Welcome to the
CDC’s Model Aquatic Health Code Network Webinar

Considerations for Increased Risk Venues

5/24/2022
2 PM EST

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This webinar is being recorded.
Webinar Agenda

- CDC’s Announcements: Healthy & Safe Swimming Week & MAHC 4th Edition
- Understanding Increased Risk Venues
- Questions & Answers
CDC Announcements

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Healthy Swimming and Model Aquatic Health Code
Centers for Disease Control and Prevention
Make a Healthy Splash: Stay Healthy and Safe in Splash Pads

HEALTHY & SAFE SWIMMING WEEK

M A Y 23–29, 2022

www.cdc.gov/healthyswimming
Communication Resources

- HSSW 2022 Campaign: https://www.cdc.gov/healthywater/swimming/safe-swimming-week/
- Splash pads and healthy swimming: https://www.cdc.gov/healthywater/swimming/swimmers/water-play-areas-interactive-fountains.html
- Splash pad operation and management: https://www.cdc.gov/healthywater/swimming/swimmers/splash-pad-operation-and-management.html
- Update factsheet: https://www.cdc.gov/healthywater/swimming/materials/infographic-make-a-healthy-splash.html
Tentative Timeline for 4th Edition
Model Aquatic Health Code release

March
Submit into CDC clearance

May/June
Clear code and annex through three CDC Centers and three CDC Offices

Summer
Publish on CDC website (www.cdc.gov/mahc)
Today’s Presenter

Dewey Case
Technical Director
Council for the Model Aquatic Health Code
Understanding Increased Risk Venues

Identifying Challenges and Needs
What is an Increased Risk Venue?

MAHC 3rd Edition Definition

An aquatic venue which due to its intrinsic characteristics and intended users has a greater likelihood of affecting the health of the bathers of that venue by being at increased risk for microbial contamination (e.g., by children less than 5 years old) or being used by people that may be more susceptible to infection (e.g., therapy patients with open wounds). Examples of increased-risk venues include spray pads, wading pools and other aquatic venues designed for children less than 5 years old as well as therapy pools.
Increased Risk Venues Include:

- Spray pads
- Wading Pools
- Therapy Pools
Increased Risk Venues

Key risk factors

- **Spray Pads**
  - Small volume of water.
  - Can be difficult to maintain water quality.

- **Wading Pools**
  - Small volume of water.
  - Can be difficult to maintain water quality.

- **Therapy Pools**
  - Small volume of water with a warmer temperature.
  - Bather Density can be on the high end.
Bather Characteristics

Spray Pads

- Tend to be younger children
- Likely to ingest water either on accident or on purpose
- Can be in the process of potty training
Bather Characteristics

Wading Pools

- Almost entirely very small children
- Likely to be in potty training or not fully potty trained
- Lots of oral interaction of water and objects
Bather Characteristics

• Therapy Pools
  • Usually an older adult
    • Often immunocompromised
    • Post-surgery wounds still healing
    • More open wounds due to aging and related to diabetes
    • May have incontinence issues
  • Post Surgery Adult
  • Adult with cognitive deficits
  • Can be younger children in potty training when accompanied by a parent in some facilities
  • Can be an organized class (Parent/Child, early Learn to Swim) in some facilities
What is the primary concern?  . . .

Recreational Water Illnesses

The primary concern with these venues is enteric related illnesses such as *Cryptosporidium*, *Giardia*, *Shigella*, and *E.coli*.

An added concern of infections from open wounds exists.

- Staph / MRSA (*from pool surfaces*)
- Infections from poorly maintained water

Immunocompromised persons are an additional concern.
What are additional concerns?

Physical Safety

- Drowning risk
  - Toddler proportions
  - Older persons and warm water
  - Perceptions by users/parents on water depths
- Accidental entry
- Slips and falls
- Physical injuries due to improper flow
  - VGB
  - Excessive flow/pressure from features (bubblers, spray nozzles)
The MAHC

Design & Construction

• 4.7.3.3.1.2 Required Facilities [for secondary disinfection]

• 4.10 Hygiene Facilities
  • 4.10.2.2 requires less than 200ft from wading pools and spray pads

• 4.12.4 Therapy Pools

• 4.12.8 Interactive Water Features

• 4.12.9 Wading Pools
The MAHC

Operations and Maintenance

- 5.7.1.9 Flow Rates / Turnovers
- 5.7.3.7 Automated Controllers and Equipment Monitoring
The MAHC

Policies and Management

• 6.3.3 Safety Plan
• 6.4.1.6 Daily Water Monitoring and Testing Records
• 6.4.2.2.3 Sign Messages
• 6.4.2.2.4 Hygiene Facility Signage
The MAHC

Policies and Management

- 6.3.3 Safety Plan
- 6.4.1.6 Daily Water Monitoring and Testing Records
- 6.4.2.2.3 Sign Messages
- 6.4.2.2.4 Hygiene Facility Signage
- 6.5 Fecal/Vomit/Blood Contamination Response
- 6.5.3.6 Legionella Contamination
Additional Considerations

Filtration

• Sand v. Cartridge v. DE filters
  • Microns matter
  • Filter credits for Crypto removal
  • Recent research by Dr. J. Amberguy

• NSF 50 v. NSF 61
Increased Risk Venue – Honorable Mention

Spas

• Small volume of water
• Very high temperatures contribute to microbial concerns
• Can be difficult to maintain
• Often not drained and cleaned frequently enough
• Average owner / operator may not understand all the risks
• While not submerged, aerosolization of water can contribute to transmission of pathogens

An emerging serious concern with Spas is Legionella.

Refer to MAHC section 4.12.1.
Summary of Actions

Keys to preventing disease

Design & Construction
- Proper design.
- Spec’ing proper equipment and mandatory secondary disinfection.

Operations
- Ensuring proper sanitizer and pH.
- Automation.
- Consistency.
- Owner/operator responsibility.

Management
- Proper training of owner/operator.
- Changing bather behaviors via messaging.
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  - Participate in CMAHC’s triennial Vote on the Code conference to discuss, debate, and vote on proposed updates to the MAHC

- Educational Resources
  - Discounts on MAHC webinars and trainings
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- Get Involved
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