

RxSafe Marin Report Card Potential Indicators



One of the strategic directions of the Data Collection & Monitoring Action Team is to generate and disseminate a report card that describes prescription drug misuse and abuse in Marin County with clearly defined indicators. The report card will serve as a tool to track our progress through time, to compare ourselves to other counties doing similar work, and to communicate about prescription drug misuse in Marin County. The set of 14 potential indicators includes relevant preliminary data.

Contact:

Karina Arambula

415-473-2715 karambula@marincounty.org

Jasmine Carver

415-473-2574 jcarver@marincounty.org

Dr. Matthew Willis

415-473-4163 mwillis@marincounty.org

**Potential Indicator 1:
Drug Overdose Deaths**

Why this matters:

A central goal of RxSafe Marin is to reduce fatalities due to prescription drug misuse. Drug overdose deaths should also be viewed as the "tip of the iceberg". The Centers for Disease Control and Prevention estimate that for every one death from prescription painkillers, there are 130 people who abuse and 825 people who are non-medical users.¹ By addressing prescription drug misuse, lives can be saved.

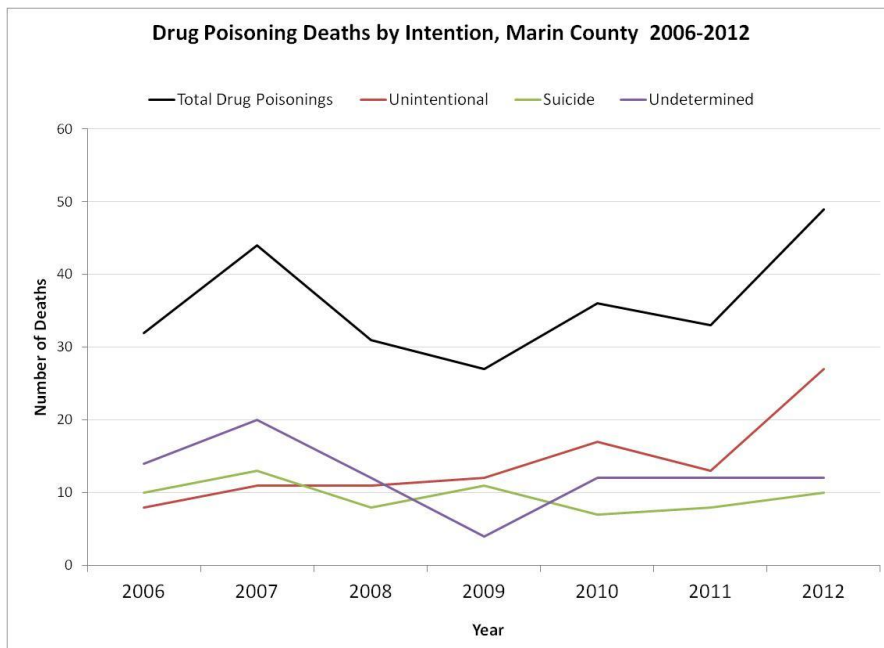
Data Source:

California Department of Public Health (CDPH) Vital Statistics

Report Card Data:

Indicator	2006	2007	2008	2009	2010	2011	2012
Total Drug Overdose Deaths	32	44	31	27	36	33	49

Supporting Data:



Data include poisonings from all drug types.

Works Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalafety/rxbrief/>

Potential Indicator 2:

Non-Fatal Opioid-Related Emergency Department Visits

Why this matters:

The Centers for Disease Control and Prevention (CDC) reports that in 2011, drug misuse and abuse caused about 2.5 million emergency department (ED) visits. Of these, more than 1.4 million ED visits were related to pharmaceuticals.¹ In the United States, prescription opioid abuse costs were about \$55.7 billion in 2007. Of this amount, 46% was attributable to workplace costs (e.g., lost productivity), 45% to healthcare costs (e.g., abuse treatment), and 9% to criminal justice costs.²

Data Source:

