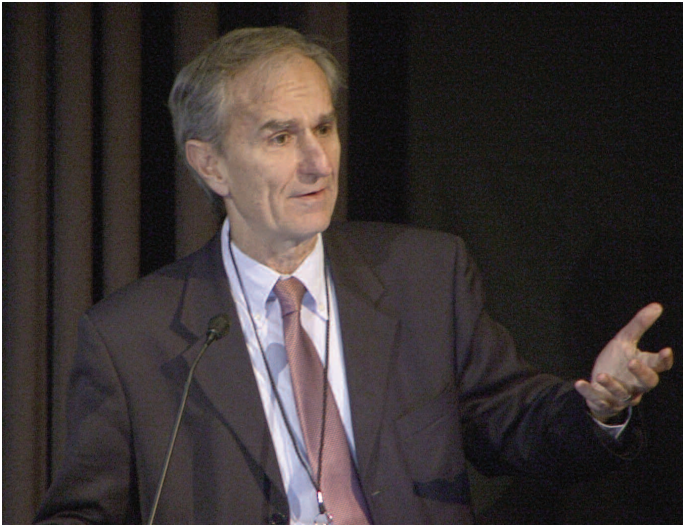


## International Conference on Opioids, June 5-7, 2016

The 2016 International Conference on Opioids (ICOO2016) was held in Boston, June 5-7, 2016, at the Joseph B. Martin Conference Center at Harvard Medical School. Attendees from around the world participated in this two plus day conference that featured renowned speakers from many countries presenting the latest research, ethics, legal and clinical application of opioids.



**Eduardo D. Bruera, MD** in his excellent keynote presentation, *Long-term Opioid Use in Supportive Care Clinics: Assessment and Monitoring Among Patients with Advanced Cancer and Cancer Survivors*, detailed the science and clinical application of opioids for pain in cancer survivors.

Sincere thanks and congratulations to all our ICOO 2016 presenters, conference committee, educational partners and co-chairs for creating a truly world class event!  
Join us for ICOO 2017, June 11-13, 2017!



**Dr. Carol Warfield** discussing crucial issues faced by health-care providers who prescribe opioids in her presentation *Legal Issues from a Physician's Viewpoint*.



Thought leaders **Daniel Carr, MD** and **Jane Ballantyne, MD** discussing *Selected Case Studies and the Application of Recent Guidelines* in their lively panel.



**Humayun Chaudhry, DO, MACP, MACOI** in his insightful keynote, *The Role and Perspective of State Medical Boards in the Oversight of Chronic Opioid Therapy for Pain Management*, detailed the role of medical boards as they support doctors in the proper clinical use of opioids.



Co-Chairs, **Dr. Paul Sloan** and **Dr. Elinore McCance-Katz** directed the fifth annual International Conference On Opioids with passion, alacrity and gravitas.



Dr. Daniel B. Carr presenting the new *National Pain Strategy: Implications for the Pain Community*. The latest version presented can be located at: [http://www.opioidconference.org/uploads/NPS\\_Final\\_18\\_March\\_2016.pdf](http://www.opioidconference.org/uploads/NPS_Final_18_March_2016.pdf)



Leah Sera, PharmD, BCPS and Nina M. Bemben, PharmD, BCPS on OIC in *New Drugs in Opioid-Induced Constipation: How Much is That Bowel Movement Gonna Cost You?*



Attorney Ronald Chapman, II, JD, Dr. Daniel Schwarz and Honorable Jodi Debbrecht Switalksi, JD (not shown), presented their eye-opening session: *Evidence-Based Best Practice for Opioid Prescribing and Monitoring: Medicolegal Pain Management Expert Symposium*.



Attorneys Jonathan M. Young, JD, PhD and Michael C. Barnes, JD presented *If Not You, Who? A Call for Informed Professionals To Engage in Opioid-Related Policy Making*.



Dr. John Standridge enlightened the audience with his presentation *Association of Single-Nucleotide Polymorphisms, Buprenorphine vs Methadone Maintenance Therapy, and Second/Third Trimester Dose Reduction Strategies with Clinical Outcomes of Neonatal Abstinence Syndrome*.



