Q2M2

Quality | Quantitative
Measurement | Management

Benefits of measuring organisational rescue time and *sharing data globally*

Performance Optimisation Program (POP)

International Conference on Drowning Prevention (CIPREA) 2018, Málaga

POP is 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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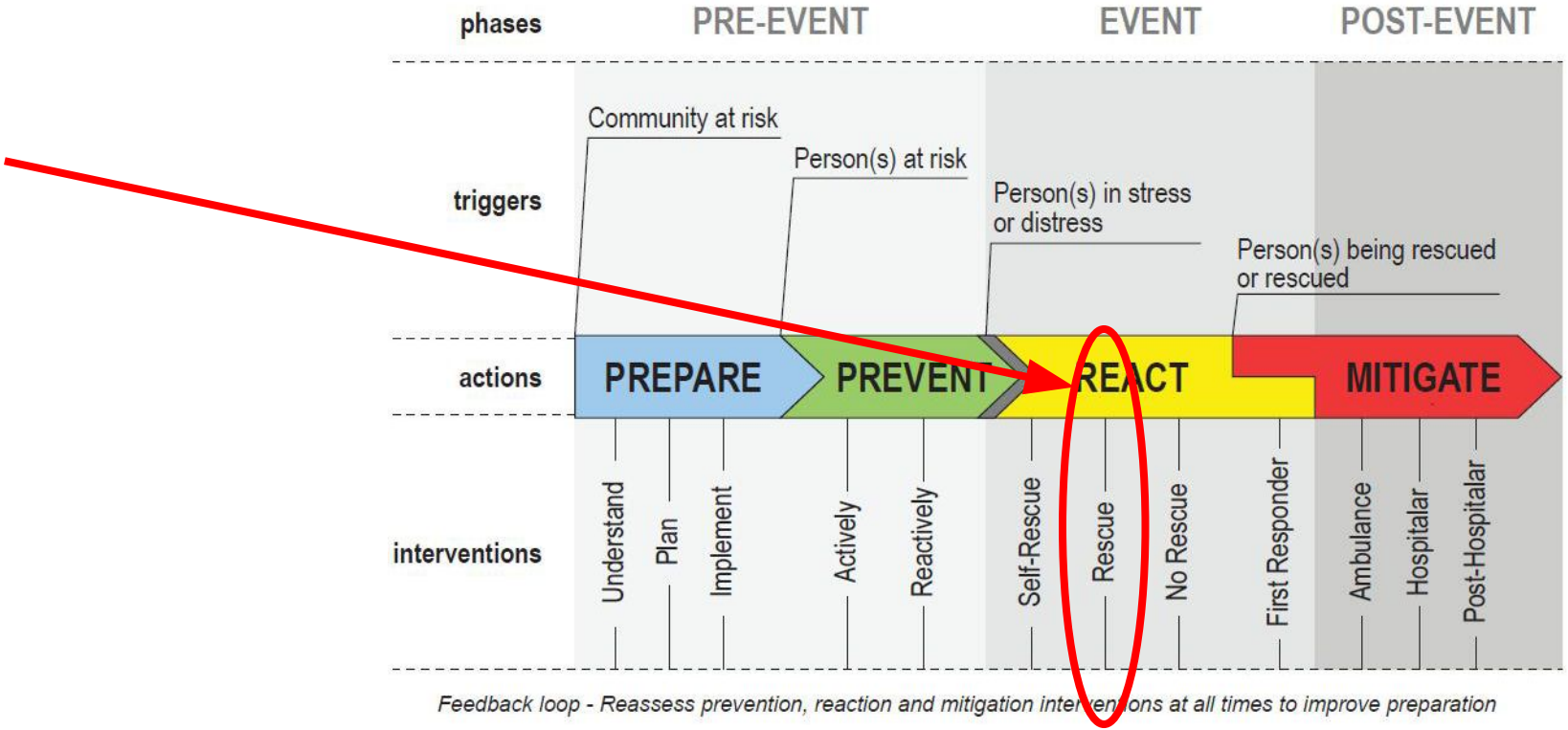
Q2M2
www.q2m2.com

The rescue phase



Szpilman, D., Tipton, M., Sempsrott, J., Webber, J., Bierens, J., Dawes, P., Seabra, R., Barcala-Furelos, R. and Queiroga, A.C., 2016. Drowning timeline: A new systematic model of the drowning process. The American journal of emergency medicine, 34(11), pp.2224-2226.

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How do we measure the average rescue time?

