

Human Errors May Explain An Epidemic of Prescription Pain Control Overdose Deaths



Research Article

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Abstract

This study reviews the validity of a public perception promoted by Centers for Disease Control that prescription pain medications have contributed to an epidemic of overdose deaths and illicit use of heroin. No scientific evidence has been found to support a causative link between prescription pain medications and an epidemic of overdose deaths and illicit use of heroin. The study results suggest highly complex multifactorial medical and psychosocial influences to be predominant in the increasing numbers of overdose deaths.

Introduction

A prevalent public perception promoted by Centers For Disease Control has been suggesting that prescription pain medications have led to an epidemic of overdose deaths and also have contributed to the increased abuse of illicit drugs including heroin [1].

The negative public perception of prescription pain medications has adversely impacted people with chronic pain who may benefit from prescription pain medications.

The aim of this review is to determine whether the alleged association between the increasing number of overdose deaths, worsening of drug addiction and the prescription pain medication is scientifically valid.

Results

Centers for Disease Control and Prevention (CDC) have published numerous alerts repeatedly warning of a deadly epidemic of deaths from prescription painkiller overdoses (Figure 1 & 2).

On November 4, 2015 DEA acting administrator Chuck Rosenberg warned doctors and the public: guns safer than prescription drugs. He declared that in 2013 more than 46,000 people in the United States died from a drug overdose and more than half of those were caused by prescription painkillers and heroin.

CDC prescription drug overdose data in October 2015 reported total annual overdose deaths jumped to 44,000 deaths

with prescription drugs deaths of 23,000 and 16,000 deaths from prescription opioids [1].

CDC prescription drug overdose data also reported the following [2]:

- Every day in the United States 44 people died as a result of prescription opioid overdose.
- Nearly 2,000,000 Americans either used for or dependent on opioid painkillers in 2013.
- Drug misuse caused about 2.5 million emergency department visits in 2011.

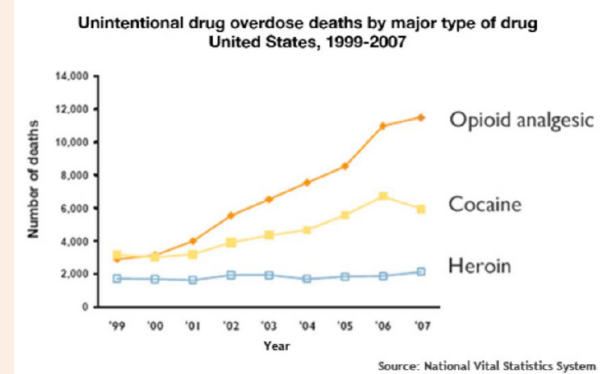


Figure 1: CDC Promotion of the Epidemic.



Prescription painkiller* overdoses are a public health epidemic

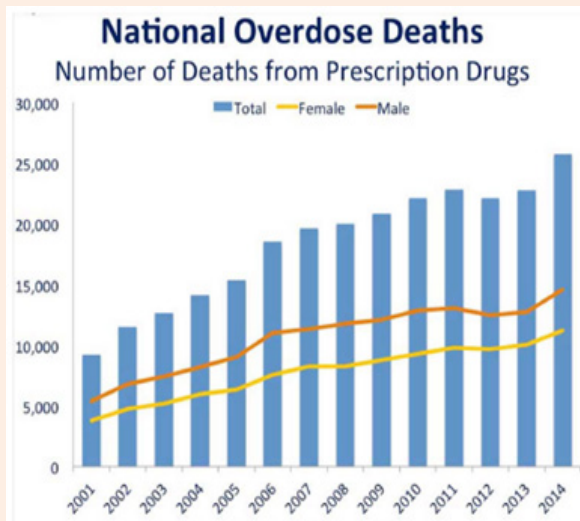
- Prescription painkiller overdoses killed nearly 15,000 people in the US in 2008. This is more than 3 times the 4,000 people killed by these drugs in 1999.
- In 2010, about 12 million Americans (age 12 or older) reported nonmedical use of prescription painkillers in the past year.
- Nearly half a million emergency department visits in 2009 were due to people misusing or abusing prescription painkillers.
- Nonmedical use of prescription painkillers costs health insurers up to \$72.5 billion annually in direct health care costs.

