments on the fly, the Wall Street Journal reports. Crying non-stop, vomiting, jerking their limbs, these newborns are the result of America’s addiction to drugs called opioids—including anti-addiction drugs like methadone and painkillers like oxycodone. More than 13,000 such babies were diagnosed in the US in 2009.

Ill-prepared hospitals have created different treatments, with one giving babies methadone and another trying morphine. But then newborns have to be weaned off of those drugs. Worse, care for drug-addicted babies can take weeks and fatten hospital bills: one study found a

More than 13,000 babies were born in 2009 addicted to prescription drugs like painkillers. (Shutterstock)
Targets of Fetal Drug Exposures

Drug class, timing, dose, pattern of intake all determine long-term effects on the developing child.

cdc.gov
Fetal Opioid Exposure

• Congenital anomalies – small increased risk for birth defects overall

• Heroin – high risk for withdrawal, increased risk of sudden unexpected infant death
  • Possible increase in heart defects, nystagmus, strabismus
  • Small head circumference and overall size
  • Motor and cognitive impairments, ADHD

• Buprenorphine – few studies, no ADHD

• Methadone
  • Increased preterm birth, low birth weight, respiratory issues
  • Mixed evidence of problems related to cognitive and behavioral development
  • Confounders

• Normal developmental potential after exposure to treatments
• Home environment is most influential factor for development
Among women using opioids, 86% of pregnancies are unplanned.

Rates of NAS cases from rural communities has risen from 12.9% to 21.2%.

Over 80% of NAS cases are billed to Medicaid.

drugabuse.com
NAS Risk

• Risk of withdrawal exists when a mother uses substances that can create dependence chronically in the weeks prior to delivery

• High risk
  – Daily dosing, especially around-the-clock
  – Using long-acting substances
  – Using multiple substances that create dependence

• Lower risk
  – Sporadic or occasional use
  – Use of short-acting substances
  – Use of single substance
  – Prematurity
Neonatal Abstinence Syndrome

- Greenville County: 6421 births in 2015 = 52 cases per year
Dr. Jennifer Hudson checks a baby girl’s heartbeat at Greenville Memorial Hospital on Feb. 6. The baby is receiving treatment at the hospital for opioid addiction.

Greenville hospital pioneers new way to treat babies in withdrawal
MAiN Program

Early Medication Treatment for Qualified Newborns
(within 24 hours of birth)

Rooming-in with Mother or Care in Level I Nursery

Inpatient Stabilization with Outpatient Wean
(average LOS 8 days)


Outpatient CARE

Weaning Calendar with Pre-Filled Oral Syringes

Outpatient Check-Ups Weekly for 4 Weeks

SC DHEC Nurse Home Visit(s)
Interpreting Neonatal Drug Screens

Drug ingested by mother
Circulates through mother’s body; some metabolized
Circulates through placenta; some filtered out
Circulates through baby’s body; some metabolized
Some metabolites detectable in urine and/or meconium

Short-acting drugs stay in urine for 2-3 days (cocaine, amphetamine)
Long-acting drugs stay in urine for weeks (cannabis)
Drug metabolites collect in meconium and cord starting around 20 weeks
Meconium and cord testing takes 5-7 days

Negative screen on baby does not rule out drug exposure
Positive screen on baby is highly sensitive for drug exposure

Substance-using mothers often don’t tell the (whole) truth
People often obtain/claim prescriptions to explain positives

