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NUNAVIK 2017

HUNTING, FISHING, GATHERING, AMMUNITION USE AND PUBLIC HEALTH MESSAGING

QANUILIRPITAA? 2017

Nunavik Inuit Health Survey

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RÉGIE RÉGIONALE DE LA SANTÉ ET DES SERVICES SOCIAUX DU NUNAVIK
NUNAVIK REGIONAL BOARD OF HEALTH AND SOCIAL SERVICES

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Institut national de santé publique Québec

Nunavik Regional Board of Health and Social Services
P.O Box 900
Kuujjuaq, (Quebec) J0M 1C0
Phone number: 819-964-2222
Toll-free: 1-844-964-2244

Email: info@sante-services-sociaux.ca
Website: nrbhss.ca/en/health-surveys

Legal deposit – January 2023
Bibliothèque et Archives nationales du Québec
ISBN: 978-2-924662-81-6 (PDF)

AUTHORS

Chris Furgal, PhD
Associate Professor
Indigenous Environmental Studies and Sciences Program,
Trent University

Mélanie Lemire, PhD
Associate Professor
Département de médecine sociale et préventive,
Université Laval
Titular of the Littoral Research Chair – Sentinel North
Partnership Research Chair in Ecosystem Approaches
to Health
Axe santé des populations et pratiques optimales
en santé – Centre de recherche du CHU de Québec –
Université Laval

Benoît Lévesque MD, MSc, FRCP
Direction de la santé environnementale et de la toxicologie,
Institut national de santé publique du Québec
Département de médecine sociale et préventive,
faculté de médecine, Université Laval

Rebecca Martin, MA
Research Associate
Trent University

Amanda Boyd, PhD
Associate Professor
Morrow School of Communications, Washing State University

EXECUTIVE DIRECTOR

Danielle St-Laurent, Director
Bureau d'information et d'études en santé des populations
Institut national de santé publique du Québec

SCIENTIFIC DIRECTORS

Pierre Ayotte, Professor
Department of Social and Preventive Medicine,
Faculty of Medicine, Université Laval
Population Health and Optimal Health Practices
Research Unit, CHU de Québec Research Center
Institut national de santé publique du Québec

Françoise Bouchard, Director of Public Health
Nunavik Regional Health and Social Services Board

STATISTICAL ANALYSIS

Rebecca Martin
Research Associate
Trent University

WITH THE COLLABORATION OF

Brittany Curry-Sharples
Trent University

SCIENTIFIC EDITING

Susie Gagnon, Scientific Advisor
Bureau d'information et d'études en santé des populations
Institut national de santé publique du Québec

Marie-Josée Gauthier, Planning, Programming and Research Officer
Public Health Department
Nunavik Regional Board of Health and Social Services

COMMUNICATIONS

Nunavik Regional Board of Health and Social Services

VISUAL DESIGN

Alphatek

SUGGESTED CITATION

Furgal, C., Lemire, M., Lévesque, B., Martin R., Boyd, A. (2022). *Hunting, Fishing, Gathering, Ammunition Use and Public Health Messaging.* Nunavik Inuit Health Survey 2017 *Qanuilirpitaa?* How are we now? Quebec: Nunavik Regional Board of Health and Social Services (NRBHSS) & Institut national de santé publique du Québec (INSPQ).

QANUILIRPITAA? 2017 HEALTH SURVEY

ACKNOWLEDGMENTS

On behalf of the Steering Committee,

I would like to express my gratitude to all Nunavimmiut who participated in the *Qanuilirpitaa?* 2017 Health Survey. This important health survey was made possible thanks to the long-standing partnership between the Nunavik Regional Board of Health and Social Services, the Institut national de santé publique du Québec and researchers from the Centre de recherche du CHU de Québec – Université Laval, McGill University and Trent University.

The valuable contribution of Inuit research advisors, leaders from each community, as well as representatives from the Avataq Cultural Institute, the Ungava Tulattavik Health Centre, the Inuulitsivik Health Centre, the Kativik Regional Government, Kativik Ilisarniliriniq, Makivik Corporation, the northern villages and the Qarjuit Youth Council is also gratefully acknowledged.

The Steering Committee and the Data Management Committee of *Qanuilirpitaa?* 2017 guided and enriched this work throughout the different phases, from planning to data interpretation and contextualization. We would like to highlight the invaluable contribution of Pierre Ayotte and Françoise Bouchard, the scientific directors, and Danielle St-Laurent, the project's executive director. We are also indebted to Geneviève Hamel, Suzanne Bruneau, Suzanne Côté and Nathalie Ouellet who coordinated the planning and implementation of the survey, and are sincerely thankful to the Inuit interviewers who carried out exceptional work in often challenging circumstances. We are also grateful to all of the professionals, technicians, students, field team and clerical staff, as well as to the crew of the Canadian Coast Guard Ship *Amundsen*.

Finally, this survey could not have been undertaken without the financial support of the Nunavik Regional Board of Health and Social Services, the Kativik Regional Government, Makivik Corporation, Kativik Ilisarniliriniq, the Ministère de la Santé et des Services sociaux du Québec, ArcticNet, the Amundsen Science Ship Fund and the Northern Contaminants Program. Numerous people have contributed at different stages of the survey process, many of whom are listed below, but there are many more!

Minnie Grey

Chair, *Qanuilirpitaa*? Steering Committee
Executive Director, NRBHSS

In memory of Audrey Flemming and Linda Shipaluk

PRINCIPAL INVESTIGATORS AND INUIT ADVISORS*

Adult component
Pierre Ayotte
Chris Furgal
Mélanie Lemire
Benoît Lévesque
Michel Lucas
Mary Pilurtuut

Youth component
Richard Bélanger
Gina Muckle
Louisa Yeates

Community component
Nancy Etok
Christopher Fletcher
Kitty Gordon
Betsy Palliser
Mylène Riva

Oral health
Aimée Dawson
Chantal Galarneau

Men's health
Gilles Tremblay

STEERING COMMITTEE AND DATA MANAGEMENT COMMITTEE (DMC) PARTICIPANTS
Minnie Grey (Steering Committee Chair)
Marie Rochette (DMC Co-Chair)
Robert Watt (DMC Co-Chair
Alicia Aragutak
Ellen Avard
Jean-Etienne Bégin
Françoise Bouchard
Suzanne Bruneau
Marie-Noëlle Caron
Maria Cengarle
Yasmine Charara
Suzanne Côté
Serge Déry
Aleashia Echalook
Mona Eepa Belleau
Maggie Emudluk
Barrie Ford
Susie Gagnon
Marie-Josée Gauthier
Yoan Girard
Lucy Grey
Geneviève Hamel
Olivia Ikey
Suzy Kauki
Elena Koneak Labranche
Christine Leblanc
Stéphanie Léveillé
Eliana Manrique
Murray McDonald
Jennifer Munick
Tunu Napartuk
Jeannie Nungak
Josepi Padlayat
Geneviève Pellerin
Fabien Pernet
Maata Putugu
Hilda Snowball
Danielle St-Laurent
Jobie Tukkiapik
Larry Watt
Shirley White-Dupuis

INTERVIEWERS/NURSES
Linda Amidlak
Thomas Annanak
Lydia Audlaluk
Jeannie Calvin
Caroline Couture
Louis-Frédéric Daigle
Véronique Dion Roy
Geneviève Dorval
Véronique Doutreloux
Philippe Dufresne
Victoria E. Forest
Audrey Flemming
Jeannie Flemming
Elisabeth Gagné
Virginie Gargano
Suzie Gordon
Sarah Imak
Léa Laflamme
Pierre Lejeune
Alexandre Léveillé
Paul Marcoux
Josée Michaud
Laura McKeeman
Claude Morency
Julie Nastapoka
Julie Picard
Michel Poulin
Linda Shipaluk
Évelyne Thibault
Mina Tukai
Amelia Tukkiapik Whiteley

COMMUNICATIONS AND TRANSLATION
Minnie Amidlak
Annie Baron
Nicolas Baltazar
Brigitte Chalifoux
Caroline D'Astous
Nina Gilbert
Alasie Hickey
Nathalie Labonté
Irène Langis
Josée Lévesque
Robert Mackey
Émilie Pelletier
Eva Pilurtuut
Ida Saunders
Jenny Simpraseuth
Rhéal Séguin

DENTISTS/RESPIRATORY THERAPISTS
Élaine Audet
Lucie Bélanger
Hélène Fournier-Noël
Marie-Rose Gagnon Beaumont
Isabelle Gauthier
Gabrielle Gingras
Ariane H. Morin
Cassiopée Paradis-Gagnon

FIELD STAFF
Stéphane Anctil
Julien Arsenault
Marie Bernard
Justine Blanco Lalande
Christian Brunet
Virginie Chadenet
Catherine Godin
Josianne Grenier
Dominique Hamel
Robert Ladouceur
Trina Manac'h
Laurence Millette
Guillaume Proulx
Sylvie Ricard
Camille Tremblay-Fournier
As well as all local research assistants and local logistics staff

ADMINISTRATIVE SUPPORT AND INFORMATICS TECHNOLOGIES
Vincent Gilbert
Denis Granghon
Eva Gunn
Ginette Laflamme
Liv Larsen
Richard Leboeuf
Sylvie Muller

DATA PROCESSING, QUALITY CONTROL AND LAB WORK
Véronique Boiteau
Marc-André Dubé
Marianne Dubé
Denis Hamel
Judith Labrecque
Jacinthe Larochelle
Caroline Moisan
Nathalie Ouellet
Louis Rochette
Mélanie St-Onge
Mélanie Tessier
Hamado Zoungrana

COMMUNITY COMPONENT/ MOBILIZATION
David Arsenault
Marie Baron
Imane Cheriet
Marie-Hélène Dion-Gagnon
Sarah Fraser
Melody Lynch
Marie-Claude Lyonnais
Cindy Ruel

AND MANY MORE!

**Each person's name is listed only once even though the person may have been a contributor in more than one category.*

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1 BACKGROUND OF Q2017 NUNAVIK HEALTH SURVEY

The *Qanuilirpitaa?* 2017 Health Survey is a major population health survey conducted in Nunavik that involved the collection, analysis and dissemination of information on the health status of Nunavimmiut. The last health survey conducted prior to it in Nunavik dated from 2004. Since then, no other surveys providing updated information on the health of this population had been carried out. Thus, in February 2014, the Board of Directors of the Nunavik Regional Board of Health and Social Services (NRBHSS) unanimously adopted a resolution to conduct a new health survey in all 14 Nunavik communities, in support of the Strategic Regional Plan.

The general objective of the 2017 health survey was to provide an up-to-date portrait of the health status of Nunavimmiut. It was also aimed at assessing trends and following up on the health and health determinants of adult participants since 2004, as well as evaluating the health status of Nunavik youth. This health survey has strived to move beyond traditional survey approaches so as to nurture the research capabilities and skills of Inuit and support the development and empowerment of communities.

Qanuilirpitaa? 2017 included four different components: 1) an adult component to document the mental and physical health status of adults in 2017 and to follow up on the adult cohort of 2004; 2) a youth component to establish a new cohort of Nunavimmiut aged 16 to 30 years old and to document their mental and physical health status; 3) a community component to establish the health profiles and assets of communities in a participatory research approach; and 4) a community mobilization project aimed at mobilizing communities and fostering their development.

This health survey relied on a high degree of partnership within Nunavik (Nunavik Regional Board of Health and Social Services (NRBHSS), Makivik Corporation, Kativik Regional Government (KRG), Kativik Ilisarniliriniq (KI), Avataq Cultural Institute, Qarjuit Youth Council, Inuulitsivik Health Centre, Ungava Tulattavik Health Centre), as well as between Nunavik, the Institut national de santé publique du Québec (INSPQ) and academic researchers from three Canadian universities: Université Laval, McGill University and Trent University. This approach followed the OCAP principles of Ownership, Control, Access and Possession (First Nations Information Governance Centre, 2007).[1] It also emphasized the following values and principles: empowerment and self-determination, respect, value, relevance and usefulness, trust, transparency, engagement, scientific rigour and a realistic approach.

TARGET POPULATION

The survey target population was all permanent Nunavik residents aged 16 years and over. Persons living full time in public institutions were not included in the survey. The most up-to-date beneficiaries register of all Inuit living in Nunavik, provided by the Makivik Corporation in spring 2017, was used to construct the main survey frame. According to this register, the population of Nunavik was 12 488 inhabitants spread out in 14 communities. The register allowed respondents to be selected on the basis of age, sex and coast of residence (Hudson coast and Ungava coast).

SURVEY FRAME

The survey used a stratified proportional model to select respondents. Stratification was conducted based on communities and age groups, given that one of the main objectives of the survey was to provide estimates for two subpopulations aged, respectively, 16 to 30 years and 31 years and over. In order to obtain precise estimates, the targeted sample size was 1 000 respondents in each age group. Assuming a 50% response rate, nearly 4 000 people were required to obtain the necessary sample size. From this pool, the number of individuals recruited from each community was proportionate to population size and took into account the number of days that the survey team

1 OCAP® is a registered trademark of the First Nations Information Governance Centre (FNIGC).

would remain in each community – a situation that imposed constraints on the number of participants that could be seen. Within each stratum, participants were randomly selected from the beneficiaries register. However, the individuals from the 2004 cohort, all 31 years old and over (representing approximately 700 individuals), were automatically included in the initial sample.

DATA COLLECTION

Data were collected from August 19, 2017 to October 5, 2017 in the 14 villages. The villages were reached by the *Amundsen*, a Canadian Coast Guard Icebreaker, and participants were invited on board the ship for data collection purposes.

Two recruitment teams travelled from one community to another before the ship's arrival. An Inuk assistant in each community helped: identify, contact and transport (if necessary) each participant; inform participants about the sampling and study procedures; obtain informed consent from participants (video) and fill in the identification sheet and sociodemographic questionnaire.

Data collection procedures for the survey included questionnaires, as well as clinical measurements. The survey duration was about four hours for each wave of participants, including their transportation to and from the ship. Unfortunately, this time frame was sometimes insufficient to complete the data collection process. This survey received ethical approval by the Comité d'éthique de la recherche du Centre Hospitalier Universitaire de Québec – Université Laval.

Aboard the ship, the survey questionnaires were administered by interviewers, many of whom were Inuit. Face-to-face interviews were conducted using a computer-assisted interviewing tool. If there were problems with the laptop connections, paper-form questionnaires were filled out. The questionnaires were administered in Inuktitut, English or French, according to the preference of the participants. Interviewers received training in administering the questionnaires prior to the start of the survey. The questionnaires were divided into five blocks: psychosocial interview (blocks 1 and 3), physical health and food security interview (block 2), food frequency questionnaire (block 4), and sociodemographic interview (block 5).

The survey also included a clinical component, with tests to document aspects of physical health, sampling of biological specimens (such as blood, oropharyngeal swabs, urine, stool, and vaginal swabs), spirometry, and an oral clinical exam. These sessions were supervised by a team comprised of nurses, respiratory therapists, dentists, dental hygienists and assistants, and laboratory technicians.

PARTICIPATION

There were a total of 1 326 participants, including 574 Nunavimmiut aged 16 to 30 years old and 752 Nunavimmiut aged 31 years and over, for total response rates of 30.7% and 41.5%, respectively. The participants' distribution between the two coasts (Ungava and Hudson) was similar. The distribution of men and women was unequal, with twice as many women (873) than men (453) participating in the survey. If the results obtained from this sample are to be inferred to the target population, survey weights must be used.

Overall, as compared to the 2004 survey, the response rate (i.e., the rate of participants over the total number of individuals on the sampling list) was lower than expected, especially among young people. This includes the refusal rate and especially a low contact rate. Several reasons might explain the low response rate, including the short time period available to contact individuals prior to the ship's arrival in the community and non-contact due to people being outside of the community or on the land. Nevertheless, among the individuals that were contacted (n = 1 661), the participation rate was satisfactory with an internal participation rate of 79.7% More details on the collection, processing and analysis of the data are given in the Methodological Report (Hamel, Hamel & Gagnon, 2020).

2 INTRODUCTION

Hunting, fishing, berry picking and harvesting seafood from the local environment continues to be critically important to the well-being of Nunavimmiut and Nunavik communities. The gathering of country food resources helps individuals meet nutritional and energy needs on a regular basis, plays a central role in the economies of communities and the region, and contributes significantly to the cultural, social and mental health and well-being of Nunavimmiut (Arriagada and Bleakney, 2019; Kenny et al., 2018; ITK, 2014; Furgal and Rochette, 2007; Dewailly et al., 2001). In a rapidly changing society and environment this is even more important today than ever before.

The ongoing forces of climatic change and variability, environmental development and pollution, increasing population growth, demands on time by a wage-based economy, and increasing costs associated with land-based equipment and maintenance all challenge the continuity of participation in these hunting, fishing and gathering activities (Rosol et al., 2016a,b; Ford et al., 2010).

An examination of the Aboriginal Peoples Survey datasets from 2001 to 2017 on participation in hunting, fishing and collecting activities in Inuit Nunangat showed that approximately 65% of Inuit reported participating in hunting, fishing or trapping and about 50% had gathered wild plants and berries in 2017 (Kumar et al., 2019). However, it also reported that participation in these activities was decreasing among working-age adults since 2006. Greater participation in these land-based practices was shown to be associated with being employed, male, in a couple-headed household, and greater participation in social events or cultural activities. Barriers to participation in these land-based activities were identified and included lack of time, not having enough money for equipment or supplies, having a disability, no one to do it with, location of residence, fewer animals to harvest, and quotas (Kumar et al., 2019). In 2004, the *Qanuippitaa?* Inuit Health Survey in Nunavik reported that nearly half of Nunavimmiut were classified as "regular" hunters (at least once a week), approximately one third as "regular" fishers (at least once a week), and nearly half were reported to participate in berry picking at least once a month when berries were in season (Furgal and Rochette, 2007).

While participation in land-based activities of hunting, fishing, and gathering are common practices in communities today and convey significant health and other benefits, they also represent exposure to some risks for residents (King and Furgal, 2014). Exposure to zoonotic diseases such as trichinella (Ducrocq et al., 2020; Martinez-Levasseur et al., 2020) or rabies (Mediouni et al., 2020) through interaction with wildlife (e.g. butchering and preparing) are ongoing public health concerns in many Inuit regions, including Nunavik (see the *Qanuilirpitaa?* 2017 thematic report entitled *Zoonotic and Gastrointestinal Diseases* for more details). Exposure to environmental contaminants such as lead through the use of some forms of leaded ammunition, cleaning of firearms, and consumption of wildlife shot with those ammunition (Fillion et al., 2014; Couture et al., 2012) has required ongoing attention from health and environmental authorities because of the risks they pose to public health (Pontual et al., 2021; Lemire et al., 2015). Similarly, intake of methylmercury from certain country food species higher in concentrations of this contaminant poses health risks during vulnerable lifetime periods, especially prenatal life. With the goal of supporting safe and healthy participation in land-based activities and access to the resources, public health authorities have implemented specific monitoring or intervention programs (Ducrocq et al., 2020; Gautier et al., 2016) and engaged in public education campaigns or released messages with specific health advice (Boyd et al., 2019; Boyd and Furgal, 2018; Laird et al., 2013).

OBJECTIVES

The portrait drawn in this report aims to describe practices and knowledge pertaining to land-based activities among Nunavimmiut aged 16 years and over, and to identify some of their determinants. The specific objectives are to:

- Document the status of participation in land-based activities (hunting, fishing, berry picking and seafood harvesting) among Nunavimmiut aged 16 years old and older;
- Examine reported changes in efforts required to locate and hunt key country food species over time among Nunavimmiut;
- Document the status of firearm use and cleaning among hunters, the type of ammunition used by those handling firearms and preparation of animals in the region;
- Describe the level of awareness of key public health messages and reported changes in ammunition use and consumption behaviours;
- Examine differences among groups and associations with key socio-demographic characteristics in Nunavik regarding participation in land-based activities, changes in efforts for finding, hunting and catching wildlife species over time, firearm use and cleaning and types of ammunition use, and awareness of public health messaging and associated changes in consumption behaviour.

3 METHODOLOGICAL ASPECTS

STUDY POPULATION

A total of 1 326 individuals participated in the data collection process onboard the CCGS Amundsen, and among them, 1 295 (97.7%) responded to one or more questions in the physical health and food security interview (block 2). Response rates of block 2 participants on variables are provided in the following section, using a denominator of 1 295 (or lower if the variable is only relevant for a subsample of participants). In the results section, prevalence data are presented for the total population and according to ecological region[2], age group and sex.

HUNTING, FISHING, GATHERING, AMMUNITION USE AND PUBLIC HEALTH MESSAGING VARIABLES

Hunting, Fishing, Harvesting, Berry Picking

Participants were asked how often they went hunting, fishing, and harvesting seafood in the spring, summer, fall, and winter prior to the survey, and how often they went berry picking during berry picking season in the 12 months prior to the survey. A composite variable was created with the hunting, fishing, and harvesting seafood variables to assess frequency of engaging in one or more of these activities in the 12 months prior to the survey. Response rates ranged from 96.8% to 97.7% for these variables.

The hunting, fishing, and berry picking questions (but not the harvesting seafood questions) were asked in both the 2004 and 2017 surveys. The wording of the hunting and fishing questions were identical in both surveys, whereas the wording of the berry picking question was slightly different. The response options for all these questions were slightly different between the two surveys, with the 2004 survey question including the more nuanced options of "1 to 3 days per week" and "4 or more days week" compared to the single option of "once or more a week" in the 2017 survey. These more nuanced response options were combined into a single "once or more a week" category for the 2004 data, such that direct comparisons could be made between 2004 and 2017. The frequency of hunting, fishing, and berry picking activities in each season of 2004 versus the same season in 2017 was also compared within each level of the following socio-demographic variables: coastal region[3] (i.e. Hudson Coast and Ungava Coast), age group, and sex.

For this report, the term "hunters" refers to Nunavimmiut who reported hunting at least once in the 12 months prior to the survey.[4]

2 Ecological regions include Hudson Bay (Kuujjuarapik, Umiujaq, Inukjuak, Puvirnituq and Akulivik), Hudson Strait (Ivujivik, Salluit, Kangiqsujuaq and Quaqtaq) and Ungava Bay (Kangirsuk, Aupaluk, Tasiujaq, Kuujjuaq and Kangiqsualujjuaq).

3 Coastal regions (Hudson Coast and Ungava Coast) were used for the comparisons with 2004, as the information was not presented by ecological region in 2004. Hudson Coast: Kuujjuarapik, Umiujaq, Inukjuak, Puvirnituq, Akulivik, Ivujivik and Salluit; Ungava Coast: Kangiqsujuaq, Quaqtaq, Kangirsuk, Aupaluk, Tasiujaq, Kuujjuaq and Kangiqsualujjuaq.

4 The "frequency of hunting across seasons" questions were used to create a filtering variable for several survey questions described in later parts of this report. Specifically, only participants who reported hunting at least once in the 12 months prior to the survey (i.e. who had at least one response other than "never" for at least one of the four seasons) were classified as "hunters" and asked questions about firearm use and cleaning firearms inside the house. Hunters who reported using a firearm were subsequently asked about the types of ammunition they used, how they cleaned the meat around a slug/bullet wound channel, and about challenges finding, catching or hunting species.

Frequency of Going Out on the Land[5]

A composite variable was created that combined one question asking "how often" participants went out on the land with another question asking them "for how long" (block 5). The response rate for this composite variable was 99.4%.

Challenges hunting/finding/catching species since 2011

Participants who had hunted at least once in the 12 months prior to the survey ("hunters") and who used a firearm were also asked if caribou, seal, beluga, walrus, and goose were each harder, easier, or the same difficulty to hunt/find/catch compared to the previous years (since 2011) during the same season.[6] Two composite variables were created, one that assessed if at least one of the listed land species (i.e. caribou or goose) was harder to hunt, and the other that assessed if at least one of the listed marine species (i.e. seal, beluga, or walrus) was harder to hunt. Participants who did not hunt either of the land species, and participants who did not hunt any of the marine species, were excluded from the "challenges hunting land species" and "challenges hunting marine species" composite variables, respectively. Response rates ranged from 90.1% to 99.3% across these variables.

The challenges hunting questions and response options were slightly different in *Qanuippitaa?* 2004 (Q2004) and *Qanuilirpitaa?* 2017 (Q2017), as were the samples of participants who were asked these questions. To compare Q2004 and Q2017 information on hunting challenges, a composite variable assessing if *at least one* of the five listed species was harder to hunt since 2011 was created using the Q2017 data. This Q2017 composite variable is similar to the original Q2004 variable on hunting challenges. To get roughly similar samples between 2004 and 2017, and to reduce the likelihood of including in the samples participants who did not hunt the five listed species, a subsample of participants who hunted at least once a week in all four seasons ("very active subsistence hunters") was used for the Q2004 versus Q2017 comparison analyses.

Firearm User

Participants who had hunted at least once in the 12 months prior to the survey ("hunters") were asked if they used a firearm. The response rate was 96.9% for this variable.

Cleaning Firearm Inside the House

Participants who had hunted at least once in the 12 months prior to the survey ("hunters") were asked if they or someone in their home cleans guns inside the house (yes/no). Since a "yes" response does not necessarily mean the participant themself cleaned guns inside the home, but only that someone inside their house did, this variable is a measure of potential exposure to lead rather than a measure of likely personal direct exposure or personal behaviours relating to cleaning guns inside the home. The response rate was 96.3% for this variable.

Preparation of Species

All participants were asked how many wild birds, caribou/muskoxen, foxes/wolves/dogs, bears, and sea mammals they had prepared (skinned, washed, cut, etc.) in the 12 months prior to the survey. Due to 0 frequencies on one or more of the original response options for the foxes/wolves/dogs, bears, and sea mammals variables, response options were amalgamated for these variables. Response rates varied from 99.8% to 100% for these 5 variables.

Type of Ammunition Use

Participants who had hunted at least once in the 12 months prior to the survey ("hunters") and who used a firearm were asked whether they used lead shot, unleaded shot, lead bullets, unleaded bullets, lead slug, and unleaded slug for hunting. Three composite variables were created to assess exclusive use of lead ammunition, exclusive use of unleaded ammunition, or a mix of both lead and unleaded types of ammunition – one variable for each type of ammunition (i.e. bullets, shot, and slug). Response rates for ranged from 94.4% to 99.3%.

5 Variable from Block 5 instead of Block 2.

6 Participants were also asked if they did not hunt each species. Proportions on the "challenges hunting" variables for the Q2017 analyses are only among those who hunted the species (i.e. who responded harder, easier, or no change); participants who did not hunt that species were excluded from the calculation. However, when comparing Q2004 and Q2017, participants who did not hunt species were included in the analyses in order to increase the comparability between the two surveys.

Public Health Messaging Around Lead Shot

All participants were asked if they had heard about the concern related to the use of lead shot for hunting game in Nunavik (yes/no). The response rate was 99.8% for this variable.

Cleaning of Meat Around the Wound

Participants who had hunted at least once in the 12 months prior to the survey ("hunters") and who used a firearm were asked how they clean meat that is damaged after shooting with a bullet or a slug. The response rate was 93.7% for this variable.

Public Health Messaging Around Mercury in Country Foods & Modifications to Eating Habits Variables

All participants were asked if they had heard about mercury in country foods in Nunavik (yes/no). The response rate was 99.8% for this variable.

Participants who reported they had heard about mercury in country foods were subsequently asked if they had modified their eating habits (yes/no). The response rate was 99.3% for this variable.

Participants who reported they had heard about mercury in country foods and also said they had modified their eating habits were subsequently asked how they had modified their eating habits of various animals. Response rates ranged from 63.6% to 85.4% for the five listed animals. Text responses on the "other animal, specify" question are provided in the Results section.

SUBPOPULATION VARIABLES USED IN BIVARIATE ANALYSES

Table 1 Lists of subpopulation variables that were crossed with the hunting, fishing, gathering, ammunition use and environmental health messaging variables in bivariate association analyses.

PHFSI (block 2) Variables: Hunting, Fishing, Gathering, Ammunition Use and Public Health Messaging Variables	Subpopulation Variables Used in Bivariate Analyses	Source of Subpopulation Variables
Hunting, Fishing, Harvesting, Berry Picking across Seasons		
Hunting/Fishing/Harvesting composite		
Frequency of Going Out on Land		
Challenges Hunting Species		
Challenges Hunting Land Species		
Challenges Hunting Marine Species	ecological region, age group, sex, self-reported physical health	SDI (block 5) & PHFSI (block 2)
Firearm User		
Preparation of Species		
Type of Ammunition Use		
Type of Ammunition Use composite		
Cleaning Meat Around Wound		
Cleaning Firearm Inside the Home	ecological region, age group, sex	SDI (block 5)
	pregnancy status[7]	PSI (block 3) & SDI (block 5)
Public Health Messaging Around Lead Shot	ecological region, age group, sex	SDI (block 5)
Public Health Messaging Around Mercury	pregnancy status[7]	PSI (block 3) & SDI (block 5)
Eating Habit Modifications	ecological region	SDI (block 5)
Eating Habit Modifications – specific animals	pregnancy status[7]	PSI (block 3) & SDI (block 5)

SDI = sociodemographic interview; PSI = psychosocial interview; PHFSI = physical health and food security interview.

7 Composite variable with three categories: pregnant in the year prior to the survey, women of childbearing age (49 years and under) who were not pregnant in the year prior to the survey, and women of non-childbearing age (50 years and older).

STATISTICAL ANALYSES

Univariate and bivariate analyses were performed using SAS® Studio software, Version 3.8 (Cary, North Carolina, USA). Sampling weights were used to estimate population proportions, and replicate weights were used to estimate variance. The sampling weights took into account the sampling design, total non-response at both the time of recruitment and appointments on the ship, and post-stratification adjustments to ensure the sample was representative of the population on sex, age group, and ecological region (Hamel, Hamel, & Gagnon, 2020). Replicate weights were obtained via the balanced repeated replication method (Hamel, Hamel, & Gagnon, 2020). Partial non-response was deemed to have a negligible impact on biasing estimates (Hamel, Hamel, & Gagnon, 2020); available case analysis was therefore used for this report.

For each bivariate analysis, an adjusted chi-square test of association (second-order Rao-Scott chi-square test) was run to determine if an association between the two variables was statistically significant at the 0.05 alpha level. If significant, follow-up 2x2 adjusted chi-square tests were then run to see which specific groups had significantly different estimated proportions. For example, the overall association between *ecological region* and *frequency of hunting in the spring in the year before the survey* was significant, and 2x2 adjusted chi-square tests of association were used to see which ecological regions differed from one another for each category of hunting frequency (never, less than once a month, 1 to 3 days per month, once a week or more).

Coefficients of variation (CV) were calculated to assess the reliability of estimates. Estimates with a CV less than 15% were considered acceptable. Estimates with a CV greater than 15% and less than or equal to 25% were considered "marginally acceptable" and must be interpreted with caution due to the high sampling variability (indicated by a single asterisk (*)). Estimates with a CV greater than 25% are "unacceptable" and are presented for illustrative purposes only and must be used with caution (indicated by a double asterisk (**)).

In order to evaluate whether there has been a change from 2004 to 2017 in the frequency of hunting across seasons, fishing across seasons, berry picking during berry picking season, and challenges hunting/finding/catching species in the ±5 years preceding the surveys, age-adjusted proportions and standard errors for the categories of these variables were calculated for both *Qanuippitaa?* 2004 and *Qanuilirpitaa?* 2017. The direct age standardization method was used, with 2017 as the reference. A Wald test of the difference between the logit-transformed age-adjusted estimates was performed to assess statistical significance (Hamel, Hamel, & Gagnon, 2020). To help protect against an inflated Type I error rate, Bonferroni-adjusted alpha levels were first used, and then analyses with variables that had one or more categories that were significantly different between 2004 and 2017 were rerun using the 0.05 alpha level. For example, at least one of the categories of the "frequency of hunting in spring" variable had significantly different proportions between Q2004 and Q2017 using the Bonferroni-adjusted alpha level (specifically, the proportion for "less than once a month" was significantly higher in 2017 than 2004, and the proportion for "at least once a month" was significantly lower in 2017 than 2004). The Q2004 versus Q2017 comparisons were rerun for the 4 "frequency of hunting in spring" categories using the 0.05 alpha level instead, and an additional category ("1 to 3 days per month") then had significantly different proportions in 2004 and 2017.

