COMBATING PRESCRIPTION DRUG ABUSE

Idaho State University CE Series
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In support of improving patient care, Idaho State University Kasiska Division of Health Sciences is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

DISCLOSURES

◦ The planners and presenter of this presentation have disclosed no conflict of interest, including no relevant financial relationships with any commercial interests

OBJECTIVES

◦ Describe the dangers of inappropriate use of antibiotics, opioids, and benzodiazepines cited in the literature

◦ Utilize CDC opioid prescribing guidelines, benzodiazepine taper recommendations, and state prescription monitoring programs in practice

◦ Identify prescription drug abuse risk facts and red flags and employ mitigation strategies

ANTIBIOTIC TRENDS

◦ Urgent threats
  ◦ Clostridium Difficile
  ◦ Carbapenem-resistant Enterobacteriaceae (CRE)
  ◦ Drug-resistant Neisseria gonorrhoeae

◦ Serious threats
  ◦ Multi-drug-resistant Pseudomonas aeruginosa
  ◦ Drug-resistant Staphylococcus pneumoniae
  ◦ Drug-resistant Salmonella Typhi
  ◦ Drug-resistant tuberculosis

◦ Concerning threats
  ◦ Vancomycin-resistant Staphylococcus aureus (VRSA)


STRATEGIES FOR IMPROVING ANTIBIOTIC RESISTANCE

◦ Preventing infection and spread of resistance

◦ Tracking resistant bacteria

◦ Improving the use of antibiotics

◦ Promoting development of new antibiotics and new diagnostic tests for resistant bacteria


Percent of Hospitals with Antibiotic Stewardship Programs by State, 2015

Nationally, 49.7% of all hospitals have stewardship programs (2,189 of 4,452). The national goal is 100% of hospitals by 2020.
ANTIBIOTIC STEWARDSHIP

- Decrease in the use of antibiotics², 3, 5, 6, 7
- Decreased hospital readmission and mortality rates⁷
- Improved susceptibility of bacteria to antibiotics³, 4
- Decreased rates of drug resistant infections⁵, 6, 7

PRESCRIPTION DRUG ABUSE

DEFINITIONS

- Taking a prescribed medication in a manner or dose other than prescribed
- Taking a prescription medication that was prescribed for someone else
- Taking a prescription medication to feel euphoria
- Prescription medications often misused
  - Opioids
  - CNS depressants
  - Stimulants

OPIOID TRENDS

- Between 1999 to 2015 more than 183,000 people have died as a result of an overdose related to prescription opioids
- Over 15,000 people died from prescription opioid overdose in 2015
- Every day, over 1,000 emergency department visits related to inappropriate prescription opioid use
- 1 in 4 Americans who are prescribed opioids for non-cancer pain struggles with addiction

SAHMSA Dawn Report
Boscarino. Risk factors for drug dependence among out-patients on opioid therapy in a large US healthcare system. Substance Use & Misuse 2010
OPIOID TRENDS

- Death rates related to
  - Methadone ↓ by 9.1%
  - Natural/semisynthetic ↑ by 2.6
  - Synthetic opioids (not methadone) ↑ by 72.2%
  - Heroin by ↑ 20.6%

Drugs most commonly involved in prescription opioid deaths
- Methadone
- Oxycodone
- Hydrocodone

Overdose death rates are highest among
- People 25-54 years old
- Non-Hispanic whites
- American Indian or Alaskan Natives

RISK FACTORS FOR OPIOID OVERDOSE

- Previous overdose increases risk of a subsequent overdose
- Mental health diagnosis
- PTSD diagnosis
- Substance Use Disorder
- Patient using opioid for non-cancer pain had higher rates of opioid use disorder
- High doses of opioids
- Combining opioids with sedating substances

BENZODIAZEPINE TRENDS

- Between 1996 and 2013, 13.5 million adults filled a benzodiazepine prescription
- Total quantity of benzodiazepines more than tripled
- The median cumulative quantity increased by 140%
- Overdose death rates increased 4-fold

Benzodiazepine and Opioid Overdose Mortality in the United States, 1999-2013

National Overdose Deaths
Number of Deaths from Heroin and Non-Methadone Synthetic Opioids

Source: National Center for Health Statistics, CDC Wonder

National Overdose Deaths
Number of Deaths from Benzodiazepines

Source: National Center for Health Statistics, CDC Wonder


RISKS FOR BENZODIAZEPINE OVERDOSE

- Combining benzodiazepine with
  - Antidepressants
  - Sedative hypnotics
  - Alcohol
  - Opioids

BENZODIAZEPINE IN THE ELDERLY

- In the elderly, benzodiazepines are associated with
  - Falls
  - 3 times increased dizziness, loss of balance, falls
  - Sedation
  - 4 times higher risk of morning sedation
  - Hip fractures
  - Cognitive impairment
  - 5 times increased risk of memory loss, confusion, disorientation

BENZODIAZEPINES IN PATIENT WITH DEMENTIA

- No improvement in sleep quality
- Exacerbation of
  - Cognitive deterioration
  - Risk of falls
  - Aspiration
  - Agitation
  - Death

STIMULANT TRENDS

- Most commonly prescribed stimulants
  - Amphetamine
  - Methylphenidate
  - Lisdexamfetamine
- Prescription rates highest among children <18 (except Idaho)
- Reason for abuse among college students
  - Help with concentration
  - Help study
  - Increase alertness
  - Getting high
  - Experimentation
  - Weight loss
STIMULANT EFFECTS

