



Why Drownings Are a Leading Cause of Death among Children

June 21st, 2017

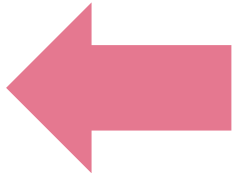
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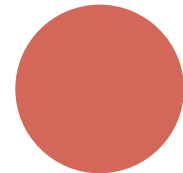
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Presenters

**Adam B. Katchmarchi,
Ph.D., M.S., EMT-B**



Alan Korn, JD



The background is a solid light blue color with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

-DROWNING-

A LOOK AT THE NUMBERS AND SCOPE OF THE PROBLEM

DR. ADAM B. KATCHMARCHI, PH.D., M.S., EMT-B

**INDIANA UNIVERSITY OF PENNSYLVANIA
NATIONAL DROWNING PREVENTION ALLIANCE**

OVERVIEW

- The Centers for Disease Control and Prevention (CDC) classify drowning as an unintentional injury related death.
- Drowning is the leading cause of unintentional injury related death for children 1-4.



THE DROWNING PROCESS

- Drowning is the process of experiencing respiratory impairment from submersion/immersion in liquid (World Congress on Drowning, 2002).
- Drowning Victims:
 - Endangered
 - Distressed
 - Active
 - Passive
- Outcomes:
 - Non-Fatal
 - Fatal



SIGNIFICANCE OF THE PROBLEM

United States Drowning Data:

Fatal Drowning Deaths 1981-2015	
1981	6,227 (2.57 per 100,000)
1991	4,621 (1.77 per 100,000)
2001	3,281 (1.19 per 100,000)
2011	3,556 (1.14 per 100,000)
2015	3,602 (1.12 per 100,000)

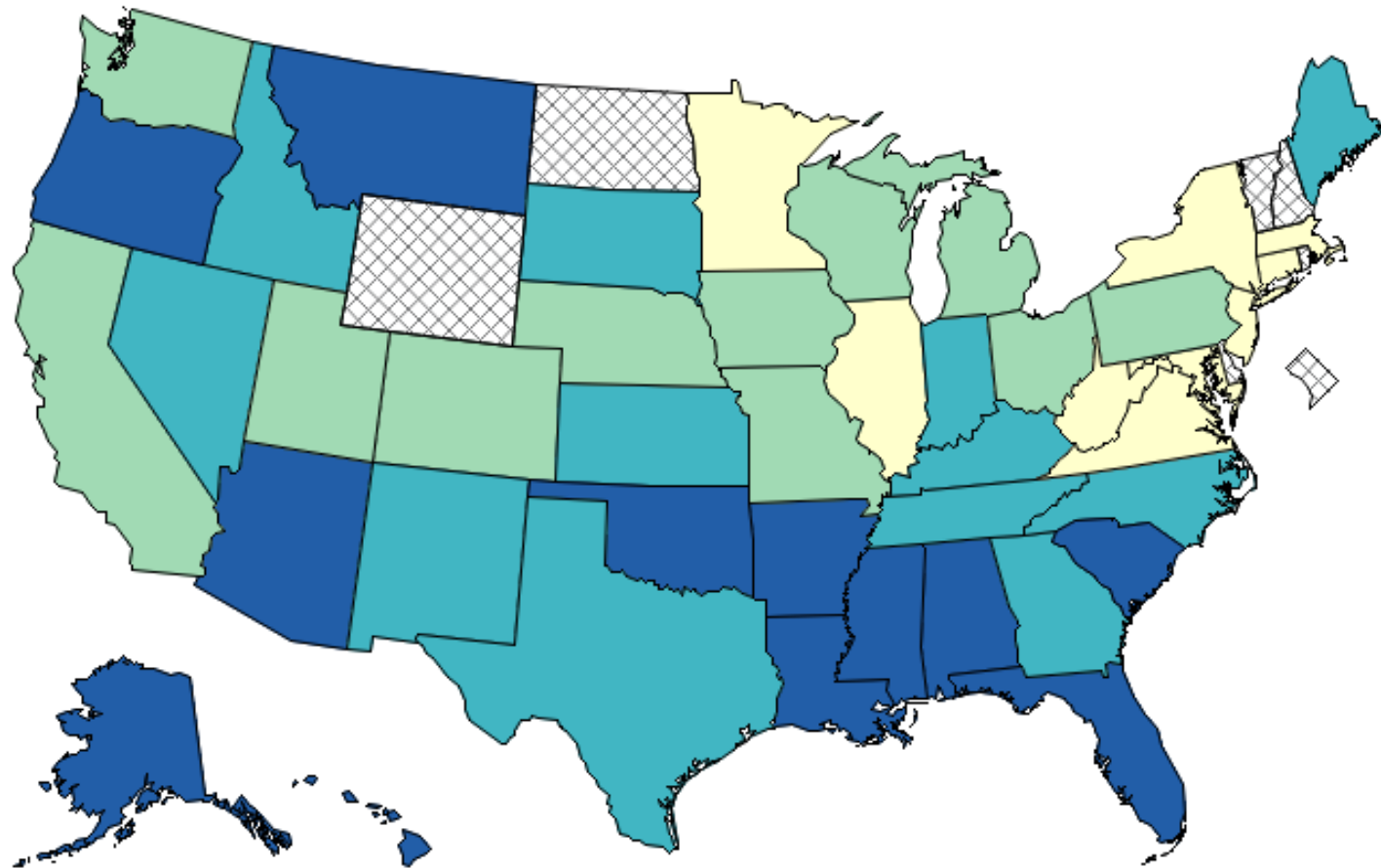
Non-Fatal Drowning Injuries 2001-2011	
2001	5,691 CI [2,518, 8,864]
2011	7,488 CI [4,327, 10,648]
2015	9,001 CI [2,511, 15,490]

