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Continuing Education
in the Health Professions

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2018 ANNUAL CONFERENCE

Destination: Patient Outcomes.
Our Journey to Improving Patient Care.

January 20-23, 2018
Grande Lakes, Orlando, Florida

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Up By the Bootstraps: A CPD Response to a Public Health Problem and a Zero Budget

Presenter: Camille Fung, MD
Co-Presenters: Jack Dolcourt, MD MEd, Trisha Veenema

University of Utah, Salt Lake City, UT

January 22, 2018 10:00-10:45am

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All presenters have no conflicts of interest to disclose

Acknowledgement: We thank CO*RE, the Collaborative for REMS Education now Collaborative for Relevant Education for their generously making their slide decks available to us.

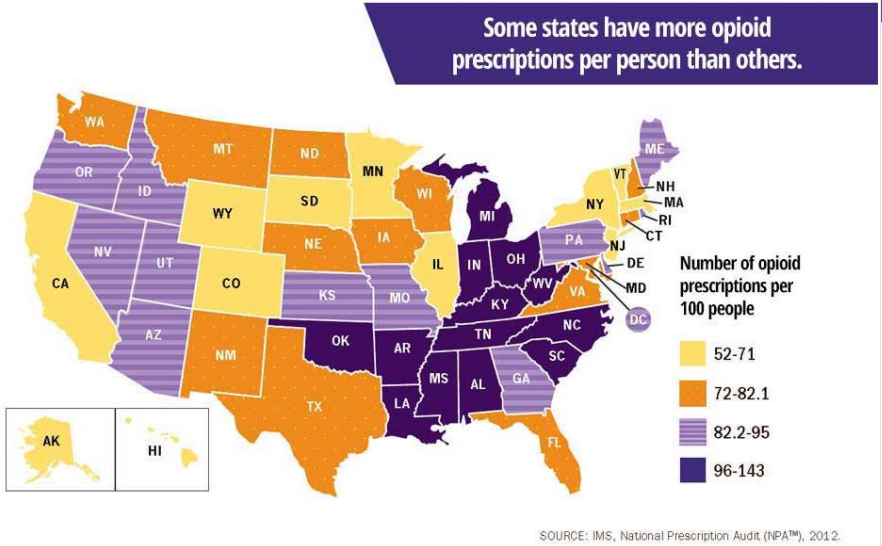
Learning Objectives

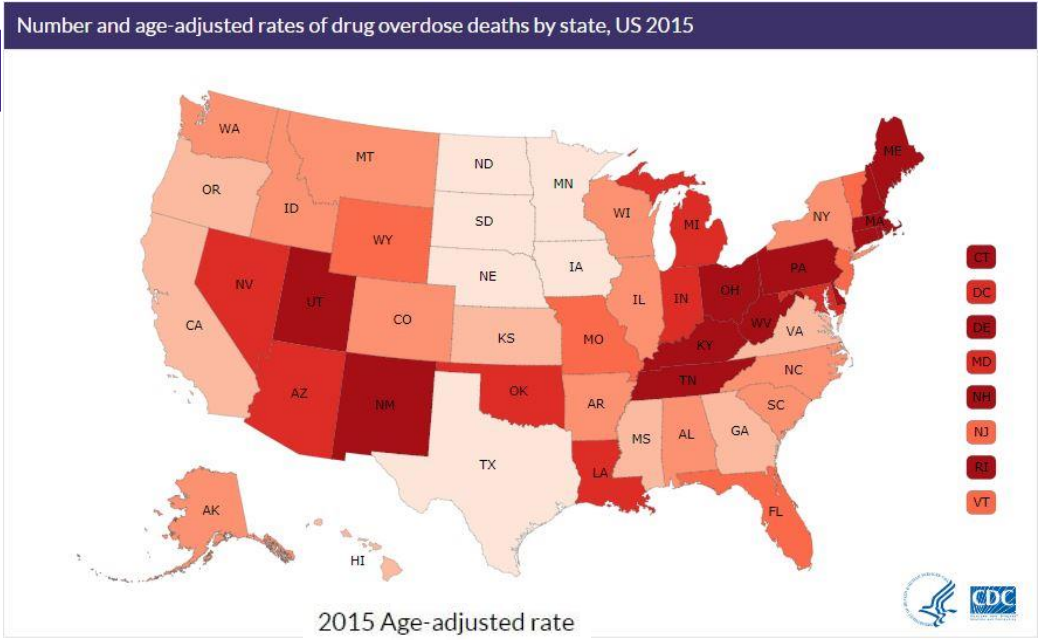
- Recognize CPD's potential for recognizing and responding to public health problems
- Avoid being straight-jacketed by absence of project funding
- Recognize that "better" cannot be the enemy of "adequate"
- Bring together coalitions to utilize the resources that are readily available