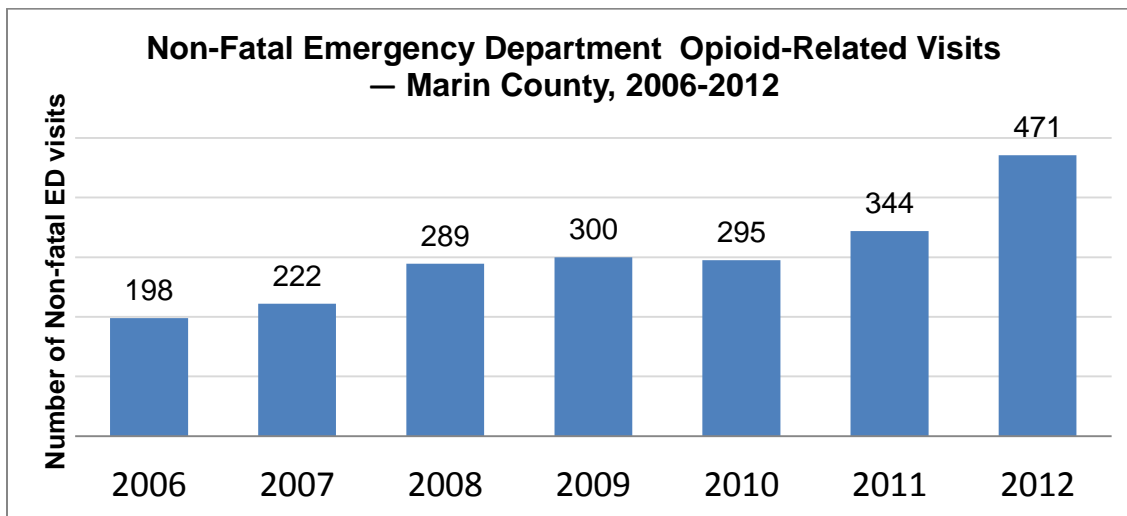
Office of Statewide Health Planning & Development (OSHPD). Emergency Department Data. Prepared by California Department of Public Health, Safe and Active Communities Branch

Report Card Data:

Indicator	2006	2007	2008	2009	2010	2011	2012
Non-Fatal Opioid-Related Emergency Department Visits	198	222	289	300	295	344	471

* While the emergency department visits counted here could result from misuse, they could also be due to opioid use as directed by a prescriber.

Supporting Data:



Includes poisoning and other physical and mental health injuries where the opioid use was part of the principal diagnosis.

Works Cited:

1. Substance Abuse and Mental Health Services Administration. Highlights of the 2011 Drug Abuse Warning Network (DAWN) findings on drug-related emergency department visits. The DAWN Report. Rockville, MD: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration; 2013. Available from URL: <http://www.samhsa.gov/data/2k13/DAWN127/sr127-DAWN-highlights.htm>
2. Birnbaum HG, White AG, Schiller M, Waldman T, Cleveland JM, and Roland CL. Societal costs of prescription opioid abuse, dependence, and misuse in the United States. *Pain Medicine* 2011; 12: 657-667

Potential Indicator 3:

Total Number of Prescriptions for Controlled Substances

Why this matters:

The quantity of narcotic prescriptions in a population has been associated with abuse, diversion and overdoses in various populations.¹ Prescriber practices, pharmaceutical companies and patient behavior (such as "doctor shopping") are all factors influencing the quantity of controlled substance prescriptions. This indicator allows us to track controlled substance prescriptions over time.

