A person wearing a black wetsuit and a bright pink swim cap is swimming in clear, blue-green water. The person's arms are extended forward, and their hands are just below the surface, creating splashes. The background is a soft-focus view of the water's surface with light reflecting off the ripples.

Recreational Open Water and Infectious Disease

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Background

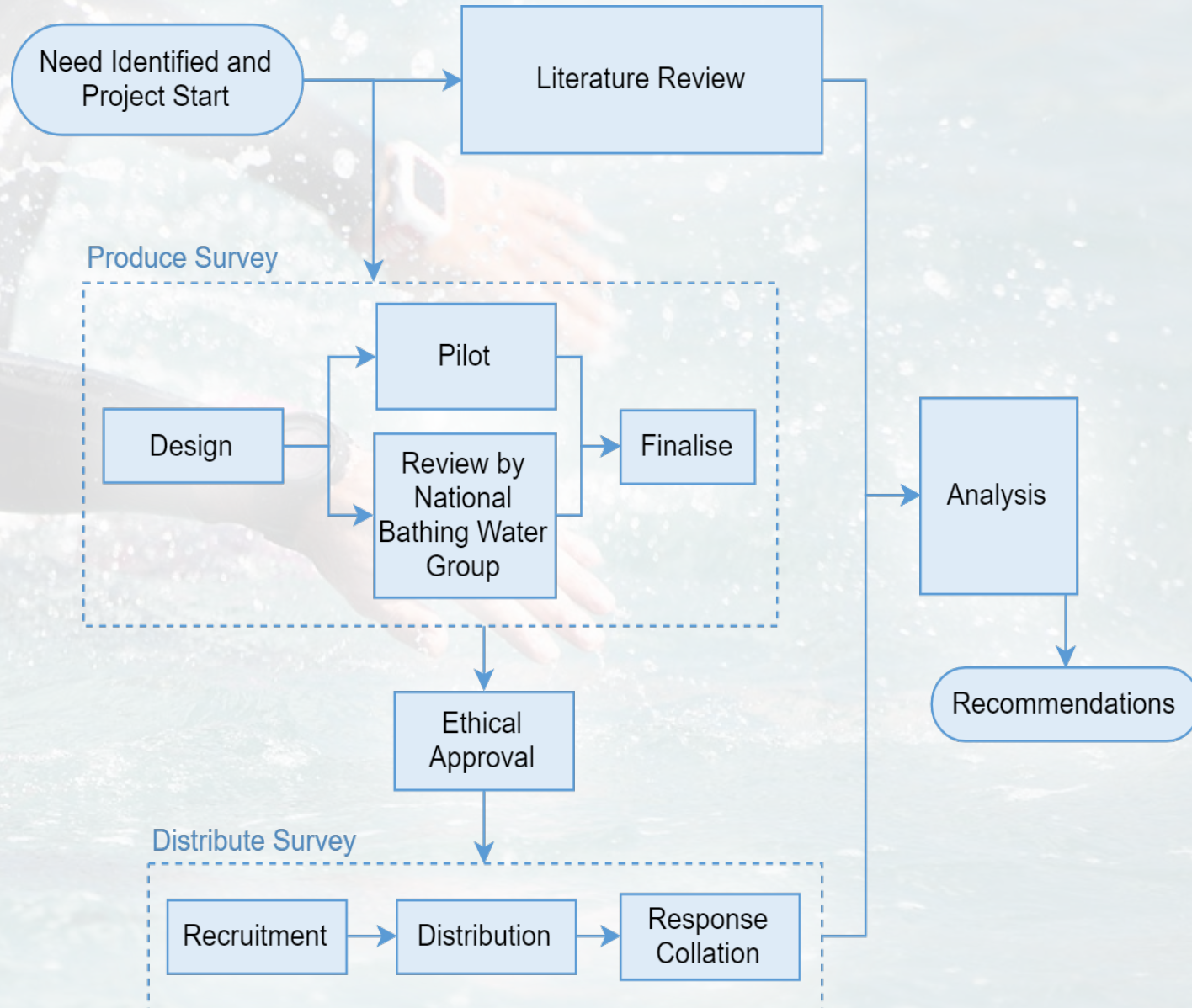
- Exercise improves both physical and mental health.
- Water-based events are gaining in popularity.
- Healthy participation in these activities depends on water quality.
- Multiple epidemiological studies have shown contact with faecally contaminated water poses serious risks to health.
- Numerous reports nationally and internationally of athletes experiencing illness following recreational water contact.
- Risk is highest if water is swallowed or after poor weather conditions.

Aim

To minimise the public health risk of infectious disease by developing evidence-based recommendations for recreational open water users.