Public Health Problem: The Opidemic

- Prescription opioid use is widespread in the U.S.
- Six out of ten drug overdose deaths involve an opioid; 91 Americans die every day from opioid overdose (more deaths than car accidents)
- In 2010, enough OPRs were prescribed “to medicate every American adult with a standard pain treatment dose of 5mg of hydrocodone taken every 4 hours for a month”
- Most commonly prescribed short-acting opioids: codeine, hydrocodone, and oxycodone (1/10, 1, 1.5-2x potent than morphine respectively); long-acting opioids are methadone and buprenorphine to stabilize opiate/opioid withdrawal symptoms

Public Health Problem: Opioid Prescription and Deaths in U.S.





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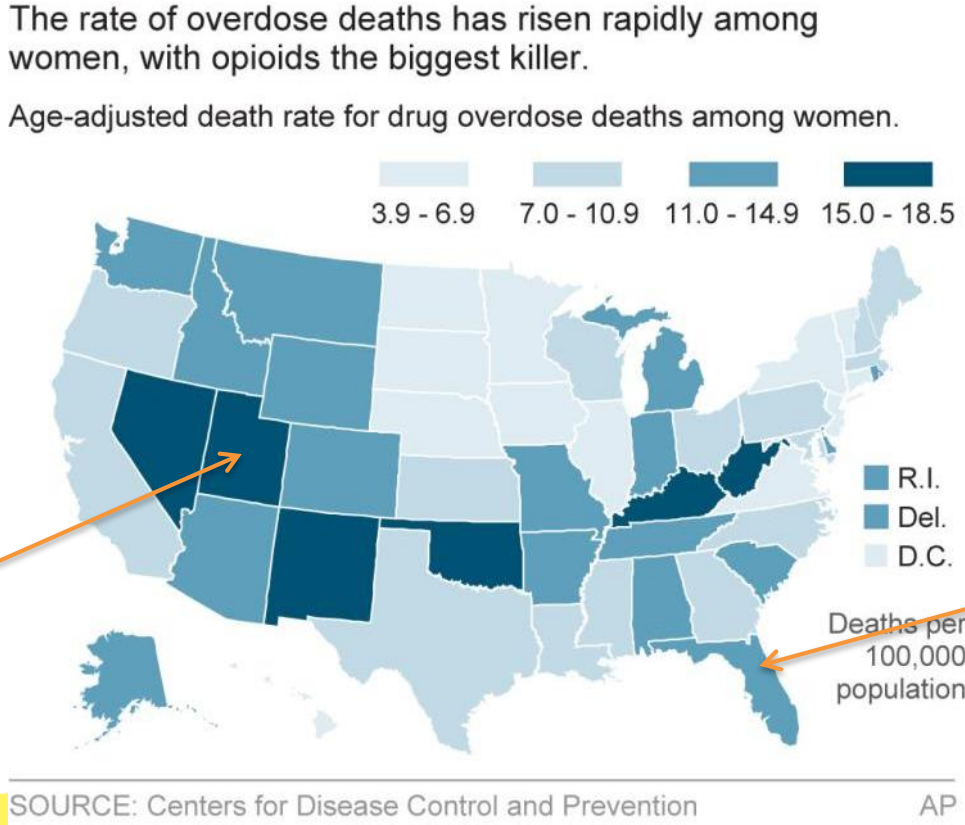
Ignored Public Health Problem: Drug Overdose Death Rates Among Women



