Welcome!

Neonatal Abstinence Syndrome

Understanding the Breadth and Context of the Problem

A webinar designed for Level I hospitals

June 12, 2014 and June 17, 2014

Ohio Perinatal Quality Collaborative

Michele Walsh, MD

NEO Content Lead

OPQC Ohio Perinatal Quality Collaborative

BEACON

Ohio Department of Medicaid

John R. Kasich, Governor
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Ohio Children's Hospital Association

CME:

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Social Work:

Cincinnati Children's Hospital Medical Center Social Service is an approved provider of social work continuing education by the State of Ohio Counselor, Social Worker and Marriage and Family Therapist Board (RSX069302). This presentation is approved for 1.0 (one) clock hour.

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Please sign in with everyone's name email address, and hospital affilitation who is on the call.

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Agenda

Time	Topic	Presenter
12:00 pm	Welcome Overview of Agenda Review of Objectives	Beth White, MSN, CNS
12:10 pm	NAS: The scope of the problem	Moira Crowley, MD Scott Wexelblatt, MD
12:25 pm	The OPQC NAS project	Moira Crowley, MD Scott Wexelblatt, MD
12:40 pm	Toward an understanding of addiction as a chronic illness	Moira Crowley, MD Scott Wexelblatt, MD
12:55 pm	Next steps	Beth White, MSN, CNS

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Objectives

- Describe the magnitude in incidence of babies born with NAS in Ohio and the U.S.
- Describe 1-2 strategies to provide compassionate care for families with newborns diagnosed with NAS
- Identify the role of Level 1 Mother-Baby Units in the safe care of newborns with NAS

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Featured Faculty

Moira Crowley, MD

- Rainbow Babies and Children's Hospital
- Co-Director, Neonatal ECMO program
- Assistant Professor, Pediatrics
- University Hospitals Case Medical Center
- OPQC NEO faculty

Scott Wexelblatt, MD

- Cincinnati Children's Hospital and Medical Center
- Medical Director—Regional Newborn Services
- Assistant Professor, Pediatrics, University of Cincinnati
- OPQC NEO faculty

Michele Walsh, MD

- Division Chief, Neonatology
- Rainbow Babies and Children's Hospital/
- University Hospitals Case Medical Center
- OPQC Neonatal Clinical Lead

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Poll

- Who would you reach out to first to help you plan care for a newborn with NAS?
  - Pastoral care
  - Social work
  - Specially training physician or nurse on staff
  - Addiction specialist
  - We don’t really have any one specific to help us

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Pain

- 1995: studies showed cancer patients' pain was undertreated.
- 1995: American Pain Association issued guidelines on pain management.
- 1999: US Veterans Affairs Dept adopted and spread physician education
- 2000: Joint Commission on Hospital Accreditation: Pain is the Fifth Vital Sign

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Opiate-Related Admissions to Treatment Centers - 2001

Client Admissions for Opiate Abuse and Dependence

Ohio MACSIS Data - 2001

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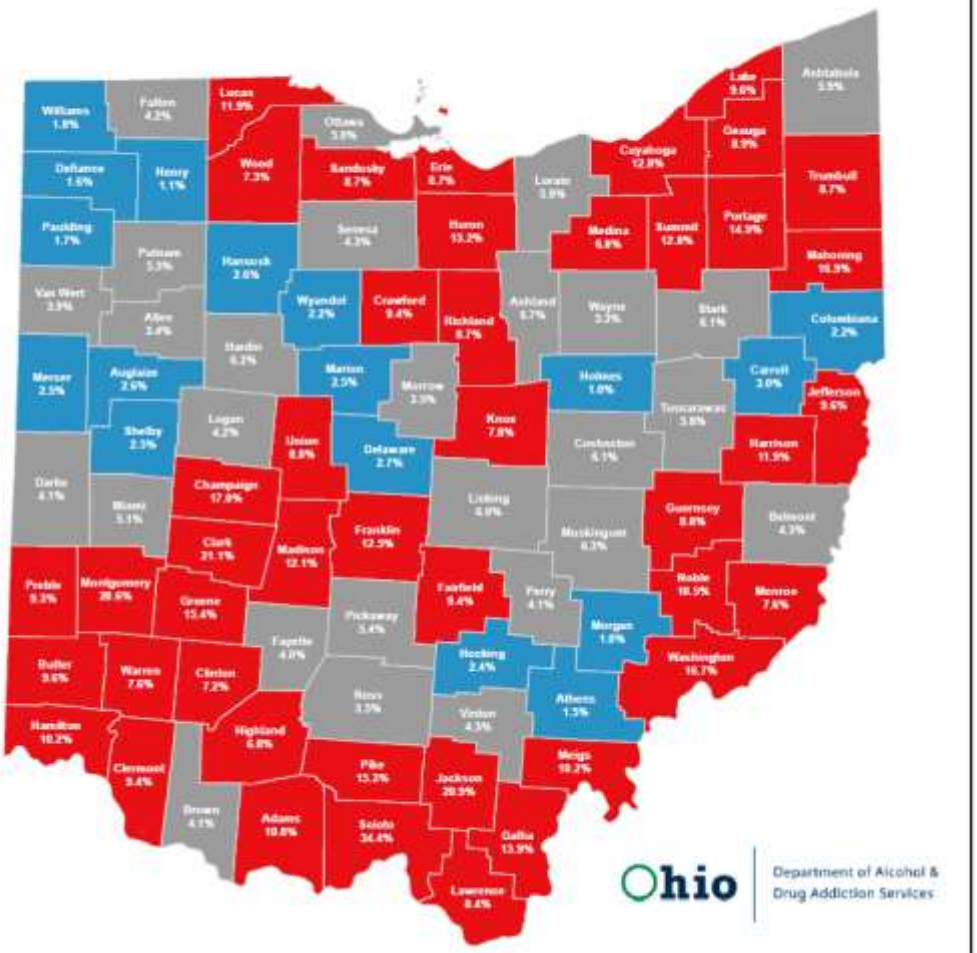
Epidemic is Spreading- 2005

