Pediatric Opioid-Related Health Care Encounters in California
Tracy L. Burns, MD, Kevin T. Scolaro, MD, Alan H. Hoang, MD, and Rakhi Dayal, MD
Department of Anesthesiology and Perioperative Care
University of California, Irvine Health

Background
The US opioid epidemic has become a significant issue requiring the attention of several government agencies and officials, including President Obama. While the problem is not unique to adults, children have largely been excluded from research and important discussions – including the CDC guidelines. State and local entities have started the process of understanding the impact of the opioid epidemic with an aim toward strategies to reduce morbidity and mortality. Understanding trends in pediatric opioid-related health care encounters will aid in establishing a baseline from which interventions can be designed. The goal of this project was to describe opioid-related emergency department (ED) visits and mortality for children in California.

Methods
The California Department of Public Health runs a web-based tool detailing ED visit and fatality data for people in the state. We used this database to report on infants and children age 0 to 18 years. ED visit data, specified as treat & release, or transfer to another facility, was available from 2006 to 2014. Fatality data was analyzed from 2006 through 2013 – the most recently published year. Comparing opioid-related adverse events to other substances was our main focus.

Results
Opioids were among the most often cited substances for poisoning-related ED visits during the study period (Figure 1). The data demonstrated a bimodal distribution. Infants, toddlers, and teens were the groups with significant opioid-related ED visits (Figure 2). Pediatric fatalities ranged from 13 – 29 per year and peaked in 2011. Opioid poisoning caused 229 pediatric deaths during the study period. The large majority of which (74%) were aged 16-18 years.

Discussion
California children, particularly those under 4 years and teenagers, are at risk of opioid-related morbidity and mortality. Young children are poisoned primarily by unintentional ingestions, an issue that can be alleviated through safe medication storage education and improved packaging. Tackling the problem in teens is taxing and requires a multi-faceted approach addressing the why and how of opioid misuse in this demographic. Recreation, self-injurious behavior, and misunderstanding indications commonly lead to opioid-related adverse effects. There is an immense need for atención and resources to adequately address these issues. We recommend child-specific education efforts start at 10 years and specifically mention prescription opioids. Targeted ED education is a critical engagement point to which resources should be allocated including consultation of pain medicine and/or addiction specialists.

References