

# HEALTH MATTERS

Riverside University Health System — Public Health  
Epidemiology & Program Evaluation



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## Opioid-Related ED Visits and Hospitalizations in Riverside County

### INTRODUCTION

Opioid-related inpatient hospitalizations and emergency department (ED) visits have increased nationally and statewide since 2010. Riverside County mirrors national and state trends, with both ED visits and inpatient hospitalizations increasing more than 50% (56% and 53% respectively) from 2010 - 2016.

Much of these opioid-related inpatient hospitalizations and ED visits are as a result of the misuse and addiction to opioids, including prescription pain relievers. In the U. S., approximately 21– 29% of patients who are prescribed opioids for chronic pain misuse them (NIDA, n.d.).

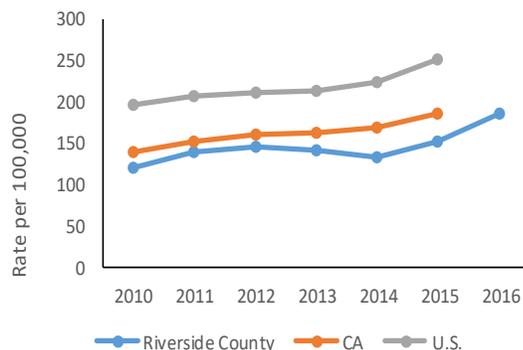
This brief will explore the increase in ED visits and inpatient hospitalizations for Riverside County by age group, ethnicity and city as well as the trend for opioid medications prescribed within the county during this time period.

For the purposes of this brief, “opioid-related” refers to primary and other diagnosis where opioids are involved. These include ICD10 codes F11.11 for opioid abuse.

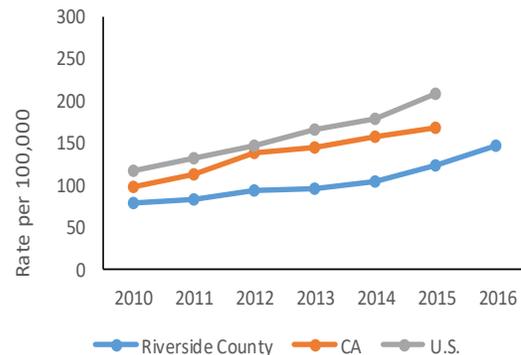
### KEY FINDINGS

- Opioid-related ED visits and inpatient hospitalizations increased 56% and 53 %, respectively, from 2010 - 2016.
- In 2016, approximately two-thirds of opioid-related ED visits and inpatient hospitalizations (61% and 68%, respectively) occurred among white residents.
- In 2016, the highest rate of opioid-related inpatient hospitalization occurred among adults 54 - 65 years of age.
- Rates of opioids prescribed per 1,000 residents decreased 10% from 2015 to 2017.

