

# HEALTH MATTERS

Riverside University Health System — Public Health  
Epidemiology & Program Evaluation



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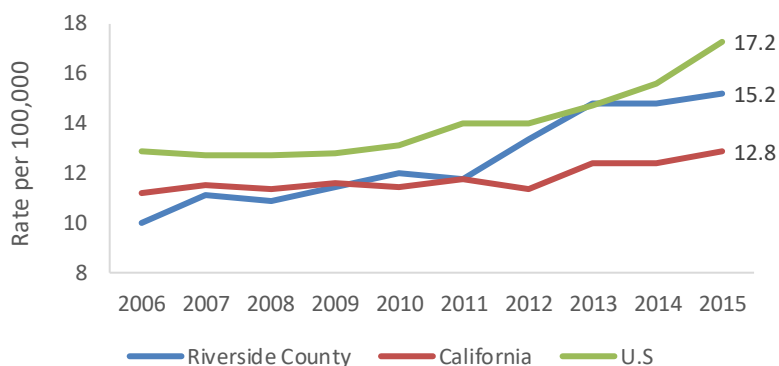
## Overdose and Opioid Deaths in Riverside County, CA

### INTRODUCTION

Deaths from drug overdose continue to increase in the U.S. Over a 6-year period from 1999 to 2014, deaths from drug overdose tripled and the impact of this is felt at state and local levels nationwide. Contributing significantly to this epidemic is the increase in use of pain reliever opioids;<sup>1</sup> in 2015, it was estimated that 11.5 million people in the U.S. (5% of the population aged 18 years and older) used opioid pain relievers for non-medical purposes.<sup>2</sup> Today, the amount of opioid pain relievers sold in the U.S. is four times higher than it was in 1999.<sup>1</sup>

Data from 2006-2015 shows that the rate of drug overdose deaths in the U.S. increased significantly during this 10-year period.<sup>3</sup> When compared to California and the U.S., Riverside County had the largest increase over the 10-year period, with death rates increasing 51.8% (from 10.0 to 15.2 per 100,000). Comparatively, drug overdose death rates in the U.S. and California increased 33.9% (from 12.9 to 17.2 per 100,000) and 14.8% (from 11.2 to 12.8 per 100,000) respectively.

**Figure 1. Rates of Overdose Deaths**  
Riverside County, 2006 - 2015



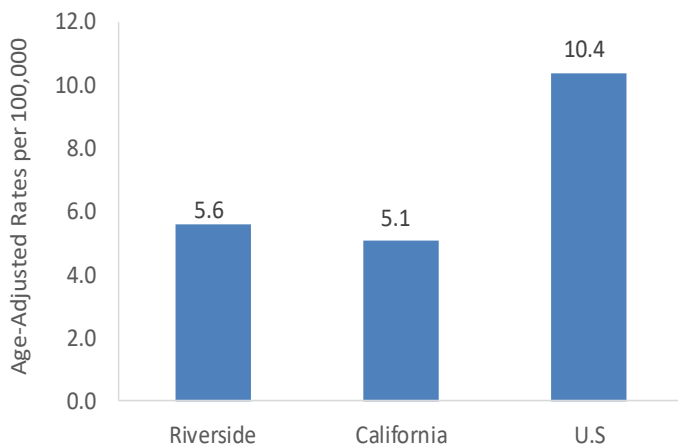
### KEY FINDINGS

- ▶ The rate of unintentional drug overdose increased 51.8% over 10 years, from 10.0 per 100,000 in 2006 to 15.2 per 100,000 Riverside County residents in 2015.
- ▶ Unintentional overdose death rates increased among all races over a 10-year period from 2006 to 2015. The highest increase occurred among whites (91%) and the lowest among Blacks (30%). Unintentional overdose increased 47% among American Indian Alaskan Native (AIAN) and 52% among Hispanics.
- ▶ Unintentional overdose deaths among Blacks decreased significantly from 2014 and 2015 (39%).
- ▶ Overall opioid-related overdose deaths increased 10% from 2011 to 2015 in Riverside County.
- ▶ Deaths involving heroin increased 80% from 2011 to 2015 in Riverside County.
- ▶ One in four overdose deaths in 2015 involved heroin.

