Perceptions of Opioid Misuse and Chronic Pain: A Qualitative Assessment of Rhode Island Commercial Fishing Captains

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INTRODUCTION:

Commercial fishing has long been recognized as one of the most hazardous occupations in the United States, with a fatality rate 29-times that of the national average.[1] Strenuous work, long hours, seasonal employment, and irregular sleeping patterns all contribute to a high risk of work-related injury[2] and chronic pain. Although the mortality and occupational hazards associated with commercial fishing have been well-documented,[3,4] relatively little is known about fishermen's own perceptions of injury and chronic pain resulting from their demanding physical workload. Amidst a worsening epidemic of opioid misuse such insights are needed, as the commercial fishing industry may be an especially susceptible population. This study investigates these issues in a fishing port in Rhode Island: the Port of Galilee, located in Point Judith.

Galilee is home to an economically versatile fishing industry due to its geographic location at the southern edge of several cold water groundfish species and the northern edge of mid-Atlantic stock. Fisheries are dominated by bottom and midwater dragging, with lobsterpot fishing, gillnetting, and shellfishing contributing in smaller proportions to the Port's overall landings. An offshore fleet of approximately 20 larger (60 to 70 foot) vessels, operated by a captain and 4-5 crew members, predominately lands midwater species such as squid, herring, mackerel, and whiting. Smaller (45-60 foot), inshore vessels, operated by a captain and 1-2 crewmembers, target groundfish species like cod. 2004 surveys[5] from the National Oceanic and Atmospheric Administration indicate 134 vessels docked in Point Judith, although that number has likely since declined owning to increasingly hostile regulatory climates.[6] Nevertheless, Point Judith remains a major fishing port in the United States, ranking 20th in value of landings at 46.2 million pounds accrued in 2015.[7]

Despite the industry's rich heritage in the Ocean State, and its prominent contribution to the regional economy, the Point Judith commercial fishing community has continually struggled. From a fisheries management perspective, the Port of Galilee is susceptible to scrutiny from both the New England and the Mid-Atlantic Fishery Management Councils, which, in light of increasingly stringent state and federal regulations, has posed a threat to the viability of the fishing port.[8] Seasonal tourism in Point Judith, including whale watching, dining, recreational fishing, and a ferry service to Block Island, has led to difficulty securing shore-front real estate for fish processing companies and increases in the cost of dockage and wharfage for commercial vessels.[9] Finally, the industry has long been stigmatized by its reputation for high rates of drug and alcohol addiction among fishermen, with few available treatment options in Point Judith for fishing families in need of help.[10]

The most recent estimates from the Center for Disease Control state that in 2015, Rhode Island had the 5th highest rate, nationwide, of death due to drug overdose at 28.2 deaths per 100,000.[11] Fentanyl-related overdoses have increased 15-fold since 2012,[12] and heroin use continues to rise. Given the high level of stress, physical demand, and rate of injury, commercial fishermen, particularly those living in resource-poor settings, may be at increased risk for opioid misuse. To our knowledge, no research to date has examined how this issue is playing out in the commercial fishing community, especially in the northeastern United States, which again is particularly hard hit by the opioid epidemic. We therefore conducted a qualitative study to gain insight on the following question: How do the contextual lifestyle and circumstances of commercial fishermen influence access to healthcare and potentially contribute to the use and misuse of opiates? Our goal was to draw upon the principles of ethnography to describe the perceived determinants of chronic pain and overall health status among fishermen in Point Judith. Such insights may in turn inform initiatives aimed at curbing the opioid

epidemic in the northeastern United States and in other locations where fishing is a predominant industry.

METHODS:

Entering the Community

Commercial fishermen have been traditionally known for their skepticism of outsiders.[13] Therefore, before beginning qualitative interviewing of fishermen, we connected with fishing advocates associated with two local non-profits: The Rhode Island Fishermen's Alliance and the Commercial Fisheries Center of Rhode Island (CFC-RI). In explaining the intent of our study, and expressing a shared interest in serving the commercial fishing population, we forged a strong relationship that proved to be indispensable in the initial phases of recruitment.