Dr. Penny Briscoe traveled from Australia to present: *How to Wean Patients of Opioids: What Resources Can be Used to Educate and Support Patients to Cease Taking Opioids*.



Dr. Robert Jamison captivated the audience presenting an important and timely session on the latest in *Behavioral Interventions for Pain Management*.



The six New England Governors in a packed session discussing their efforts to end the epidemic of opioid abuse and deaths in their states. (L-R) Gov. Peter E. Shumlin (VT), Gov. Gina M. Raimondo (RI), Gov. Dannel P. Malloy (CT), Gov. Paul R. LePage (ME), Gov. Maggie Hassan (NH) and Gov. Charlie Baker (MA). The full video of the intense session is available at: <http://youtu.be/WTD1kcEBnDI> or <http://www.opioidconference.org>



(L-R) Beatrice Setnik, PhD, James Tolliver, PhD, Richard Dart, MD, PhD and Edward Cone, PhD explored the future of ADFs in *The Evolution of Abuse Deterrent Drug Formulations: Testing Effectiveness from the Benchtop to the Real World*.



James McDonald, MD, MPH presenting *The Disciplinary Process for Physicians Who are Reported for Poor Opioid Prescribing Practices*.



Dr. Kieran Moore sharing the Canadian perspective in his presentation *Reducing the Community Prescribed Opioid Load as a Harm Reduction Strategy*.



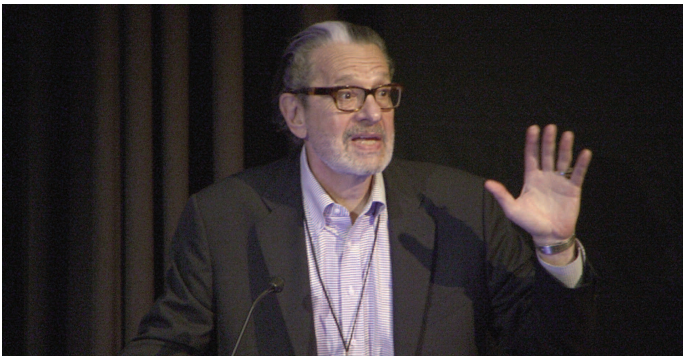
(Left to Right) Dr. John Renner, Dr. Akiva Daum, Dr. Joseph Insler and Dr. Anna LaRose presented *Effective Treatment vs Enabling: Where to Draw the Line with Opioid Agonist Therapy?*



(Left to Right) Dr. Seddon Savage and Dr. Gil Fanciullo in a timely session *Opioids and Clinical Cannabis: Considerations in Co-occurring Use*.



(Left to Right) Dr. Kathryn Walker and Dr. Mary Lynn McPherson engaging the audience with their presentation *Contemporary Issues in Opioid Therapy*.



Dr. Howard A. Heit inspiring the audience with his presentation *Opioids for Chronic Pain: "Damned if You Do, Damned if You Don't!"*



Dr. Guy Hans discussing *Reduction in Postoperative Opioid Requirement Through the Combined Application of Preoperative Risk Assessment and Multimodal Analgesia*.



Dr. Elinore McCance-Katz, ICOO2016 co-chair tackles the tough issue of *Medication Assisted Treatment for Opioid Use Disorders that Occur in the Treatment of Chronic Pain*.



Dr. Jane Ballantyne shares insights into the creation of the recent CDC guidelines in *Practical Aspects to Following Opioid Guidelines*.



(Left to Right) Paul Coplan, ScD, MBA, Gregory Wedin, PharmD, DABAT and Laura Wallace, MPH presenting *ER/LA Opioid Analgesics REMS: Implementation and Impact on Opioid Abuse, Overdose and Death*.



(Left to Right) Dr. Joseph Stauffer, Dr. TJ Gan and Dr. Lynn Webster presenting *Kappa Opioid Receptor Agonists (KORAs), a Novel Pharmacology for the Treatment of Acute and Chronic Pain*.