**Figure 1.** Opioid-Related Inpatient Hospital Stays, Riverside County, California and U.S. 2010 - 2016.



**Figure 2.** Opioid-Related Emergency Department (ED) Visits, Riverside County, California and U.S. 2010 - 2016.

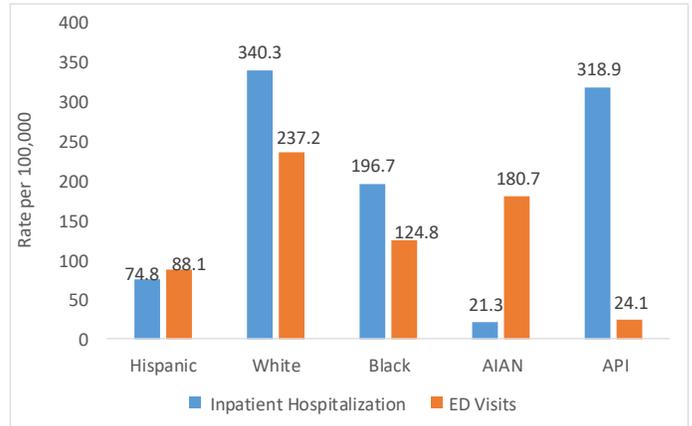


# Opioid-Related Emergency Department Visits and Inpatient Stays, 2016

## Race/Ethnicity

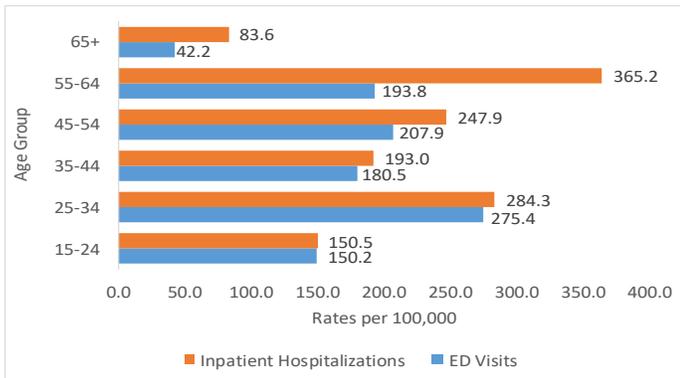
In 2016, there were 3,387 ED visits and 4,306 inpatient hospitalizations that were opioid-related. Overall, ED visits and inpatient hospitalizations rates were highest among whites at 340.3 per 100,000 and 237 per 100,000, respectively (Fig. 3). ED visits for whites, blacks and Asian Pacific Islanders surpassed the overall County rate of 184.9 per 100,000.

**Figure 3.** Opioid-Related Emergency Department (ED) Visits, and Hospitalizations, by Ethnicity, Riverside County, 2010 - 2016.



## Age

**Figure 4.** Opioid-Related Emergency Department (ED) Visits, and Hospitalizations, by Age, Riverside County, 2010 - 2016.

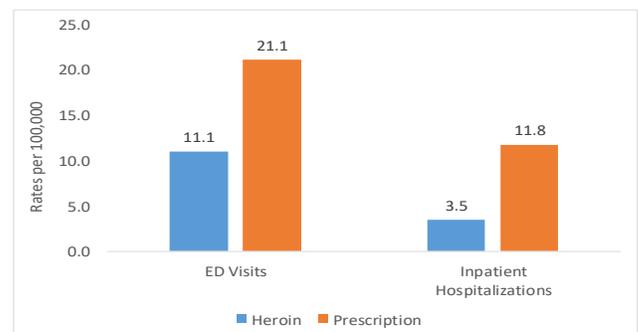


In 2016, adults 25 years of age and older were more likely to be hospitalized for opioid-related conditions. The largest rate was among the 55-64 year age group, double the overall rate for inpatient hospitalizations (Fig.4). This age group also had the highest rate for inpatient stays related to prescription drugs and the 25-34 age group had the highest rate of inpatient stays related to heroin.

## Opioid Category

In 2016, Riverside County residents were more likely to have opioid-related ED visits and inpatient hospitalizations due to prescription drugs compared to heroin. Prescription opioids were twice and four times more likely than heroin to be the primary or underlying factor for ED visits and inpatient hospitalizations, respectively.

**Figure 5.** Opioid-Related Emergency Department (ED) Visits, and Hospitalizations, by Opioid Category, Riverside County, 2010 - 2016.



For the purposes of this brief, prescription drugs included methadone, morphine, codeine, hydrocodone and oxycodone.

## TOP 10 Cities—Opioid-Related ED Visits and Inpatient Hospitalizations

**Table 1:** Top 10 Cities with the Highest Opioid-Related ED Visits in Riverside County, 2016  
(Rates per 100,000)

City	Rate
Blythe	440.6
Palm Springs	374.7
Wildomar	269.5
Banning	265.9
Indio	259.2
Desert Hot Springs	248.4
Hemet	230.5
Lake Elsinore	202.6
Calimesa	191.0
Riverside	165.1

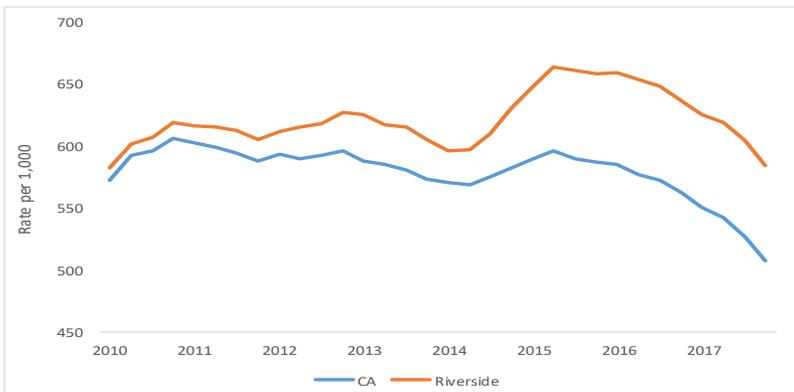
**Table 2:** Top 10 Cities with the Highest Opioid-Related Inpatient Hospitalizations in Riverside County, 2016  
(Rates per 100,000)