Client Admissions for Opiate Abuse and Dependence

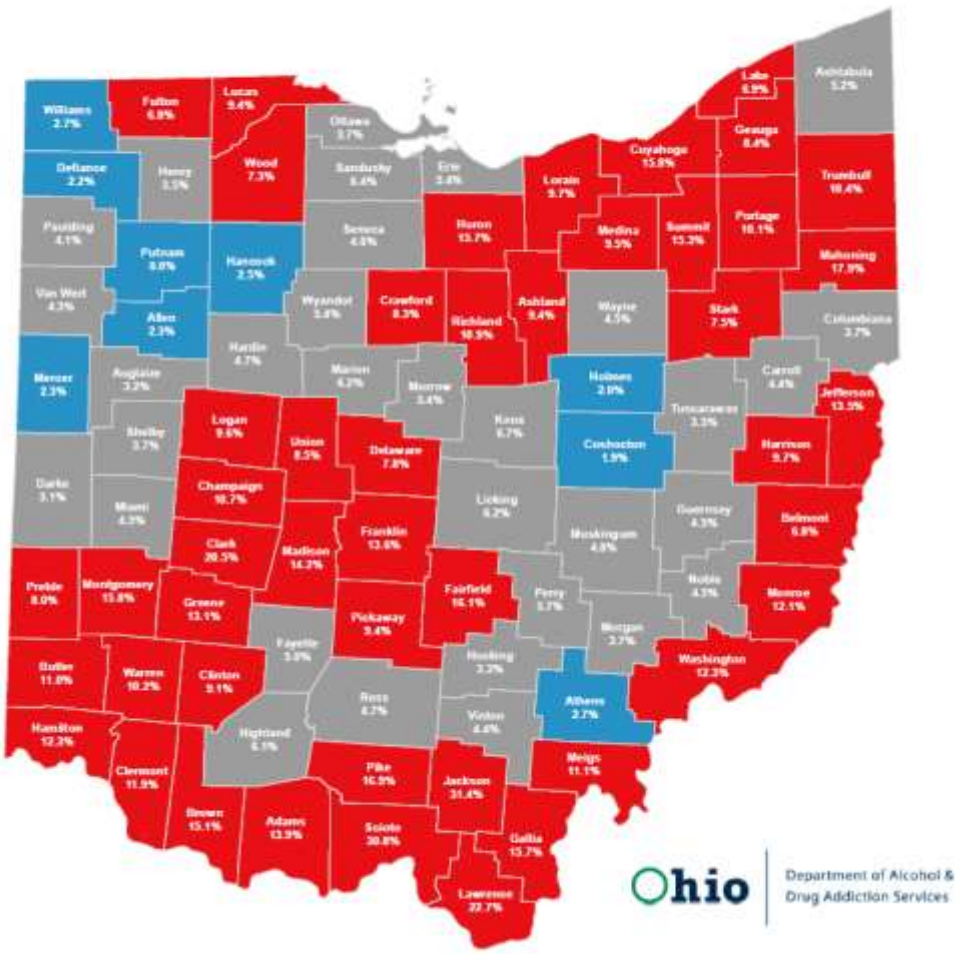
Ohio MACSIS Data - 2005



Epidemic is Spreading- 2007

Client Admissions for Opiate Abuse and Dependence

Ohio MACSIS Data - 2007



Map Information:

This map represents the percentage of clients in treatment with an opiate-related diagnosis (heroin and prescription opioid). The highest concentrations for opiate admissions are in Jackson (31.4%), Scioto (30.8%) and Lawrence (22.7%) counties. The counties with the lowest concentrations of an opiate-related diagnosis are Putnam (0.0%), Coshocton (1.9%) and Holmes (2.0%).

Data Source:
Data from Multi Agency Community Information Systems (MACSIS)
Map produced April 2013

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Epidemic is Spreading-2009

Client Admissions for Opiate Abuse and Dependence

Ohio MACSIS Data - 2009

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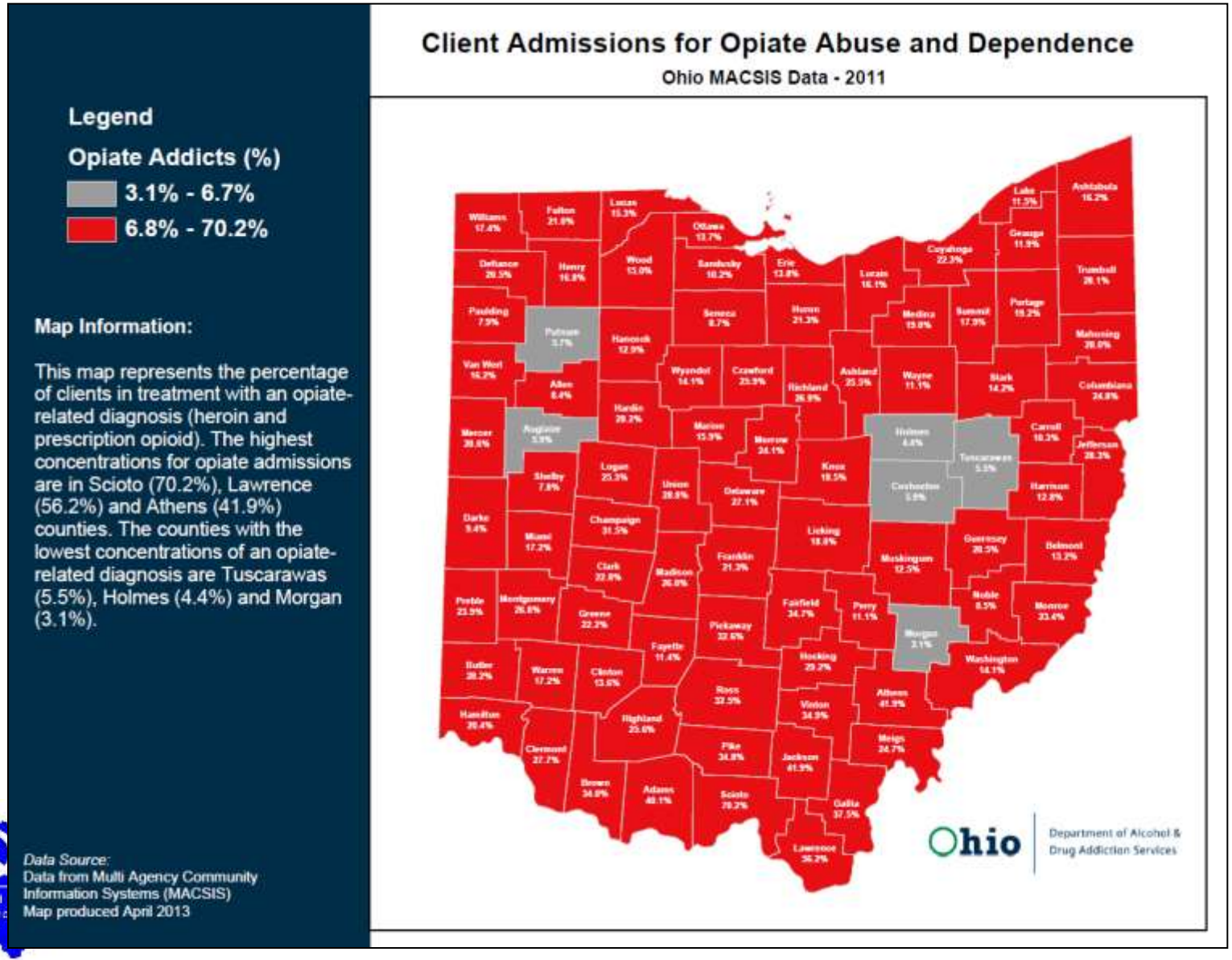
Epidemic is Spreading-2011



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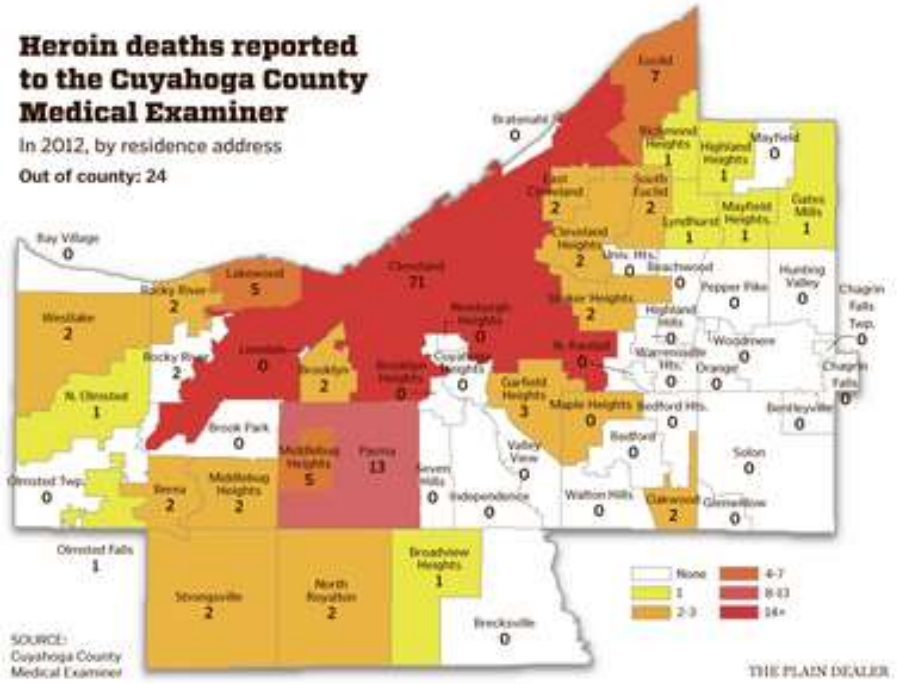
The Heroin Epidemic:
Death toll from drug continues to soar in Cuyahoga County



