

Continuum of Medical Education Approaches to the Opioid Epidemic: Preparing Physicians to Practice Safe, Effective Pain Management and Treatment



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Disclosures/Conflict of Interest

NONE

Learning Objectives

Upon completion of this presentation, the learner will be able to:

1. Identify recent trends in opioid prescription, use, and overdose.
2. Describe how to incorporate recently published clinical guidelines for prescribing opioids—including risk mitigation strategies and prevention and treatment of overdose—into didactic and training experiences using a multidisciplinary faculty.



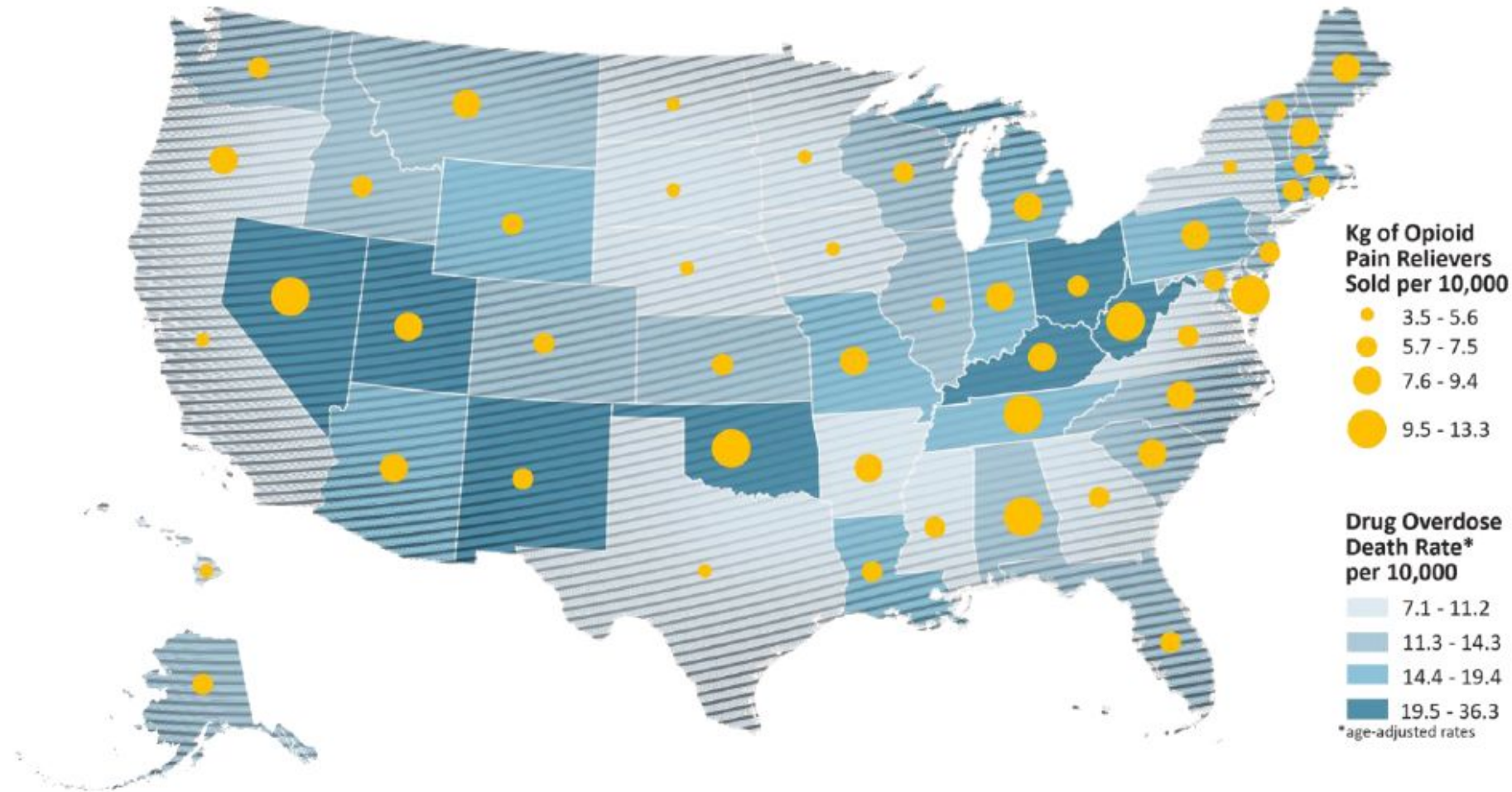
Outline

1. Undergraduate Medical Education: didactics (in black); **clinical training (in blue)**
2. Graduate Medical Education
3. Continuing Medical Education
4. Public Education
5. Lessons Learned
6. Example: Multidisciplinary Pain Management Application Exercise

Overview of the Opioid Epidemic (Ivanhoe.com) <https://www.youtube.com/watch?v=VW2IHSb921c>

Video (above) includes UCF College of Medicine's response to the opioid crisis

Role of Prescribing Opioids and Overdose Deaths



*Death rate, 2013, National Vital Statistics System. Opioid pain reliever sales rate, 2013, DEA's Automation of Reports and Consolidated Orders System

Medical Education: State-Wide Collaboration in Florida

Council of Florida Medical School Deans’ Pain Management Group

Nova Southeastern University

Florida International University

University of South Florida

Florida State University

University of Florida

Lake Erie College of Osteopathic Medicine

Florida Atlantic University

University of Central Florida


University of Miami

Representatives from Biomedical Sciences, Anesthesiology, Hospice,
Law, Pediatrics, Internal Medicine, Psychiatry, Psychology, Family
Medicine, Pain Management, Addictions.