(Centers for Disease Control and Prevention, 2017)

	Age Groups										
Rank	<1	1-4	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	All Ages
1	Unintentional Suffocation 1,125	Unintentional Drowning 390	Unintentional MV Traffic 351	Unintentional MV Traffic 412	Unintentional MV Traffic 6,787	Unintentional Poisoning 11,231	Unintentional Poisoning 10,580	Unintentional Poisoning 11,670	Unintentional Poisoning 7,782	Unintentional Fall 28,486	Unintentional Poisoning 47,478
2	Unintentional MV Traffic 64	Unintentional MV Traffic 332	Unintentional Drowning 129	Unintentional Drowning 87	Unintentional Poisoning 3,920	Unintentional MV Traffic 6,327	Unintentional MV Traffic 4,686	Unintentional MV Traffic 5,329	Unintentional MV Traffic 5,008	Unintentional MV Traffic 6,860	Unintentional MV Traffic 36,161
3	Unintentional Drowning 30	Unintentional Suffocation 131	Unintentional Fire/burn 72	Unintentional Other Land Transport 51	Unintentional Drowning 504	Unintentional Drowning 445	Unintentional Fall 492	Unintentional Fall 1,298	Unintentional Fall 2,504	Unintentional Unspecified 5,204	Unintentional Fall 33,381
4	Unintentional Fire/burn 22	Unintentional Fire/burn 100	Unintentional Other Land Transport 32	Unintentional Fire/burn 41	Unintentional Fall 217	Unintentional Fall 324	Unintentional Drowning 374	Unintentional Suffocation 469	Unintentional Suffocation 777	Unintentional Suffocation 3,837	Unintentional Unspecified 6,930
5	Unintentional Natural/Environment 12	Unintentional Pedestrian, Other 75	Unintentional Suffocation 31	Unintentional Poisoning 36	Unintentional Other Land Transport 201	Unintentional Unspecified 194	Unintentional Suffocation 240	Unintentional Drowning 450	Unintentional Unspecified 696	Unintentional Poisoning 2,198	Unintentional Suffocation 6,914
6	Unintentional Unspecified 12	Unintentional Fall 30	Unintentional Natural/Environment 24	Unintentional Suffocation 26	Unintentional Unspecified 135	Unintentional Other Land Transport 181	Unintentional Unspecified 238	Unintentional Unspecified 395	Unintentional Fire/burn 565	Unintentional Fire/burn 1,171	Unintentional Drowning 3,602
7	Unintentional Poisoning 9	Unintentional Poisoning 29	Unintentional Pedestrian, Other 20	Unintentional Unspecified 16	Unintentional Firearm 121	Unintentional Suffocation 181	Unintentional Other Spec., classifiable 210	Unintentional Fire/burn 372	Unintentional Drowning 491	Unintentional Drowning 699	Unintentional Fire/burn 2,711
8	Unintentional Other Land Transport 5	Unintentional Struck by or Against 27	Unintentional Poisoning 17	Unintentional Firearm 15	Unintentional Pedestrian, Other 118	Unintentional Other Spec., classifiable 145	Unintentional Fire/burn 150	Unintentional Other Spec., classifiable 278	Unintentional Natural/Environment 322	Unintentional Natural/Environment 670	Unintentional Natural/Environment 1,579
9	Unintentional Struck by or Against 5	Unintentional Unspecified 26	Unintentional Struck by or Against 17	Unintentional Other Transport 14	Unintentional Suffocation 97	Unintentional Fire/burn 139	Unintentional Other Land Transport 143	Unintentional Natural/Environment 231	Unintentional Other Spec., classifiable 253	Unintentional Other Spec., NEC ^N 623	Unintentional Other Land Transport 1,360
10	Unintentional Fall 4	Two Tied 25	Unintentional Unspecified 14	Unintentional Fall 13	Unintentional Fire/burn 78	Unintentional Pedestrian, Other 124	Unintentional Natural/Environment 134	Unintentional Other Land Transport 202	Unintentional Other Spec., NEC ^N 207	Unintentional Other Land Transport 355	Unintentional Other Spec., classifiable 1,251