Region	Jan 12	Jun 12	Jan 13
Akron	↑	↑	↑
Athens	↑	↑	↑
Cincinnati	↑	↑	
Cleveland	↑	↑	↑
Columbus		↑	↑
Dayton	↑	↑	
Toledo	↑	↑	↑
Youngstown	↑	↑	

- Surpassed deaths due to MVA and homicide.

cleveland.com

Sept 13, 2013

Ohio Substance Abuse Monitoring Network, June 2013

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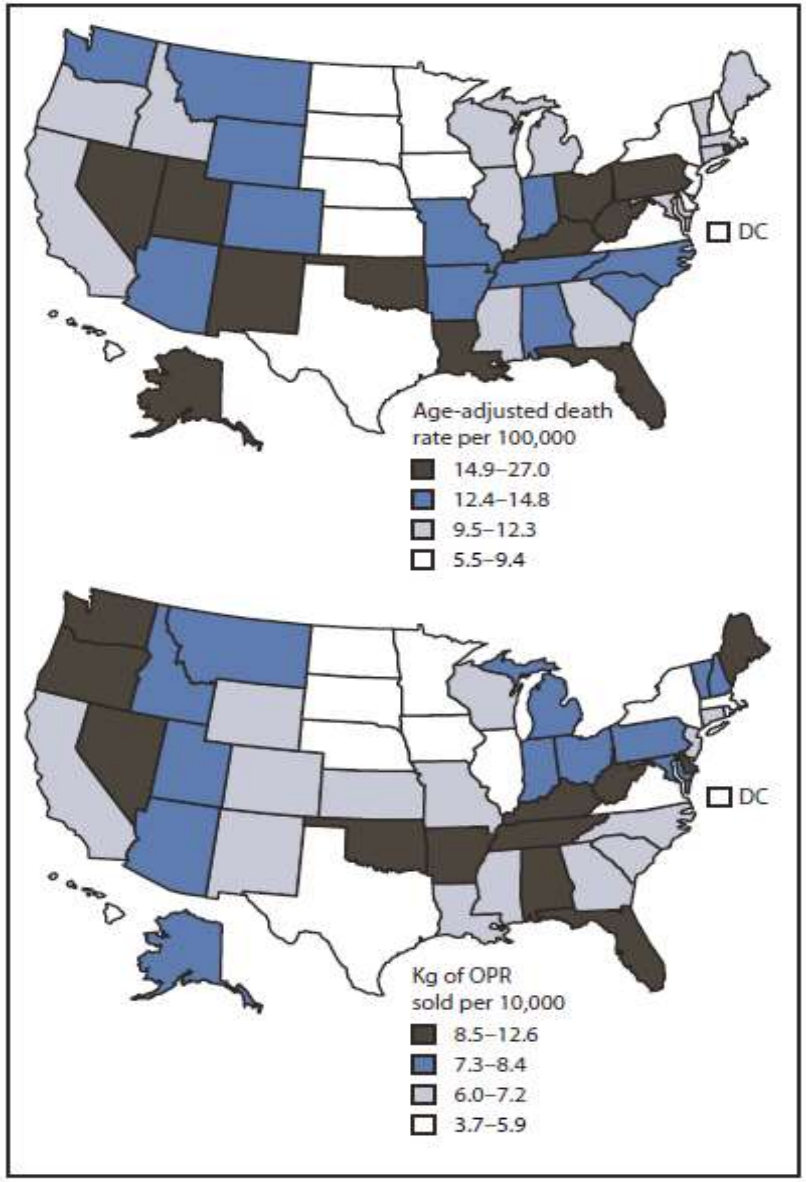
National Problem

- 1 death every 3 minutes
- 1 NAS baby born every 5 minutes



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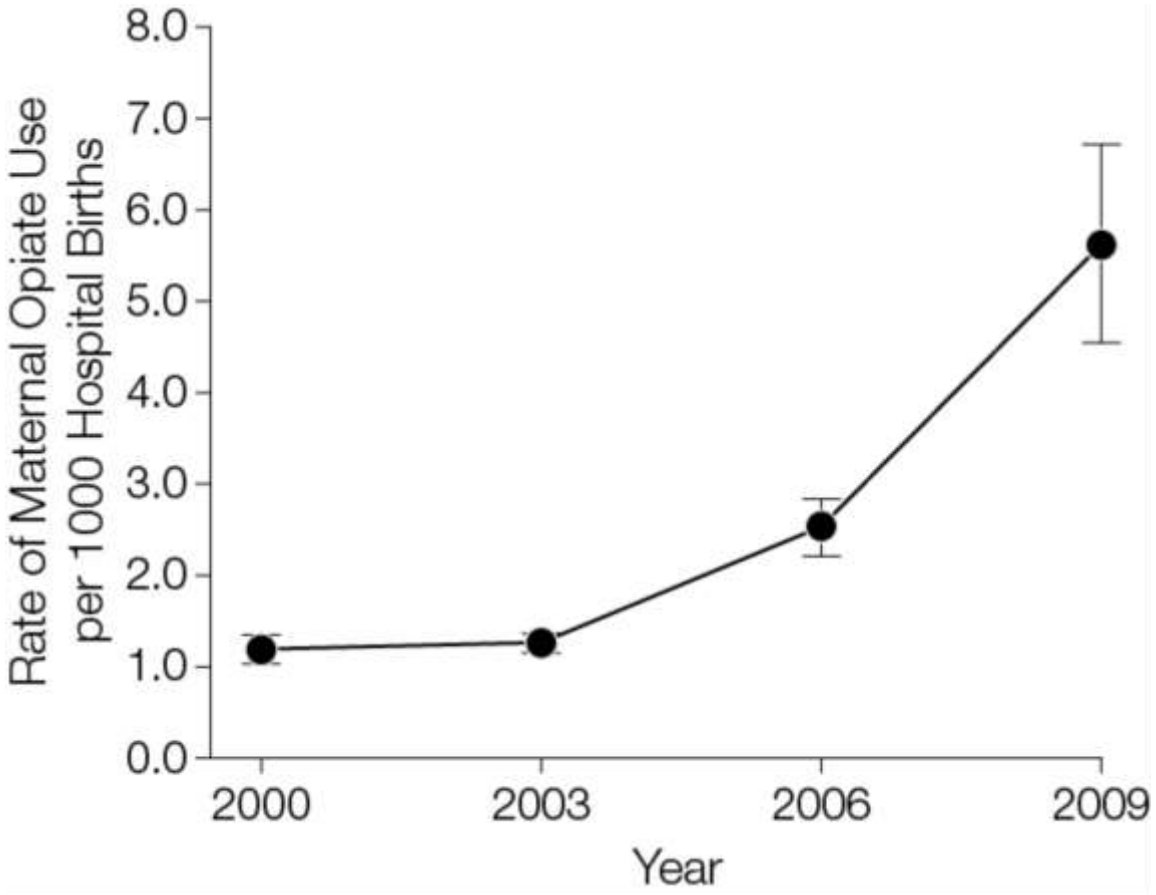
From: Neonatal Abstinence Syndrome and Associated Health Care Expenditures: United States, 2000-2009