Sharing of modules/guidelines through use of an online platform
by University of South Florida.


In progress: Development of shared core competencies

→ Curriculum → Assessment.




CFMSD – 2017 Pain Management Group

Download




Clinical Practice Guidelines

Updated Feb 21, 2017 by Gary Reisfield 1




med student substance abuse materials

Created Feb 21, 2017 by Bryan Bognar 3




Articles

Updated Feb 20, 2017 by Terry Meek 1




Opioid guidelines, policies, and statutes

Updated Feb 20, 2017 by Gary Reisfield 2




Miscellaneous Information

Updated Feb 16, 2017 by Terry Meek 1




Curricula, Teaching Modules

Created Feb 6, 2017 by Bryan Bognar 0




PowerPoint Presentations

Created Feb 6, 2017 by Bryan Bognar 1



Bognar notes-thoughts.boxnote

Updated Feb 22, 2017 by Bryan Bognar 1.5 KB



PAMI-Pain-Management-and-Dosing-Guide-Nov-2016.pdf

Uploaded Jan 29, 2017 by Phyllis Hendry 340.4 KB

Undergraduate Medical Education: M1 and M2 years

M1 year: **Psychosocial Issues in Healthcare**, Dr. Dan Topping:

- Introduce **substance use disorders** (diagnostic criteria, **motivational interviewing**).
- The role of the **palliative care** provider and provision of **pain control** to dying patients.



M2 year: **Skin and Musculoskeletal Systems**, Dr. Laurel Gorman and Orthopedic faculty:

- **Pharmacology** of NSAIDs and muscle relaxants. **World Health Organization's Pain Relief Ladder**.
- **Nonpharmacologic treatment** of back pain and other musculoskeletal injury: exercise, Physical Therapy, etc.



M2 year (continued)

Brain and Behavior Module

Dr. Laurel Gorman, Pharmacology:

- **Neurobiology of Pain**, Chronic Pain **Pharmacology** SLM (including fibromyalgia), Migraine/headache pharmacotherapy, and **Local Anesthesia**.
- Pharmacology of Opioid Analgesics, **Opioid risk mitigation** strategies (e.g., dangers of mixing opioids with benzodiazepines or alcohol), **opioid OD reversal**, and **treatment of opioid OD/addiction**.
- Anticonvulsants, and certain antidepressants (SNRIs, TCAs) for **neuropathic pain**.
- A **TBL on chronic pain therapeutics**: students apply previously learned information about analgesic choices (opioids, NSAIDs, anticonvulsants, antidepressants) to treat chronic pain in clinical cases, with discussion and debate the rationale and concerns.

Dr. Marcy Verduin, Psychiatry:

- **Opioid use disorders**, including management of opioid withdrawal
- **Evidence-based treatment** with methadone or buprenorphine maintenance; opioid use disorder and pregnancy; psychotherapies—CBT, Motivational Enhancement Therapy; Twelve Step Facilitation, Contingency Management.

Dr. Martin Klapheke, Psychiatry:



M3 year

Orientation Week, Dr. Colleen Moran-Bano: Practical Pharmacology session has one focus on Pain Management. It is also covered in one of seven **clinical stations** students rotate through in Clinical Skills and Simulation Center.



OB-GYN Clerkship, Dr. Aileen Caceres:

- Didactics: **post-operative pain management.**
- **Students work closely on the wards with social services addressing substance dependency among pregnant women, providing resources for follow up and management.**
- **Pain management on the Labor & Delivery unit: epidurals and other analgesia as well as potential complications of use for both mother & fetus.**



M3 year

Surgery Clerkship, Dr. Matt Lube: Didactic on “**Analgesia, Anxiolytics, and Sedation**”, which includes **post-op pain management**, including conversion from IV PCA to oral regimens for acute pain management.



