

Title: 12 YEARS OF BRAZILIAN LIFESAVING SOCIETY (SOBRASA) – Did we make any difference?

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Research Topic: “New and emerging lifesaving organisations”

Three learning objectives

1. Do our prevention projects make any difference in mortality?
2. Do our prevention proposals have good support from lifesaving services?
3. We analysed mortality in all lifesaving services in Brazil and evaluate which one improve with prevention project.

Type of Communication proposed: Oral

Abstract

Brazil is one of the largest extension and population countries in the world. His water surface is huge in size and exposes 176 million inhabitants (2003) every day, yearly around to water accidents. Drowning became a public health problem in Brazil since 1910, when the population starts to cultivate beach as a leisure. At that time fisherman were responsible for preservation of life at the water. The first organized lifeguarding service was founded in 1918, in Rio de Janeiro. Since then, many others services were created around the country but from 1984, military firefighters take over the responsibility for the lifesaving in each state of Federation. Among rare exceptions of civilians lifesaving services and pool lifeguards, Brazil has this unique characteristics of a military firefighters lifeguards. In 1991, Brazilians lifeguards made their first official international contact with other countries representative, Dr Ian Mackie from Australia. At that time contact was by mail and demands time to establish, so as the information to come to South America. The mail exchange resulted in a first Brazilian participation in an international event - 1994 World Lifesaving Championship and the foundation of International Life Saving Federation - ILS, where the idea and the importance of the concept of a national lifesaving organization was conceived. A Brazilian Lifesaving Society (SOBRASA) was created in 1995 by some water safety expert's firefighters. The main goal was to reduce drowning mortality by using preventive actions. Since then, many different prevention programs were created or promoted around the country by Sobrasa and his representatives. Our purpose is to evaluate if the prevention concept of ILS and Sobrasa make any difference to drowning mortality in Brazil.

Methods: Drowning death rates among Brazilian residents were calculated from death certificates (1979-2003) based on DATASUS - Mortality System Information <www.datasus.gov.br> using International Classification of Disease (CID10), in all 27 States of Brazilian Federation. We based our evaluation in 2 different periods, 1987 to 1995 and 1995 to 2003 using median death rate/100.000 inhabitants in each period, including both 1995 to reduce bias. We considered a relevant change in death rates if it was greater than 10% from one period to another. Firefighters States services join Sobrasa as a Full Member (FM)(at least running 3 prevention programs), others as Associate Members (AM)(at least one prevention program), a few just as Correspondent Members(CM) (at least lifeguard on duty)and others have established No Contacts until 2007(NC).

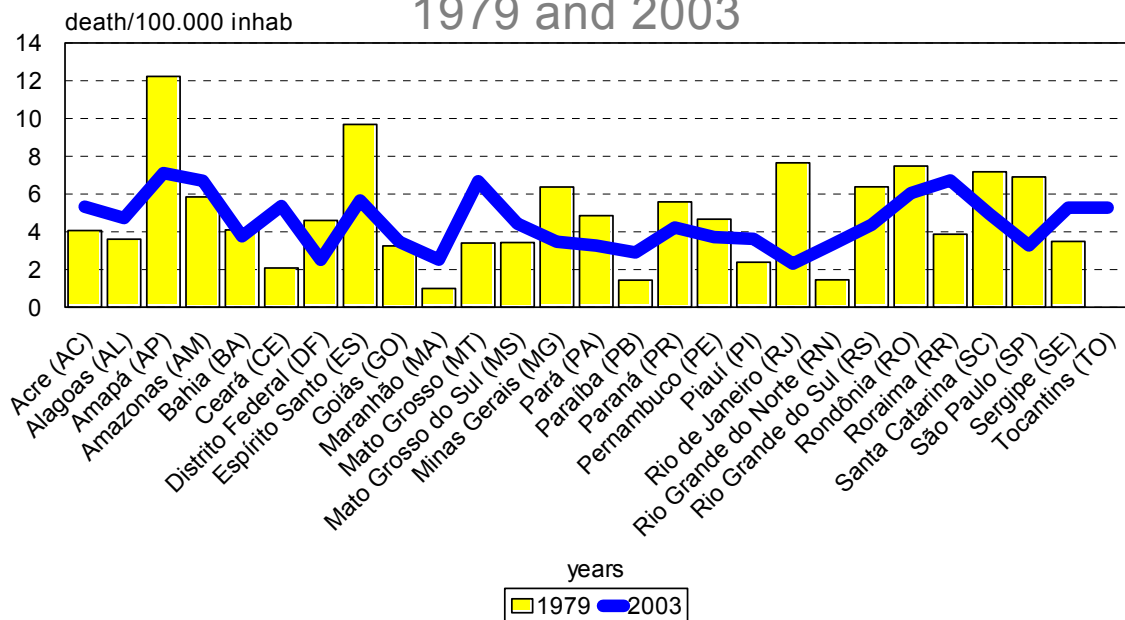
Results: At general, there was a total reduction on mortality rates of 30,2% from 1979(5,42/100.000) to 2003(3,78) (graphic 1). There was no important difference from 1979(5,42) to 1987(5,35/100.000). We found an 8,3% mortality reduction from 1987 (5,35) to 1995 (4,91/100.000) and a decrease of 23% from 1995 (4,91) to 2003 (3,78/100.000) in Brazil. Table 1 shows all Brazilians States and their median death rates mortality for both periods evaluated.

