

# U.S. RECREATIONAL BOATING ACCIDENTS

## Prevention Through Awareness



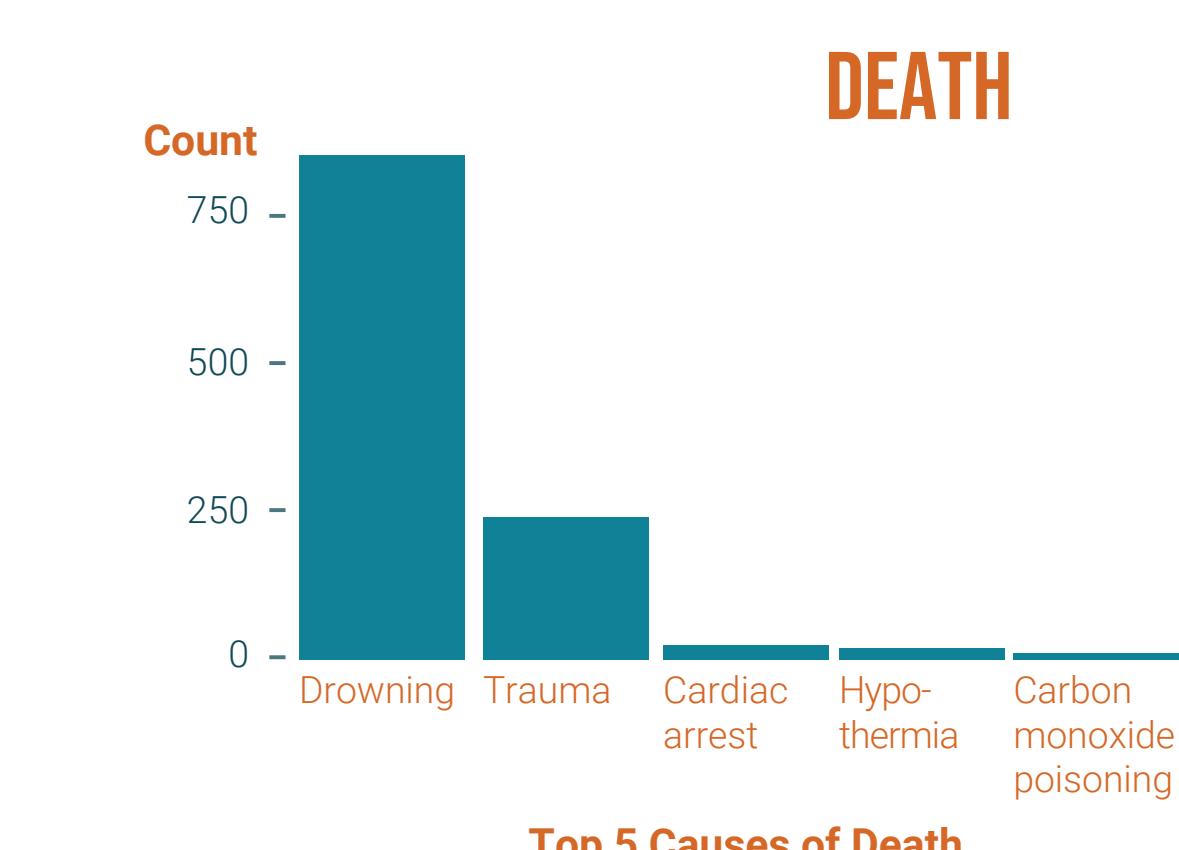
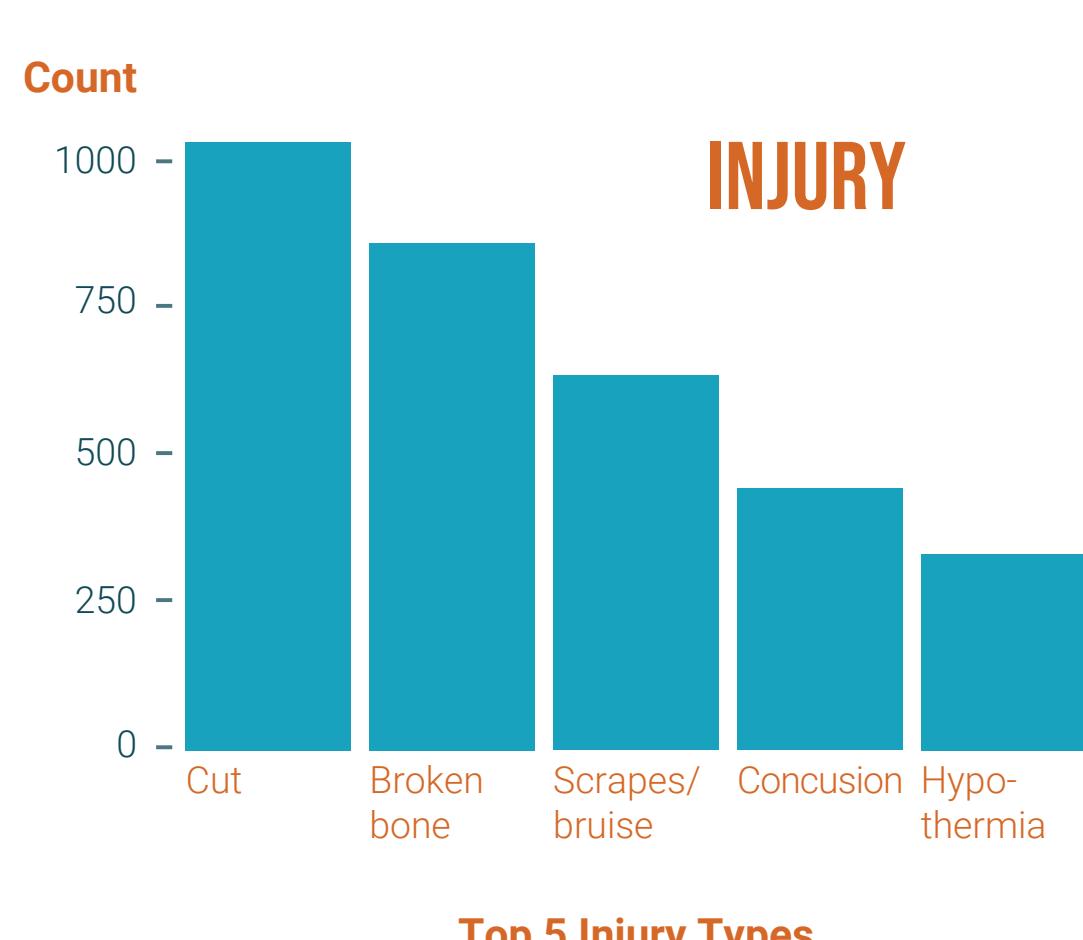
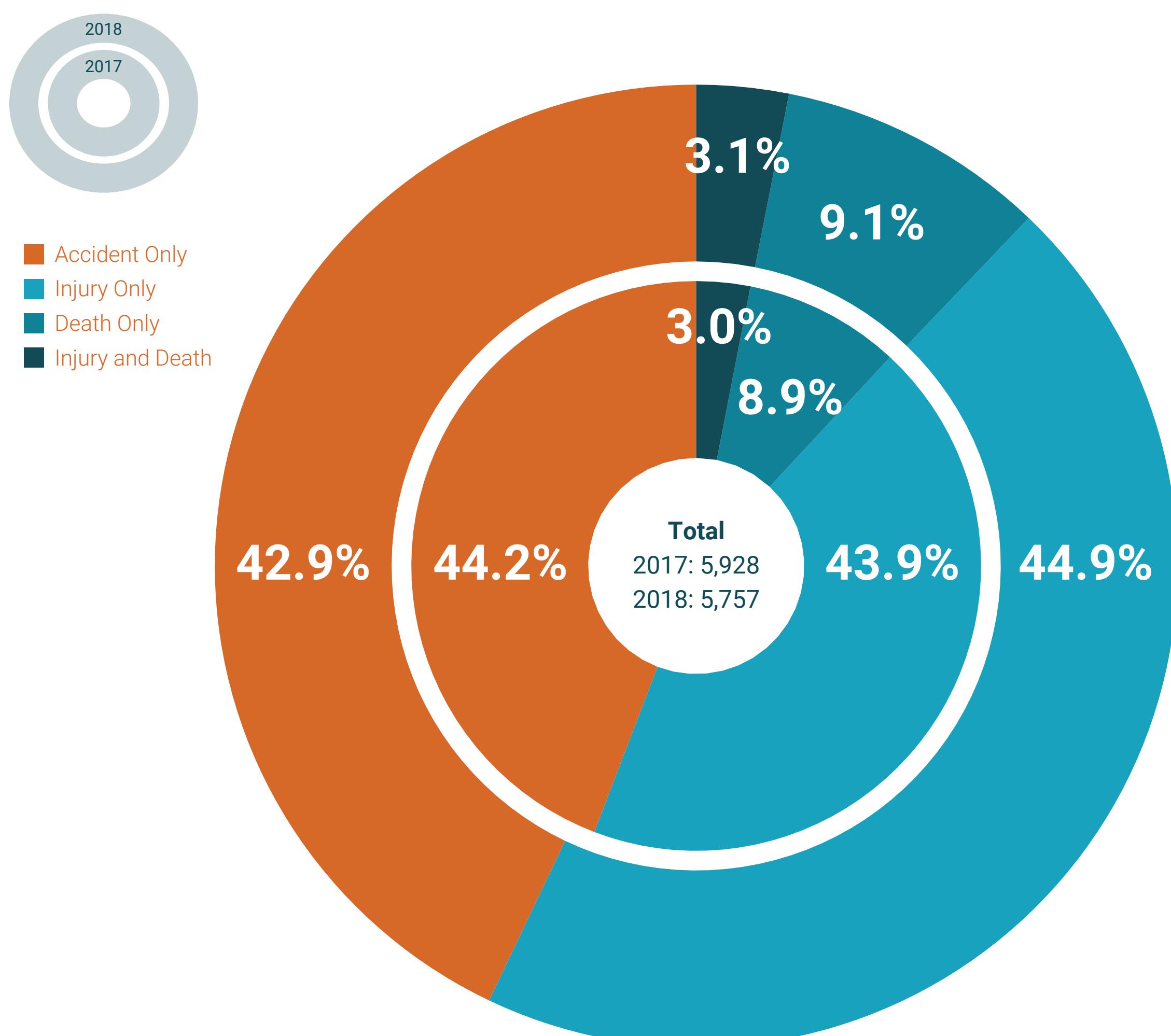
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The annual economic impact of recreational boating averages around \$170.3 billion a year. It also supports more than 691,149 workers and 35,277 businesses. It is estimated that 141.6 million Americans go boating each year. However, being on the water, although fun, is also dangerous. Generally, this analysis seeks to improve the understanding of recreational boating accidents to prevent them from occurring. Specifically, it aims to uncover the answers to three primary questions:

1. How many boating accidents are there each year and what are their outcomes?
2. What happened?
3. What was the cause?

## OUTCOMES OF BOATING ACCIDENTS

The donut charts below show the distribution of accident outcomes for the years 2017 and 2018. As seen below, most boating accidents result in injury, followed by simply just accidents, and then accidents that include death. The total number of accidents for years 2017 and 2018 show that there has been little change year over year for these time periods.

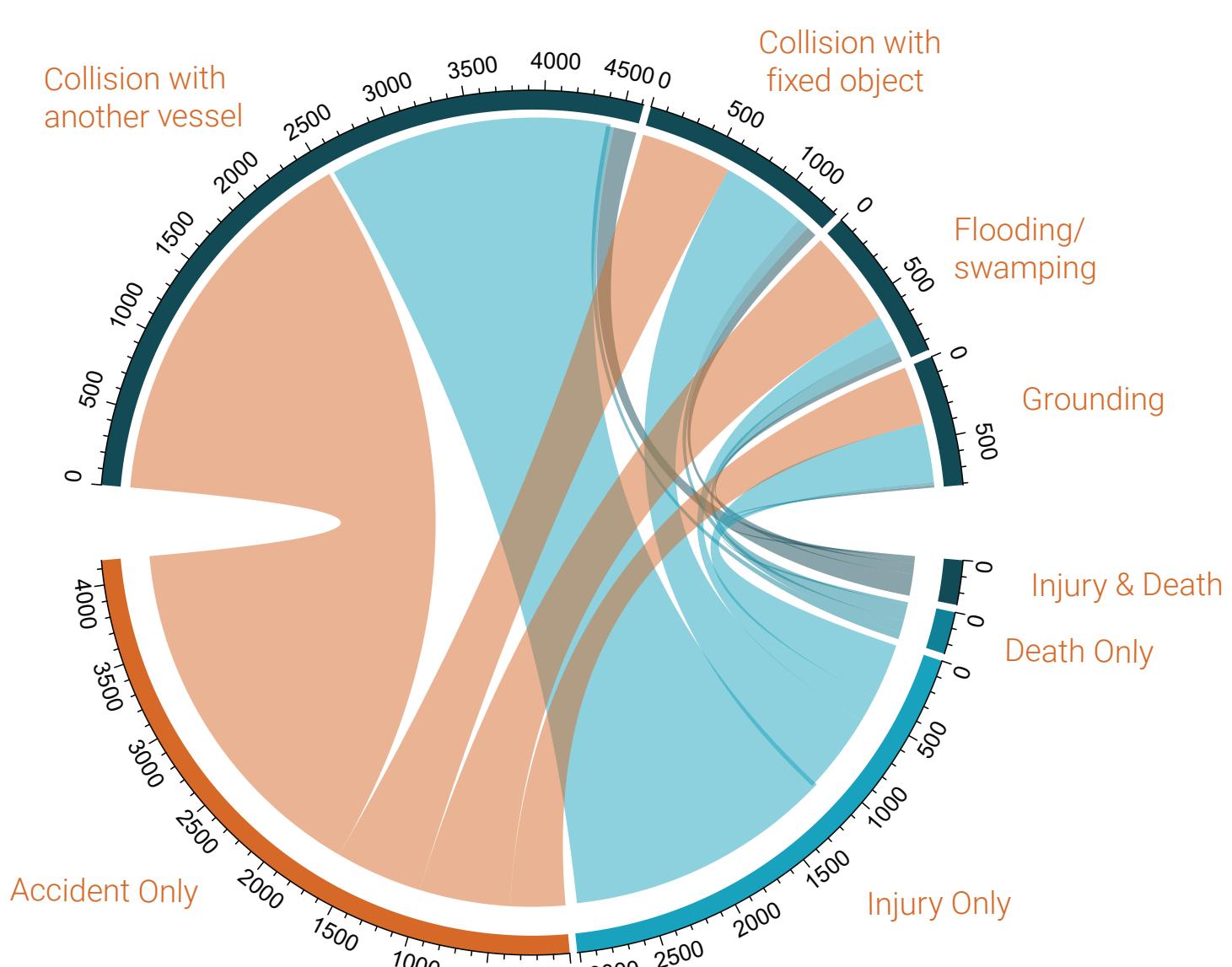


**DATASET:**  
The United States Coast Guard granted our team access to their 2017 and 2018 boating accident database for every state in the U.S. except for California. The dataset contains very specific details on every boating accident they are dispatched to. We scoped the data to include approximately 35 columns of both numeric and categorical features over approximately 11,685 observations.