City	Rate
Palm Springs	349.6
Desert Hot Springs	339.3
Calimesa	310.9
Hemet	228.9
Wildomar	218.8
Rancho Mirage	218.2
Palm Desert	217.3
Cathedral City	189.7
Indio	161.6
La Quinta	159.8

Residents of Palm Springs, Desert Hot Springs, Wildomar, Indio, Hemet and Calimesa are among the top 10 cities with the highest opioid-related rates for both ED visits and inpatient hospitalizations in 2016. At the top of the list for ED visits is Blythe (441 per 100,000), followed by Palm Springs (375 per 100,000) and Wildomar (270 per 100,000). At the top of the list for opioid-related inpatient hospitalizations are Palm Springs (350 per 100,000), Desert Hot Springs (339 per 100,000) and Calimesa (311 per 100,000). Seventy percent of the top 10 cities with the highest rates for opioid-related inpatient hospitalizations are located in the East region of the county. Eighty percent of the top 10 cities with the highest rates for opioid-related ED visits are located in the East and Mid regions of the county (40% for each region, respectively).

## Opioids Prescribed from 2010 to 2017 in Riverside County and California

**Figure 6.** Twelve month rolling average of opioids prescribed in Riverside County and California, 2010 – 2017.



The amount of opioids prescribed in California and Riverside County peaked in 2015, reaching an all-time high of 589.8 per 100,000 and 684.9 per 100,000, respectively. From 2015 through 2017, these rates decreased by 10% and 12% for California and Riverside County, respectively. This decrease may be as a result of changes in guidelines and regulations for prescribing medications in 2014 (see next page for some of these guidelines and regulations).

## Changes in Prescribing Guidelines and Regulations

### In 2014

- ▶ The federal government tightened prescribing rules for hydrocodone combined with a second analgesic, like acetaminophen (Sullivan, 2018).
- ▶ The California Medical Board published Guidelines for Prescribing Controlled Substances for Pain.
- ▶ The Medical Board joined with the California Department of Public Health, the Pharmacy Board, and many other State agencies and stakeholders to expand prevention and treatment strategies as well as to decrease the amount of misuse.

### In 2016

- ▶ The CDC released Guidelines for Prescribing Opioids for Chronic Pain.
- ▶ The Comprehensive Addiction and Recovery Act ([P.L. 114-198](#)) was signed into law.

### In 2017

- ▶ Federation of State Medical Boards (FSMB) published Guidelines for the Chronic Use of Opioids (April 2017).
- ▶ The VA/DoD Clinical Practice Guideline for Opioid Therapy for Chronic Pain was published (February 2017).

### From the Desk of Cameron Kaiser, MD, MPH, FAAFP, Public Health Officer, County of Riverside

The American opioid crisis is the perfect example of a perfect storm: medications of abuse being prescribed in large numbers due to well-meaning but misplaced clinical criteria, a lack of public and professional understanding of these drugs' addictive potential, and pharmaceutical companies with a financial stake in ensuring opioid medications are used as much as possible. Unfortunately, whatever benefit these medications may have had in treating chronic pain has been seriously outweighed by the negative externalities caused by their impact upon society.

Chronic pain is poorly defined and even more poorly managed by us in the medical community. No patient can clearly fall into a neat classification scheme: all drug-seekers probably have some legitimate pain that their habit is treating, and all chronic pain patients will invariably have some drug-seeking behavior because of these drugs' strong addictive potential. Unfortunately, chronic pain patients have filled the void with their own inadequate attempts at management, and it is the individuals in this report who have suffered the most harm as a result.

The impact of opioid drugs on Riverside County and the nation as a whole will reverberate for years even as the pendulum on the medically appropriate way to manage pain continues to swing. Other controlled substances like the benzodiazepine class are likely to become future concerns of abuse for similar reasons. Measuring, addressing and reducing the harms caused by opioid medications and other addictive prescription drugs will require a major concerted effort by the county, medical care providers, medical care plans and individual patients to ensure pain is addressed -- but not in a way that leaves people worse off than when they started.

#### References:

1. CDC. (2017). Opioid Overdoses Treated in Emergency Departments. Retrieved from <https://www.cdc.gov/vitalsigns/opioid-overdoses/index.html>
2. National Institute on Drug Abuse [NIDA]. (n.d.). Opioid Overdose Crisis. Retrieved from <https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis>
3. The National Alliance of Advocates for Buprenorphine Treatment. (n.d.). Retrieved from [https://www.naabt.org/education/opiates\\_opioids.cfm](https://www.naabt.org/education/opiates_opioids.cfm). Accessed June 12 2018.