Additionally, Q2004 versus Q2017 comparisons on the categories of the hunting, fishing, berry picking, and challenges hunting variables were run for each age group separately. The Wald test and Bonferroni-adjusted alpha level approach mentioned above was used, but without any age-standardization.

4 RESULTS

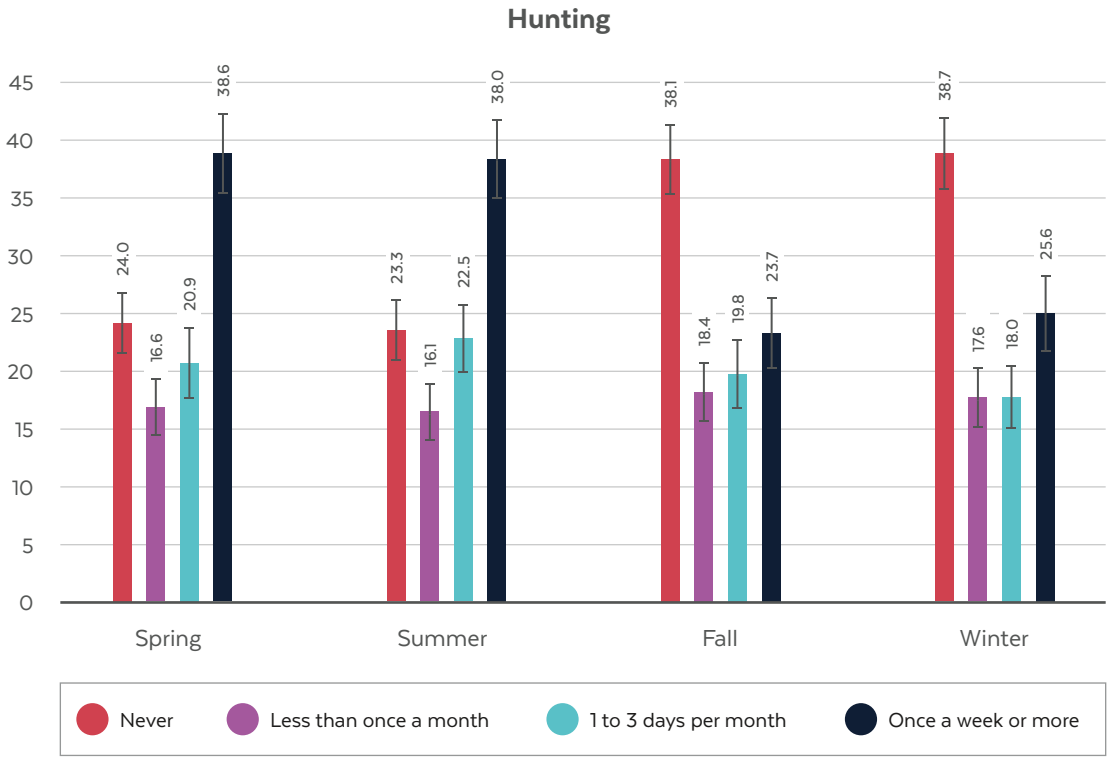
PART 1: FREQUENCY OF LAND-BASED ACTIVITIES

All participants were asked how regularly they went hunting, fishing, and harvested seafood in the spring, summer, fall, and winter seasons prior to the survey. Similarly, all participants were asked how regularly they went berry picking during the berry picking season prior to the survey. All composite variables used in this section were based on questions that all participants were asked.

Frequency of Hunting across Seasons

Going hunting "once a week or more" was the most common response for the spring and summer of the year before the survey (39% and 38% respectively), whereas "never" going hunting was the most common response for the fall and winter (38% and 39% respectively; Figure 1). Despite "never" being the most common response for the fall and winter, in all four seasons the majority of Nunavimmiut went hunting at least once (i.e. responses other than "never" combined – specifically, "less than once a month", "1 to 3 days per month", and "once a week or more") (76% in the spring, 77% in the summer, 62% in the fall, 61% in the winter; Figure 1).

Figure 1 Prevalence and 95-percent confidence intervals of frequency of hunting in each season of the year before the survey among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



Residents of Hudson Strait and Ungava Bay were more likely to go hunting at least once in the spring (78% and 82% respectively) than residents of Hudson Bay (71%; Table 2). In the other three seasons, residents of Ungava Bay were more likely to go hunting at least once than residents of Hudson Strait and Hudson Bay (Tables 3-5). However, when considering regular participation in hunting – that is, hunting "once a week or more" – there were no significant differences between ecological regions in the spring (Table 2), summer (Table 3), and fall (Table 4). Residents of Ungava Bay were more likely to go hunting regularly in the winter (once a week or more; 33%) than residents of Hudson Strait (19%*) and Hudson Bay (24%; Table 5).

Youth aged 16-19 in Nunavik were more likely to go hunting at least once in the spring (83%) than adults aged 31-54 (74%) and elders aged 55 and over (75%; Table 2). However, in all four seasons, there were no significant differences in regular hunting– that is, "once a week or more" – between age groups (Table 2-5)

In all four seasons, males were more likely to go hunting at least once – and also more regularly (i.e. 1 to 3 days per month and/or once a week or more) – than females (Tables 2-5). It is worth noting that "once a week or more" was the most commonly reported level of participation in hunting among males for all four seasons (ranging from 29% in the fall to 47% in the spring; Tables 2-5), and the most commonly reported level of participation in hunting among females for the summer (33%; Table 3).

Table 2 Prevalence and 95-percent confidence intervals of frequency of hunting in the spring of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting – Spring	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	22.5[a]	18.4	27.3	16.2*	11.9	21.7	24.3	18.6	31.1	36.9	30.9	43.5
Hudson Bay	29.2[b]	25.0	33.8	15.3	12.1	19.2	19.2	15.4	23.8	36.2	31.2	41.5
Ungava Bay	18.5[a]	15.4	22.1	18.4	15.0	22.4	20.4	16.7	24.7	42.6	38.0	47.4
Age Groups												
Youth (16-19)	17.3[a]	13.2	22.4	23.9[a]	18.1	30.7	21.3	15.7	28.2	37.5	30.9	44.6
Young Adults (20-30)	23.3	18.8	28.5	13.0[b]*	9.6	17.3	23.3	18.1	29.5	40.4	34.4	46.8
Adults (31-54)	26.5[b]	22.4	31.0	17.9	14.5	21.8	17.0[a]	13.4	21.3	38.6	33.7	43.8
Elders (55 and up)	25.0[b]	19.4	31.6	13.1[b]*	9.5	17.9	25.8[b]	20.2	32.2	36.1	29.6	43.1
Sex												
Male	15.7[a]	12.5	19.5	14.6	11.5	18.5	22.8	18.6	27.7	46.9[a]	41.7	52.1
Female	32.3[b]	29.2	35.5	18.6	16.0	21.4	18.9	16.4	21.7	30.2[b]	27.0	33.6

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 3 Prevalence and 95-percent confidence intervals of frequency of hunting in the summer of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting – Summer	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	23.6[a]	19.3	28.5	13.4[a]	10.1	17.7	25.1	19.6	31.6	37.8	31.9	44.2
Hudson Bay	27.7[a]	23.6	32.3	14.7	11.5	18.6	20.7	16.9	25.2	36.9	32.1	41.9
Ungava Bay	17.8[b]	14.7	21.4	19.7[b]	15.9	24.1	22.9	19.0	27.2	39.7	35.1	44.5
Age Groups												
Youth (16-19)	18.5	13.8	24.3	15.9*	11.5	21.6	29.9	23.5	37.2	35.7	28.8	43.3
Young Adults (20-30)	21.6	17.3	26.7	17.5	13.5	22.4	23.6	18.8	29.1	37.3	31.7	43.2
Adults (31-54)	23.6	19.9	27.7	17.1	13.6	21.3	20.2	16.3	24.7	39.1	34.3	44.2
Elders (55 and up)	30.1	23.7	37.3	11.4*	8.1	15.7	19.6	14.7	25.7	38.9	32.2	46.1
Sex												
Male	16.9[a]	13.5	20.9	14.6	11.3	18.6	25.6[a]	21.2	30.5	43.0[a]	38.1	48.0
Female	29.8[b]	26.8	33.1	17.6	15.3	20.3	19.4[b]	16.8	22.3	33.1[b]	29.9	36.4

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 4 Prevalence and 95-percent confidence intervals of frequency of hunting in the fall of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting – Fall	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	39.0[a]	34.0	44.2	16.1[a]	12.0	21.3	25.0[a]	19.6	31.4	19.9	15.1	25.7
Hudson Bay	44.9[a]	40.2	49.8	14.0[a]	11.0	17.7	16.6[b]	13.0	21.0	24.5	20.2	29.3
Ungava Bay	29.2[b]	25.5	33.1	25.5[b]	21.4	30.0	19.9	16.5	23.9	25.4	21.4	30.0
Age Groups												
Youth (16-19)	35.6	29.5	42.2	22.7	16.9	29.8	18.6*	13.3	25.3	23.1	17.1	30.4
Young Adults (20-30)	39.1	33.4	45.1	18.4	14.4	23.2	19.6	15.0	25.2	22.9	18.2	28.3
Adults (31-54)	37.6	33.1	42.4	18.1	14.6	22.2	21.2	17.2	25.8	23.1	19.1	27.6
Elders (55 and up)	40.0	33.5	46.8	15.4*	11.0	21.1	17.5*	12.7	23.6	27.1	21.5	33.7
Sex												
Male	24.9[a]	20.9	29.4	20.1	16.4	24.4	26.1[a]	21.7	31.1	28.8[a]	24.3	33.8
Female	51.4[b]	47.9	54.8	16.7	14.4	19.4	13.4[b]	11.1	15.9	18.6[b]	16.0	21.5

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 5 Prevalence and 95-percent confidence intervals of frequency of hunting in the winter of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

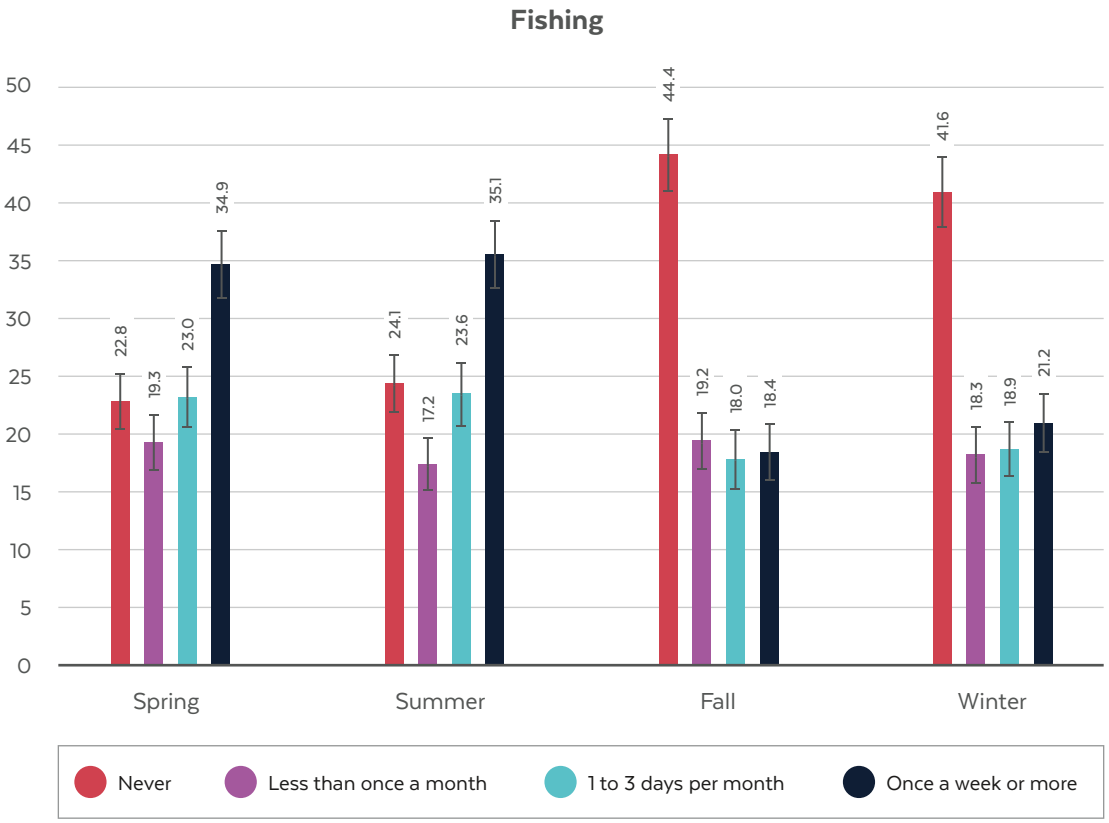
Hunting – Winter	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	46.6[a]	41.2	52.2	15.7*	11.2	21.4	18.5*	13.3	25.0	19.2[a]*	14.1	25.7
Hudson Bay	45.3[a]	40.4	50.4	16.9	13.5	21.0	14.2[a]	11.1	17.9	23.6[a]	19.1	28.7
Ungava Bay	25.0[b]	21.3	29.0	19.9	16.6	23.6	22.5[b]	18.5	26.9	32.7[b]	28.2	37.5
Age Groups												
Youth (16-19)	29.0	23.2	35.6	23.1	17.4	29.9	20.2*	14.7	27.1	27.7	21.1	35.6
Young Adults (20-30)	37.6	32.0	43.5	14.4*	10.5	19.4	20.0	15.3	25.7	28.0	22.8	34.0
Adults (31-54)	40.6	36.0	45.3	18.7	15.2	22.9	16.8	13.2	21.3	23.9	19.5	28.8
Elders (55 and up)	45.2	38.3	52.3	15.5*	11.1	21.3	15.5*	11.2	21.2	23.7	18.1	30.5
Sex												
Male	25.6[a]	21.4	30.3	18.2	14.7	22.3	22.5[a]	18.4	27.1	33.7[a]	28.8	39.1
Female	51.7[b]	48.4	55.1	17.0	14.6	19.7	13.6[b]	11.5	16.1	17.6[b]	15.1	20.4

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Frequency of Fishing across Seasons

The findings for frequency of fishing across seasons are similar to those for frequency of hunting across seasons. Going fishing "once a week or more" was the most common response for the spring and summer of the year before the survey (35% and 35% respectively), and "never" going fishing was the most common response for the fall and winter (44% and 42% respectively; Figure 2). In all four seasons, the majority of Nunavimmiut went fishing at least once (i.e. responses other than "never" combined – specifically, "less than once a month", "1 to 3 days per month", and "once a week or more") (77% in the spring, 76% in the summer, 56% in the fall, 58% in the winter; Figure 2).

Figure 2 Prevalence and 95-percent confidence intervals of frequency of fishing in each season of the year before the survey among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



Also similar to the results for hunting across seasons, residents of Hudson Strait and Ungava Bay were more likely to go fishing at least once in the spring (83% and 82% respectively) than residents of Hudson Bay (70%; Table 6). In the summer, residents of Ungava Bay were the most likely to go fishing at least once (85%), followed by residents of Hudson Strait (76%), and then residents of Hudson Bay (69%; Table 7). In the fall and winter, residents of Ungava Bay were more likely to go fishing at least once (64% in the fall, 71% in the winter) compared to residents of Hudson Strait (52% for the fall, 48% for the winter) and compared to residents of Hudson Bay (52% for the fall, 54% for the winter; Tables 8 and 9). When considering regular participation in fishing, residents of Ungava Bay were more likely to go fishing once a week or more than residents of Hudson Bay in the spring (39% for Ungava Bay versus 32% for Hudson Bay; Table 6), in the summer (42% vs. 30%; Table 7), and in the winter (29% vs. 18%; Table 9). Residents of Ungava Bay were also more likely to go fishing once a week or more than residents of Hudson Strait in the summer (42% vs. 34%; Table 7) and in the winter (29% vs. 15%*; Table 9). There were no differences between ecological regions in regular participation in fishing of "once a week or more" in the fall (Table 8).

Elders were more likely to go fishing at least once in the fall (61%) than youth (50%; Table 8). For the other three seasons, no differences were found between age groups in the prevalence of fishing at least once (Tables 6, 7 and 9). However, when considering regular participation in fishing, Elders were more likely to go fishing once a week or more in the spring (Table 6) and fall (Table 8) compared to the other three age groups. No differences between age groups were observed for frequency of fishing in the summer (Table 7) and winter (Table 9).

In all four seasons, males were more likely than females to go fishing at least once (spring: 83% of males versus 72% of females; summer: 81% vs. 71%; fall: 66% vs. 45%; winter: 69% vs. 48%; Tables 6-9). Similarly, when considering more regular participation in fishing, males were more likely than females to go fishing 1 to 3 days per month in the spring, fall and winter, and to go fishing once a week or more in the summer and winter (Tables 6-9).

Table 6 Prevalence and 95-percent confidence intervals of frequency of fishing in the spring of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Fishing – Spring	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	17.0[a]	13.5	21.3	21.1	15.9	27.5	27.1[a]	21.3	33.7	34.8	28.4	41.7
Hudson Bay	29.8[b]	25.5	34.4	19.8	16.3	23.9	18.7[b]	14.9	23.1	31.7[a]	27.1	36.7
Ungava Bay	18.4[a]	15.3	21.9	17.3	14.1	21.0	25.4[a]	21.6	29.6	39.0[b]	34.8	43.3
Age Groups												
Youth (16-19)	26.4	20.5	33.3	24.5[a]	18.6	31.5	19.1*	13.7	25.9	30.1[a]	23.9	37.2
Young Adults (20-30)	24.0	19.7	29.0	18.5[a]	14.1	23.8	24.3	19.1	30.5	33.2[a]	27.7	39.1
Adults (31-54)	22.1	18.3	26.4	21.4[a]	17.5	25.9	22.8	18.8	27.3	33.7[a]	29.0	38.8
Elders (55 and up)	19.4	14.5	25.4	11.0[b]*	7.8	15.3	24.8	19.2	31.2	44.9[b]	37.7	52.3
Sex												
Male	17.5[a]	14.3	21.2	20.4	16.6	24.7	26.5[a]	22.2	31.2	35.7	30.9	40.8
Female	28.2[b]	25.2	31.5	18.2	15.7	21.0	19.5[b]	16.8	22.5	34.1	31.0	37.3

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 7 Prevalence and 95-percent confidence intervals of frequency of fishing in the summer of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Fishing – Summer	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	24.3[a]	19.9	29.4	15.3*	11.3	20.5	26.1	20.3	32.9	34.3[a]	28.7	40.3
Hudson Bay	31.4[b]	26.7	36.4	17.6	14.1	21.6	21.1	17.4	25.4	29.9[a]	25.5	34.7
Ungava Bay	15.0[c]	12.2	18.3	18.2	14.8	22.1	24.8	20.9	29.1	42.1[b]	37.7	46.6
Age Groups												
Youth (16-19)	26.1	20.0	33.2	18.0	13.3	23.8	24.6	18.6	31.7	31.4	24.7	38.9
Young Adults (20-30)	22.9	18.7	27.7	18.7	14.7	23.6	26.2	20.8	32.4	32.2	27.1	37.8
Adults (31-54)	23.2	19.4	27.5	18.2	14.5	22.6	22.8	18.9	27.2	35.8	31.3	40.6
Elders (55 and up)	26.8	20.7	33.8	11.6*	8.1	16.5	20.0	15.1	26.0	41.6	34.8	48.7
Sex												
Male	19.2[a]	15.4	23.7	16.1	12.8	20.2	25.8	21.3	30.8	38.9[a]	34.1	43.8
Female	29.1[b]	25.9	32.4	18.3	15.8	21.2	21.3	18.6	24.3	31.3[b]	28.1	34.6

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 8 Prevalence and 95-percent confidence intervals of frequency of fishing in the fall of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Fishing – Fall	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	48.4[a]	42.0	54.8	16.6	12.3	21.9	20.0	14.9	26.3	15.1*	10.8	20.7
Hudson Bay	48.4[a]	43.4	53.5	18.0	14.6	22.2	13.6[a]	10.5	17.6	19.9	15.9	24.5
Ungava Bay	36.5[b]	32.4	40.8	22.6	18.4	27.5	22.0[b]	18.0	26.7	18.9	15.5	22.7
Age Groups												
Youth (16-19)	49.6[a]	42.3	56.9	24.7[a]	18.5	32.1	13.4[a]*	8.9	19.6	12.4[a]*	8.1	18.5
Young Adults (20-30)	46.5	40.8	52.3	17.6	13.4	22.8	19.6	14.8	25.7	16.3[a]	12.4	21.1
Adults (31-54)	43.3	38.4	48.3	21.1[a]	17.3	25.4	17.3	13.6	21.8	18.3[a]	14.7	22.5
Elders (55 and up)	38.8[b]	32.2	45.8	12.8[b]*	9.2	17.6	21.0[b]	15.8	27.4	27.4[b]	21.4	34.3
Sex												
Male	34.1[a]	29.2	39.3	22.9[a]	19.1	27.2	23.0[a]	18.8	27.8	20.1	16.1	24.7
Female	54.8[b]	51.2	58.4	15.6[b]	13.1	18.3	13.0[b]	10.8	15.5	16.7	14.2	19.5

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 9 Prevalence and 95-percent confidence intervals of frequency of fishing in the winter of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Fishing - Winter	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	51.6[a]	45.3	57.9	14.4*	10.2	20.1	19.1*	14.0	25.4	14.9[a]*	10.2	21.2
Hudson Bay	46.4[a]	41.2	51.6	19.5	15.7	23.9	15.8[a]	12.6	19.5	18.4[a]	14.5	23.0
Ungava Bay	28.6[b]	24.9	32.5	19.6	15.8	23.9	22.5[b]	18.6	27.0	29.4[b]	25.2	33.8
Age Groups												
Youth (16-19)	36.8	29.9	44.4	18.6*	13.4	25.1	21.8	16.4	28.3	22.8	17.1	29.7
Young Adults (20-30)	39.7	34.3	45.4	15.9	12.1	20.8	20.3	15.3	26.3	24.0	19.1	29.7
Adults (31-54)	42.5	37.6	47.5	22.2	17.9	27.1	17.3	13.9	21.4	18.1	14.3	22.6
Elders (55 and up)	47.0	40.3	53.7	12.8*	9.1	17.8	17.5	13.0	23.1	22.7	17.2	29.3
Sex												
Male	30.9[a]	26.2	36.0	20.3	16.4	24.9	22.7[a]	18.9	27.0	26.1[a]	21.8	30.8
Female	52.4[b]	48.9	55.9	16.2	13.8	19.0	15.0[b]	12.6	17.7	16.4[b]	14.0	19.1

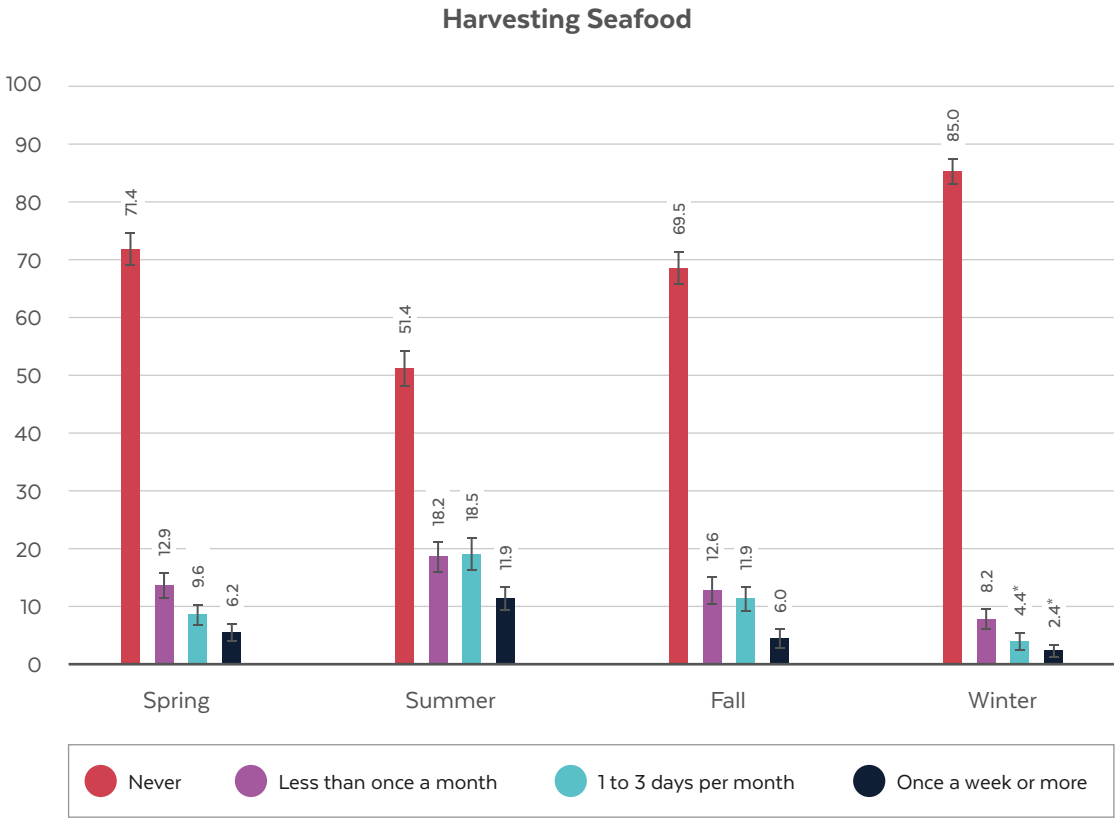
a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Frequency of Harvesting Seafood across Seasons

In every season during the year before the survey, the majority of Nunavimmiut did *not* harvest seaweeds, mollusks (mussels, scallops, clams, etc.) or urchins (these food items herein referred to as "seafood") (71% in the spring, 51% in the summer, 70% in the fall, and 85% in the winter; Figure 3).

Figure 3 Prevalence and 95-percent confidence intervals of frequency of harvesting seafood in each season of the year before the survey among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

In each season, residents of Hudson Strait were more likely to harvest seafood at least once than residents of Hudson Bay (Tables 10-13). The proportion of Ungava Bay residents who harvested seafood at least once in a season generally fell in between the proportions for Hudson Strait and Hudson Bay (Tables 10-12), with the exception of winter (Ungava Bay had the smallest proportion of participation in this season; Table 13). Differences between ecological regions on specific categories of participation were generally concordant with the results mentioned above (Tables 10-13). Noteworthy, Hudson Strait residents were more likely to harvest seafood regularly – i.e. once a week or more – in the summer (16%) than Hudson Bay residents (10%; Table 11), and were more likely to harvest seafood regularly in the fall (11%*) than both Hudson Bay (4%*) and Ungava Bay residents (5%*; Table 12).

Elders and adults were both more likely to harvest seafood at least once in the fall (37% and 33% respectively) compared to youth (20%; Table 12). No significant differences between age groups were observed for frequency of harvesting seafood in the spring, summer and winter (Tables 10, 11 and 13).

Males were more likely than females to harvest seafood at least once in the spring (34% versus 23%; Table 10), fall (37% versus 24%; Table 12), and winter (20% versus 10%; Table 13). Sex differences on specific categories of participation were generally concordant with these findings (Tables 10-13). In the summer, frequency of harvesting seafood was comparable between males and females (i.e. no sex differences on any categories; Table 11).