UTAH

The Alliance for Continuing Education in the Health Professions meeting

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Another Ignored Public Health Problem: Neonatal Abstinence Syndrome (NAS)

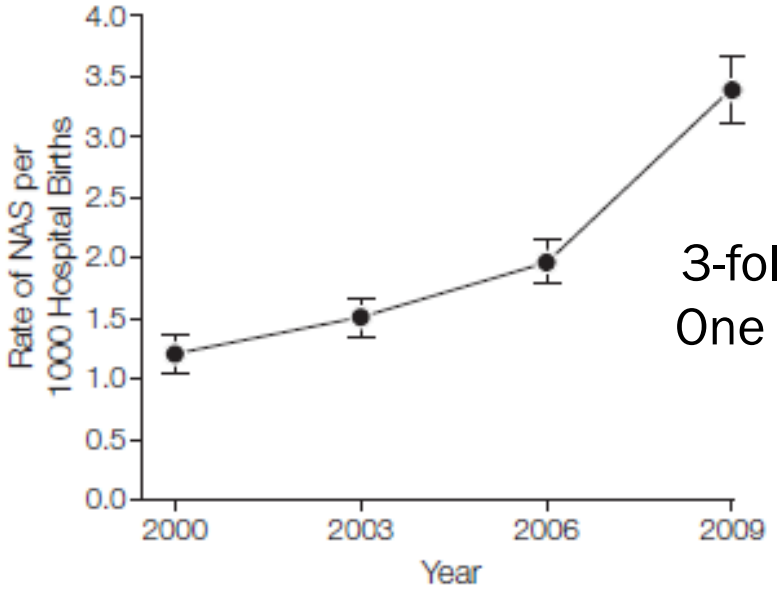
- The term NAS has been principally used to describe neonatal withdrawal signs/symptoms occurring after *in utero* exposure to opioids
- 55% - 94% of babies exposed to opioids will develop withdrawal signs/symptoms

Neonatal Abstinence Syndrome and Associated Health Care Expenditures

United States, 2000-2009

Patrick et al. JAMA 2012;307(18):1934-40

Figure 1. Weighted National Estimates of the Rates of NAS per 1000 Hospital Births per Year



3-fold increase in NAS during study period

One baby born per hour in the U.S. suffers NAS

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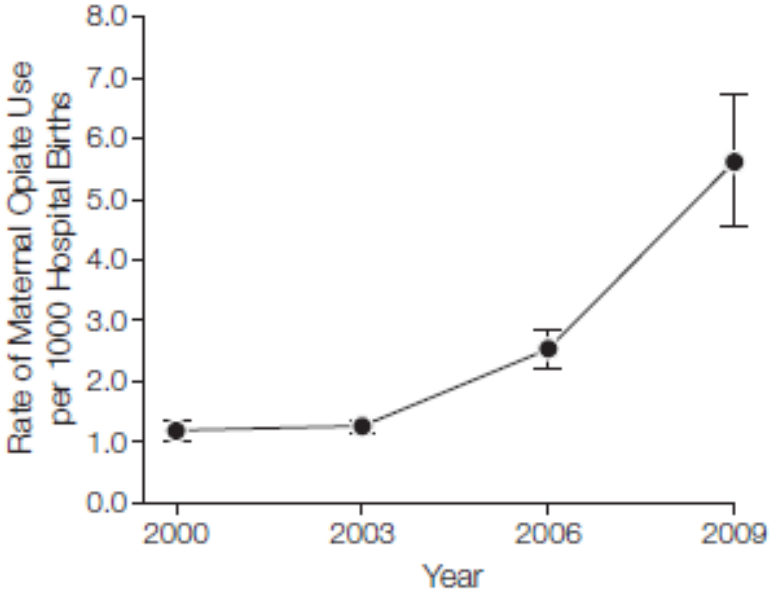
Neonatal Abstinence Syndrome and Associated Health Care Expenditures

United States, 2000-2009

Patrick et al. JAMA 2012;307(18):1934-40

Figure 2. Weighted National Estimates of the Rates of Maternal Opiate Use per 1000 Hospital Births per Year



5-fold increase in maternal opiate use

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Neonatal Abstinence Syndrome and Associated Health Care Expenditures