Neurology Clerkship, Michael Bellew, MD:

- Self-learning module on the prescription opioid crisis in Florida, **best practice safety recommendations for prescribing opioids**, and when/when not to use opioids for back pain and headache.
- Use of **anticonvulsants** for pain management.
- **Clinical: pain management for back pain and headache, including non-opioid treatments in the pediatric population (headaches).**

M3 year

Pediatric Clerkship, Dr. Colleen Moran-Bano:

- Didactics: **pain assessment tools in children, a stepped approach to pain management**, and pharmacokinetics of narcotics (particularly in relation to fast/slow metabolizers of codeine) and current recommendations.
- Video of the week exercise covering societal problems in Pediatrics. One week addresses **“When babies are born withdrawing from opioids”**. This session includes a review of the problem, an American Academy of Pediatrics policy Statement, and 3 questions for further consideration
- **Clinical: on the inpatient services, students work with post-op patients as well as those with sickle cell disease and help deliver pain management, applying the stepped approach.**
- **Clinical: recently seeing and treating increased numbers of babies born dependent on opioids with Neonatal Abstinence Syndrome.**



Internal Medicine/Family Medicine Clerkship

Magdalena Pasarica MD, PhD



1. “Flipped classroom”:

Outside class assignment (1h):

SLM on pain management in the hospice setting

In class sessions (4h):

- **Individual exercise of solving 3 progressive cases on pain management for patients receiving care in hospice.** The exercise is followed by group discussion of correct and incorrect choices.
- **Individual exercise of solving 4 progressive cases of patients presenting in an outpatient setting with either acute (2 cases) and chronic (2 cases) back pain.** The exercise is followed by group discussion of correct and incorrect choices.

2. Clinical Log conditions that students have to encounter in the rotation:

- Pain management
- Back pain
- Joint/limb pain
- Abdominal pain

Psychiatry Clerkship **LEARNING OBJECTIVE #6:** Demonstrate knowledge about relieving physical and emotional pain and ameliorating the suffering of patients while also preventing complications of acute and chronic opioid treatment.

1. “Flipped classroom”. Outside class assignments **(4 hr):**

SLM on **Substance Use Disorders**, including prevention & treatment of Opioid Use Disorder, treatment of Opioid Intoxication, Overdose and Withdrawal.

SLM on **Motivational Interviewing**

SLM on **Multidisciplinary Pain Management**

SLM on **Opioids for Chronic Pain: the CDC Guidelines**

In class sessions **(4 hr):**

Live patient interview; small group exercise with diagnostic and treatment considerations regarding substance use in an impaired professional.

Clinical case application exercise co-taught with Family Medicine faculty:

- **planning and implementing multidisciplinary pain management;**
- **utilizing opioid risk mitigation strategies;**
- **education of patients/caregivers on out-of-hospital steps of opioid overdose resuscitation.**



2. Clerkship students assigned to Nemours Children’s Hospital gain experience in work with the Pain Program, including family therapy and team meetings.

3. Clerkship students assigned to the Orlando VAMC gain experience in medication assisted (Buprenorphine) Opioid Use disorder treatment program.

M3 year

Coming in 2017-2018 academic year:

- **M3 Longitudinal Curriculum Themes SIMULATION SESSION**

Sim-Man Case-Opioid Overdose: all M3 students will rotate through this session on Patient Safety and Medical Informatics. Students must identify opioid overdose in the patient, and initiate emergency treatment. A debriefing session is held with faculty at the end of the session.

- **M4 Psychiatry Boot Camp OSCE: SP/family station** involving opioid risk mitigation strategies

M4 year

- **Emergency Medicine Selective (required)**: Emergency Medicine toxicologist and member of the Orange County Heroin Task Force, is producing a required online SLM for all students on the opioid crisis (including heroin).
- Coverage in various **M4 electives** such as Anesthesiology, Pediatric Heme-Oncology, PICU, and Pediatric Surgery.
- Coverage in various **M4 Boot Camps** during Capstone Week such as Pediatrics (includes pharmacology of pain management), Psychiatry (substance abuse), etc.

Didactics: pain management in palliative care.

Didactics: appropriate use of opioids for chronic, non-malignant pain; the CDC Guidelines are covered.

Didactics: urine drug screening interpretation in the setting of opioid management (qualitative vs quantitative tests, cross-reactivity, etc.).

Clinical: exposure to consulting palliative care team on the inpatient wards.

Clinical: manage chronic non-malignant pain on a regular basis at VA continuity clinic. There they learn strict policies and process for prescribing opioids, including documentation of a pain treatment contract and regular drug screening. Pocket cards are given to residents on safe prescription of opioids.