# 2016 INTERNATIONAL CONFERENCE ON OPIOIDS

## Posters Presented June 5–7, 2016

### **Between a Rock and a Hard Place? Managing Pain in Patients on Opioid Maintenance Therapy**

Nina Bemben, PharmD, BCPS; Leah Sera, PharmD, BCPS

*The rising rate of opioid misuse and addiction has led to increasing numbers of patients seeking treatment for opioid substance use disorder. This presentation will address the clinical challenge of managing pain in patients receiving opioid maintenance therapy (buprenorphine or methadone) for concurrent substance use disorder.*

### **Levorphanol: Can This Old Dog Learn New Tricks?**

Nina Bemben, PharmD, BCPS; Leah Sera, PharmD, BCPS

*Levorphanol is a mu-opioid agonist, with additional activity as a NMDA receptor antagonist. While uncommonly used in the United States, the pharmacology of levorphanol and its pharmacokinetic characteristics make it potentially useful for pain management. This presentation reviews the pharmacology and pharmacokinetics of levorphanol and addresses its place in therapy.*

### **Oral Fluid Drug Testing: A New Look at Applications, Advantages, and Methods**

Damon Borg, PhD; Richard Stripp, PhD; Elizabeth Kolb

*Although urine is the most common biological matrix used in clinical toxicology, a major disadvantage is that it solely indicates past exposure to a drug. Thus, the development of simpler methods to assess biologically active drug levels in a person is desirable. Oral fluid is a matrix well suited for the clinical toxicology/medication monitoring industry because collections are based upon simple, non-invasive, collection procedures using an oral swab.*

### **A 10-year Retrospective Study of Opioid Overdoses among Patients in a Large Integrated Healthcare System**

Joseph Boscarino, PhD, MPH; H. Lester Kirchner, PhD;

James Pitcavage, MSPH; Vijay Nadipelli, BPharm, MS; Naoko Ronquest, PhD;

Michael Fitzpatrick, MD, FACEP; John Han, MD, MS, FIPP, DAPM

*The prevalence of opioid abuse has increased drastically over the past decade. The current study describes the characteristics of patients who have overdosed on opioids and assesses the health outcomes and cost among those admitted to a large health system using electronic health records.*

### **Progression of Non-Medical Use of Hydrocodone Combination Products: Results from an Internet Survey of Recreational Drug Users**

Theresa Cassidy, MPH; Natasha Oyedele, MPH; Jared Beaumont, MPH;

Sven Guenther, PhD; Travis Mickle, PhD

*Non-medical use of prescription opioids continues to increase (SAMHSA, 2010). However, little is known about the potential impact commonly prescribed opioids, such as hydrocodone combination products (HCPs), have on abuse progression and their influence on the overall problem of prescription opioid abuse.*

### **Current Status of Implementation for Abuse-Deterrent Opioids in the US Market—The Need for Working with Policymakers and Payers to Improve Legislative and Regulatory Incentives for ADFs**

Daniel Cohen, MALS

*Abuse Deterrent Formulations (ADF's) are breakthrough technologies that can play a major role in deterring abuse. Medical professionals need to understand the public policy implications impacting the technologies which exist today, what current opioids contain ADF's, and the importance of mandatory adoption of ADF's in all C-II opioids.*

### **Epidemic: Responding to America's Prescription Drug Abuse Crisis**

Angela Conover

*This presentation focuses on heroin accessibility in all communities as a result of additions that stem from prescription pain killers. To address this issue, the Partnership for a Drug-Free New Jersey, the Drug Enforcement Administration-NJ Division, and HIDTA NY/NJ have embarked upon a series of gatherings with New Jersey's medical community to address the important role these professionals can have in reversing the alarming trends in opiate abuse.*

### **Pharmacokinetics and Pharmacodynamics of Intranasal and Intramuscular Naloxone in Healthy Volunteers**

Ola Dale, MD, PhD; Arne Skulberg, MD; Ida Tylleskär; Turid Nilsen;

