AQUATICS 2030 IN THE UNITED STATES: FACILITATING A SYSTEMS-BASED APPROACH TO IMPROVING AQUATIC HEALTH AND SAFETY IN A DE-CENTRALIZED REGULATORY LANDSCAPE

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Introduction

Public health issues such as outbreaks, drowning, and injuries continue to impact aquatics in the United States. The U.S. has a de-centralized, non-federal regulatory structure for public swimming pools and hot tubs/spas; regulation can be at a state level, a county level, or unregulated depending on the state or locality. Consequently, there are no uniform national requirements directing the design, construction, operation, and maintenance of public swimming pools and hot tub/spas. As a result, the code requirements for preventing and responding to microbiologic contamination, drowning, and injuries varies substantially across the United States. Individual jurisdictions spend a great deal of time, personnel, and other resources creating and updating their individual codes on a periodic basis. A new national approach to improve health and safety that benefits the public and aquatics staff while easing the regulatory and resource burden on individual states and counties is being developed.

Methods

The U.S. Centers for Disease Control and Prevention (CDC) with New York State leadership created a national partnership among public health, aquatics sector, and academic experts to improve aquatic health and safety. This partnership developed voluntary, open-access, model national guidance called the Model Aquatic Health Code (MAHC), which was first released by CDC in 2014. An independent, non-governmental organization, the Council for the Model Aquatic Health Code (CMAHC), was created to continue the public-private partnership and advise CDC on improvements, updates, and revisions needed to keep the MAHC up to date while continuously improving aquatic health and safety.

Results

CDC has revised the MAHC twice, using CMAHC recommendations, resulting in release of the MAHC 3rd edition in 2018. The MAHC has started to address cutting edge aquatic issues such as cryptosporidiosis control, improved swimmer hygiene, chlorine outgassing events, operator training, lifeguard supervision and zones of surveillance, and operation and policy requirements. Other issues not previously covered in U.S. aquatic codes are being addressed (e.g., noise pollution, float tanks). Additional measures to address drowning and injury prevention, infectious disease and biofilm control, filtration and water quality, and improved indoor air quality guidelines are needed. As of the end of 2018, there have been four majority adoptions and six partial adoptions by five states, two counties, and three U.S. government agencies. At least 22 states and counties are in the process of, or considering, MAHC adoption. Major U.S. public health organizations have endorsed use of the MAHC and are increasingly accepting MAHC variances, while adoption efforts proceed. In some cases, aquatics sector organizations are using the MAHC as the standard of care prior to adoption to ensure improved operational uniformity across jurisdictions. As part

of MAHC acceptance, the aquatics sector is also advocating for the CMAHC to “certify” MAHC compliance of aquatics products and services.

Conclusion

A model guidance approach and use of a public-private partnership to give advice on improving aquatic health and safety is progressing in the United States. Increasing aquatics use, rapid technological and entertainment advances, 365-day operation, changing national demographics, an aging population, and increasing swimmer empowerment are driving cultural, industry-wide changes in aquatics. Public health tracking and evaluation efforts, engineering improvements, and swimmer education together with the MAHC can serve as a platform to guide aquatic sector improvements that address existing and emerging health and safety issues.

References

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