Pain and Symptom Management for Children with Serious Illness: Challenges and Opportunities in the Context of the Opioid Epidemic

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Learning Objectives: “Opioid Epidemic”

- Explore, whether a 2016 CDC guideline for adults resulted in significant increase of suffering of infants, toddlers, children and adolescents in the United States
- “Opioid Epidemic” = “Polypharmacy Illicit Drug Epidemic”
- What are pediatric challenges?
- Where are pediatric opportunities?
Pediatric Representation in Current National Discussion

2016 CDC Guidelines for Prescribing Opioids for Chronic Pain:
- 0% pediatric content
- 0% pediatric evidence
- 0% pediatric specialists

74.3 million children 0-17 years in USA

Pediatric content today:
20 out of 395 minutes

Pediatric Pain - Status Quo

- Pain in children's hospitals is common, under recognized and under treated

- Parents expect pain to be relieved

- Assumption: everything possible is done
  - Lancet 187; 1(8527):243-8

Pediatric Pain - Status Quo

- USA: adults receive more than two - three times as many analgesic doses as children (with identical diagnoses)

- The younger children are, the less likely they receive appropriate analgesia

- Compared to adults, pediatric patients receive fewer and/or incorrectly dosed analgesics in daily routine
Inappropriate Analgesia:

- Children with persistent pain suffer more physical symptoms in adult life, more anxiety and more depression. 1946 Medical Research Council and 1958 National Child Development Study.


Trauma & post-traumatic stress disorder (PTSD):


More than 115 children die in the US every day...

- More than 1 child every 15 minutes...
Boeing 747-400
416 passengers

US Health Care System...?

- USA: (conservatively estimated)
- 237,000 children live with life-limiting conditions (LLC)
- 570 “Boeing 747”
- > 15,000 children 0-17 years die each year due to life-limiting conditions
- 36 “Boeing 747”
  - one crash every 10 days

Distressing Symptoms Requiring Opioids?

Opioids

- Opioids are associated with many side effects and are potentially lethal
- But, no other analgesics equal in potency and effect have been discovered or developed to reduce suffering
- Opioids need to provide adequate treatment of pain and suffering after surgeries, burns, physical trauma, and medical illnesses such as sickle cell crisis, cancer, and pancreatitis etc.

The one with the “opioid epidemic”...

Addiction

“Charlotte, I am worried about addiction. When children are in severe pain, it’s best just to NOT give them any opioids, am I correct...?”

https://www.youtube.com/watch?v=7Csudpyeu9W
produced many experts, pundits, and politicians who offer simplistic blameworthy origins for the problem e.g.
- overprescription of opioids
- deceptive marketing of opioids
- The Joint Commission
- and/or an inability of Americans to endure discomfort

as well as simplistic solutions, e.g.
- draconian restriction of prescribing
- mandatory use of prescription drug monitoring programs
- non-opioid alternatives to opioids: acupuncture, meditation, and/or yoga

“Opioid Crisis” according to

Present problem much more one of deaths from illicit drugs than from prescription opioids
more about deaths from illicit use of prescriptions than from medical use of prescription opioids
We have an epidemic of substance use disorder (SUD) embedded in a complicated matrix of despair and hopelessness across the United States

correlates closely with socioeconomic factors such as unemployment, poor education, availability of illicit street and diverted prescription opioids, genetic predisposition to SUD, and psychiatric morbidity
Thus, there is scant evidence to support existence of epidemic of deaths due to appropriate use of prescribed opioids
“How many children have to suffer needlessly from pain to avoid one opioid death?”

Does prescribing opioids to children in pain result in increased risk of drug abuse in adulthood?