Instrument Development

We developed our instrument to be consistent with existing literature studying occupational health and safety risks for professions such as fishermen.[14] We then used the same semi-structured guide for all interviews, supplemented with spontaneous probes and follow-ups. Our analysis focused on answers to the following questions

1. What are some of the unique challenges you face working as a commercial fisherman?
2. How would you describe your overall health?
3. How do you think working as a fisherman affects your health?
4. What, if any, has been your experience with chronic pain?
5. Do you have any healthcare needs that are unmet?

6. Do you have a sense of how prevalent opiate use is among the commercial fishing population in Point Judith?

These core questions, which were supplemented with spontaneous proves and follow-ups, were derived from an ethnographic framework aimed at understanding the contextual circumstances and lifestyle of Point Judith commercial fishermen.

Data Collection

One author conducted in-person, semi-structured interviews with 15 full time fishing captains in Point Judith, Rhode Island between the months of May and July of 2017. Given the sensitive and personal nature of the inquiries, interviews were held at private locations where participants felt comfortable and free to disclose any information. We arranged interviews around fishing and/or harvesting schedules so as not to interfere with work, and met participants in their homes, vehicles, wheelhouses, and office trailers. Following verbal informed consent, one-time interviews ranging from 20 - 60 minutes in length were audio-recorded through an encrypted device to protect the participant's right to confidentiality and guard against a breach of data. The Brown University Institutional Review Board exempted this study from review.

Participants

Recruitment of participants took place either dockside or by telephone. Three of 15 total participants were identified using a list of telephone numbers provided by CFC-RI, and the remaining 13 participants were identified in-person by the principal investigator at the Port of Galilee.

Inclusion criteria for participation were as follows: being an employed or self-employed commercial fisherman captain based out of Point Judith, Rhode Island. The sole exclusion criterion was being less than 18 years of age.

Data Analysis

Interviews were transcribed verbatim and anonymized prior to analysis. Transcription took place immediately following each interview to best facilitate a progressive, iterative immersion[15] with the data. Each study author independently reviewed the transcripts and initially categorized essential, recurrent themes. Then, we compared thematic findings and began to tabulate supporting quotations for each. Further discussion and recombining led to an agreed-upon interpretation of these overall findings.

RESULTS:

All 15 captains that were approached agreed to participate. Nine were self-employed (independent owner-operators) and 6 were affiliated with a fleet of corporately managed vessels, owned and insured by a local fish processing company. Their average age was 47 years (range 29-67), and number of years in the industry was 29 (range 2-53). Thirteen captains primarily operated lager offshore trawling vessels and 2 operated smaller inshore gillnetting vessels. Although the lifestyle and scope of work is considerably different between offshore and inshore fishing, patterns and themes began to emerge by the 5th interview, and by the 12th interview, data saturation was obtained.

We identified 5 major themes: Recurrent patterns of addiction and opiate use among crewmembers; chronic pain and injury as ubiquitous byproducts of life as a commercial fisherman; insufficient pain management despite medical need; practical barriers to obtaining primary healthcare; and, perceived lack of support from the state.

Recurrent patterns of addiction and opiate use among crewmembers

Many captains, particularly those of offshore vessels, expressed feelings of frustration and disillusionment when describing their experiences maintaining sober, reliable crew.

> *I bring them on not knowing they are using. They always have told me they haven't used in couple years, or that they're doing good, but it's all a con. I try to weed them out. I don't put up with them for long. I give them the benefit of the doubt and then I start to see*

that they're not right, do you know what I mean? Then they're gone. I don't keep them on the boat.

Citing widespread onshore use of opiates, many captains reported difficulty in assessing the addiction status of their crew prior to departing for fishing trips.

It seems to be the same situation on every boat… I mean, it's pretty much if you show up to work and you're relatively sober, you're good. The problem is, these guys are bringing [expletive] on the boat to maintain. So it's like, they don't seem [expletive] up. But, if you took whatever the blood alcohol content of heroin is, they'd have a pretty good dose in them.