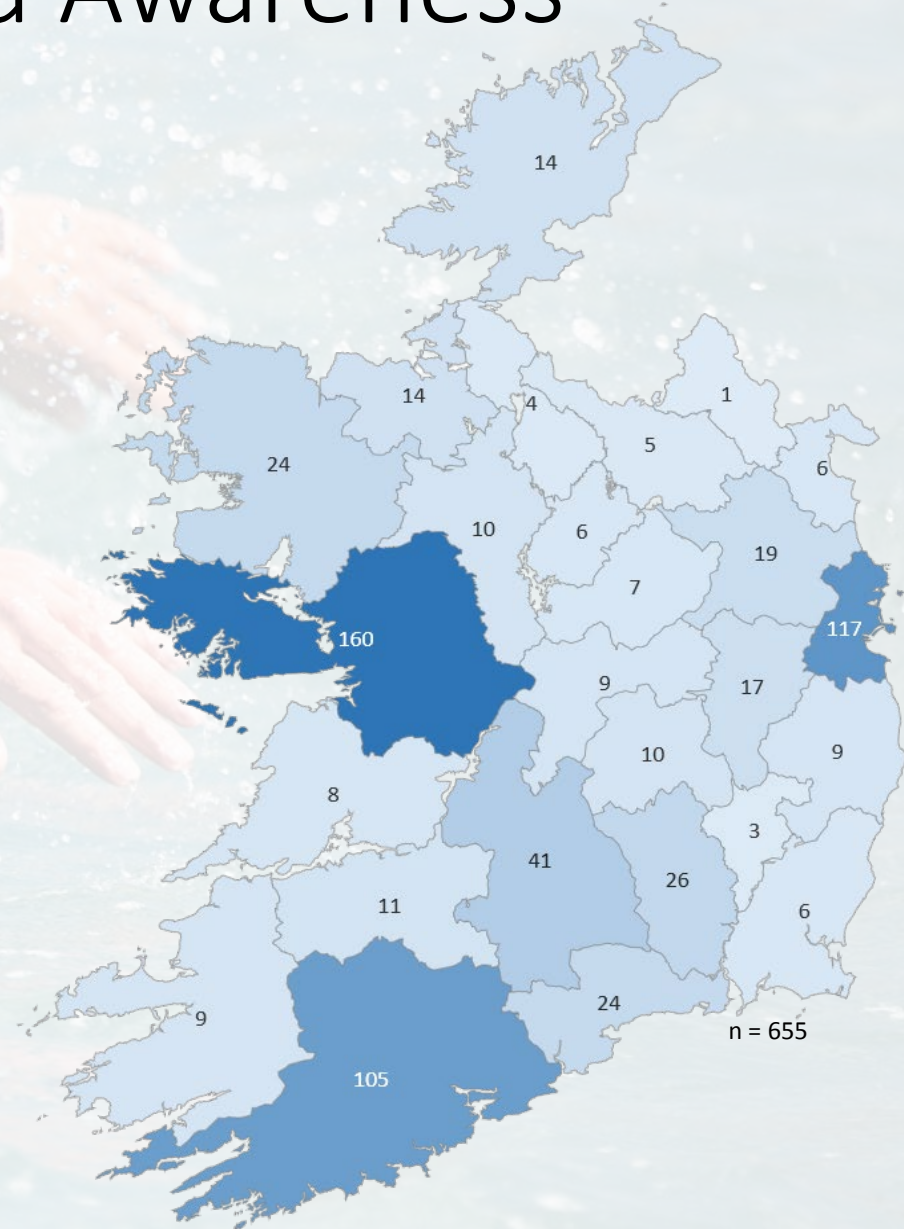
Methodology

- Identify the epidemiology of illness associated with recreational water use
 - Literature review
- Conduct formative research with key stakeholders
 - Country-wide online survey of those who take part in training and sporting events which involve contact with open water (e.g. canoeists, swimmers, triathletes etc.) to assess awareness, preventive behaviours and predictors of illness