- In high doses, stimulants can lead to:
  - Paranoia
  - Hallucinations
  - Hypertension
  - Tachycardia
  - Ventricular irritability
  - Hyperthermia
  - Respiratory depression

- In overdose, stimulants can lead to:
  - Heart failure
  - Stroke
  - Seizures


RECOGNIZING SIGNS

SIGNS OF ABUSE AND ADDICTION

- Physical symptoms
  - Bloodshot or glazed eyes
  - Dilated or constricted pupils
  - Abrupt weight changes
  - Bruises, infections
  - Wearing long sleeve when not appropriate
  - Abnormal vital signs
  - Sinusitis, nose bleeds
  - Incoordination
  - Deterioration in physical appearance

- Behavioral symptoms
  - Aggression and/or irritability
  - Changes in personality and/or attitude
  - Lethargy
  - Depression
  - Changes in social network
  - Changes in habits
  - Changes in priorities
  - Financial problems
  - Criminal activity


SIGNS OF ABUSE AMONG COWORKERS

- Diminished quality of work
- Excessive amounts of time spent near a “drug supply”
- Worsening interpersonal relationships
- Heavy “wasting” of drugs
- Careless recordkeeping/charting
- Inappropriate prescriptions for large doses
- Increasing isolation
- Patient and staff complaints

IDAHO PRESCRIPTION MONITORING PROGRAM (AWARxE)

- Legislative update
  - Pharmacist are REQUIRED to annually register with the board to obtain access to the online controlled substance prescription database
  - A practitioner or a pharmacist may have up to 4 delegates access the database under practitioner/pharmacist supervision

https://bop.idaho.gov/pmp/AWARxE
PREVENTING DIVERSION
- Report forgeries, altered scripts and counterfeit prescriptions to the
  - Prescriber
  - Law enforcement
  - Board office
- Report “doctor shoppers” to the board office
- Report excessive prescribing to board office

WHAT CAN BE DONE?

STRATEGIES FOR COMBATING RX DRUG ABUSE
- Addressing regulatory issues relating to drug diversion and law enforcement
- Treatment resources for addiction services
- Utilizing prescribing guidelines
- Improving monitoring
- Increasing education

UTILIZING PRESCRIBING GUIDELINES
- CDC Guideline for Prescribing Opioids for Chronic Pain
  - For primary care clinicians to manage adult patients with chronic pain
  - Determine if and when to start opioids
  - Selecting an opioid, dose, duration
  - Reassessing prescribing and when to discontinue
  - Helps providers and patients assess benefits and risks of opioid use

CDC RECOMMENDATIONS
- Opioids are not first-line therapy
- Treatment goals for pain and function
- Risks and benefits
- Immediate-release opioids when starting therapy
- Lowest effective dose
- Short duration for acute pain
CDC RECOMMENDATIONS
- Frequent benefit and harm evaluation
- Mitigate risk
- Review PDMP data
- Urine drug testing
- Avoid concurrent benzodiazepine and opioids
- Offer treatment for opioid use disorder

WHEN TO CONSIDER DOSE REDUCTION
- Patient request
- No clinically significant improvement in pain and function
- Dose ≥ 50MME* without benefit
- Opioids combined with benzodiazepines
- Substance use disorder
- Showing signs for overdose or experienced an overdose

HOW TO TAPER
- Go slow!
  - 10% every week or every month
- Consult
- Treatment experts
- Support
  - Naloxone for overdose prevention
  - Treatment for opioid use disorder
  - Psychosocial support
- Encourage
  - Patients reports improved function after tapering

RESOURCES AVAILABLE
- CDC Guideline for Prescribing Opioids for Chronic Pain
  - www.cdc.gov/drugoverdose/prescribing/guideline.html
- Washington State Opioids Taper Plan Calculator
- Tapering Long-Term Opioid Therapy in Chronic Noncancer Pain
  - http://www.mayoclinicproceedings.org/article/S0025-6196(15)00303-1/fulltext

BENZODIAZEPINE TAPERING
- General tapering strategies
  - 25% weekly dose reduction until 50% of original dose, then reduce dose by 1/8 every 4-7 days
- Duration of taper is based on duration of therapy
  - > 8 weeks: 2-3 weeks
  - > 6 months: 2-4 weeks
  - > 1 year: 2-4 months
- Switching to long-acting is not supported in literature
- Taper should be individualized to each patient

EMPOWER TRIAL
- Direct-to-consumer educational intervention
- Community pharmacies
- 303 long-term users of benzodiazepines age 65-95
- 6-months follow-up
  - 62% discussed tapering
  - 27% discontinued benzodiazepines
NALOXONE – MITIGATING STRATEGY
- Opioid antagonist
  - Competitively binds and displaces opioids at receptor sites
- Formulations
  - Nasal – Narcan®
    - 4mg in one nostril
  - IM – Evzio®
    - 2mg IM

NALOXONE – MITIGATING STRATEGY
- Onset of action
  - IM: 2-5 minutes
  - Intranasal: ~8-13 minutes
- Duration of action
  - ~30-90 minutes
- Adverse reaction
  - Injection site reaction
  - Opioid withdrawal

NALOXONE ATOMIZER KIT

NALOXONE IM – EVZIO®

NALOXONE NASAL – NARCAN®
REFERENCES


REFERENCES


26. Engler JS. Potential for improved multidisciplinary collaboration between healthcare providers and infectious disease specialists. JAMA Internal Medicine 2015; 175: 640-641