United States, 2000-2009

Patrick et al. JAMA 2012;307(18):1934-40

Table 3. Mean Hospital Charges and Length of Stay for Neonatal Abstinence Syndrome vs All Other US Births

	Mean (95% CI)				*P* for Trend
	2000	2003	2006	2009	
Neonatal Abstinence Syndrome					
Unweighted sample, No.	2920	3761	5200	9674	
Length of stay, d	15.8 (14.2-17.3)	15.9 (14.5-17.3)	15.3 (14.6-16.0)	16.4 (15.8-17.1)	.06
Hospital charges, 2009 US $	39 400 (33 400-45 400)	47 900 (40 800-55 100)	44 600 (40 400-48 900)	53 400 (49 000-57 700)	<.001
All Other US Births					
Unweighted sample, No.	784 191	890 582	1 000 203	1 113 123	
Length of stay, d	3.1 (3.0-3.1)	3.2 (3.1-3.2)	3.2 (3.2-3.3)	3.3 (3.3-3.4)	<.001
Hospital charges, 2009 US $	6600 (5800-7300)	7300 (6900-7600)	8200 (7800-8600)	9500 (9000-9900)	<.001

Hospital charges quadrupled adjusting for inflation!

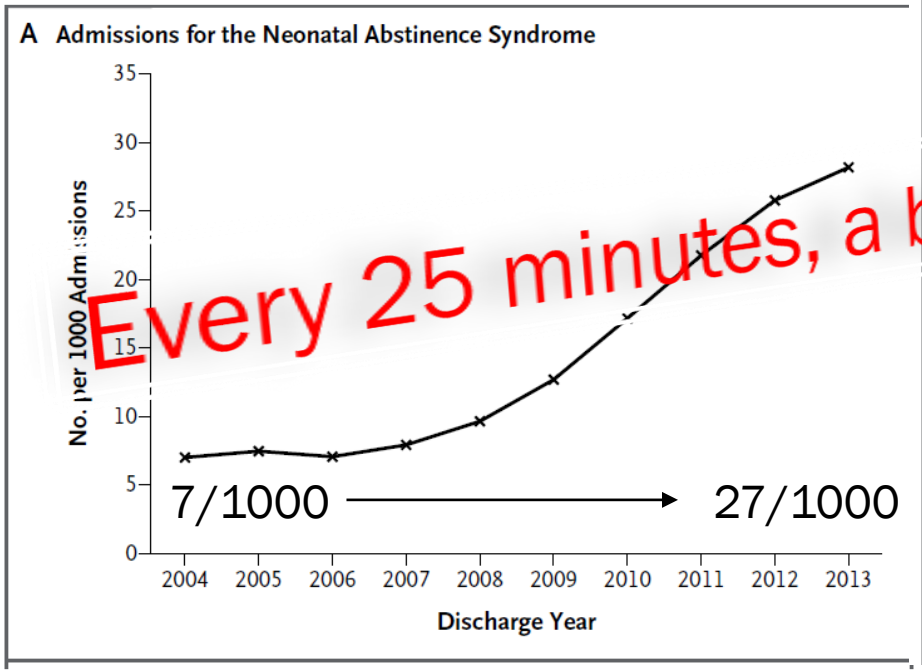
Table 4. Proportions of US Hospital Charges for Neonatal Abstinence Syndrome by Payer[a]