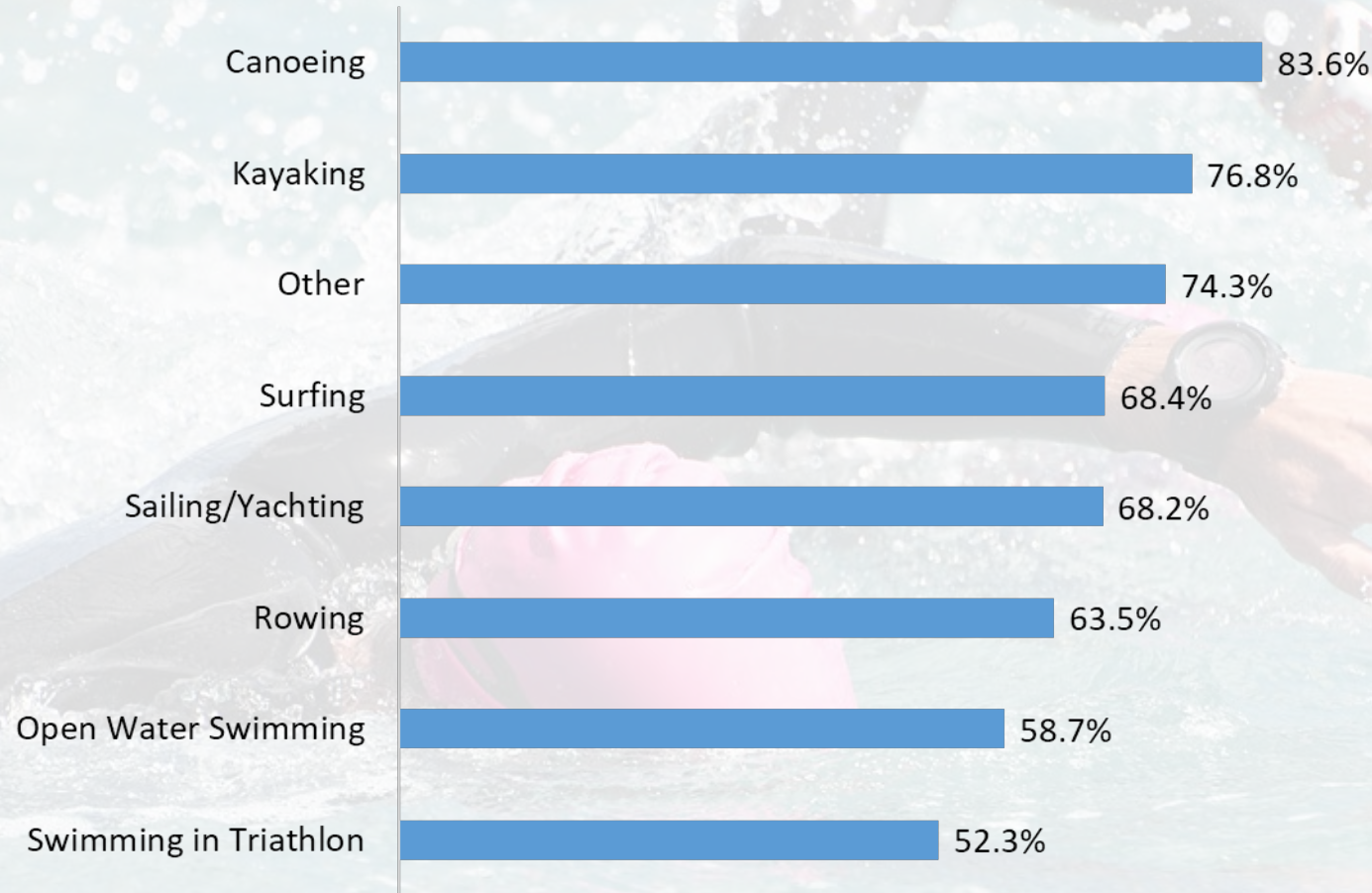


Key findings – Demographics and Awareness

- 673 survey responses
- 56.2% male, 43.8% female
- Age range 18-71 years (mean 41.1)
- Good geographical spread of respondents
- Males have longer experience with water activities
- Many respondents participated in multiple sports
 - Open water swimming 59.7%
 - Swimming in a triathlon 42.9%
 - Kayaking 36.5%
 - Canoeing 11.9%
- 61.5% aware of risk of infection with open water contact