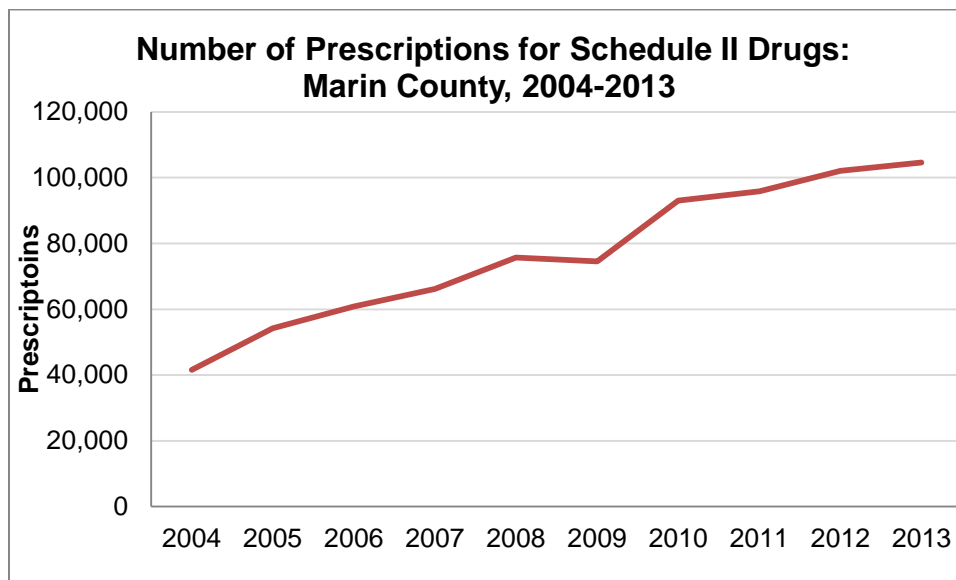
Data Source:

Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP)

Report Card Data:

Indicator	2010	2011	2012	2013
Total Number of Prescriptions for Controlled Substances	396,518	403,561	416,777	412,356

Supporting Data:



Works Cited:

1. NYC Department of Health and Mental Hygiene, City Health Information: Preventing misuse of prescription opioid drugs. (<http://www.nyc.gov/html/doh/downloads/pdf/chi/chi30-4.pdf>)

Potential Indicator 4:
Amount of Narcotics Prescribed

Why this matters:

Throughout the past decade, narcotic prescriptions have risen nationally. Concurrently, opioid dependence and abuse have increased.¹ This indicator shows the kilograms of morphine equivalents prescribed in the population. Morphine equivalents are used because of varied strengths of the drugs.² The measure reflects the strength of the narcotic, the dose (mg per pill), the number of pills per prescription, and the number of prescriptions in the population.

Data Source:

Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP)

Report Card Data:

Indicator	2010	2011	2012	2013
Amount of Narcotics Prescribed (Morphine Kilogram Equivalents)	191.1	187.1	189.8	181.1

Supporting Data:

**Morphine Milligram Equivalent Conversion Factors and Total Kilograms by Opioid –
Marin County, 2010-2013**

Narcotic	MME Conversion Factor	Kilograms of Narcotics (Morphine Equivalents)
Oxycodone	1.5	257.6
Hydrocodone	1	171.9
Morphine	1	129.3
Methadone	3	97.9
Hydromorphone	4	33.7
Buprenorphine	10	10.8
Oxymorphone	3	10.3
Codeine	0.15-0.25	8.7
Levorphanol	11	0.2

Works Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>
2. Rx for Prevention, Preventing Prescription Opioid Abuse.
<https://admin.publichealth.lacounty.gov/wwwfiles/ph/media/media/rx-nov-dec2012.pdf>

Potential Indicator 5:

Median Number of Pills per Narcotic Prescription

Why this matters:

In the U.S., over half of people who report abusing prescription painkillers get them free from a friend or relative.¹ For most patients with acute pain, such as after an injury or surgery, a 3-day supply is sufficient.² A reduction in the number of pills per narcotic prescription would reduce the amount of available drugs in the population, and therefore risk of adverse outcomes.

