

**Q2M2**

Quality | Quantitative  
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## **Pilot study:**

# **Measuring retention for water survival skills training**

- for children with limited resources



# Developed and supported by:



**The Danish Council for Greater Water Safety, Denmark**

<http://www.badesikkerhed.dk/en/>



**The North Zealandic Lifeguard Organisation, Denmark**

<http://livredningstjenesten.dk/>

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[www.q2m2.com](http://www.q2m2.com)

# Problem

- ❑ Children drown because they have limited water survival skills.
- ❑ We believe that a high proportion of all drowning incidents for children happen close to land.
- ❑ Learning to swim, say just 200 metres, requires consistent effort over a long time which is often more than children (and their families) can afford.

# Objectives

- ❑ **Short term:** Measuring retention for water survival skills training for children with limited resources.
- ❑ **Long term:** Developing a cost-efficient program on how to teach children - with limited resources - ongoing water survival skills. In other words:

*How little can we teach to make them safe?*

# Method

For the data collection and data analysis we have applied:

- ❑ The Statistical Value Chain (SVC)\* [www.q2m2.com/the-statistical-value-chain](http://www.q2m2.com/the-statistical-value-chain)
- ❑ Based on the SVC we have developed a test protocol and scheme for testing the survival skills of children. The test protocol/scheme can be found here: <https://form.q2m2.com/int-water-survival-skills-test/>

\*Herrmann, I. T., G. Henningsen, C. D. Wood, J. I. R. Blake, J. B. Mortensen, and H. Spliid. 2013. The Statistical Value Chain (SVC)—A Benchmarking Checklist for Decision Makers to Evaluate Decision Support seen from a Statistical Point-of-View. *International Journal of Decision Sciences* 4(2). July–December 2013.

# The test

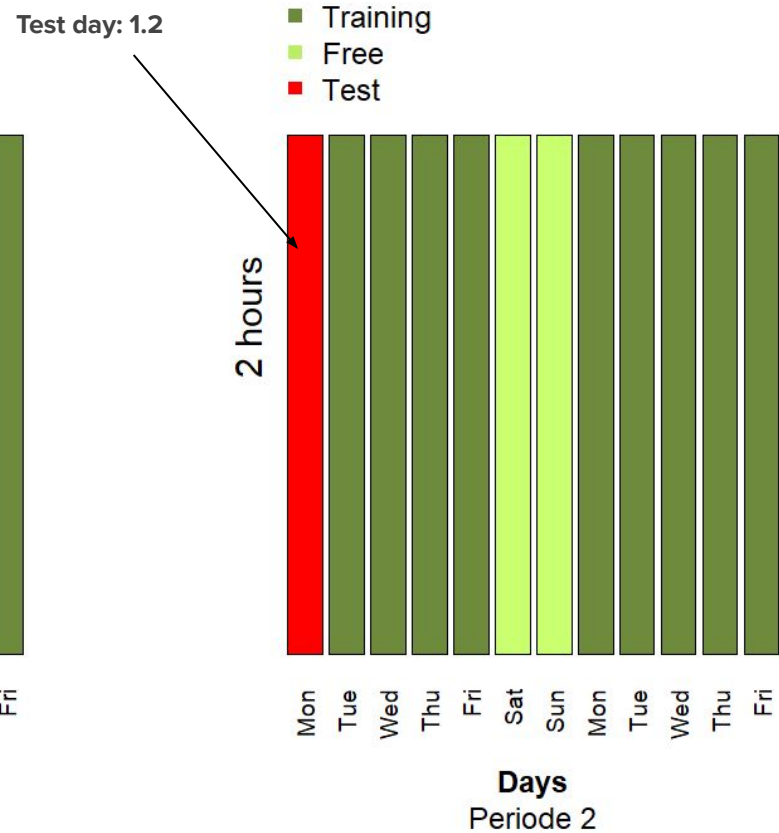
- ❑ **600 children in the age group 8-10 years** old who went to a school program where they were taught swimming in two short and intensive periods.
- ❑ **60 of the children had not been taught swimming beforehand** or had any training in the intermediate period.
- ❑ **19 of the paired tests** were considered **acceptable** for further analysis.