- 36.8% received information/advice about water-related illness
- 51.4% never forgo training/events due to concerns about water quality



Awareness of Risk



Proportion of respondents in each activity

Sports with highest intensity water contact, who reported swallowing water most frequently (swimmers, triathletes) were least aware.

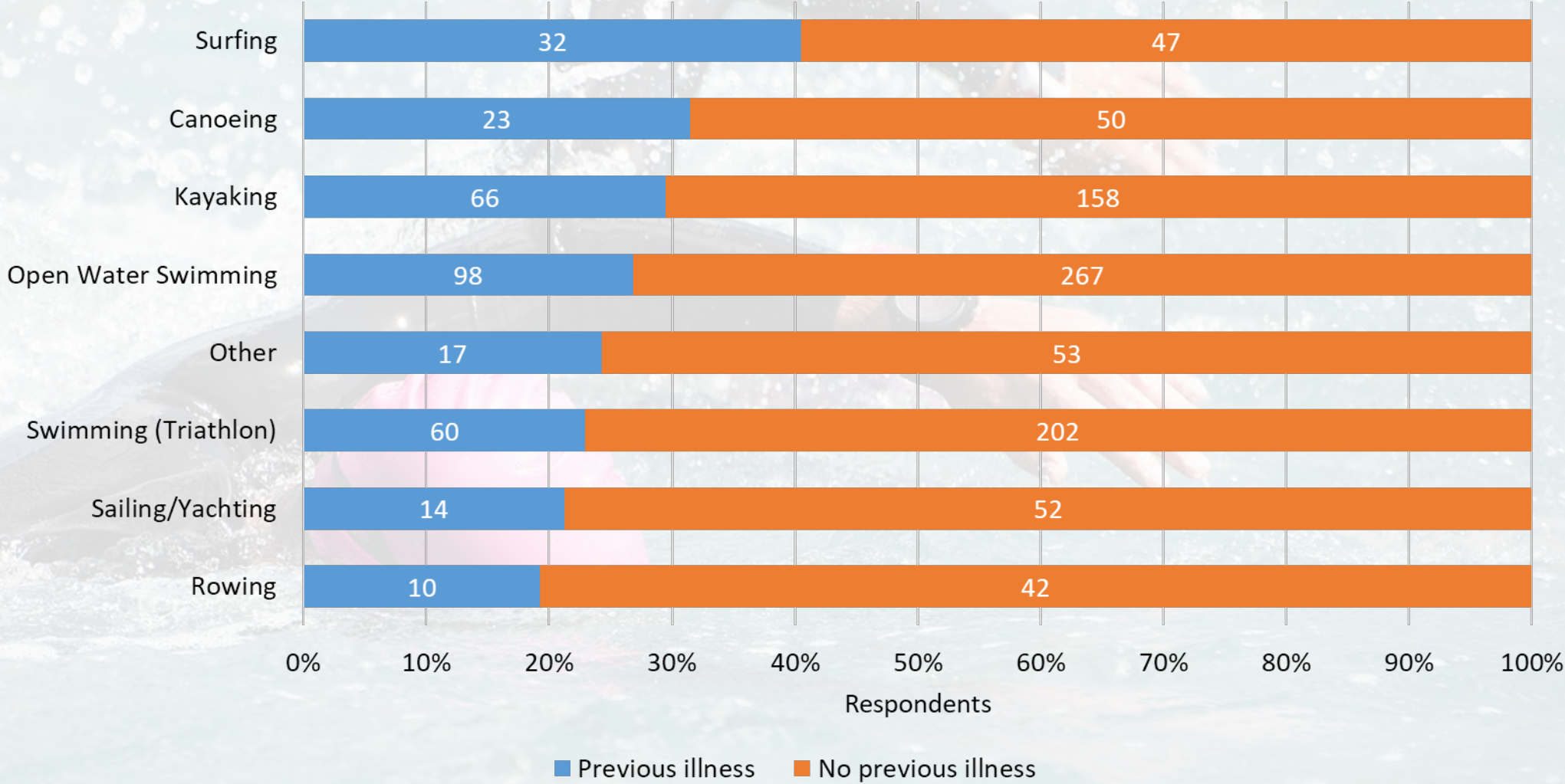
Those with longer experience significantly more likely to be aware of risks