- Test standard published at WCDP in 2017: www.q2m2.com/WCDP2017/proposal

Main features are:

- **Representative** sampling
- **Unwarned** tests
- Sample size is preferable larger than five pct.
- **Rescue time = observation time + operation time**
- Measured from an incident occurs until lifeguard is at the position

NLO

A Nordic Surf Lifeguard Organization (NLO)

- ❏ Operating +20 lifeguard stations
- ❏ ~ 70 km between the east and the west outposts
- ❏ Mid June to mid August
- ❏ One lifeguard per station
- ❏ Opening hours 10.00 am to 06.00 pm

NLO area

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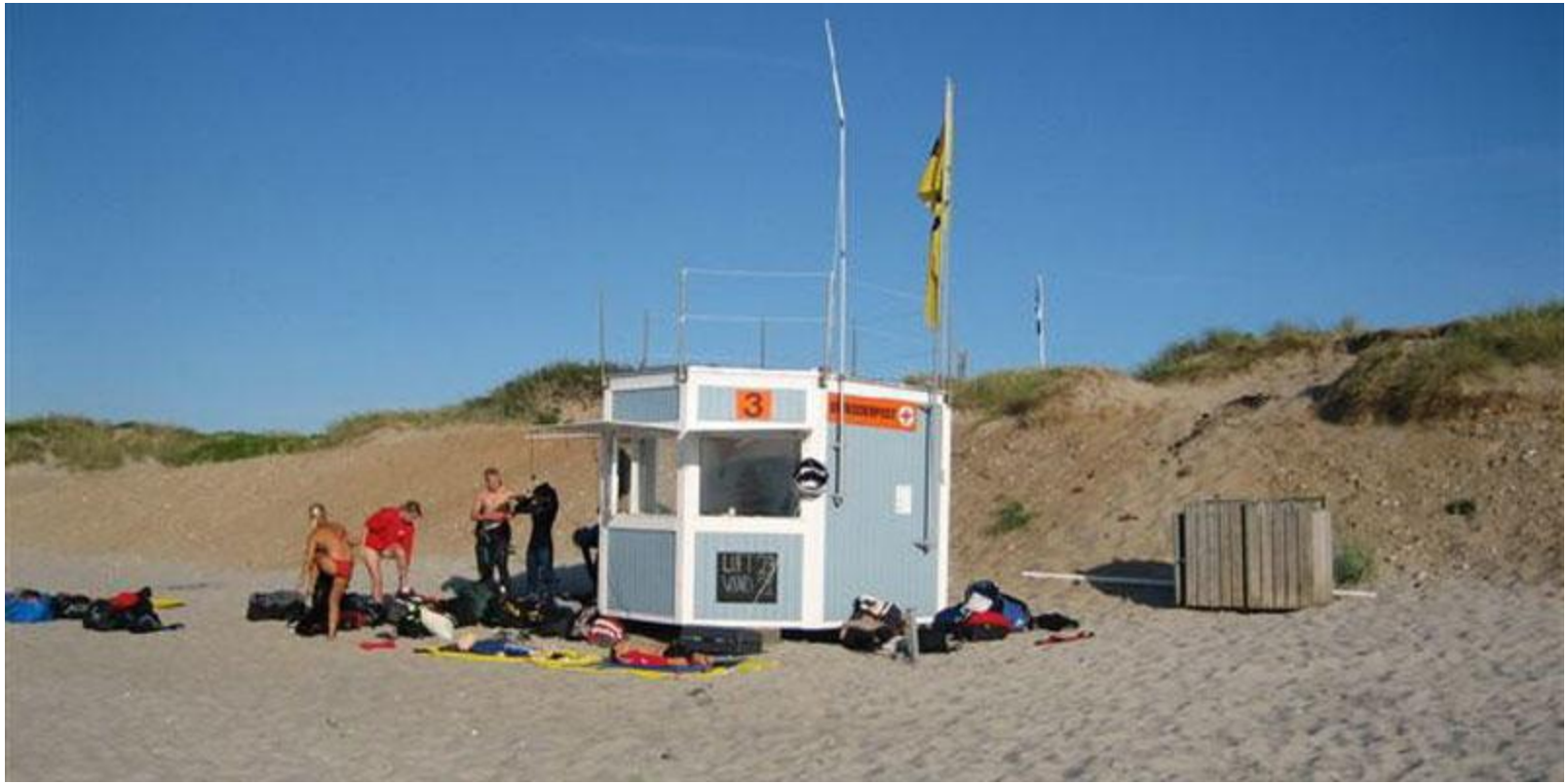
NLO Lifeguard station



