**Background**

Drowning has been the leading cause of death among children 1-4 years for at least 3 decades in California. California Pool Safety Act (2017) requires pool or spa be equipped with at least 2 of 7 specified drowning prevention safety features at private single-family home. Home inspection required for final building permit approval.

**Purpose**

Determine trend data pre/post-2017 Pool Safety Law
Compare trend data for all childhood drownings (0-17 years) with 1-4-year-olds
Determine incident location & high-risk age groups

**Methods**

Abstracted data from California Department of Public Health EpiCenter, a comprehensive source of injury data
Trend data (2010-2020) calculated using ICD-10 External Cause of Morbidity
Unintentional Drowning rates for 0-17 years and 1-4 years
Trend data for pool drownings used E-codes W67 and W68
Specific drowning E-codes (W65, W66, W67, W68, W69, W70, W73, W74) were used to determine age groups and drowning locations for 2018-2020

**Results**

**Figure 1. All California Fatal Drownings Trend Data for Children 1-4 years of age vs. Children 0-17 years of age (2010-2020)**

- Rates for ages 0-17 years are low and remain consistent over time
- Rates for ages 1-4 years fluctuated from a high of 2.7 in 2011 to a low of 1.8 in 2016
- Rates for ages 1-4 years have been increasing since 2017
- Pool drownings, which accounted for 66% of 1-4 year old drownings, showed a similar increase

**Figure 2. California Fatal Drowning Statistics by Incident Location in Children 0-17 Years of Age (2018-2020)**

- 62% of all drownings were children 1-4 years of age
- Among children 0-17 years, 57% of all fatalities were in pools
- 76% of pool drownings were 1-4 years of age
- Among children 1-4 years, 70% of all fatalities were in pools

**Conclusions**

Despite the California 2017 Pool Safety Act, progress in reduction of childhood pool drowning among 1-4 year olds has stalled.
State database is excellent for trend data and incident location
State data is insufficient to understand why rates have not decreased
The American Academy of Pediatrics strongly recommends that states establish systematic reporting on the circumstances of drowning in order to develop best practices, community interventions, and relevant public policies

Results from this project have helped to inform California Senate Bill 855, which will establish a statewide drowning fatal and nonfatal data collection system

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**Pool Access Barriers (California Law)**

Isolation enclosure; Removable mesh fencing; Safety pool cover; Home exit alarms; Self-closing, self-latching device on direct access doors; Alarms in pool/spa; Equally protective, approved and tested alternatives