Days-long fishing trips are typically high-risk, high-reward, with crewmembers returning to port with several thousand dollars of earned cash. "*They get a check and don't come back until they're broke,"* one captain remarked, later admitting, *"You can't run a boat without them, so I let them on. But sometimes after one trip, I can't take any more of the drug addict [expletive]. Sleeping on the job and [expletive]. It's dangerous, you can kill someone."*

Despite numerous stories of addiction, one captain seemed understanding, linking the drug problem to the rugged culture of commercial fishing:

I think the problem is – and it's not just opioids, it's drugs and alcohol as well – unfortunately the type of person it takes to do this kind of job is the type of person who's

prone to the very extremes. You know? To do this as a lifestyle, it's a hard job and it commands a lot. You put your life on the line all the time. You see things and experience things that other people don't do and, I remember when I was younger, I used to feel like I deserved to do whatever I wanted to do with my free time. Do you know what I mean? Because I worked so hard. I think unfortunately the type of person that industry attracts are the type of people who are prone to those things… I had some problems with it in my past. In my twenties. Not with opioids, but with cocaine.

Chronic pain and injury as ubiquitous byproducts of life as a commercial fisherman

When asked about personal experience with pain and injury, all 15 captains attributed a persistent sense of localized pain to the physical demands of the job. One captain provided the following summary:

You're doing physical work, but not the type that keeps you in shape. Sleeping three hours a day doesn't help. Just lifting, dragging, being on the vessel just takes a toll on you physically. The muscle pain. I've experienced everything. Carpal tunnel. Disc degeneration. Broken ankles. Fish poisoning – you either get pricked by a tool we use or cuts. I've seen head injuries. I've seen all sorts of different things. Things can fall. Anything that can happen on lands can be tenfold on a moving vessel.

Musculoskeletal injuries involving the hands, knees, lower back, cervical spine, and shoulder were commonly reported. One captain shared an outlying perspective on his awareness of chronic pain:

Chronic pain? I really don't know what pain is. I just don't recognize it as a symptom to pay attention to. I don't know if that makes sense. But that's why I rely on my doctor so much because I'm inclined to believe something could be happening to me and I'm really not going to feel it.

Inadequate pain management

Though coping strategies for pain differed among captains, many cited feelings of distrust around the medical establishment. One captain described the stigma of commercial fishermen:

I mean, we're definitely profiled as an industry. Drug addicts. Alcoholics. These are the first questions were asked. I mean, I've only been in this industry. I don't know what they ask other people when you initially sit down with the doctor.

Many captains speculated that increasingly stringent prescribing regulations have left them shorthanded, having no choice but to ration pills in order to manage their pain needs.

I had 10 Vicodin that were given to me and I stretched them out over 10 days…. See, I think a lot of the problem is, with this whole opioid epidemic, you see it and read about it in the news, and when a guy like me actually does go out and blow out his back and goes to the doctor, I mean, I could have used 20 [Vicodin]…. I think a lot of the people who actually need them, aren't getting them.

Practical barriers to obtaining primary healthcare

Commercial fishing schedules are generally incompatible with normal business hours and preventive care is an undervalued commodity in fishing culture. The few captains that used of primary care services cited fragmented care associated with their doctors switching practices. Many preferred emergency rooms or urgent care clinics:

> *Unless it's somebody that's conscientious and has a family with kids, I don't think anybody would bother with [primary care]. There's walk in clinics and stuff like that so – say you're bleeding or something, you just go. Get the thing bandaged up or whatever and get back to work.*

Furthermore, healthcare insurance is prohibitively expensive, and the onus of navigating the marketplace falls on individual fishermen unless they are covered by a spouse's insurance. As a fleet manager explained:

> *The biggest problem is paying for everything. When Obamacare came out, I strongly encouraged all these guys to go out and apply for it. I had 20-25 fishermen a month and 2 of them did it. I told them to take the time to try. Especially the people with kids.*

Lack of government support

Captains were quick to describe commercial fishing in Rhode Island as a kind of forgotten heritage – a thriving industry that at one time garnered support from the state and drove the local economy, but has since become burdened by regulations and out-competed by tourism.