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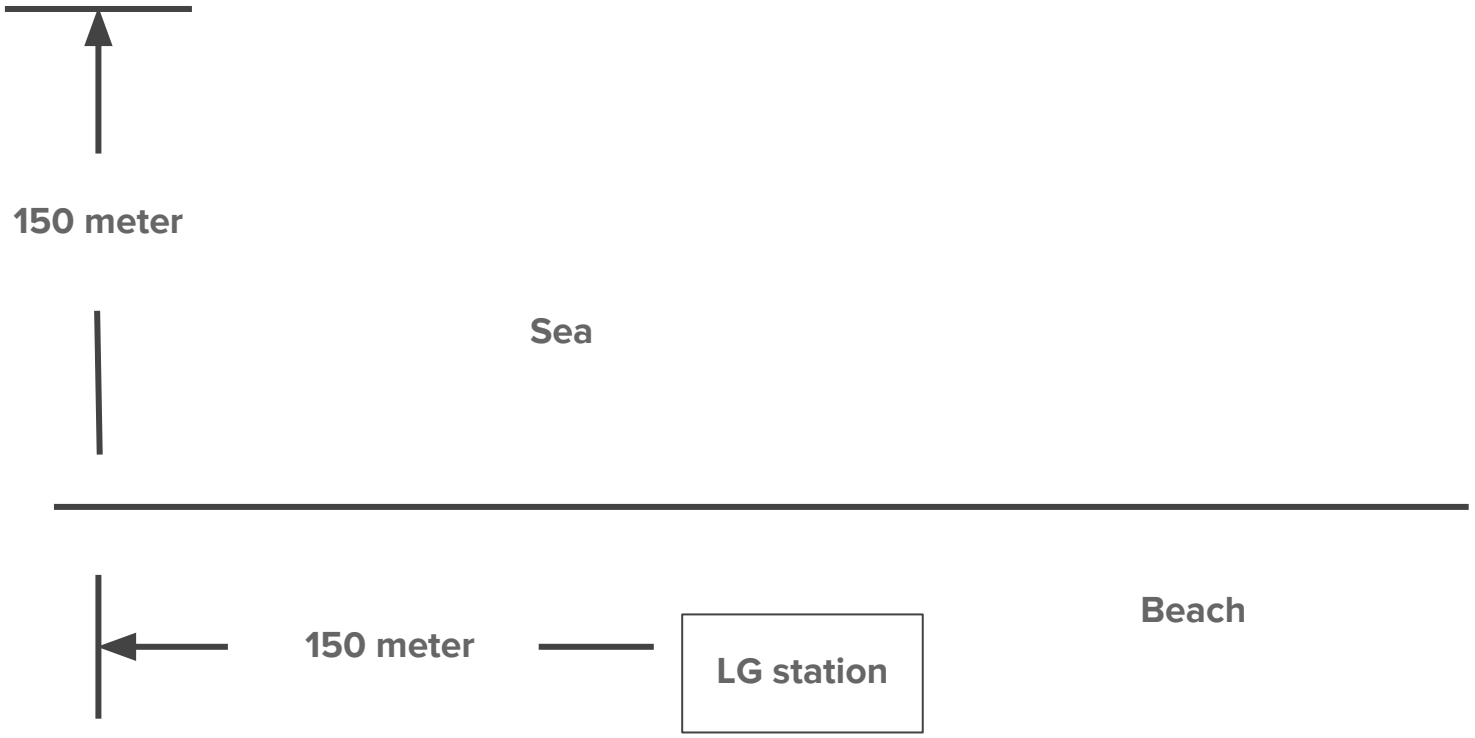
NLO - area of responsibility



