

Exploring the Use of Internet Tools for Drowning Prevention, Rescue, and Treatment

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Drowning is a global epidemic as the 3rd leading cause of non-intentional death worldwide. More than 90% of these deaths occur in low- and middle-income countries. Drowning affects people from all ages, ethnicities, and socioeconomic status, although certain groups, namely children, are more vulnerable than others. Many High-income communities have reduced their risk of drowning, but continue to struggle in making drowning prevention a public policy or community health priority. Although death by drowning is a known global public health issue, there are paramount challenges in the reliability and collection of data and implementation of large scale drowning prevention and lifesaving programs even in high-income countries.

Critical steps in the drowning community's mission to save more lives include finding new and innovative ways to collect reliable drowning data, collaborate across social media, implement cost effective drowning prevention education initiatives, and leverage local governments and communities.

One of the hallmarks of this challenge is providing information and education on prevention, rescue and treatment at a low cost. In the digital age, the most powerful and cost effective way to deliver content is through online platforms. The sharing principle of the Internet allows the value of a single prevention program to be multiplied, increasing the benefit while maintaining low costs. Web programs and technologies also efficiently target young people, an age range that is at higher risk for drowning. Programs can tap into existing networks and trends that span across cultural and socioeconomic spectrums.

The authors propose a classification of the value and pitfalls of existing internet tools. Consideration is given to ease of use, time- and cost- effectiveness in relation to their impact in each performance category described below. Existing and future aspects of drowning prevention, rescue and treatment initiatives are explored.

Methodology

Case examples of Internet tools (Webpages, Blogs, Social Media [Facebook, twitter, and others], mobile communication applications [WhatsApp, Viber, Skype], Email, LinkedIn, and Research Gate) with content on drowning prevention, rescue, and treatment are categorized according to their functionability in 8 performance categories: Internal Administrative Communication, Internal Operations Communication, External Indirect Communication, Public Education Campaigns, Professional Education, Collaborative multi party communication, and Searchability.

All internet tools identified in the review are examined, categorized, and rated according to their effectiveness (financial cost, time commitment, and ease of use).

Results

A matrix is created to show the effectiveness of each tool in each performance category. There are varying degrees of use in many of these tools; many function in multiple categories with varying rank, and many have a free or paid option that vary significantly in cost. In performance categories associated with number of people reached, impact increases with financial cost. For other tools that relate to internal communication, free tools such as email and mobile applications are much more affected by time commitment than cost, but rate higher in ease of use/access. The results for different Internet tools and their value vary from region to region but not much, as certain technologies are more prevalent in some areas more than others. Real examples from the Internet are selected to demonstrate each categorized tool.

Conclusion

The Internet is an underutilized tool in the drowning field. By developing categorization and ranking of these technologies, drowning prevention organizations, research institutions, and rescue agencies will be able to implement more efficient education and rescue programs, collect better data, and better understand and address the complex issues of the global drowning epidemic. This may offer drowning prevention organizations in both high-income and low- and middle-income nations resources to decrease cost, increase quality of impact, and expand their mission.