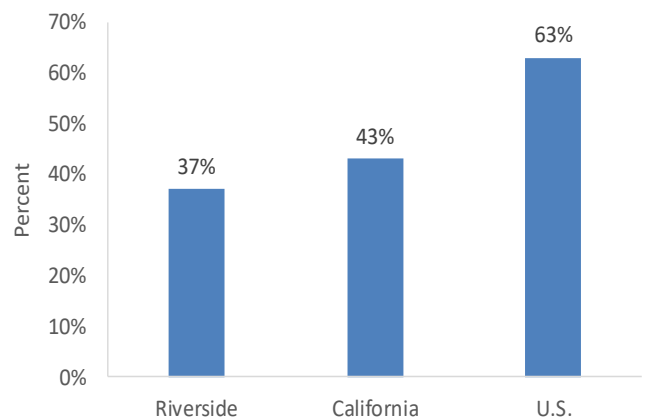
## OPIOIDS

- ▶ Opioids include both illegal drugs such as heroin and legal prescription pain relievers such as oxycodone, hydrocodone, codeine, morphine, fentanyl and others.
- ▶ Opioids are chemically related and interact with opioid receptors on nerve cells in the brain and nervous system to produce pleasurable effects and relieve pain<sup>6</sup>.
- ▶ In 2015, the age-adjusted rate of overdose involving opioids for Riverside County was slightly higher than California (5.6 and 5.1 per 100,000, respectively).
- ▶ Riverside County had the lowest percentage of opioid deaths out of all overdose deaths when compared to California and the U.S.

**Figure 2. Rates of overdose involving opioids**  
Riverside County, California and U.S., 2015



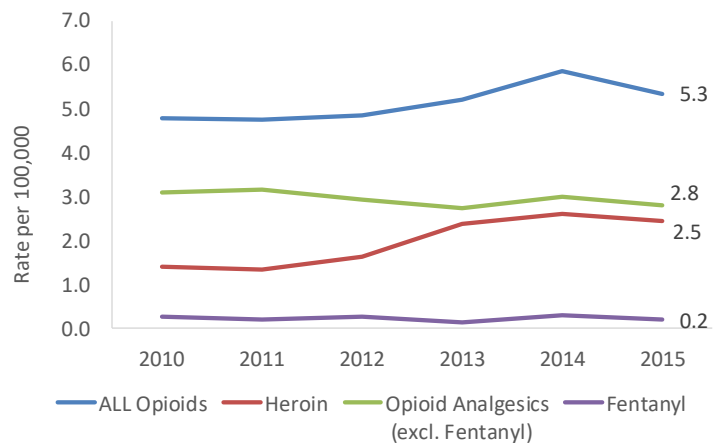
**Figure 3. Opioid overdose deaths as a percent of all drug overdose deaths**  
Riverside County, California and U.S., 2015



## Overdose deaths involving Opioids in Riverside County

In Riverside County, among the opioids classes, the largest increase (80%) was observed for heroin from 2011 to 2015. A report from the CDC stated that national increases in opioid death overdoses have been driven by significant increases in synthetic opioids, specifically heroin. Nationally, deaths from heroin increased 20% within one year from 2014 to 2015.<sup>4</sup>

**Figure 4. Overdose deaths by opioid type**  
Riverside County, 2011 - 2015



## DEMOGRAPHICS of Opioid Related Overdose Deaths in Riverside County<sup>9</sup>

<i>per 100,000</i>	2011	2012	2013	2014	2015	5-yr Total	5-yr Avg Rate
<b>Gender</b>							
Male	76	67	89	96	75	403	7.1
Female	31	42	29	39	49	190	3.4
<b>Race/Ethnicity</b>							
White	77	76	87	92	83	415	11.4
Hispanic	22	24	25	29	35	135	3.9
API	1	1	0	1	2	5	0.9
Black	4	3	4	9	3	23	4.5
<b>Age</b>							
10-17	2	0	0	1	0	3	0.2
18-24	14	14	12	8	12	60	4.8
25-34	12	17	19	16	24	88	6.0
35-44	20	16	19	22	17	94	6.5
45-54	36	29	29	38	26	158	10.5
55-64	20	22	29	40	29	140	11.6
65+	3	11	10	10	16	50	3.4
<b>Total</b>	107	109	118	135	124	593	
<b>Rate</b>	5.6	5.7	6.0	6.8	6.2		6.1
<b>All Opioids</b>	107	109	118	135	124	119	