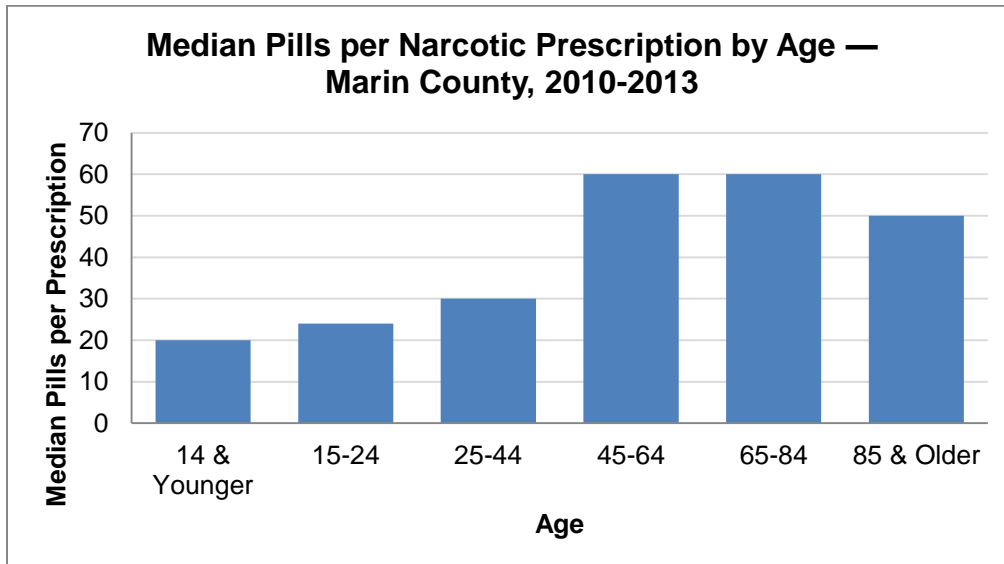
Data Source:

Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP)

Report Card Data:

Indicator	2010	2011	2012	2013
Median Number of Pills per Narcotic Prescription	50	45	50	56

Supporting Data:



Prescriptions with more than 600 pills were excluded

Works Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>
2. NYC Department of Health and Mental Hygiene, City Health Information: Preventing misuse of prescription opioid drugs. (<http://www.nyc.gov/html/doh/downloads/pdf/chi/chi30-4.pdf>)

**Potential Indicator 6:
Pounds of Safely Disposed Medications**

Why this matters:

Almost all prescription drugs involved in overdoses come from prescriptions originally; very few come from pharmacy theft. The amount of unused prescription medication in a population contributes to drug abuse, diversion and overdoses. In the U.S., 55% of people who abuse prescription painkillers get them from a friend or relative.¹ Drug take-backs provide the opportunity to properly dispose of unused prescription medication on a biannual basis. The Marin County Environmental Health Services is the designated local enforcement agency (EA) implementing the medical waste program in Marin County in accordance with the Medical Waste Management Act where the community can dispose of medical waste year round.

Data Source:

Drug Enforcement Agency (DEA)
County of Marin Environmental Health Services (EHS)

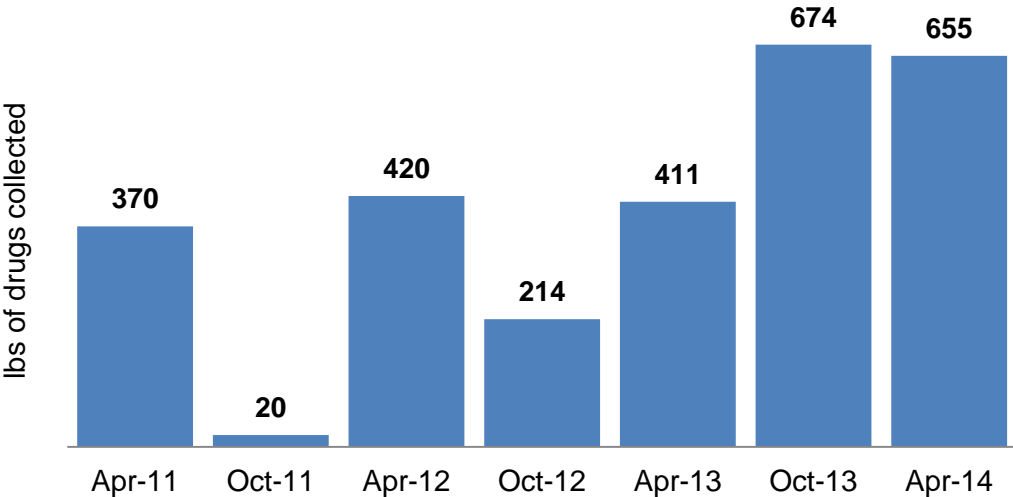
Report Card Data:

Indicator	2009	2010	2011	2012	2013	2014 (to date)
Pounds of Disposed Drugs						
• Via Take Back Events			390	634	1,085	655
• Via EHS Collection Sites	2,941	4,638	4,555	5,202	6,433	2,471

Indicates all prescription drugs, not only controlled substances

Supporting Data:

Pounds of Disposed Medications Collected via Take Back Events – Marin County, 2011- 2014 YTD



Work Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>

Potential Indicator 7:
Total Adult Treatment Admissions

Why this matters:

Misuse and abuse of prescription drugs costs the country an estimated \$53.4 billion a year in lost productivity, medical costs and criminal justice costs, and currently only one in 10 Americans with a substance abuse disorder receives treatment.¹ This indicator shows adult treatment admissions and the proportion of those due to opioids, including heroin. Evidence suggests that most new heroin users initially abused prescription opioids before transitioning to heroin.²

Data Source:

CalOMS Treatment (CalOMS Tx): California's data collection and reporting system for alcohol and other drug treatment services

Report Card Data:

Indicator	2008/09	2009/10	2010/11	2011/12	2012/13
Total Adult Treatment Admissions	2,040	2,065	1,628	1,399	1,600
Percent of clients reporting any opiate use (including heroin) at time of admission	29%	29.7%	28.5%	32.6%	32.5%

Works Cited:

1. Trust for America. <http://healthyamericans.org/reports/drugabuse2013/>. Accessed June 13, 2014.
2. Volkow, Nora D., et al. "Medication-Assisted Therapies—Tackling the Opioid-Overdose Epidemic." *New England Journal of Medicine* (2014). <http://www.nejm.org/doi/pdf/10.1056/NEJMp1402780>

Potential Indicator 8:

Number of People Over Age 65 Taking both Narcotics and Benzodiazepines

Why this matters:

Prescription drug misuse is exacerbated by the combination of drugs that are not recommended to be taken together. The Centers for Disease Control and Prevention (CDC) reports that about half of narcotic deaths involved at least one other drug, including benzodiazepines.¹ Older patients are especially vulnerable to drug to drug interactions.² This indicator shows the number of patients prescribed both narcotics and benzodiazepines in the 65 and older age group.

Data Source:

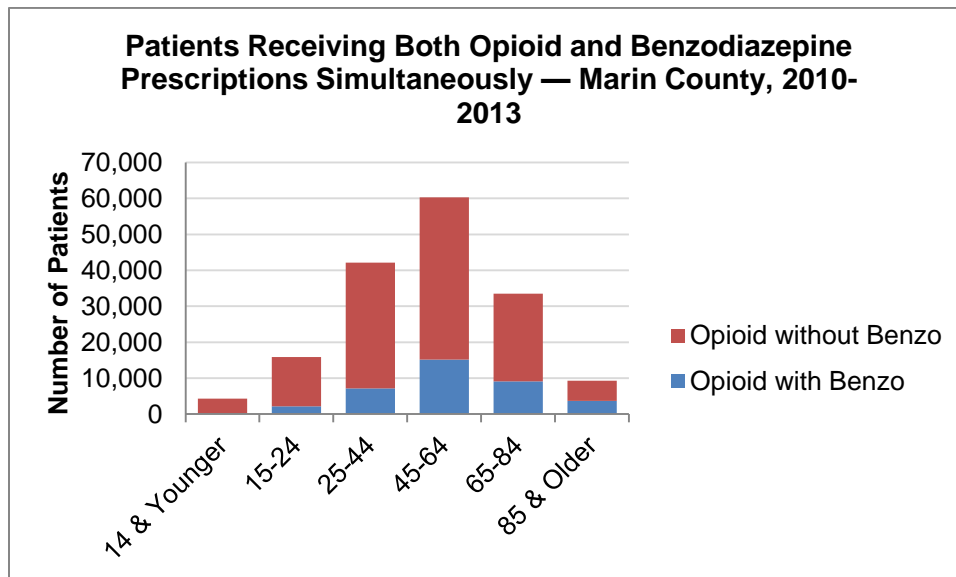
Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP)