Key Findings – Previous Illness

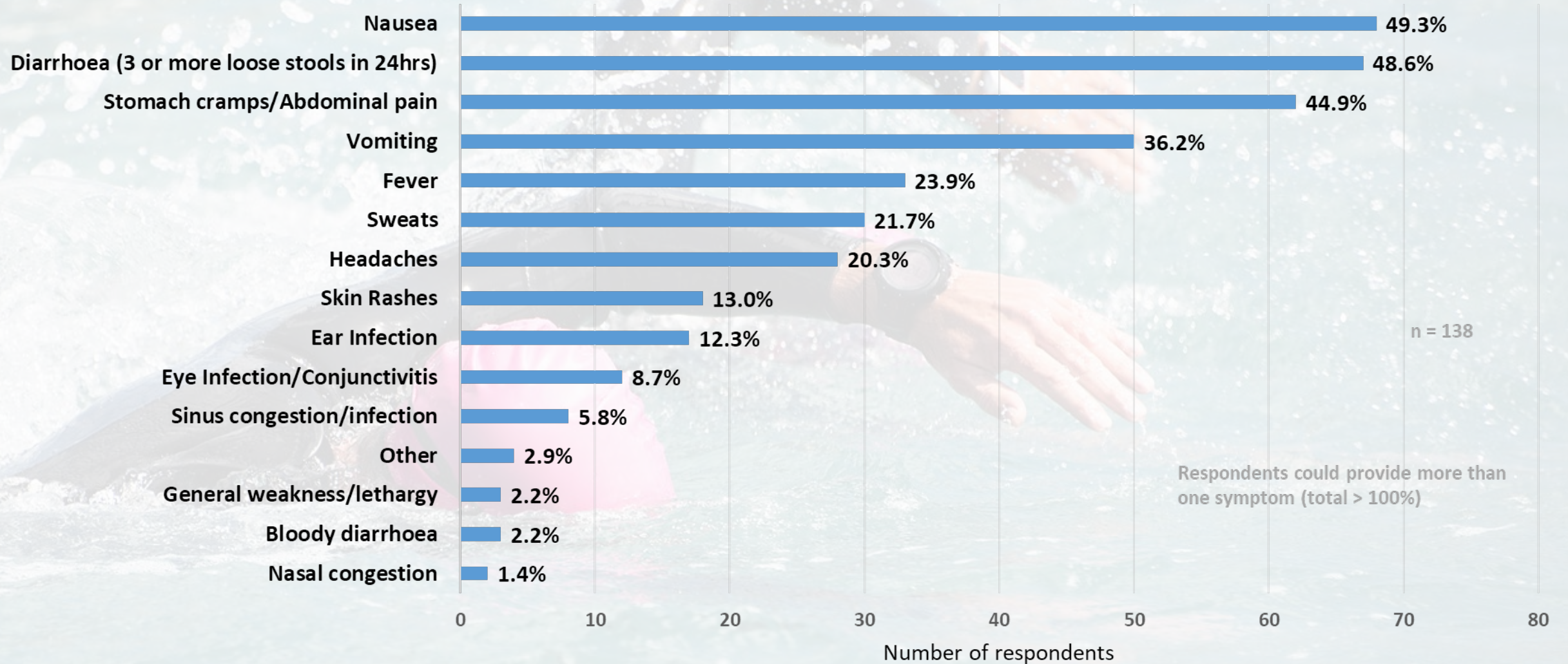
26.6% linked a previous illness to recreational open water contact

- Gastrointestinal symptoms most common
- 38.1% attended a medical professional
- 43.9% took time off work
- Those who experienced a previous illness are significantly more likely to forgo training or an event due to concerns about water quality