Sissel Skarra; Trond Sand, MD

*Twelve volunteers received 0.8 mg of new nasal naloxone formulation (IN) and standard intramuscular naloxone (IM) during remifentanyl infusion in a two-way cross over design. Effect outcome was pupil size. The relative bioavailability of IN/IM was 0.75. IM had a shorter T<sub>max</sub>. IM produced a faster and more pronounced action on pupil size.*

### **The Use of Urine Drug Test among Advanced Cancer Patients on Chronic Opioid Therapy at an Outpatient Supportive Care Clinic**

Tonya Edwards, MS,BSN,CCRP; Joseph Arthur, MD; David Hui, MD;

Suresh Reddy, MD; Jessica Waletich-Fleming, Pharm, DBCPS;

Sriam Yennu, MD; Eduardo D. Bruera, MD

*This poster describes the use of urine drug test in pain management among advanced cancer patients at an outpatient supportive care and the factors associated with its ordering.*

### **What Do Drug Overdose Statistics Really Tell Us?**

Jennifer Erensen, MPH; J. David Haddox, DDS, MD

*Recent reports have highlighted new drug overdose death statistics, focusing on opioids and heroin. These data are concerning and complicated. This presentation will clarify what these data actually represent, providing a scientific basis to better inform clinicians and policymakers in addressing opioid misuse and abuse.*

### **Survey of Patients' Perspective on Opiate Treatment Agreement in the Outpatient Clinic**

Cheryl Erwin, JD, PhD; Pravesh Sharma, MD; Regina Baronia; Arqam Abdali;

Stephen Manning

*There is no question that competing public health concerns, ie, the under-treatment of pain and the abuse of prescription drugs, present a major policy dilemma in the United States of America. The "War on Pain" stands at odds with the "War on Drugs" in America, leaving conscientious physicians in the middle of the battlefield. This study demonstrates that the doctor/patient relationship is at risk through the use of opioid treatment agreements. We present suggestions for improving the dialogue between doctors and patients.*

### **Opioid Overdose and Treatment Preference**

Jessica Flori, BA; Genie Bailey, MD; Micah Conti, BA; Megan Risi, BS;

Michael Stein, MD

*This study seeks to investigate how the experience of lifetime overdose and overdose in the last year influences the treatment preferences of opioid dependent individuals in an inpatient detoxification setting.*

**Ultra-Rapid Outpatient Opioid Detoxification Using a Novel Enhanced Multimodal Ketamine Infusion**

Gerald Grass, MD

*To our knowledge this is the first documented use of an enhanced sequential ketamine infusion to rescue a patient from acute ultra-high dose opioid withdrawal symptoms secondary to intrathecal pump misadventure.*

**Decreased Opioid Use and Pain Scores After Five Months Using a Compounded Topical Analgesic: Fourth Interim Results from the Optimizing Patient Experience and Response to Topical Analgesics (OPERA) Observational Study**

Jeffrey Gudin, MD; Michael Brennan, MD; Edmund Harris, MD; Peter Hurwitz; Derek Dietze

*158 adult patients experiencing neurologic or musculoskeletal pain received a compounded topical analgesic for a mean of 164 days. Use of opioids and pain levels assessed by BPI (Short Form) each decreased significantly. Patient satisfaction levels were high, and no side effects were reported. Results of previous analyses were confirmed.*

**Decreased Pain and Opioid Use Following Use of a Compounded Topical Analgesic: Third Interim Results from the Optimizing Patient Experience and Response to Topical Analgesics (OPERA) Observational Study**

Jeffrey Gudin, MD; Michael Brennan, MD; Edmund Harris, MD; Peter Hurwitz; Derek Dietze

*631 adult patients experiencing neurologic or musculoskeletal pain received a compounded topical analgesic for a mean of 76 days. Pain levels assessed by BPI (Short Form) and use of opioids each decreased significantly. BPI score decreases were greater for patients using diclofenac-containing as compared to ketoprofen-containing compounded topicals.*

**Relative Bioavailability, Intranasal Abuse Potential, and Safety of Benzhydrocodone/Acetaminophen, a Novel Immediate-Release Hydrocodone Prodrug Combination, Compared with Hydrocodone Bitartrate/Acetaminophen in Recreational Drug Abusers**