Table 10 **Prevalence and 95-percent confidence intervals of frequency of harvesting seafood in the spring of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017**

Harvesting – Spring	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	56.8[a]	50.5	62.9	19.8[a]	14.9	26.0	14.6[a]	10.9	19.3	8.8*	5.7	13.2
Hudson Bay	79.0[b]	74.8	82.6	9.0[b]*	6.5	12.2	6.4[b]*	4.4	9.4	5.6*	3.8	8.3
Ungava Bay	72.4[c]	68.1	76.4	12.8[b]	9.9	16.3	9.8	7.4	12.9	5.0*	3.6	7.0
Age Groups												
Youth (16-19)	73.0	65.7	79.2	15.9*	10.6	23.1	7.5**	4.1	13.1	3.7**	1.8	7.4
Young Adults (20-30)	73.7	67.7	79.0	12.2*	8.7	16.9	7.0*	4.5	10.7	7.0*	4.5	10.8
Adults (31-54)	71.0	67.0	74.7	13.5	10.5	17.3	10.0	7.6	13.0	5.5*	3.6	8.3
Elders (55 and up)	66.9	60.7	72.6	9.9*	6.8	14.2	14.7*	10.6	20.0	8.5*	5.3	13.3
Sex												
Male	65.8[a]	61.4	70.0	16.2[a]	12.7	20.4	10.3	7.9	13.4	7.6*	5.4	10.7
Female	76.9[b]	74.1	79.6	9.6[b]	7.9	11.6	8.8	7.1	10.9	4.7*	3.5	6.4

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Table 11 Prevalence and 95-percent confidence intervals of frequency of harvesting seafood in the summer of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Harvesting – Summer	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	37.7[a]	31.9	43.9	23.1[a]	18.1	29.0	23.2[a]	18.2	29.2	16.0[a]	11.8	21.2
Hudson Bay	64.5[b]	59.9	68.9	13.5[b]	10.5	17.1	12.1[b]	9.0	16.1	9.9[b]	7.5	13.0
Ungava Bay	44.9[a]	40.4	49.4	20.6[a]	17.0	24.7	23.1[a]	19.2	27.6	11.4	8.9	14.5
Age Groups												
Youth (16-19)	52.7	45.5	59.8	22.2*	16.3	29.4	12.4*	8.5	17.8	12.7*	8.6	18.4
Young Adults (20-30)	52.6	46.2	59.0	17.4	13.2	22.7	17.6*	12.9	23.5	12.3	9.2	16.3
Adults (31-54)	50.9	46.8	54.9	18.1	14.8	21.9	18.8	15.3	22.9	12.2	9.4	15.8
Elders (55 and up)	49.2	42.7	55.8	16.3*	11.9	21.9	25.0	19.8	30.9	9.5*	6.6	13.6
Sex												
Male	49.8	45.1	54.6	19.7	16.0	24.0	18.9	15.1	23.4	11.5	8.7	15.2
Female	52.9	49.9	55.9	16.7	14.4	19.3	18.2	15.7	20.9	12.2	10.2	14.6

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Table 12 Prevalence and 95-percent confidence intervals of frequency of harvesting seafood in the fall of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Harvesting – Fall	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	53.2[a]	47.3	59.0	18.3[a]	13.8	24.0	17.6[a]	13.6	22.5	10.8[a]*	6.9	16.7
Hudson Bay	78.7[b]	74.4	82.5	8.6[b]*	6.0	12.1	8.5[b]*	6.0	11.9	4.2[b]*	2.7	6.7
Ungava Bay	69.9[c]	65.7	73.7	13.5[a]	10.6	17.2	11.9[b]	9.1	15.4	4.7[b]*	3.2	6.7
Age Groups												
Youth (16-19)	79.7[a]	72.4	85.4	8.2[a]**	4.8	13.9	8.4[a]**	4.6	14.9	3.6**	1.4	9.0
Young Adults (20-30)	71.7	65.6	77.1	11.7*	8.3	16.2	11.1*	7.5	15.9	5.6**	3.3	9.3
Adults (31-54)	66.8[b]	62.8	70.5	15.3[b]	12.1	19.1	11.5	9.0	14.7	6.4*	4.3	9.5
Elders (55 and up)	63.3[b]	56.9	69.3	11.9*	7.9	17.3	17.1[b]	12.7	22.6	7.8*	4.9	12.2
Sex												
Male	63.1[a]	58.5	67.5	15.8[a]	12.5	19.7	13.4	10.4	17.1	7.7[a]*	5.3	11.1
Female	76.0[b]	73.2	78.6	9.4[b]	7.6	11.7	10.3	8.6	12.3	4.2[b]*	3.1	5.8

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Table 13 Prevalence and 95-percent confidence intervals of frequency of harvesting seafood in the winter of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Harvesting – Winter	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	69.9[a]	63.7	75.5	16.5[a]	12.3	21.9	9.8[a]*	6.2	15.3	3.7**	1.9	7.2
Hudson Bay	87.8[b]	84.2	90.7	6.5[b]*	4.5	9.4	3.6[b]**	2.0	6.1	2.1**	1.0	4.4
Ungava Bay	92.3[c]	89.8	94.3	4.2[b]*	2.9	6.1	1.6[b]**	0.9	2.9	1.8**	1.0	3.5
Age Groups												
Youth (16-19)	87.6	81.0	92.2	5.4**	2.6	10.9	3.8**	1.5	9.2	3.1**	1.3	7.4
Young Adults (20-30)	87.9	83.3	91.4	6.6*	4.2	10.2	3.3**	1.6	6.7	2.2**	0.9	5.1
Adults (31-54)	83.1	79.6	86.2	10.1*	7.4	13.5	4.7**	2.8	7.8	2.1**	1.0	4.2
Elders (55 and up)	82.1	76.8	86.4	8.9*	5.9	13.1	6.2**	3.6	10.5	2.8**	1.1	7.3
Sex												
Male	79.6[a]	75.7	83.0	10.9[a]	8.3	14.2	5.9[a]*	3.8	8.9	3.6[a]**	2.2	6.1
Female	90.5[b]	88.6	92.1	5.4[b]	4.2	7.1	3.0[b]*	2.0	4.3	1.1[b]**	0.6	2.0

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

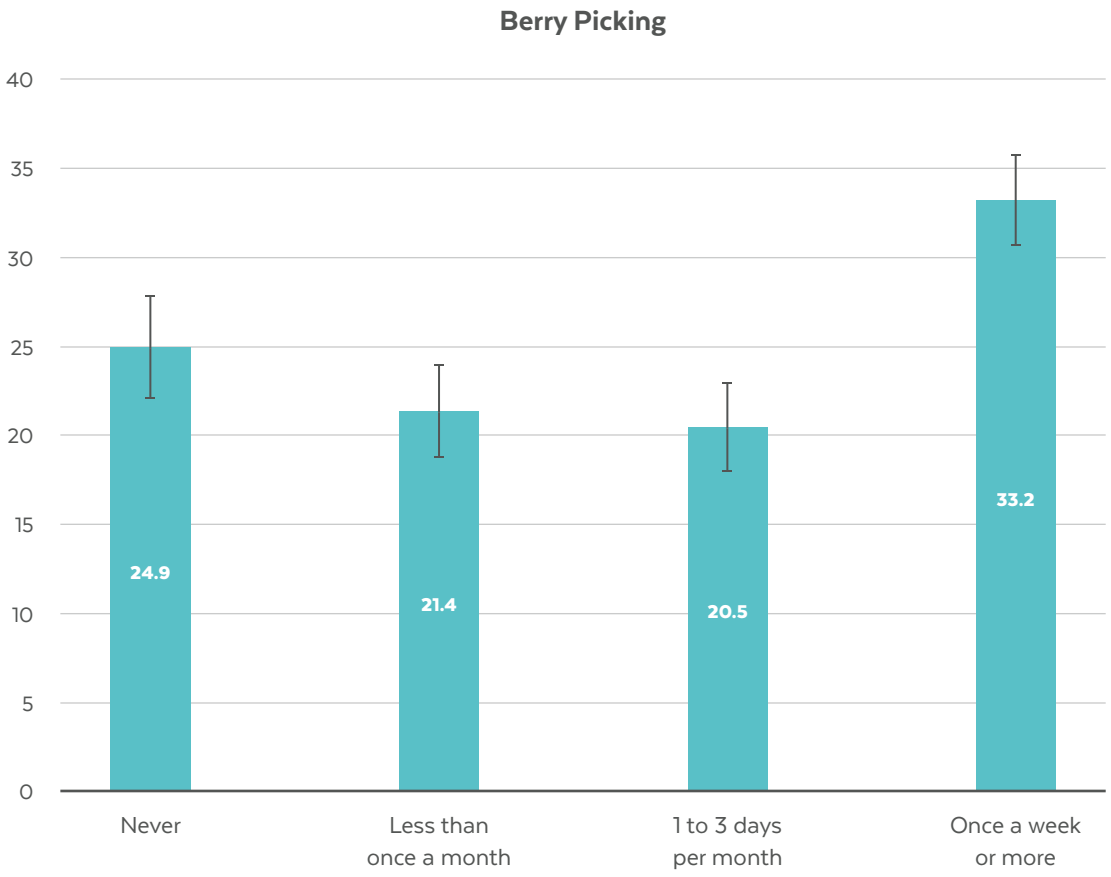
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Frequency of Berry Picking

Around three quarters of Nunavimmiut went berry picking at least once during berry picking season in the year before the survey (i.e. response options other than "never" combined; Figure 4). The most common response option selected by Nunavimmiut was going berry picking once a week or more, with around one third of Nunavimmiut reporting this frequency of participation (33%; Figure 4).

Figure 4 Prevalence and 95-percent confidence intervals of frequency of berry picking during the berry picking season of the year before the survey among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



There were no significant differences between ecological regions in the frequency of berry picking (Table 14).

Elders were more likely to go berry picking regularly – that is, once a week or more (46%) – than their younger counterparts (26% of youth, 28% of young adults, and 34% of adults; Table 14). Similarly, adults were more likely to go berry picking once a week or more (34%) than their younger counterparts (26% of youth and 28% of young adults; Table 14).

Females were more likely to go berry picking at least once during berry picking season (88%) than males (63%), and more likely to go berry picking once a week or more (47%) than males (20%; Table 14).

Table 14 Prevalence and 95-percent confidence intervals of frequency of berry picking during the berry picking season of the year before the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Berry Picking	Never			Less than once a month			1 to 3 days per month			Once a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	29.9	24.1	36.5	23.2	17.8	29.6	21.2	16.0	27.5	25.7	20.8	31.4
Hudson Bay	24.6	20.3	29.5	19.1	15.4	23.5	20.4	16.6	24.8	36.0	31.7	40.4
Ungava Bay	21.8	17.9	26.3	22.9	19.0	27.2	20.2	17.0	23.7	35.2	31.7	38.8
Age Groups												
Youth (16-19)	26.5	20.3	33.9	28.2[a]	22.0	35.4	19.5	14.8	25.1	25.8[a]	20.3	32.2
Young Adults (20-30)	28.9[a]	23.5	34.9	23.8[a,b]	18.9	29.4	19.7	15.3	25.0	27.6[a]	23.5	32.2
Adults (31-54)	24.2	19.7	29.2	20.1[b,c]	16.3	24.5	21.3	17.5	25.7	34.4[b]	30.1	39.0
Elders (55 and up)	18.7[b]*	13.7	25.0	14.1[c]*	10.1	19.5	20.8	15.6	27.1	46.4[c]	39.7	53.3
Sex												
Male	37.4[a]	32.3	42.7	23.8	19.7	28.5	19.0	15.4	23.3	19.8[a]	16.2	24.0
Female	12.4[b]	10.2	14.9	18.9	16.3	21.8	22.0	19.4	24.9	46.7[b]	43.4	50.0

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

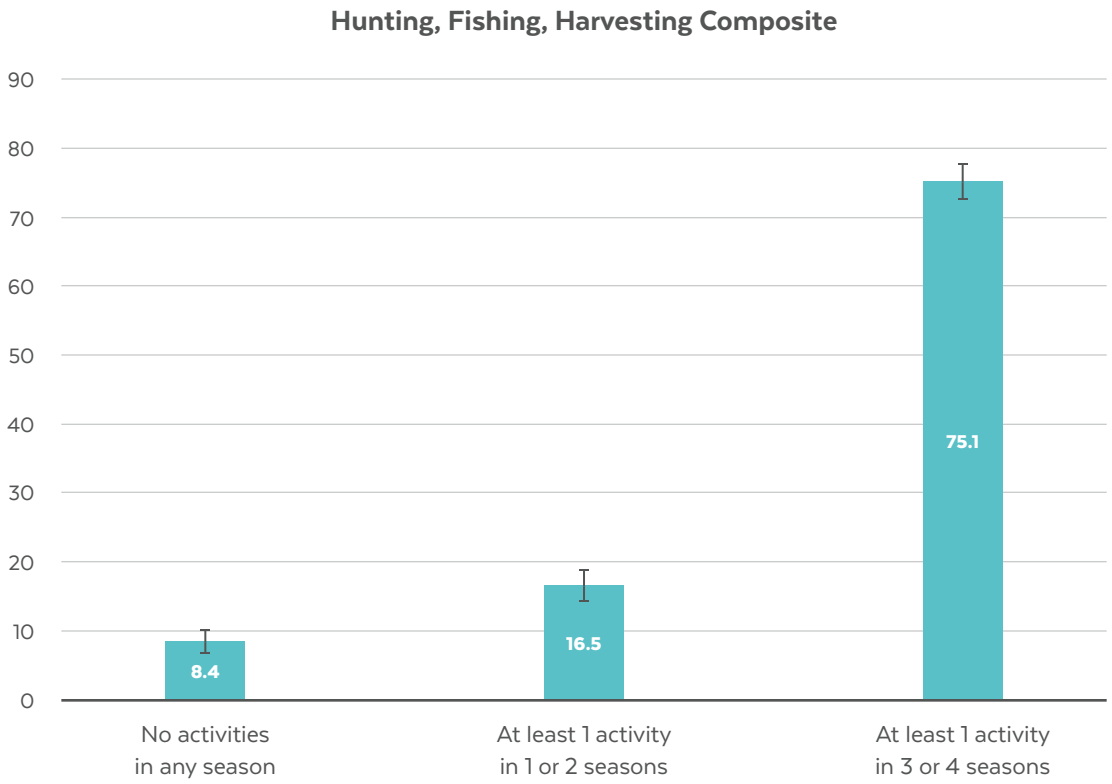
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Frequency of Land-Based Activities (hunting, fishing, harvesting) across Seasons

In addition to examining the frequency of hunting, fishing, and harvesting seafood separately for each season (spring, summer, fall, winter), a composite "frequency of land-based activities" variable was created in order to examine the regularity of participating in hunting, fishing and/or harvesting seafood activities across the year prior to the survey. Individuals were categorized as having participated in none of these activities in any season, in at least 1 of these activities in 1 or 2 seasons, or in at least 1 of these activities in 3 or 4 seasons. Since the survey question about berry picking was not on the same "scale" as the questions about hunting, fishing and harvesting seafood (i.e. "berry picking season" vs. "spring, summer, fall, winter"), berry picking was not included in the calculation of this composite variable and the findings are therefore limited to hunting, fishing and/or harvesting seafood land-based activities.

The majority of Nunavimmiut participated in at least one of these land-based activities (hunting, fishing and/or harvesting seafood) in 3 or 4 seasons (75%; Figure 5). A small percentage of Nunavimmiut did not participate in any of these activities in any season (8%; Figure 5).

Figure 5 Prevalence and 95-percent confidence intervals of frequency of land-based activities (hunting, fishing, harvesting) in the 12 months prior to the survey among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



There were significant differences in participation between ecological regions, with residents of Ungava Bay being the most likely to participate in at least one activity in 3 or 4 seasons (83%), followed by Hudson Strait (76%), and then Hudson Bay (68%; Table 15).

There were no significant differences in participation between age groups (Table 15).

Males were more likely to participate in at least one of these activities in 3 or 4 seasons (84%) than females (66%; Table 15).

Table 15 Prevalence and 95-percent confidence intervals of frequency of land-based activities (hunting, fishing, harvesting) in the 12 months prior to the survey among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting/Fishing/Harvesting Composite Variable	No activities in any season			At least one activity in 1 or 2 seasons			At least one activity in 3 or 4 seasons		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	6.1[a]*	4.1	8.9	17.9[a]	14.6	21.8	76.0[a]	71.8	79.8
Hudson Bay	13.0[b]	9.9	16.7	19.2[a]	15.5	23.6	67.8[b]	62.8	72.4
Ungava Bay	4.4[a]*	3.0	6.4	12.3[b]	9.7	15.5	83.3[c]	80.0	86.2
Age Groups									
Youth (16-19)	5.0**	2.8	8.8	12.8*	9.1	17.6	82.2	76.9	86.5
Young Adults (20-30)	8.7*	6.2	12.1	16.7	13.0	21.1	74.6	69.7	78.9
Adults (31-54)	9.5*	7.0	12.8	16.1	12.8	20.2	74.4	69.8	78.5
Elders (55 and up)	8.2**	5.0	13.4	20.7	15.8	26.6	71.1	64.4	77.0
Sex									
Male	5.3[a]*	3.4	8.2	10.9[a]	8.1	14.5	83.9[a]	79.8	87.3
Female	11.5[b]	9.4	14.0	22.2[b]	19.4	25.4	66.2[b]	62.8	69.5

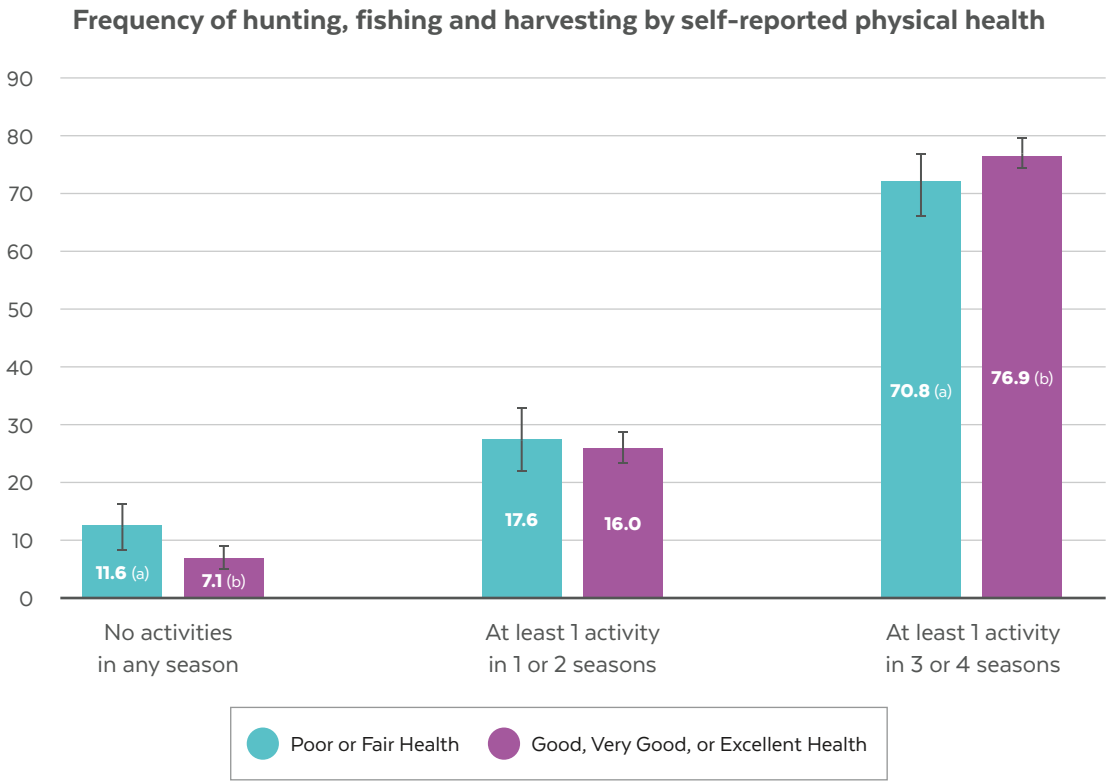
a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Nunavimmiut who perceived their physical health as being good, very good or excellent were more likely to participate in at least one of these activities in 3 or 4 seasons (77%) than Nunavimmiut who perceived their physical health as being poor or fair (71%; Figure 6).

Figure 6 Prevalence and 95-percent confidence intervals of frequency of land-based activities (hunting, fishing, harvesting) in the 12 months prior to the survey among Nunavimmiut by self-reported physical health, population aged 16 years and over, Nunavik, 2017



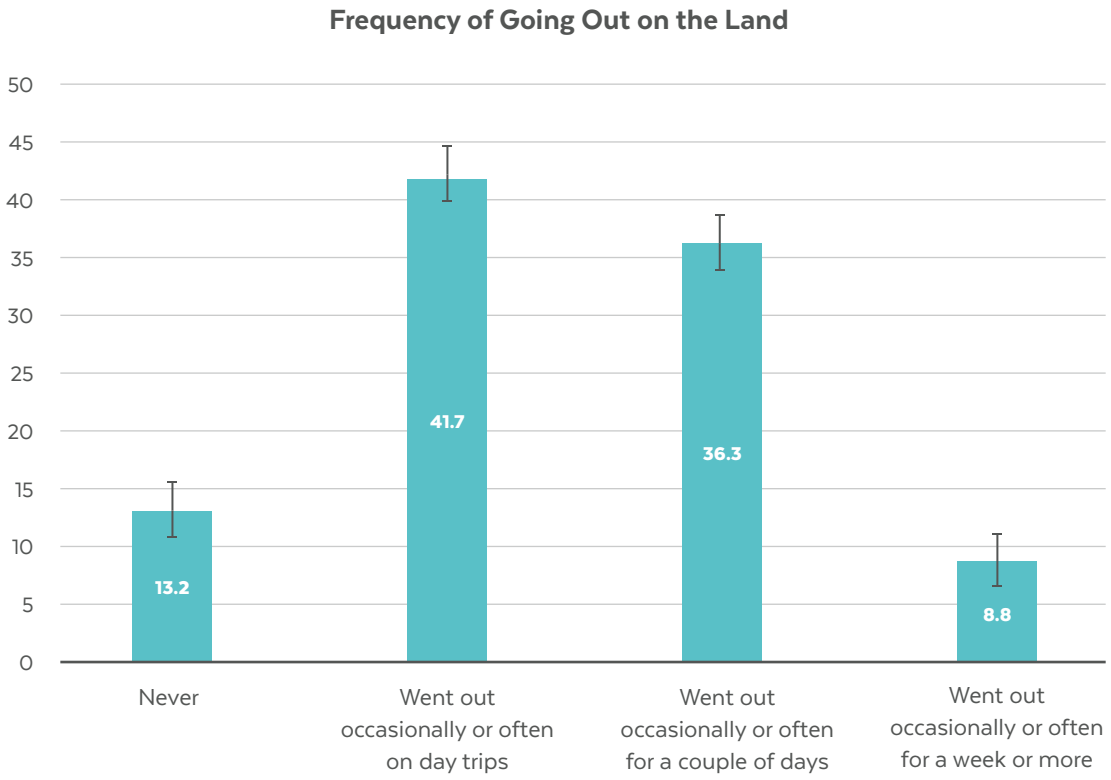
a, b Estimates with different letters are statistically different between levels of self-reported physical health ($p < 0.05$).

Frequency of Going Out on the Land

The survey included a question about frequency of going out on the land (with response options of never, occasionally, and often) and a follow-up question for respondents who selected "occasionally" or "often" asking whether they went out on day trips, for a couple of days, or for a week or more at a time. These two questions were combined into a single composite variable with each category representing an increased frequency of going out on the land (never went out on the land, went out occasionally or often on day trips, went out occasionally or often for a couple of days, and went out occasionally or often for a week or more).

The majority of Nunavimmiut went out occasionally or often on day trips (42%) or occasionally or often for a couple of days (36%; Figure 7). The percentage of Nunavimmiut who never went out on the land was 13% (Figure 7).

Figure 7 Prevalence and 95-percent confidence intervals of frequency of going out on the land among Nunavimmiut, population aged 16 years and over, Nunavik, 2017



There were no significant differences between ecological regions in terms of never going out on the land (Table 16). The majority of Hudson Bay residents went out occasionally or often on day trips (50%), and this prevalence was higher than for residents of Hudson Strait (37%) and Ungava Bay (34%; Table 16). The majority of Ungava Bay residents went out occasionally or often for a couple of days (50%), and this percentage was larger than for residents of Hudson Strait (39%) and Hudson Bay (24%; Table 16). However, the percentage of Ungava Bay residents who went out occasionally or often for a week or more (4%*) was smaller than for residents of Hudson Strait (11%*) and Hudson Bay (11%; Table 16).

There were no significant differences between age groups on this composite variable (Table 16).

Females were more likely to go out occasionally or often on day trips (47%) than males (36%), but less likely to go out occasionally or often for a couple of days (32% versus 41%; Table 16). There were no significant differences between males and females in terms of never going out on the land and in terms of going out occasionally or often for a week or more (Table 16).

Table 16 Prevalence and 95-percent confidence intervals of frequency of going out on the land among Nunavimmiut by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Freq Going Out on Land	Never			Went out occasionally or often on day trips			Went out occasionally or often for a couple of days			Went out occasionally or often for a week or more		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	13.5	10.1	17.8	37.0[a]	31.1	43.4	38.7[a]	32.6	45.1	10.8[a]*	7.2	16.0
Hudson Bay	14.6	11.1	19.0	50.3[b]	45.3	55.3	23.8[b]	19.7	28.4	11.3[a]	8.4	15.0
Ungava Bay	11.2	8.6	14.4	34.4[a]	30.3	38.8	50.2[c]	45.7	54.8	4.2[b]*	2.8	6.3
Age Groups												
Youth (16-19)	11.4*	7.4	17.1	38.9	32.1	46.2	35.9	29.4	43.0	13.8*	9.4	19.9
Young Adults (20-30)	12.2*	9.0	16.3	44.5	38.8	50.3	38.1	32.5	44.0	5.2**	3.1	8.8
Adults (31-54)	14.1	10.8	18.2	42.8	37.7	48.1	34.6	30.2	39.3	8.5*	5.8	12.3
Elders (55 and up)	14.2*	10.1	19.7	37.0	30.5	44.1	37.8	31.4	44.6	10.9*	7.2	16.2
Sex												
Male	14.1	10.8	18.1	36.3[a]	31.7	41.1	40.9[a]	36.3	45.7	8.8*	6.2	12.3
Female	12.3	10.2	14.7	47.3[b]	43.9	50.7	31.7[b]	28.5	35.0	8.8	7.0	11.0

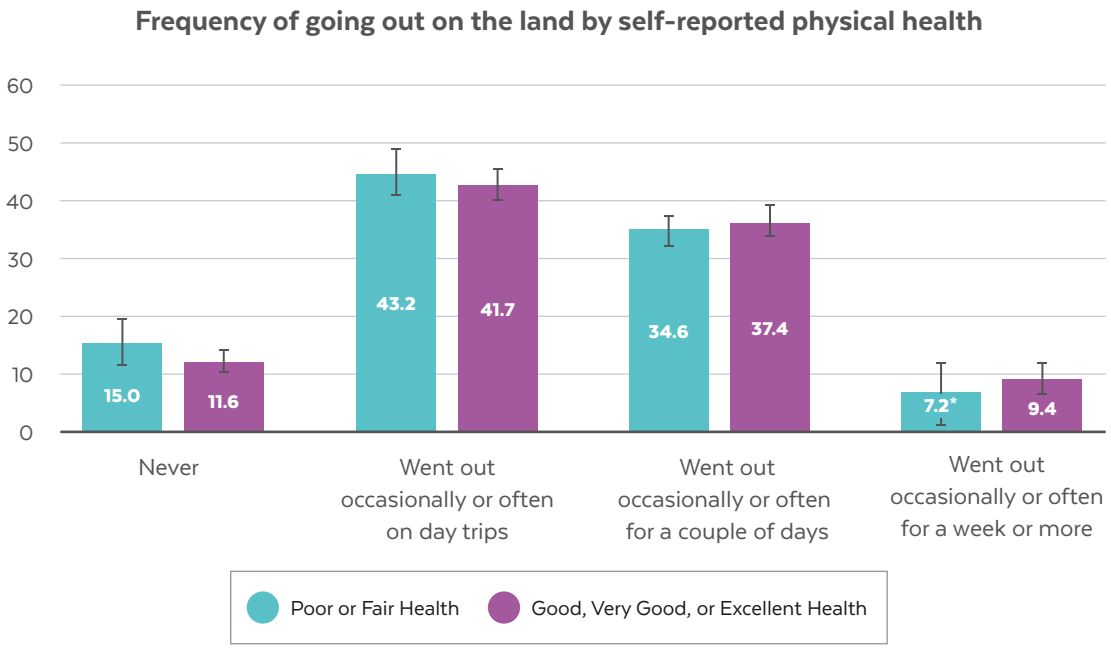
a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

There were no significant differences between Nunavimmiut reporting different levels of physical health on this composite variable (Figure 8).

Figure 8 Prevalence and 95-percent confidence intervals of frequency of going out on the land among Nunavimmiut by self-reported physical health, population aged 16 years and over, Nunavik, 2017



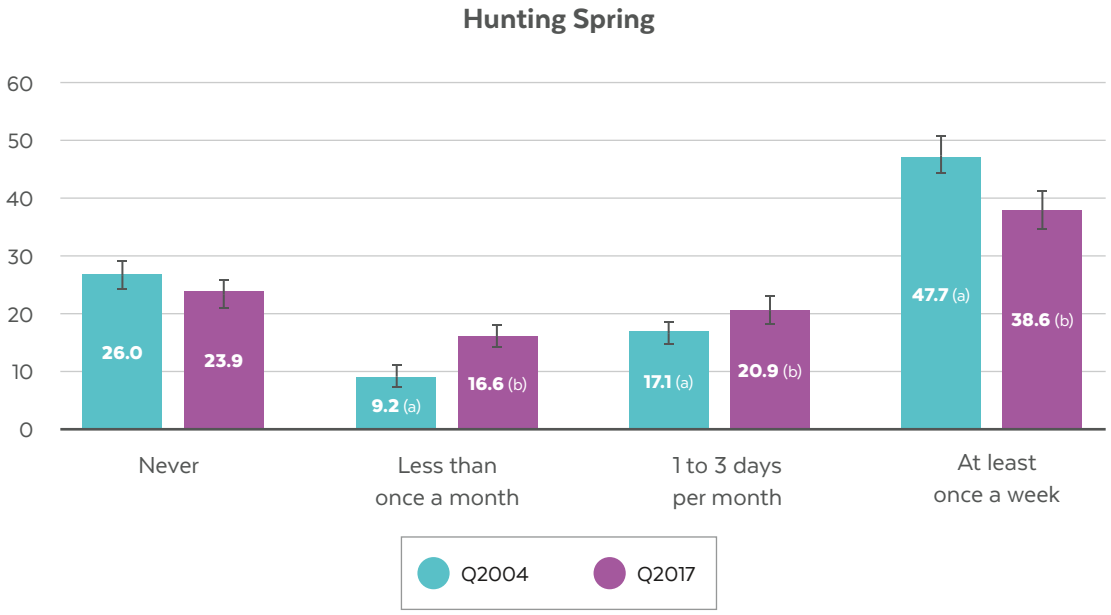
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Q2004 versus Q2017 – Hunting

The frequency at which Nunavimmiut went hunting was compared for the 12 months before the 2004 survey versus the 12 months before the 2017 survey for each season separately. The wording of the hunting frequency question was identical in the 2004 and 2017 surveys. The response options were slightly different, with the 2004 survey question including the more nuanced options of "1 to 3 days per week" and "4 or more days week" compared to the single option of "once or more a week" in the 2017 survey. These two response options were combined into a single "once or more a week" category for the 2004 survey data, and direct comparisons were made between 2004 and 2017 for each category (i.e. never, less than once a month, 1 to 3 days per month, and at least once a week).

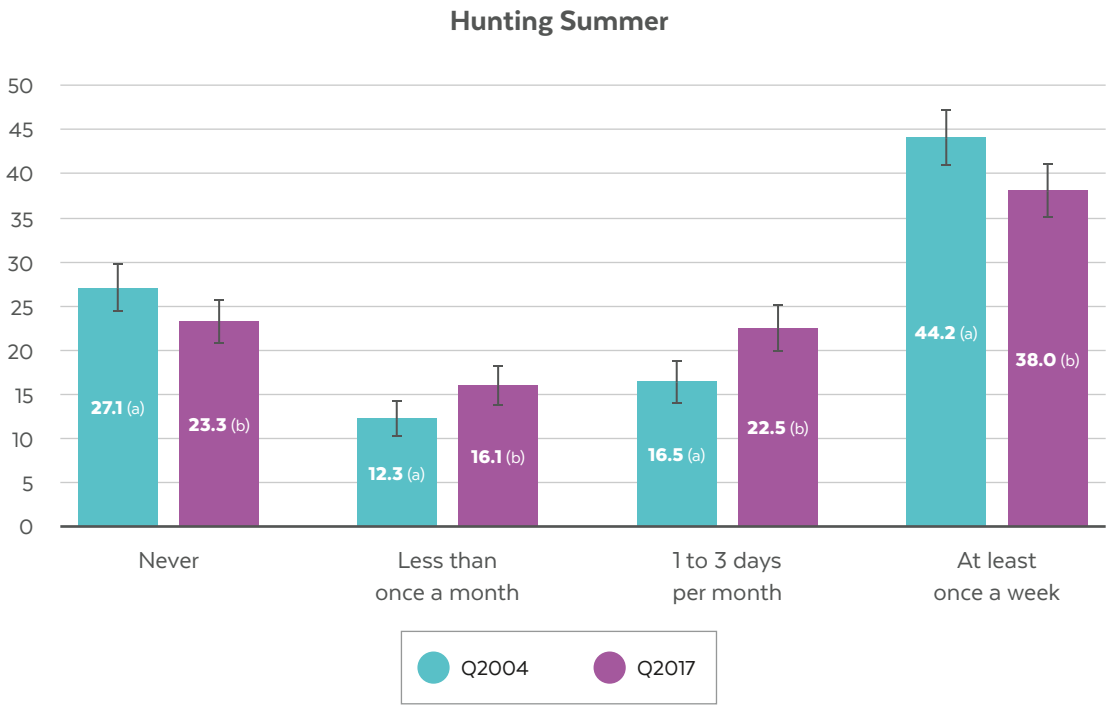
There was no difference in the percentage of Nunavimmiut who hunted at least once (i.e. response options other than "never" combined) in the spring, fall, and winter before the 2004 survey versus the 2017 survey (Figures 9, 11 and 12). The prevalence of Nunavimmiut who hunted at least once in the summer before the 2017 survey (77%) was slightly higher than those who hunted at least once in the summer before the 2004 survey (73%; Figure 10). However, in all four seasons, the prevalence of Nunavimmiut who hunted regularly – that is, at least once a week – was larger for the 2004 than 2017 survey data (Figures 9-12).

