

# Drowning in Texas, 2010-2012

## What is Drowning?

- “Drowning: is the process of experiencing respiratory impairment from submersion/immersion in liquid.”<sup>1</sup>
- Drowning can be fatal or non-fatal
- Drowning is a reportable condition in Texas and by law must be reported by physicians, hospitals, medical examiners and justices of the peace

## Where did the data come from?

- Fatal drowning data are taken from death certificate information for deaths occurring in 2010 - 2012 in Texas<sup>2,3</sup>
- Non-fatal drowning data are from the Texas Submersion Registry for 2010 - 2012 in Texas<sup>4</sup>
- The Texas Submersion Registry is a passive surveillance system, meaning records are accepted but additional cases are not actively sought. Therefore, it is estimated that drowning is underreported in the Registry and the numbers presented in this report underrepresent the true burden of drowning in the state.

1. “A new definition of drowning: towards documentation and prevention of a global public health problem.” Bulletin of the World Health Organization. (2005) 83:11.

2. The 2012 data have not been finalized and are subject to change

3. DSHS Center for Health Statistics. <http://www.dshs.state.tx.us/chs>

4. DSHS EMS/Trauma Registry. <http://www.dshs.state.tx.us/injury>

# Fatal Drownings, 2010-2012

TEXAS DROWNING DEATHS								
	SEX			RACE/ETHNICITY			AGEGROUP	
	# deaths	per 100,000 <sup>†</sup>		# deaths	per 100,000 <sup>†</sup>		# deaths	per 100,000 <sup>†</sup>
Male	780	2.04	White	512	1.48	Infants	9	0.77
Female	230	0.60	Black	149	1.71	1-4 yrs	144	3.08
TOTAL	1010*	1.32	Hispanic	300	1.02	5-9	44	0.76
			Other	49	1.20	10-14	24	0.9
						15-19	76	1.33
						20-24	102	1.79
						25-34	147	1.34
						35-44	116	1.10
						45-54	124	1.20
						55-64	103	1.16
						65-74	66	1.15
						75+	55	1.58

<sup>†</sup>per 100,00 population  
 \*does not include 134 non-resident drowning deaths

Place of Drowning, Deaths						
	Bathtub	Pool	Natural Body	Other	Unspecified	Total
Infants	5	0	0	0	4	9
1-4 yrs	7	75	13	3	46	144
5-9	1	18	15	1	9	44
10-14	1	3	12	0	7	23
15-19	3	7	45	3	16	74
20-24	7	13	47	1	33	101
25-34	8	8	62	2	58	138
35-44	10	15	50	2	29	106
45-54	10	13	50	2	42	117
55-64	13	9	35	2	37	96
65-74	7	10	18	0	26	61
75+	12	9	11	2	20	54
Total	84	180	358	18	327	967

Drowning Deaths by County			
County	# Resident Deaths	per 100,000 <sup>†</sup>	# Occurrence Deaths
Bexar	69	1.29	60
Brazoria	15	1.54	18
Cameron	18	1.44	39
Collin	21	0.85	12
Comal	7	2.03	29
Dallas	98	1.35	83
El Paso	16	0.64	29
Ft. Bend	25	1.33	14
Galveston	7	2.33	33
Harris	177	1.39	142
Hidalgo	14	0.57	43
Jefferson	20	2.62	13
McClennan	15	2.07	13
Montgomery	26	1.80	23
Nueces	11	1.05	20
Smith	19	2.93	16
Tarrant	68	1.21	70
Travis	39	1.21	51
Williamson	9	2.00	5

