



Reducing Neonatal Abstinence Syndrome: Tennessee's Experience

Speaker: Dr. Michael Warren

Moderators: Cindy Rodgers & Jennifer Allison

Audio will begin at 3:30PM ET.

You can listen through your computer speakers or call 866-835-7973



Meeting Orientation

- If you are having any technical problems joining the webinar please contact the Adobe Connect hotline at **1-800-416-7640**.
- Type any additional questions or comments into the Q&A box under the slides.
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Introductory Poll



Tennessee Efforts to Prevent Neonatal Abstinence Syndrome

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Disclosures

- I have no relevant financial disclosures.
- I will not be discussing any unapproved or off-label uses of therapeutic agents of products.



POLL QUESTION



Objectives

- Briefly review etiology, diagnosis, and treatment of Neonatal Abstinence Syndrome (NAS)
- Describe scope of NAS in TN and US
- Share TN efforts related to NAS prevention



NAS Background

- Describes symptoms in neonates associated with withdrawal from intrauterine opioid exposure
- Symptoms primarily related to CNS (seizures, tremors, crying, hyperactivity, etc) and GI (poor feeding, poor weight gain, uncoordinated sucking, vomiting, diarrhea, etc)
- Withdrawal occurs in 55-94% of exposed infants



NAS Background

- NAS can be associated with:
 - Prescription drugs obtained with prescription
 - Includes women on pain therapy or replacement therapy
 - Prescription drugs obtained without prescription
 - Illicit drugs



NAS Identification

- NAS diagnosis based on:
 - History of exposure
 - Evidence of exposure (maternal drug screen; infant urine, meconium, hair, or umbilical samples)
 - Clinical signs (symptom rating scale)



NAS Treatment

- Initial treatment: minimize environmental stimuli, avoid excess stimulation, respond early to signals, minimize hunger and support adequate growth
- Pharmacologic therapy may be needed



NAS Outcomes

- No definitive long-term consequences of neonatal withdrawal
- Limited studies show:
 - Normalization of developmental assessment scores
 - Resolution of seizures
- Confounding by social/environmental variables