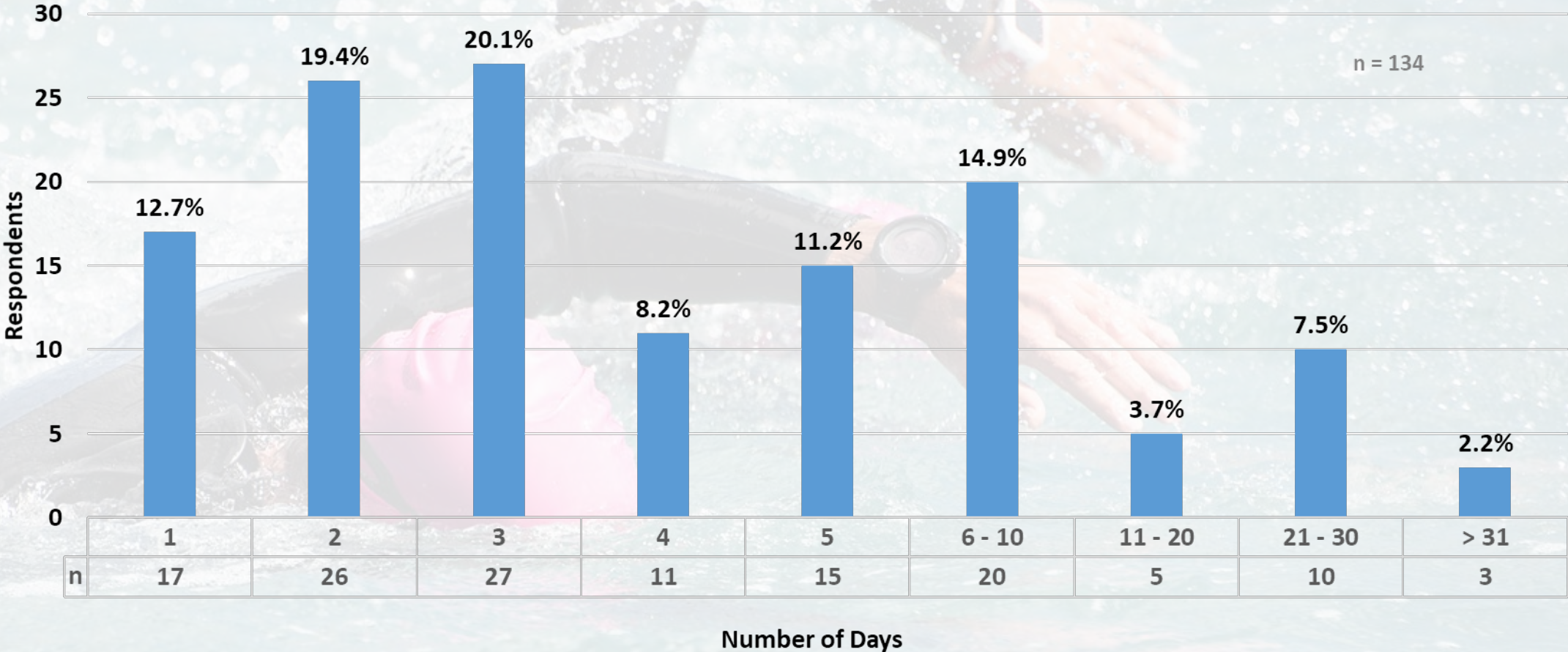
Water-related Illnesses Experienced Across Sports



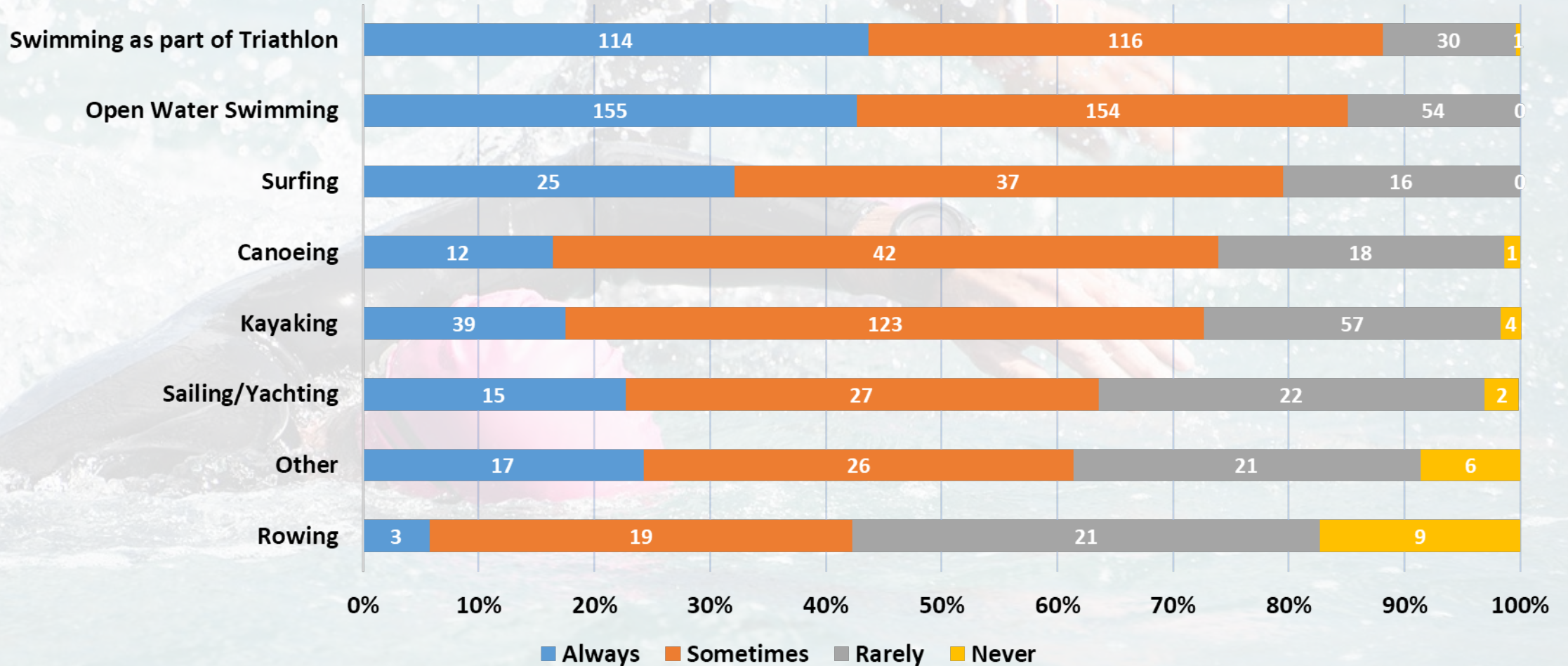
Symptoms of Illness



Illness duration



Swallowing Water by Individual Sport



Predictors of Illness

A person wearing a black wetsuit and a pink swim cap is swimming in the ocean. The water is splashing around them, and they are wearing a watch on their left wrist. The background is a bright, overcast sky.