Report Card Data:

Indicator	2010	2011	2012	2013
Number of People Age 65 and Older Taking both Narcotics and Benzodiazepines	4,049	4,147	4,397	3,987

*Patients who received at least one opioid and one benzodiazepine prescription within 30 days.

Supporting Data:



Works Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>
2. The Merck Manual, Drug-Related Problems in the Elderly.
http://www.merckmanuals.com/professional/geriatrics/drug_therapy_in_the_elderly/drug-related_problems_in_the_elderly.html

Potential Indicator 9:

Possession of Controlled Substance without a Prescription

Why this matters:

The number of people reported in possession of controlled substance without a prescription shows how prescription drug misuse interacts with law enforcement. Unsafe use and illegal use are closely linked. This measure reflects both the prevalence of prescription drug diversion and the local law enforcement effort to control the problem.

Data Source:

County of Marin District Attorney (DA)

Report Card Data:

Indicator	2010	2011	2012	2013
Possession of Controlled Substance without a Prescription	8	9	13	28

Numbers reflect prescription medications as well as cocaine and methamphetamine.

Potential Indicator 10:

Number of Practitioners and Pharmacists Registered with CURES

Why this matters:

Clinicians who prescribe controlled substances are encouraged to register with Controlled Substance Utilization Review and Evaluation System (CURES)/ California Prescription Drug Monitoring Program (PDMP).¹ The program allows prescribers to see if a patient has received controlled substance prescriptions from 2 or more providers, or filled them from 2 or more pharmacies within the past month.² Increasing prescriber utilization of CURES is a feasible step to reduce prescription drug misuse in the county. One of RxSafe Marin's strategic goals is to double the number of prescribers registered in CURES from June, 2014 to June, 2015.

Data Source:

Controlled Substance Utilization Review and Evaluation System (CURES), California Prescription Drug Monitoring Program (PDMP)

Report Card Data:

Indicator	Total Number at the End of Year				As of June 17, 2014
	2010	2011	2012	2013	
Number of Practitioners and Pharmacists Registered with CURES					
• Practitioners	54	95	121	149	203
• Pharmacists	4	9	11	42	64

Works Cited:

1. CURES/PDMP. (<https://pmp.doj.ca.gov/pdmp/index.do>)
2. NYC Department of Health and Mental Hygiene, City Health Information: Preventing misuse of prescription opioid drugs. (<http://www.nyc.gov/html/doh/downloads/pdf/chi/chi30-4.pdf>)

Potential Indicator 11:

Number of Sites available for disposal of medical waste that accept controlled substances.

Why this matters:

The purpose of the Medical Waste program is to protect the health of the public, health care facility personnel, and landfill personnel from exposure to medical wastes containing potentially infectious pathogenic organisms.¹ Increasing the opportunities to properly dispose of unused prescription medication—particularly controlled substances is an important public safety goal.

The Marin County Environmental Health Services is the designated local enforcement agency (EA) implementing the medical waste program in Marin County in accordance with the Medical Waste Management Act. Currently, the only facilities that take controlled substances are the City of Sausalito Police Department, Novato Police Department, the Central Marin Police Authority, and the Mill Valley Police Department.