Substance use disorder

- Age 35: Multiple cohorts of nationally representative probability samples of U.S. high school seniors (n = 4072)

  - Appropriate medical use of prescription opioids in adolescence NOT associated with substance use disorder in adulthood
  - Whereas any nonmedical use predicted substance use disorder symptoms
  - Risk of substance use behaviors during adolescence substantially increased if adolescents reported any history of nonmedical use of prescription opioids, whereas appropriate medical use of prescription opioids did not seem to be associated with substance use behaviors
• Two public school districts in Metro Detroit 2009-2010: 11% opioid use or misuse last year

• 4 out 5 adolescents (grade 7-11) used opioids as prescribed.
• 20% (n=95) reported misuse, of those:
  • 76% (n=72) “for pain relief only”
  • 24% (n=23) “for non-pain relief” (because it gives me a high, because it counteracts the effects of other drugs, because of experimentation, because it is safer than street drugs, because it helps me sleep, because it decreases anxiety, because I am addicted)

• adolescents with physical pain, mental health, sleep problems were more likely to use and misuse opioids

Medical “Misuse”

Misuse of opioids among US 12th graders dropped dramatically despite high overdose rates among adults


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

http://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm

• Scope:“patients aged ≥18 years with chronic pain outside of palliative and end-of-life care” and “treating patients with chronic pain (i.e., pain lasting >3 months or past the time of normal tissue healing) in outpatient settings”
  “recommendations do not address the use of opioid pain medication in children or adolescents aged <18 years”

• Yet... children are suffering TODAY because of this (and other guidelines / regulations) ...
2 of my Patients

- Sophia, 11 years
- Freya, 13 years

So, what amount of opioid prescribing is appropriate?

Multimodal analgesia act synergistically for more effective pediatric pain control with fewer side effects than single analgesic or modality

- **Acute Pain**
  - Medications (Opioids, simple analgesia, Adjuvant medications)
  - Interventions (nerve block, epidural)
  - Rehabilitation (PT, OT)
  - Psychology (CBT)
  - Integrative (“non-pharmacological”) modalities

- **Chronic Pain: Pediatric Pain Clinic**
  - Rehabilitation (PT, OT)
  - Integrative (“non-pharmacological”) modalities
  - Psychology (CBT)
  - Normalizing Life (school, sleep etc.)
  - Opioids usually contraindicated
Pain Treatment

“Fluffy, do children in pain have access to a pediatric pain clinic with psychology, physical therapy and yoga in USA…? Do health insurers cover costs for those evidence-based treatments…?”

Pediatric Patients: Status-Quo

- Most pediatric patients do NOT have access to effective safe alternatives to opioids that are covered by insurance (!)
- Designated Inpatient Pain Teams
- Interdisciplinary Pain Clinics
  - Physical Therapy
  - Psychology
  - Integrative (non-medicine strategies)
- Mental health services
- Drug treatment programs
Conclusions

- Children in severe acute pain and during their end-of-life are suffering TODAY because adult “experts” made “adult guidelines” with NO consideration toward children (22% of our population)
- Withholding evidence-based analgesia to children in pain not only unethical, but causes immediate and long-term harm
- Potential risks in safety of analgesics real, but manageable; cannot justify denying administration of opioids to pediatric patients with severe tissue injury / end-of-life
- Opioids contraindicated in chronic pain
- While prescription opioids continue to play part in the crisis, illicit drugs are driving forces behind the increase in unintentional overdose deaths in the United States

Opportunities….?

- To avoid children, teenagers (and adults) dying of opioids and illicit polypharmacy: Pediatric patient need to have access to
  - interdisciplinary outpatient pediatric pain clinics
  - inpatient pediatric pain services
  - mental health services
  - drug treatment programs
- i.e. offered by health care systems...
- ...and treatment must me covered by health insurance...
Treating Pain & Suffering in Children
“Keeping the Eye on the Ball …?”

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12th International Symposium on Pediatric Pain (ISPP)
• Basel, Switzerland, June 16-20, 2019
http://www.ispp2019.org

Education in Palliative & End-of-life Care (EPEC): Become an EPEC-Peds Trainer Conference
• Pune, India, January 19-20, 2019
• Sydney/Australia, March 8-9, 2019
• Minneapolis, MN, USA, Oct 2-4, 2019
• Curso de Capacitadores EPEC-Peds LatinoAmérica (in Spanish): South America, Nov 2018
• Professional Development Workshop, Minneapolis, MN, USA, Oct 5, 2019

12th Pediatric Pain Master Class
• Minneapolis, Minnesota, USA | June 13-18, 2020