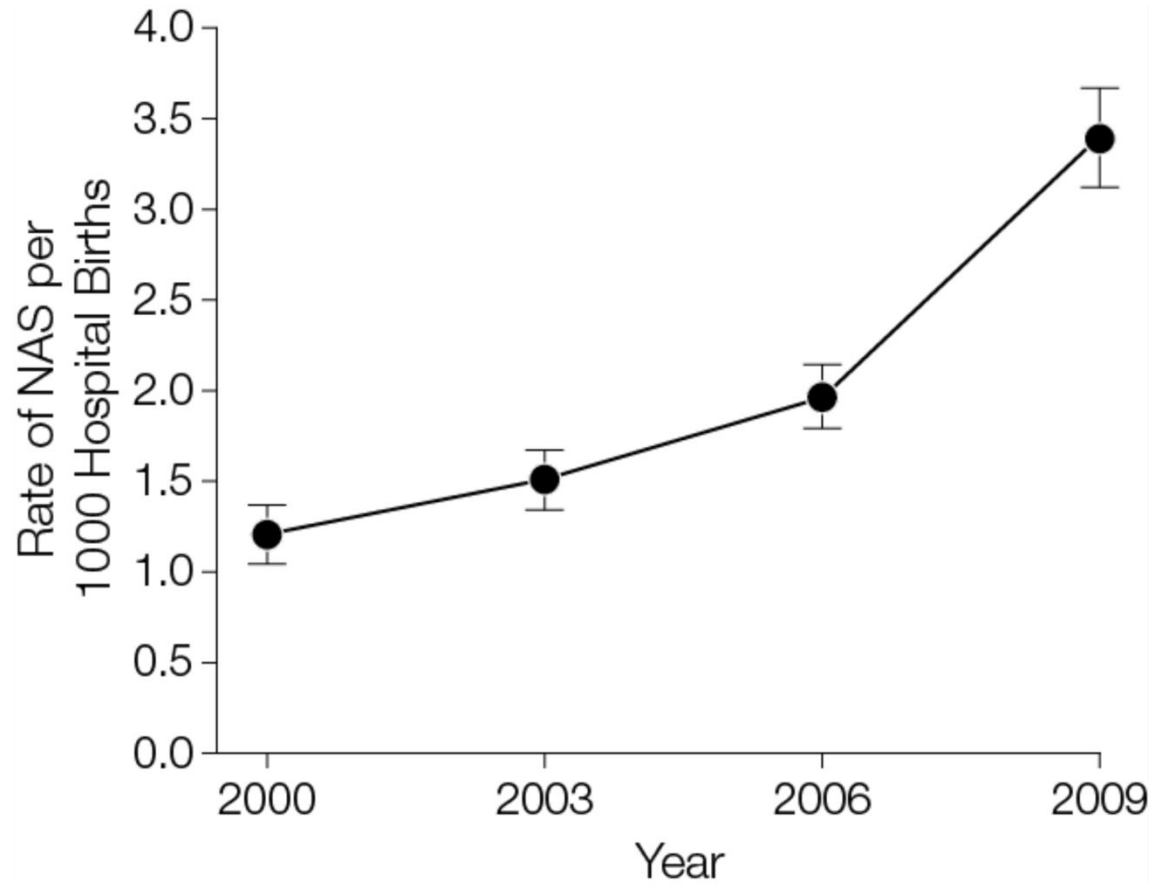


NAS Epidemiology (US)

- Over the past decade:
 - 2.8-fold increase in NAS incidence
 - 4.7-fold increase in maternal opioid use
 - Increase in hospital costs \$39,400 → \$53,400
 - 78% charges to state Medicaid programs