Data Source:

Drug Enforcement Agency (DEA)

Report Card Data:

Indicator	2013
Number of Sites Accepting	13

Works Cited:

1. Centers for Disease Control and Prevention. <http://www.cdc.gov/homeandrecreationalsafety/rxbrief/>
2. County of Marin, Environmental Health Services.
<http://www.marincounty.org/depts/cd/divisions/environmental-health-services/medical-waste>

Potential Indicator 12:
Student Self-Report Rx Painkiller Use

Why this matters:

Preventing health-risk behaviors among adolescents has been an important public health priority. Prescription painkiller use in high school students can lead to poor health outcomes including addiction and overdoses. This indicator, self-report of drug use, is from a statewide survey administered in public schools. The question asks: "During your lifetime, how many times have you used or tried...?"²

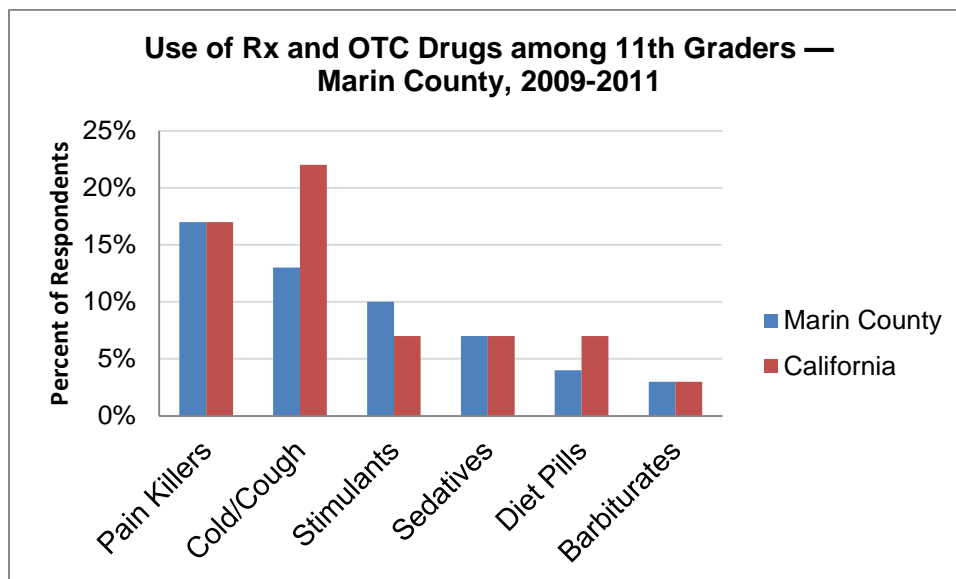
Data Source:

California Healthy Kids Survey (CHKS)

Report Card Data:

Indicator	2009-2011
11th Grade Student Self-Report Lifetime Rx Painkiller Use	17%

Supporting Data:



Works Cited:

1. Centers for Disease Control and Prevention.

http://www.cdc.gov/healthyyouth/adolescenthealth/index.htm?s_cid=cs_307

2. California Healthy Kids Survey (CHKS) Marin County Secondary 2009-2011 Main Report

https://chks.wested.org/resources/Marin_County_SEC0911_main.pdf?1340215160

Potential Indicator 13:

Percent of Students who Report Having Talked to Parents about Drugs

Why this matters:

Parents and guardians play a large role in youth development, including modeling and discussing healthy behaviors. This indicator uses responses from the California Healthy Kids Survey (CHKS) question: "During the past 12 months... Have you talked with at least one of your parents (or guardian) about the dangers of tobacco, alcohol, or drug use?" The proportion of students who do not discuss substance abuse with parents may reflect the cultural attitudes around the issue. It allows us to inform and monitor community-based interventions around substance abuse awareness.