2008-2014, United States Death Rates per 100,000 Population

Drowning, Unintentional, All Races, All Ethnicities, Both Sexes, Ages 0-19 Years
Annualized Crude Rate for United States: 1.16



Suppressed/Unstable/Undefined
1.16-1.51

0.22-0.83
1.52-2.40

0.84-1.15

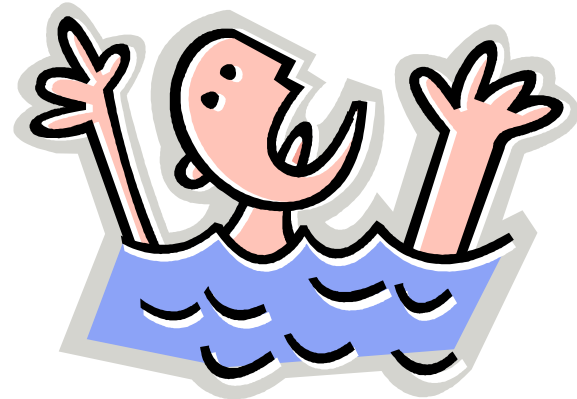
THE FACTS

- In 2015 – Drowning accounted for 1/3 of the unintentional injury related deaths for children 1-4 (out of top 10 incident types).
- In 2015 – The CDC reports 636 drowning fatalities among children 0-14.
- In 2015 – Drowning is in the top 3 unintentional injury related fatalities for ages 1-35.
- More than 1 in 5 people who die from drowning are children 14 and younger.
- For every child who dies from drowning, another 5 received emergency department care for nonfatal submersion injuries. (CDC)



THE FACTS

- From 2005-2014 there were an average of 3,536 fatal unintentional drownings (not including boating) in the US.
- Drowning is the number 2 cause of unintentional death for children under 14 – number 1 is motor vehicle accidents.
- There are an average of 10 drowning deaths per day.
- 1 in 5 people who die from drowning are children 14 and younger.

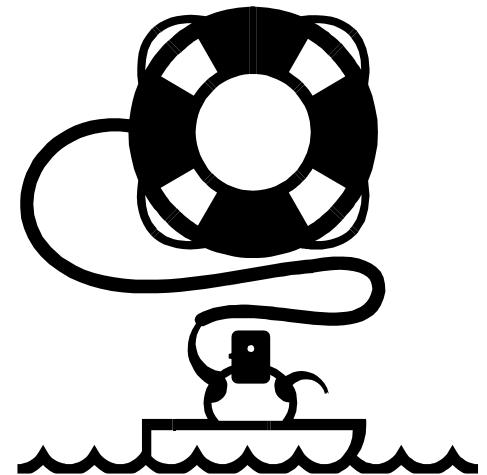


NON-FATAL DROWNING COMPLICATIONS

- **There are no medically accepted conditions known as near-drowning, dry drowning, and secondary drowning.** (Hawkings, Sempsrott, & Schmidt, 2017)
- Although extremely rare, a victim who suffers a non-fatal drowning may develop respiratory distress after the event **(2-3 hours)**.
- If a non-fatal victim experiences respiratory symptoms after exiting the water, they should be examined and observed in the Emergency Department. If symptoms do not persist they will be released in 4-6 hours.
- The victim with minimal symptoms will either get better or worse in 2-3 hours.