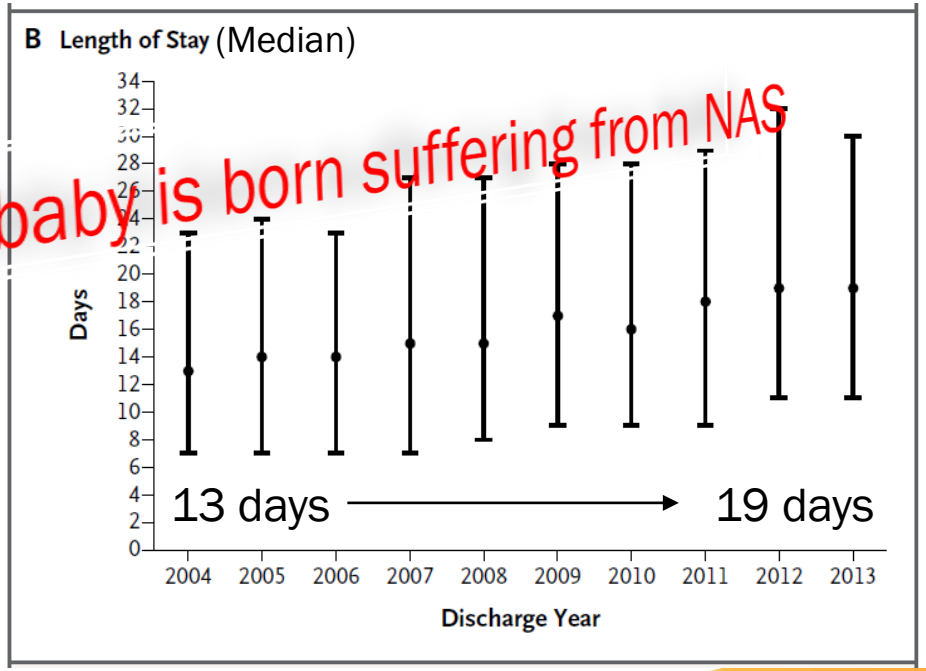
		Weighted % (95% CI)			
Year	Unweighted Sample, No.	Medicaid	Private Payer	Self-pay	Other Payer
2000	2920	68.7 (63.3-76.7)	18.2 (14.6-22.5)	8.7 (5.6-13.3)	4.4 (2.0-9.3)
2003	3761	69.9 (65.9-73.6)	19.8 (16.9-23.1)	6.5 (4.5-9.3)	3.8 (1.6-8.7)
2006	5200	73.7 (70.4-76.7)	19.0 (16.4-22.0)	5.5 (4.4-6.9)	1.9 (1.3-2.8)
2009	9674	77.6 (74.4-80.4)	17.6 (15.1-20.4)	2.9 (2.4-3.4)	2.0 (1.4-2.9)

[a] Percentages may not sum to 100 because of rounding.

Increasing Incidence of the Neonatal Abstinence Syndrome in U.S. Neonatal ICUs

Tolia et al. NEJM 2015;DOI:10.1056/NEJMsa1500439





Every 25 minutes, a baby is born suffering from NAS

Total % of NICU days nationwide attributed to NAS increased from 0.6% to 4%, with 8 centers reporting >20% of all NICU days attributed to NAS

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NAS in Utah

Complicated Pregnancies or Births due to a Mother's Drug Dependence

Figure 1. Number of hospital discharges as a result of complicated pregnancies or births due to a mother's drug dependence, Utah, 2002–2011

Source: Utah Hospital Discharge Data

Utah Department of Health Status Update 7/2013

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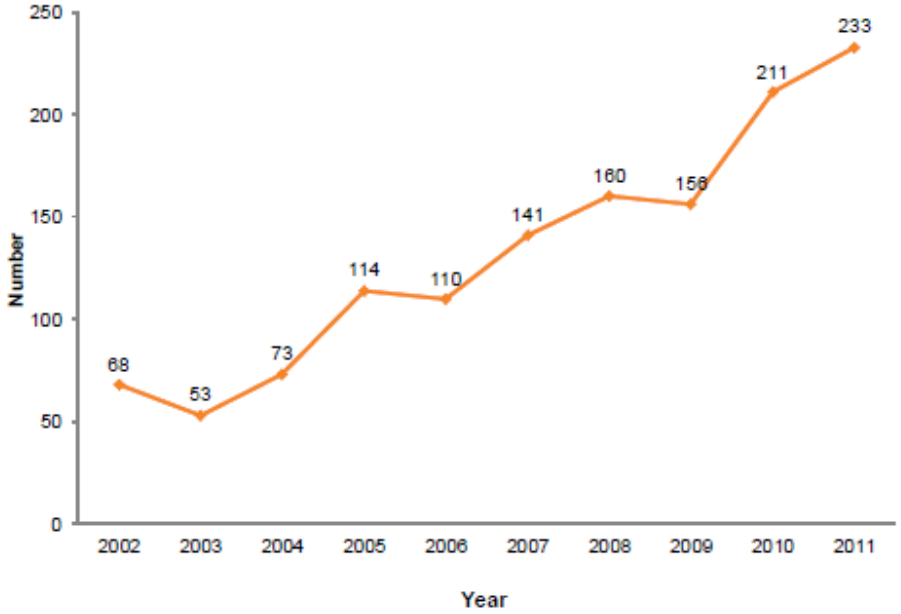
NAS in Utah