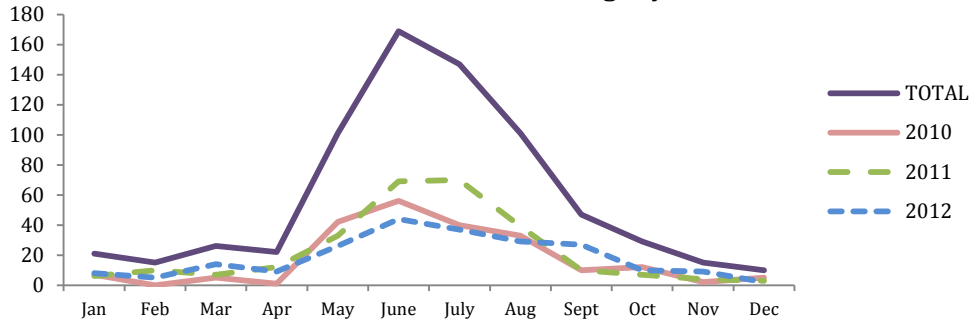
# Non-Fatal Drownings, 2010-2012

## Texas EMS/ Trauma Registry

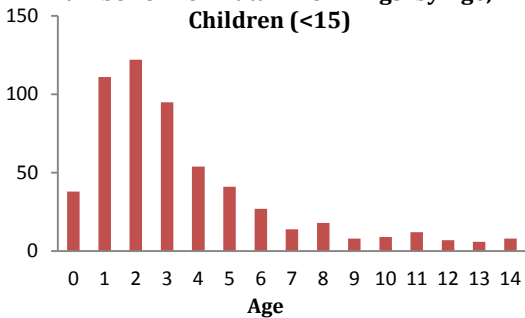
For non-fatal drownings in 2010-2012:

- 82% were children <15 years old
- 63% were Males
- Among children (<15 years old), approximately 65% were in a swimming pool, spa, or hot tub
- Among adults, approximately 55% were in a natural body of water
- 91% of non-fatal drownings in apartment homes were in children (<15)
- When known, the average hospital bill was \$19,546
- Approximately 30% of patients were swimming, 18% were playing, 4% were bathing, 22% were doing another activity, and 26% had an unknown activity
- There were 213 non-fatal drownings in 2010, 270 in 2011, and 220 in 2012

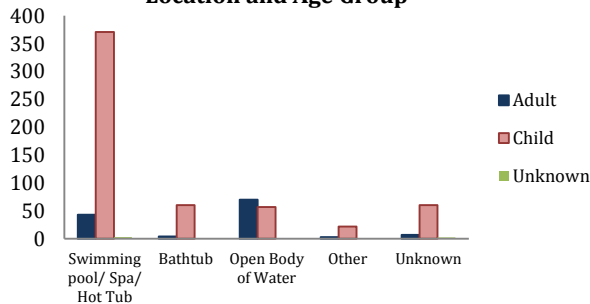
Number of Non-Fatal Drownings by Month



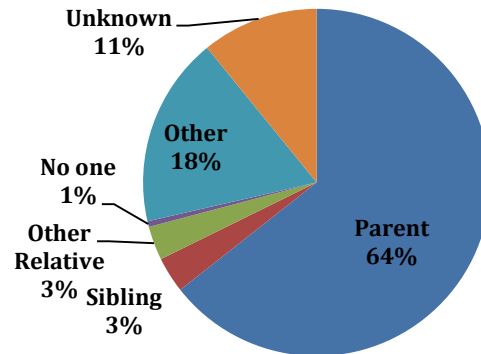
Number of Non-Fatal Drownings by Age, Children (<15)



Number of Non-Fatal Drownings by Location and Age Group



Non-Fatal Drownings, Supervisor of Child < 15 (n=570)



Non-Fatal Drownings, 2010-2012

Age	Sex		Race/Ethnicity							Total (%)
	Male	Female	White	Hispanic	Black	Asian	Native American	Other	Unknown	
< 1 year	22	16	16	20	1	1	0	0	0	38 (6)
1-4	221	161	196	115	42	12	2	6	9	382 (54)
5-9	66	42	33	35	35	5	0	0	0	108 (15)
10-14	26	16	11	17	14	0	0	0	0	42 (6)
15-19	20	3	9	8	6	0	0	0	0	23 (3)
20-29	28	8	17	13	3	1	0	2	0	36 (5)
30-39	25	2	11	12	3	1	0	0	0	27 (4)
40-49	8	5	3	4	3	1	1	0	1	13 (2)
50-59	3	4	5	1	0	0	0	0	1	7 (1)
60+	18	3	15	3	3	0	0	0	0	21 (3)
missing	5	1	1	1	2	1	0	0	1	6 (1)
<b>Total</b>	<b>442 (63%)</b>	<b>261 (37%)</b>	<b>317 (45%)</b>	<b>229 (33%)</b>	<b>112 (16%)</b>	<b>22 (3%)</b>	<b>3 (&lt;1%)</b>	<b>8 (1%)</b>	<b>12 (2%)</b>	<b>703 (100)</b>

Non-Fatal Drownings, Incident County

County	Count	County	Count
Harris	101	Williamson	25
Dallas	64	Bell	21
Tarrant	54	Denton	20
Travis	34	Cameron	17
Collin	33	El Paso	17
Nueces	26	Galveston	13