Sven Guenther, PhD; Travis Mickle, PhD; Kathryn Roupe, PhD; Jing Zhou; Beatrice Setnik, PhD; Vincent Lam, MD; Talar Hopyan, PhD; Catherine Mills, MSc  
*Recent survey data indicate that 23 percent of opioid abusers endorse intranasal administration of hydrocodone IR combination products. The prodrug benzhydrocodone was developed to deter non-oral forms of abuse of such products. This study assessed the abuse potential and pharmacokinetics of benzhydrocodone/acetaminophen relative to hydrocodone/acetaminophen in recreational opioid abusers.*

**Long-Term Safety and Analgesic Efficacy of Buprenorphine Buccal Film in Patients With Moderate-to-Severe Chronic Pain Requiring Around-the-Clock Opioids**

Martin Hale, MD; Veronica Urdaneta, MD, MPH; M. Todd Kirby, PhD; Qinfang Xiang, PhD; Richard Rauck, MD

*The novel buprenorphine buccal film developed using BioErodible MucoAdhesive technology allows for absorption of drug across the buccal mucosa of patients with moderate-to-severe pain. Long-term safety and efficacy findings of this new buprenorphine formulation are presented for patients with moderate-to-severe chronic pain requiring around-the-clock opioids.*

**Monitoring for Respiratory Compromise: Results of a Survey of Nurses**

Sandra Hanneman, PhD, RN, FAAN; Michael Wong

*An online survey of 73 nurses, who are members of the American Hospital Association (AHA), explored nurses' attitudes and beliefs about respiratory compromise, including opioid-induced respiratory depression, and continuous monitoring practices and technologies used to monitor patients.*

**Clinical Challenges in the Abuse Potential Assessment of CNS-Active Drugs: Investigator Perspectives With a Special Commentary From a Study Volunteer**

Talar Hopyan, PhD, C.Psych; Pierre Geoffroy, MDCM, MSc, FCFP

*This session will provide a unique perspective of these trials and their challenges, namely from the Investigator, study scientist, and most importantly, the study subject.*

**The Influence of Cardiac Output on the Pharmacokinetics of Sufentanil in Pigs**

Christian Jeleazcov, MD, MSc; Harald Ihmsen, PhD; Joachim Schmidt, MD  
*Pharmacokinetics of sufentanil were studied in pigs with increased or decreased cardiac output. Clearances and volumes of distribution significantly increased with cardiac output.*

**Study to Comprehensively Calculate Risk of Aberrant Behavior to Opioids by Incorporating Genetic and Phenotype Risk Factors**

Sapana Kabaria, MD; Svetlana Kantorovich, PhD; Ashley Brenton, PhD; John Blanchard, PhD; Brian Meshkin

*Balancing appropriate pain management with opioid abuse risk mitigation is a challenging undertaking navigated by physicians daily. This study incorporates clinical, phenotypic, and genetic variables to develop and validate a novel risk stratification algorithm used to accurately determine a patient's likelihood of opioid misuse or abuse.*

**Oxymorphone induced thrombotic microangiopathy**

Kamia Thakur, MD; Joseph Vadakara, MD; Alok Silodia, MD  
*Opana ER (oxymorphone) is a cheap illicit drug available throughout the USA. Intravenous use of the crushed gel formulation has been associated with drug-induced thrombotic microangiopathy. In this abstract we describe two patients who lived together and used Opana ER intravenously. Both presented with microangiopathic hemolytic anemia that mimicked thrombotic thrombocytopenic purpura.*

**Intrathecal Morphine Infusion Therapy in Management of Chronic Pain: Present and Future Implementation in Korea**

Yongjae Yoo, MD; Jee Youn Moon, MD, PhD; Yong Chul Kim, MD, PhD  
*We conducted a retrospective chart review of patients who had received an ITMP implant since the introduction of the device in Korea. Analyses focused on the clinical condition of patients after implantation and on a variety of clinical outcomes related to the intrathecal morphine infusion treatment processes.*