Continuing Medical Education

- **“Public Health Crisis of Opioid Overdoses, and the New CDC Guidelines for Prescribing Opioids for Chronic Pain”**, M. Klapheke M.D., Presentation to the Seminole County Medical Society, September 20, 2016.
- **"Taking the Guess Work out of Gestalt: Evidence Based Clinical Prediction Rules for Chronic Non-Malignant Pain and Opiate Management"**, Analia Castiglioni MD in collaboration with UAB faculty. Society of General Internal Medicine, 2017 Southern Regional Meeting, February 10-12, 2017, New Orleans, LA. "I intend to bring it home and present it to our residents".
- **“The continuum of medical education for preparing physicians to practice safe, effective pain management and treatment”**, April 5, 2017. Martin Klapheke MD and Magdalena Pasarica MD, Association of American Medical Colleges live national webinar, April 5, 2017.
- **“Psychiatry & Family Medicine Team Up to Teach Medical Students about Treatment of Pain and Prevention of Opioid Abuse”**, Martin Klapheke MD and Magdalena Pasarica MD, SGEA (Southern Group on Educational Affairs of the AAMC) Regional Meeting, Charlottesville VA, April 2017.
- **“Using New Guidelines to Teach Psychiatry Clerkship Students Opioid Risk Mitigation and the Steps of Opioid Overdose Resuscitation”**, Plenary Presentation, ADMSEP (Association of Directors of Medical Student Education in Psychiatry) Annual Meeting, Santa Ana Pueblo, New Mexico, June 17, 2017.
- Oral Presentation Submission, **“Teaching Opioid Risk Mitigation and the Steps of Opioid Overdose Resuscitation”**, to the Asian Pacific Medical Education Conference, Singapore, January 2018.

Public Medical Education

- **Newspaper interview**, on “Prescribing Opioids for Chronic Pain”, to Orlando Sentinel reporter Naseem Miller, 4-1-16.
- **Newspaper interview**, “UCF COM Curriculum on Prescribing Opioids” April 7, 2016, to Edward W. Lock, UCF Knightly News Reporter, 4-7-16.
- **Radio interview**, “Prescribing Opioids for Chronic Pain”, to Orlando radio station Growing Bolder Radio; broadcast on NPR, 4-11-16; broadcast on Public Radio WMFE, 4-24-16.
- **Television interview**, “Prescribing Opioids”, with Jessica Sanchez, Ivanhoe Broadcasting, 4-12-16. See completed video.
- Provided **interview for AAMC The Reporter** article on UCF COM Curriculum on Prescription of Opioids for Pain to Kim Krisberg of AAMC, 5-26-16.
- **Television interview** 9-22-16 with reporter Nydia Diaz, UCF Knightly News, on Opioid Awareness Week and the UCF COM Curriculum on Evidence-Based Prescription of Opioids.
- Provided **interview to Max Blau for STAT News, the Boston Globe Media’s** national healthcare website, on the UCF College of Medicine curriculum on Pain Management, Including Prescription of Opioids for Pain, 5-12-17.
- **Newspaper interview**, on “UCF College of Medicine Curriculum on Pain Management and Appropriate Prescribing of Opioids”, to Psychiatric News reporter Mark Moran, 7-11-17.

Medical Education: National Commitment

On 12-7-17 the U.S. Department of Health and Human Resources hosted a group of physicians and medical educators at the White House to discuss strategies for collaboration in dealing with the opioid public health crisis. As a participating medical school, UCF submitted an HHS/Provider Opioid Partnership Update Form documenting the numbers of students trained in appropriate opioid prescriber practices, CME presentations, and public education about the opioid epidemic. The same day the U.S. Senate passed the 21st Century Cures Act, which includes \$1 billion for state grants to fight the opioid crisis.



Lessons Learned: There is a need for multi-systems approach: medical school, community, state, nation

Our state and community has suffered greatly from the opioid public health crisis: from increased neonatal abstinence syndrome to adult deaths from opioid overdose. It can only be addressed through **collaboration throughout multiple systems**:

Education:

- Of health care providers, patients, and families: a **coordinated, multidisciplinary collaboration, including Family Medicine/Internal Medicine, Psychiatry, OB-GYN, Pediatrics, Emergency Medicine, and Pain Management**.
- On 2-27-17, Mayor Teresa Jacobs and Winnie Palmer Hospital for Women & Babies hosted the Third Annual Orange County Drug Abuse Summit focusing on Neonatal Abstinence Syndrome (NAS).
- Council of Florida Medical School Deans: Pain Management Group.

Treatment of substance abuse:

- Expanding availability of resources such as recent increased access to buprenorphine treatment.
- As recommended by the **Orange County Heroin Task Force: begun pilot program in which jailed individuals with opioid addiction have access to addiction treatment including post-release monthly naltrexone**.

Research:

- Pain management nonopioid and nonpharmacologic treatment options (e.g., neurostimulation therapies, etc.).
- Medication-assisted treatments for opioid addiction (longer-acting version of methadone, etc.).

Prevention:

- Need for state and local agencies to work together: **Orange County Heroin Task Force (includes UCF Student Health representation) has been a leader with multiple community recommendations, such as assistance in training first responders who carry naloxone**.
- Evidence-based, public health approach to substance use disorders—as called for by the Surgeon General—which could help decrease substance misuse and collateral damage such as infectious disease transmission & MVAs.