Figure 9 Prevalence and 95-percent confidence intervals of frequency of hunting in the spring of the year before the 2004 survey (Q2004) and in the spring of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



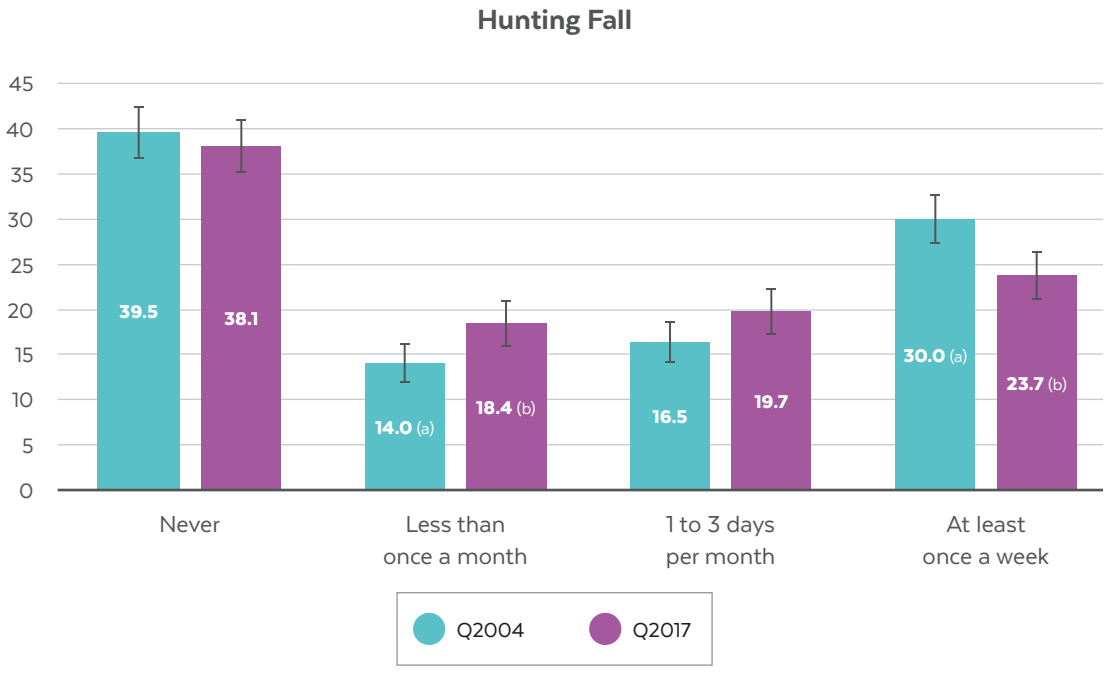
a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Figure 10 Prevalence and 95-percent confidence intervals of frequency of hunting in the summer of the year before the 2004 survey (Q2004) and in the summer of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



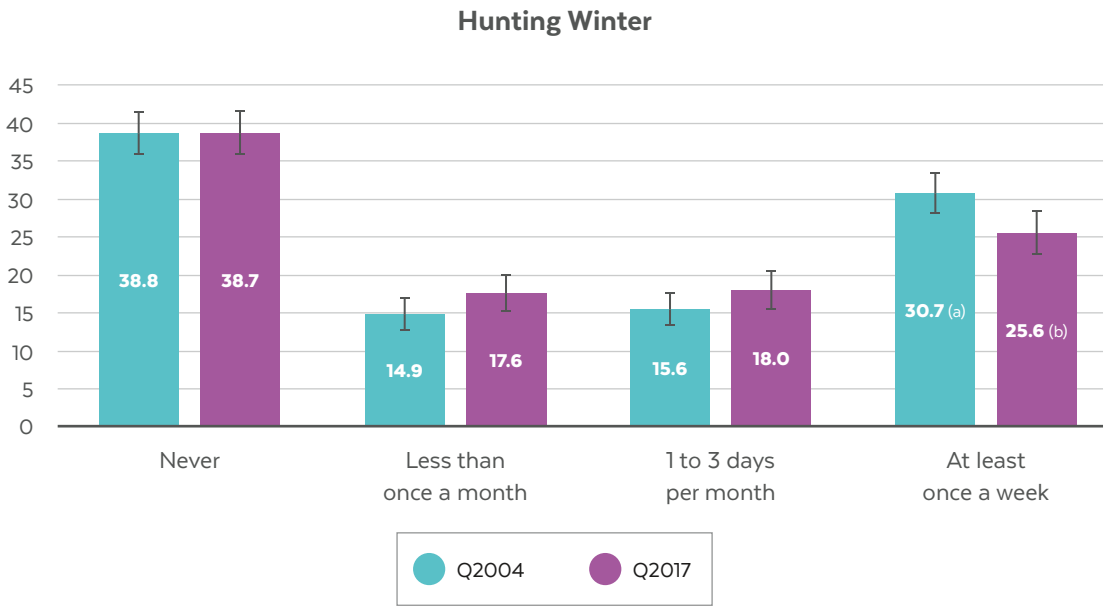
a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Figure 11 Prevalence and 95-percent confidence intervals of frequency of hunting in the fall of the year before the 2004 survey (Q2004) and in the fall of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Figure 12 Prevalence and 95-percent confidence intervals of frequency of hunting in the winter of the year before the 2004 survey (Q2004) and in the winter of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



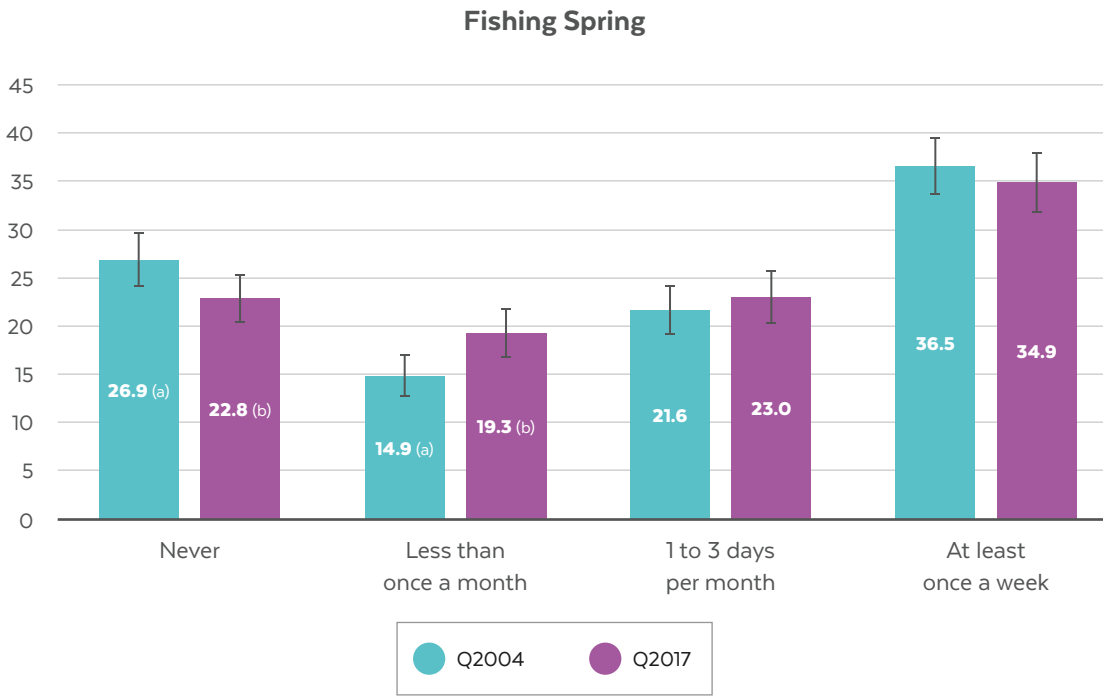
a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Q2004 versus Q2017 – Fishing

The frequency at which Nunavimmiut went fishing was compared for the 12 months before the 2004 survey versus the 12 months before the 2017 survey for each season separately. The wording of the fishing frequency question was identical in the 2004 and 2017 surveys. The response options were slightly different between the two surveys, and dealt with in the same way as the hunting frequency variable described in the preceding section so as to allow for direct comparisons.

The prevalence of Nunavimmiut who fished at least once in the spring before the 2017 survey (77%) was slightly higher than those who fished at least once in the spring before the 2004 survey (73%; Figure 13), but not in the other seasons. Meanwhile, in all seasons, there were no significant differences between 2004 versus 2017 for the prevalence of those who went fishing regularly (at least once a week; Figures 13-16).

Figure 13 Prevalence and 95-percent confidence intervals of frequency of fishing in the spring of the year before the 2004 survey (Q2004) and in the spring of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Figure 14 Prevalence and 95-percent confidence intervals of frequency of fishing in the summer of the year before the 2004 survey (Q2004) and in the summer of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017

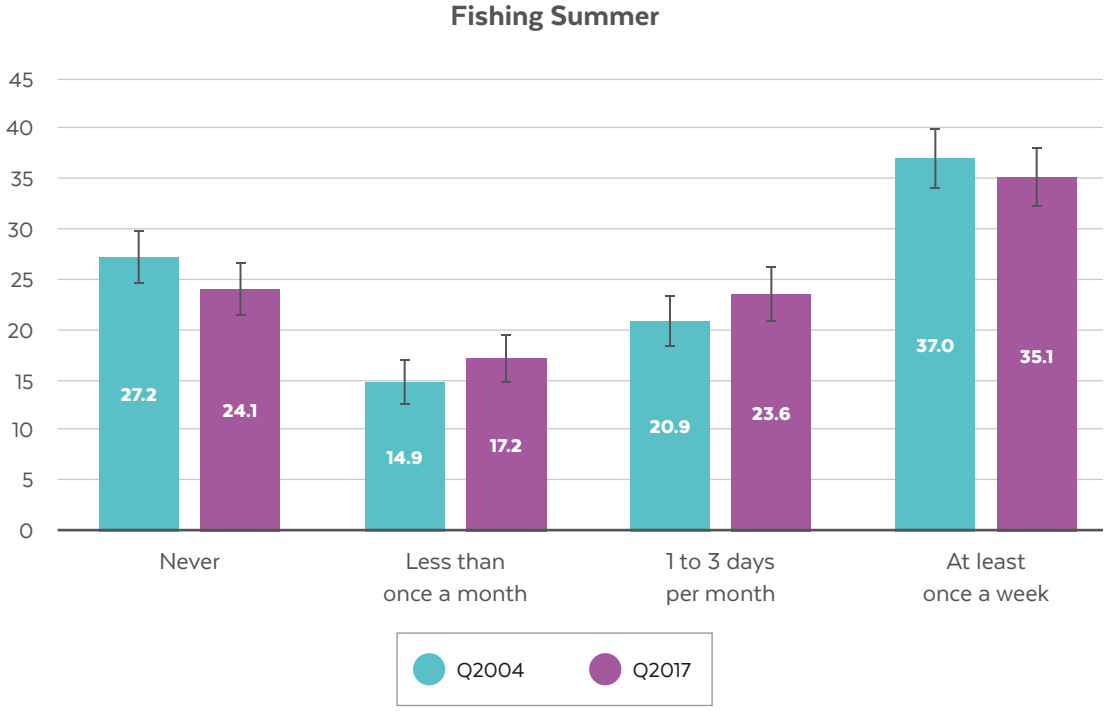


Figure 15 Prevalence and 95-percent confidence intervals of frequency of fishing in the fall of the year before the 2004 survey (Q2004) and in the fall of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017

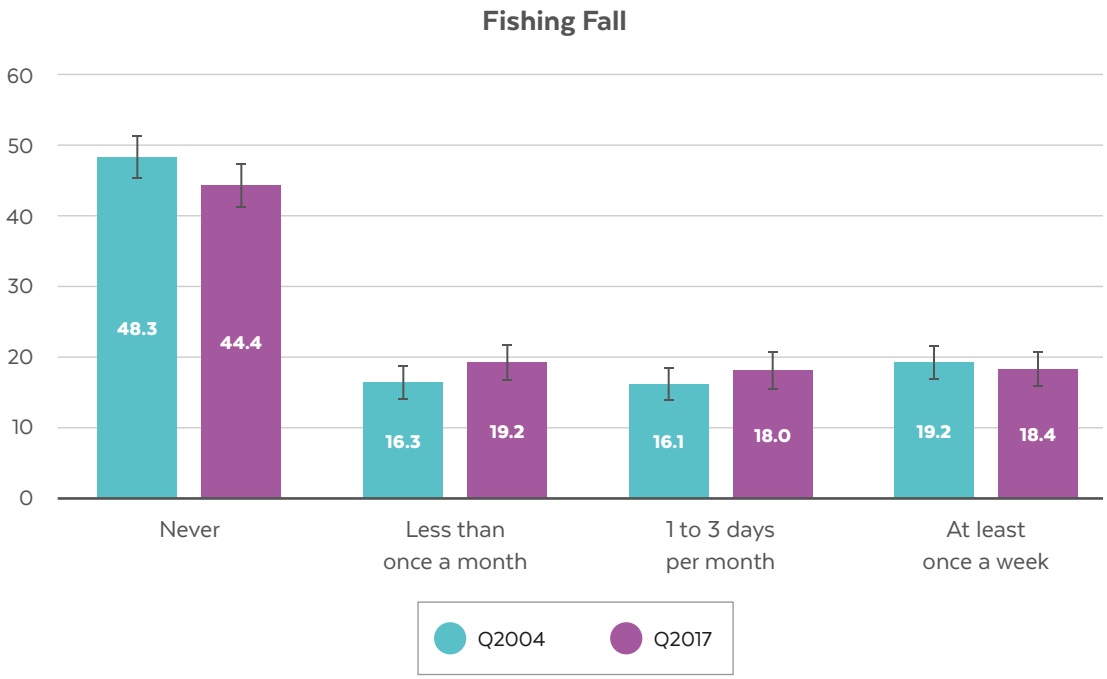
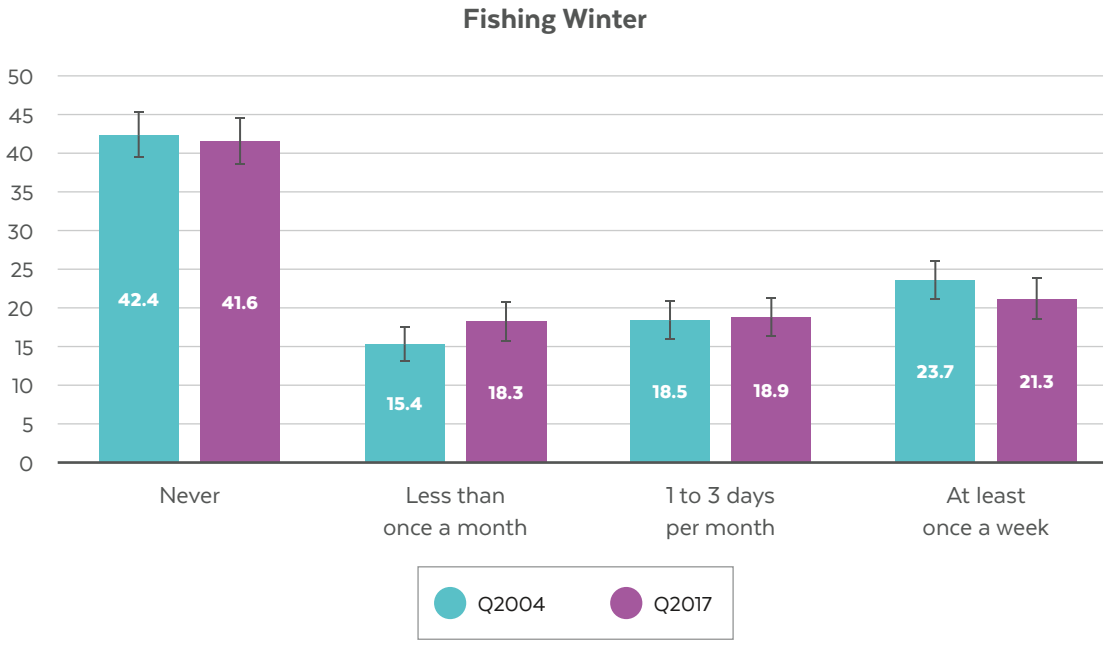


Figure 16 Prevalence and 95-percent confidence intervals of frequency of fishing in the winter of the year before the 2004 survey (Q2004) and in the winter of the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017

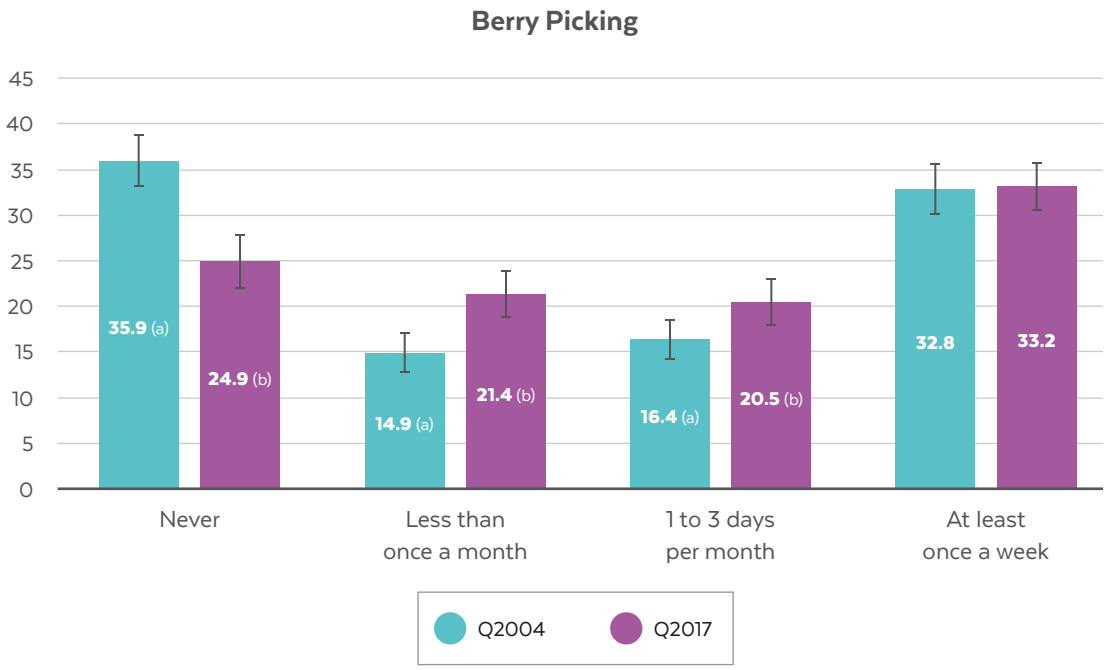


Q2004 versus Q2017 – Berry Picking

The frequency at which Nunavimmiut went berry picking during berry picking season was compared for the 12 months before the 2004 versus 2017 surveys. Despite slight differences in the wording of the berry picking question between the 2004 and 2017 surveys, direct comparisons were made since it was possible to compare the exact same response options after amalgamating the relevant 2004 survey data as described in the sections above.

The percentage of Nunavimmiut who went berry picking at least once during the berry picking season before the 2017 survey (75%) was larger than this percentage for the 2004 survey data (64%; Figure 17) but not different for those who went regularly (at least once a week).

Figure 17 Prevalence and 95-percent confidence intervals of frequency of berry picking during berry picking season in the year before the 2004 survey (Q2004) and in the year before the 2017 survey (Q2017) among Nunavimmiut, population aged 16 years and over, Nunavik, 2004 and 2017



a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$).

Q2004 versus Q2017 – Hunting, Fishing, and Berry Picking – For each Coastal Region separately

Hudson Coast

Residents of Hudson Coast were equally likely to go hunting at least once in spring, summer, fall, and winter before the 2004 survey than these same seasons before the 2017 survey (Table 17). However, residents of Hudson Coast were more likely to go hunting regularly – that is, at least once a week – in the spring, summer, and fall before the 2004 survey than these same seasons before the 2017 survey (spring: 48% vs. 36%; summer: 44% vs. 37%; fall: 30% vs. 23%; Table 17).

There were no differences in the frequency of fishing in the spring, summer, fall, and winter before the 2004 survey versus before the 2017 survey among Hudson Coast residents (Table 17).

Residents of Hudson Coast were more likely to go berry picking at least once during the berry picking season before the 2017 survey (73%) than during the berry picking season before the 2004 survey (61%; Table 17). There were, however, no differences in regular berry picking – that is, at least once a week (about a third of Hudson Coast residents in both surveys; Table 17).

Table 17 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among residents of Hudson Coast, population aged 16 years and over, Hudson Coast, 2017

Hudson Coast	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	28.7	25.4	32.3	26.7	23.6	30.1
Less than once a month	7.7*[a]	5.7	10.3	15.6[b]	13.1	18.6
1 to 3 days per month	15.5[a]	12.8	18.5	21.2[b]	18.0	24.8
At least once a week	48.2[a]	44.1	52.3	36.4[b]	32.7	40.4
Hunting Summer						
Never	28.5	25.1	32.1	26.1	23.0	29.6
Less than once a month	12.1	9.7	15.0	14.3	11.8	17.2
1 to 3 days per month	15.6[a]	12.9	18.8	22.4[b]	19.2	26.0
At least once a week	43.8[a]	39.9	47.8	37.2[b]	33.5	41.0
Hunting Fall						
Never	42.7	39.1	46.5	42.8	39.1	46.6
Less than once a month	11.7	9.2	14.7	14.7	12.2	17.7
1 to 3 days per month	16.1	13.3	19.3	19.7	16.6	23.1
At least once a week	29.5[a]	25.9	33.4	22.8[b]	19.6	26.4
Hunting Winter						
Never	44.0	40.3	47.7	45.8	42.1	49.5
Less than once a month	15.0	12.4	18.1	16.5	13.6	19.8
1 to 3 days per month	15.1	12.3	18.3	15.8	12.9	19.1
At least once a week	25.9	22.6	29.5	22.0	18.7	25.7
Fishing Spring						
Never	27.6	24.0	31.4	25.2	22.1	28.6
Less than once a month	15.4	12.7	18.6	20.4	17.2	23.9
1 to 3 days per month	21.3	18.2	24.8	21.7	18.5	25.4
At least once a week	35.7	31.9	39.6	32.7	28.9	36.8
Fishing Summer						
Never	30.6	27.0	34.4	28.8	25.4	32.6
Less than once a month	13.2	10.6	16.4	16.7	13.9	20.0
1 to 3 days per month	20.3	17.2	23.8	23.0	19.8	26.6
At least once a week	35.9	32.2	39.8	31.4	27.8	35.2

Hudson Coast	Q2004			Q2017		
	%	95% CI		%	95% CI	
Fishing Fall						
Never	51.4	47.4	55.3	48.5	44.5	52.6
Less than once a month	15.9	13.1	19.1	17.5	14.6	20.7
1 to 3 days per month	13.7	11.0	17.0	15.9	13.0	19.3
At least once a week	19.1	16.0	22.5	18.1	15.1	21.5
Fishing Winter						
Never	47.5	43.6	51.4	48.3	44.4	52.1
Less than once a month	16.5	13.7	19.7	17.6	14.7	20.9
1 to 3 days per month	16.0	13.0	19.4	17.0	14.2	20.2
At least once a week	20.1	17.1	23.4	17.1	14.1	20.7
Berry Picking						
Never	38.9[a]	35.2	42.8	26.6[b]	23.1	30.4
Less than once a month	12.2[a]	9.8	15.1	20.7[b]	17.6	24.1
1 to 3 days per month	14.3[a]	11.7	17.4	20.7[b]	17.6	24.2
At least once a week	34.6	31.0	38.4	32.1	28.8	35.5

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Ungava Coast

Residents of Ungava Coast were more likely to go hunting at least once during the summer and fall before the 2017 survey than these same seasons before the 2004 survey (summer: 82% versus 75%; fall: 71% versus 65%), and were specifically more likely to go hunting "less than once a month" in these two seasons (Table 18). There were no differences in regular hunting, in all seasons, before the 2004 versus 2017 surveys among residents of Ungava Coast (Table 18).

Residents of Ungava Coast were more likely to go fishing at least once in the spring, summer, and fall before the 2017 survey than these same seasons before the 2004 survey (spring: 82% versus 74%; summer: 85% versus 77%; fall: 64% versus 56%; Table 18). However, there were no differences in regular fishing between the 2004 and 2017 survey data for any seasons among Ungava Coast residents (Table 18).

There were no differences in the frequency of berry picking when comparing the 2004 versus 2017 survey data among Ungava Coast residents (Table 18).

Table 18 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among residents of Ungava Coast, population aged 16 years and over, Ungava Coast, 2017

Ungava Coast	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	22.3	18.9	26.0	18.6	15.4	22.3
Less than once a month	11.4[a]	9.0	14.3	18.5[b]	15.2	22.3
1 to 3 days per month	19.1	15.9	22.8	20.5	16.7	24.8
At least once a week	47.2	42.8	51.7	42.5	37.8	47.3
Hunting Summer						
Never	25.2[a]	21.6	29.3	17.8[b]	14.6	21.6
Less than once a month	12.4[a]	9.8	15.5	19.7[b]	16.0	23.9
1 to 3 days per month	17.8	14.6	21.5	22.8	19.1	27.0
At least once a week	44.6	40.1	49.2	39.7	35.1	44.5

Ungava Coast	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Fall						
Never	35.2[a]	31.1	39.5	29.2[b]	25.5	33.2
Less than once a month	17.2[a]	14.2	20.8	25.4[b]	21.4	29.8
1 to 3 days per month	17.1	13.9	20.9	20.0	16.5	24.0
At least once a week	30.5	26.4	34.9	25.4	21.4	30.0
Hunting Winter						
Never	31.9	28.0	36.0	25.0	21.4	29.1
Less than once a month	14.9	12.0	18.4	20.0	16.6	23.9
1 to 3 days per month	16.1	13.2	19.5	22.4	18.5	26.8
At least once a week	37.1	32.9	41.6	32.6	28.2	37.3
Fishing Spring						
Never	26.1[a]	22.3	30.3	18.4[b]	15.3	22.0
Less than once a month	14.1	11.6	17.2	17.3	14.0	21.1
1 to 3 days per month	21.9	18.4	25.8	25.4	21.5	29.7
At least once a week	37.9	33.6	42.4	38.9	34.6	43.4
Fishing Summer						
Never	22.7[a]	19.3	26.6	15.0[b]	12.2	18.4
Less than once a month	17.0	13.9	20.8	18.1	14.8	21.9
1 to 3 days per month	21.7	18.1	25.7	24.7	20.9	29.1
At least once a week	38.6	34.1	43.2	42.1	37.6	46.7
Fishing Fall						
Never	44.5[a]	40.1	49.0	36.4[b]	32.3	40.8
Less than once a month	16.9[a]	13.8	20.4	22.6[b]	18.6	27.1
1 to 3 days per month	19.1	16.0	22.6	22.0	18.0	26.6
At least once a week	19.5	16.4	23.1	19.0	15.6	22.8
Fishing Winter						
Never	35.7	31.6	40.1	28.7	25.0	32.7
Less than once a month	14.0	11.2	17.3	19.6	15.8	24.0
1 to 3 days per month	21.7	18.2	25.7	22.5	18.6	26.9
At least once a week	28.6	24.8	32.7	29.3	25.2	33.7
Berry Picking						
Never	31.8	27.8	36.0	21.8	17.9	26.2
Less than once a month	18.4	15.0	22.2	22.8	19.0	27.1
1 to 3 days per month	18.8	15.9	22.1	20.2	16.9	24.0
At least once a week	31.1	27.1	35.3	35.2	31.7	38.9

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

Q2004 versus Q2017 – Hunting, Fishing, and Berry Picking – For each Age Group separately

Youth aged 16-19

Youth aged 16-19 were more likely to go hunting at least once in the spring before the 2017 survey (83%) than in the spring before the 2004 survey (73%), and the increase was observed for the "less than once a month" frequency category (24% vs. 13%; Table 19). A similar pattern of results was found for hunting in the summer before the 2017 versus 2004 surveys, with the exception that proportions increased on the "1 to 3 days per month" category (30% vs. 10%) rather than the "less than once a month" category.

The proportions of regular youth hunters were similar in both surveys for all four seasons (Table 19).

Youth were more likely to go fishing at least once in the spring before the 2017 survey (74%) than in the spring before the 2004 survey (59%; Table 19). There were no differences in the frequency that youth fished between the 2004 versus 2017 survey data for the other three seasons (Table 19).

Youth were more likely to go berry picking at least once during the berry picking season before the 2017 survey (74%) than during the berry picking season before the 2004 survey (45%), and were also more likely to go berry picking regularly (Table 19).

Table 19 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut youth, population aged 16-19 years, Nunavik, 2017

Youth (16-19)	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	26.7[a]	20.9	33.4	17.3[b]	13.2	22.4
Less than once a month	13.0*[a]	8.8	18.7	23.9[b]	18.2	30.7
1 to 3 days per month	17.0*	11.9	23.5	21.3	15.7	28.2
At least once a week	43.4	36.3	50.8	37.5	30.9	44.6
Hunting Summer						
Never	27.3[a]	21.4	34.1	18.5[b]	13.8	24.3
Less than once a month	22.5	17.0	29.2	15.9*	11.5	21.6
1 to 3 days per month	10.1*[a]	6.3	15.9	29.9[b]	23.5	37.1
At least once a week	40.0	33.0	47.5	35.7	28.8	43.3
Hunting Fall						
Never	43.3	36.1	50.9	35.6	29.5	42.2
Less than once a month	12.2*	8.1	18.0	22.7	16.9	29.8
1 to 3 days per month	17.4*	11.8	24.9	18.6*	13.3	25.3
At least once a week	27.1	20.8	34.4	23.1	17.2	30.4
Hunting Winter						
Never	36.9	30.0	44.5	29.0	23.2	35.5
Less than once a month	15.0*	10.3	21.4	23.1	17.4	29.9
1 to 3 days per month	16.2*	11.2	22.8	20.2*	14.7	27.1
At least once a week	31.9	24.9	39.7	27.7	21.1	35.5
Fishing Spring						
Never	41.1[a]	33.5	49.2	26.4[b]	20.5	33.2
Less than once a month	20.8*	15.1	28.0	24.5	18.6	31.5
1 to 3 days per month	16.8*	11.6	23.7	19.1*	13.7	25.9
At least once a week	21.3*	15.2	29.0	30.1	23.9	37.1
Fishing Summer						
Never	38.9	31.4	47.1	26.1	20.0	33.2
Less than once a month	21.4*	15.7	28.5	18.0	13.3	23.8
1 to 3 days per month	19.2*	13.7	26.3	24.6	18.7	31.7
At least once a week	20.4*	14.8	27.5	31.4	24.7	38.9

Youth (16-19)	Q2004			Q2017		
	%	95% CI		%	95% CI	
Fishing Fall						
Never	60.5	51.8	68.6	49.6	42.3	56.8
Less than once a month	14.3*	9.6	20.8	24.7	18.5	32.0
1 to 3 days per month	14.5*	9.8	21.0	13.4*	8.9	19.6
At least once a week	10.7*	6.5	17.1	12.4*	8.1	18.5
Fishing Winter						
Never	46.6	38.6	54.7	36.8	29.9	44.4
Less than once a month	15.3*	10.5	21.8	18.6*	13.4	25.1
1 to 3 days per month	24.3	18.0	32.0	21.8	16.4	28.2
At least once a week	13.8*	9.0	20.7	22.8	17.1	29.7
Berry Picking						
Never	54.9[a]	47.0	62.5	26.5[b]	20.3	33.8
Less than once a month	14.8*[a]	10.3	20.9	28.2[b]	22.0	35.3
1 to 3 days per month	18.0*	12.5	25.3	19.5	14.8	25.1
At least once a week	12.3*[a]	8.0	18.5	25.8[b]	20.4	32.2

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Young Adults aged 20-30

Among young adults aged 20-30, there were no significant differences in the frequency of hunting in any season during the 12 months before the 2004 versus 2017 surveys (Table 20).

