Pregnancy and Opioid Treatment: Beyond the Hub and Spoke

A CVAHEC Summer Project
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Opioid Abuse Growing in the U.S.

- Americans make up 4.6% of world population, yet consume 80% of global opioid supply (Manchikanti & Singh, 2008)
- Nearly 17,000 Overdose Deaths in 2011
- 46 Deaths per day, almost 2 per hour (National Survey on Drug Use and Health, 2013)
Opioid Abuse and Pregnancy

- 5.4% of pregnant women 15-44 are current illicit drug users. (NSDUH, 2013)

Wanderer, Bateman, & Rathmell, 2014
Over 50 Vermonters die from opioids every year.

Death from heroin doubled from 2012 to 2013 (VDH).

Vermont ranks 2nd, behind Maine, in per capita admissions for opioid treatment.
5 regional Hubs providing methadone or buprenorphine treatment

Hub caseloads have tripled, waitlists remain stable at ~500

The Chittenden Clinic served 855 in 2014, up from 491 in 2013
Medication Assisted Treatment: Spokes

- 125 physicians licensed in Vermont to prescribe office-based opioid treatment
- 57 physicians across state prescribe to >10 Medicaid beneficiaries
  - 12 of these are in Chittenden County

### Heroin Use Has INCREASED Among Most Demographic Groups

<table>
<thead>
<tr>
<th>SEX</th>
<th>2002-2004</th>
<th>2011-2013</th>
<th>% CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2.4</td>
<td>3.6</td>
<td>50%</td>
</tr>
<tr>
<td>Female</td>
<td>0.8</td>
<td>1.6</td>
<td>100%</td>
</tr>
<tr>
<td>AGE, YEARS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-17</td>
<td>1.8</td>
<td>1.6</td>
<td>--</td>
</tr>
<tr>
<td>18-25</td>
<td>3.5</td>
<td>7.3</td>
<td>109%</td>
</tr>
<tr>
<td>26 or older</td>
<td>1.2</td>
<td>1.9</td>
<td>58%</td>
</tr>
<tr>
<td>RACE/ETHNICITY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>1.4</td>
<td>3</td>
<td>114%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>1.7</td>
<td>--</td>
</tr>
<tr>
<td>ANNUAL HOUSEHOLD INCOME</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than $20,000</td>
<td>3.4</td>
<td>5.5</td>
<td>62%</td>
</tr>
<tr>
<td>$20,000-$49,999</td>
<td>1.3</td>
<td>2.3</td>
<td>77%</td>
</tr>
<tr>
<td>$50,000 or more</td>
<td>1</td>
<td>1.6</td>
<td>60%</td>
</tr>
<tr>
<td>HEALTH INSURANCE COVERAGE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>4.2</td>
<td>6.7</td>
<td>60%</td>
</tr>
<tr>
<td>Medicaid</td>
<td>4.3</td>
<td>4.7</td>
<td>63%</td>
</tr>
<tr>
<td>Private or other</td>
<td>0.8</td>
<td>1.3</td>
<td>--</td>
</tr>
</tbody>
</table>

### Heroin Addiction and Overdose Deaths are Climbing

- 286% increase

Policies and Legislation in Vermont

- 2014: Vermont Governor Shumlin State of the State speech focuses on the heroin and opiate epidemic in VT, calls for increased funding to treatment.
- Senate bill 295 allows pharmacies to sell a life-saving overdose-reversing drug, naloxone hydrochloride, over the counter.