NAS in the US: 2000-2009

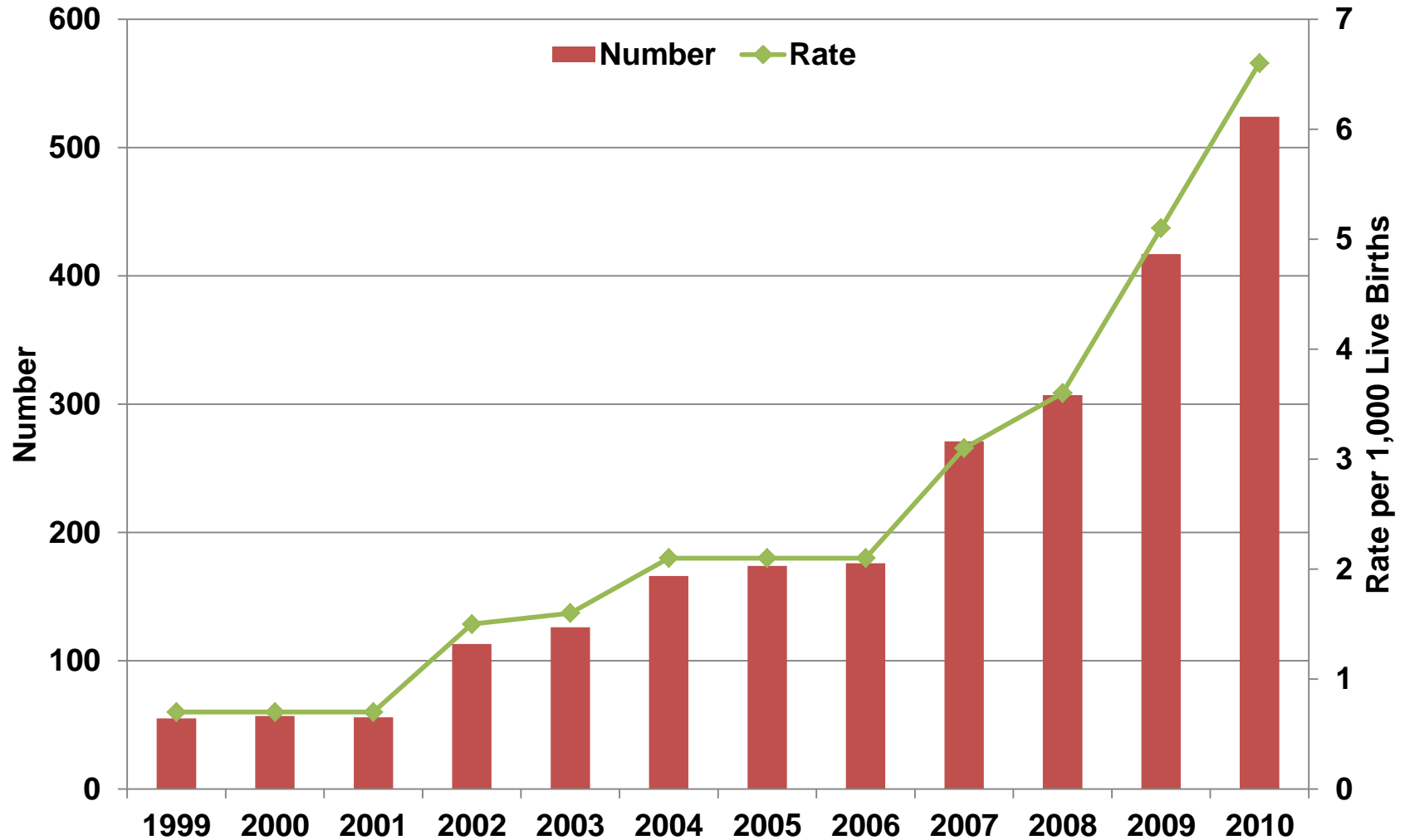


NAS Epidemiology (TN)

- Sharp increase in NAS incidence over past decade
- NAS incidence highest in East TN
- Nearly all NAS births covered by Medicaid
 - Average cost \$40,931 (compared to \$7,285 for all live births)
- Average length of stay = 16.4 days
- NAS infants over-represented in DCS custody



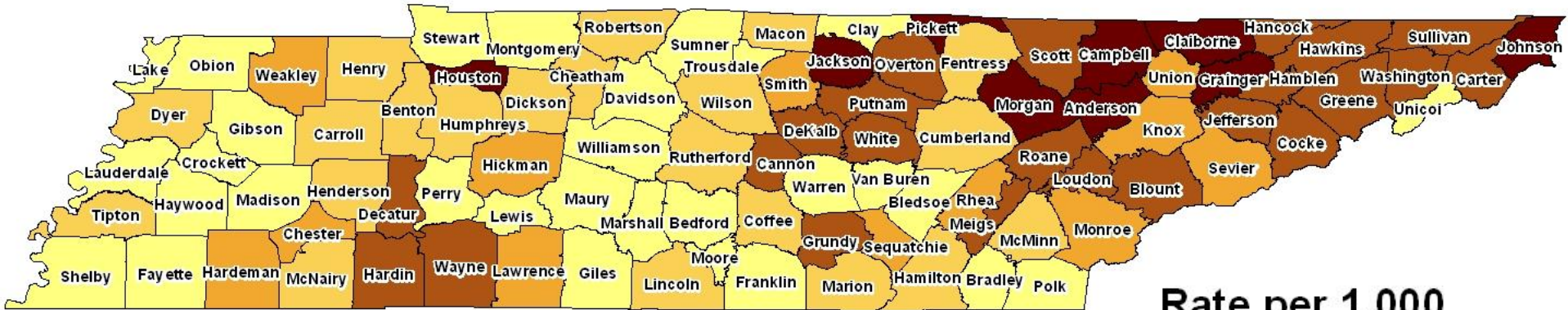
NAS in TN: 1999-2010



Data sources: Tennessee Department of Health; Office of Health Statistics; Hospital Discharge Data System (HDDS) and Birth Statistical System. Analysis includes inpatient hospitalizations with age less than 1 and any diagnosis of drug withdrawal syndrome of newborn (ICD-9-CM 779.5). HDDS records may contain up to 18 diagnoses. Infants were included if any of these diagnosis fields were coded 779.5. Note that these are discharge-level data and not unique patient data.

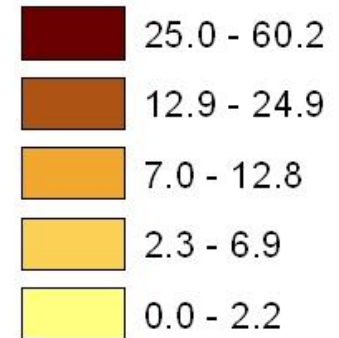


TN NAS Hospitalizations (2010)



Statewide Rate: 6.6/1,000

Rate per 1,000
Live Births



Data sources: Tennessee Department of Health; Office of Health Statistics; Hospital Discharge Data System (HDDS) and Birth Statistical System. Numerator is number of inpatient hospitalizations with age less than one and any diagnosis of neonatal abstinence syndrome (ICD-9-CM 779.5). HDDS records may contain up to 18 diagnoses. Infants were included if any of these diagnosis fields were coded 779.5. Note that these are discharge-level data and not unique patient data. Denominator is number of live births. For BSS data, county is mother's county of residence.