Young adults were more likely to go fishing at least once in the fall before the 2017 survey (54%) than in the fall before the 2004 survey (41%); more specifically they were more likely to go fishing fairly regularly (1 to 3 days per month) and regularly (at least once a week) (Table 20). There were no differences in the frequency of fishing in the spring, summer, and winter before the 2004 versus 2017 surveys among young adults (Table 20).

Young adults were more likely to go berry picking at least once during the berry season before the 2017 survey (71%) than during the berry picking season before the 2004 survey (54%), and the increase was noted specifically for the "less than once a month" frequency category (Table 20).

Table 20 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut young adults, population aged 20-30 years, Nunavik, 2017

Young Adults (20-30)	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	25.4	21.0	30.3	23.3	18.8	28.5
Less than once a month	13.4	9.9	17.7	13.0*	9.6	17.3
1 to 3 days per month	17.7	13.9	22.3	23.3	18.1	29.5
At least once a week	43.6	38.1	49.3	40.4	34.4	46.8
Hunting Summer						
Never	27.3	22.6	32.5	21.6	17.3	26.6
Less than once a month	13.8	10.4	17.9	17.5	13.5	22.4
1 to 3 days per month	21.5	17.3	26.4	23.6	18.8	29.1
At least once a week	37.5	32.3	42.9	37.3	31.7	43.2

Young Adults (20-30)	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Fall						
Never	46.5	41.2	51.9	39.1	33.5	45.1
Less than once a month	15.3	11.8	19.6	18.4	14.4	23.1
1 to 3 days per month	14.2	10.7	18.5	19.6	15.1	25.2
At least once a week	24.0	19.5	29.1	22.9	18.2	28.3
Hunting Winter						
Never	39.7	34.8	44.9	37.6	32.0	43.5
Less than once a month	18.5	14.5	23.1	14.4*	10.5	19.4
1 to 3 days per month	14.5	11.0	18.9	20.0	15.3	25.7
At least once a week	27.3	22.7	32.4	28.0	22.8	33.9
Fishing Spring						
Never	30.6	25.7	35.9	24.0	19.7	29.0
Less than once a month	22.1	17.6	27.3	18.5	14.1	23.8
1 to 3 days per month	21.5	17.5	26.0	24.3	19.1	30.4
At least once a week	25.9	21.0	31.5	33.2	27.7	39.1
Fishing Summer						
Never	27.5	22.9	32.7	22.9	18.7	27.7
Less than once a month	16.0	12.5	20.3	18.7	14.7	23.6
1 to 3 days per month	24.8	20.2	30.0	26.2	20.8	32.4
At least once a week	31.7	26.9	36.8	32.2	27.1	37.8
Fishing Fall						
Never	59.1[a]	54.1	63.9	46.5[b]	40.8	52.3
Less than once a month	19.4	15.5	24.1	17.6	13.4	22.8
1 to 3 days per month	11.3*[a]	8.2	15.3	19.6[b]	14.8	25.6
At least once a week	10.2*[a]	7.5	13.8	16.3[b]	12.4	21.1
Fishing Winter						
Never	45.3	40.2	50.6	39.7	34.3	45.4
Less than once a month	19.0	15.1	23.6	15.9	12.1	20.7
1 to 3 days per month	17.6	13.9	22.1	20.3	15.3	26.3
At least once a week	18.1	14.1	22.9	24.0	19.1	29.7
Berry Picking						
Never	46.3[a]	41.1	51.6	28.9[b]	23.5	34.9
Less than once a month	14.1[a]	10.7	18.3	23.8[b]	19.0	29.4
1 to 3 days per month	16.3	12.7	20.7	19.7	15.3	25.0
At least once a week	23.3	19.4	27.7	27.6	23.5	32.2

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

Adults aged 31-54

The proportion of adults aged 31-54 that went hunting at least once in a season was comparable between the 2004 and 2017 survey data for all four seasons (Table 21). However, adults were more likely to go hunting regularly (at least once a week) in the spring before the 2004 survey (49%) than in the spring before the 2017 survey (39%; Table 21). This pattern of results was similarly observed for the summer and fall, but not for the winter (Table 21).

Adults were equally likely to go fishing at least once in the spring before the 2004 survey (77%) as they were in the spring before the 2017 survey (78%), but they were more likely to go fishing regularly (at least once a week) in the spring before the 2004 survey (43%) than in the spring before the 2017 survey (34%; Table 21). There were no significant differences in the frequency of fishing in 2004 versus in 2017 for the other three seasons (summer, fall, winter) among adults (Table 21).

Seventy-six percent (76%) of adults aged 31-54 were practicing berry picking according to both surveys. Adults in this age group were more likely to go berry picking regularly (at least once a week) during the berry picking season before the 2004 survey (43%) than during the berry picking season before the 2017 survey (34%; Table 21).

Table 21 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut adults, population aged 31-54 years, Nunavik, 2017

Adults 31-54	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	25.7	22.1	29.7	26.5	22.4	31.0
Less than once a month	6.9*[a]	4.9	9.6	17.9[b]	14.5	21.8
1 to 3 days per month	18.1	14.8	22.1	17.0	13.4	21.3
At least once a week	49.3[a]	44.4	54.1	38.6[b]	33.7	43.8
Hunting Summer						
Never	27.9	24.0	32.2	23.6	19.9	27.7
Less than once a month	9.4*[a]	7.0	12.5	17.1[b]	13.6	21.3
1 to 3 days per month	16.2	12.9	20.2	20.2	16.3	24.7
At least once a week	46.5[a]	41.7	51.4	39.1[b]	34.3	44.2
Hunting Fall						
Never	38.0	33.7	42.5	37.6	33.1	42.4
Less than once a month	14.1	10.9	18.1	18.1	14.7	22.2
1 to 3 days per month	16.0	13.0	19.5	21.2	17.2	25.8
At least once a week	31.9[a]	27.6	36.6	23.1[b]	19.2	27.6
Hunting Winter						
Never	39.7	35.4	44.1	40.6	36.0	45.3
Less than once a month	15.2	12.0	19.0	18.7	15.2	22.9
1 to 3 days per month	16.0	13.1	19.4	16.8	13.2	21.3
At least once a week	29.2	25.1	33.6	23.9	19.5	28.8
Fishing Spring						
Never	23.5	19.7	27.7	22.1	18.3	26.4
Less than once a month	10.4[a]	7.9	13.6	21.4[b]	17.5	25.9
1 to 3 days per month	23.2	19.4	27.5	22.8	18.8	27.3
At least once a week	42.9[a]	38.2	47.7	33.7[b]	29.0	38.8
Fishing Summer						
Never	23.3	19.6	27.4	23.2	19.4	27.4
Less than once a month	13.5	10.5	17.1	18.2	14.5	22.6
1 to 3 days per month	21.4	17.7	25.6	22.8	18.9	27.2
At least once a week	41.8	37.1	46.7	35.8	31.3	40.6

Adults 31-54	Q2004			Q2017		
	%	95% CI		%	95% CI	
Fishing Fall						
Never	41.5	36.6	46.7	43.3	38.4	48.3
Less than once a month	17.0	13.8	20.8	21.1	17.4	25.4
1 to 3 days per month	20.6	17.1	24.5	17.3	13.6	21.8
At least once a week	20.9	17.0	25.4	18.3	14.7	22.5
Fishing Winter						
Never	41.4	36.7	46.3	42.5	37.6	47.5
Less than once a month	16.2	13.1	19.9	22.2	17.9	27.1
1 to 3 days per month	19.6	15.8	24.0	17.3	13.9	21.4
At least once a week	22.7	19.1	26.8	18.1	14.3	22.5
Berry Picking						
Never	24.4	20.6	28.7	24.2	19.7	29.2
Less than once a month	16.5	13.2	20.5	20.1	16.3	24.5
1 to 3 days per month	16.2[a]	13.3	19.6	21.3[b]	17.5	25.7
At least once a week	42.9[a]	38.4	47.4	34.4[b]	30.1	39.0

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

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Elders aged 55 and over

For all four seasons, the proportion of Elders aged 55 and older who went hunting at least once in the season was comparable between the 2004 and 2017 survey data (Table 22). However, Elders were more likely to go hunting regularly (at least once a week) in the spring before the 2004 survey (54%) than in the spring before the 2017 survey (36%; Table 22). This pattern of results was similarly observed for the summer and winter, but not the fall (Table 22).

Elders were equally likely to go fishing at least once in the winter before the 2004 survey (57%) as they were in the winter before the 2017 survey (53%), but they were more likely to go fishing regularly (at least once a week) in the winter before the 2004 survey (40%) than in the winter before the 2017 survey (23%; Table 22). There were no differences in the frequency of fishing between the 2004 and 2017 survey data for the other three seasons (Table 22).

There was no difference in the frequency that Elders picked berries when comparing the 2004 and 2017 survey data (Table 22).

Table 22 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut Elders, population aged 55 years and older, Nunavik, 2017

Elders/Seniors 55 and older	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	26.4	19.8	34.4	25.0	19.5	31.6
Less than once a month	4.3**[a]	2.1	8.7	13.1*[b]	9.5	17.9
1 to 3 days per month	15.7*[a]	10.8	22.2	25.8[b]	20.2	32.2
At least once a week	53.5[a]	45.5	61.4	36.1[b]	29.6	43.1
Hunting Summer						
Never	25.6	19.0	33.6	30.1	23.8	37.3
Less than once a month	8.7**	5.1	14.6	11.4*	8.1	15.7
1 to 3 days per month	12.6*	8.1	19.1	19.6	14.8	25.6
At least once a week	53.1[a]	44.7	61.2	38.9[b]	32.2	46.1

Elders/Seniors 55 and older	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Fall						
Never	30.5	23.5	38.5	40.0	33.5	46.8
Less than once a month	14.4*	9.6	21.2	15.4*	11.0	21.1
1 to 3 days per month	19.5*	13.8	26.9	17.5*	12.7	23.6
At least once a week	35.6	28.4	43.4	27.1	21.5	33.7
Hunting Winter						
Never	38.7	31.6	46.3	45.2	38.3	52.3
Less than once a month	10.1*	6.5	15.2	15.5*	11.1	21.3
1 to 3 days per month	13.0*	8.5	19.2	15.5*	11.2	21.2
At least once a week	38.3[a]	31.1	46.1	23.7[b]	18.1	30.4
Fishing Spring						
Never	19.7*	13.8	27.5	19.4	14.5	25.4
Less than once a month	5.8**	3.1	10.8	11.0*	7.8	15.3
1 to 3 days per month	22.4*	16.5	29.7	24.8	19.3	31.2
At least once a week	52.0	43.4	60.5	44.9	37.7	52.3
Fishing Summer						
Never	25.5	19.0	33.3	26.8	20.7	33.8
Less than once a month	11.8*	7.5	18.0	11.6*	8.1	16.4
1 to 3 days per month	16.6*	11.5	23.4	20.0	15.1	26.0
At least once a week	46.1	38.4	54.0	41.6	34.8	48.7
Fishing Fall						
Never	35.1	27.5	43.5	38.8	32.2	45.8
Less than once a month	13.6*	8.9	20.3	12.8*	9.2	17.6
1 to 3 days per month	17.9*	12.4	25.2	21.0	15.8	27.3
At least once a week	33.4	26.1	41.5	27.4	21.4	34.3
Fishing Winter						
Never	43.3	36.0	50.8	47.0	40.3	53.7
Less than once a month	8.0**	4.7	13.2	12.8*	9.1	17.8
1 to 3 days per month	9.0**[a]	5.3	14.7	17.5[b]	13.1	23.1
At least once a week	39.7[a]	32.9	47.0	22.7[b]	17.2	29.3
Berry Picking						
Never	28.6	21.2	37.4	18.7*	13.7	25.0
Less than once a month	13.7*	8.9	20.6	14.1*	10.1	19.5
1 to 3 days per month	16.9*	12.1	23.1	20.8	15.6	27.1
At least once a week	40.8	33.1	49.0	46.4	39.7	53.2

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Q2004 versus Q2017 – Hunting, Fishing, and Berry Picking – For each Sex separately

Males

There was no difference between the proportion of males who hunted at least once in the spring before the 2004 survey (88%) versus in the spring before the 2017 survey (84%; Table 23). However, a larger proportion of males went hunting regularly (at least once a week) in the spring before the 2004 survey (62%) than in the spring before the 2017 survey (47%; Table 23). This pattern of results was similar for the summer, fall, and winter seasons (Table 23).

There were no differences in the frequency that males fished in all seasons before the 2004 survey versus the 2017 survey (Table 23).

Males were more likely to go berry picking at least once during the berry picking season before the 2017 survey (63%) than during the berry picking season before the 2004 survey (53%), and were specifically more likely to go berry picking at a frequency of "less than once a month" (Table 23).

Table 23 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut males, population aged 16 years and over, Nunavik, 2017

Males	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	12.2	9.4	15.6	15.6	12.4	19.5
Less than once a month	8.7*[a]	6.5	11.7	14.7[b]	11.6	18.4
1 to 3 days per month	17.2[a]	14.1	20.7	22.8[b]	18.7	27.6
At least once a week	61.9[a]	57.5	66.2	46.9[b]	41.9	51.9
Hunting Summer						
Never	14.9	12.0	18.4	16.9	13.6	20.7
Less than once a month	11.8	9.2	15.0	14.6	11.3	18.6
1 to 3 days per month	16.6[a]	13.5	20.1	25.6[b]	21.4	30.4
At least once a week	56.7[a]	52.2	61.1	43.0[b]	38.0	48.0
Hunting Fall						
Never	23.0	19.4	27.1	24.9	20.8	29.5
Less than once a month	14.9[a]	12.0	18.4	20.1[b]	16.4	24.5
1 to 3 days per month	20.0[a]	16.6	23.9	26.1[b]	22.0	30.8
At least once a week	42.1[a]	37.7	46.6	28.8[b]	24.5	33.6
Hunting Winter						
Never	21.3	17.9	25.2	25.5	21.4	30.1
Less than once a month	14.3	11.5	17.6	18.2	14.6	22.5
1 to 3 days per month	19.6	16.3	23.3	22.5	18.5	27.0
At least once a week	44.8[a]	40.6	49.2	33.8[b]	28.9	38.9
Fishing Spring						
Never	23.4	19.7	27.6	17.5	14.2	21.4
Less than once a month	15.6	12.8	19.0	20.4	16.4	25.1
1 to 3 days per month	22.7	19.4	26.4	26.5	22.1	31.4
At least once a week	38.3	34.1	42.6	35.6	30.8	40.8
Fishing Summer						
Never	20.7	17.2	24.6	19.2	15.5	23.6
Less than once a month	13.7	10.9	17.1	16.2	12.7	20.3
1 to 3 days per month	22.8	19.4	26.7	25.8	21.6	30.5
At least once a week	42.8	38.6	47.1	38.8	34.2	43.7

Males	Q2004			Q2017		
	%	95% CI		%	95% CI	
Fishing Fall						
Never	40.7	36.5	45.0	34.1	29.4	39.2
Less than once a month	16.7	13.6	20.4	22.9	19.0	27.3
1 to 3 days per month	20.6	17.4	24.2	23.0	18.9	27.7
At least once a week	22.0	18.6	25.9	20.0	16.3	24.3
Fishing Winter						
Never	32.1	28.4	36.1	30.9	26.4	35.8
Less than once a month	14.4	11.8	17.5	20.3	16.4	24.8
1 to 3 days per month	23.9	20.4	27.8	22.7	18.8	27.2
At least once a week	29.6	26.0	33.4	26.1	21.8	30.9
Berry Picking						
Never	47.1[a]	42.8	51.4	37.4[b]	32.4	42.8
Less than once a month	16.4[a]	13.3	20.0	23.8[b]	19.8	28.4
1 to 3 days per month	14.8	11.9	18.2	19.0	15.3	23.4
At least once a week	21.7	18.3	25.6	19.7	16.1	23.9

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

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Females

Females were more likely to hunt at least once in the spring before the 2017 survey (68%) than in the spring before the 2004 survey (59%), and the increase was specifically observed for the "less than once a month" frequency category; Table 24). Similar findings were observed for hunting in the summer (Table 24). There were no differences in the frequency that females hunted in the fall and winter seasons before the 2004 versus 2017 surveys (Table 24).

Like their male counterparts, there were no significant differences in the frequency that females fished in all seasons before the 2004 versus 2017 surveys (Table 24).

Also like their male counterparts, females were more likely to go berry picking during the berry picking season before the 2017 survey (88%) than during the berry picking season before the 2004 survey (76%), and the increase was specifically noted for the "less than once a month" frequency category; Table 24).

Table 24 Prevalence and 95-percent confidence intervals of frequency of hunting, fishing and berry picking in each season among Nunavimmiut females, population aged 16 years and over, Nunavik, 2017

Females	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Spring						
Never	40.7[a]	36.9	44.6	32.3[b]	29.1	35.7
Less than once a month	9.8[a]	7.8	12.4	18.5[b]	16.0	21.3
1 to 3 days per month	16.9	14.0	20.2	19.0	16.4	21.9
At least once a week	32.6	28.8	36.6	30.2	27.1	33.6
Hunting Summer						
Never	39.8[a]	35.9	43.8	29.8[b]	26.7	33.1
Less than once a month	12.8[a]	10.3	15.7	17.6[b]	15.2	20.4
1 to 3 days per month	16.4	13.5	19.7	19.5	16.8	22.4
At least once a week	31.1	27.5	34.8	33.1	30.0	36.4

Females	Q2004			Q2017		
	%	95% CI		%	95% CI	
Hunting Fall						
Never	57.1	53.2	60.9	51.4	47.9	54.9
Less than once a month	13.1	10.6	16.0	16.7	14.3	19.3
1 to 3 days per month	12.7	10.2	15.7	13.3	11.2	15.8
At least once a week	17.1	14.4	20.3	18.6	16.0	21.5
Hunting Winter						
Never	57.4	53.5	61.2	51.7	48.3	55.2
Less than once a month	15.6	12.8	18.7	17.0	14.5	19.8
1 to 3 days per month	11.4	9.1	14.2	13.7	11.5	16.1
At least once a week	15.7	13.0	18.7	17.6	15.1	20.3
Fishing Spring						
Never	30.8	27.2	34.6	28.2	25.2	31.6
Less than once a month	14.1	11.7	16.9	18.2	15.7	20.9
1 to 3 days per month	20.5	17.2	24.1	19.5	16.9	22.4
At least once a week	34.7	31.0	38.5	34.1	31.0	37.4
Fishing Summer						
Never	34.1	30.4	38.0	29.1	26.0	32.4
Less than once a month	16.0	13.3	19.3	18.3	15.7	21.2
1 to 3 days per month	19.0	16.0	22.5	21.4	18.7	24.3
At least once a week	30.9	27.2	34.8	31.3	28.2	34.5
Fishing Fall						
Never	56.5	52.4	60.4	54.8	51.3	58.3
Less than once a month	15.8	13.0	19.1	15.5	13.2	18.2
1 to 3 days per month	11.5	9.0	14.7	13.0	10.8	15.5
At least once a week	16.2	13.5	19.3	16.7	14.2	19.5
Fishing Winter						
Never	53.4	49.4	57.3	52.4	49.0	55.8
Less than once a month	16.5	13.6	19.8	16.2	13.7	19.0
1 to 3 days per month	12.7	10.2	15.8	15.0	12.6	17.7
At least once a week	17.4	14.6	20.6	16.4	14.1	19.0
Berry Picking						
Never	24.2[a]	21.0	27.8	12.4[b]	10.2	14.8
Less than once a month	13.3[a]	10.9	16.2	18.9[b]	16.3	21.8
1 to 3 days per month	18.1	15.3	21.2	22.0	19.3	24.9
At least once a week	44.4	40.6	48.3	46.8	43.4	50.2

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

PART 2: CHALLENGES FINDING/CATCHING/ HUNTING SPECIES

Only hunters (participants who reported hunting at least once in the year prior to the survey) who used a firearm (responded "yes" to the firearm user question) were asked the hunting challenges questions at the time of the survey.

Participants who answered "I do not hunt this species" on a hunting challenges question were excluded from the analyses of that question (e.g. participants who reported "I do not hunt this species" for the challenges hunting caribou question were excluded from the challenges hunting caribou analyses).

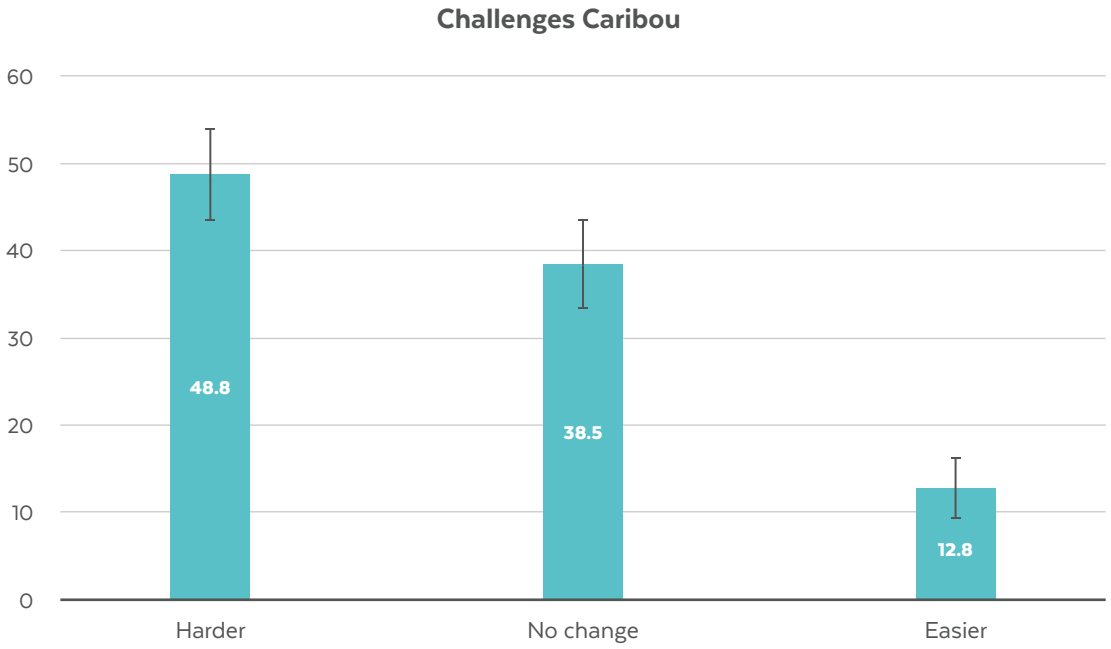
Therefore, the findings for Part 2 reflect the experiences of hunters who used a firearm and who provided a response other than "I do not hunt this species" for that particular question/species. These individuals are referred to as "caribou hunters", "seal hunters", etc. throughout Part 2 below. Due to the small number of participants fitting these criteria, the power for detecting differences is low.

The one exception to the above is the comparison of hunting challenges data between the 2004 and 2017 surveys. For this analysis, a sample of "very active subsistence hunters" – that is, participants who reported hunting *at least once a week in all four seasons* – was used in an attempt to make the samples for the two surveys as comparable as possible.

Challenges Finding/Catching/Hunting Caribou

Among "caribou hunters", almost half (49%) found caribou were harder to find, catch or hunt in the same season since 2011 (Figure 18).

Figure 18 Prevalence and 95-percent confidence intervals of challenges hunting caribou among Nunavimmiut caribou hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting caribou).

However, these percentages varied greatly across ecological regions. Specifically, caribou hunters in Ungava Bay were more likely to say caribou was harder to find, catch, or hunt since 2011 (73%) compared to caribou hunters in Hudson Strait (37%) and Hudson Bay (33%; Table 25).

There were no significant differences between age groups or sexes in reported challenges of finding, catching, or hunting caribou since 2011 (Table 25).

Table 25 Prevalence and 95-percent confidence intervals of challenges hunting caribou among Nunavimmiut caribou hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting Challenges – Caribou	Harder			No Change			Easier		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	37.1[a]	27.3	48.1	56.1[a]	44.7	66.9	6.8[a]**	3.2	13.9
Hudson Bay	32.7[a]	24.6	42.0	43.5[a]	35.2	52.2	23.8[b]*	16.8	32.4
Ungava Bay	73.0[b]	65.6	79.3	20.6[b]*	15.1	27.4	6.4[a]**	3.4	11.5
Age Groups									
Youth (16-19)	37.8*	26.5	50.7	40.5*	28.7	53.5	21.7**	12.3	35.3
Young Adults (20-30)	50.6	40.8	60.4	37.7	27.9	48.5	11.7**	6.9	19.3
Adults (31-54)	45.5	37.4	53.8	43.0	34.9	51.4	11.6*	7.0	18.4
Elders (55 and up)	61.9	51.1	71.6	27.9 *	19.2	38.5	10.2**	5.2	19.1
Sex									
Male	48.4	42.5	54.3	39.3	33.8	45.1	12.3*	8.9	16.7
Female	50.8	42.0	59.5	34.2	26.0	43.5	15.1**	8.9	24.4

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

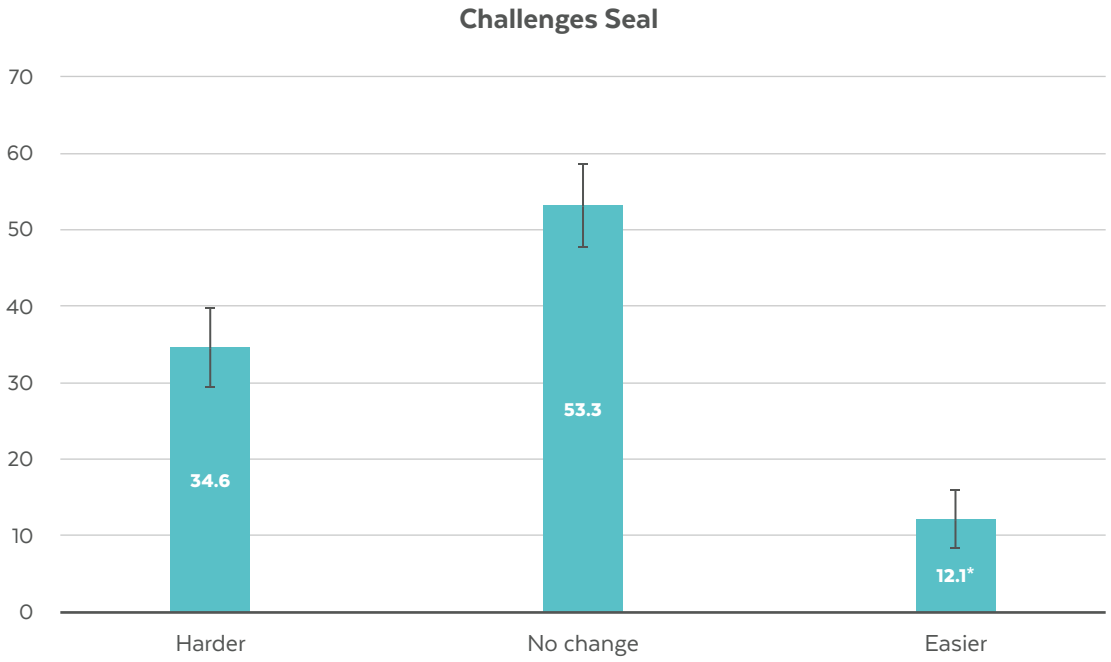
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting caribou).

Challenges Finding/Catching/Hunting Seal

Among "seal hunters", slightly more than half (53%) found there was no change in the difficulty of finding, catching, or hunting seal since 2011. The next most common category was "harder" to find/catch/hunt, with around one third of seal hunters selecting this option (35%; Figure 19).

Figure 19 Prevalence and 95-percent confidence intervals of challenges hunting seal among Nunavimmiut seal hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting seal).

Seal hunters in Hudson Strait were more likely to report seal was harder to find, catch, or hunt since 2011 (44%) than seal hunters in Hudson Bay (25%*; Table 26).

There were no significant sex differences in reported challenges of finding, catching, or hunting seal since 2011 (Table 26). While there were some significant differences between age groups, the sampling variance of the prevalence estimates was very high and these results must be interpreted with caution (Table 26).

Table 26 Prevalence and 95-percent confidence intervals of challenges hunting seal among Nunavimmiut seal hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting Challenges – Seal	Harder			No Change			Easier		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	44.3[a]	33.5	55.8	48.5	37.3	59.8	7.2[a]**	3.1	15.6
Hudson Bay	25.2[b]*	18.1	34.0	57.2	47.7	66.2	17.6[b]*	11.3	26.5
Ungava Bay	36.5	28.8	45.0	53.1	45.0	61.0	10.4*	6.5	16.3
Age Groups									
Youth (16-19)	23.2[a]**	13.7	36.5	50.9	37.0	64.7	25.9[a]**	14.9	41.0
Young Adults (20-30)	36.0	26.4	46.9	48.9	39.0	59.0	15.0*	9.1	23.8
Adults (31-54)	32.5	24.7	41.3	60.2	51.0	68.7	7.3[b]**	3.8	13.5
Elders (55 and up)	45.9[b]	34.2	58.2	47.0	35.4	58.9	7.1[b]**	3.1	15.2
Sex									
Male	35.3	29.7	41.4	52.9	46.6	59.1	11.8*	8.2	16.6
Female	30.5*	21.8	40.9	55.4	44.8	65.5	14.1**	7.9	23.8

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

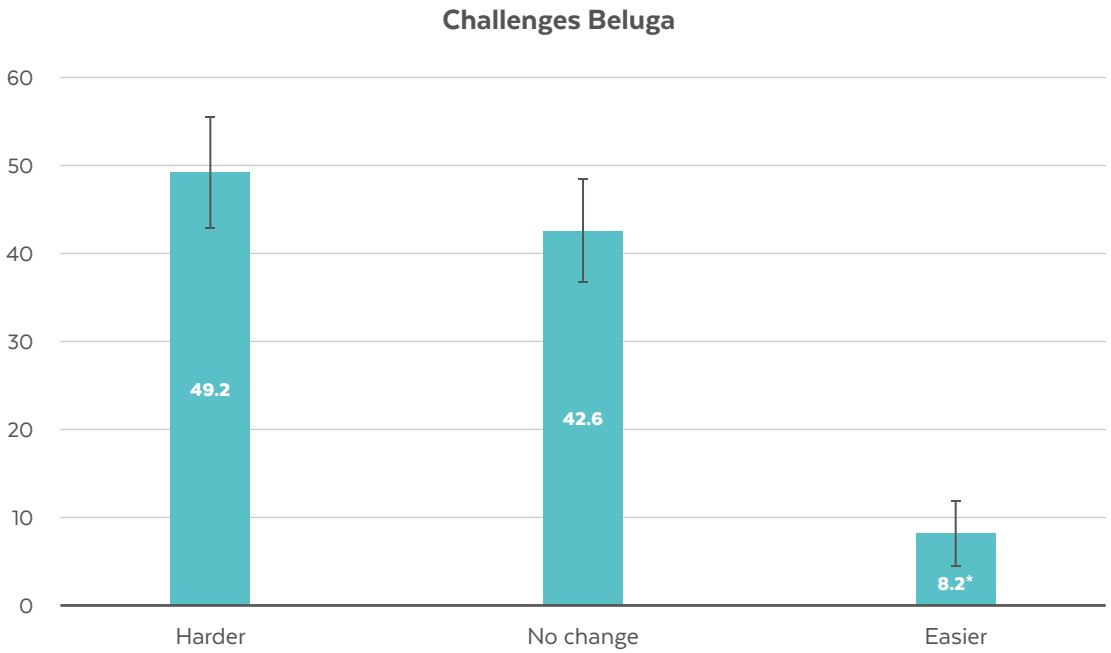
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting seal).

Challenges Finding/Catching/Hunting Beluga

Among "beluga hunters", almost half (49%) found beluga were harder to find, catch, or hunt since 2011 (Figure 20).