> *We've become a byline. I think the people in this town, and the people south of the tower, know what it's about and know what the history is about. You know, the fishing families are proud of the heritage. But once you get up to the capital, nobody gives a [expletive]. Coming down here is a novelty. They want to come down here and take pictures next to the boats but they don't want to support the industry. They're still buying fish from other places.*

Many harkened back to a time when a much larger fleet of vessels filled the Port and there was a greater sense of cohesion and social-connectedness among the fishing community. And yet despite the apparent pessimism, many captains stated that they could not imagine doing anything else. The long hours, dangerous conditions, and fierce independence associated with their job seemed to be a source of pride. As a captain recalled, *"It used to be glamorous. You had money, society was different too… But [now], you learn to love it. It's something that makes you feel accomplished at the end of the day. The boat's heavy, you're sore because you did something, and then you get that pay check."*

DISCUSSION:

We interviewed 15 well-established captains who voiced near-unanimous concern over the sustainability of the fishing community. The source of their concern was multifaceted and in part consistent with existing literature documenting regulatory burden and occupational health and safety risks as potential contributors to a declining industry[15]. Our study further identified several unreported themes. First, widespread addiction to illicit substances, most notably pharmaceutical opiates and heroin, has dismantled the supply of reliable crew, forcing many captains to either operate vessels shorthanded or terminate fishing trips early for lack of sober help. Most captains cited the risk-prone culture associated with fishing as a contributor to the addiction epidemic, but others stressed that the fishing community is no more vulnerable to addiction than their land-based peers. Regardless of the root cause, the transient supply of crew has imposed a burden on well-intentioned captains trying to operate their vessels safely and efficiently.

These very qualities of stoicism, self-sufficiency, and pragmatism are the same qualities that have led many fishermen to view healthcare as a last-resort commodity. In our interviews, we learned of several barriers to obtaining not only preventive healthcare, but also specialty care for pain-management needs. Beyond the financial disincentives associated with visiting the doctor (i.e. forgoing a day of fishing and not getting paid), healthcare insurance has become prohibitively expensive, and many fishing families chose to live without it. By one captain's estimate, more than 60% of Point Judith fishermen are without health insurance. Urgent care facilities and emergency rooms hold greater appeal than primary care for their quick turn-around rates and extended hours. The few that have used primary care services cited scheduling issues and fragmented care associated with their doctors switching

practices. Finally, several fishermen felt that the stigma around the fishing industry hindered their ability to find adequate medical management for work-related pain.

The breadth of concerning trends revealed in this study suggests a need for renewed attention to the labor demands of commercial fishing, and the downstream effects on the lives and health of the Point Judith community. Although much of our research supports an existing body of knowledge around the high risk of musculoskeletal injury[16] and risk-prone behavior[17,18] in the commercial fishing industry, our study is the first to qualitatively examine the implications of healthcare access and drug addiction in the relatively resource-poor setting of Point Judith, Rhode Island.

Public Health Implications

Neighboring fishing ports of coastal New England may serve as potential models for improving upon the resource infrastructure in the Port of Galilee, thereby addressing some of the issues we identified in our study. For example, the Fishing Partnership Support Services[19], a Massachusetts-based nonprofit organization, is leading an initiative to provide fishing captains in New Bedford and Maine with the overdose reversal drug naloxone. Such an effort, if implemented in Rhode Island, would align with the statewide directive to "secure and maintain a sustainable source of naloxone, particularly for people at highest risk for illicit or prescription drug overdoses."[20] Furthermore, the Fishing Partnership's larger mission to pair commercial fishing families with navigators and connect them with professional counseling services, health insurance assistance, and safety and survival trainings, would be a valuable service to the Point Judith community.

Limitations

The results of this study are subject to several limitations. On the basis of sample size, our interviews reflect the viewpoints of only a small subset of captains at a fishing port in the northeast. Given the sensitive nature of the interviews, particularly in the context of illicit drug use, some captains may have been reluctant to disclose personal information, despite assurance of confidentiality. This form of social desirability bias may have been reflected in a majority of captains perceiving addiction problems to be predominately a crewmember-associated issue. Future study with crewmembers is therefore warranted.

CONCLUSION:

In summary, Point Judith-based commercial fishing captains perceived opioid misuse, work-related chronic pain, and inadequate healthcare access as barriers to sustainability of their industry. Further research is needed to explore tailored interventions and supports for this community, and neighboring fishing ports of coastal New England might as models for future resource infrastructure reform.

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