**Neuropathic Pain in High Level Spinal Cord Injury Effectively Controlled by Spinal Cord Stimulator**

Prasanth B. Katta, DO; Vittal R. Nagar, MD; Vinod Muniswamy, MD; Luis A. Vascello, MD; Sara Salles, DO  
*57 year old male C4-American-Spinal-Injury-Association-classification-C with resultant neuropathic pain in his right lower extremity after failing non-interventional modalities for pain relief found relief with novel use of spinal cord stimulator.*

**Combination Strategies for Chronic Pain Management and Central Nervous System Side Effects**

Prasanth B. Katta, DO; Vittal R. Nagar, MD; Vinod Muniswamy, MD; Paul A. Sloan, MD  
*Literature suggests combination strategies for chronic pain management is commonly used in clinical practice. The clinicians treating chronic pain patient population with combination strategy should have constant vigilance, should perform re-evaluation, and a high level of suspicion to avoid the adverse effect.*

**A Randomized Trial of Probuphine® Implants in Adults Stabilized on Sublingual Buprenorphine**

Sonnie Kim, PharmD

*This randomized trial examined the safety and efficacy of long-lasting buprenorphine implants relative to sublingual buprenorphine in clinically stable opioid-dependent adults. Buprenorphine implants shown to maintain treatment efficacy and may provide superior relapse prevention relative to sublingual buprenorphine in this population.*

**Prevalence of False Negative Urine Test Results by LC-MS/MS: Comparing a High Sensitivity Method to the Current Industry Standard**

Phillip Lipnik, Kevin Krock, PhD

*The number of false negative test results were determined for each drug and/or metabolite from anonymized patient data that were generated from a validated high-sensitivity LC-MS/MS analysis. Results falling between our cutoff level and the industry average cutoff level were considered false negatives.*

**Safety Profile of Injectable Hydromorphone in a Medically Supervised Treatment Program for Long-Term Severe Opioid Use Disorder in Vancouver, Canada: Outcomes from Recent SALOME RCT**

Scott MacDonald, MD; Cheryl McDermid, MD; Piotr Klakowicz, MD; Eugenia Oviedo-Joekes, PhD; Kirsten Marchand, PhD student; Daphne Guh, MSc; Suzanne Brissette, MD

*This presentation will discuss the safety profile of high doses of injectable hydromorphone in the context of a landmark clinical trial that demonstrated its effectiveness for the treatment of severe opioid use disorder. The audience will gain an understanding of this innovative treatment approach and best practices for its delivery.*

**Opioid Modulation of Gut Microbiome Exacerbates Gram-Positive Sepsis**

Jingjing Meng, PhD; Sabita Roy, PhD; Rui Zhang, PhD; Bradley Segura, MD, PhD; Brent Bauman, MD; Santanu Banerjee, PhD

*Knowledge about the effects of prescription opioids is lacking. Our study will provide both clinical and laboratory evidence indicating that opioid treatment induces worse outcome of sepsis by modulating gut microbiome, which might provide helpful information to control or prevent infection in patients on opioids.*

**Emergency Medicine Providers Underestimate Their Opioid Prescribing Practices**

Sean Michael, MD; Christopher Androski, MS; Kavita Babu, MD; Martin Reznick, MD, MBA

*A randomized survey of attending and resident emergency medicine physicians and advanced practice providers suggests that clinicians systematically underestimate their own opioid prescribing practices, compared to those of their peers.*

**Pharmacokinetics and Abuse Potential of Benzhydrocodone, a Novel Prodrug of Hydrocodone, After Intranasal Administration in Recreational Drug Users**

Travis Mickle, PhD; Sven Guenther, PhD; Kathryn Roupe, PhD; Jing Zhou; Daniel Dickerson, MD, PhD; Lynn Webster, MD

*Non-oral abuse of immediate-release opioids is prevalent and remains a public health concern. Benzhydrocodone is a prodrug of hydrocodone with inherent physicochemical and pharmacological properties designed to deter non-oral forms of abuse. This study examined the pharmacokinetics and abuse potential of intranasal benzhydrocodone relative to intranasal hydrocodone bitartrate.*