UCF College of Medicine Psychiatry Clerkship Didactics

Didactics:	Week 1:	Week 2:	Week 3:	Week 4:	Week 5:	Week 6:
<u>Homework to be done PRIOR to class:</u>	a. CSI module: The Psychiatric Interview b. SLM: Patient Autonomy, Competence; Baker & Marchman Act c. Diagnostic Interviewing part 1 d. Screening for Suicide Risk	a. SLM “Substance Use Disorders b. Diagnostic Interviewing part 2 c. Forensic Psychiatry d. Writing Orders & Prescriptions	a. SLM “Acute Psychosis” b. SLM “CBT” c. SLM “Psychodynamic Psychotherapy” d. SLM Supportive & Brief Psychotherapy e. SLM Motivational Interviewing	a. CSI module: “Personality Disorders” b. CSI module: Anxiety Disorders c. Sleep Disorders d. Patient-centered care for individuals who are LGBT	a. Review “Child & Adolescent Psychiatry” b. SLM “Geriatric Psychiatry” c. CSI module: Neurocognitive Disorders/Dementia d. SLM Informed Consent	a. SLM Pain Multidisciplinary Management b. SLM Prescribing Opioids for Chronic Pain: CDC Guidelines
1:00-2:30pm Clinical Applications of material learned in Homework: Diagnostic Interviewing & Treatment Planning	IRAT based on above SLMs ----- Clinical Skills Eval: Patient Interview: Depression and Suicidality ----- Webcourses “In Class” folder: MSE _____ Intern Interview: critique.	IRAT based on above SLMs ----- Clinical Skills Eval: Patient Interview: Substance Use Disorders Psychopharm review	IRAT based on above SLMs ----- Clinical Skill Eval: Patient Interview: Psychotic Disorders	IRAT based on above SLMs ----- Small Groups Exercise: Evolving Cases: 1. Health Equities: LGBT individual 2. Mystery Case #1 3. Mystery Case #2	IRAT based on above SLMs ----- Small Groups Exercise: Evolving Cases: 1. Child case #1 2. Child case #2 3. Geriatric case	IRAT based on above SLMs. Small Group Exercise: Case Application of Multidisciplinary Pain Care; Opioid Risk Mitigation; Opioid Overdose Resuscitation

Part 10: Special Circumstances of Resuscitation

2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care

Eric J. Lavonas, Chair; Ian R. Drennan; Andrea Gabrielli; Alan C. Heffner; Christopher O. Hoyte; Aaron M. Orkin; Kelly N. Sawyer; Michael W. Donnino

Introduction

This Part of the 2015 American Heart Association (AHA) Guidelines Update for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) addresses cardiac arrest in situations that require special treatments or procedures other than those provided during basic life support (BLS) and advanced cardiovascular life support (ACLS).

This Part summarizes recommendations for the management of resuscitation in several critical situations, including cardiac arrest associated with pregnancy (Part 10.1), pulmonary embolism (PE) (10.2), and opioid-associated resuscitative emergencies, with or without cardiac arrest (10.3). Part 10.4 provides recommendations on intravenous lipid emulsion (ILE) therapy, an emerging therapy for cardiac arrest

Additional information about drowning is presented in Part 5 of this publication, “Adult Basic Life Support and Cardiopulmonary Resuscitation Quality.”

The recommendations in this 2015 Guidelines Update are based on an extensive evidence review process that was begun by the International Liaison Committee on Resuscitation (ILCOR) with the publication of the ILCOR 2010 International Consensus on CPR and ECC Science With Treatment Recommendations (CoSTR)² and was completed with the preparation of the 2015 CoSTR publication.^{3,4}

In the in-depth international evidence review process, the ILCOR task forces examined topics and then generated prioritized lists of questions for systematic review. The process by which topics were prioritized for review are described in