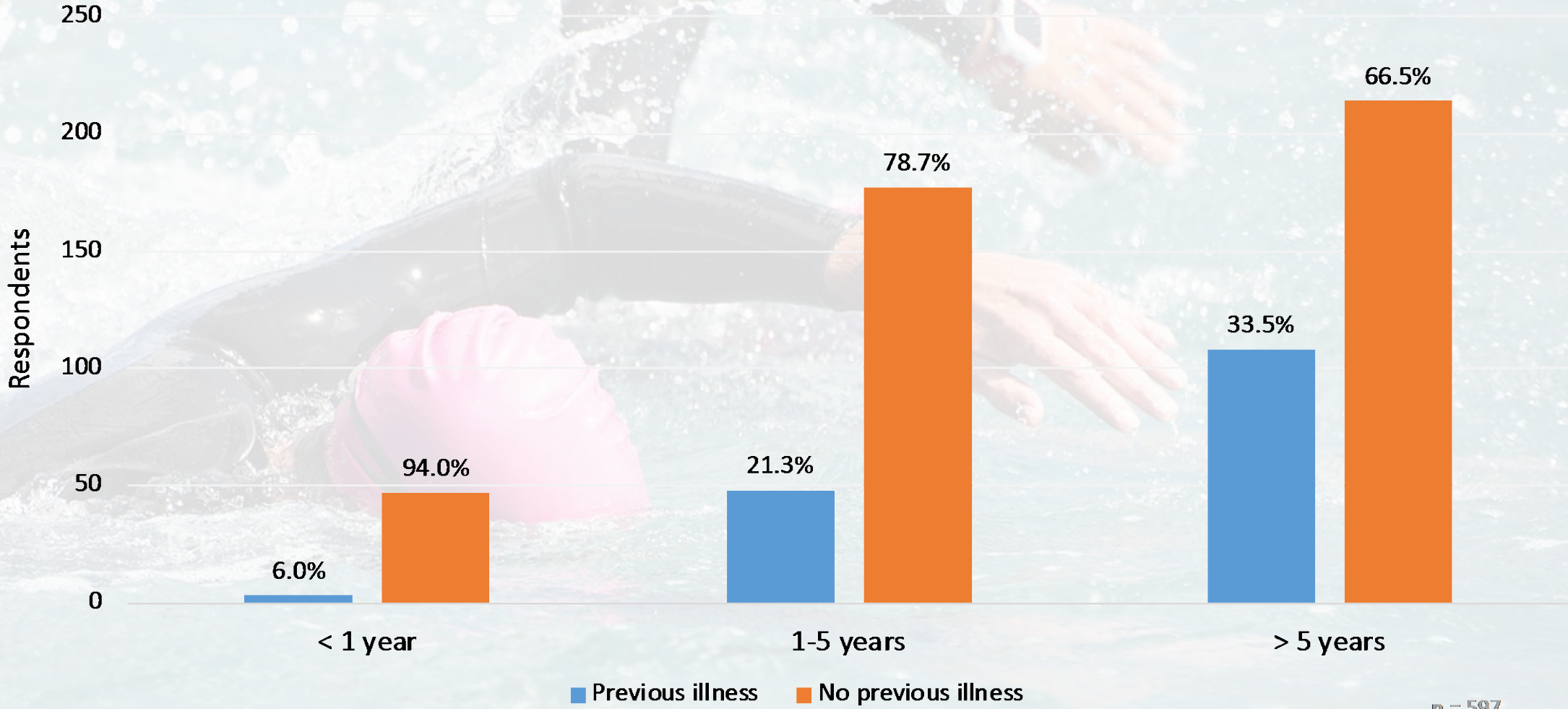
Higher likelihood of illness

- longer experience
- sometimes or always swallow water
- sometimes cover grazes

Lower likelihood of illness

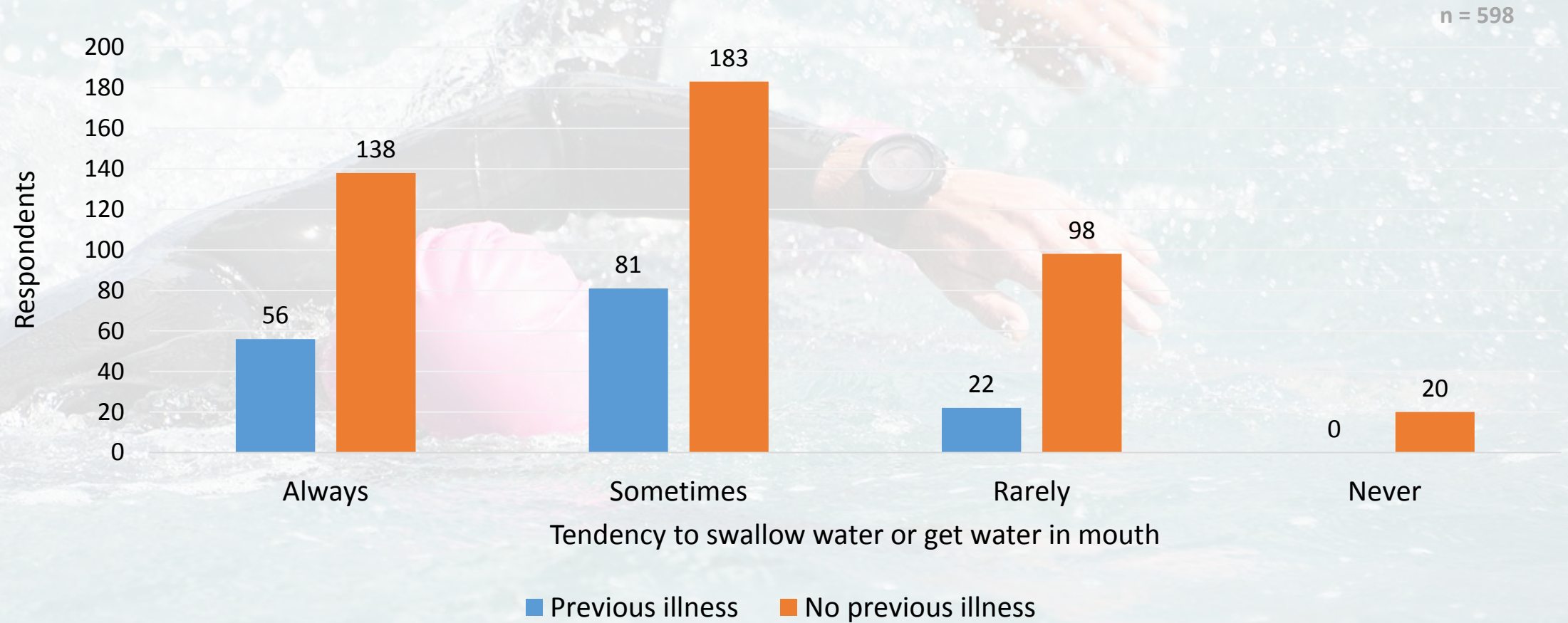
- sometimes or always wear protective clothing (e.g. wetsuit)