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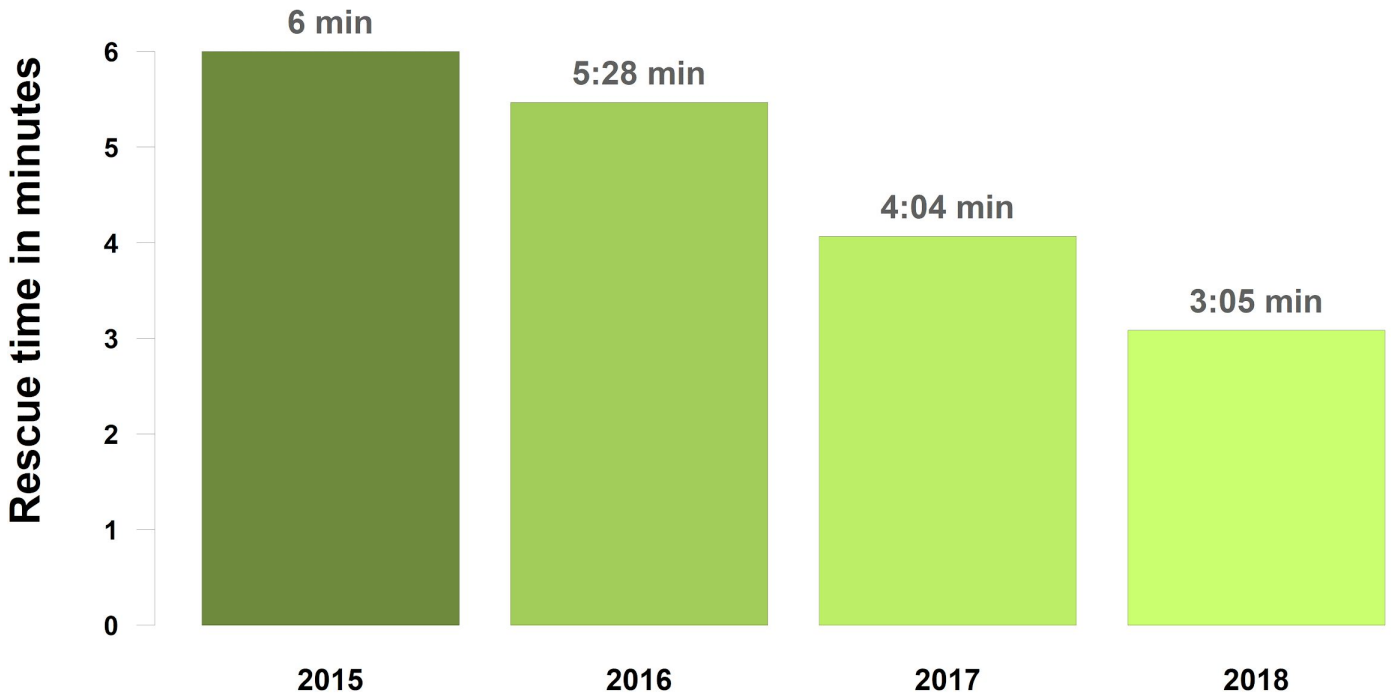
Average rescue time for NLO 2015 to 2018



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What can affect the rescue time?

Variables investigated:

1. Year
2. Date
3. Period
4. Time
5. Time of day
6. GPS for lifeguard station
7. GPS for drowner
8. Distance from lifeguard station to drowner
9. Flag
10. Beach
11. Distance to shoreline from lifeguard station
12. Beach guests
13. Surf size
14. Wind speed
15. INS 1
16. INS 2
17. Visibility above water
18. Seaweed in water
19. Visibility above water
20. Lion's mane jellyfish
21. Calls 112
22. Level of communication and analyzing before action-taking
23. Use of wetsuit
24. Engine starting problems
25. Mode of Transportation
26. Use of wetsuit
27. Pre-warning of lifeguard
28. Third-part control
29. Age of lifeguard
30. Years of experience of lifeguard
31. Lifeguards days on beach current season
32. Experience with real-life emergencies
33. Sharp INSITU
34. Self INSITU
35. Standard INSITU
36. Test time for 50 meter swim
37. Test time for 1200 swim
38. Score in theory test
39. **And more...**