Figure 20 Prevalence and 95-percent confidence intervals of challenges hunting beluga among Nunavimmiut beluga hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting beluga).

Beluga hunters in Hudson Bay were the most likely to say beluga was harder to find, catch, or hunt since 2011 (65%), followed by beluga hunters in Ungava Bay (49%), and then beluga hunters in Hudson Strait (32%*; Table 27).

There were no significant differences between age groups or sexes in the reported challenges of finding, catching, or hunting beluga since 2011 (Table 27).

Table 27 Prevalence and 95-percent confidence intervals of challenges hunting beluga among Nunavimmiut beluga hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting Challenges – Beluga	Harder			No Change			Easier		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	32.4[a]*	21.9	44.9	57.9[a]	46.3	68.7	9.7**	4.9	18.4
Hudson Bay	65.1[b]	53.7	75.0	24.2[b]*	15.9	35.0	10.7**	5.2	21.0
Ungava Bay	49.2[c]	40.3	58.1	46.0[a]	37.2	55.1	4.8**	2.1	10.4
Age Groups									
Youth (16-19)	46.6*	32.8	61.0	43.6*	29.5	58.8	9.8**	3.9	22.5
Young Adults (20-30)	57.7	45.3	69.2	36.0*	25.5	48.0	6.3**	2.5	15.3
Adults (31-54)	46.2	36.4	56.3	46.0	36.5	55.7	7.8**	3.6	16.3
Elders (55 and up)	43.1	31.4	55.5	45.7	34.2	57.6	11.2**	5.2	22.5
Sex									
Male	47.4	40.4	54.5	44.0	37.5	50.8	8.6*	5.3	13.6
Female	60.0	49.0	70.0	34.1*	24.6	45.1	6.0**	2.4	13.9

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

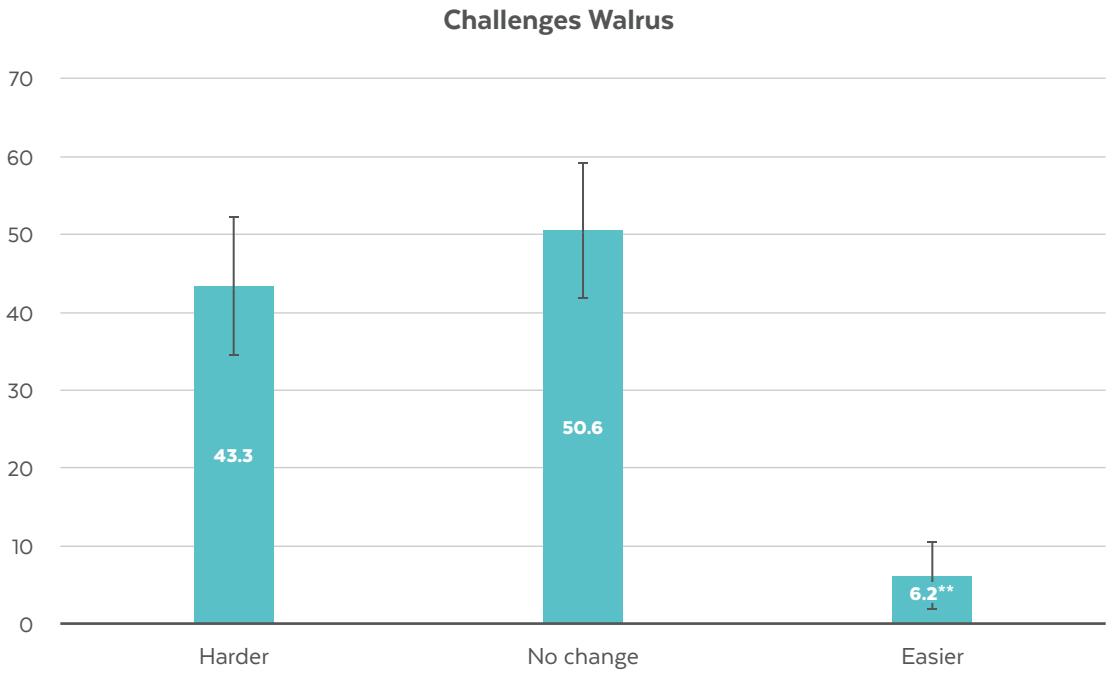
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting beluga).

Challenges Finding/Catching/Hunting Walrus

Among "walrus hunters", slightly more than half (51%) found there was no change in the difficulty of finding, catching, or hunting walrus since 2011. The next most common category was "harder" to find/catch/hunt (43%; Figure 21).

Figure 21 Prevalence and 95-percent confidence intervals of challenges hunting walrus among Nunavimmiut walrus hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting walrus).

There were no significant differences between ecological regions, age groups or sexes in the reported challenges of finding, catching, or hunting walrus since 2011 (Table 28).

Table 28 Prevalence and 95-percent confidence intervals of challenges hunting walrus among Nunavimmiut walrus hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting Challenges – Walrus	Harder			No Change			Easier		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	31.8*	19.3	47.7	61.2	46.1	74.5	7.0**	2.7	16.8
Hudson Bay	52.5*	36.1	68.3	40.7*	26.2	57.0	NP	2.2	19.4
Ungava Bay	48.6	35.1	62.3	47.1*	33.4	61.3	NP	1.0	16.6
Age Groups									
Youth (16-19)	57.2*	35.3	76.6	42.8**	23.4	64.7	NP		
Young Adults (20-30)	53.2*	34.3	71.3	35.1**	18.7	56.0	NP		
Adults (31-54)	35.2*	22.4	50.4	57.4	43.0	70.7	7.4	2.8	17.9
Elders (55 and up)	39.6*	24.4	57.0	58.0	40.8	73.5	NP		
Sex									
Male	42.3	33.2	52.0	51.7	42.4	60.9	6.0**	2.9	11.9
Female	52.2*	31.8	71.8	39.9**	21.5	61.7	NP	1.8	29.4

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

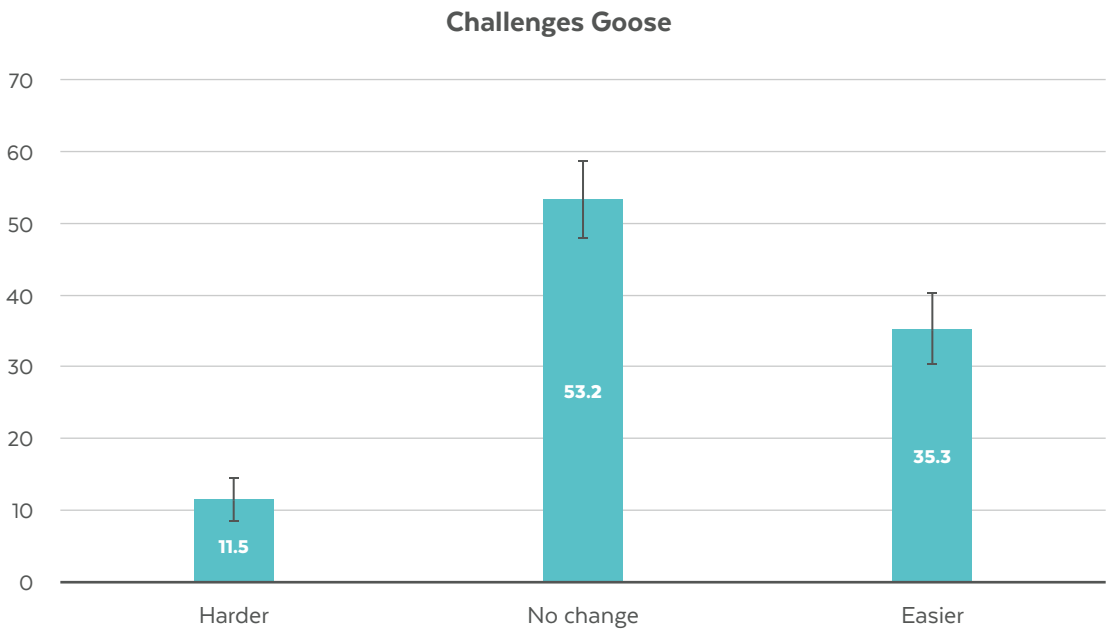
NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting walrus).

Challenges Finding/Catching/Hunting Goose

Among goose hunters, slightly more than half (53%) found there was no change in the difficulty of finding, catching, or hunting goose, and around 35% reported that it "easier" to find/catch/hunt goose since 2011 (Figure 22).

Figure 22 Prevalence and 95-percent confidence intervals of challenges hunting goose among Nunavimmiut goose hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting goose).

Goose hunters in Ungava Bay were *less* likely to say there was no change in the difficulty of finding, catching, or hunting goose since 2011 (48%) than goose hunters in Hudson Strait (64%), and were *less* likely to say goose was easier to find, catch, or hunt since 2011 (29%) than goose hunters in Hudson Bay (44%; Table 29).

There were no significant differences between age groups in reported challenges of finding, catching, or hunting goose since 2011 (Table 29).

Female goose hunters were more likely to say goose was harder to find, catch, or hunt since 2011 (19%*) than male goose hunters (10%*; Table 29).

Table 29 Prevalence and 95-percent confidence intervals of challenges hunting goose among Nunavimmiut goose hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Hunting Challenges – Goose	Harder			No Change			Easier		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	3.9[a]**	1.6	9.0	64.4[a]	52.2	74.9	31.7*	21.4	44.2
Hudson Bay	5.6[a]**	2.8	10.8	50.4	41.9	58.9	44.0[a]	35.9	52.4
Ungava Bay	22.8[b]	16.9	30.0	47.8[b]	39.8	56.0	29.4[b]	22.5	37.3
Age Groups									
Youth (16-19)	10.1**	3.7	24.5	43.7	31.7	56.6	46.2	33.9	59.0
Young Adults (20-30)	10.2**	5.8	17.2	52.2	42.1	62.2	37.6	28.4	47.8
Adults (31-54)	13.2*	9.1	18.7	54.1	45.2	62.6	32.7	25.0	41.5
Elders (55 and up)	11.3**	5.8	20.8	61.3	49.7	71.7	27.5*	18.9	38.1
Sex									
Male	10.1[a]*	7.3	13.9	52.9	46.8	58.9	37.0	31.4	43.0
Female	18.7[b]*	12.7	26.5	54.9	45.2	64.2	26.4*	18.8	35.8

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

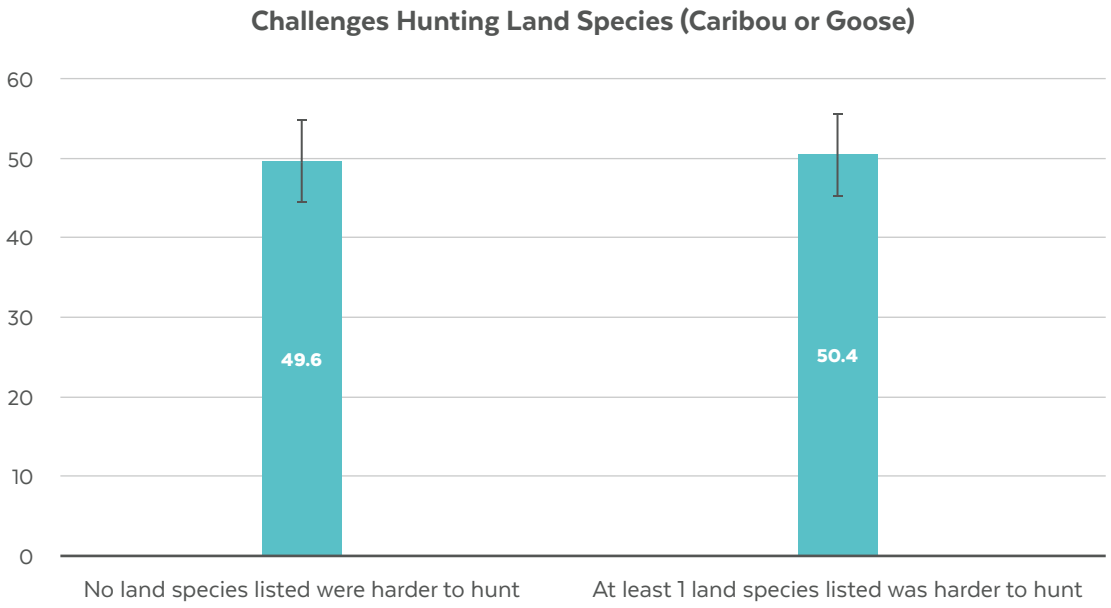
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for this question (i.e. challenges hunting goose).

Challenges Finding/Catching/Hunting Land Species & Marine Species

Roughly half (50%) of caribou and/or goose hunters found that at least one of these land species was harder to find, catch, or hunt in the same season since 2011 (Figure 23). However, these percentages varied greatly across ecological regions, with caribou/goose hunters in Ungava Bay being more likely to say that at least one of these land species was harder to find, catch, or hunt since 2011 (75%) than caribou/goose hunters in Hudson Strait (38%) and in Hudson Bay (35%; Table 30). Elder caribou/goose hunters were more likely to say at least one of these land species was harder to find, catch, or hunt since 2011 (63%) than their youth (38%*) and adult (49%) counterparts (Table 30).

Figure 23 Prevalence and 95-percent confidence intervals of challenges hunting land species (caribou and/or goose) among Nunavimmiut caribou/goose hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for both the challenges hunting caribou and challenges hunting goose questions (i.e. they hunted caribou and/or goose).

Table 30 Prevalence and 95-percent confidence intervals of challenges hunting land species (caribou and/or goose) among Nunavimmiut caribou/goose hunters of caribou[ϕ] by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Challenges Land Composite (Caribou, Goose) At least 1 land species was harder to find/hunt/catch		
	Prevalence	95% CI	
Ecological Region			
Hudson Strait	38.2[a]	28.4	49.0
Hudson Bay	34.7[a]	26.7	43.6
Ungava Bay	74.8[b]	67.7	80.8
Age Groups			
Youth (16-19)	38.3[a*]	27.1	50.8
Young Adults (20-30)	51.6	42.1	61.0
Adults (31-54)	48.5[a]	40.4	56.8
Elders (55 and up)	62.8[b]	52.1	72.4
Sex			
Male	49.7	43.9	55.5
Female	53.9	45.4	62.3

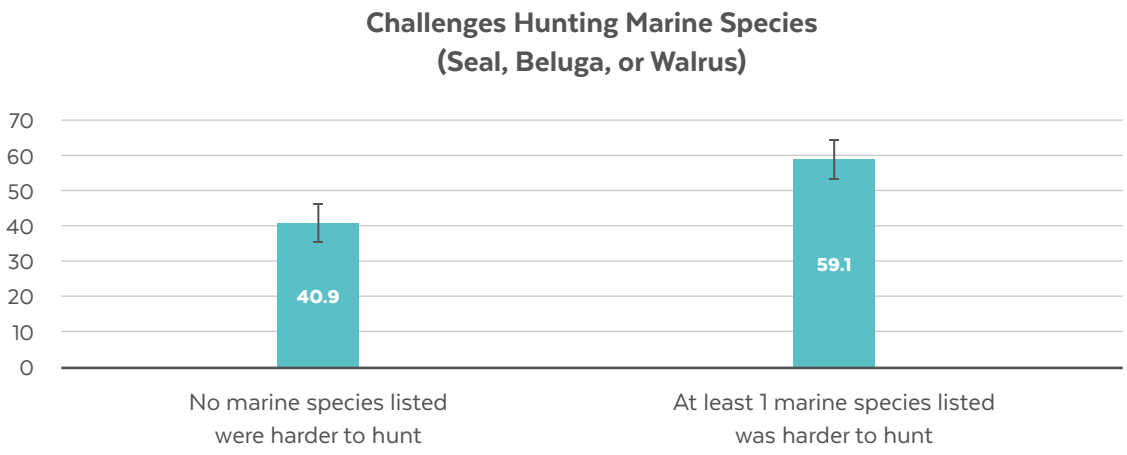
a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for both the challenges hunting caribou and challenges hunting goose questions (i.e. they hunted caribou and/or goose).

Around 59% of seal, beluga and/or walrus hunters found that at least one of these marine species was harder to find, catch, or hunt in the same season since 2011 (Figure 24). There were no significant differences between ecological regions, age groups or sexes (Table 31).

Figure 24 Prevalence and 95-percent confidence intervals of challenges hunting marine species (seal, beluga and/or walrus) among Nunavimmiut seal/beluga/walrus hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for all three of the challenges hunting seal, challenges hunting beluga, and challenges hunting walrus questions (i.e. they hunted at least one of these marine species).

Table 31 Prevalence and 95-percent confidence intervals of challenges hunting marine species (seal, beluga and/or walrus) among Nunavimmiut seal/beluga/walrus hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Challenges Marine Composite (Seal, Beluga, Walrus) At least 1 marine species was harder to find/hunt/catch		
	Prevalence	95% CI	
Ecological Region			
Hudson Strait	60.8	49.6	70.9
Hudson Bay	59.6	50.3	68.3
Ungava Bay	57.3	48.8	65.4
Age Groups			
Youth (16-19)	54.2	41.1	66.7
Young Adults (20-30)	64.1	53.8	73.3
Adults (31-54)	54.8	45.5	63.7
Elders (55 and up)	63.8	51.9	74.2
Sex			
Male	58.4	52.0	64.4
Female	63.0	53.0	72.1

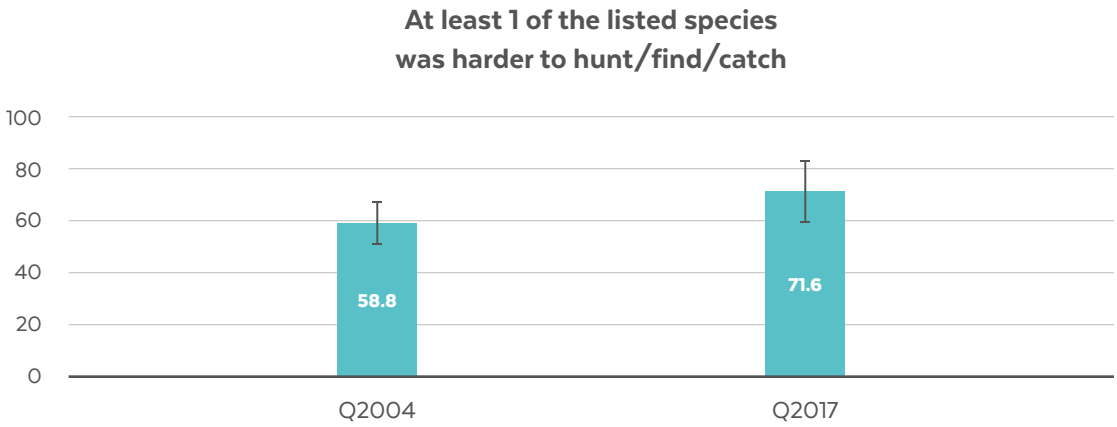
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (frequency of hunting across seasons questions), who reported using a firearm (firearm use question), and who did not select the response option "I do not hunt this species" for all three of the challenges hunting seal, challenges hunting beluga, and challenges hunting walrus questions (i.e. they hunted at least one of these marine species).

Q2004 versus Q2017 – Any Species Harder to Hunt

To compare hunting challenges that Nunavimmiut experienced over a period of time prior to the 2004 survey (specifically, "since the year 2000") versus over a slightly different period of time prior to the 2017 survey (specifically, "since the year 2011"), a composite variable was created to assess whether *any* species were harder to find/catch/hunt. Only "very active subsistence hunters" – that is, Nunavimmiut who reported hunting "at least once a week" in all four seasons – were included in these analyses, in order to make the sample of participants who were asked about hunting challenges similar between the two surveys. Additionally, only including very active subsistence hunters in these comparison analyses meant that any observed differences in hunting challenges between the two surveys were more likely due to environmental change factors instead of potential differences in hunting skill or experience between the two survey samples.

The proportion of very active subsistence hunters in Nunavik who found that at least 1 species was harder to find, catch or hunt in the period of time before the 2004 survey (59%) appears lower than the proportion for the period of time before the 2017 survey (72%) but the difference is not statistically significant (Figure 25).

Figure 25 Prevalence and 95-percent confidence intervals of finding at least 1 species was harder to hunt during a period of time prior to the 2004 survey (Q2004) and during a period of time prior to the 2017 survey (Q2017) among very active subsistence hunters$^{\phi}$, population aged 16 years and over, Nunavik, 2004 and 2017



ϕ Nunavimmiut who reported hunting at least once a week in all four seasons in the year prior to the survey.

A larger proportion of very active subsistence hunters in Ungava Coast communities found at least 1 species was harder to find, catch or hunt in the period of time before the 2017 survey (86%) than in the period of time before the 2004 survey (65%; Table 32).

Additionally, a larger proportion of very active female subsistence hunters reported that at least 1 species was harder to find, catch or hunt in the period of time before the 2017 survey (81%) than in the period of time before the 2004 survey (32%*; Table 32).

There were no significant differences in hunting challenges between the two surveys among very active subsistence hunters who belonged to a specific age group, who lived in Hudson Coast communities, or who were male (Table 32).

Table 32 Prevalence and 95-percent confidence intervals of finding at least 1 species was harder to hunt during a period of time prior to the 2004 survey (Q2004) and during a period of time prior to the 2017 survey (Q2017) among very active subsistence hunters$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2004 and 2017

At least 1 listed species was harder to hunt	Q2004			Q2017		
	%	95% CI		%	95% CI	
Coast						
Hudson Coast	53.7	41.7	65.2	62.7	45.6	77.2
Ungava Coast	64.5[a]	52.9	74.6	85.9[b]	68.4	94.5
Age Groups						
Youth 16 – 19	79.0	52.1	92.9	46.7**	19.6	75.8
Youth 20 – 30	61.3	42.9	76.9	83.6	63.2	93.8
Adults 31 – 54	45.7	35.1	56.8	64.1*	41.1	82.0
Elders/Seniors 55 and older	72.2	54.8	84.7	80.5	52.9	93.8
Sex						
Male	63.4	54.1	71.7	69.9	55.1	81.5
Female	31.7*[a]	18.7	48.5	81.2[b]	61.4	92.1

a, b Estimates with different letters are statistically different between the 2004 and 2017 surveys ($p < 0.05$). This table reads slightly differently than the other tables in this report in that comparisons are made across rows rather than down columns.

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once a week in all four seasons in the year prior to the survey.

PART 3: FIREARM USE AND PREPARATION OF WILDLIFE

Hunters (participants who hunted at least once in the 12 months prior to the 2017 survey) were asked whether they were the one who uses the firearm (see *Firearm User* section below) and whether they or someone in their home cleans guns inside the house (see *Cleaning Firearm Inside the House* section below).

All participants were asked the "preparation of species" questions – that is, how many wild birds; caribou or muskoxen; foxes, wolves or dogs; bears; and sea mammals (seals, whales, walrus) they prepared (skinned, washed, cut, etc.) in the 12 months prior to the survey. See the *Prepare Wild Birds* through *Prepare Sea Mammals* sections below.

Firearm User

Only half (52%) of Nunavimmiut hunters reported using a firearm in the year prior to the survey (Table 33).

Hunters in Hudson Strait were more likely to use a firearm (58%) than hunters in Hudson Bay (47%; Table 33).

There were no significant differences between age groups in firearm use among hunters (Table 33).

Male hunters were more likely to be the one who uses a firearm (79%) than female hunters (20%; Table 33).

Table 33 Prevalence and 95-percent confidence intervals of firearm use among Nunavimmiut hunters$^{\phi}$ overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Firearm User (Yes)		
	Prevalence	95% CI	
Overall	51.7	49.0	54.5
Ecological Region			
Hudson Strait	57.6[a]	52.3	62.8
Hudson Bay	47.0[b]	42.0	52.0
Ungava Bay	53.0	48.8	57.3
Age Groups			
Youth (16-19)	43.5	36.1	51.3
Young Adults (20-30)	55.5	49.7	61.1
Adults (31-54)	51.2	46.5	55.8
Elders (55 and up)	54.6	47.6	61.5
Sex			
Male	79.2[a]	74.6	83.2
Female	19.6[b]	16.7	22.8

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions).

Cleaning Firearm Inside the House

As described in the *Methodological aspects* section, this variable is a measure of potential exposure to lead rather than a direct measure of personal exposure to lead or personal behaviours relating to the cleaning of guns inside the home.

Around 38% of Nunavimmiut hunters said they or someone in their home cleans guns inside the house (Table 34).

Male hunters were more likely to report that they or someone in their home cleans guns inside the house (42%) than female hunters (33%; Table 34).

There were no significant differences between ecological regions, age groups or pregnancy status on this variable (Table 34).

Table 34 Prevalence and 95-percent confidence intervals of cleaning firearms inside the house among Nunavimmiut hunters[ϕ] overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Cleaning Firearm Inside the House (Yes)		
	Prevalence	95% CI	
Overall	37.9	34.7	41.3
Ecological Region			
Hudson Strait	39.9	32.8	47.4
Hudson Bay	39.8	34.3	45.6
Ungava Bay	34.5	30.0	39.3
Age Groups			
Youth (16-19)	38.6	31.0	46.9
Young Adults (20-30)	39.5	32.9	46.4
Adults (31-54)	36.5	31.4	41.9
Elders (55 and up)	37.9	30.7	45.6
Sex			
Male	42.1[a]	36.7	47.6
Female	33.1[b]	29.4	36.9
Pregnancy Status			
Pregnant	34.7	25.8	44.8
Non-pregnant women of childbearing age	32.1	27.6	36.9
Women of non-childbearing age	34.1	26.5	42.6

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions).

Prepare Wild Birds

Around 64% of Nunavimmiut prepared at least 1 wild bird in the 12 months prior to the survey (i.e. response options other than "none" combined). Around one quarter of Nunavimmiut prepared a large number of wild birds – specifically, 14% prepared 10 to 29 wild birds and 10% prepared 30 or more wild birds (Table 35).

Residents across all three ecological regions were equally likely to prepare at least 1 wild bird in the 12 months prior to the survey (64% for Hudson Strait, 62% for Hudson Bay, 68% for Ungava Bay; Table 35). Residents of Hudson Strait were more likely to prepare a large number of wild birds – i.e. 10 to 29 wild birds – compared to residents of the other two ecological regions (Table 35).

Elders and adults were both more likely to prepare at least 1 wild bird in the 12 months prior to the survey (76% and 71% respectively) than youth (49%) and young adults (57%; Table 35). Concordantly, Elders were more likely to prepare 3 to 9 wild birds (31%) than both young adults (20%) and youth (18%*), and adults were more likely to prepare 3 to 9 wild birds (26%) than youth (18%*; Table 35). Elders were also more likely to prepare a large number of wild birds – that is, 10 to 29 wild birds (19%*) – than youth (10%*) and young adults (11%*; Table 35).

Males were more likely to prepare a large number of wild birds in the 12 months prior to the survey – specifically, 10 to 29 wild birds and 30 or more wild birds – than females (Table 35).

Table 35 Prevalence and 95-percent confidence intervals of the number of wild birds prepared in the 12 months prior to the survey overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Prepare Wild Birds	None			1 or 2			3 to 9			10 to 29			30 or More		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Overall	35.6	32.8	38.5	17.2	15.1	19.5	23.8	21.2	26.5	14.0	11.9	16.3	9.5	7.6	11.8
Ecological Region															
Hudson Strait	36.4	30.4	42.7	12.6[a]	9.5	16.6	23.8	18.4	30.2	19.7[a]	14.6	26.1	7.5**	4.5	12.4
Hudson Bay	37.8	33.1	42.8	15.9[a]	12.6	19.9	21.6	17.6	26.1	12.7[b]	9.8	16.4	12.0*	8.8	16.2
Ungava Bay	32.2	28.2	36.5	22.1[b]	18.5	26.1	26.5	22.6	30.8	11.4[b]	8.7	14.8	7.9*	5.4	11.3
Age Groups															
Youth (16-19)	50.6[a]	43.6	57.5	15.8*	11.0	22.1	17.9[a]*	12.9	24.4	10.4[a]*	6.5	16.1	5.3[a]**	2.4	11.3
Young Adults (20-30)	43.1[a]	37.2	49.2	18.1	14.2	22.9	20.3[a,b]	15.8	25.6	10.7[a]*	7.4	15.1	7.9*	4.8	12.6
Adults (31-54)	29.2[b]	24.9	34.0	17.7	14.6	21.4	25.5[b,c]	21.6	30.0	15.5	12.0	20.0	12.0[b]	8.9	15.9
Elders (55 and up)	24.3[b]	19.0	30.6	15.6*	11.5	20.9	30.8[c]	24.8	37.6	19.0[b]*	14.0	25.4	10.2*	6.4	15.7
Sex															
Male	32.3[a]	27.8	37.2	14.4[a]	11.4	18.0	22.7	18.8	27.2	16.7[a]	13.2	20.8	13.9[a]	10.6	18.0
Female	38.8[b]	35.6	42.1	20.0[b]	17.2	23.2	24.8	21.9	28.0	11.2[b]	9.2	13.7	5.1[b]*	3.5	7.2

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Prepare Caribou or Muskoxen

Around 60% of Nunavimmiut prepared at least 1 caribou or muskox in the 12 months prior to the survey (i.e. response options other than "none" combined). Around 1 in 10 individuals prepared a relatively large number of caribou or muskoxen – specifically, 7% prepared 10 to 29 caribou or muskoxen and 2%* prepared 30 or more caribou or muskoxen (Table 36).

Residents of Hudson Strait were more likely to prepare at least 1 caribou or muskox in the 12 months prior to the survey (68%) than residents of Hudson Bay and Ungava Bay (57% for both of these groups; Table 36). Concordantly, residents of Hudson Strait were more likely to prepare 3 to 9 caribou or muskoxen (31%) than residents of the other two ecological regions (23% for Hudson Bay, 21% for Ungava Bay), and may have been more likely to prepare 10 to 29 caribou or muskoxen (9%*) than residents of Ungava Bay (4%**) although the latter proportion had very high sampling variance (unreliable).

Youth aged 16-19 and adults aged 31-54 were both more likely to prepare at least 1 caribou or muskox in the 12 months prior to the survey (63% and 62% respectively) than young adults aged 20-30 (54%; Table 36). The seemingly significant differences on the "10 to 29" category suggest that youth may have been less likely to prepare a large number of caribou or muskoxen than young adults and adults, although these results are unreliable due to very high sampling variance (Table 36).

Males were more likely than women to prepare at least one caribou or muskox in the 12 months prior to the survey (75% vs. 45%). A similar pattern of results was observed for the other categories (Table 36).

Table 36 Prevalence and 95-percent confidence intervals of the number of caribou or muskoxen prepared in the 12 months prior to the survey overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Prepare Caribou or Muskoxen	None			1 or 2			3 to 9			10 to 29			30 or More		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Overall	40.4	37.6	43.2	25.9	23.4	28.6	24.4	21.8	27.3	7.0	5.3	9.0	2.3*	1.5	3.6
Ecological Region															
Hudson Strait	32.2[a]	27.3	37.5	25.5	20.3	31.5	31.0[a]	25.2	37.5	9.2[a]*	5.7	14.5	NP		
Hudson Bay	43.1[b]	38.5	47.8	22.2[a]	18.5	26.3	23.2[b]	19.0	28.0	8.4[a]*	5.8	12.1	3.1**	1.7	5.8
Ungava Bay	42.9[b]	38.5	47.3	30.9[b]	26.7	35.4	21.2[b]	17.6	25.4	3.6[b]**	2.1	6.1	1.4**	0.7	2.8
Age Groups															
Youth (16-19)	37.1[a]	31.1	43.4	31.3[a]	24.9	38.4	28.0[a]	21.5	35.7	2.9[a]**	1.3	6.2	NP		
Young Adults (20-30)	46.3[b]	40.5	52.3	26.2	21.2	31.9	17.8[b]	13.5	23.2	7.5[b]**	4.5	12.1	2.2**	1.0	4.5
Adults (31-54)	37.7[a]	33.2	42.3	23.0[b]	19.0	27.6	26.8[a]	22.2	31.9	8.8[b]*	6.1	12.5	3.8**	2.0	6.9
Elders (55 and up)	39.7	33.4	46.4	27.7	22.1	34.1	26.9[a]	20.9	33.8	5.4**	3.0	9.6	NP		
Sex															
Male	25.4[a]	21.5	29.8	29.6[a]	25.5	34.0	32.5[a]	28.0	37.4	9.1[a]*	6.3	13.0	3.3[a]**	1.9	5.9
Female	55.4[b]	51.9	58.9	22.2[b]	19.4	25.3	16.3[b]	13.8	19.1	4.8[b]*	3.4	6.7	1.2[b]**	0.7	2.3

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

Prepare Foxes, Wolves or Dogs

Due to frequencies of zero on the "30 or more" category for certain levels of the socio-demographic variables, the "10 to 29" and "30 or more" categories were combined into a single "10 or more" category for the "preparation of foxes, wolves of dogs" variable.