**Vermont's opioid treatment budget by year**

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$2,914,630</td>
</tr>
<tr>
<td>2011</td>
<td>$3,500,000</td>
</tr>
<tr>
<td>2012</td>
<td>$3,800,000</td>
</tr>
<tr>
<td>2013</td>
<td>$4,848,237</td>
</tr>
<tr>
<td>2014</td>
<td>$5,254,144</td>
</tr>
<tr>
<td>2015</td>
<td>$13,254,144</td>
</tr>
</tbody>
</table>
Opioid Addiction & Pregnancy in VT

- 2000: 1st opioid exposed newborn identified at FAHC
- more than 1,200 delivered to date
- 35 pregnant women treated at the Chittenden Clinic 6/13 - 6/14
- Others treated at spokes

Vermont Children’s Hospital:
Outpatient Methadone Treatment

- 747 Infants born to women on opioid-assisted treatment
  - 476 infants 06/06/2009 – 12/31/2012
    - 365 Infants did not receive methadone (76.7%)
    - 111 Infants treated with methadone (20.3%)
      - 91 term infants
      - 20 preterm infants
    - 78 infants inpatient and outpatient methadone
      - 78/476 = 16.4%
Risks of Opioid Abuse

- Injection drug use associated with high risk of infections, including hepatitis B and C and HIV
- Risks during pregnancy: decreased fetal growth, placental abruption, preterm labor, aspiration of meconium, fetal death.
- Neonatal Abstinence Syndrome: (NAS) a group of problems that occur in a newborn who was exposed to addictive opiate drugs while in the mother’s womb (medline plus)
Cost of Addiction

- CDC estimates abuse of opioids results in medical costs of over $72 billion per year.
- Investing in treatment:
  - Every $1 spent in addiction treatment yields $4-$7 reduction in drug related crime.
  - Total health care savings exceed 12:1.
  - Incalculable savings to individual and society, including increase in productivity and decrease in drug-related accidents.
Costs of Pregnancy

• 85% of pregnancies in women who use opioids or are on MAT are unintended.
  o Cost of an unintended pregnancy: $9,000 per birth.

• Neonatal abstinence syndrome: mean length stay for infants with NAS in the hospital is 16.4 days with an average cost of $53,000.

Screening

How to Screen

- All pregnant women should be screened for drug and alcohol use
- Screening is a skill, and staff should be trained in interview techniques.
- Screening should be performed by health care provider or other staff member who has an ongoing relationship with patient.
- Results should be discussed with the client in non-judgemental, supportive, manner and documented in the chart.
Referral to Treatment

Stages of Change (Prochaska and diClemente, 1999)
1) Pre-Contemplation
2) Contemplation
3) Preparation
4) Action
5) Relapse

* It is important to recognize that the recovery process is long and relapse is a part of this process.

Referral to Treatment

- Determine on an individualized basis - Hub and Spoke system, collaboration between community medical professionals
PREGNANT OPIOID-DEPENDENT WOMAN, NEWLY DIAGNOSED

- Patient calls/is referred for opioid dependence
- Appointment with Social Worker and ultrasound to confirm viability
- Scheduled for admission for assessment of opioid dependence
- Initiation of medication and follow-up in 1-3 days until stable
- Weekly visit, witnessed UDS, assess symptoms, adjust dose
- Identify postpartum provider; transfer at 8 weeks postpartum

(Johnston, 2013)
Treatment During Pregnancy

- Current recommendation is methadone or buprenorphine.
- Withdrawal not recommended, especially after 2nd trimester.
- Patients with more complex issues and less stable financial, housing, or social supports referred to hub for methadone.
- Patients frequently treated with buprenorphine at UVM Medical Center. Referred to spoke 8 weeks postpartum.

![Chart showing treatment differences]
# Methadone vs Buprenorphine: the Vermont Experience

<table>
<thead>
<tr>
<th>Favors Methadone</th>
<th>Favors Buprenorphine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extensive long term data and experience</td>
<td>Less severity and duration of NAS</td>
</tr>
<tr>
<td>Automatic structured program</td>
<td>Community based treatment, easier access in rural areas</td>
</tr>
<tr>
<td>Easier to manage intra- and post-partum pain</td>
<td>Partner / couples treatment access</td>
</tr>
</tbody>
</table>

Neither medication is FDA approved for use in pregnancy
Harm Reduction Strategies