**A Meta-Analytic Review of the Adverse Drug Events of Prescription Opioids for Chronic Non-Cancer Pain**

Matthew Pelcowitz B.A., MSc Candidate

*This review will underscore the problems with the literature on the adverse events of prescription opioids and provide a meta-analytic estimate of the prevalence of specific adverse events involved with prescription opioids such as misuse, abuse, addiction, overdose and deaths.*

**Veteran's Hospital Automated Software Platform to Assess Pre-Validated Risk for Opioid-Induced Respiratory Depression to Qualify Patients for In-Home Naloxone**

Jacqueline Pratt Cleary, PharmD; Jeffrey Fudin, PharmD, DAAPM, FCCP, FASHP; Mena Raouf; Uyen Nguyen; Michael Carpenter, PharmD

*Implementation of a software platform based on the previously validated RIOSRD tool, to determine which patients should be targeted for access to a naloxone auto-injector at the Albany Stratton VA Medical Center.*

**High-Dose Epidural Opioid Based Anesthesia for Hyperthermic Intraperitoneal Chemotherapy**

Annette Rebel, MD; Nicholas Willius, MD; Jason Stouse, BS; Zaki-Udin Hassan, MBBS

*The abstract describes perioperative analgesia with high-dose epidural fentanyl for a patient undergoing hyperthermic intraperitoneal chemotherapy using a case report and discusses pro/cons of this approach. We found that aggressive epidural anesthesia and analgesia intraoperatively during HIPEC is well tolerated and supports early postoperative recovery after HIPEC.*

**Characteristics and Treatment Patterns of US Medicaid Patients with Opioid Use Disorder**

Naoko Ronquest, PhD; Bernd Wollschlaeger, MD, FAAFP, FASAM; Leslie Montejano, MA, CCRP; Tina Willson, PhD; Vijay Nadipelli, BPharm, MS

*This poster presents the results of a retrospective claims database study that described the pharmacological and non-pharmacological treatments received by a large sample of US Medicaid patients diagnosed with opioid use disorder from 2008-2014. Results suggest there may be opportunities to improve care through more comprehensive treatment.*

**Case Study: Opioid Therapy for Patients with Substance Use Disorder**

Tulika Shishir Kumar Saxena, MD; Somesh Sharma

*Comparison between two 32 years old male patients with substance use disorder and c/o pain following trauma with initiation of opioid therapy. Emphasis on identification of red flags, the methods of risk assessment, proper triage of patients, benefits of specialist intervention at an early stage and treatment plans.*

**Reduced Buprenorphine/Naloxone Prescriptions Dispensed in a State Medicaid Population Following Formulary Conversion from Suboxone to Bunavail: Implications for Potential Diversion**

Richard Soper, MD, JD, MS, FASAM, DABAM

*Buprenorphine/naloxone products are mainstay in pharmacological treatment and maintenance for opioid addiction. Real-world analyses are needed to determine the impact on potential diversion in this space when switches occur between products.*

**The Safety, Tolerability, and Effectiveness of Orally Administered CR845, a Peripherally Acting Kappa Opioid Agonist, in Patients with Osteoarthritis of the Knee or Hip**

Joseph W. Stauffer, DO, MBA; Catherine Munera, PhD; Kerry P. Eible, RN, BSN; Paul J. Tiseo, PhD

*Patients with pain due to osteoarthritis of the knee or hip were treated with oral CR845, a peripherally acting, selective kappa opioid receptor agonist. CR845 was well tolerated and reduction in joint pain was superior in the 5-mg group compared with the 0.25-, 0.5-, and 1-mg groups combined (P=0.02; Wilcoxon Rank Sum test).*

**Effectiveness and Safety of Hysingla® ER, a Once-daily, Single-entity, Hydrocodone With Abuse-deterrent Properties in Treating Chronic Nonmalignant and Nonneuropathic Pain in Patients with Depression and Anxiety**

Louise Taber, MD; Rupa Shah, PharmD; Shau Yu Lynch, PhD; Ellie He, PhD; Steven R. Ripa, MD