Around 15% of Nunavimmiut prepared at least 1 fox, wolf or dog in the 12 months prior to the survey (i.e. response options other than "none" combined; Table 37).

Males were more likely than women to prepare at least one fox, wolf or dog in the 12 months prior to the survey (24% vs. 6% for women). A similar pattern of results was observed for the other categories, however the sampling variance for some of the prevalence estimates was high (Table 37).

There were no significant differences between ecological regions or age groups in the frequency that Nunavimmiut prepared foxes, wolves or dogs in the 12 months prior to the survey (Table 37).

Table 37 Prevalence and 95-percent confidence intervals of the number of foxes, wolves or dogs prepared in the 12 months prior to the survey overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Prepare Foxes, Wolves, Dogs	None			1 or 2			3 to 9			10 or More		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Overall	84.9	82.4	87.0	8.8	7.1	10.8	4.6*	3.4	6.2	1.8**	1.1	3.0
Ecological Region												
Hudson Strait	88.3	82.7	92.2	6.8**	4.0	11.4	4.5**	2.3	8.8	NP		
Hudson Bay	84.7	80.8	87.9	8.4*	5.9	11.6	4.0**	2.4	6.6	2.9**	1.5	5.5
Ungava Bay	82.6	78.6	86.1	10.7	7.9	14.2	5.3*	3.4	8.1	1.4**	0.6	3.4
Age Groups												
Youth (16-19)	83.0	76.5	88.0	12.0*	7.9	17.7	NP			NP		
Young Adults (20-30)	86.0	80.8	90.0	5.8*	3.6	9.4	6.5**	3.8	11.0	NP		
Adults (31-54)	86.3	82.0	89.7	8.4*	5.7	12.3	3.6**	2.1	6.1	1.7**	0.7	3.9
Elders (55 and up)	81.1	75.1	85.9	11.7*	8.1	16.5	5.6**	3.1	10.1	NP		
Sex												
Male	75.9[a]	71.4	79.9	13.3[a]	10.2	17.0	7.6[a]*	5.3	10.6	3.3**	1.9	5.6
Female	93.9[b]	91.9	95.4	4.2[b]*	3.0	5.9	1.5[b]**	0.8	3.0	NP		

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

Prepare Bear

Due to frequencies of zero on one or more categories of the "prepare bear" variable for certain levels of the socio-demographic variables, the "1 or 2", "3 to 9", "10 to 29" and "30 or more" categories were combined into a single "1 or more" category.

Around 7% of Nunavimmiut prepared 1 bear or more in the 12 months prior to the survey (Table 38).

Youth aged 16-19 were more likely to prepare 1 bear or more in the 12 months prior to the survey (13%*) than adults aged 31-54 (6%*) and potentially also Elders aged 55 and over (4%**) although this latter estimate has very high sampling variance (Table 38).

Males were more likely to prepare 1 bear or more in the 12 months prior to the survey (12%) compared to females (3%*; Table 38).

There were no significant differences between ecological regions in the frequency that Nunavimmiut prepared bear in the 12 months prior to the survey (Table 38).

Table 38 Prevalence and 95-percent confidence intervals of the number of bears prepared in the 12 months prior to the survey overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Prepare Bear	None			1 or More		
	Prevalence	95% CI		Prevalence	95% CI	
Overall	92.7	90.8	94.3	7.3	5.7	9.2
Ecological Region						
Hudson Strait	93.7	88.8	96.6	6.3**	3.4	11.2
Hudson Bay	93.9	90.6	96.0	6.1*	4.0	9.4
Ungava Bay	90.6	87.1	93.3	9.4*	6.7	12.9
Age Groups						
Youth (16-19)	87.0[a]	80.3	91.7	13.0[a]*	8.3	19.7
Young Adults (20-30)	92.4	87.9	95.4	7.6*	4.6	12.1
Adults (31-54)	93.8[b]	90.8	95.9	6.2[b]*	4.1	9.2
Elders (55 and up)	95.9[b]	91.4	98.1	4.1[b]**	1.9	8.6
Sex						
Male	88.0[a]	84.3	90.9	12.0[a]	9.1	15.7
Female	97.5[b]	96.2	98.4	2.5[b]*	1.6	3.8

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

Prepare Sea Mammals (seals, whales, walrus)

Due to frequencies of zero on the "30 or more" category for certain levels of the socio-demographic variables, the "10 to 29" and "30 or more" categories were combined into a single "10 or more" category for the "prepare sea mammals" variable.

Around 45% of Nunavimmiut prepared at least 1 sea mammal in the 12 months prior to the survey (Table 39).

Residents of Hudson Strait were more likely to prepare at least 1 sea mammal in the 12 months prior to the survey (55%) than residents of Hudson Bay (40%) and residents of Ungava Bay (45%; Table 39).

Males were more likely than women to prepare at least 1 sea mammal in the 12 months prior to the survey (58% vs. 32% for women). A similar pattern of results was observed for the other categories, however the sampling variance for the "10 or more" category was high (Table 39).

There were no significant differences between age groups in the frequency that Nunavimmiut prepared sea mammals in the 12 months prior to the survey (Table 39).

Table 39 Prevalence and 95-percent confidence intervals of the number of sea mammals (seals, whales, walrus) prepared in the 12 months prior to the survey overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Prepare Sea Mammals	None			1 or 2			3 to 9			10 or More		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Overall	54.9	52.0	57.8	25.7	23.1	28.6	14.7	12.6	17.1	4.6*	3.3	6.5
Ecological Region												
Hudson Strait	45.5[a]	39.9	51.2	29.0	23.0	35.9	18.7[a]	14.0	24.6	6.7**	3.5	12.5
Hudson Bay	60.1[b]	55.3	64.7	23.6	19.7	28.0	11.2[b]*	8.2	15.0	5.1**	3.1	8.3
Ungava Bay	55.2[b]	50.4	59.9	26.0	22.0	30.4	16.3[a]	13.1	20.1	2.6**	1.4	4.7
Age Groups												
Youth (16-19)	60.1	52.8	67.1	21.5	15.8	28.4	14.9*	10.0	21.4	3.5**	1.6	7.6
Young Adults (20-30)	55.9	49.7	61.9	25.0	19.9	30.9	12.8*	9.0	17.9	6.3**	3.6	10.7
Adults (31-54)	52.1	47.6	56.6	28.9	24.4	33.8	14.6	11.2	18.8	4.4**	2.4	7.9
Elders (55 and up)	55.1	48.3	61.8	23.3	18.1	29.4	18.1*	13.3	24.2	3.5**	1.4	8.0
Sex												
Male	42.1[a]	37.4	47.0	30.8[a]	26.3	35.8	19.5[a]	15.8	23.7	7.6[a]*	5.1	11.1
Female	67.8[b]	64.5	70.9	20.6[b]	17.9	23.6	10.0[b]	8.1	12.1	1.7[b]**	0.9	3.0

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

PART 4: AMMUNITION TYPE, MEAT CLEANING PRACTICE AND PUBLIC HEALTH MESSAGING ON LEAD AMMUNITION

Hunters (participants who hunted at least once in the 12 months prior to the 2017 survey) who reported they were the one who uses the firearm (answered "yes" to the Firearm User question) were asked what types of ammunition they use (see the *Ammunition Type* section below) and how they clean meat that is damaged after shooting with a bullet or a slug (see *Cleaning Meat Around Wound* section below).

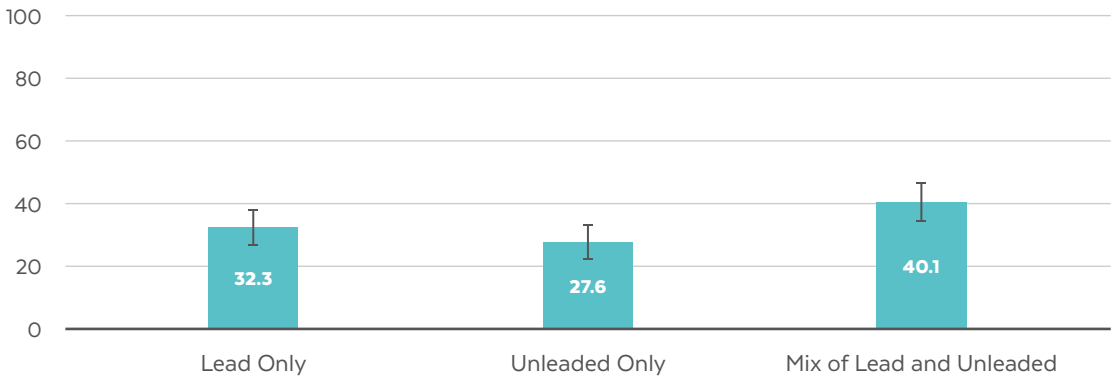
All participants were asked whether they had heard about the concern related to the use of lead shot for hunting game in Nunavik (response options of Yes and No; see *Hearing the Public Health Message Related to the Use of Lead Shot* section below). The public health message around lead shot that the Nunavik Regional Board of Health and Social Services released in 2011 stated:

"In order to reduce and prevent the adverse effects of prenatal and childhood lead exposure documented in this study, we strongly emphasize the need to ban all further use of lead shots." (NRBHSS, 2011)

Ammunition Type

Among Nunavimmiut hunters who used shot (35% of overall population), 40% of them used a mix of leaded and unleaded shot, 32% used only leaded shot, and 28% used only unleaded shot (Figure 26). There were no significant differences in the type of shot used (leaded, unleaded, or mixed) between ecological regions, age groups, and sexes (Table 40).

Figure 26 Prevalence and 95-percent confidence intervals of the use of shot types among Nunavimmiut hunters who use shot$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used shot (based on the lead shot use and unleaded shot use questions).

Table 40 Prevalence and 95-percent confidence intervals of the use of shot types among Nunavimmiut hunters who use shot$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

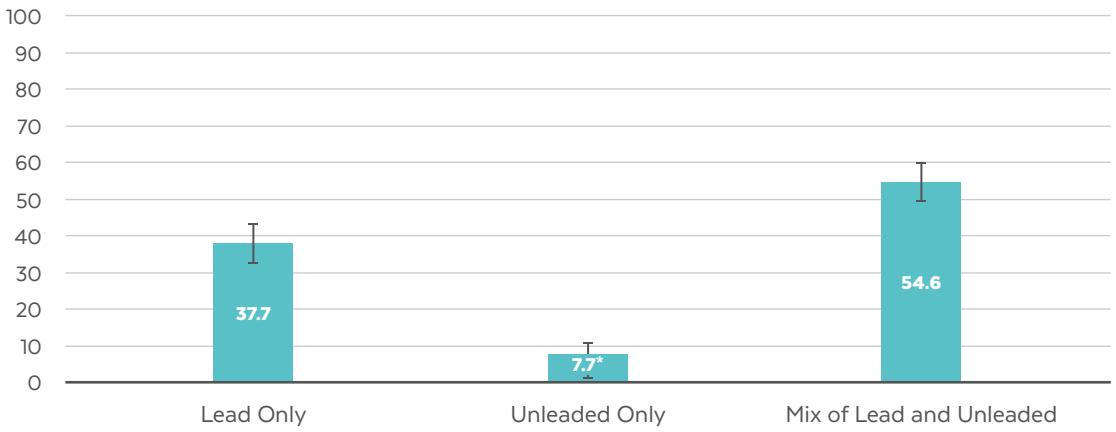
Shot Type	Leaded Only			Unleadaed Only			Mix of Leaded and Unleaded		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	25.7*	15.6	39.3	26.2*	15.6	40.6	48.1	34.6	61.9
Hudson Bay	37.8	28.8	47.7	21.9*	15.3	30.3	40.3	31.2	50.1
Ungava Bay	30.8	22.9	40.0	34.7	26.4	43.9	34.5	26.3	43.7
Age Groups									
Youth (16-19)	32.5*	20.7	47.1	27.2*	16.3	41.7	40.3*	26.5	55.8
Young Adults (20-30)	32.5*	23.0	43.8	20.7*	12.6	32.1	46.8	34.9	59.0
Adults (31-54)	34.8	26.2	44.5	29.6*	21.2	39.7	35.6	26.8	45.5
Elders (55 and up)	25.6*	15.6	39.0	36.5*	25.2	49.4	37.9*	26.1	51.4
Sex									
Male	31.6	25.8	38.1	28.0	22.6	34.1	40.4	34.1	47.0
Female	38.3*	26.6	51.4	24.0*	15.1	36.0	37.7*	26.3	50.6

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used shot (based on the lead shot use and unleaded shot use questions).

Among Nunavimmiut hunters who used bullets (41% of overall population), the majority of them used a mix of leaded and unleaded bullets (55%), followed by 38% who used only leaded bullets and 8%* who used only unleaded bullets (Figure 27). Males were more likely to use a mix of leaded and unleaded bullets (59% vs. 31% of females) whereas females were more likely to use only leaded bullets (63% vs. 33% of males; Table 41). There were no significant differences in the type of bullet used (leaded, unleaded, or mixed) between ecological regions and age groups (Table 41).

Figure 27 Prevalence and 95-percent confidence intervals of the use of bullet types among Nunavimmiut hunters who use bullets$^{\phi}$, population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used bullets (based on the lead bullet use and unleaded bullet use questions).

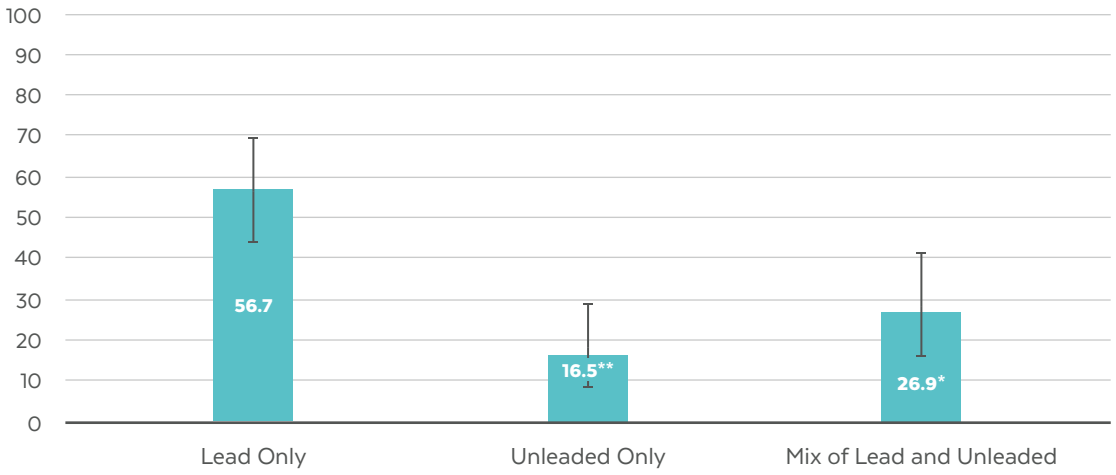
Table 41 Prevalence and 95-percent confidence intervals of the use of bullet types among Nunavimmiut hunters who use bullets[ϕ] by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Bullet Type	Leaded Only			Unleaded Only			Mix of Leaded and Unleaded		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	35.7*	25.9	47.0	4.4**	1.6	11.4	59.9	48.2	70.6
Hudson Bay	33.7	25.3	43.2	9.7**	5.4	16.8	56.6	46.9	65.9
Ungava Bay	42.6	35.2	50.4	8.3**	4.7	14.3	49.0	41.2	56.9
Age Groups									
Youth (16-19)	53.3	40.5	65.6	NP			41.4*	29.5	54.4
Young Adults (20-30)	37.3	27.7	47.9	7.1**	3.5	13.8	55.6	45.2	65.6
Adults (31-54)	28.9	21.3	37.9	9.2**	5.0	16.3	61.9	52.0	71.0
Elders (55 and up)	46.4	35.1	58.2	7.4**	3.3	15.8	46.1	35.0	57.6
Sex									
Male	32.7[a]	26.8	39.1	8.1*	5.3	12.1	59.3[a]	52.6	65.6
Female	63.1[b]	53.9	71.4	6.0**	2.9	12.0	30.9[b]	23.3	39.8

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.
NP Data not presented ($n < 5$).
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used bullets (based on the lead bullet use and unleaded bullet use questions).

Among Nunavimmiut hunters who used slugs (7% of overall population), the majority of them used only leaded slugs (57%), followed by 27%* who used a mix of leaded and unleaded slugs and 17%** who used only unleaded slugs (Figure 28). There were no significant differences in the type of slug used (leaded, unleaded, or mixed) between ecological regions, age groups, and sexes (Table 42).

Figure 28 Prevalence and 95-percent confidence intervals of the use of slug types among Nunavimmiut hunters who use slugs[ϕ], population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used slugs (based on the lead slug use and unleaded slug use questions).

Table 42 Prevalence and 95-percent confidence intervals of the use of slug types among Nunavimmiut hunters who use slugs$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Slug Type	Leaded Only			Unleaded Only			Mix of Leaded and Unleaded		
	%	95% CI		%	95% CI		%	95% CI	
Ecological Region									
Hudson Strait	70.0*	41.6	88.4	NP			30.0**	11.6	58.4
Hudson Bay	55.3*	35.2	73.9	NP			32.8**	16.3	55.2
Ungava Bay	42.5**	23.1	64.6	41.2**	21.2	64.7	16.2**	6.5	35.2
Age Groups									
Youth (16-19)	77.3*	47.7	92.7	NP			NP		
Young Adults (20-30)	52.0*	28.3	74.9	NP			23.9**	8.7	50.8
Adults (31-54)	56.1*	30.2	79.1	NP			29.8**	10.7	60.2
Elders (55 and up)	40.1**	16.1	70.1	NP			59.9**	29.9	83.9
Sex									
Male	56.6	42.2	70.0	18.4**	9.7	32.3	25.0**	14.0	40.5
Female	57.3**	23.5	85.4	NP			NP		

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used slugs (based on the lead slug use and unleaded slug use questions).

Hearing the Public Health Message Related to the Use of Lead Shot

Around 34% of Nunavimmiut reported hearing about the concern related to the use of lead shot for hunting game in Nunavik (Table 43).

Residents of Ungava Bay were more likely to report hearing the concern related to the use of lead shot (40%) than residents of Hudson Strait (31%) and residents of Hudson Bay (31%; Table 43).

Elders were more likely to report hearing the concern related to the use of lead shot (57%) than their younger counterparts (20%* for youth, 25% for young adults, and 36% for adults; Table 43). Similarly, adults were more likely to report hearing the concern related to the use of lead shot (36%) than their younger counterparts (20%* for youth and 25% for young adults; Table 43).

Males were more likely to report hearing the concern related to the use of lead shot (45%) than females (23%; Table 43).

Women of 50 years old and above were more likely to report hearing the concern related to the use of lead shot (37%) than women who had been pregnant in the year prior to the survey (18%*) and women of childbearing age who had not been pregnant in the year prior to the survey (18%; Table 43).

Table 43 Prevalence and 95-percent confidence intervals of hearing the public health message related to the use of lead shot among Nunavimmiut overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Heard of Public Health Messaging around Lead Shot		
	Prevalence	95% CI	
Overall	33.9	31.0	36.8
Ecological Region			
Hudson Strait	31.3[a]	25.5	37.6
Hudson Bay	30.6[a]	26.2	35.5
Ungava Bay	39.7[b]	35.5	44.2
Age Groups			
Youth (16-19)	20.3[a*]	14.7	27.3
Young Adults (20-30)	25.1[a]	20.0	30.9
Adults (31-54)	35.8[b]	31.0	40.8
Elders (55 and up)	56.5[c]	49.2	63.5
Sex			
Male	44.9[a]	39.9	50.0
Female	22.7[b]	20.1	25.5
Pregnancy Status†			
Pregnant	18.3[a*]	12.6	25.9
Non-pregnant women of childbearing age	18.0[a]	14.8	21.7
Women of non-childbearing age	36.5[b]	30.0	43.5

a, b, c Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
† This variable is among females only (males excluded).

Association between Ammunition Type and Hearing the Public Health Message

Among Nunavimmiut hunters who used shot, those who heard the public health message about the concern related to the use of lead shot were more likely to use only unleaded shot (37%) than those who did not hear the public health message (19%*; Table 44).

Table 44 Prevalence and 95-percent confidence intervals of the use of shot types among Nunavimmiut hunters who use shot[ϕ] by whether or not they heard the public health message around the use of lead shot, population aged 16 years and over, Nunavik, 2017

	Lead-only Shot			Unleaded-only Shot			Mix of Lead and Unleaded Shot		
	Prevalence	95% CI		Prevalence	95% CI		Prevalence	95% CI	
Heard concern about lead shot									
Yes	23.7[a*]	17.1	32.0	37.1[a]	29.0	46.0	39.2	30.7	48.3
No	40.3[b]	32.3	48.8	18.7[b*]	12.9	26.5	41.0	32.6	50.0

a, b Estimates with different letters are statistically different between those who heard the concern about lead shot (yes) and those who did not (no) ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used shot (based on the lead shot use and unleaded shot use questions).

This pattern of results was unique to shot as no significant differences between those who heard and did not hear the public health message and their use of bullet types (Table 45) and slug types were seen (Table 46).

Table 45 Prevalence and 95-percent confidence intervals of the use of bullet types among Nunavimmiut hunters who use bullets$^{\phi}$ by whether or not they heard the public health message around the use of lead shot, population aged 16 years and over, Nunavik, 2017

	Lead-only Bullets			Unleaded-only Bullets			Mix of Lead and Unleaded Bullets		
	Prevalence	95% CI		Prevalence	95% CI		Prevalence	95% CI	
Heard concern about lead shot									
Yes	33.2	25.9	41.4	11.0*	6.9	17.0	55.8	47.2	64.1
No	41.7	34.4	49.3	4.9**	2.5	9.0	53.5	45.8	61.0

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used bullets (based on the lead bullet use and unleaded bullet use questions).

Table 46 Prevalence and 95-percent confidence intervals of the use of slug types among Nunavimmiut hunters who use slugs$^{\phi}$ by whether or not they heard the public health message around the use of lead shot, population aged 16 years and over, Nunavik, 2017

	Lead-only Slugs			Unleaded-only Slugs			Mix of Lead and Unleaded Slugs		
	Prevalence	95% CI		Prevalence	95% CI		Prevalence	95% CI	
Heard concern about lead shot									
Yes	46.9*	30.3	64.3	23.1**	11.2	41.6	30.0**	15.8	49.4
No	69.1	47.3	84.8	NP			22.9**	9.6	45.5

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

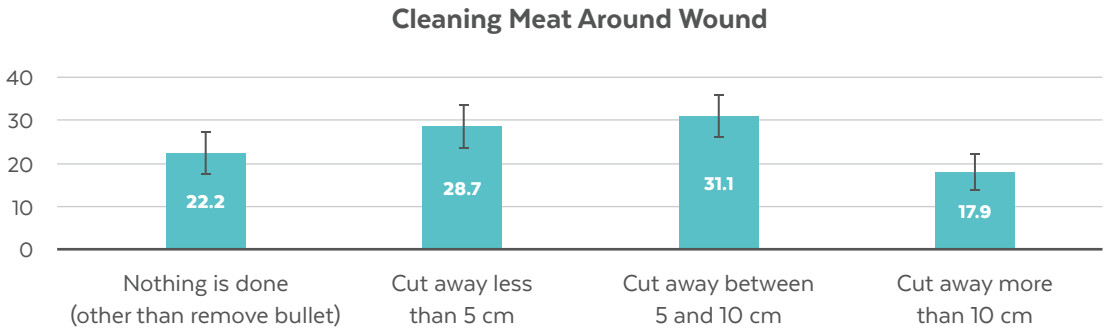
NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question) *and* who used slugs (based on the lead slug use and unleaded slug use questions).

Cleaning Meat Around Wound

The most commonly reported behaviour for cleaning meat that was damaged by a bullet/slug impact was to extract the slug/bullet and then cut away between 5 and 10 cm of the meat around the slug/bullet impact (31%; Figure 29). Around 22% of Nunavimmiut hunters reported that nothing was done other than extracting the slug/bullet, 29% reported that they extract the slug/bullet and cut away less than 5 cm of the meat around the slug/bullet impact, and 18% reported that they extract the slug/bullet and cut away more than 10 cm of the meat around the slug/bullet impact (Figure 29).

Figure 29 Prevalence and 95-percent confidence intervals of cleaning meat around a bullet/slug wound among Nunavimmiut hunters who use a firearm$^{\phi}$, population aged 16 years and over, Nunavik, 2017



ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question).

There were no significant differences between ecological regions, age groups or sexes in the way hunters who use a firearm cleaned the meat that was damaged by a bullet or slug (Table 47).

Table 47 Prevalence and 95-percent confidence intervals of cleaning meat around a slug/bullet wound among Nunavimmiut hunters who use a firearm$^{\phi}$ by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Cleaning Meat Around Wound	Extract bullet/slug only			Extract and cut away less than 5cm			Extract and cut away between 5cm to 10cm			Extract and cut away more than 10cm		
	%	95% CI		%	95% CI		%	95% CI		%	95% CI	
Ecological Region												
Hudson Strait	25.6*	16.2	38.1	27.6*	18.3	39.5	25.4*	17.5	35.4	21.3*	13.4	32.0
Hudson Bay	19.5*	13.4	27.3	31.6	23.3	41.2	30.4	22.4	39.8	18.6*	12.6	26.5
Ungava Bay	22.4*	16.2	30.1	26.7	20.2	34.3	36.2	29.2	43.8	14.7*	10.0	21.0
Age Groups												
Youth (16-19)	31.9*	20.4	46.2	26.4*	16.5	39.3	29.9*	18.5	44.6	11.8**	5.2	24.4
Young Adults (20-30)	29.3*	20.6	40.0	31.1	23.0	40.5	23.9*	16.5	33.4	15.7**	9.3	25.3
Adults (31-54)	17.8*	11.6	26.3	24.8*	17.6	33.8	37.9	29.7	46.9	19.4*	13.7	26.8
Elders (55 and up)	12.4**	6.8	21.6	35.3*	25.6	46.3	29.3*	20.4	40.2	23.0*	15.1	33.4
Sex												
Male	23.4	18.3	29.4	28.5	23.0	34.6	30.8	25.7	36.5	17.3	13.1	22.6
Female	16.2*	10.0	25.1	30.1	22.4	39.0	32.7	24.2	42.7	21.0*	14.6	29.3

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hunting at least once in the year prior to the survey (based on the frequency of hunting across seasons questions) *and* who reported using a firearm (based on the firearm use question).

PART 5: PUBLIC HEALTH MESSAGING ON MERCURY IN COUNTRY FOODS IN NUNAVIK

In October 2011, the Nunavik Regional Board of Health and Social Services released public health messages stating:

"In Nunavimmiut, the main source of mercury exposure is beluga meat. Therefore, until we have evidence of a decrease of the mercury content in this specific country food, pregnant women and those of childbearing age should decrease their consumption of beluga meat." (NRBHSS, 2011)

All participants of the *Qanuilirpitaa?* 2017 survey were asked whether they had "heard about mercury in country foods in Nunavik" (response options of Yes and No; see *Hearing about Mercury in Country Foods in Nunavik* section below).

Participants who reported that they had heard about mercury in country foods in Nunavik (i.e. answered "yes") were asked whether or not they had modified their eating habits (response options of Yes and No; see *Modifications to Eating Habits in General* section below).

Participants who reported that they had heard about mercury in country foods in Nunavik *and* who reported that they had modified their eating habits (i.e. answered "yes" to both preceding questions) were asked what specific changes they had made to their eating habits – i.e. stopped eating, eat less, eat more, or changed the way it is prepared – for each of the following country food items: beluga meat, beluga mattaaq/blubber/fat, seal meat, seal liver, seal fat, and any "other" country food items (see *Modifications to Eating Habits of Specific Country Food Items* section below).

Hearing the Public Health Message about Mercury in Country Foods in Nunavik

Around 58% of Nunavimmiut reported that they had heard about mercury in country foods in Nunavik (Table 48).

Residents of Hudson Bay were less likely to report hearing about mercury in country foods (52%) than residents of Hudson Strait (61%) and residents of Ungava Bay (64%; Table 48).

There were significant differences in hearing about mercury in country foods between all four age groups. Youth were the least likely to report hearing about mercury in country foods (33%), followed by young adults (49%), then adults (66%), and finally Elders, who were the most likely to report hearing about mercury in country foods (79%; Table 48).

Males were more likely to report hearing about mercury in country foods (61%) than females (55%); Table 48).

Women 50 years old and above were more likely to report hearing about mercury in country foods (71%) than women who had been pregnant in the year prior to the survey (43%) and women of childbearing age who had not been pregnant in the year prior to the survey (51%; Table 48).

Table 48 Prevalence and 95-percent confidence intervals of hearing about mercury in country foods in Nunavik among Nunavimmiut overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Heard of Public Health Messaging around Mercury in Country Foods		
	Prevalence	95% CI	
Overall	58.2	54.9	61.3
Ecological Region			
Hudson Strait	61.2[a]	54.8	67.2
Hudson Bay	52.1[b]	47.1	57.0
Ungava Bay	63.5[a]	59.0	67.8
Age Groups			
Youth (16-19)	33.0[a]	25.8	41.1
Young Adults (20-30)	48.6[b]	42.1	55.1
Adults (31-54)	65.9[c]	60.9	70.5
Elders (55 and up)	78.5[d]	71.9	83.8
Sex			
Male	61.1[a]	56.0	66.0
Female	55.2[b]	51.6	58.7
Pregnancy Status†			
Pregnant	42.8[a]	34.9	51.1
Non-pregnant women of childbearing age	51.2[a]	46.7	55.7
Women of non-childbearing age	71.3[b]	64.1	77.6

a, b, c, d Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).

† This variable is among females only (males excluded).

Modifications to Eating Habits in General

Nunavimmiut who reported hearing about mercury in country foods were subsequently asked whether or not they had modified their eating habits (response options of Yes and No), with around 20% reporting that they had modified their eating habits (Table 49).

Among Nunavimmiut who had heard about mercury in country foods, there were no significant differences between ecological regions, age groups or sexes in their reported modifications to eating habits (Table 49).

Among women who had heard about mercury in country foods, those of childbearing age but who were not pregnant in the year prior to the survey were more likely to report having modified their eating habits (27%) than women of 50 years old and above (15%*) and (potentially) women who had been pregnant in the year prior to the survey (14%**), although this latter estimate has very high sampling variance (Table 49).