Discussion: Evaluation of prevention campaign on drowning using only the worst endpoint – death - is much more complicated than we suppose at the beginning of this research, although is the most trustful outcome. Prevention measures take time to produce effect on rates, especially death and to evaluate and compare correctly and it does not take on consideration factors as seasonality and disasters. Other important point was the fact that rates were considered to a whole state instead of counties or cities, which may be unfair or inexact with some lifeguard services, who may accomplish a excellent results but in fact are incorporate in the state death rates. In this research a significant reduction in mortality from 1979 to 2003 was demonstrated. Before 1987 the mortality death rates was unchanged but decrease in the two periods evaluated. Reduction on death rates was more positive from 1995 to 2003 (73%) which is a significant demonstration that death rates drop

especially at this period. This reduction was related especially to Full Members States. Many factors is related to these results, as such: The improvement on the firefighters lifesaving service on rescue and prevention, the increase on propaganda on drowning prevention, the increase on prevention programs to children, and the improve on pre-hospital attendance. It is very important to each lifeguard state service to evaluate their own area to delimitate where exactly the problem is and find out their solution to reduce death by drowning. Although we have no way to demonstrate how much knowledge exchange and prevention programs done by ILS and Sobrasa during these years (1995 to 2003) were responsible by these positive results, we understand that communication and exchange information about this important subject was definitely a landmark on drowning in our country and will in the near future reduce more dramatically the trends on drowning.

Drowning

Death/100.000 inhabitants on Brazil States 1979 and 2003



Graphic 1 -

	Median death/100.000 inhabitants	Median death/100.000 inhabitants	Percentual (%) Increase death in Red, Decrease in blue unchanged in black (<10%)	
	1987-1995	1995-2003		
Acre (AC) (NC)	6,7	6,42	4,10419885	Acre (AC)
Alagoas (AL)	3,86	4,3	-11,43790116	Alagoas (AL)
Amapá (AP) (NC)	11,5	9,68	15,9623407	Amapá (AP)
Amazonas (AM) (CM)	5,56	6,49	-16,72103894	Amazonas (AM)
Bahia (BA) (FM)	4	3,88	3,564315271	Bahia (BA)
Ceará (CE) (AM)	2,57	4,11	-59,75248798	Ceará (CE)
Distrito Federal (DF) (FM)	3,77	2,65	29,60540467	Distrito Federal (DF)
Espírito Santo (ES) (FM)	7	6,24	10,94442667	Espírito Santo (ES)
Goiás (GO) (CM)	5,09	4,56	10,46794588	Goiás (GO)
Maranhão (MA) (CM)	1,59	1,84	-15,49544131	Maranhão (MA)
Mato Grosso (MT) (NC)	5,38	6,63	-23,26594991	Mato Grosso (MT)
Mato Grosso do Sul (MS) (CM)	6,48	5,61	13,40772225	Mato Grosso do Sul (MS)
Minas Gerais (MG) (AM)	5,34	4,15	22,27200574	Minas Gerais (MG)
Pará (PA) (CM)	4,09	3,34	18,44281884	Pará (PA)
Paraíba (PB) (CM)	3,45	3,4	1,316137502	Paraíba (PB)
Paraná (PR) (FM)	5,63	4,9	12,87478337	Paraná (PR)
Pernambuco (PE)	4,62	4,84	-4,588627544	Pernambuco (PE)
Piauí (PI) (NC)	2,57	2,98	-16,01802667	Piauí (PI)
Rio de Janeiro (RJ) (FM)	5,3	3,56	32,72886756	Rio de Janeiro (RJ)
Rio Grande do Norte (RN) (CM)	3,11	4,17	-34,18424718	Rio Grande do Norte (RN)
Rio Grande do Sul (RS) (FM)	5,48	4,65	15,23088829	Rio Grande do Sul (RS)
Rondônia (RO) (NC)	9,86	6,76	31,43523708	Rondônia (RO)
Roraima (RR) (NC)	9,4	9,95	-5,900436031	Roraima (RR)
Santa Catarina (SC) (FM)	6,86	5,78	15,72752637	Santa Catarina (SC)
São Paulo (SP) (FM)	5,7	4,54	20,38822717	São Paulo (SP)
Sergipe (SE) (CM)	5,33	5,5	-3,118780181	Sergipe (SE)
Tocantins (TO) (NC)	2,09	3,76	-79,61100568	Tocantins (TO)

Table 1