- Collaboration between healthcare providers and child welfare sectors
- Assistance with childcare and transportation to attend appointments
- Addiction counseling, including help with quitting smoking
- Access to integrated program models (e.g. on site pregnancy, parenting, or child related services offered through addiction services).
- MAT services
- Provide testing for sexually transmitted infections and other sexual services.
Myths and Facts about Opioids and Pregnancy

● Every baby born to a mother on opiates is “addicted”
  ○ Infants cannot be addicts: the disease of addiction requires loss of control, compulsion, and obsession
● Opiates during pregnancy lead to “damaged baby”
  ○ No evidence currently exists that opiate exposure results in developmental delay or any other lasting effects
  ○ Alcohol, however, can result in major physical/developmental/behavioral effects
If a baby needs treatment for opiate withdrawal, it must be because the mother “used” opiates during pregnancy.

- MAT reduces the incidence of infant withdrawal, but does not eliminate it. At VT COGs around 25% of exposed babies required medication, and the incidence is not related to mom’s MAT dose.

Opiate replacement treatment + pregnancy = child abuse

- NAS is expected and treatable. MAT is safer during pregnancy than withdrawal.

More severe withdrawal when a baby is born must be because the mother “used during pregnancy”

- Exposure to tobacco in addition to opiates can also increase the severity of withdrawal for an infant.
Current Issues Facing Pregnant Women and their Children

- Generational, family and partner substance abuse
- About 70% of women have co-occurring symptoms including: anxiety, depression, post traumatic stress disorder
- Legal issues
- Unstable housing/homelessness and access to transportation
- History of domestic violence
- Stigma, fear of judgment
- Transition to post-partum providers
- Inadequate child-care availability
- Poor job availability (including difficulty in obtaining job due to criminal background)
Barriers to Best Practice Treatment

- Variations in child welfare response and policies
- Lack of collaboration between providers and community professionals.
- Lack of medication availability/waitlist for MAT in Vermont unless you are pregnant
- Differences in screening and assessment practices: pregnancy, post-pregnancy, Neonatal Abstinence Syndrome.
Community Resources

- **Howard Center Chittenden Clinic** - Provides outpatient pharmacotherapy (Methadone or Buprenorphine) and evidence-based treatment to individuals affected by opioid addiction.

- **CHARM Program** - Children and Recovering Mothers ([http://www.kidsafevt.org/childprotection](http://www.kidsafevt.org/childprotection)) The Children and Recovering Mothers program, a collaborative in Burlington, VT is a multidisciplinary group of agencies serving women with opioid addiction and their families during pregnancy and infancy. In 2013, CHARM supported 194 women, babies and their families.
The following table lists the CHARM Collaborative members.

<table>
<thead>
<tr>
<th>Member Organization</th>
<th>Services Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comprehensive Obstetric and Gynecological Services (COGS), Fletcher Allen Health Care Hospital</td>
<td>Prenatal care, MAT assessment, Buprenorphine, Care coordination</td>
</tr>
<tr>
<td>NeoMed Clinic, Vermont Children’s Hospital at Fletcher Allen Health Care Hospital</td>
<td>Neonatal assessment and treatment, Parent education on Neonatal Abstinence Syndrome, Developmental assessment</td>
</tr>
<tr>
<td>Howard Center/Chittenden Clinic</td>
<td>MAT assessment, Methadone, buprenorphine, Individual and Group substance abuse treatment</td>
</tr>
<tr>
<td>LUND</td>
<td>Residential care for mother and baby, Substance abuse treatment, Parent and Family support</td>
</tr>
<tr>
<td>Vermont Department for Children and Families</td>
<td>Child Safety Assessments, Child Welfare Services</td>
</tr>
<tr>
<td>Vermont Department of Corrections/Correct Care Solutions</td>
<td>Healthcare for women in the corrections system</td>
</tr>
<tr>
<td>Alcohol and Drug Abuse Programs, Vermont Department of Health</td>
<td>Substance abuse treatment, Opioid Treatment Authority</td>
</tr>
<tr>
<td>Maternal and Child Health (Chittenden, Franklin and Grand Isle Counties), Vermont Department of Health</td>
<td>Public Health Services, Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), Home Visiting referral</td>
</tr>
<tr>
<td>Vermont Department of Health Access</td>
<td>Medicaid</td>
</tr>
<tr>
<td>Visiting Nurse Association of Chittenden and Grand Isle</td>
<td>Nurse Home Visiting services</td>
</tr>
</tbody>
</table>
Lund Home - (http://www.lundvt.org)- The Lund Home is a residential treatment home for pregnant mothers and their children. In addition to the residential program, Lund offers screening and assessment, outpatient treatment, residential treatment, group counseling, family therapy, and individual counseling.

