Abuse of Immediate Release Opioid Analgesics as Compared to Extended Release Formulations in the US

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Disclosures

• Most manufacturers of prescription opioids or stimulants in the US subscribe to RADARS System.

• RADARS System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado.

• Subscribers receive information, but do not participate in developing the System, data collection, or analysis of the data. They do not have access to the raw data.

• Employees are prohibited from personal financial relationships with any company.
Background

• Therapeutic use and abuse of prescription opioids in US increased dramatically 1990-2010

• CDC estimated deaths related to pharmaceutical opioids nearly 19,000 in 2014
Background

• Strong regulatory focus on extended release (ER) medication abuse
  • US FDA concerned for potential increased risk of serious side effects
  • Risk Evaluation and Mitigation Strategy (REMS)
  • Current abuse deterrent formulations (ADFs)
Background

- However, immediate release (IR) opioids may be the bigger public health issue
  - 90% of opioid analgesic prescriptions dispensed
  - Majority of abusers initiate abuse with IR
  - Not currently subject to REMS or similar regulation
  - No current ADFs
Objective

• To compare rates of opioid analgesic abuse reported for ER and IR opioid analgesic formulations over time in US poison centers
Methods

• Compare rates of Intentional Abuse reported for ER and IR opioid formulations

• Data from RADARS System Poison Center Program
Methods

- Data evaluated from 2009-2014
- Adjusted for population, prescriptions dispensed, and tablets dispensed
- Poisson regression used to compare IR and ER opioid case counts over time
Results

- IR opioids are prescribed at a rate 12-16 times higher than ER
- IR opioids are dispensed in 3-7 times greater gram quantities than ER
Results

• Poison Center Program
Discussion

- IR opioid abuse and diversion impact a much larger absolute number of individuals than ER opioids

- More prescribing = more reported abuse

- Population rates higher for IR than ER
Discussion

• Current US policy misses a prime opportunity for intervention
  • Focusing on IR formulations impacts more individuals
  • Many may be early in process of initiation of abuse
  • Targeting both IR and ER decreases “squeezing the balloon” effect
Discussion

• Rates per prescriptions dispensed higher for ER than IR
  • ER more desirable for experienced abusers?
  • Higher mg dose per pill

• Adjusting for tablets dispensed shows similar effect
Conclusion

- IR medication abuse impacts a much larger absolute number of individuals in the US than ER

- For the greatest public health impact, interventions to decrease prescription opioid abuse in the US should include both IR and ER formulations
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Questions?