JAMA. 2012;307(18):1934-1940. doi:10.1001/jama.2012.3951



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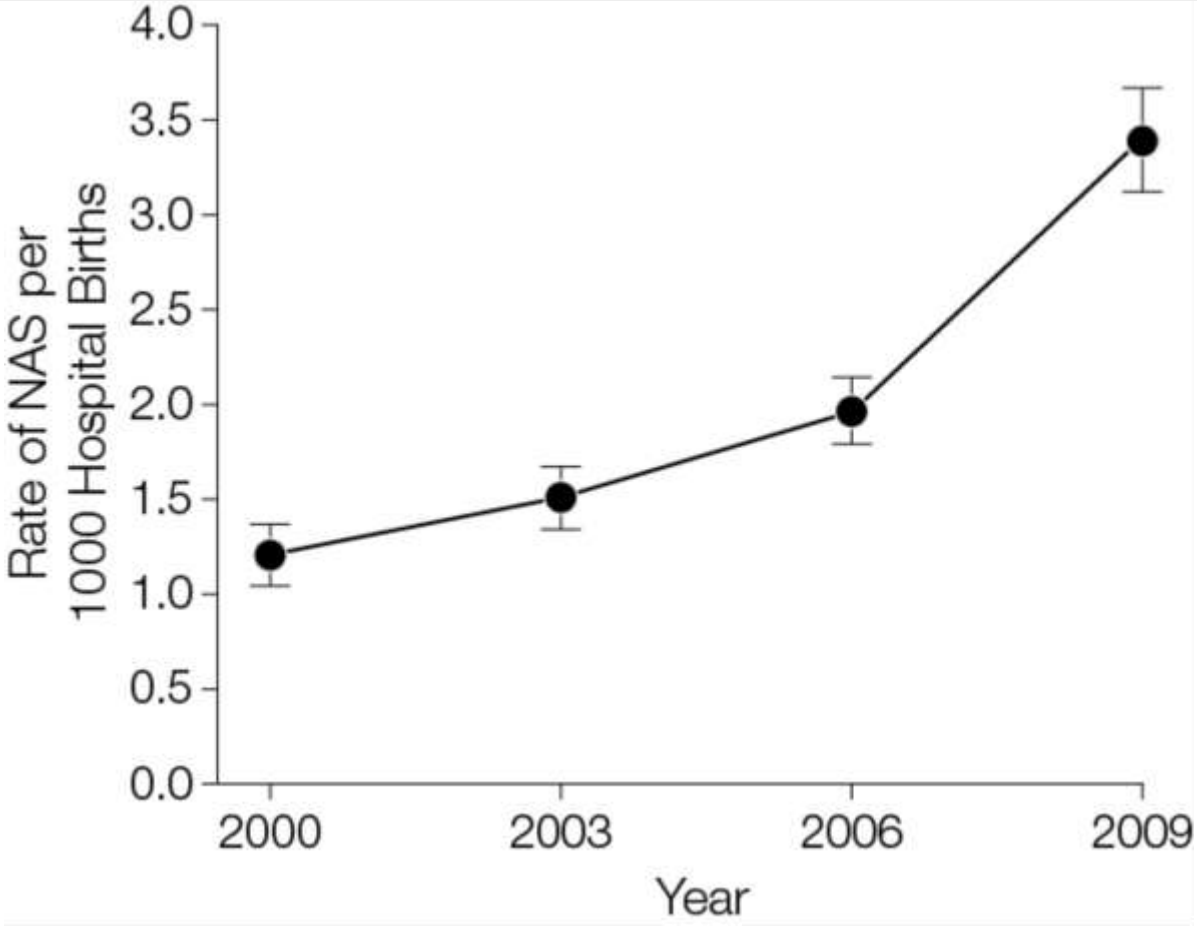
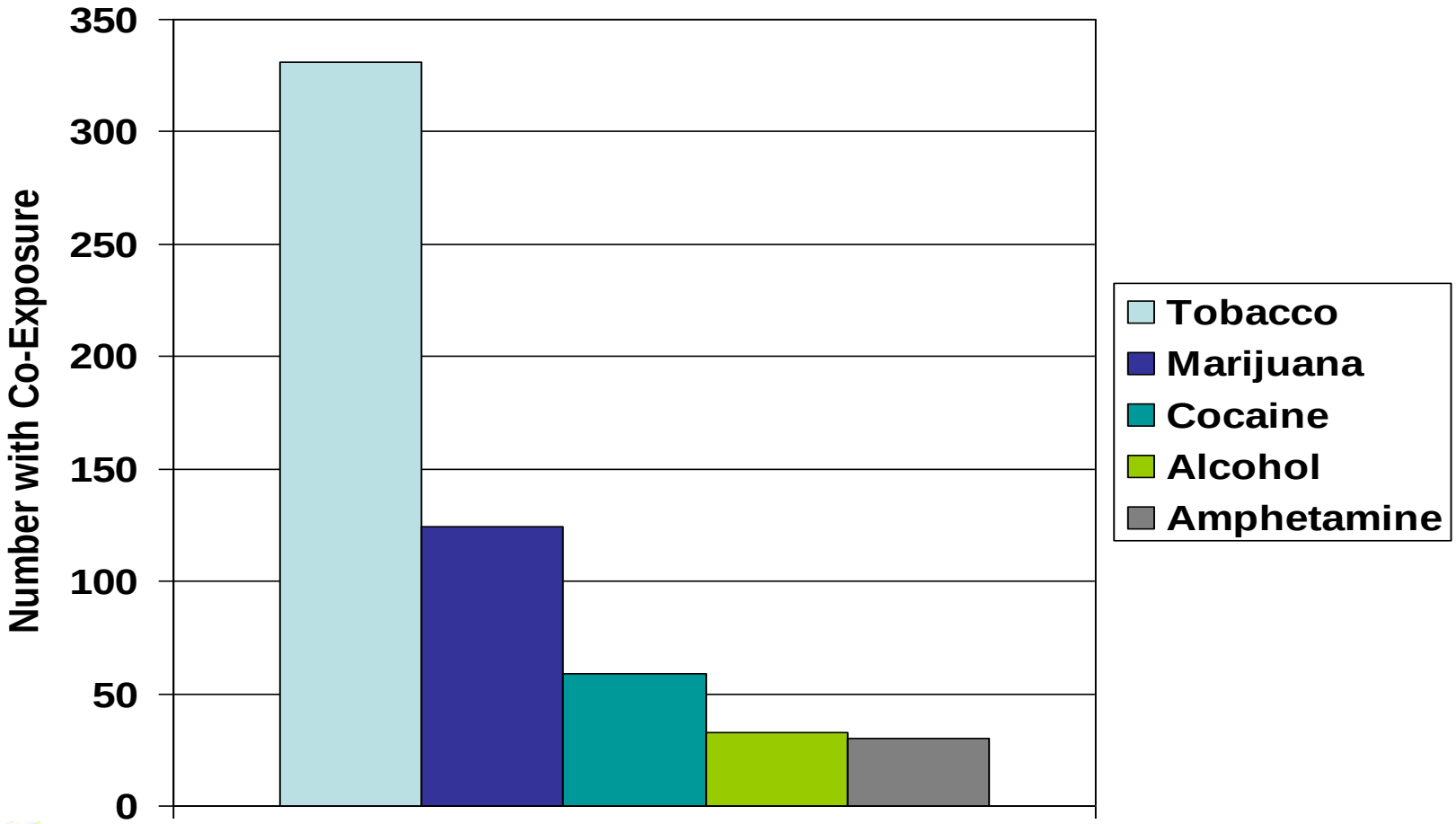