“Being around” a user is highly unlikely to cause positive screen
<table>
<thead>
<tr>
<th>Medication administered, prescribed, or misused</th>
<th>Urine drug screen result may be positive for...</th>
</tr>
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<tbody>
<tr>
<td>Heroin</td>
<td>Morphine Normorphine</td>
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<tr>
<td>Morphine</td>
<td>Morphine Normmorphine Hydromorphone</td>
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<tr>
<td>Hydrocodone</td>
<td>Hydrocodone Hydromorphone Norhydrocodone Dihydrocodeine</td>
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<td>Hydromorphone</td>
<td>Hydromorphone</td>
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<tr>
<td>Codeine</td>
<td>Morphine Hydrocodone Norcodeine</td>
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<tr>
<td>Oxycodone</td>
<td>Oxycodone Oxymorphone Noroxycodone</td>
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<td>Oxymorphone</td>
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<tr>
<td>Fentanyl</td>
<td>Fentanyl Norfentanyl</td>
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<tr>
<td>Methadone</td>
<td>Methadone</td>
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<tr>
<td>Buprenorphine</td>
<td>Buprenorphine Norbuprenorphine</td>
</tr>
</tbody>
</table>
Point 2

8.7M children (12.5% in US) live in a household with at least one parent who had a substance use problem within past year (SAMHSA, 2017)

• Parenting with a substance use disorder is hard.

• Parenting substance exposed infants and children is hard.
Parenting with SUD

• More likely to be: single, incarcerated, hospitalized, with chronic health problems
• Less stable family life; disrupted routines
• Poor physical and emotional availability; unpredictable and inconsistent
• Lower resources (dedicating money and time to substances or treatment services)

• Irritability, depression, mood instability
• Lack of energy for play and parenting
• Lower levels of bonding, supervision and positive attention
• Higher power-assertive behaviors by mothers (disapproval, commanding, provoking)
• Swings between overly strict (irritable, inattentive) and overly permissive (rewards, bribes) parenting
• Elevated risk for neglect, unsafe conditions
• Low confidence in parenting; guilt and remorse; self-critical of weakness
Our Most Vulnerable Citizens

“A lot of officials – nurses, social workers – say, ‘We don’t report when the mother is trying to get better.’ I always come back and say, ‘Well, it’s not about the mother. What about the baby?’”

Ila Baugham, retired pediatrician and member of child-fatality review team

A Reuters investigation found 110 examples of children whose mothers used opioids during pregnancy and who later died preventable deaths after they were sent home from the hospital. A federal law meant to protect those children has largely been ignored by states across America.

Helpless & Hooked, Reuters.com, 2015

Jennifer Frazier with Jacey. In a letter from prison, Frazier laments that she couldn’t get more help before accidentally killing her daughter.
Police said they found 47-year-old James Lee Acord and 50-year-old Rhonda L. Pasek overdosing in a Ford Explorer in East Liverpool, Ohio, on Wednesday, with a 4-year-old boy in the back seat. His face has been digitally altered to protect his identity. (courtesy of the City of East Liverpool)

Nearly 1/3 of children entering foster care do so in part because of parental drug abuse.

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2005</td>
<td>22%</td>
</tr>
<tr>
<td>2015</td>
<td>32%</td>
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</table>
SC Mandated Reporter Law

Must report when

- in the reporter’s **professional capacity**
- the reporter has received information
- which gives the reporter **reason to believe**
- that a child has been or may be abused or neglected
S.C. Code §63-7-310

- Physicians and nurses, among other professionals, are required to report child abuse and neglect
  - Exposing a child to illegal drugs is abuse/neglect
  - Creating an unreasonable risk of harm to child is abuse/neglect

- A viable fetus is a child for the purposes of the mandated reporter law
What about HIPAA and Doctor/Patient Confidentiality?

• When the issue is the abuse and/or neglect of a child, then the professional has no restrictions to disclosure and reporting.

