Role of Lifesaving Sport events as a drowning prevention tool – case study in Brazil

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Background

In Brazil, 6,369 people die annually from drowning (3.3/100,000 inhabitants), being the second leading cause of death of children aged 1 to 9 years old. Every action that seeks prevention can mitigate this scenario. In this context, since 1995, a National Lifesaving Championship takes place. It's a sport and scientific event organized by SOBRASA, the Brazilian Lifesaving Society, so as to bring together lifeguards from across the country with the same goal – reduce the number of drownings through preventive actions. Among the states that participate annually in the event, the Paraná State, through its Fire Department, has joined regularly since 2005.

Aims

This study aims to understand if this annual event, of an essentially sporting context, had an impact in reducing drowning deaths in the state of Paraná.

Methods

2005 was considered the year when Paraná began regularly attending the annual lifesaving sport event. We assessed the drowning mortality rate per 100,000 inhabitants in Paraná for the period covering 7 years before and 8 years after 2005 (1998-2012), using DATASUS system from the Ministry of Health, and listed the drowning prevention actions implemented institutionally by the Paraná State Fire Department in both periods.

Results

Comparing both periods, a 22% reduction in drowning mortality rate was observed in the state of Paraná, 4,6 deaths/100.000 population between 1998 and 2004, and 3,6 deaths/100.000 between 2005 and 2014.

In the period from 1998 to 2004, we've identified 9 new actions targeting drowning prevention and reduction in Paraná, such as: the use of rescue tubes, and Personal Protection Equipment (PPE) for lifeguards (sunglasses and sunscreen) and the use of elevated watchtowers; while in the second period (2005-2012), encompassing the years in which the state regularly participated in lifesaving sport events, we've registered 31 new actions, corresponding to an increase of 200%. These actions included redesigning of lifeguards' uniform, adopting a national standard, the use of new materials to assist in the activity, such as boards, stand-ups, jet skis, IRBs, and new rescue tubes, and the implementation of various international protocols, such as the classification of the degrees of drowning.

Discussion

Lifesaving Sport events can be an excellent tool for drowning prevention and reduction, because they don't focus merely on sport, but also on the interaction among institutions, providing a favourable environment to the exchange and discussion of experiences and ideas, that help and inspire change. The discussion happening in a relaxed environment and nourished by different views, builds up on previous concepts and allows the protocols to evolve faster. This was evidenced by the exponential increase of implemented actions arising from this national scientific and sport meeting and the reduction of around 22% of drowning deaths in the state. Most certainly there are other indirect factors of state participation in these events that also contributed to the mentioned results, such as a manager more conscious to the need for change, a lifeguard troop more motivated and well-trained, and the provision of new and instant information nationwide.

There is no doubt that the Paraná State Fire Department – responsible for the prevention, rescue and treatment of drowning victims, could have changed by itself even if not attending these events. However it is evident that major changes happened with regular participation at SOBRASA's Lifesaving Sport and Scientific events.

Noteworthy, the information exchanged in this type of event accelerated the improvement process and created strategies that qualified the service provided, ultimately saving lives.