SAMHSA

Opioid Overdose

TOOLKIT

Facts for Community Members

Five Essential Steps for First Responders

Information for Prescribers

Safety Advice for Patients & Family Members

Recovering from Opioid Overdose

CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016

Recommendations and Reports / March 18, 2016 / 65(1);1–49



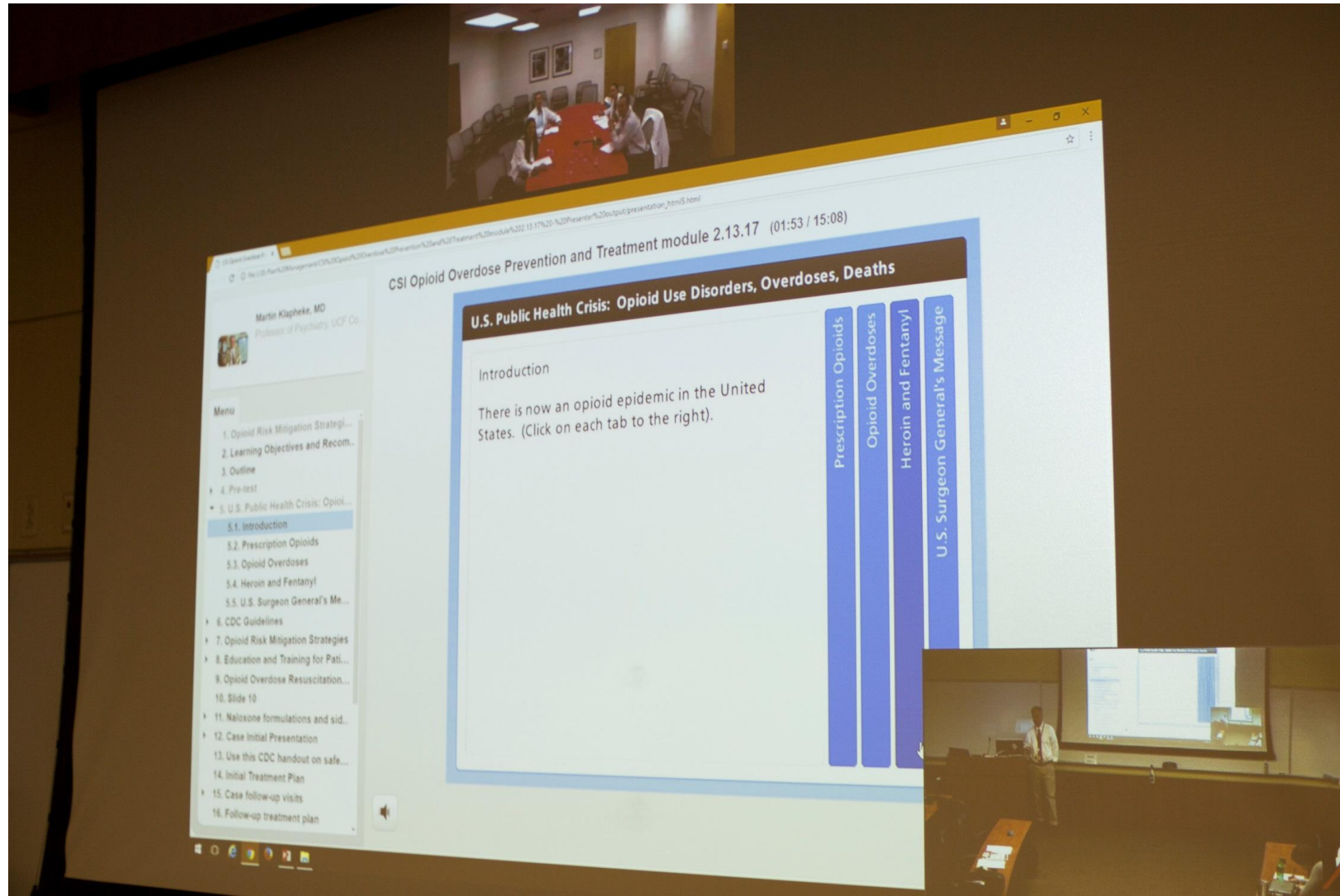
Format:

On March 15, 2016, this report was posted as an MMWR Early Release on the MMWR website (<http://www.cdc.gov/mmwr>).

Deborah Dowell, MD¹; Tamara M. Haegerich, PhD; Roger Chou, MD¹ ([View author affiliations](#))



Teleconferencing: Small Group Exercise in Orlando & St. Petersburg



Video: this woman has stopped by to visit her brother but finds him down, and she suspects an opioid-related, life-threatening emergency.

Written Pre-test: write down every step you would advise her to take. Save your answers for later comparisons.

Video clip

Video Case Presentation: *Acute Pain Management*



Break into Small Groups for Pain Management Treatment Planning, including Opioid Risk Mitigation Strategies