• In other words...
  • ANY information is appropriate to disclose, even “hearsay”
  • You have no obligation to inform a patient or family that you are making a report

• And...
  • DSS will not disclose the identity of any reporter
Aberrant Drug-Related Behavior

• Behavior that suggests prescription or illicit drug misuse
  
  – Appearing intoxicated or over-sedated
  – Showing deteriorating functioning at home or work
  – Criminal, intimidating or threatening behavior
  – Excessive defensiveness or over-compliance
  – Emotional detachment
  – Neglecting personal hygiene, nutrition, home environment or health needs
  – Resisting drug screening, referrals for therapy, or questioning about use
  – Resisting home visits by nurses or case workers: prefer “privacy”
  – Avoidance of seeking medical care with one provider
  – Refusal to consent for record transfers
  – Giving variable addresses, birth dates, phone numbers, medical history or other information to providers; frequent moving
  – Repeatedly losing medications, prescriptions or seeking early refills
  – Reporting events that typically warrant police involvement or medical care, without seeking it (car accident, stolen prescriptions, assault, etc.)
Exposed Infants Have More...

- Colic, fussiness
- Feeding problems
- Sleep issues
- May persist 4-12 months

- Increased risk for SIDS
- Infectious exposures (STIs, hepatitis C)
- Vision and hearing problems
- Abusive trauma
Exposed Children Have More...

• Social and psychological difficulties
• Behavioral problems and difficult temperament
• Injuries and illness
• Home and parental displacements
• Peer relationship and social adaptability problems
• Difficulty receiving counseling geared toward coping
• Negative health outcomes
  • Missed well visits, vaccinations, hepatitis C testing
  • Nutrition-related problems

communitiesinschools.org
Parenting Substance Exposed Children

- Have a team of professionals to identify and address special needs of the child
- Have a support system beyond friends and family for encouragement and support – mentors, support groups, peers with similar challenges
- Avoid labels and stereotypes – teach kids not to share entire life history, have a cover story or opt out of conversations to promote self esteem
- Respect the child’s privacy – only share background on as-needed basis to avoid stigma – share the challenge but not the cause
- Have predictable routines – plan in advance and explain changes in routines, even if positive
- Nurture physically and emotionally – expect different responses to affection – test frequency and acceptability of hugs, kisses, pats, closeness, etc.
- Advocate for educational needs
- Develop success in at least one area of talent or interest
- Maintain a realistic but positive attitude
- Learn tolerance for the unknown
- Avoid burnout

Oregon Post Adoption Resource Center, 2006
Hepatitis C During Pregnancy

- Prevalence among pregnant women is 1-2%
- As high as 7-8% among those misusing opioids
- Risk of transmission to the baby is about 6%
- Infant testing needed at 2-4 months and 18 months

- How well do we screen exposed infants?
  - 1025 exposed newborns, 2006-2014
  - 31% received well-child services
  - 30% of those who received well-child services were screened for hepatitis C

What Else?

• Optimize child health outcomes
  • Well visits and specialty care (developmental follow-up)
  • Encourage vaccinations
  • Encourage continuity with a medical home
  • Access early intervention services
  • Promote optimal nutrition
  • Support honesty and trust in the medical system
  • Prevent ongoing exposures

• Prevent adverse childhood experiences
  • Parenting skills to promote consistency and emotional availability
  • Employment for economic and resource stability
  • Choose healthy and stable relationships
  • Coping skills to handle stress; promote resilience in parents and children
  • Seek treatment for co-occurring disorders
Point 3

- Opioids in the home create special risks to children and adolescents
Half of parents with prescription painkillers for their child said they had leftover medication.

Of these parents...

- Kept it at home: 47%
- Tossed it in the trash or toilet: 30%
- Don’t recall: 9%
- Returned it to the doctor or pharmacy: 8%
- Used it for other family members: 6%
Household opioid prescriptions increase overdose risk for young children

Researchers looked at health data of Ontario children under the age of 10 who were treated in emergency departments for acute opioid overdose. They compared the likelihood that their mothers had been prescribed opioid vs. non-opioid painkillers before the child’s overdose episode.

Risk of severe overdose in children whose mothers had been prescribed opioids:

- nearly 2.5 times higher
- than children whose mothers had been prescribed non-opioid pain medications.