Length of Experience and Previous Illness

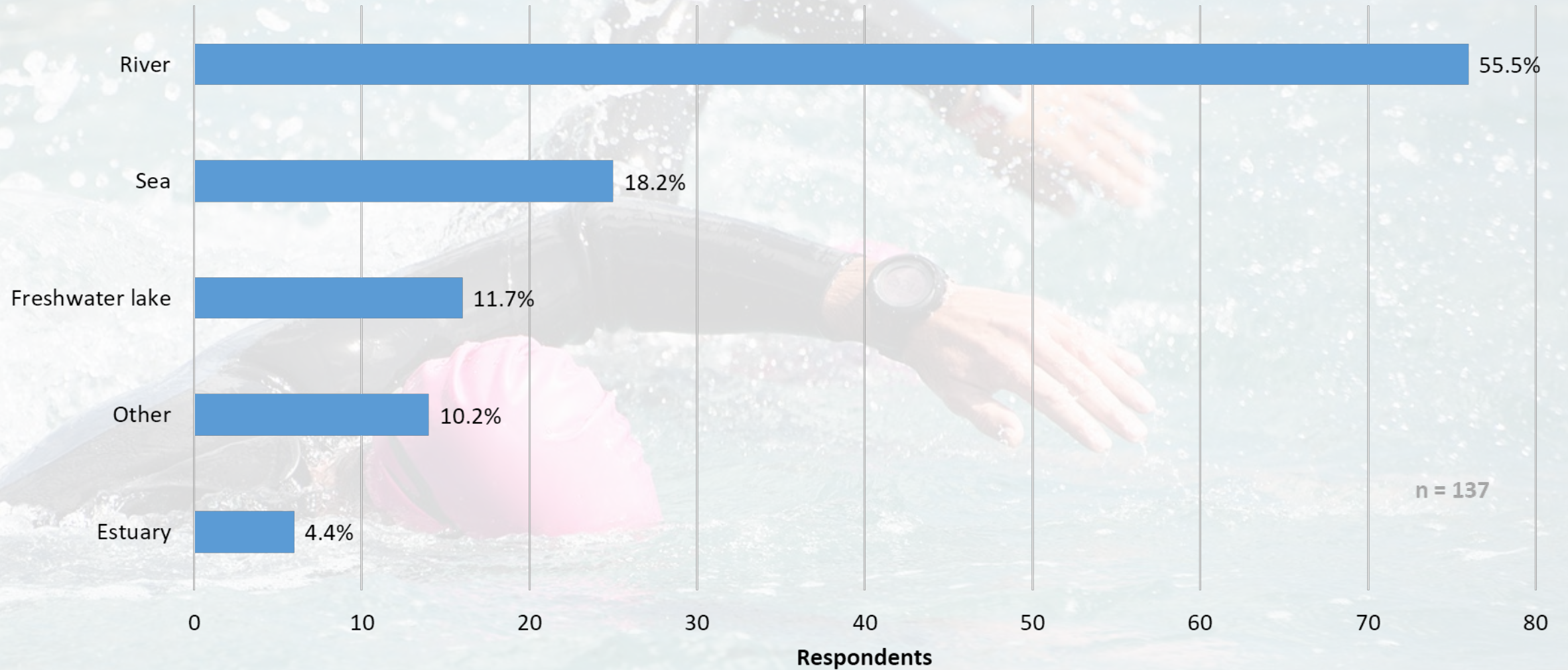


n = 597

Swallow Water and Previous Illness

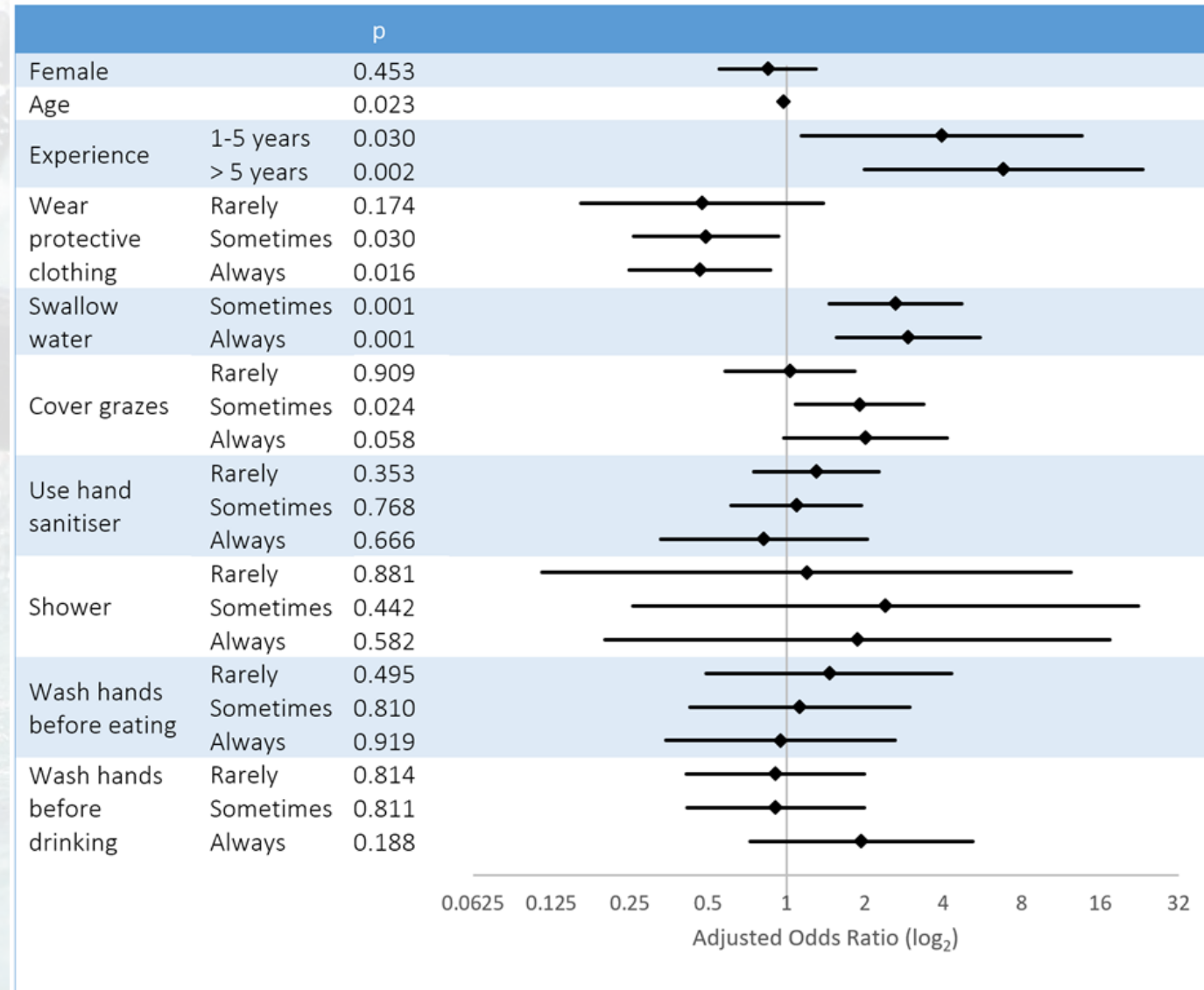


Type of Water Contact Prior to Illness



Summary of Key Findings

- 673 survey responses
- **26.6% linked a previous illness to recreational open water contact**
- Gastrointestinal symptoms most common
- Higher likelihood of illness
 - longer experience
 - sometimes or always swallow water
 - sometimes cover grazes
- Lower likelihood of illness
 - sometimes or always wear protective clothing (e.g. wetsuit)



Recommendations

General recommendations

- National sporting bodies/event organisers should inform participants of the risk
- Clinicians and those undertaking epidemiological surveillance should consider recreational water when a patient with recreational water contact presents with illness

Recreational water users

- Use beaches compliant with EU bathing standards
- Be aware of weather events (heavy rainfall) which can lead to water contamination
- **Before entering water:** Wear protective equipment, cover cuts and grazes
- **During water contact:** Minimise swallowing of water
- **After exiting water:** Wash hands before eating/drinking, shower as soon as possible, clean all equipment thoroughly
- In case of illness contact your GP and mention recent water contact. If you are concerned the source may be a risk to others, contact your local Department of Public Health for advice



Thank you

Any questions?