TN's Prescription Drug Problem

- Increase in TN deaths due to prescription drug overdose
 - 422 in 2001
 - **1,062 in 2011**
- More than deaths from:
 - Motor vehicle accidents, homicide, or suicide
- Opioids (methadone, oxycodone, and hydrocodone) are by far the most-abused prescription drugs



TN's Prescription Drug Problem



275.5 Million Hydrocodone Pills

51 pills
per every
Tennessean
over age 12



116.6 Million Xanax Pills

22 pills
per every
Tennessean
over age 12



113.5 Million Oxycodone Pills

21 pills
per every
Tennessean
over age 12



POLL QUESTION



NAS Efforts in TN

- Spring 2012
 - “Prescription Safety Act” required prescribers to register with Controlled Substances Monitoring Database (CSMD)
 - Growing awareness of increasing NAS incidence among neonatal providers
 - Initial discussions between public health (TN Department of Health) and Medicaid (TennCare)



NAS Subcabinet Working Group

- Convened in late Spring 2012
- Committed to meeting every 3-4 weeks
- Cabinet-level representation from
Departments:
 - Public Health (TDH)
 - Children’s Services (DCS)
 - Human Services (DHS)
 - Mental Health and Substance Abuse Services (DMHSAS)
 - Medicaid (TennCare)
 - Children’s Cabinet



NAS Subcabinet Working Group

- Working principles:
 - Multi-pronged approach
 - Best strategy is primary prevention but clearly must address secondary and tertiary prevention
 - Each department progresses independently, keep group informed of efforts
 - Supportive rather than punitive approach



The Levels of Prevention

	PRIMARY Prevention	SECONDARY Prevention	TERTIARY Prevention
Definition	An intervention implemented before there is evidence of a disease or injury	An intervention implemented after a disease has begun, but before it is symptomatic.	An intervention implemented after a disease or injury is established
Intent	Reduce or eliminate causative risk factors (risk reduction)	Early identification (through screening) and treatment	Prevent sequelae (stop bad things from getting worse)
NAS Example	Prevent addiction from occurring Prevent pregnancy	Screen pregnant women for substance use during prenatal visits and refer for treatment	Treat addicted women Treat babies with NAS



POLL QUESTION



NAS—Primary Prevention

- **Prevent addiction from occurring**
 - Letter to FDA encouraging black box warning
 - Provider education
 - Letter to providers to increase awareness
 - Possibly add to “responsible prescribing” CME
 - TennCare limitations on opioid availability
 - Requirement for counseling as part of prior authorization
 - Limitations on available quantity



Request for Black Box Warning



STATE OF TENNESSEE
DEPARTMENT OF HEALTH

JOHN J. DREYZEHNER, MD, MPH
COMMISSIONER

BILL HASLAM
GOVERNOR

November 1, 2012

Margaret Hamburg, M.D.
Commissioner
U.S. Food and Drug Administration
10903 New Hampshire Avenue
Silver Spring, MD 20993

Dear Commissioner Hamburg:


We write out of grave concern for the health, developmental and life course consequences for babies whose antenatal environment includes substantial opioid analgesic exposure. We believe that a “black box warning” for these medications would help assure that women of childbearing age and their health care providers are aware of the serious risks associated with narcotic use during pregnancy. Possible content for the warning may be as follows:

WARNING: USE OF NARCOTIC ANALGESICS IN WOMEN OF CHILD BEARING AGE MAY CAUSE NEONATAL ABSTINENCE SYNDROME

This message would also promote a critical dialog between the patient and provider regarding considerations in planning for pregnancy or prevention of unintended pregnancy for women who are benefiting therapeutically from these powerful medications or who may be at risk for abusing them. This



TennCare Prior Authorization Form

 TENNCARE		Prior Authorization Form Long Acting Narcotics	
***All PA forms may be found by accessing https://tnm.providerportal.sxc.com/rxclaim/TNMPAs.htm ***			
If the following information is not complete, correct, or legible the PA process can be delayed. <u>Use one form per</u>			
Member Information			
Last Name		First Name	
ID Number		Date of Birth	- -
Prescriber Information			

For female patients between the ages of 18 & 45, please complete questions 10 -12

10. The use of opioid analgesics during pregnancy has been associated with neonatal abstinence syndrome. Has this patient been counseled regarding the risks of becoming pregnant while receiving this medication, including the risk of neonatal abstinence syndrome? Yes No
11. Is this patient currently utilizing a form of contraception? Yes No
12. Has access to contraceptive services been offered to this patient? Yes No

NAS—Primary Prevention

- **Prevent pregnancy from occurring**
 - Provider education
 - Counseling by providers at initial prescription
 - Promotion of contraceptives, particularly long-acting reversible contraceptives (LARCs)
 - Licensure mandates (A&D, pain clinics, etc) requiring counseling re: addiction during pregnancy and contraceptives
 - Training to other partners who interact with this population (ex. Drug courts)