From 2011 - 2015 there was an average of

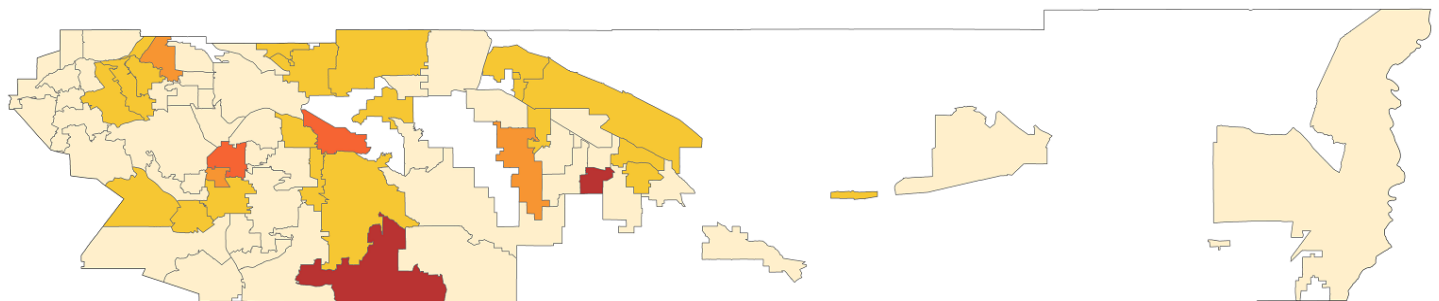
# 2

opioid-related overdose deaths per week in Riverside County

Top 5 Cities with the Highest Opioid-Related Death Rates							
	<i>per 10,000</i>						
	2011	2012	2013	2014	2015	5-yr Total	5-yr Avg Rate per 10,000
Hemet	13	9	12	16	8	58	9.7
Indio	7	5	1	8	9	30	5.4
Riverside	19	13	29	18	26	105	3.5
Corona	7	4	6	3	10	30	2.7
Moreno Valley	6	7	3	7	1	24	1.8

Among the top 5 cities, Hemet had the highest opioid-related death rates per 10,000.

## 2016 overall opioid overdose rates per 100,000 population by zip code, Riverside County<sup>10</sup>



Rate per 100,000 Residents by Zip Code (2016):

	0 - 5		6 - 12		13 - 19		20 - 26		27 - 32
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## ADDRESSING THE DRUG AND OPIOID OVERDOSE EPIDEMIC IN RIVERSIDE COUNTY

California is on the lower end of the drug and opioid overdose death rates when compared to the rest of the U.S. When compared to other California counties for overdose death rates, ranked by 3-year average (2013-2015), Riverside county ranks 28th (14.8 per 100,000) of 58 counties,<sup>8</sup> with age-adjusted rates higher than the HP 2020 goal of 11.3 per 100,000 and surrounding counties of San Bernardino (10.6 per 100,000), San Diego (13.0 per 100,000), Orange (11.0 per 100,000) and Los Angeles (7.3 per 100,000).<sup>8</sup>

For opioid overdose deaths rates, Riverside County's rate (4.3 per 100,000) is higher than Los Angeles (3.0 per 100,000) and San Bernardino (1.6 per 100,000), but lower than Orange (8.1 per 100,000) and San Diego (6.7 per 100,000).<sup>9</sup> This does not mean, however, that we shouldn't reduce the impact.

Opioid abuse is a public health issue that is being addressed nationally and locally. To address this issue locally, Riverside County has partnered with San Bernardino County and the Inland Empire Health Plan on the Inland Empire Opioid Crisis Coalition (IEOCC), an initiative bringing together medical providers, community stakeholders, health systems, hospitals, health plans and both county public health departments. The IEOCC is working to continue the implementation of an opioid emergency department toolkit launched by its predecessor, the Inland Empire Safe Opioid Prescribing Medical Task Force, aimed at reducing overprescription of opioid pain medications in emergency departments as well as giving patients additional options for management of their pain. In addition, the IEOCC seeks to add new stakeholders to the coalition (including other providers such as primary care and dentistry, and new partners such as law enforcement), address mental health needs in this population, build better tools for data analysis, improve access to care for individuals who are already addicted, and increase overall patient and provider awareness of when opioids are appropriate and when they are not.

However, such local and regional coalitions, even covering both counties, still need state and nationwide solutions to not only address regulations around prescribing and the appropriate legal classification of such medications, but also recognize that the opioid crisis is actually a symptom of a larger problem: an inability as a public health and medical care system to find good solutions for chronic pain. As long as the definition of pain is ill-defined and the treatment of pain is unspecified, we will always struggle with the solution because when it comes to physical pain and its mental health ramifications, even to this day we still don't yet fully understand the problem. — *Cameron Kaiser, MD, MPH, FAAFP, Public Health Officer*

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