Reducing Misuse and Diversion

NEARLY 25% OF TEENS REPORT abusing or misusing a prescription drug at least once in their life.

1/3 OF TEENS BELIEVE IT IS OK TO TAKE A PRESCRIPTION DRUG WITHOUT A PRESCRIPTION FOR AN INJURY OR TO DEAL WITH PAIN.

OVER 70% OF PEOPLE WHO'VE ABUSED PRESCRIPTION PAIN RELIEVERS SAY THEY GOT THEM FROM FRIENDS OR RELATIVES.
Nonmedical Prescription Opioid Use by Parents and Adolescents in the US

Results showed 14% of adolescents misused prescription opioids if their parents did compared to 8% if their parents did not. The findings held true after controlling for other factors, according to the study “Nonmedical Prescription Opioid Use by Parents and Adolescents in the US” (Griesler PC, et al. Pediatrics. Feb. 25, 2019, https://doi.org/10.1542/peds.2018-2354).

Further analysis found mothers’ opioid use predicted teen use. Race and gender were not significant factors in parent-child use.

In addition, teens were more likely to misuse prescription opioids if their parents smoked, did not monitor them closely or had a troubled relationship with them, the study showed. Teens’ own smoking, marijuana use, depression and delinquency also made them more likely to misuse prescription opioids. Those who were religious or believed the drugs to be risky were less likely to use them.

Authors said there are several possible explanations for the link between parent and teen opioid use. Teens may have been copying their parents’ behavior, drugs may have been more readily available in their homes or parenting strategies may be ineffective. Genetics also may play a role.

"Parent-based interventions targeted at NMPO (nonmedical prescription opioid use) use among youth should not only address parental NMPO use but should also promote positive parenting practices, such as monitoring and reduced conflict," they wrote.
Figure 2. Past month substance use among 12th grade aged youths, by dropout status: 2002 to 2014

* Difference between 12th grade aged students and 12th grade aged dropouts is statistically significant at the .05 level.

Source: SAMHSA, Center for Behavioral Health Statistics and Quality, National Surveys on Drug Use and Health (NSDUHs), 2002 to 2005, 2006 to 2010 (revised March 2012), and 2011 to 2014.
Prescription Opioids in Adolescence and Future Opioid Misuse

**RESULTS:** Legitimate opioid use before high school graduation is independently associated with a 33% increase in the risk of future opioid misuse after high school. This association is concentrated among individuals who have little to no history of drug use and, as well, strong disapproval of illegal drug use at baseline.
Reducing Misuse and Diversion

• Safe storage and disposal

How to properly dispose of unused prescription drugs at home:

1. Mix unused medication with garbage, coffee grounds, cat litter or sawdust.
2. Place mixture in a disposable container such as a sealable plastic bag.
3. Discard sealed container in trash bin.
4. Remove and dispose of label from the empty medicine container.

Source: Substance Abuse and Mental Health Services Administrator; THE COLUMBUS DISPATCH
List of medicines recommended for disposal by flushing

This list from the U.S. Food and Drug Administration (FDA) tells you which medicines you should flush when they are no longer needed. Links in the list below direct you to medicine information for consumers that includes specific disposal instructions.