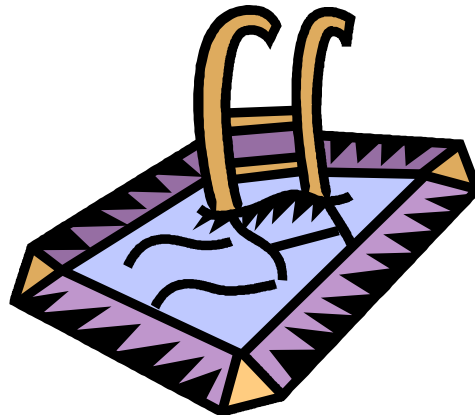
HIGHER RISK POPULATIONS

- Higher drowning risks among:
 - Immigrant Populations
 - Minority Communities
 - Individuals with Disabilities
- 80% of drowning victims are male (CDC, 2015)



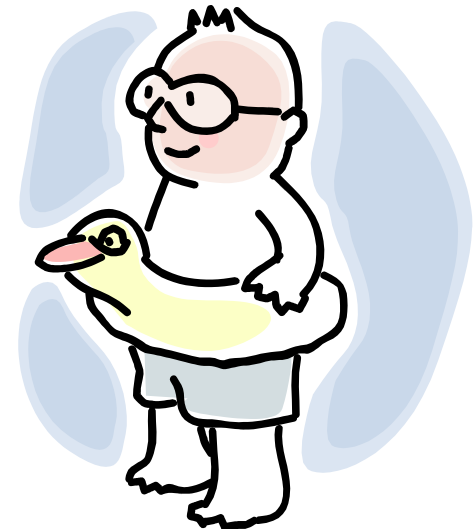
MINORITY POPULATIONS

- African Americans ages 5-19 drown in swimming pools at a 5.5 times higher rate than Caucasian children.
- African Americans ages 11-12 drown in swimming pools at a 10 times higher rate than Caucasian children.
- American Indian and Alaskan Native children drown at a 3.1 times higher rate than Caucasian children.



FACTORS INFLUENCING DROWNING

- Lack of Swimming Ability
- Lack of Barriers
- Lack of Supervision
- Location
- Use of Lifejackets
- Alcohol & Drug Use
- Medical Conditions



INDIVIDUALS WITH DISABILITIES

- Studies show that people with intellectual disabilities (ID) such as autism have a higher standardized mortality ratio (SMR).
- SMR greater than 1.0 means the observed death rate exceeds expectations.
- SMR for drowning with individuals with mild autism was 3.9.
- SMR for drowning with individuals with moderate, severe, or profound ID was 13.7. (Myers, S.)

RECOMMENDATIONS

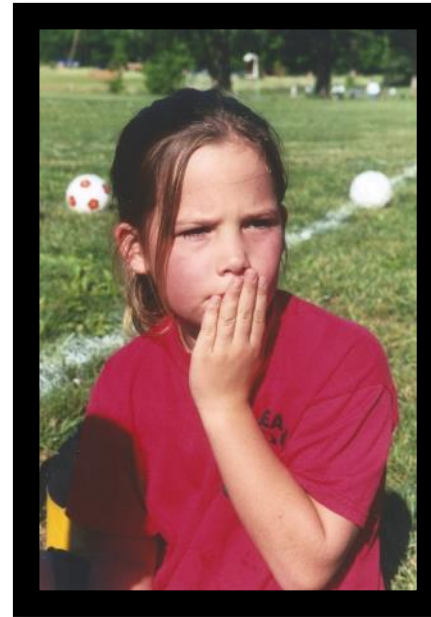
- Learn to Swim
- Use layers of protection.
- Always swim in a designated swimming area.
- Use approved floatation devices.
- NEVER swim alone.
- Use a water watcher or swim near a lifeguard.
- Know CPR and First Aid.
- Have quick access to call 911.
- Have rescue equipment ready to go.
- Supervision is KEY!