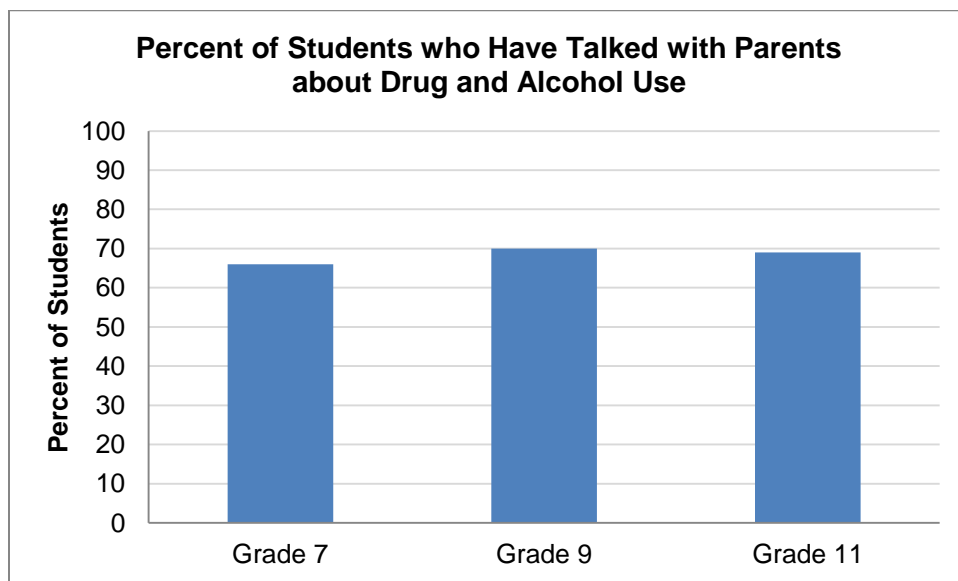
Data Source:

California Healthy Kids Survey (CHKS)

Report Card Data:

Indicator	2009-2011
Percent of 11th Grade Students who Report Having Talked to Parents about Drugs	69%

Supporting Data:



Works Cited:

1. Centers for Disease Control and Prevention.
http://www.cdc.gov/healthyyouth/adolescenthealth/index.htm?s_cid=cs_307
2. California Healthy Kids Survey (CHKS) Marin County Secondary 2009-2011 Main Report
https://chks.wested.org/resources/Marin_County_SEC0911_main.pdf?1340215160

Potential Indicator 14:
Patient Response to EMS Administration of Naloxone (Narcan)

Why this matters:

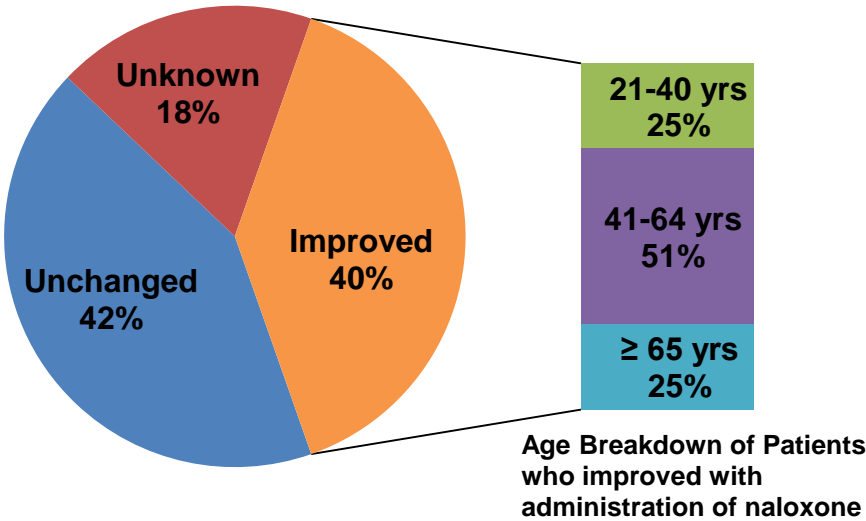
Opioids (including prescription opioid medications and heroin) are major causes of drug overdose deaths. Naloxone is the standard of care for treatment of potentially fatal respiratory depression caused by opioid overdose. Tracking effective use of naloxone is an important component of monitoring opioid related health outcomes.¹

Data Source:

Marin County Emergency Medical Services

Supporting Data:

**Patient Response to EMS Administration of Naloxone
(Narcan), N=186**



Emergency Medical Services, March 1, 2013 – June 1, 2014

Works cited:

1. Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report. February 17, 2012. <http://www.cdc.gov/mmwr/PDF/wk/mm6106.pdf>