- Over the past decade, the number of Utah newborns diagnosed with NAS increased ~243% (not including latest numbers)

Newborns with Neonatal Abstinence Syndrome

Figure 2. Number of newborns (birth to 28 days) with NAS, Utah, 2002–2011



Source: Utah Hospital Discharge Data

Latest numbers

2012: 272

2013: 275

2014: 310

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Utah Department of Health Status Update 7/2013

2011 Utah SB-61 Opioid Prescribing Education Prerequisite for 2016 License Renewal

Licensed controlled substance prescribers except veterinarians

- 3.5 hours of opioid prescribing education (dentists ↓2 hours)
- CME certified – ACCME or state accredited provider
- Division of Occupational and Professional Licensure (DOPL)
  - 4 pages content specifications: *FDA Blueprint for Prescriber Education for Extended-Release and Long-Acting Opioid Analgesics*
  - National and Utah specific resources
  - Pain specialist helped develop the course

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BUT FDA Blueprint….

- Addressed only ambulatory adults
- Avoided addressing the management of pregnant mothers with opioid dependence
- Avoided addressing opioids in children <18 years of age
- Avoided addressing newborn infants with neonatal abstinence syndrome (NAS) after birth

We Had NO Money

Stone Soup for Children

https://www.youtube.com/watch?v=ToBDv5RFCyc

“We brought the soup pot …”

- Course content
  - Adult pain specialist adapted & augmented CO*RE[1] content (Dr. Scott Junkins from Department of Anesthesiology) to mesh with DOPL’s content specifications, leaving time for pregnant mother & newborn baby modules
  - Maternal-fetal medicine specialist to compose and present opioid addiction management in pregnancy (Dr. Bob Andres from Division of MFM in Department of OB/Gyn)
  - Neonatal medicine specialists to compose and present NAS management post-delivery (Drs. Camille Fung, Jack Dolcourt, Mariana Baserga in Division of Neonatology in Department of Pediatrics)

[1]Collaborative for REMS Education now Collaborative for Relevant Education

“…and we brought the soup stone”

- Assigned Camille as Course Director because of her interest in opioid education
  - Acted as a physician lead to implement an evidence-based care process model (CPM) for NAS evaluation and treatment within Intermountain Healthcare and University of Utah Healthcare
  - Contract with Utah Dept. of Health to spread CPM to other hospitals in other healthcare systems within the state (acting as Medical Director for Neonatal subcommittee within Utah Women and Newborns Quality Collaborative - UWNQC)
- Jack & UofU CME Office
  - Assisted with authorship, instructional design, DOPL approval, CME certification, registration and record keeping, credit card processing
  - 2012 ACEHP presentation by CO*RE (Collaborative for REMS Education)
  - Concentrated DOPL-specified content into 2 hour curriculum
  - Developed 1.5 hour curriculum pregnant mother & her newborn
- Trisha UofU CME Office operated behind the scenes
  - Trouble shooting & complaints

“Village where the soup was cooked”

- Classroom setting
  - Two live courses taught by faculty “villagers”
  - Reserved first classroom with appropriate AV equipment through College of Nursing
  - Reserved Primary Children Hospital’s auditorium and another satellite classroom to accommodate overflow for second course
  - Educated faculty, mid-level providers, and GME trainees within University of Utah
  - Free attendance
  - CME office kept track of testing/evaluations/generation of participation certificates

“Village where the soup was cooked”