<table>
<thead>
<tr>
<th>Active Ingredient</th>
<th>Found in Brand Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzhydrocodone/Acetaminophen</td>
<td>Apadaz</td>
</tr>
<tr>
<td>Buprenorphine</td>
<td>Belbuca, Bunavail, Butrans, Suboxone, Subutex, Zubsolv</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>Abstral, Actiq, Duragesic, Fentora, Onspis</td>
</tr>
<tr>
<td>Diazepam</td>
<td>Diastat/Diastat AcuDia rectal gel</td>
</tr>
<tr>
<td>Hydrocodone</td>
<td>Anexia, Hysingla ER, Lortab, Norco, Reprexain, Vicodin, Vicoprofen, Zohydro ER</td>
</tr>
<tr>
<td>Hydromorphone</td>
<td>Dilaudid Exalgo</td>
</tr>
<tr>
<td>Meperidine</td>
<td>Demerol</td>
</tr>
<tr>
<td>Methadone</td>
<td>Dolophine, Methadone</td>
</tr>
<tr>
<td>Methylphenidate</td>
<td>Daytra transdermal patch system</td>
</tr>
<tr>
<td>Morphine</td>
<td>Arymo ER, Embeda, Kadian, Morphabond ER, MS Contin, Avinza</td>
</tr>
<tr>
<td>Oxycodone</td>
<td>Combunox, Oxydol (formerly Oxecta), OxyContin, Percocet, Percodan, Roxicet, Roxicodone, Roxybond, Targiniq ER, Xartemis XR, Xtampza ER</td>
</tr>
<tr>
<td>Oxymorphone</td>
<td>Opana, Opana ER</td>
</tr>
<tr>
<td>Tapentadol</td>
<td>Nucynta, Nucynta ER</td>
</tr>
<tr>
<td>Sodium Oxybate</td>
<td>Xyrem oral solution</td>
</tr>
</tbody>
</table>

FDA believes that the known risk of harm, including death, to humans from accidental exposure to the medicines listed above, especially potent opioid medicines, far outweighs any potential risk to humans or the environment from flushing these medicines. FDA will continue to conduct risk assessments as a part of our larger activities related to the safe use of medicines.

For disposal information, specific to another medication you are taking please visit Drugs@FDA. Once there type in the medication name and click on search. Then click on the label section for that specific medication. Select the most recent label and search for the term “disposal.”

Updated: April 2018
Prevention

• For families with chronic opioids in the home (including grandparents), be sure to encourage...

  • Secure storage
  • Disposal of old medications
  • Using strategies to reduce risk for teen opioid misuse
Preventing Substance Use in Teens: 5 Questions

- **Communication:** Are you able to communicate calmly and clearly with your teenager about relationship problems?

- **Encouragement:** Do you encourage positive behaviors in your teenager on a daily basis?

- **Negotiation:** Are you able to negotiate emotional conflicts with your teenager and work toward a solution?

- **Setting limits:** Are you able to calmly set limits when your teenager is defiant or disrespectful? Are you able to set limits on more serious problem behavior such as drug use, if or when it occurs?

- **Supervision:** Do you monitor your teenager to assure that he does not spend too much unsupervised time with peers?
Resources

REACH OUT

Know the substance abuse facilities and other resources in your community. If you discover a problem, immediately contact professionals in your area. Ask your child's physician and school counselors for referrals. The following resources may also be helpful:

  This site provides tips to help raise drug-free kids.

  This publication outlines the risks in prescription drug misuse.

  This site provides a wealth of information on all aspects of the teen drug risk.

  This site provides resources specifically about opioids.

- National Institute on Drug Abuse: Pain Medicine (Oxy, Vike) Facts: [https://easyread.drugabuse.gov/content/pain-medicine-oxy-vike-facts](https://easyread.drugabuse.gov/content/pain-medicine-oxy-vike-facts)
  This site provides a wealth of information on opioid and pain drug misuse.
Take Home Points

• Address contraception needs of women of child-bearing age who are chronically taking controlled substances.

• Monitor substance-exposed infants and children for developmental, behavioral, and family problems.

• Comply with mandated reporting law to protect children from potential abuse and neglect.

• Advise families to safely store, dispose of, and talk about opioids in the home to prevent teen misuse.
“We must come together if we want to redesign the world that our children will inherit. The alternative is too terrible to contemplate.”

Naidoo, Change: Organising Tomorrow, Today

Contact Me:

Jennifer A. Hudson, MD
Medical Director, Newborn Services
MAiN Program
Jennifer.hudson2@prismahealth.org
864-455-3114
62nd Annual Greenville Postgraduate Seminar
Spotlight: Primary Care