* "Prescription painkillers" refers to opioid or narcotic pain relievers, including drugs such as Vicodin (hydrocodone), OxyContin (oxycodone), Opana (oxymorphone), and methadone.

Figure 2: CDC Promotion of the Epidemic.

Analysis

CDC data showed that between 2000 and 2013 the number of deaths from suicide jumped from 33,000 to 41,000 annual deaths corresponding to a jump from 10.4 to 12.6 per hundred thousand population. There was an increase in heroin overdose deaths from 0.7 to 2.5 deaths per hundred thousand population in the same period [3]. They showed a decline of prescription pain medication overdose deaths from 2011 to 2013 [3] (Figures 3-6).



Number of Deaths from Prescription Drugs

The figure above is a bar chart showing the total number of U.S. overdose deaths involving prescription drugs from 2001 to 2014. The chart is overlaid by a line graph showing the number of deaths by females and males. From 2001 to 2014 there was a 2.8-fold increase in the total number of deaths.

Number of Deaths from Prescription Opioid Pain Relievers

The figure below is a bar chart showing the total number of U.S. overdose deaths involving opioid pain relievers from 2001 to 2014. The chart is overlaid by a line graph showing the number of deaths by females and males. From 2001 to 2014 there was a 3.4-fold increase in the total number of deaths.

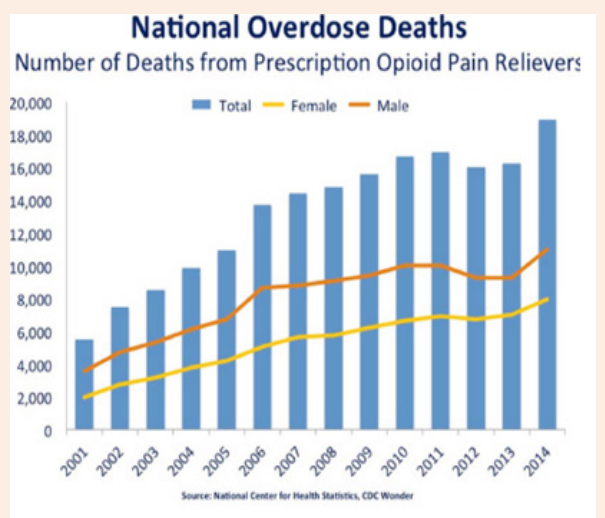
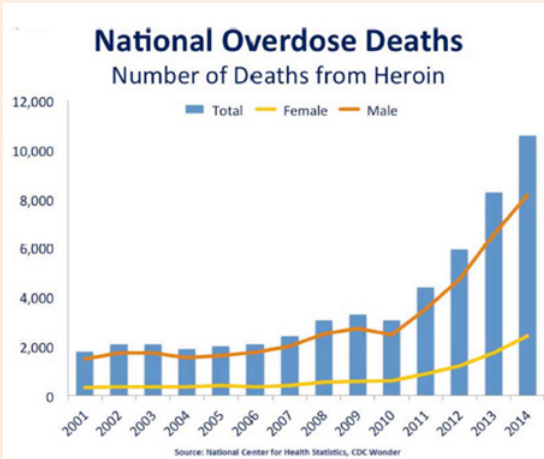


Figure 3: CDC Promotion of the Epidemic.