Turning Point Center - Provides recovery support services in a safe, substance-free environment for individuals and families on numerous paths to self discovery and sustained recovery. (www.turningpointcentervt.org)
UVM ICON Care Notebook

Developed for families of opioid exposed newborns. Includes:

- **Stories** written by mothers in recovery
- **Resources and Contacts**
- **Before Birth**: when to call the doctor, signs of preterm labor, and pain relief options
- **After delivery**: information on breastfeeding and postpartum support
- **Development and Play**: bonding and reading with baby, play, developmental milestones
- **Baby Medicine**: Neonatal Abstinence Screening Tool (NAS), treatment options for newborn withdrawal
Recommendations

- In general, difficulty accessing MAT due to waitlist, limited spoke providers - need for more prescribers
  - Pregnant women are moved to the top of the waitlist
- Importance of counseling, smoking reduction, collaboration between community care providers (nurses, obstetricians, social workers)
- 3-6 months postpartum is a particularly vulnerable time
  - Importance of continued care, counseling, social supports
- Recognize the strengths of the pregnant mothers and show them respect by asking about their goals and motivations for recovery
Pregnant women are prioritized for treatment. Discussions with local providers indicated that one area of difficulty is continuing support postpartum, when women are particularly vulnerable to relapse.

For our CVAHEC summer project, we designed a brochure to help connect women with resources both during and after pregnancy. The brochure can be found on www.cvahec.org
Ongoing Research at UVM

- Improving prescription contraceptive use among opioid-maintained women, S. Heil et al.
  - Study examining whether providing contraception onsite (at the hub) and financial incentives for follow up visits will reduce the # of unintended pregnancies in women on MAT.

- Incentives for cessation among pregnant smokers, S. Higgins et al.
  - Providing abstinence-contingent vouchers to improve neonatal outcomes.

- Interim treatment to bridge waitlist delays, S. Sigmon et al.
  - Exploring the use of a secure computerized buprenorphine dispenser and phone-based daily monitoring to increase access to MAT for those on waitlists.
Special Thanks

- Michael Corrigan, MD, Swanton, VT
- Gary De Carolis, Executive Director, Turning Point Center of Chittenden
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- Charles MacLean, MD, University of Vermont
- Jerilyn Metayer, RN, University of Vermont
- Mary Ellen Mendl, Director, Vermont 211
- Ryan Mitofsky, Prevention Consultant, Vermont Department of Health Alcohol and Drug Abuse
- Dennis O’Neill, RN, Nursing Supervisor, Howard Center Chittenden Clinic
- Jessilyn Dolan, RN, Lund Home
- Karen Schumacher, LICSW, Community Health Center of Burlington
- Marnie Stothart, MA, LADC, Associate Director, Howard Center Chittenden Clinic
- Beth Tanzman, MSW, Assistant director, Blueprint for Health
- Judy Wechsler, Education Research Coordinator, CVAHEC
Citations


• Blandthorn et al.(2011). Neonatal and maternal outcomes following maternal use of buprenorphine or methadone during pregnancy: findings of a retrospective audit. Science Direct, Women and Birth(24, 32-39)


Wanderer, Bateman, & Rathmell. “Opioid use is rising.” Anesthesiology, Dec 2014.

Additional information from lectures to the UVM College of Medicine class of 2018, by Dr. Stephen Higgins, behavior and health, and Dr. Stacey Sigmon, on Opioids.