NAS—Secondary Prevention

- **Identify pregnant women who may be opioid addicted**
 - Identify reproductive-aged women via CSMD whose fill patterns suggest risk of dependence
 - Referral to TennCare managed care organization case management programs
 - Screen women for drug use
 - Consent of patient
 - Supportive rather than punitive approach



NAS—Tertiary Prevention

- **Minimize complications for women who are addicted (and their neonates)**
 - Can addicted pregnant women be weaned?
 - ACOG→associated with high relapse rates
 - AAP→associated with increased risk of fetal distress or fetal loss
 - Other sources:
 - Not recommended in 1st or 3rd trimesters
 - May be option in 2nd trimester (requires careful fetal monitoring)
 - What are best strategies for treating NAS infants?



NAS—Tertiary Prevention

- **Minimize complications for women who are addicted (and their neonates)**
 - What are best strategies for treating pregnant women and affected infants?
 - Convening “Expert Panels”
 - Maternal group—review literature, identify potential recommendations for treating pregnant women
 - Perinatal quality collaborative (TIPQC) project: “Optimizing Neonatal Abstinence Syndrome Management”



NAS—Reportable Disease

- Current estimates of NAS incidence come from:
 - Hospital discharge data (all payers but ~18 month lag)
 - Medicaid claims data (only ~9 month lag but only includes Medicaid)
- Need more real-time estimation of incidence in order to drive policy and program efforts



NAS—Reportable Disease

- Health Commissioner has authority to add diseases to Reportable Disease list
 - **Reportable disease**—Any disease which is communicable, contagious, subject to isolation or quarantine, or epidemic...
 - **Event**—An occurrence of public health significance and required by the Commissioner to be reported in the List.



NAS—Reportable Disease

- Add NAS to state's Reportable Disease list
 - Effective January 1, 2013
- Collaborated with state perinatal quality collaborative (TIPQC) to define reporting elements
 - Align required reporting elements with same data elements reported in hospital QI projects



NAS—Reportable Disease

- Reporting hospitals/providers will submit electronic report (SurveyMonkey)
- Case Information:
 - Birth hospital
 - Reporting hospital
 - Last 4 digits of reporting hospital chart number
 - Infant Date of Birth
 - Infant Sex
 - Maternal County of Residence



NAS—Reportable Disease

- Diagnostic Information:

Required Elements for Diagnosis (must be present for diagnosis)	
<input type="checkbox"/>	Confirmatory test (select which: hair, urine, meconium, umbilical cord, other)
	Select confirmatory test: <input type="checkbox"/> Hair <input type="checkbox"/> Urine <input type="checkbox"/> Meconium <input type="checkbox"/> Umbilical cord <input type="checkbox"/> Other (specify _____)
<input type="checkbox"/>	Clinical signs in infant
Other Supportive Elements for Diagnosis (check all that apply)	
<input type="checkbox"/>	Maternal history of substance known to cause NAS
<input type="checkbox"/>	Positive screening test for substances known to cause NAS



NAS—Reportable Disease

- Source Information:

Source of Substance (check all that apply)	
<input type="checkbox"/>	Maternal: Supervised replacement therapy (prescription drug obtained <i>with</i> a prescription)
<input type="checkbox"/>	Maternal: Supervised pain therapy (prescription drug obtained <i>with</i> a prescription)
<input type="checkbox"/>	Maternal: Therapy for psychiatric or neurological condition (prescription drug obtained <i>with</i> a prescription)
<input type="checkbox"/>	Maternal: Prescription substance obtained <i>without</i> a prescription
<input type="checkbox"/>	Maternal: Non-prescription substance
<input type="checkbox"/>	No known exposure but clinical signs consistent with NAS



NAS—Reportable Disease

- Important caveat:
 - *Reporting is for surveillance purposes only.*
 - *Does not constitute a referral to any agency other than the Tennessee Department of Health.*
 - *Does not replace requirement to report suspected abuse/neglect.*



Questions?



Contact Information

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Our Next Session

Preventing the Misuse and Abuse of Prescription Stimulants among Students

Monday, December 17, 2:30 – 3:30 PM ET

To register:

http://edc.adobeconnect.com/e2fye17mbne/event/event_info.html



Webinar Survey

<http://www.surveymonkey.com/s/neonatal111912>