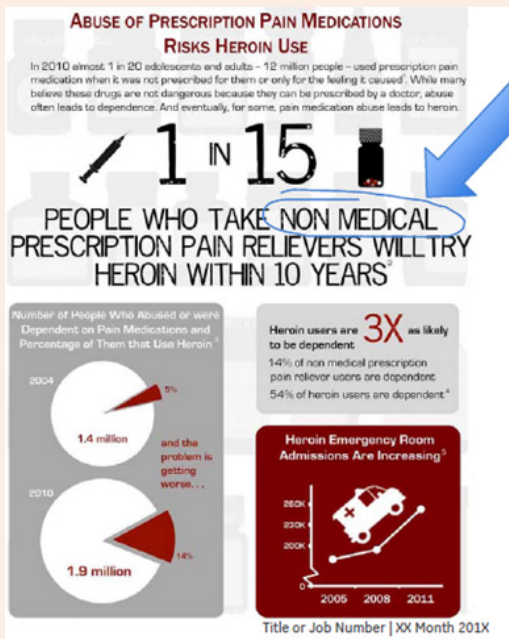


Number of Deaths from Heroin
 The figure is a bar chart showing the total number of U.S. overdose deaths involving heroin from 2001 to 2014. The chart is overlaid by a line graph showing the number of deaths by females and males. From 2001 to 2014 there was a 6-fold increase in the total number of deaths.

Figure 4: CDC Promotion of the Epidemic.

Year	2011	2013
# Deaths per 100k population	7.3	7.2

Figure 5: Overdose Deaths From Prescription P Medications Have Declined From 2011 to 2013.



Shows misrepresentation of research data to wrongly link prescription pain medication use with increased likelihood of heroin use in the future. The study subjects were not patients with chronic pain receiving prescription pain medications

Figure 6: False Alarm – False Advertising.

A groundbreaking study by Drs Webster & Dasgupta [3] observed that common recording errors made the overall death statistics of overdose deaths scientifically questionable. Of significance was possibly the exaggerated numbers of prescription pain medication deaths because often the overdose diagnosis did not include laboratory data and based upon police and unconfirmed reports.

A careful review of CDC disseminated data in support of a causative link between prescription pain medications and an epidemic of deaths from prescription pain medications and illicit use of heroin revealed no scientifically valid study to support the central claim.

Discussion

It seems that the current prevalent impression that prescription pain medications have been causing much harm by contributing to an epidemic of overdose deaths, illicit drug use lacks any scientific evidence. Some of the erroneous public perception can be explained on the basis of the following:

- I. Association is not causation
- II. Total drug overdose deaths (44,000 or 14 people per hundred thousand population) include suicides and antidepressants and grossly distort final results.
- III. Prescription pain medications are wrongly singled out as the predominant cause of high numbers of total drug overdose deaths without supporting evidence. From 2011 to 2013 the number of deaths from prescription pain medications have declined from 7.32 to 7.2 per hundred thousand population.
- IV. The high number of suicides (40,000 or 12.5 people per hundred thousand population) are similar to the high number of overdose deaths. This suggests that the number of overdose deaths reflects complications of many complex mental disorders independent of prescription pain medications.
- V. CDC statistics wrongfully claim many fold increases in overdose deaths by excluding a scientifically valid comparison of number of deaths per hundred thousand population and only citing the overall numbers of deaths. This is a serious statistical misrepresentation.

According to the Institute of Medicine Report that there are some 110 million Americans with chronic pain [4-9]. This large number may reflect multiple social medical realities – aging nation, industrial and traffic accidents, wars and longer longevity with cancer and other chronic disorders---and has greatly increased the number of people who may benefit from prescription pain medications.

The risk of medication overuse and addiction are serious concerns. They should be addressed without impeding adequate treatment for people with pain.

Clinicians must also be aware of the potential adverse events including fatalities associated with disruption of treatment

with opiates in different subgroups. Of significance is the well-established risk of premature death upon discontinuation of opiates independent of withdrawal responses. Dissemination of erroneous information about prescription pain medications have gained even more significance because of the vast literature revealing serious complications of untreated chronic pain that may include brain atrophy and neurodegeneration [8].

Conclusion

Despite the current prevalent public perception that prescription opiates have caused an epidemic of overdose deaths and illicit use of drugs there is no scientific evidence to support it.

Conflict of Interest

This is to confirm that I have no conflict of interest in the publication of this manuscript. I also confirmed that I have not received any financial aid in the preparation of this manuscript.

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