Virginia Graeme Baker Pool & Spa Safety Act and Drowning Prevention

June 21st, 2017

Alan Korn, JD, Executive Director, Abbey's Hope Charitable
Foundation

The Story of Virginia Graeme Baker



It's Happened to Other Children

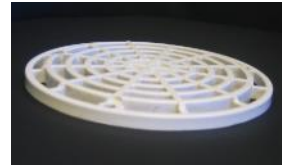


Entrapment-Related Injuries



Drains

Avoid Dangerous Drains



Look for Safe Drain Covers



Safety Vacuum Release Systems (SVRS)



Background & Requirements of the VGB Act

- The Politics Behind the Law
 - Bi-partisan Support
 - Baker Family Personal Involvement
 - Congresswomen Debbie Wasserman-Schultz (D-FL) & Senator Amy Klobuchar (D-MN)
 - Signed by President George W. Bush



Background & Requirements of the VGB Act

- Actual Requirements
 - Drains Sold in U.S. must meet safety standards
 - Illegal to sell non-compliant drain covers
 - Use in public pools & spas
 - Single main drains (special circumstances)
 - New Pool/Spa Construction
 - Dual main drains
 - 3 feet apart
 - Use safety standard drains
 - Other technologies as approved
 - Grant Program
 - Establishment of Pool Safety Campaign

Other Layers of Protection

- Four-sided isolation fencing
 - Self-latching and locking gates
 - Four to five-feet high with vertical slats
- Door and Window Alarms
- Pool Covers
- Pool Alarms
- Learn How to Swim
- Bystander CPR
- Active Supervision




Educational Water Safety Resources

Drain Education Boards

**WHAT DOES A
DANGEROUS DRAIN
COVER LOOK LIKE?**

Flat in shape • Large openings • Cover is damaged, loose or missing



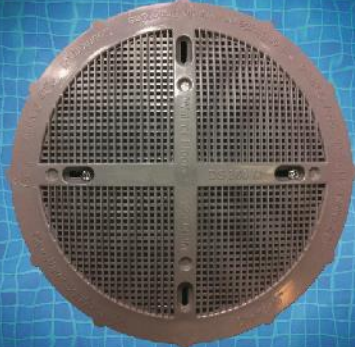
NEVER SIT ON OR PLAY NEAR ANY DRAIN.

If you spot a dangerous drain, get out immediately!
Contact the pool's owner or a pool professional.

abbey's HOPE
SAFER POOLS. SAFER KIDS.

**WHAT DOES A
SAFE DRAIN
COVER LOOK LIKE?**

Dome shaped • Small openings • Large surface area • Installed properly

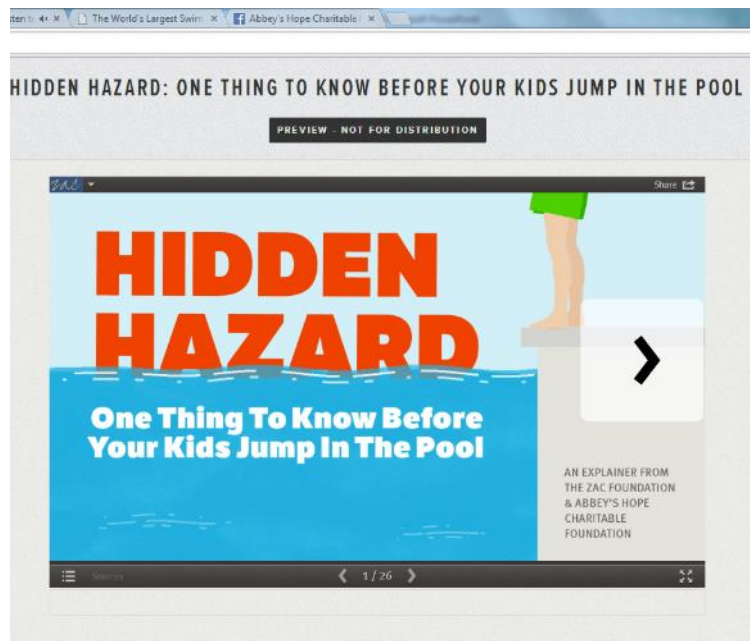


CHECK DRAINS BEFORE ENTERING WATER.

Still concerned? Contact the pool's owner or a pool professional.
Never sit on or play near any drain.

abbey's HOPE
SAFER POOLS. SAFER KIDS.