- Internet enduring material
  - Filmed the second live course to be hosted on internal LMS in order to reach a wider audience who cannot attend the live course and for participants outside of U of U
  - Division of Neonatology agreed to subscribe to web hosting service to house the enduring material but no IT support!
  - CME office acted as “soup tasters” (good and bad tastes)
  - Incurred a charge to outside audience to pay back the web hosting fee and to generate revenue for the revision of course for the next licensing cycle (2 other approved courses also charged a fee)

Delving down to the nitty gritty

Hurdles

Course Content Approval

- Utah Division of Occupation and Professional Licensing (DOPL)
  - Slide number addressing each of the 76 content specifications
  - According to DOPL regulation, our entire slide set was re-routed to Utah Medical Association for content expertise and approval
- Took 9 weeks to obtain DOPL approval (including 1 rejection)
  - Of note, UMA was an FDA REMS grant-recipient and was offering their own course as well

Hurdles

Practical tidbits

- Left with a relatively short time frame to advertise our course
- First live course in classroom had a limited reach of audience
- Learners had to take a half-day commitment from work to attend
- DOPL required a test be administered but no guidelines as to a pass/fail rate
- Hand graded every test
- Some test questions were rated as “ambiguous”. Learners could not remember what they heard 3 hours ago.
- CME certificates had to be generated separately after learners received a code

Hurdles

Limited reach of audience

- For second live course, organized a filming crew from Primary Children's Hospital to film the content (without charge) while hosting at 2 separate sites on campus (necessary as we were closer to license renewal date)
- Asked UofU LMS to edit and host course (without charge)
- Took filmed and edited material and wanted to place it on web hosting site for outside audience

- But….no money for web hosting
- So…..web hosting paid for by UofU Division of Neonatology
- Charged a fee for outside audience using the web version of course

Additional Hurdles

Internet enduring material

- Purely web hosting, no technical support for web glitches
- Could not pause the content (only go backwards)
- Course would not run smoothly at times
- Test given at the end of course, same complaints as live course
- Link credit charge to CME office and back to web hosting page to take the course (its own glitches)

Version 1.0 Educated

	Physicians	Non-physicians	Total
Live course	99	95	194
Web-based Enduring Material	700	112	812
Total	**799**	**207**	**1006**

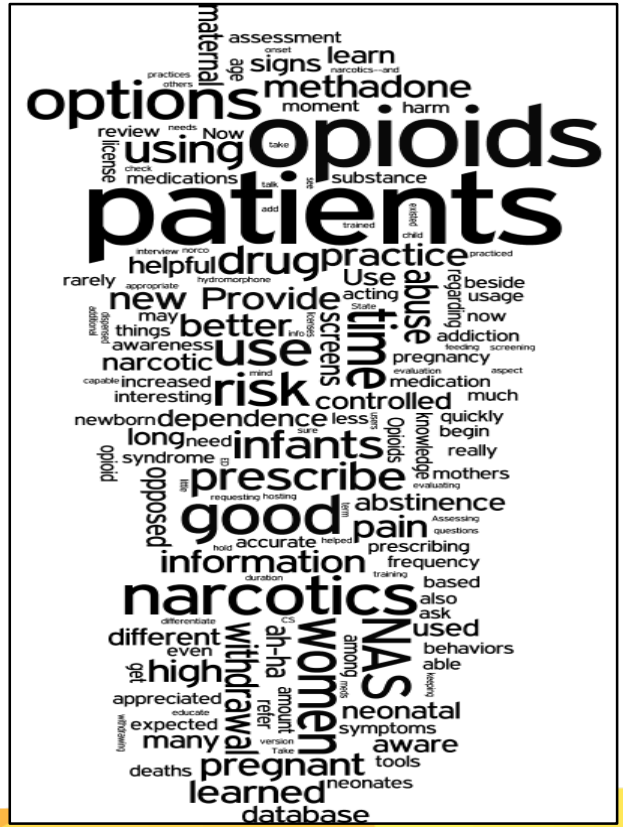
Evaluations – The Not so Good Feedback

- “I did not learn anything new; I have used all these practices for many years (since the early 1990's) when I also practiced as an internist (I am med-peds trained; now only do peds). I could add an additional aspect to the training that I used in my practice that was very helpful.”
- “Nothing, I do not prescribe these narcotics. I have to have a controlled substance license for other controlled substances.”
- “Won't be using much but thanks for arranging CME for us so we can all keep our licenses!”
- “A lot of good review, but no "ah-ha" moment.”