Poly Exposures



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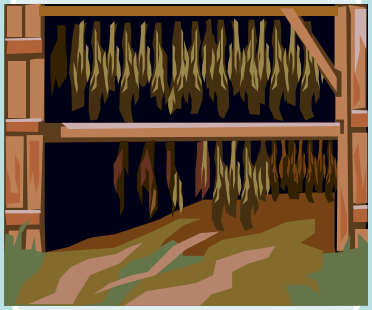
Multiple Simultaneous Withdrawals



82% Exposed to tobacco

- Average cotinine level by cord analysis: 135 ng
- Maximum = 270
- Average US Adult Smoker= 100 ng

10% Exposed to SSRI or Benzodiazepine

- Known withdrawal syndromes

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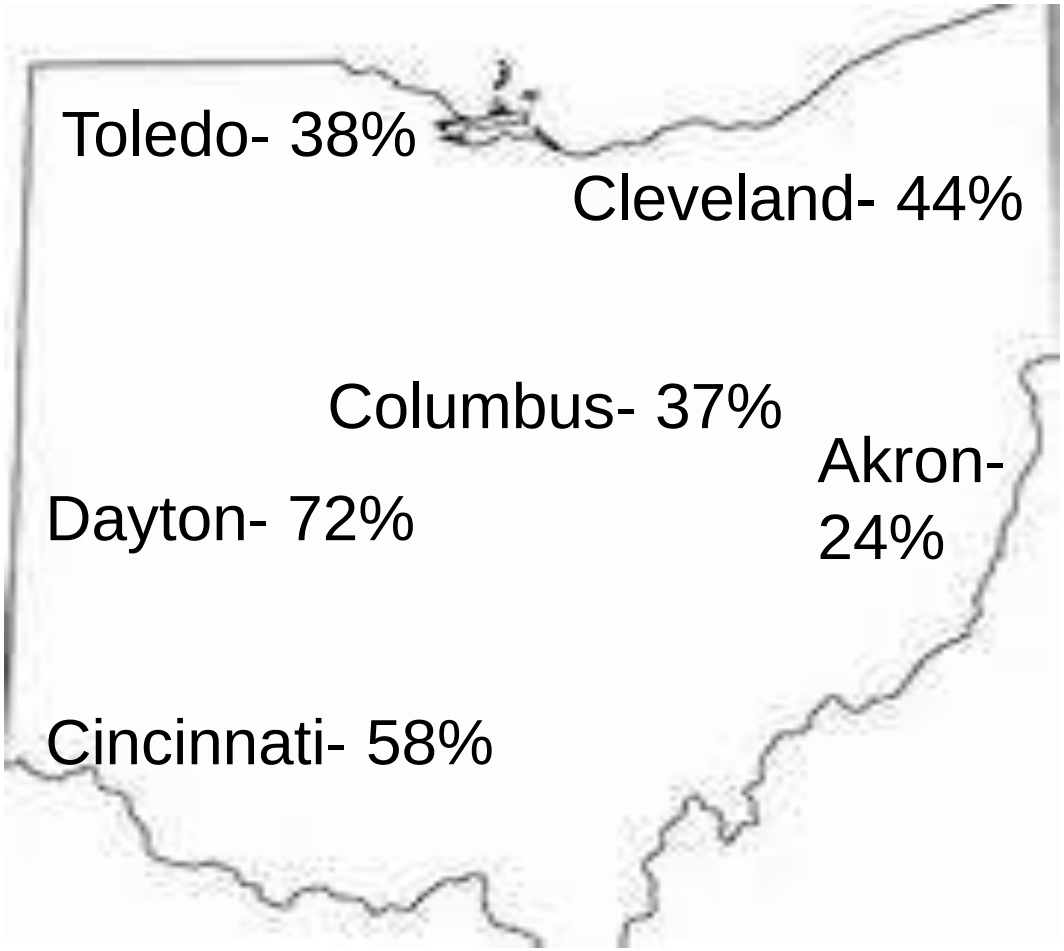
Illegal Narcotics: Abuse by Ohio Region



OPQC NAS AIM Statement

- By increasing identification of and compassionate withdrawal treatment for full-term infants born with Neonatal Abstinence Syndrome (NAS), we will reduce length of stay by 20% across participating sites by June 30, 2015

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Key Driver Diagram

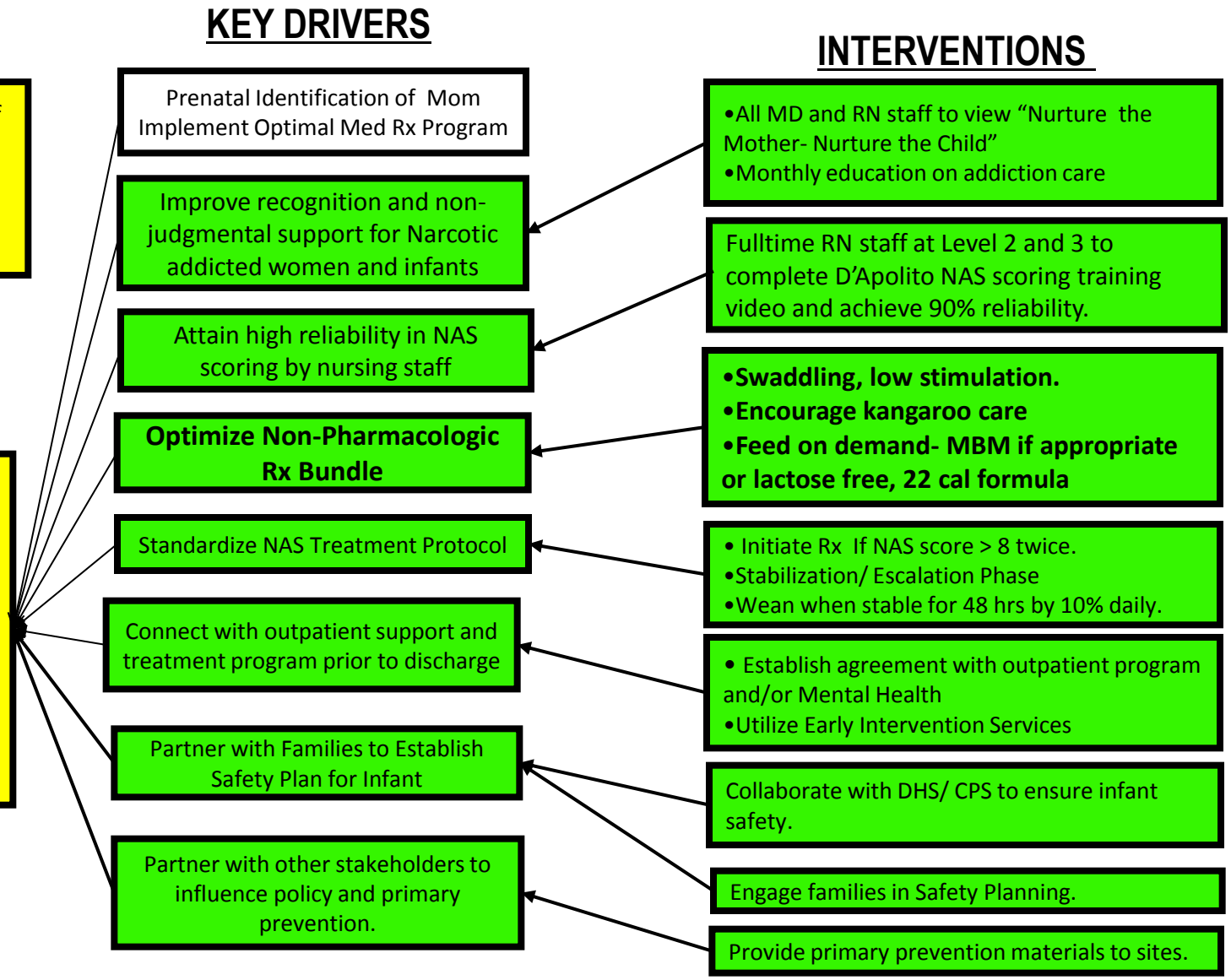
Project Name: OPQC Neonatal NAS **Leader:** Michelle Walsh, MD