# The test

## March: Water survival skills - training and test



## October: Water survival skills - training and test





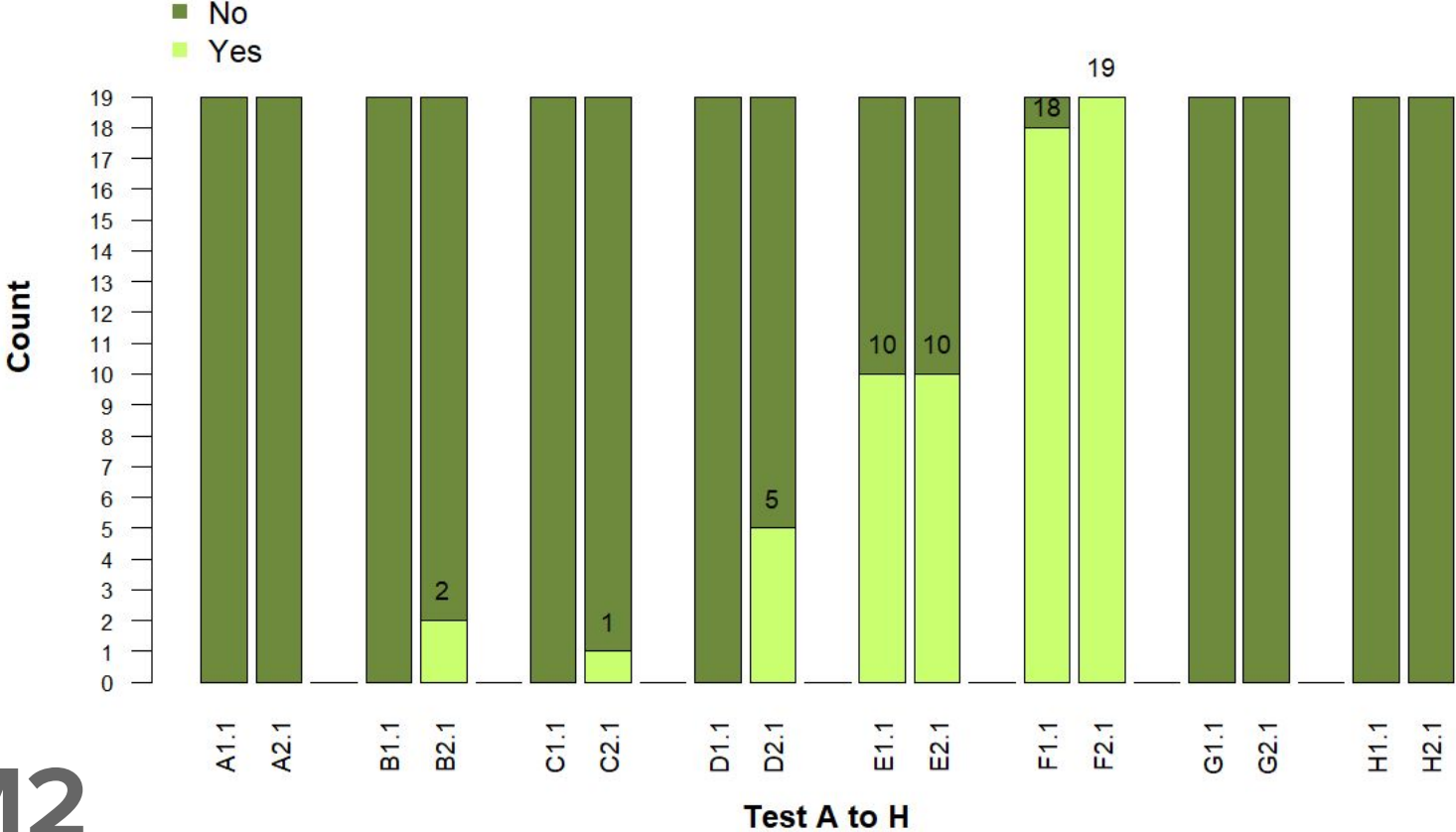
# What is water survival skills?

We have defined “water survival skills” to be able to:

- A. Jump into the water and climb back again over a high barrier
- B. Float on the back for more than 30 sec
- C. Float on the front for more than 10 sec
- D. Turn in the water from front to back
- E. Put the head under water without goggles
- F. Pick up an item from the bottom (1,1m)
- G. Tread water more than a minute
- H. Swim 25 meters without any aids

# Results

## Water survival skills - test results



# Conclusion

Teaching water survival skills in an intensive 10 days program to children in the age group 8-10 years **does not give sufficient\*** water survival skills

\*Assuming an ongoing level of preparedness is desired.

The tests (also) showed that on the last day of each periode a larger proportion children were able to successfully do some of the tests.

# Limitations of the study

- ❑ The tests has been undertaken in a swimming pool. Not taken into consideration open water challenges.
- ❑ Our data does not support any kind of generalization.
- ❑ We do not have data for how fast the water survival skills declines.
- ❑ Based on our data we cannot tell how often water survival skills should be practised to support a constant level of preparedness.

# Outlook

- ❑ More data is needed.
- ❑ We **invite anyone** who is interested in **water survival skills** to participate in this global data collection and analysis program.
- ❑ The service is **free-of-charge**.
- ❑ Data and results will be shared publicly and in an anonymized form.
- ❑ We can also help organisations with **tailored and cost-efficient** test programs.

This presentation can also be downloaded from: [www.q2m2.com/references](http://www.q2m2.com/references)