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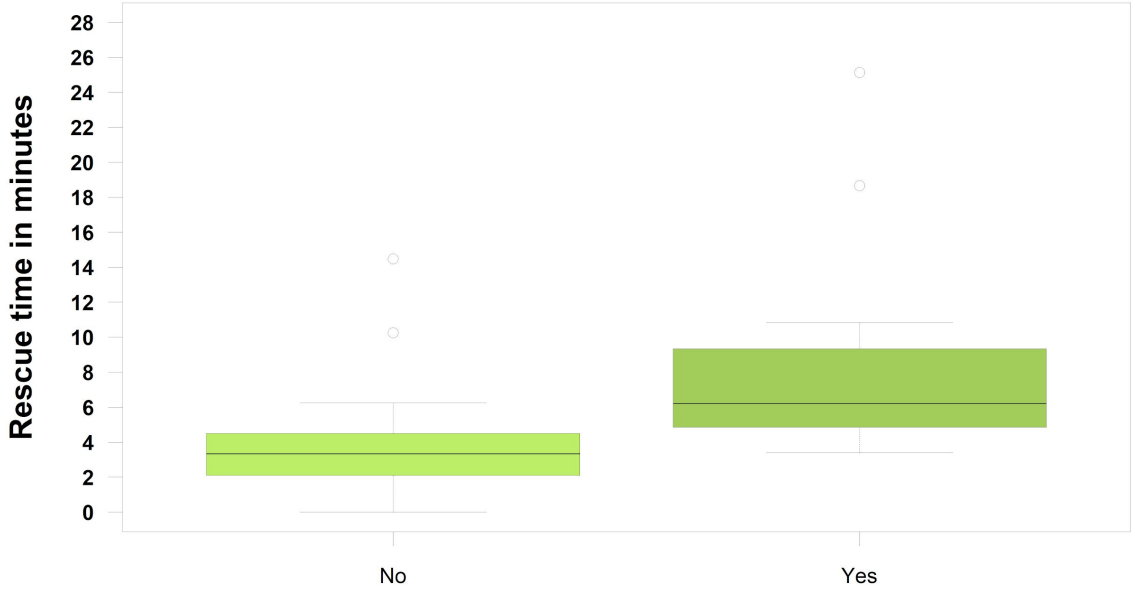
The effect of beach guest - and not the lifeguard - observes the indident (2016)



Was it a beach guest that notified the lifeguard about the drowning incident?

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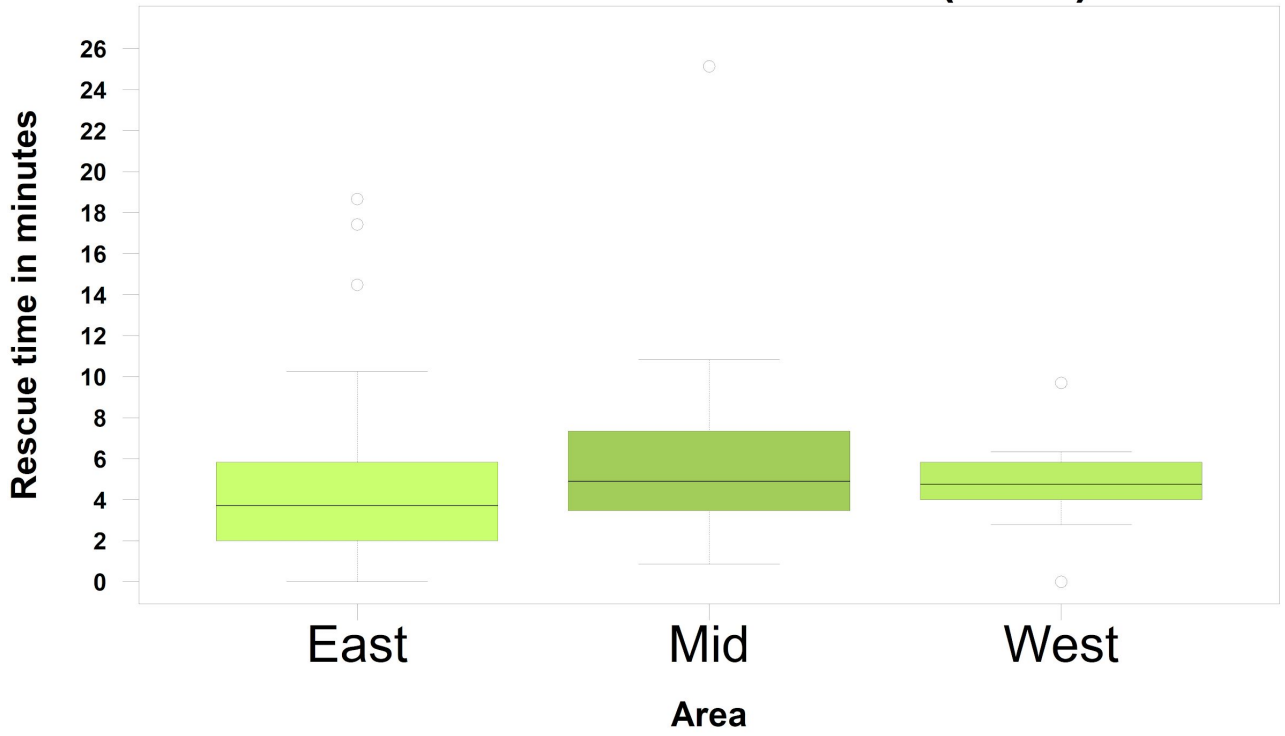
Comparing the difference among NLO's three main areas (2016)