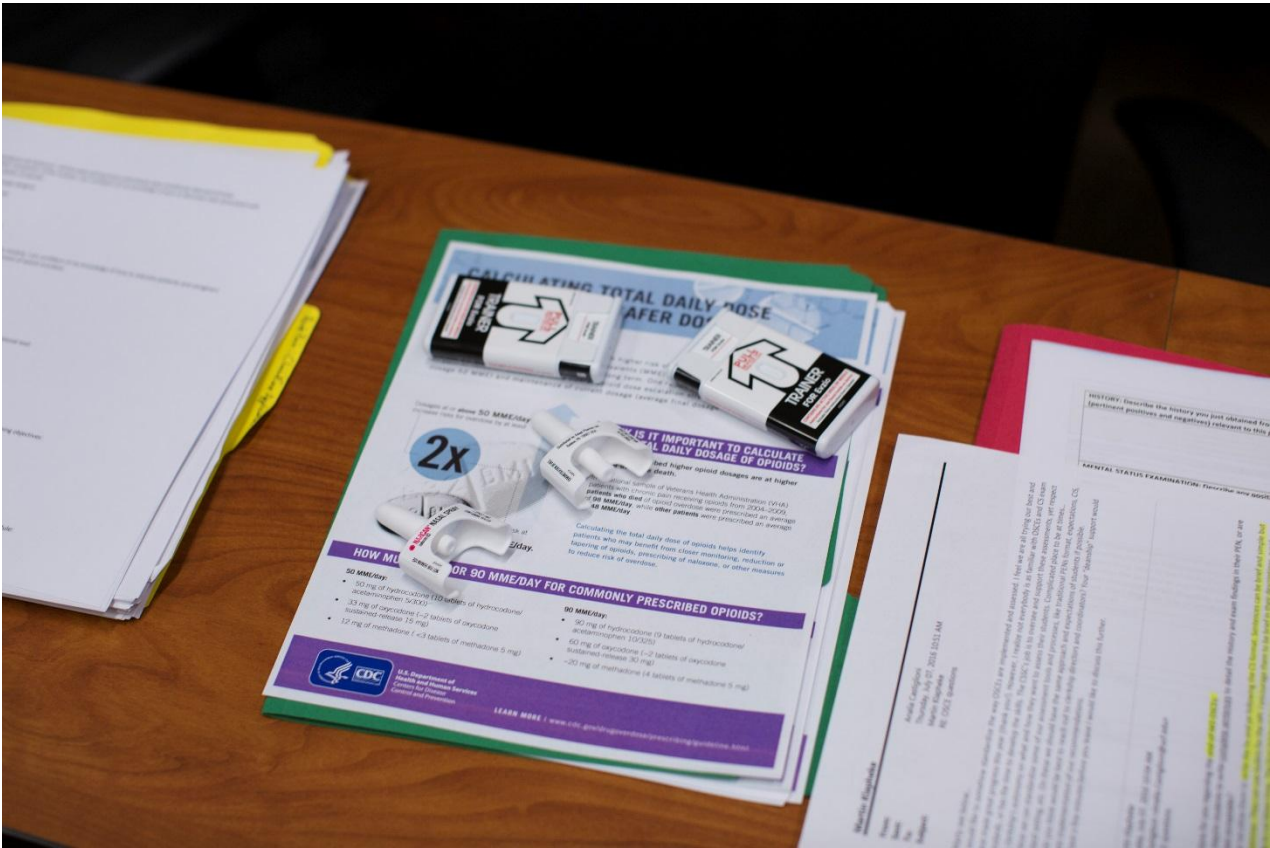


Video Case Follow-Up: *Chronic Pain Management, and Complications*





Learning how to educate patients and caregivers about naloxone and overdose resuscitation



Video clip from small group, interactive didactic session co-taught by Family Medicine & Psychiatry faculty