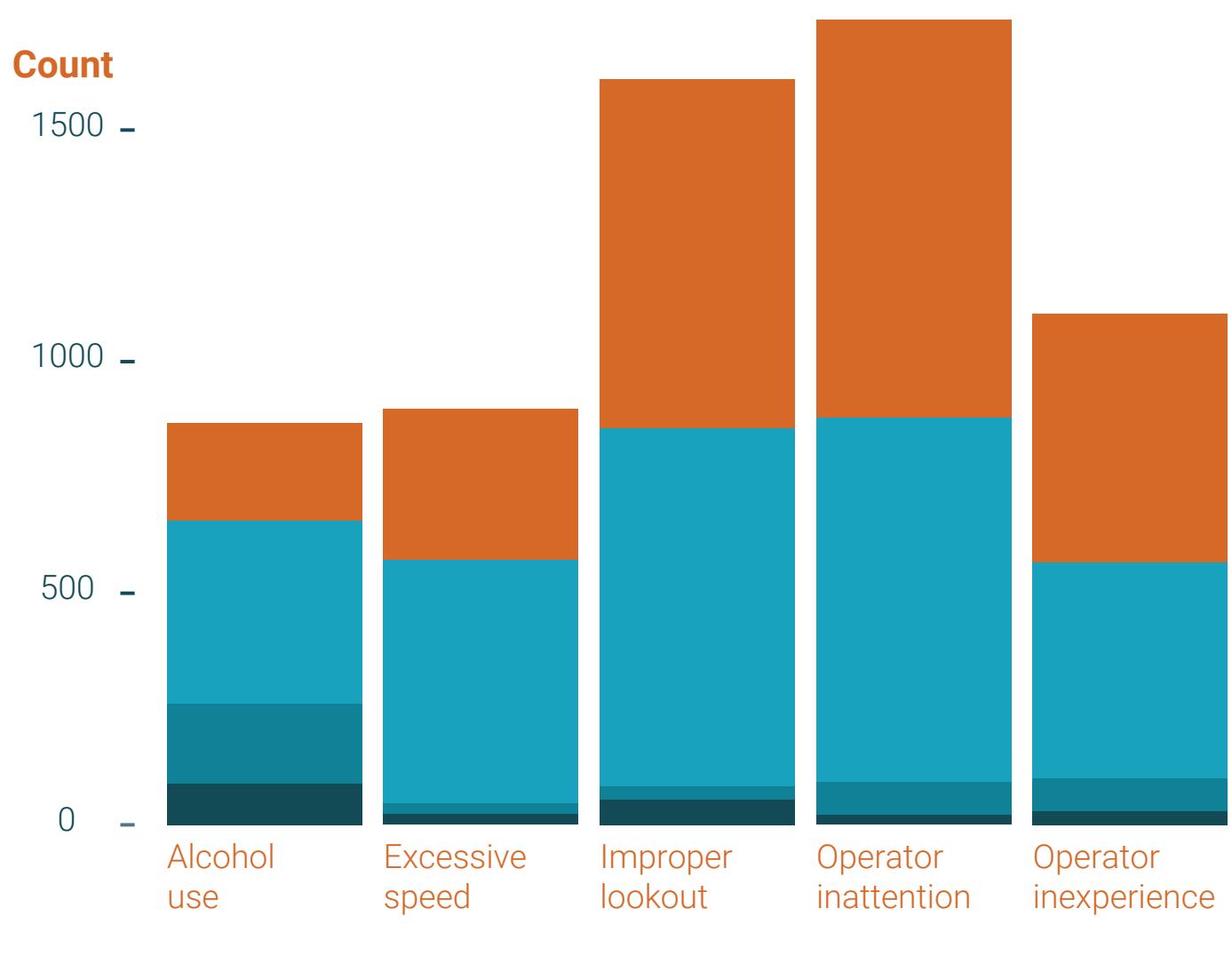
**AUDIENCE:**  
Current boaters, future boaters, and passengers. As a result of COVID-19, boat brokers are reporting significant growth in boat sales. This means there are many new boaters on the water. Knowing more about boating accidents may help prevent future occurrences.

## WHAT HAPPENED?

The chord diagram below illustrates the 4 most common events that occur as a result of an accident. The bottom of the diagram shows the outcome of the accident and is then mapped to a proportional accident event on the top of the diagram. Overwhelmingly, most accidents involve a collision with another vessel or a fixed object in the water.



## WHAT WAS THE CAUSE?



**45**  
AVERAGE OPERATOR AGE

**M: 92%  
F: 8%**  
OPERATOR GENDER

**4**  
AVERAGE NUMBER OF  
PEOPLE ON BOARD

**40**  
AVERAGE LENGTH OF  
BOAT (FT.)

**\$14,500**  
AVERAGE DAMAGE (\$)

## SUMMARY

Generally, boating accidents, regardless of outcome, most often result in a collision and are primarily caused by operator inattention or improper lookout. For accidents involving injury, most often an individual experiences a cut or broken bone. For accidents involving death, the leading cause of the accident is alcohol, which most often results in death from drowning. In summary, the best way to boat safely is to pay attention, assign a lookout, wear a life vest, and to drink alcohol responsibly.