Top 12 counties only

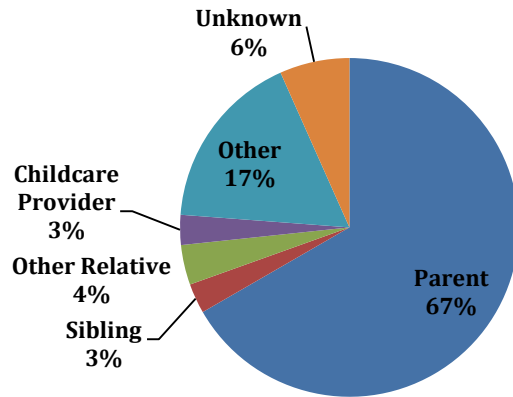
Source: DSHS EMS/Trauma Registry  
<http://www.dshs.state.tx.us/injury>

# APARTMENTS: Non-Fatal Drownings, 2010-2012

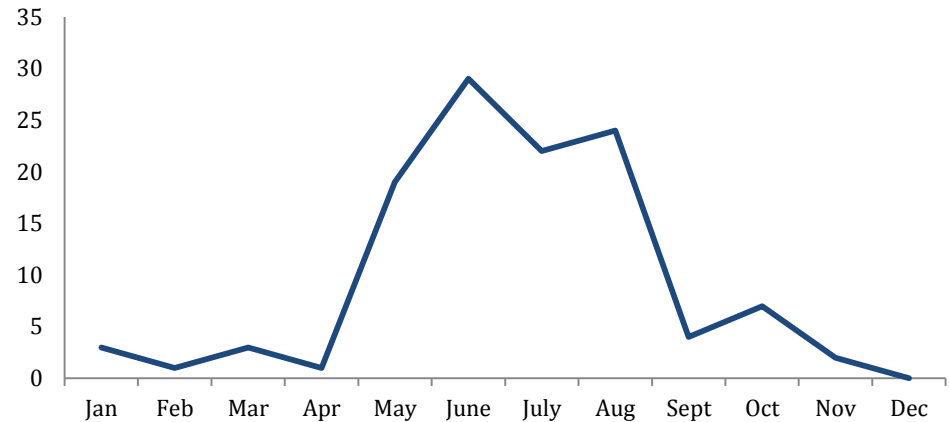
For non-fatal drownings in apartment homes in 2010-2012:

- 91% were children (<15)
- 60% were males
- 78% were in a swimming pool/ hot tub/ spa and 13% were in a bathtub

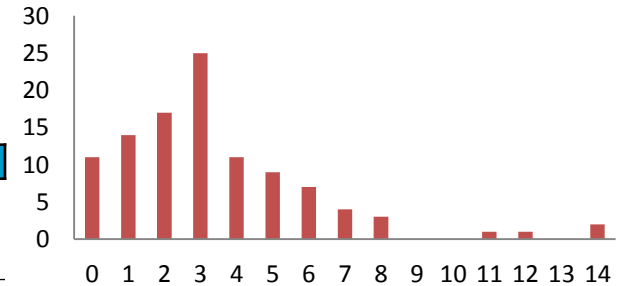
**Non-fatal drownings in apartment homes: Supervisor of Child <15, (n=105)**



**Number of Non-Fatal Drownings in Apartment Homes, 2010-2012**



**Number of Non-Fatal Drownings in Apartments by Age, Children (<15)**



**Non-Fatal Drownings in Apartment Homes, 2010-2012**

Age	Sex		Race/Ethnicity							Total (%)
	Male	Female	White	Hispanic	Black	Asian	Native American	Other	Unknown	
< 1 year	7	4	2	8	1	0	0	0	0	11 (10)
1-4	39	28	19	31	15	2	0	0	0	67 (58)
5-9	14	9	5	5	12	1	0	0	0	23 (20)
10-14	2	2	0	0	4	0	0	0	0	4 (3)
15-19	2	1	1	0	2	0	0	0	0	3 (3)
20-29	1	1	1	0	1	0	0	0	0	2 (2)
30-39	3	0	0	0	3	0	0	0	0	3 (3)
40-49	1	0	0	1	0	0	0	0	0	1 (<1)
50-59	0	0	0	0	0	0	0	0	0	0 (0)
60+	0	1	1	0	0	0	0	0	0	1 (<1)
missing	0	0	0	0	0	0	0	0	0	0 (0)
<b>Total</b>	<b>69 (60%)</b>	<b>46 (40%)</b>	<b>29 (25%)</b>	<b>45 (39%)</b>	<b>38 (33%)</b>	<b>3 (3%)</b>	<b>0 (0%)</b>	<b>0 (0%)</b>	<b>0 (0%)</b>	<b>115</b>

**Non-Fatal Drownings in Apartment Homes, Incident County**

County	Count
Harris	27
Dallas	15
Tarrant	11
Travis	11

*Top 4 counties only*