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Making Safety an Easy Catch: PFD Use Among Commercial Fishermen in New England

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Abstract

This brief highlights the development and administration of Lifejackets for Lobstermen and its successor, Lifejackets for Fishermen. These programs provide education about, physical access to, and monetary incentives for personal floatation devices (PFDs). Preliminary data shows that commercial fishermen in New England have increased their PFD wear rates significantly since the launch of these programs in 2019.

Keywords

Lifejackets; falls overboard; behavior change

Introduction

The successful integration of safety technologies and practices into worksites is key to reducing occupational injuries, illnesses, and fatalities. The concept of designing for dissemination, implementation, and sustainability encompasses this principle, encouraging researchers to engage end-users early and often to ensure innovations are desired and accessible.¹ Within the world of occupational safety, this becomes a bigger challenge, particularly in industries such as commercial fishing where limited resources, numerous competing priorities, and a general acceptance of risk often shift the focus from safety. In this brief, we provide an example of an intervention that was designed with these concepts in mind – Lifejackets for Fishermen – and preliminary data showing the impact of this program on the safety of the New England commercial fishing fleet, which includes those in the coastal states of Massachusetts, Connecticut, Rhode Island, New Hampshire, and Maine.

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Lifejacket promotion

It is well known that despite the wide and longstanding availability of personal floatation devices (PFDs, lifejackets), drownings are a leading cause of death among commercial fishermen.² A 2015 study by Weil et al. indicated in Massachusetts, just 22% of lobstermen surveyed reported wearing PFDs while fishing.³ This same study highlighted several barriers to wearing PFDs, including the ability to work comfortably and safely in them, the cost to purchase PFDs, stigma surrounding PFD use, and a general acceptance of the risks involved with not wearing PFDs.³

Using this study as a starting point, a Lifejackets for Lobstermen program was developed to encourage northeast lobstermen to purchase and wear PFDs. As an initial step, lobstermen were asked to trial several new styles of PFDs. This was intended to identify a single PFD that would work best for lobstermen; however, the trial demonstrated several were popular, and the final selection came to personal preferences. To promote use of these more favorable PFDs, the study team held events at fishing ports throughout Maine and Massachusetts between April and November 2019, the last month of which was added due to high demand from lobstermen in the study's control ports.⁴ At these events, lobstermen had the opportunity to learn about and try on the various models and then purchase their favorites at a 50% discount.

After the pilot of this program proved successful, it was rebranded to Lifejacket for Fishermen, and its administration was handed off to Fishing Partnership Support Services (FPSS), a community-based organization offering a range of services to commercial fishermen and their families.⁵ To sustain this program long-term, it was modified to fit within the scope of FPSS's existing work. In its current iteration, FPSS integrates PFD training in each of its safety and first aid classes, fishing community events, and trade shows. Commercial fishermen who attend an FPSS training, such as Safety and Survival at Sea, or meet with an FPSS navigator are provided with education about and an opportunity to try on various PFDs. These events give them time to share their personal experiences with man overboard, reflect on their risks, and discuss their options with their peers. As a financial incentive, they are then able to purchase up to two PFDs (to account for seasonal differences) from a retailer of their choosing and receive a 50% rebate. Additionally, a limited-time, 100% rebate is currently being trialed for fishermen who place PFD orders online during specific trainings.

Lifejacket beliefs and use

The introduction of PFD promotion programs in New England has already had impressive impacts on the commercial fishing industry, demonstrated by participation in the programs, self-reported use and intentions, and observational data.

Lifejacket program engagement

The Lifejackets for Lobstermen program distributed 1,087 PFDs over the course of its 8-month run. Since then, Lifejackets for Fishermen has distributed 96 PFDs using the 50% rebate scheme and an additional 149 PFDs via the limited-time on-site 100% rebate scheme offered at just seven trainings over 3 months.

Self-reported beliefs and use

A 2021 evaluation of the original Lifejackets for Lobstermen program demonstrated statistically significant increases in self-reported PFD wear rates, intention to wear, and intention to develop PFD policies for crew among lobster boat captains.⁴ Training evaluation data from FPSS provides additional insight into the behaviors and intentions of commercial fishermen as they relate to PFD use. For instance, among fishermen participating in an FPSS Safety and Survival training in the New England region, there has been an overall increase in self-reported PFD wear rates and a decrease in those indicating they do not plan to wear a PFD (Figure 1). Overall, more than 50% of surveyed fishermen reported they are going to start wearing a PFD as a result of their experience at training. By 2024, 87% of respondents indicated they were already wearing a PFD or were going to begin wearing one.

Observed PFD use

In addition to self-reported data, the United States Coast Guard First District office (which includes the New England states noted above as well as New York) began collecting data on PFD use at the start of 2022. While a relatively new data source, it has already shown an increase in observed PFD wear rates among commercial fishermen (personal communication between Trevor Cowan, US Coast Guard, and Dan Orchard, FPSS, September 2024). In calendar year 2022, 31% of crew ($n = 1,409$ of 4,576 total crew) were observed wearing PFDs during fishing vessel boardings. This is compared to calendar years 2023 and 2024, during which 48% of crew ($n = 1,197$ out of 2,506 total crew and $n = 983$ out of 2,025 total crew, respectively) were observed wearing PFDs during boardings.