GLOBAL AIM

To reduce the number of moms and babies with narcotic exposure, and reduce the need for treatment of NAS.

SMART AIM

By increasing identification of and compassionate withdrawal treatment for full-term infants born with Neonatal Abstinence Syndrome (NAS), we will reduce length of stay by 20% across participating sites by June 30, 2015.



Level 1 Key Driver Diagram

Project Name: OPQC Neonatal NAS **Leader: Michelle Walsh, MD**

GLOBAL AIM

To reduce the number of moms and babies with narcotic exposure, and reduce the need for treatment of NAS.

SMART AIM

By increasing identification of and compassionate withdrawal treatment for full-term infants born with Neonatal Abstinence Syndrome (NAS), we will reduce length of stay by 20% across participating sites by June 30, 2015.

KEY DRIVERS

- Prenatal Identification of Mom Implement Optimal Med Rx Program
- Improve recognition and non-judgmental support for Narcotic addicted women and infants
- Utilize Lipsitz scoring tool to standardize identification
- **Optimize Non-Pharmacologic Rx Bundle**
- Standardize referral those needing treatment
- Partner with Families to Establish Safety Plan for Infant

INTERVENTIONS

- •All MD and RN staff to view "Nurture the Mother- Nurture the Child"
- •Monthly education on addiction care
- All staff view webinar on scoring with Lipsitz tool.
- **•Swaddling, low stimulation.**
- **•Encourage kangaroo care**
- **•Feed on demand- MBM if appropriate or lactose free, 22 cal formula**
- Collaborate with DHS/ CPS to ensure infant safety.
- Engage families in Safety Planning.

Benefits of a Collaborative

- Learning from your colleagues
- Access to experts in the field of addiction medicine
- Learning a Quality Improvement Methodology that you can apply to other projects
- All Teach, All Learn!

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Overview of Ohio Children's Hospital (OCHA) NAS Project

- Longitudinal cohort of term infants with narcotic abstinence syndrome.
- Admitted to 6 Ohio Children's Hospitals and affiliates Jan 2012- June 2013.
- Determine the "potentially better practice" for narcotic abstinence treatment.
- Identify variation and areas for future research.

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Descriptors: 660 neonates
(2012- 2013)

	Mean	Range
Maternal Age, y	27 y	17-44
Maternal Race White, Non-Hispanic (%)	92%	
Single	84%	
Insurance, Public None	80% 10%	

Perinatal Descriptors

	N= 660
Prenatal Care	89%
Pregnancy Complications	85%
Sexually Transmitted Disease	7%
HIV	0
Hep C	26%
Hep B	1%

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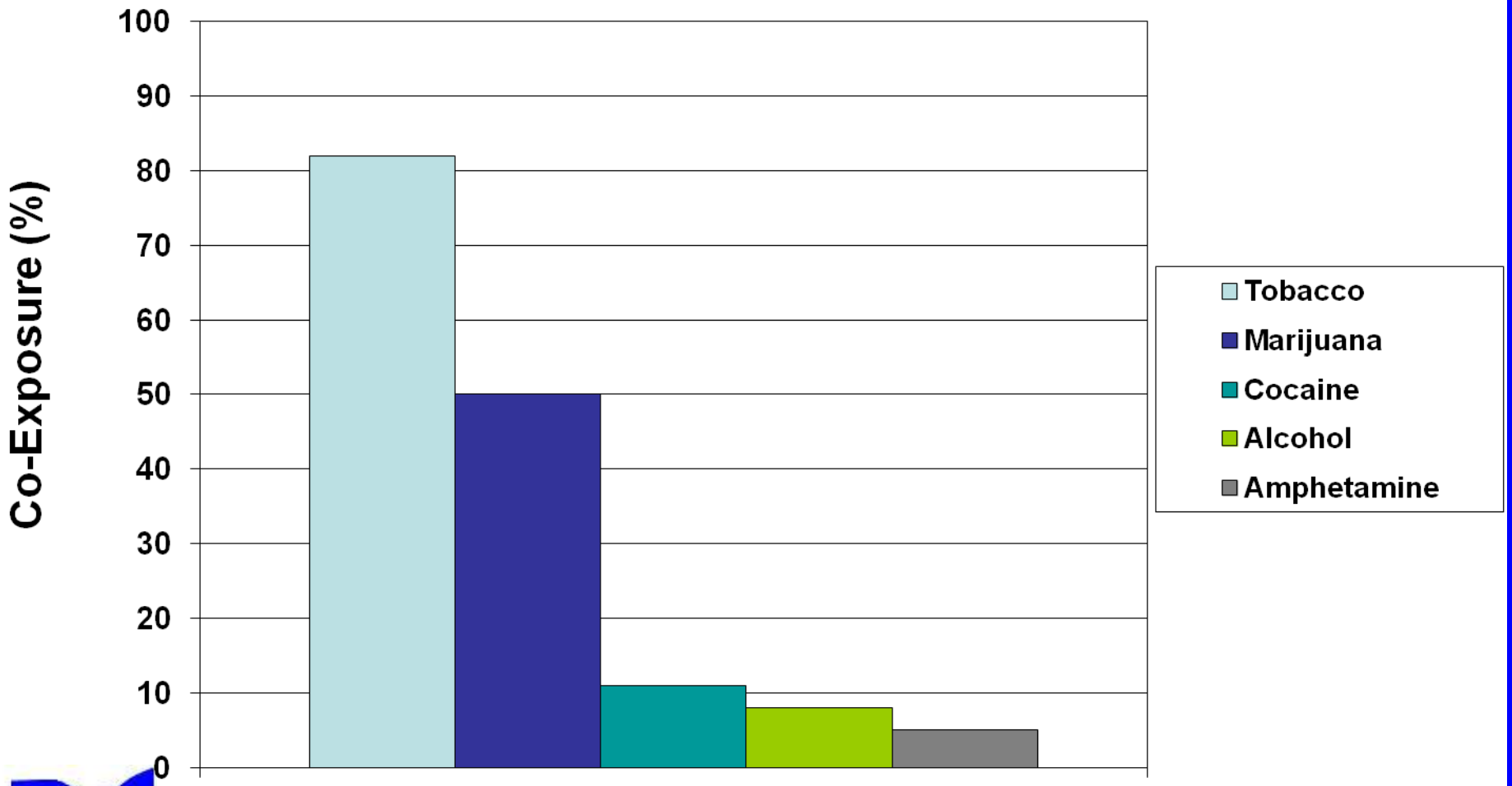
Poly Exposures

