

Project reveals pandemic perceptions in Alaskan fishing community

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When the COVID-19 pandemic spread across United States in early 2020, people's perceptions of the disease varied widely. Penn State researchers examined those perceptions in Bristol Bay, Alaska, home to the world's largest commercial salmon fishery, and found people's perceptions of risk due to COVID-19 varied across race/ethnicity groups by residency and income. They [published](#) their work in the journal *Marine Policy*.

"In the months leading up to the 2020 commercial salmon fishery opening, Bristol Bay residents had not experienced any cases of COVID-19," said lead author Luke Smith, assistant research professor at Penn State's Social Science Research Institute. "Community members, policymakers and fisherman debated opening the fishery and welcoming thousands of out-of-state fishing industry workers into the community."

According to a 2021 Bristol Bay Defense Fund report, the Bristol Bay Salmon industry generates \$2 billion in [economic value](#) each year, and is a significant contributor to local jobs, income and local tax base, with the value of the fishery extending beyond the region and Alaska.

"The cancellation of the salmon season would have resulted in a significant income decline for a majority of residents until the fishing season next year," said Guangqing Chi, professor of rural sociology and demography and public health sciences and co-author of the study.

When local officials decided to open the salmon season in spring 2020, the researchers designed an online survey to gauge the community's COVID-19 perceptions. They worked in collaboration with local leaders, community members and commercial fishery participants and advertised the survey via resident networks, mail and fliers at fishing and processing facilities.

The [online survey](#) collected socioeconomic data and included questions to gauge risk perceptions to the disease. According to Smith, more than 900 people responded to the survey, which revealed lower income participants who are members of minority groups, such as non-resident Hispanic workers and resident Alaska Natives, had the highest risk perceptions related to COVID-19.

"We also found that the highest concerns about severe illness were associated among those with lower incomes and lower perceived job choice," Smith said. "One key finding was that lower income minorities needed to work high-exposure jobs and had fewer employment opportunities to replace high-risk jobs. Luckily, Bristol Bay did not get swamped by the pandemic early on, and the fishing industry there was one of the early adopters of vaccine requirements."

The survey also revealed that [community members](#) who remembered how the 1918 flu affected previous generations through trauma and family disruptions were more concerned about COVID-19 exposure. Additionally, those with comorbidities and those exposed to COVID-19 due their jobs were also more concerned about severe illness.

"Out-of-state workers had higher perceptions of getting sick due to their travel, but they perceived work was more important than their health," Smith said. "One interesting finding was that surveyed males believed they could find other work outside of the fishing industry more easily than females."

Researchers conducted additional online surveys during the 2021 and 2022 salmon fishing seasons to determine changing perceptions of the pandemic.

"In the future, we would like to determine if vaccine requirements hindered future participation in the fishing season and people's

perceptions of masking and other disease mitigations during the pandemic," Smith said.

The project is part of another project, "Pursuing Opportunities for Long-term Arctic Resilience for Infrastructure and Society (POLARIS)," which began in 2019, and is establishing a network of platforms and tools across the Arctic to document and understand the Arctic's rapid social, demographic, ecological and geophysical changes.

"The ultimate goal of POLARIS is to enable communities to become more resilient with both stronger societies, civic culture and improved infrastructure needed as the new Arctic continues to emerge," Chi said.

More information: M. Luke Smith et al, Differences in perceptions of COVID-19 risks in a fishing community in Alaska, 2020–2021, *Marine Policy* (2024). [DOI: 10.1016/j.marpol.2024.106045](https://doi.org/10.1016/j.marpol.2024.106045)

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