Discussion

Ten years ago, many would have scoffed at the idea of commercial fishermen voluntarily and proudly wearing PFDs while working. At that time, fishermen themselves explained that while they knew they were at risk for drownings, the barriers to protecting themselves with PFDs out-weighed those risks and created a culture in which risk was accepted and, in many ways, dismissed.³ However, as the preliminary data presented here show, recent efforts have begun to shift behaviors and beliefs around PFDs. This shift highlights the importance of research and community organizations working together to create an environment that encourages safe and healthy work practices; one that notably includes access to resources necessary for workers to do their jobs safely.

In the example of Lifejackets for Lobstermen and Lifejackets for Fishermen, two primary components of access are in play: the immediate availability of PFDs at the time of program exposure and their cost. Over the past 5 years, different combinations of physical access and financial support have been tested: on-site purchases with an immediate 50% discount, off-site purchases with a 50% mail-in rebate, and onsite ordering at no cost to fishermen. Though the data show that the no-cost PFDs were distributed most efficiently, this scheme is likely not sustainable. Thus, additional work is underway to understand which of these components is most important, and identify the most effective and sustainable balance of the two.

Though PFD purchases through these programs are important in understanding progress, from a safety perspective data demonstrating better intentions to wear PFDs and actual increases in PFD use are even more telling. These data have shown significant improvements in very short periods of time, with PFD use already becoming more normalized among commercial fishermen in this region. While these data are promising, it is important to note the limitations of self-reported data as well as the reality that participants' intention to wear and actual PFD use may decline overtime without further reminders or influence.

These observations serve as a reminder of the important roles that both research teams and community partners play. From the safety research perspective, considering dissemination, implementation, and sustainability of programs from the beginning contributes to better interventions that fit well within existing environments. Further, community-based organizations, particularly those that are well-known and respected, are integral to connecting workers with and building trust in these proven programs. Together, these roles help make safety measures more readily accessible and easier to implement, which will in turn save the lives and livelihoods of workers.

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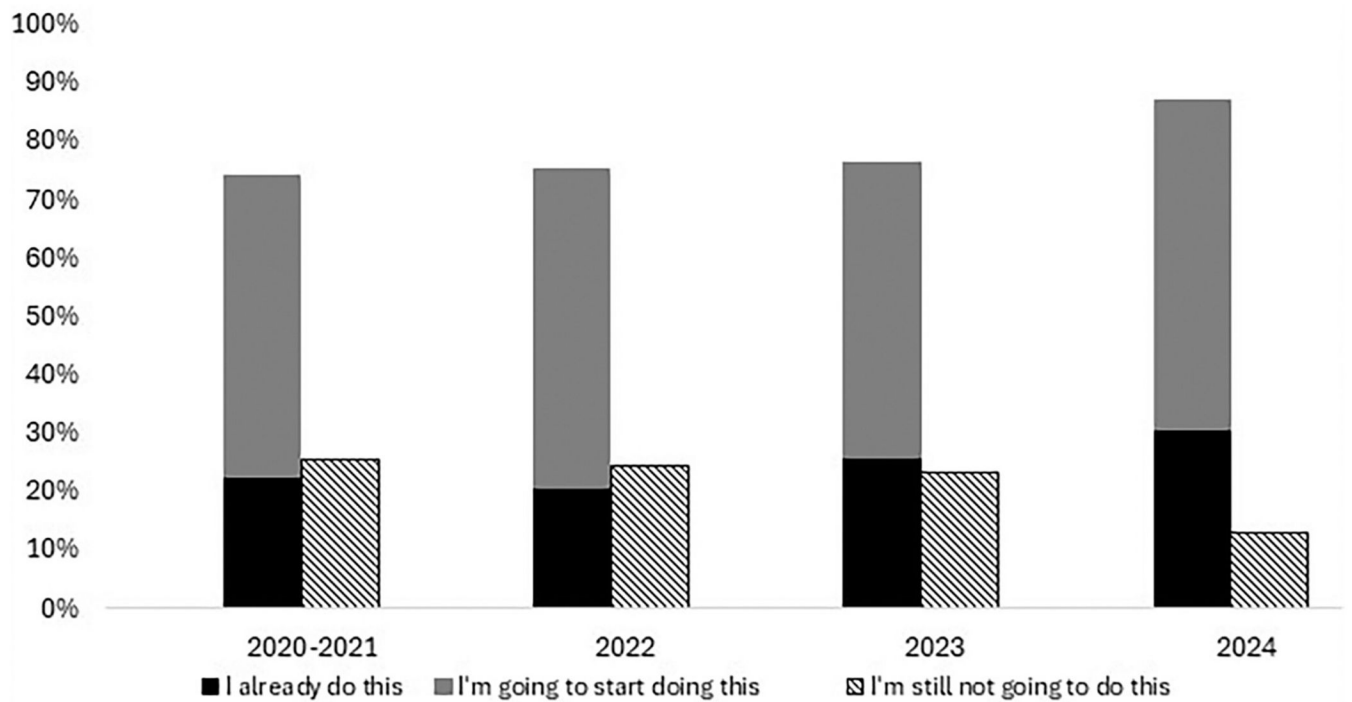


Figure 1.

Responses to the question, "which of these safety practices are you likely to change or modify after today's training: wear a lifejacket while at sea?" by training year. Training years run from September through August. 2020 and 2021 training years are combined due to the low number of sessions offered in 2020 resulting from COVID-19. $N = 195$ in 2020-2021, 134 in 2022, 226 in 2023, and 123 in 2024.