Model Aquatic Health Code (MAHC)
STEERING COMMITTEE

Project Outline

Background

In the United States, all pool codes are created, reviewed, and approved by state and/or local public health officials. As a result, there are no uniform national standards governing design, construction, operation, and maintenance of swimming pools and other treated recreational water venues. Thus, the code requirements for preventing and responding to injuries and recreational water illnesses can vary significantly among local and state agencies.

The Model Aquatic Health Code (MAHC)

The Model Aquatic Health Code (MAHC) is intended to transform the typical health department pool program into a data-driven, knowledge-based, risk reduction effort to prevent disease and injuries and promote healthy recreational water experiences. The MAHC should ensure that the best available standards and practices for protecting public health are available for adoption by state and local agencies. It will provide uniform guidelines for the design, construction, operation, and maintenance of swimming pools and other disinfected swimming venues to prevent recreational water illnesses and injuries and promote healthy recreational water experiences. There is no federal regulatory authority for disinfected recreational venues. As a result, the MAHC will serve as a model and guide for local and state agencies needing guidance to update or implement a pool code in their jurisdiction.

Vision/Mission Statement

The goal is to develop a Model Aquatic Health Code that is user-friendly, knowledge-based, and scientifically supported in an effort to reduce risk and promote healthy recreational water experiences. The objective of the MAHC is to transform varied swimming pool regulations used by health departments into a uniform model national code to ensure the health and safety of the swimming public.

Path

The MAHC process will involve developing a comprehensive national consensus risk reduction plan for the design, construction, alteration, replacement, operation, management, and regulatory oversight of aquatic facilities in the United States. This will be accomplished through development of a model aquatic health code that is data and best practices based, national in scope, can be implemented across the U.S., is updated on a continuous basis, and includes input from all sectors and levels of public health, all segments of the aquatics industry, and the general public.

Goals and Objectives of the MAHC

The MAHC Process will be:
- Transparent
- Inclusive
- Communicative
- Timely
- Modular

The MAHC will be:
- Data and best practices driven
- Modular
- Current and updated
- Free and accessible for all

The MAHC will drive:
- Reductions in recreational water illnesses and injuries
- Adoption of universally recognized minimum U.S. standards
- Needs for training and education
- Needs for epidemiological and environmental health surveillance systems
- Data collection and analysis to support recommendations
- Data-based decision making
- Systems-based and/or performance based approaches to aquatic facility design and operation
- Creation of a research agenda

Rationale behind the Goals and Objectives

The MAHC process will be:
- Transparent
  - Open website, constant updates, clear rules of engagement, names of organizations and participants.
- Inclusive
  - Steering Committee and technical committees will include a broad geographic representation and involve a variety of professionals (epidemiologists, environmental health professionals, operators, suppliers, designers, engineers) with broad expertise.
- Communicative
  - Open website, regular reports, news/status from Director, presentations at national meetings, public dissemination of information on progress, opportunities for public comment.
- Timely
  - Modules will be released as completed rather than wait for a full code, set deadlines for production, prioritize products, keep a sense of movement and urgency.
- Modular
  - Modular posting will enable the completion of complete sections faster than an entire document. It will allow priorities to be addressed first and

will keep a sense of progress in the process. Multiple modules can be worked on simultaneously by different technical committees. The Steering Committee can keep global direction in mind and modules will be stand alone units that can be used individually when finalized.

The MAHC will be:
- Data or best practices driven
  - The MAHC will use data where needed and will plan to collect new data over time. The process will create a repository of best practices for operation that all operators can access – set up criteria for decision making (goal, factors being considered, ability to achieve the desired outcome, reproducibility).
- Modular
  - See above.
- Current and updated
  - The MAHC will model the update process on the Conference for Food Protection. This will allow all interested partners to put in position papers to modify the MAHC and have a vote on modification.
- Free and accessible for all
  - The MAHC will be on the web for all to view and comment. The process will be posted and representation will be clear.

The MAHC will drive:
- Uniformity of codes across the U.S.
  - The disparate nature of codes leads to inconsistent operation and enforcement.
- A need for training and education of public health professionals, operators, and the general public
  - Preliminary data suggest that education across the board improves understanding on each sector's role in public health improvement; however, more data is needed. The MAHC should give some idea on key elements that are needed by staff or inspectors to perform their job functions. Job functions should drive training development.
- The need for epidemiological/environmental health surveillance systems
- Development of a database for outbreaks/disease/injury that supports the need for recommendations being made, gives insight into what causes outbreaks, and drives changes in surveillance data being requested. The MAHC is likely to drive implementation of any such new systems.
- Data collection, analysis, and data-based decision making
  - Routine, standardized pool inspection data that is electronic and analyzable would help collect data on efficacy of MAHC changes, expand the national database, yield baseline data for monitoring the MAHC effort through future years, and improve communication between groups.
  - Analyzable data means that one can monitor trends and changes in codes to help identify where resources should be invested.

- Decision making will also be informed by data collected as part of the research agenda and will reinforce, redefine, or reevaluate MAHC recommendations.
- A systems-based and/or a performance based approach to aquatic facility design and operation
    - The working hypothesis is that systems-based and performance based approaches yield superior results to prescriptive standards by allowing for more flexibility to meet intended outcomes; this can be tested.
- A research agenda
    - The MAHC data needs will drive funding and the scope of key research projects. The process will clearly outline data that are needed and how they will be used in order to ensure that the research yields data that are needed. These data will strengthen or underwrite the MAHC recommendations. Quality data will drive better decisions on engineering, hydraulics, disinfection, etc.

Organization, Process, and MAHC Development
- Director
    - Orchestrates process.

- Steering Committee
    - Membership by nomination.
    - Small, representative, will include a code of ethics.
    - Work on editorial control at top so overall product uniformity that fits mission and objectives.
    - Need basic aquatics knowledge to be able to evaluate MAHC progress.

- Technical Committees
    - Code of ethics: Members represent the country not themselves or employer, individual opinions will not be quoted.
    - Will require specific skill level which is committee dependent.
    - Time commitment may necessitate rotation of members on a regular basis, regular conference calls to make quick progress, support from Directorate/ Steering Committee.

- MAHC Process
    - Develop individual components and release as completed rather than a complete document – completed items may be up for review and updating while other modules will just be under development.
    - Need list of modules and should prioritize development of each.
    - Prepare outline of full "MAHC Strawman" with outlined components so users see the final vision, and then prioritize each section for creation. All readers will know what is being worked and see sequence in which projects will come on line.

- Modules allow release of information before the entire MAHC is completed and will maximize input from technical committees by involving representatives from across the U.S.

Process Components and Group Roles
- MAHC layout and philosophy
  - Introduction and background
  - Glossary
  - Code portions
  - Appendices with explanations and data, operation recommendations
  - Preventive maintenance guide
  - Avoid being too prescriptive

- Resource Library
  - Find what has been created globally
  - Create repository for use by workers in virtual workspace
  - Collect codes, standards
  - Collect needed scientific articles

- Steering Committee role
  - Initialize MAHC outline
  - Set MAHC process
    - Technical committees work by consensus using available science, engineering, best practices, defensibility
    - Excellence versus perfection is the goal
    - Mechanism for change is built in for updates
  - Keeps records of issue discussions
  - Assign priorities
  - Set up technical committees and appoint chairpersons
  - Edit MAHC for uniformity and one "voice" and send back to technical committee

- Technical Committee role
  - Determine expertise needed
  - Draft members from across country
  - Develop timeline
  - Regular report/briefing back to Director/Steering Committee
  - Draft work plan
  - Draft language
  - Determine research needs