Introduction
In many countries, including the United States, commercial fishing has the highest fatality rate of any occupation. Most of these fatalities are due to drowning after a vessel loss or from a fall overboard. Preventing vessel losses and falls overboard are the most certain way to prevent these fatalities, but this is not always possible. During 2000–2009, 155 commercial fishermen drowned after falling overboard in the United States. None of the victims were wearing a Personal Flotation Device (PFD).

Aims/Objectives
The purpose of this study was to examine commercial fishermen’s perceptions of the risk of falling overboard, experiences with falls overboard, and preconceptions about PFDs regarding efficacy and comfort. Also, the study engaged fishermen in evaluating a variety of PFDs for comfort while working.

Methods
The study consisted of a cross sectional survey and a PFD evaluation. The cross-sectional survey measured fishermen’s perceptions of the risk of falling overboard, experiences with falls overboard, and preconceptions about PFDs regarding efficacy and comfort. Fishermen who completed the cross sectional survey were invited to evaluate a PFD during their fishing season. Fishermen were randomly assigned one of six PFD models, and asked to wear it each time they went on deck. They were asked to rate the PFD comfort and satisfaction after the first day and again after one month of wear. Analyses were performed using SPSS ver.15.

Results
When asked ‘How much do you worry about falling overboard?’ 24% (96) selected ‘very much’. Only 5% (19) responded ‘not at all’. Fishermen believed that their career chance of ever falling overboard was 36%. Most respondents (258, 63%) believed that there was ‘a lot’ that an individual fisherman could do to prevent dying from a fall overboard. One half (200, 49%) stated that PFDs were ‘very effective’ for surviving a fall overboard. Overall, 19% (79) reported that they ‘always’ wore a PFD while working on deck, but there were major differences between gear types (crabbers, trawlers, gillnetters, longliners).

Of the 214 fishermen who participated in the PFD evaluation, 190 (89%) completed the first evaluation form and 146 (68%) completed the second. Overall comfort of the PFDs was rated on a scale of one to ten, with one being the least comfortable and ten being the most comfortable. On the first (day one) evaluation, the PFDs were rated: Hydrostatic Inflation Technology (HIT) suspenders (8.0), secumatic suspenders (7.0), foam bibs (6.9), nylon suspender bibs (6.5), foam vest (5.6), and neoprene suspender bibs (5.1). Overall satisfaction with the PFDs varied widely across gear types. The HIT suspenders PFD was most often the highest rated, both on the first (day one) evaluation and the second (one month) evaluation. The foam bibs PFD was most often rated second highest for overall satisfaction, while the foam vest and neoprene suspender bibs PFDs were rated lowest.

Discussion
This study revealed that fishermen working on different types of fishing vessels with different equipment and in different environments have varying perceptions of risk, attitudes and beliefs about PFDs, and preferences for PFDs. As a result, a ‘one size fits all’ approach to increasing PFD usage in the fishing industry will not likely be effective. PFDs and messages about PFDs must be tailored to individual gear types. This study found two specific PFDs that seemed to be comfortable and acceptable to a high percentage of fishermen in all gear types. Manufacturers may have more success supplying PFDs to the fishing industry if they engage fishermen early in design and testing.

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