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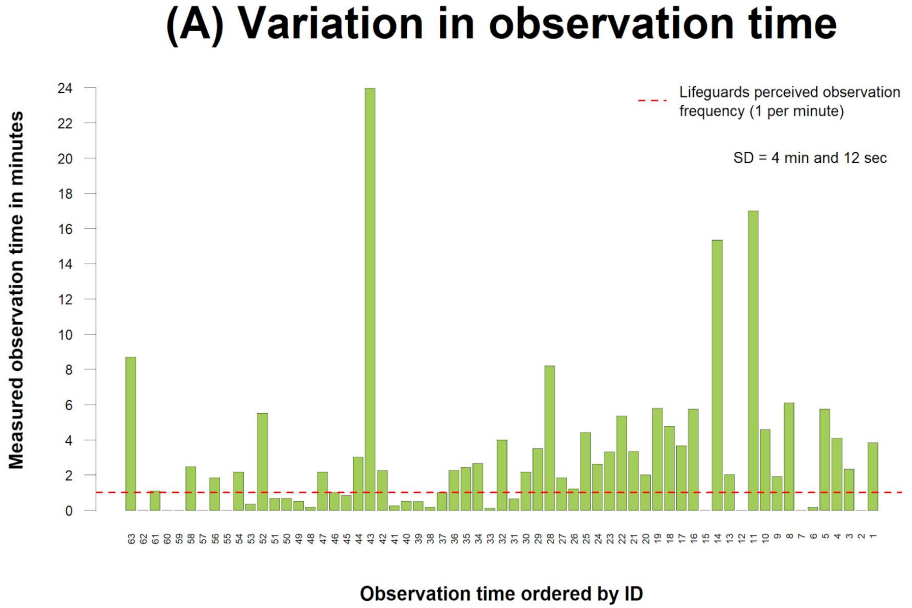
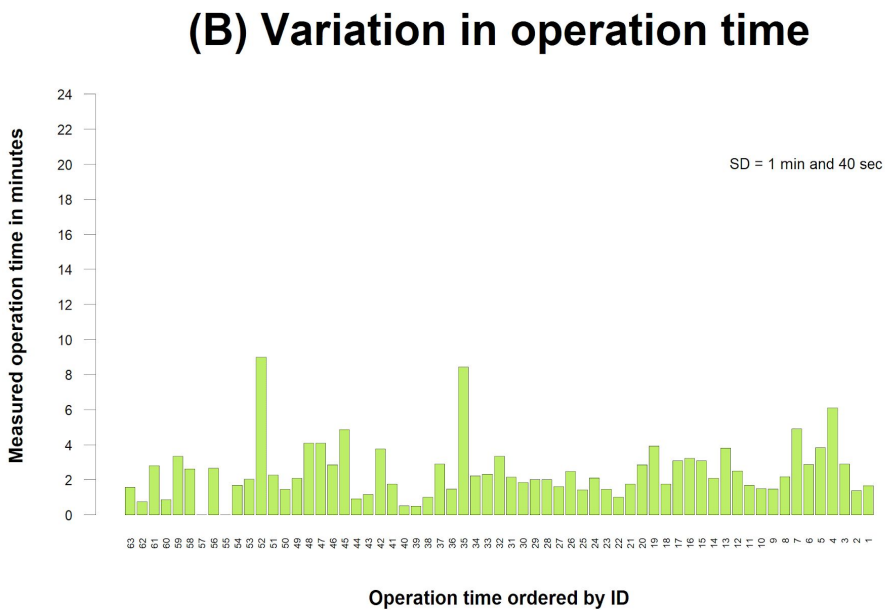
Observation time matter the most (by far)





2016 data

- **Observation time accounts for 60 pct of the full rescue time**

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Motivation

Vittone and Pia (2006) indicates that an instinctive **drowning** incident takes between **20 and 60 seconds**

Mario Vittone and Francesco A. Pia, 2006. *It Doesn't Look Like They're Drowning - How To Recognize the Instinctive Drowning Response*, Journal of US Coast Guard search and rescue. p. 14.

Data collection form

https://form.q2m2.com/dnk-2018-rt/

Benefits of POP:

- ❑ **Continuously improving** the average rescue time
- ❑ Develop methods to achieve **acceptable** rescue time
- ❑ Find the most **cost-efficient** methods to achieve acceptable rescue time

Request

Sharing data on rescue time that will benefit all and enable everyone achieving the **best** possible **rescue time**