*Treatment with Hysingla® ER, a once-daily, single-entity, hydrocodone (HYD) formulated with abuse-deterrent properties, resulted in a clinically important reduction in pain severity and pain interference in patients with comorbid depression and anxiety. HYD efficacy was sustained throughout the 12-month maintenance period with stable HYD doses during this period.*

**Effectiveness and Safety of Hysingla® ER, a Once-daily, Single-entity, Hydrocodone With Abuse-deterrent Properties in Treating Chronic Non-malignant and Non-neuropathic Pain in Patients with Osteoarthritis**

Louise Taber, MD; Stacy Baldrige, MSN, RN, CNRN, CCRC; Ellie He, PhD; Steven R. Ripa, MD

*In this clinical analysis, many patients with chronic pain associated with OA who were treated with HYD had  $\geq 2$ -point reductions in pain, pain severity, and pain interference that were maintained over a 52-week period. HYD was well tolerated, and no new or unexpected AEs or safety concerns were observed.*

**Safety, Tolerability, and Efficacy of Xtampza™ ER (oxycodone DETERx® extended-release) Treatment in Subjects 65 years and Older**

Christy Thompson, PhD; Michael DeGeorge, PharmD; Ernest Kopecky, PhD; Ben Vaughn, MS

*This analysis showed that Xtampza™ ER was well tolerated and efficacious in an  $\geq 65$  population. Safety was similar to that of other opioid analgesics. Xtampza™ ER may be an alternative to hard tablet oxycodone formulations in the elderly, including those with difficulty swallowing.*

**Sprinkle Administration of Xtampza™ ER (oxycodone DETERx® extended-release): An Abuse-deterrent, Extended-release Formulation**

Christy Thompson, PhD; Michael DeGeorge, PharmD; Ernest Kopecky, PhD; Alison Fleming, PhD

*This study demonstrates that Xtampza ER can be administered as an intact capsule or by opening the capsule and sprinkling the contents onto applesauce, thus offering a flexible dosing option for the estimated 11 million patients that suffer from both chronic pain and dysphagia.*

**MeDSS: A Data-Driven Decision Support Tool for Pain Management**

Jaya Tripathi; Scott Weiner, MD, MPH

*In our presentation, we will show how the use of advanced analytics and visualization techniques can help with pain medication management.*

**Physicians Prescribing Opioids to Legitimate Pain Patients Can Take Concrete Steps to Lessen the Risk of Criminal Prosecution**

Benjamin Wish

*In recent years, criminal prosecutions of physicians who prescribe opioids for the treatment of pain, especially chronic non-cancer pain, have increased significantly. Although the risk of prosecution cannot be eliminated, there are important steps physicians can and should take to minimize that risk.*

**Evaluating the SOAPP-R's Contribution to Assessing Risk for Prescription Opioid Abuse**

Daniel Eichorn, BS; Alexandra Lesenskyj, BA; Christina R. Maxwell, PhD, MTR; Ricardo A. Cruciani, MD, PhD; Sarah K. Moore, PhD, LCSW

*Our retrospective review aimed to evaluate the SOAPP-R's contribution in assessing the risk for opioid misuse; determining the percentage of patients with high-risk SOAPP-R scores and assessing the tool's effectiveness at predicting urine toxicology abnormalities aided in this exploration.*

**Exploring the Effects of Short-Term Oxycodone Maintenance on Pain and Other Responses in Physically Dependent Opioid Users**

Marion Coe, Doctoral Candidate; Paul Nuzzo; Michelle Lofwall, MD; Sharon Walsh, PhD

*Algesia, analgesia, and prototypic opioid response are evaluated in a 6-week inpatient study of physically dependent opioid users maintained on oxycodone. While volunteers reported subjective opioid effects (eg euphoria) during pharmacological challenge sessions, they were insensitive to the analgesic properties of oxycodone, even at twice the maintenance dose.*

**Opioid Use in Chronic Pain Patients with Chronic Kidney Disease: A Systematic Review**

Vittal Nagar, MD; Prava Birthi; Sara Salles, DO; Paul A. Sloan, MD

*A systematic review of published studies describing the use of opioid and other analgesics for the treatment of chronic pain in patients with chronic kidney disease.*