Evaluations – The Good Feedback (many more of these)

- “more screening and increased sensitivity to neonatal abstinence syndrome (NAS) because of the high rate of drug abuse in pregnant women that was documented in this activity”
- “helped to have a better foundation about when to refer”
- “may recognize when patients ask for specific narcotics that they may need some help with addiction and ask further questions. Use CAGE tool.”
- “more screening and increased sensitivity to neonatal abstinence syndrome (NAS) because of the high rate of drug abuse in pregnant women that was documented in this activity”
- “I can better differentiate between dependence and addiction.”

Semi-quantitative analysis of learners' committed-to changes



"Options"- use of more non-opioid options

"Opioids" – take time to explain side effects of opioids

"Patients" – assess patients more frequently for abuse and addiction

"Narcotics" - against the use of long term narcotics

"NAS" – more aware of withdrawal symptoms and management strategies

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Solutions for the next iteration (Version 2.0)

- Planned one year in advance
- Wanted professionally filmed, hosted, and managed with IT support and ability to handle money transactions
- Had to fund raise for a near $13K product (we grossed $4K from Version 1.0 course)
  - Educational funds from Utah Dept. of Health/March of Dimes ($5K)
  - Loan from Division of Neonatology ($4K)
- Charging every learner with the intention to have a self-sustaining product with each future iteration
- Wanted a product that was truly educational and not just checking a box to satisfy DOPL for license renewal

Solutions for the next iteration (Version 2.0)

- Recruited a total of 10 faculty of different disciplines to help cook this next pot of soup
  - broadened our curriculum even further to include motivational interviewing, maintenance assisted therapy, naloxone use for opioid overdose, Pediatric pain management
- Included 6.25 hours of education even though DOPL requires 3.5 hours (2-hour CO*RE “entrée” plus a menu of “sides” to make up remaining 1.5 hours)
- Course content approval – solicited help from a State Representative who worked with UMA for expedited approval (2 days vs. 9 weeks)
- Got more savvy with advertising of course – we even Tweeted!

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Solutions for the next iteration (Version 2.0)

- Ability to break down the 2-hour CO*RE curriculum into smaller modules with 3 different faculty presenting (2 from UofU College of Pharmacy)
- Participants can pause and rewind content any time (cannot fast-forward!)
- Inserted test questions after each smaller module for better retention of material
- Once paid, provided learners the ability to have downloadable slides for future reference
- Providing both CME and MOC credits for ABIM, ABA, ABP

Where are we now in real time?

- As of 12/31/17, we have educated 958 physicians, advanced care practitioners, dentists, and GME trainees of multiple specialties (the month of January left to go before Utah license renewal ends)
- We have truly permeated the whole state of Utah across many hospital systems!
- Feedback has been even more positive than last course (evident by more hours taken than the mandatory 3.5 hours)

“Villagers with their meats & vegetables”

- Primary Children’s Hospital - auditorium & video production
- UofU College of Nursing - auditorium
- UofU School of Medicine faculty
  - Maternal Fetal Medicine, Anesthesiology, Neonatology
- UofU LMS - video production & internal web hosting
- UofU CME - coordination of web hosting and payment
- UofU Pediatrics/Neonatology - loan
- Utah Dept. of Health/March of Dimes educational funds

Take Home Messages

- Do not let lack of funding discourage you
- Seek expertise from your CME office
- Recruit faculty and organization friends who appreciate the importance of the topic at hand
- Start small but think bigger as you receive feedback
- Stone Soup strategy – you may be pleasantly surprised as to what is available…..and at no cost to you
- Once a course is constructed, explore other ways to apply the course to other educational opportunities (after all, you worked hard at it!)

Do you have your own Stone Soup story?

Please share your experiences

- Successes
- Lessons learned

Contact information

- camille.fung@hsc.utah.edu
- jack.dolcourt@hsc.utah.edu
- trisha.veenema@hsc.utah.edu