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Aquatic Safety
Victim Recognition & Scanning

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Aquatic Safety Issues

US Drowning Data:

- Each year, 3700+ people drown in the U.S. of which 1500 are children.
- Drowning remains the second-leading cause of injury-related death for children ages 1 to 14 years.
- One-third to half of those children drowned in guarded pools.
- Non-white children drown at a disproportionately high rate; African-American children ages 5-19 years fatally drowned at 2.3 times the rate of white children in this age group.

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Aquatic Safety Issues

YMCA Drowning Data:

- From 2002-2007 there were 28 documented drownings and 67 near-drownings in YMCA pools
- Of the 28 drowning victims, 19 were male and 9 were female
- Approximately 40% of the victims were under the age of 10 and 30% between the age of 11 and 21
- Sixty percent of the drownings occurred during a "special event" (i.e. rental group, birthday party, etc.)

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Is There a Problem?

- High Risk Factors
 - Males (under 12 years of age)
 - Non Whites
 - Special Events
 - Birthdays
 - Rental Groups
 - Pool Design
- Ellis Study 2001



Video

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YMCA Aquatic Safety

YUSA Task Force Recommendations

- Promote a culture of safety that starts with the top leadership of the YMCA and establishes clear accountability
- Focus on effective lifeguard victim recognition techniques
- Place emphasis on teaching swimming and aquatic safety



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Overview

What is the Lifeguard's Function?
Why do people Drown with Guards on duty?

What can we do?

- Management strategies
- Victim recognition
- Scanning techniques
- Vigilance maintenance
- Encourage behaviors



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Victim Recognition

What is the Lifeguard's Function?

- Lifeguarding vs. Lifesaving
- Proactive Prevention
 - Vigilant Scanning
 - Victim Recognition



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Victim Recognition

Why are there Drownings with Lifeguards?

Recognition

- Silent Drownings
 - Minimal Surface Struggle
 - No Noise
 - Poor Visibility – mixed among others on surface
- Victim on Bottom
 - Poor Visibility – agitation, glare, obstructions



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Victim Recognition

Why are there Drownings with Lifeguards?

Secondary Responsibilities:

- Conversations Distract Focus from Scanning
- Giving Swim Instruction
- Other Duties – testing chemicals, clearing equipment, moving lane lines, etc.



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Victim Recognition

Why are there Drownings with Lifeguards?

Distractions

- External – discussions, socializing, flirting, reading, phone, etc.
- Internal – daydreaming, “zoning out”



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What Can We Do?

Management Strategies to Reduce Drownings

- New aquatic staff orientation
- In-service training
 - Recognition – Scanning – Emergency Management
- Testing
 - ALL youth and outside groups
- Supervision
 - Hourly – Welcome – Recognition
- Regular Drills
 - Test and improve scanning capacity



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Strategies For Effective Scanning

Triage Scanning:

1st Priority - Scan the bottom of the pool as victims underwater are at the greatest risk.

2nd Priority - Scan the surface of the water.

3rd Priority - Manage behavior and deck activity

- Managing scanning priorities with multiple guards
- Managing scanning priorities with single guard
- Managing scanning priorities and high risk areas
- Managing scanning priorities and youth swimming skill levels

1 ... 2 ... 3 ...

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Strategies For Effective Scanning

Zone Coverage

- Ability to see the entire bottom and top
- Pool design, obstructions, agitation, and glare
- 180 degree scans

Lifeguard stands

- Elevation
- NO folding and deck chairs

10 / 10 Rule

- 10 seconds to scan zone and recognize the victims
- 10 seconds to get to the victim



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Strategies For Vigilance & Alertness

Vigilance Capacity

- Air Traffic Controller studies
- Cognitive vision studies (*Video*)



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Strategies For Vigilance & Alertness

Five Minute Scanning Strategy:

Designed to reduce monotony and increase vigilance

- **Posture:** Sit – Stand – Stroll
- **Position:** Switch position or posture every five minutes, Include more frequent rotations
- **Pattern:** Scan – Change visual patterns every five minutes, Scan bottom first and then the top
- **Count:** Count or approximate swimmers in zone every five minutes

Rehearse - a rescue in your mind with a swimmer in your zone

Expect it to happen!!!!!!

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Strategies For Vigilance & Alertness

Breaks and Rotation Strategies

Health Education Strategies - *Educate and coach life guards about correct diet and nutrition, on avoidance of alcohol and other substance abuse, and on adequate sleep. A healthy lifestyle can measurably improve vigilance capacity.*

Strategies for outdoor pools

- Heat and sun glare negatively impact vigilance capacity
- Personal protective equipment
- Hydration
- Increase breaks and rotations



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Drills For Vigilance, Recognition & Scanning

Disappearing Silhouette Manikin

Red Ball Drill

Silhouette Manikin Drill

Red Cap Drill



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Positioning

At Water's Edge

Sitting

- Guard Stands

Standing

Rotation

No Distracting Duties



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Vigilance

Scanning

- 10/10
- Triage
- 5 Minute

Breaks (10 minutes per hour)

Support & Monitoring



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5 Minute Scanning

Posture: Sit – Stand – Stroll

Position: Switch position 5 minutes and 15 minute rotations

Pattern: Scan – Change visual patterns every 5 minutes

Count: Count or approximate swimmers in zone every 5 minutes

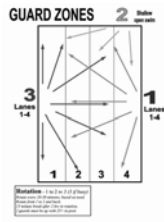
Rehearse: Rehearse a rescue in mind with a swimmer in zone

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Zone Coverage

- 10/10 Scanning
- Top & Bottom
- Single – Multiple Guards
- Written Plan
- Conditions



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Encouraging Behavior

- Welcome
- Hourly Checks
- Drills
- In-Service Training
- Recognition



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