Video clip

Video Case Follow-up: Substance Abuse Treatment Consultation

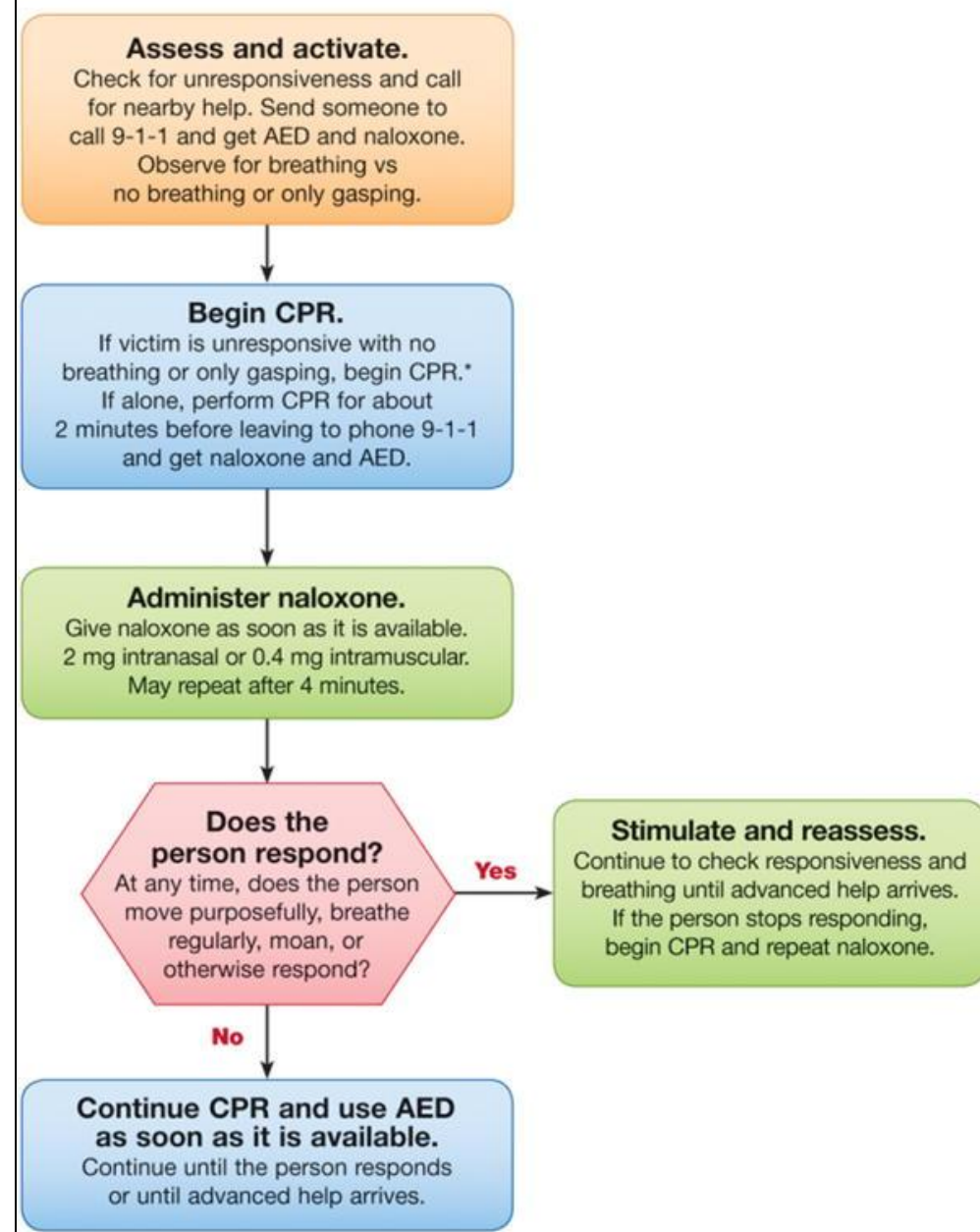


First aid and non-healthcare providers modifications of

Basic Life Support: See the American Heart Association (AHA) algorithm (9) to the right.

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Circulation.2015;132:S501-S518
Part 10: Special Circumstances of Resuscitation
©2015 American Heart Association, Inc.

Opioid-Associated Life-Threatening
Emergency (Adult) Algorithm—New 2015



*CPR technique based on rescuer's level of training.
© 2015 American Heart Association

“ACNS” mnemonic for out of hospital care by non-healthcare providers for suspected opioid overdose (6, 9):

ASSESS & ACTIVATE If unresponsive, e.g., to shouting or sternal rub, call out for nearby help to: **call 911/Emergency Medical Services (EMS)**, and get naloxone and an automated external defibrillator (AED). Assess for signs of opioid overdose such as shallow or decreased or stopped breathing (signs can also include reduced heart rate, bluish color to the lips or fingernails, and, possibly, small pupils).

CPR: If unresponsive with no breathing or only gasping, provide cardiopulmonary resuscitation (CPR). If no help is nearby, do CPR for 2 minutes, then phone 911/EMS—use cell phone with speaker if possible—and get naloxone and AED. If not trained in CPR, follow guidance from EMS over the phone (dispatch-guided CPR). Use AED as soon as available. If you must leave the patient to get help, or if rescue breaths are not needed, place the patient on their side (recovery position) to prevent aspiration from vomiting.

NALOXONE: Give it as soon as it is available. Can give by intramuscular auto-injector or nasal spray. Remember that naloxone has a short half-life; if respiratory depression persists or recurs, can give repeated doses every 2 to 3 minutes (package typically includes 2 doses, e.g., 2 nasal spray bottles). The goal of naloxone is to restore breathing, not necessarily full arousal.

STAY: Do not leave the patient until EMS arrives. If the patient becomes responsive and resumes breathing, continue to monitor them until EMS arrives. If not responsive and not breathing normally, continue CPR, repeat naloxone as above, and use AED as soon as it is available.

Video Case Follow-up: Opioid Overdose Resuscitation: “ACNS” mnemonic

ASSESS & ACTIVATE:



CARDIOPULMONARY RESUSCITATION



NALOXONE



STAY



Handouts: Martin.Klapheke@ucf.edu

1. Listing of the CDC Guidelines for Prescribing Opioids for Chronic Pain

2. Risk Mitigation from the CDC:

- WHY GUIDELINES FOR PRIMARY CARE PROVIDERS?
- CHECKLIST FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN
- ASSESSING BENEFITS AND HARMS OF OPIOID THERAPY
- GUIDELINE FOR PRESCRIBING OPIOIDS FOR CHRONIC PAIN
- CALCULATING TOTAL DAILY DOSE OF OPIOIDS FOR SAFER DOSAGE
- NONOPIOID TREATMENTS FOR CHRONIC PAIN
- PRESCRIPTION DRUG MONITORING PROGRAMS (PDMPs)

3. Opioid Overdose Resuscitation:

a. For lay persons:

- Naloxone: all products overview, from Prescribe to Prevent www.prescribetoprevent.org
- Naloxone nasal spray or injection, from Prescribe to Prevent www.prescribetoprevent.org
- Opioid-Associated Life-Threatening Emergency (Adult) Algorithm, from the American Heart Association
- “ACNS” mnemonic for out of hospital care by lay persons for Opioid Overdose

b. For Healthcare Professionals:

- Modifications of *Basic Life Support*, and of *Advanced Cardiac Life Support* during Opioid Overdose
- How to Prescribe Naloxone & Billing Codes, from Prescribe to Prevent www.prescribetoprevent.org

c. Additional Resources