Drain Entrapment Explainer



Water Watchdog Tag



I AGREE TO:

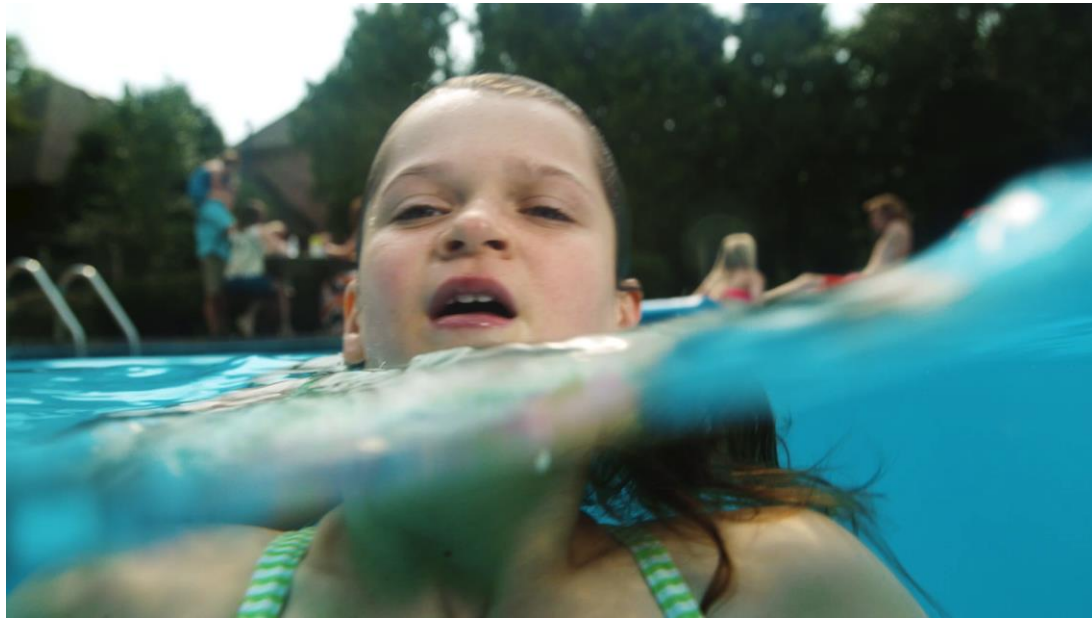
WATER WATCHDOG TAG

abbey's HOPE

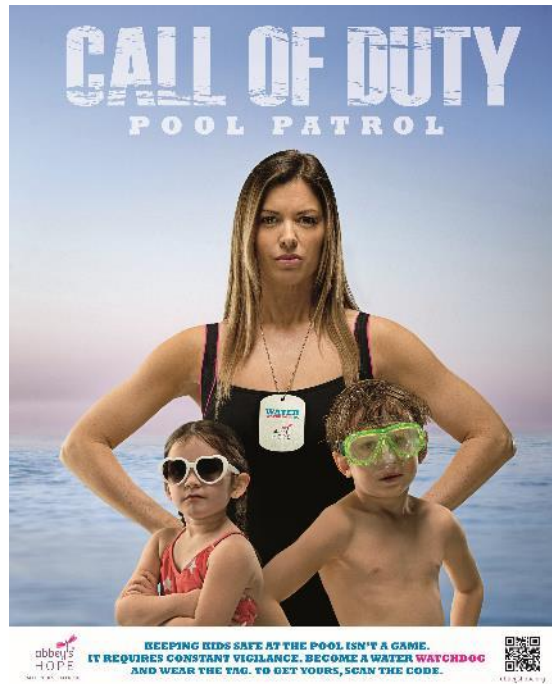
Take the pledge at abbeyshope.org

- Maintain constant visual contact with children in my group
- Stay by the water until relieved by another adult
- Keep a phone nearby for emergencies
- Refrain from drinking alcohol or socializing while on duty
- Refrain from talking on the phone, texting or reading

The graphic features a wooden dog tag with a hole at the top. The tag is set against a background of rippling blue water. The text 'WATER WATCHDOG TAG' is printed in blue and pink on the tag, and 'abbey's HOPE' is printed in purple below it. To the right of the tag, a list of five commitments is presented, each separated by a horizontal line. The entire graphic is contained within a teal rectangular frame.



Water Watchdog Poster



Families United to Prevent Drowning



www.familiesunitedtopreventdrowning.org

Questions & Contact Information

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202.537.7233

Questions



Please enter your questions in the Q & A box

Thank you!

Please fill out our short evaluation:

<https://www.surveymonkey.com/r/R75ZLW6>