(Data from 80 umbilical cord samples)



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Multiple Simultaneous Withdrawals

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- Average cotinine level by cord analysis 135 ng
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Infant Treatment

Characteristic	
Symptoms Started (hours; Mean)	46
Treatment Length (days; Mean)	18.5
Hospital Stay (days; Mean)	22.2
Number of Drugs Used (Mean)	1.5
Drugs used Morphine Methadone	 50% 49%

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Ohio Potentially Better Protocol

Non-Pharmacologic	Swaddle, Comfort, MBM or Consider low lactose 22 Calorie
Initiate	NAS score > 8 q3h two times > 12 one time
	Drug: Morphine/ Methadone 0.05 mg/kg PO
Escalate	If ≥ 12, increase dose
Stabilize	No increase for 48 hrs
Wean	10% of max dose daily Discharge 48 hours off drug

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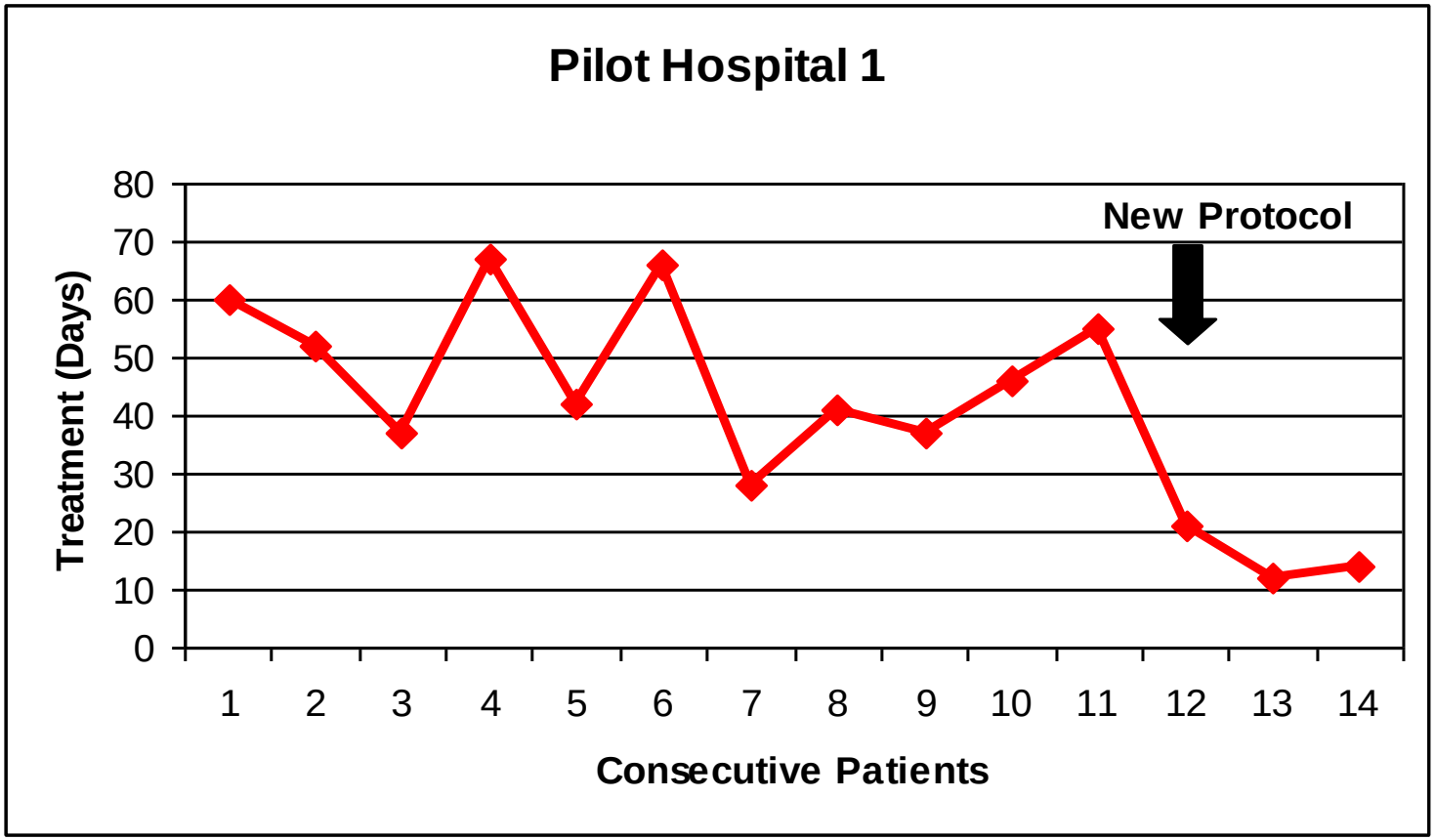
Impact of Ohio Weaning Protocol



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Improve Non-Judgmental Support

- Trauma Informed
- Compassionate care

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Improve Consistency in Lipsitz Scoring

- All sites use same tool
- Train RN staff to improve reliability in scoring using Lipsitz Tool.
  - 11 item subjective measurement of withdrawal symptoms
  - Will be discussed in 2nd webinar

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Non-Pharmacologic Bundle

- Consider site of care. Is NICU needed? Might couplet care with Mom be better?
- Soothing techniques
- Prenatal counseling of Mothers on what to expect, and how they can sooth their baby.
- Feedings: Mom's milk on demand**
    - ? Low Lactose
    - ? Higher calorie in first days?

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Questions

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Understanding Addiction as a Chronic Illness

Content Acknowledgment:
Krisanna Deppen, MD
Family Medicine, Addiction Medicine
Grant Medical Center-OhioHealth
Columbus, OH

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Poll

To what extent is an individual personally responsible for their addiction problem?

- Not at all responsible
- Moderately responsible
- Very responsible

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Substance Use 101: Mythbusters

Some Addicts Never Had a Chance to "Just Say No."

If you think drug addicts only hurt themselves, think again. Everyone is at risk of becoming a tragic victim of drug-related crime, violence and bodily harm. Even a newborn baby.

This year, an estimated 362,000 drug-damaged babies will be born in the United States. They enter this world craving illegal street drugs they know nothing about. It's an emotionally devastating addiction they inherit from their mothers.

And it is the cruelest form of abuse and neglect imaginable.

Underdeveloped, undernourished, crying, sweating and weighing only 2 to 3 pounds at birth, drugged babies suffer days of withdrawal torment from prenatal exposure to drugs.

Some will die from blood poisoning, seizures or heart attacks. Many will be abandoned by their drug-addicted mothers. Most will have difficulty relating to their world, and will encounter severe psychological problems later on.

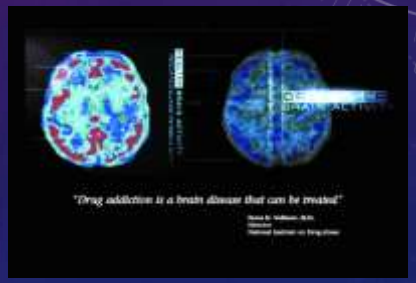
It is time to halt the horror. It is time to put an end to drug abuse.

Myth

"IF THESE MOMS REALLY CARED ABOUT THEIR BABIES, THEY WOULD JUST QUIT"

- Those who can quit, often do
- Addiction has multiple effects on the brain
- Addiction is similar to other chronic medical illnesses

- Addiction
  - A primary chronic, neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations
- Neurobiology of addiction
  - Role of dopamine
  - The neurobiology of addiction



encompasses more than the neurochemistry of reward

  - Frontal cortex-altered impulse control, altered judgment, and the dysfunctional pursuit of rewards (Volkow, 2007)

Relapse Rates: Similar for Drug Addiction And Other Chronic Illnesses

Percentage of patients whose symptoms reoccur

Source: "Drug dependence, a chronic medical illness: implications for treatment, insurance and outcomes evaluation," *Journal of the American Medical Association*, 2000.

Myth

"METHADONE (OR BUPRENORPHINE) IS JUST ANOTHER ADDICTION"

- Dependence is different than addiction
- Legal, safe, monitored dose
- Studies on improved outcomes on methadone

DEPENDENCE IS DIFFERENT THAN ADDICTION

- Physical dependence
  - Tolerance and withdrawal can develop with appropriate use of prescription medications (pain or addiction treatment)
- Addiction
  - Characterized by behaviors that include one or more of the following: impaired control over drug use, continued use despite harm, and craving (“3 C’s”)

OPIOID MAINTENANCE THERAPY (SPECIFICALLY METHADONE)

- Began in 1967 by Dole and Nyswander
- Improved outcomes
  - Decreased mortality, reduced illicit drug use, reduced seroconversion of HIV, decreased criminal activity, increased socially productive activities (Martin 2009)
- Only 10-20% of patients who discontinue maintenance therapy are able to remain abstinent (Nosyk 2012)
- PET scans suggest that methadone maintenance at least partly normalizes cerebral glucose metabolism, as compared with patients withdrawn from methadone and in sustained remission (Galynker 2000)

Myth

"MAINTENANCE THERAPY IS HELPFUL FOR MOM, BUT THIS CAN'T BE GOOD FOR THE BABY."

- Improved maternal outcomes
- Improved obstetrical outcomes
- Improved neonatal outcomes

Maternal improvements

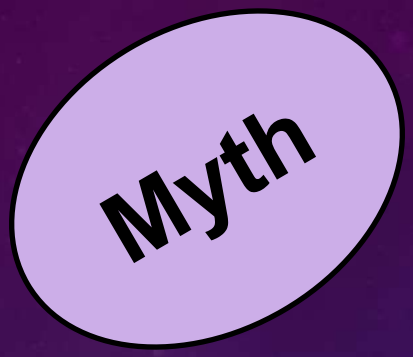
- Decreased risk of relapse
- Improved prenatal care
- Higher likelihood of abstinence from concomitant drug use
- Untreated heroin use in pregnancy linked to growth restriction, placental abruption, fetal demise, preterm labor

(ACOG, 2012. Minnes, 2011)

Fetal improvements

- Higher birth weights
- Higher gestational age

(Peles, 2012)



"THESE MOMS ARE SO MUCH WORK, THIS ISN'T WORTH IT."

- Improving care of these families is valuable to infant care and development
- Improving care is valuable to the substance using family
- Improving care may be valuable to your staff
- Improving care could be valuable to you

Benefits of Improved Care for Infants and Families

Infants

- After delivery, long-term outcomes improved with safe, sober environment to grow up in
- Facilitated by early bonding

Mother/families

- Recovery from addiction is life-changing
- Recovery occurs at similar rates to treatment of many other chronic, medical diseases
- Delivery of infant affected by drug use could be a teachable moment

IMPORTANCE TO MEDICAL PROVIDERS

- Providing substance-using families a different experience of the health care system may help facilitate better bonding and care for infants
- Creating an environment where moms are welcome, can create a better environment for us to work in
- Understanding addiction and learning skills to communicate effectively with these families could lessen caregiver burnout/stress

IMPROVING COMMUNICATION SKILLS: INTRO TO MOTIVATIONAL INTERVIEWING

- “Motivational interviewing is a collaborative, person-centered form of guiding to elicit and strengthen motivation for change.” (Miller & Rollnick, 2009)
- Five components of motivational interviewing
  - Express empathy
  - Develop discrepancy
  - Support self-efficacy
  - Roll with resistance
  - Eliciting change talk and commitment language

CONCLUSION

- Addiction is a chronic and treatable disease
- Opioid maintenance therapy with methadone or buprenorphine may play an important role in treatment of pregnant women struggling with addiction
- Opioid maintenance therapy improves outcomes for both pregnant women and their infants
- Providing non-judgmental, compassionate care can be rewarding and beneficial for the patients and the providers

Questions

Please click on the raised hand icon on the right of your screen to ask a question OR type it into the chat box.

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Team Sharing and Learning

Harvard School of Education http://socrativegarden.wordpress.com/2011/08/04/1-2-3-word-cloud/

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Next Steps

- This webinar will be repeated on: June 17
  - There is still time to register! Tell your colleagues.
- Second Webinar Topics: (early Fall, 2014)
  - Identification of women who use narcotics
    - Approaches to Screening
    - Approaches to Drug Testing
    - Legal Issues
    - Duty to Report
  - Use of Lipsitz Scoring Tool for newborn
  - When is it safe to discharge?
- Third Webinar Topics: (mid-Fall, 2014)
  - Optimizing non-pharmacologic care of NAS
  - Who needs to be referred for treatment?

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Resources

- OPQC web site: https://opqc.net
- OPQC email: opqc@cchmc.org
- Twitter account: @OhioPQC

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The OPQC NAS Project is funded by The Ohio Department of Medicaid

Ohio Children's Hospital Association

Saving, protecting and enhancing children's lives

Ohio | Department of Medicaid

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Presenters:

Moira Crowley, MD

University Hospitals, Rainbow Babies and Children Hospital

Cleveland, Ohio

Scott Wexelblatt, MD

Cincinnati Children's Hospital and Medical Center

Cincinnati, Ohio

Disclosure: Financial disclosure information (planning committee and presenters): Planning committee members/faculty were determined to have no conflicts of interest pertaining to this activity.

Commercial Support: **Commercial support received: None**

If at any time during this activity you feel that there has been commercial or promotional bias, please indicate on the online evaluation**.**

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Objectives:

- Describe the magnitude in incidence of babies born substance/opioid addicted.
- Relate how compassionate care can ameliorate the effects of NAS.
- Relate best practices for timely identification and ongoing assessment of NAS.
- Describe an integrated community approach to reduce health problems experienced by newborns with NAS.

Hardware/Software Requirements:

Compatible with Mac and Window users and common web browsers. High-speed access recommended though not required (responsiveness may be noticeably slower using dial-up connection).
Adobe Flash Player 9.x is required and Speakers/headphones required to listen to audio

Provider Contact Information:

If you should have any questions about the content of the meeting, please contact Dr. Moira Crowley or Dr. Wexelblatt .
If you should have any questions regarding CME credit, please contact the CME office at cme@cchmc.org.

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