Table 49 Prevalence and 95-percent confidence intervals of modifying eating habits among Nunavimmiut who heard about mercury in country foods$^{\phi}$, overall and by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

	Yes, Modified Eating Habits		
	Prevalence	95% CI	
Overall	20.3	17.2	23.8
Ecological Region			
Hudson Strait	18.0*	12.5	25.2
Hudson Bay	21.1	15.8	27.6
Ungava Bay	21.1	16.8	26.2
Age Groups			
Youth (16-19)	28.8*	18.2	42.4
Young Adults (20-30)	16.6*	11.3	23.9
Adults (31-54)	21.1	16.6	26.3
Elders (55 and up)	19.5*	13.8	26.8
Sex			
Male	19.5	14.9	25.0
Female	21.3	17.5	25.7
Pregnancy Status†			
Pregnant	14.4[a]**	7.1	26.9
Non-pregnant women of childbearing age	26.8[b]	21.3	33.0
Women of non-childbearing age	14.5[a]*	9.5	21.7

a, b Estimates with different letters are statistically different between levels of that socio-demographic variable ($p < 0.05$).
* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.
ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question).
† This variable is among females only (males excluded).

Modifications to Eating Habits of Specific Country Food Items

Nunavimmiut who reported hearing about mercury in country foods *and* who subsequently said they had modified their eating habits in general (12% of overall population) were asked what changes they had made to their eating habits of specific country food items. Response options included: stopped eating, eat less, eat more, or changed the way it is prepared.

When asked what changes they had made to eating beluga meat – *the focus of the 2011 public health messages* – around 68% reported eating less of it (53%) or that they stopped eating it (15%; Figure 30). Around one-quarter (24%) reported eating more beluga meat, and a small percentage (8%) reported changing the way it was prepared.

Unfortunately, a similar pattern was observed for other country food items that were not part of the public health messages. The prevalence of "eating less" ranged from 49% to 59% depending on the country food item, and the prevalence of "stopped eating" ranged from 9% to 25% (Figures 31 through 35).

There were no differences detected between ecological regions, age groups, sexes, or women of differing pregnancy statuses on modifications to eating habits of any of the specific country food items, including beluga meat (Tables 50 through 55).

A total of 59 participants reported modifying eating habits of "other" country food items, including trout (16 participants), arctic char (10 participants), and other types of fish or "fish" in general (19 participants). Additional "other" country food species (such as polar bear, mussels and other seafood, caribou) were reported by a small number of participants.

Figure 30 Prevalence and 95-percent confidence intervals of changes to eating beluga meat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, population aged 16 years and over, Nunavik, 2017

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Table 50 Prevalence and 95-percent confidence intervals of changes to eating beluga meat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general[ϕ], by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits Beluga Meat	Stopped Eating			Eat Less			Eat More			Change the Way it is Prepared	
	%	95% CI		%	95% CI		%	95% CI		%	95% CI
Ecological Region											
Hudson Strait	15.7**	6.3	34.0	57.9*	35.7	77.3	23.4**	9.3	47.5	NP	
Hudson Bay	19.5**	10.0	34.5	45.7*	29.4	63.0	19.1**	8.3	38.0	NP	
Ungava Bay	11.5**	4.9	24.6	55.7	41.6	69.0	28.4*	17.5	42.6	NP	
Pregnancy Status[†]											
Pregnant	NP			NP			NP			NP	
Non-pregnant women of childbearing age	20.8**	11.8	34.2	61.1	45.8	74.4	15.8**	7.3	30.9	NP	
Women of non-childbearing age	NP			41.5**	19.6	67.3	NP			NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

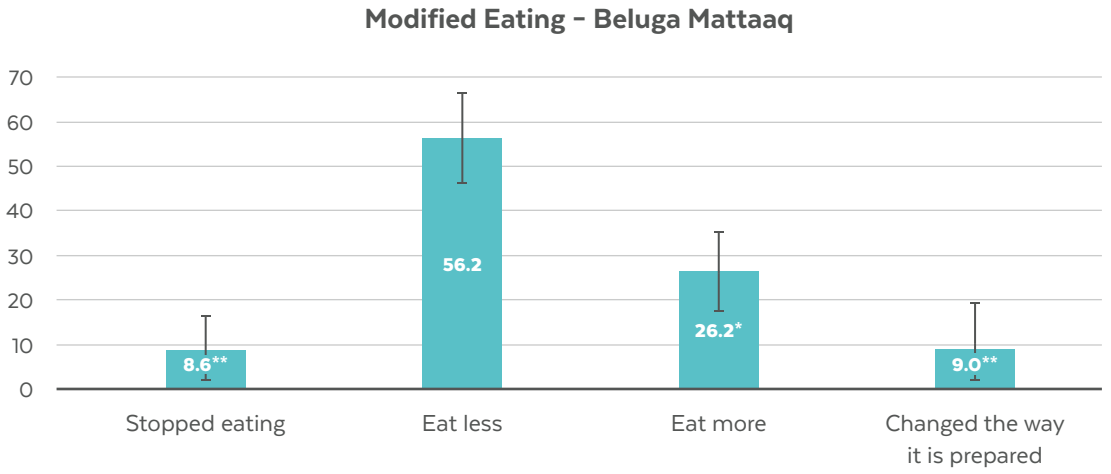
** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

Figure 31 Prevalence and 95-percent confidence intervals of changes to eating beluga mattaaq among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general[ϕ], population aged 16 years and over, Nunavik, 2017



* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Table 51 Prevalence and 95-percent confidence intervals of changes to eating beluga mattaaq among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits	Stopped Eating			Eat Less			Eat More			Change the Way it is Prepared	
Beluga Mattaaq	%	95% CI		%	95% CI		%	95% CI		%	95% CI
Ecological Region											
Hudson Strait	NP			51.1*	31.3	70.5	22.1**	8.7	45.8	NP	
Hudson Bay	14.2**	5.2	33.1	50.0*	34.0	66.0	26.0**	13.8	43.6	NP	
Ungava Bay	NP			65.9	51.9	77.6	29.1*	18.2	43.0	NP	
Pregnancy Status†											
Pregnant	NP			79.7*	27.0	97.6	NP			NP	
Non-pregnant women of childbearing age	NP			60.0	45.5	73.1	27.7**	16.0	43.6	NP	
Women of non-childbearing age	NP			57.5*	33.0	78.8	NP			NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

Figure 32 Prevalence and 95-percent confidence intervals of changes to eating seal meat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, population aged 16 years and over, Nunavik, 2017

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Table 52 Prevalence and 95-percent confidence intervals of changes to eating seal meat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits Seal Meat	Stopped Eating			Eat Less			Eat More			Change the Way it is Prepared	
	%	95% CI		%	95% CI		%	95% CI		%	95% CI
Ecological Region											
Hudson Strait	NP			53.9*	33.0	73.5	23.5**	9.6	47.0	NP	
Hudson Bay	12.5**	6.1	23.7	52.3*	35.1	69.0	31.4**	17.6	49.6	NP	
Ungava Bay	NP			69.0	52.8	81.6	24.1**	12.6	41.2	NP	
Pregnancy Status†											
Pregnant	NP			NP			NP			NP	
Non-pregnant women of childbearing age	NP			66.4	48.3	80.7	24.9**	12.6	43.2	NP	
Women of non-childbearing age	NP			51.9**	27.8	75.1	NP			NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

Figure 33 Prevalence and 95-percent confidence intervals of changes to eating seal liver among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, population aged 16 years and over, Nunavik, 2017

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Note: Prevalence and 95-percent confidence intervals not presented (NP) for the "change the way it is prepared" category.

Table 53 Prevalence and 95-percent confidence intervals of changes to eating seal liver among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits Seal Liver	Stopped Eating			Eat Less			Eat More			Change the Way it is Prepared	
	%	95% CI		%	95% CI		%	95% CI		%	95% CI
Ecological Region											
Hudson Strait	21.8**	9.2	43.7	52.2*	28.6	74.9	26.0**	10.4	51.4	NP	
Hudson Bay	21.1**	10.5	38.1	36.4**	20.5	55.9	37.8**	21.1	58.1	NP	
Ungava Bay	16.8**	7.1	34.7	61.3	43.0	76.9	19.3**	8.8	37.3	NP	
Pregnancy Status†											
Pregnant	NP			NP			NP			NP	
Non-pregnant women of childbearing age	29.5**	15.1	49.6	49.2*	30.0	68.6	21.4**	9.8	40.5	NP	
Women of non-childbearing age	NP			49.6**	25.3	74.0	33.3**	13.1	62.3	NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

Figure 34 Prevalence and 95-percent confidence intervals of changes to eating seal fat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general$^{\phi}$, population aged 16 years and over, Nunavik, 2017

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Table 54 Prevalence and 95-percent confidence intervals of changes to eating seal fat among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general[ϕ], by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits Seal Fat	Stopped Eating			Eat Less			Eat More			Change the Way it is Prepared	
	%	95% CI		%	95% CI		%	95% CI		%	95% CI
Ecological Region											
Hudson Strait	27.8**	12.2	51.7	41.2**	21.6	64.0	31.0**	13.4	56.6	NP	
Hudson Bay	15.1**	7.0	29.6	54.8*	36.5	71.9	21.1**	9.5	40.4	NP	
Ungava Bay	12.7**	5.9	25.2	60.8	45.3	74.5	23.0**	12.2	39.0	NP	
Pregnancy Status†											
Pregnant	NP			NP			NP			NP	
Non-pregnant women of childbearing age	19.6**	10.2	34.2	55.7	39.9	70.4	17.3**	8.1	33.3	NP	
Women of non-childbearing age	NP			48.0**	25.6	71.2	25.2**	9.3	52.5	NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

Figure 35 Prevalence and 95-percent confidence intervals of changes to eating other country food items among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general[ϕ], population aged 16 years and over, Nunavik, 2017

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

Table 55 Prevalence and 95-percent confidence intervals of changes to eating other country food items among Nunavimmiut who heard about mercury in country foods and had modified their eating habits in general[ϕ], by socio-demographic variables, population aged 16 years and over, Nunavik, 2017

Modifications to Eating Habits	Stopped Eating			Eat Less			Eat More		Change the Way it is Prepared	
Other Food Source	%	95% CI		%	95% CI		%	95% CI	%	95% CI
Ecological Region										
Hudson Strait	25.2**	8.2	56.0	74.8*	44.0	91.8	NP		NP	
Hudson Bay	NP	10.3	58.8	49.3**	24.9	74.0	NP		NP	
Ungava Bay	22.9**	11.3	40.9	52.8*	32.8	72.0	NP		NP	
Pregnancy Status†										
Pregnant	NP			NP			NP		NP	
Non-pregnant women of childbearing age	31.7**	17.0	51.3	50.4*	31.5	69.1	NP		NP	
Women of non-childbearing age	NP			NP					NP	

* Coefficient of variation is greater than 15% and lower than or equal to 25%. Estimate must be interpreted with caution due to the high sampling variability.

** Coefficient of variation is greater than 25%. Estimate is presented for illustrative purposes only and must be used with caution.

NP Data not presented ($n < 5$).

ϕ Nunavimmiut who reported hearing about mercury in country foods in Nunavik (i.e. "yes" response on that question) *and* who reported that they had modified their eating habits in general (i.e. "yes" response on that question).

† This variable is among females only (males excluded).

5 DISCUSSION

Connections with the environment are key for many aspects of Inuit health. Participation in hunting, fishing, and collecting activities and spending time on the land provide access to resources that support food security, provide opportunities for physical activity and maintain balance in mental health. These same relationships are pathways of exposure to environmental contaminants, zoonotic diseases and exposures to weather and temperature extremes that can impact health. This survey asked Nunavimmiut about their participation in harvesting activities and time on the land, firearm use, preparation of harvested animals as well as their awareness of and response to public health messages about environmental contaminants and country foods.

FREQUENCY OF GOING OUT ON THE LAND

Spending time on the land pursuing various activities is still critically important for the large majority of Nunavimmiut. Nearly all Nunavimmiut (87%) reported going out on the land occasionally or often. Only a small percentage (13%) of individuals reported never going out on the land. Even short trips provide the opportunity to participate in land-based harvesting activities. Hudson Bay residents went out occasionally or often on day trips more than the other two regions. Going out for a couple of days was more commonly reported by Ungava Bay residents. Longer trips (a week or more) were more commonly taken by Hudson Strait and Hudson Bay residents. The frequency of going out on the land did not differ with age, but females were more likely to go on shorter trips (day trips vs. trips of a couple of days) than males. No difference was seen between the sexes for longer trips, and self-perceived physical health status was not associated with frequency of going out on the land. It is evident that maintaining a strong relationship with the land is still very important to the large majority of residents in the region, both males and females, regardless of age.

PARTICIPATION IN HUNTING, FISHING, GATHERING ACTIVITIES

Harvesting activities are widely and commonly practiced by the majority of Nunavimmiut. Most people reported going hunting at least once in each season (76%-spring, 77%-summer, 62%-fall, 61%-winter). In the spring, going hunting at least once was more common among residents of Hudson Strait and Ungava Bay than Hudson Bay, while in the other three seasons it was more common among residents of Ungava Bay only. Residents of Ungava Bay were also more likely to regularly hunt (once a week or more) in the winter than residents in the other two ecological regions. Regional differences may reflect seasonal differences in species' availability or in socio-demographics between the three eco-regions in Nunavik, including time spent in wage earning employment and access to economic resources for hunting equipment and supplies. In the spring, youth (aged 16-19) were more likely to report hunting at least once compared to older age groups, but no age differences among those that hunted once a week or more were seen. In all seasons, males were more likely to go hunting in Nunavik in the year prior to the survey, and to hunt more regularly, than females.

Similar results were reported for participation in fishing in that a majority of Nunavimmiut went fishing at least once in each season in the year prior to the survey (77%-spring, 76%-summer, 56%-fall, 58%-winter). The same pattern observed in hunting frequency across regions was reported for fishing. In the spring, going fishing at least once was more common among residents of Hudson Strait and Ungava Bay than Hudson Bay, while in the other three seasons it was more common among residents of Ungava Bay only. Ungava Bay residents were also more likely to fish regularly (once a week or more) in the spring, summer, and winter. Elders were more likely to report fishing regularly in the spring and the fall than their younger counterparts. Also, males were more likely than females to go fishing at least once in each season, and were more likely to fish regularly in the summer and winter than females.

While recognized as a means to get some highly valued country foods, a smaller proportion of Nunavimmiut reported seafood harvesting in all seasons than other harvesting activities (29%-spring, 49%-summer, 31%-fall, 15%-winter). This activity was more common among Hudson Strait residents than residents of Hudson Bay in all seasons and residents of Ungava Bay in three seasons (all except summer). Few differences were noted for seafood harvesting frequencies between age groups. Males were more likely than females to participate in these activities in all seasons except the summer during which the frequency of participation between sexes was comparable. These differences likely represent differing access to key seafood species at various times of the year (eg. summer season is the easiest to access seafood species with the absence of ice cover in the intertidal region where some key species like mussels can be harvested), community traditions and knowledge across the ecological regions and differing levels of knowledge and interest in these country food species among age groups. In fact, shellfish and seaweed were reported to be more frequently consumed in Hudson Strait and Ungava Bay villages than in the Hudson Bay region previously by Rapinski et al. (2018). Also, Elders from Ivujivik and Kangiqsualujjuaq have previously reported that these local marine foods, accessible all year round from the shore (known as *Tinninimiutait*), which include blue mussels (*uviluq*) and seaweeds (*kuanniq*), play a key role in local culture, food security, health and well-being in those communities (Rapinski et al., 2018).

Similar to hunting and fishing, the majority of Nunavimmiut (75%) participated in berry picking at least once during the picking season in the year prior to the survey. About 1 in 3 Nunavimmiut went picking berries once a week or more and no differences were seen between ecological regions in regards to participation in this activity. However, interest in this accessible activity seemed to be higher among Elders and females as they were more likely to report berry picking once a week or more than younger individuals and males in the region. Berry picking requires fewer hunting resources, equipment, physical demands and is more predictable in terms of time needed for a successful collection. The patterns seen in berry collecting frequency reflect the nature of this important land-based activity.

GENERAL PARTICIPATION IN LAND-BASED ACTIVITIES AND COMPARISON WITH 2004

When looking at participation in hunting, fishing and/or seafood harvesting across seasons, it was seen that the majority (75%) of Nunavimmiut participated in at least one of these activities at least once in 3 or 4 seasons. Only 8% reported never participating in any of these activities at all in the year prior to the survey. Ungava Bay residents were the most likely to report participation in at least one of these activities in 3 or 4 seasons, followed by Hudson Strait and then Hudson Bay. No differences were seen between age groups. Males were more likely to report participation in 3 to 4 seasons than females, along with individuals reporting their physical health as good, very good, or excellent compared to poor or fair health. Differences between ecological regions may be related to regional differences in species availability or socio-demographics within the region as a whole, as well as access to harvesting equipment and money for supplies. Other differences seen may reflect general cultural norms between the sexes particularly as berry collecting was not included in this comparative variable, time available to participate in these activities regularly and the general physical health and mobility that is needed to travel and be active on the land.

No difference was seen in the percentage of individuals reporting that they had hunted at least once in spring, fall or winter between 2004 and 2017. In the summer, a greater proportion of residents reported hunting at least once in the 2017 survey compared to 2004. However, hunting more regularly (at least once a week) was more commonly reported for all four seasons in 2004 than in 2017. No changes were observed for fishing between the two surveys with the exception of fishing once a week which was more commonly reported in 2017 than 2004. Similar to the results for hunting, berry picking at least once was reported by a greater percentage of Nunavimmiut in 2017 than in 2004. These differences between 2017 and 2004 may be related to changes in socio-demographics in the region or in time, access to resources to support travel on the land and harvesting activities or ecological changes taking place in these regions over time. Additionally, planning and programming implemented by the Regional Health Board to support access to land in support of mental wellness may have played a role in the results seen here (NRBHSS, n.d.). Overall, taking part in harvesting activities at least once has generally increased between 2004 and 2017, however, regular participation in those activities has generally stayed stable or decreased between 2004 and 2017. These changes and the apparent decrease in more year-round participation in hunting activities should be examined in more detail (Arriagada and Bleankney, 2019).

We also examined changes between 2004 and 2017 in harvesting activity participation in the two administrative regions in Nunavik. Among Hudson Coast residents, more regular hunting (at least once a week) was lower in 2017 than 2004 in all seasons except winter, while berry picking at least once was more commonly reported. No change in

participation in fishing was seen. Among Inuit living on the Ungava Coast, some differences in participation frequencies were seen. In the summer and fall, Ungava Coast residents were more likely to go hunting at least once in 2017 than 2004 and this is mainly due to an increase in occasional participation. Ungava residents were also more likely to go fishing at least once in the spring, summer and fall in 2017 compared to 2004. No changes in berry picking were seen between the two surveys among Ungava Coast residents.

When examining patterns of harvesting activities between 2004 and 2017 within each age group and sex separately, some differences were seen. Youth (aged 16 to 19) were more likely to go hunting in spring and summer, fishing in the spring, and berry collecting in 2017 than 2004. The frequency of participation in fishing in the fall and berry picking was greater for young adults (aged 20-30) in 2017 compared to 2004. Among older adults (aged 31-54), hunting or fishing at least once was not different between these two time periods, but regular (once a week or more) participation in hunting in spring, summer and fall, fishing in the spring, and berry picking were all lower in 2017 than 2004. Among Elders (aged 55 and over), the levels of hunting at least once were similar between the two time periods but regular hunting in spring, summer and winter was similarly lower in 2017 than 2004. Regular fishing in the winter was also lower in 2017 than 2004 among Elders.

Among males, regular participation in hunting activities was lower in 2017 than 2004., Males were more likely to report berry picking at least once in 2017 when compared to 2004. Females were more likely to hunt at least once in spring and summer and more likely to berry pick at least once in 2017 than 2004.

The regional, age and sex specific changes in participation in harvesting activities between 2004 and 2017 should be further examined because of the importance that the connection to the land and harvesting of country food resources represents for Nunavimmiut (Kumar et al., 2019; Arriagada and Bleakney, 2019; King and Furgal, 2014).

CHALLENGES FINDING, CATCHING, HUNTING COUNTRY FOOD SPECIES

When asked about challenges finding, hunting or catching species since 2011, nearly half of Nunavimmiut caribou hunters reported caribou being harder to find, hunt or catch. This was also more commonly reported among caribou hunters in Ungava Bay communities. One-third of seal hunters said seals were harder to find, hunt or catch than in previous seasons and this was more commonly experienced among Hudson Strait hunters than those in Hudson Bay. Half of beluga hunters reported that beluga were harder to find, hunt or catch and this was more commonly reported among hunters in Hudson Bay than Ungava Bay or Hudson Strait. Slightly less than half of walrus hunters said walrus had become harder to find, hunt or catch. Approximately one-third of goose hunters said geese were actually easier to find, hunt or catch and this was more commonly reported in Hudson Bay than Ungava Bay.

In the region as a whole, there were no significant differences among very active subsistence hunters in reported difficulties finding, hunting or catching species in the few years leading up to the 2004 survey compared to the few years leading up to the 2017 survey. However, among Ungava Coast residents, a larger proportion of individuals said at least one species was harder to hunt in the period before 2017 than before 2004. This was also the case for females in the region. Among Hudson Coast residents, no differences between the 2004 and 2017 surveys were reported. Differences in reported harvesting difficulties may reflect changes in wildlife availability or accessibility which can be influenced by a number of factors including climate, environmental change and variability, and species ecology. As well, this may be influenced by changes among hunters and frequency of time spent on the land, access to equipment, or other human related factors (Ford et al., 2010; Furgal and Rochette, 2007). Because of the importance of these resources culturally, economically and to health in the region, more detailed analysis of these changes over time are being explored (Rosol et al., 2016a,b).

FIREARM USE, CLEANING OF GUNS AND PREPARATION OF ANIMALS

Using and cleaning firearms can be a source of exposure to lead for Nunavimmiut hunters as well as others in their household (Fillion et al., 2014). In 2017, just over half of Nunavimmiut hunters said they used a firearm in the year prior to the survey, indicating that many Nunavimmiut who take part in hunting activities are not handling firearms. Firearm use was more likely among residents of Hudson Strait than Hudson Bay and among males than females. A little more than one-third of hunters said someone cleans guns inside their house and this was more commonly reported among males. No differences were seen with gun cleaning behaviour among age groups, ecological regions or based on the pregnancy status of individuals. These results

are significant in that blood lead levels among those who reported hunting once a week or more during the summer, and those using lead shot (pellets) or cleaning guns inside the house, or living in houses where someone cleaned guns inside, were significantly higher than among other Nunavimmiut (see the *Qanuilirpitaa?* 2017 thematic report entitled *Environmental Contaminants: Metals* (Lemire et al., 2021)).

While country foods are critically important to the health and well-being of Nunavimmiut, the frequency at which they are prepared or the way they are prepared can expose individuals to zoonotic diseases such as trichinellosis or rabies (Ducrocq et al., 2020; Martinez-Levasseur et al., 2020; Mediouni et al., 2020). Nearly two-thirds of Nunavimmiut reported preparing at least one bird and caribou or muskox in the year prior to the survey, and just under half reported preparing at least one sea mammal. A much smaller percentage reported preparing at least one fox, wolf or dog (15%), or bear (7%). A small proportion of individuals reported preparing more than 10 animals of any species such that this activity seems to be concentrated among more experienced Inuit. More birds, caribou or muskox, and sea mammals were prepared by Hudson Strait residents and preparation was more common among males for most species. While Elders were more commonly involved in the preparation of birds, youth were more likely to prepare bear. Patterns in associations with region, age and sex for preparation of animals are important with regards to the transmission of skills and knowledge associated with harvesting and trapping (Pearce et al., 2011), and are examined in association with prevalence of zoonotic diseases in the region in the *Zoonotic and Gastrointestinal Diseases* thematic report in this series (Ducrocq et al., 2021; Mediouni et al., 2020).

PUBLIC HEALTH COMMUNICATION AND CONTAMINANTS

As country foods are the primary pathway of exposure to key environmental contaminants such as lead and mercury in the region for Nunavimmiut, the Public Health Department periodically releases messages to inform the public on how they can reduce their exposure to contaminants such as lead and mercury while still maintaining and promoting the health benefits associated with country food consumption. The survey asked Nunavimmiut about their awareness and response to the messages and information released on these topics previously.

LEAD

If particles of lead from ammunition are not cleaned away from the wound in a harvested animal shot with leaded ammunition, it can expose the individual to lead through ingestion (Fillion et al., 2014; Couture et al., 2012). The use of lead shot (pellets) for hunting migratory waterfowl was banned in Canada as of 1999. Shortly after, Nunavik public health authorities actively informed Nunavimmiut about the risks of using lead shot for hunting (Levesque et al., 2003). This contributed to a voluntarily ban and replacement of lead shot by steel in the region, and exposures declined between 1992 and 2004 among adults (Dewailly et al., 2007; Couture et al., 2012). In association with results from the Nunavik Child Development Study reporting that prenatal exposure to lead was associated with reduced body and head size and poorer intellectual function among children at school age in the region, and that childhood exposure was also related to a greater risk of rule-breaking behaviour and hyperactivity, the Nunavik Regional Board of Health and Social Services then once again encouraged harvesters in the region to reduce their use of leaded ammunition when possible, especially the use of leaded shot.

"In order to reduce and prevent the adverse effects of prenatal and childhood lead exposure documented in this study, we strongly emphasize the need to ban all further use of lead shots." (NRBHSS, 2011)

Results from the survey show that among hunters who use shot, 40% of them used a mix of leaded and unleaded shot. The remaining 60% of these hunters were roughly equally divided between lead-only shot use (32%) and unleaded-only shot use (28%). As for bullets, the majority of hunters using them use a mix of both leaded and unleaded bullets (55%) and this was more commonly reported among males than females (59% vs. 31%, respectively). Similarly, among those hunters using slugs, the majority reported only using leaded slugs (57%). These patterns of ammunition use likely reflect ammunition availability, preference and wildlife most commonly harvested in the different regions in the years prior to the survey. These results should be considered in any future campaigns to encourage the use of unleaded ammunition to reduce the potential for lead exposure among Nunavimmiut (Couture et al., 2012).

Approximately one-third of Nunavimmiut reported hearing the previous messages about health concerns associated with the use of lead shot. Hearing the messages was more common among residents of Ungava Bay than the other two ecological regions, and among Elders than younger groups. Further, it was more commonly recalled among males than females. Considering the importance of this issue for women of childbearing age and pregnant

women and its association with the protection of the developing fetus from in-utero exposure to this contaminant, it is concerning to note that women 50 years old and above were more likely to report hearing this message than women of childbearing age (pregnant or not pregnant). However, on a positive note, among hunters that use shot, those that heard the public health message related to the use of leaded ammunition were more likely to report the use of only unleaded shot than those that did not report hearing this message. These patterns of awareness likely relate to message release frequency in the different regions, socio-demographics of the target audiences by villages, and other factors. Because of the importance of these message campaigns for the purposes of health protection, particularly among women of childbearing age, it is important to evaluate message reception, awareness and comprehension in greater detail as is currently being pursued.

The Public Health Department further recommended the removal of 10 cm of flesh around the bullet channel of animals killed with leaded bullets to eliminate a large portion of the lead fragments from the meat and reduce the potential for ingestion of these fragments and lead exposure among consumers. Nearly one-third of individuals said that they cleaned 5-10 cm around the wound of animal where it had been hit, while just under one-third said they extracted the bullet and cut less than 5 cm around the wound. Approximately 20% of Nunavimmiut said they cleaned more than 10 cm around the wound and extracted the bullet, while roughly the same proportion said they did nothing to clean the around the wound. These behaviours did not differ within the region by age, sex or ecological region. Past research (Fachehoun et al., 2015) has shown that these behaviours may be very valuable in minimizing the risk of exposure to lead for Inuit and therefore greater evaluation of the awareness and performance of these actions should be conducted.

MERCURY

The Public Health Department has previously distributed messages in the region concerning country food consumption and exposure to mercury (Boyd et al., 2019). In response to results from the Nunavik Child Development Study that reported prenatal exposure to mercury was associated with poorer intellectual function and poorer attention in the classroom among school-aged children, the Nunavik Regional Board of Health and Social Services released public health messages and advice in October 2011. They stated,

"In Nunavimmiut, the main source of mercury exposure is beluga meat. Therefore, until we have evidence of a decrease of the mercury content in this specific country food, pregnant women and those of childbearing age should decrease their consumption of beluga meat." (NRBHSS, 2011).

Just over half of Nunavimmiut reported hearing those messages when asked in the 2017 survey. This was less likely among residents of Hudson Bay than the other ecological regions, and more likely with age. Despite the importance of this information for women of childbearing age and pregnant women because of the sensitivity of the developing fetus to in-utero exposure to mercury during gestation, males were more likely to have heard the information than females, and women 50 years old and above were more likely to report hearing this information than women of childbearing age (pregnant or not before the survey).

Most people who had heard mercury messages did not change their eating habits. Twenty percent of Nunavimmiut who mentioned hearing the information about mercury and health reported modifying their eating habits in some way. Among women, modifying eating habits in some way was more commonly reported by non-pregnant childbearing age women than women who had been pregnant (in the last year) or women of non-childbearing age. While roughly two-thirds of Nunavimmiut who heard the messages and modified their eating habits in some way reported reducing or stopping their consumption of beluga meat, the focus of the public health messages, between 65% and 84% also reported reducing or stopping their consumption of other country food items too. It is important to examine why this is the case as it appears that this behavioural change in response to mercury messaging on beluga meat may be negatively influencing perceptions of safety and consumption of other important and healthy country food items as well. It is critical that individuals receive, trust and understand the health information needed to support their decisions relating to country food consumption and environmental contaminants when they have the opportunity and want to take action (Boyd et al., 2019).

The results here suggest that greater examination of the reception, awareness and response to messaging on lead and mercury and the reasons why, should be pursued to ensure that public health messaging efforts are as successful as they can be in providing the intended support for individual decision making in the future (Boyd et al., 2019; Lemire et al., 2018).

6 CONCLUSION

Our findings indicate continued strong participation in land-based activities among Nunavimmiut. Less frequent participation in some land-based activities seems to have increased, while more regular hunting appears to have decreased from 2004 to 2017. In some cases, participation among younger individuals was greater in 2017 than 2004 (especially less frequent participation of at least once in the season), while that of older adults and elders was lower in 2017 than 2004 (especially more regular participation of at least once a week).

Wildlife species' availability and accessibility to Inuit is influenced by a number of factors. While some species (caribou and beluga) were reported to be harder to find, hunt or catch compared to previous seasons, others (seal, geese) were said to be the same difficulty. These findings differed between sub-regions in Nunavik and with increasing focus on the role and influence of climate change and other forces on hunting activities in the Arctic, warrant further examination in future research.

The survey gathered very important information regarding gun and ammunition use and awareness and response to environmental health messages on lead exposure in the region. Just over half of Nunavimmiut reported using a firearm and just over one third reported someone cleaning guns inside their home. Lead shot, for which there has been a voluntary ban on use in the region since 1990 due to public health concerns, was reported to be used by nearly three-quarters of individuals reporting the use of shot in their hunting. One in five Nunavimmiut reported not cleaning around the wound of an animal where it had been shot, which is another action known to reduce potential exposure to lead contamination from ammunition use. Only one-third of individuals reported having heard messages regarding the concerns about the use of lead shot and exposure to this contaminant in the region previously. It is valuable to know that among those who used shot, those that heard the public health messages were more likely to report only using unleaded shot as compared to those that did not hear the messages. The reasons for continued use of lead shot and how best to encourage and support the use of unleaded alternatives requires further research and action to protect individuals from this source of environmental contaminant exposure.

The Regional Public Health Department has similarly communicated information to help reduce prenatal environmental exposure to mercury in the region via the consumption of certain country foods (i.e. beluga meat). Just over half of Nunavimmiut reported hearing these messages; however, the key target audience of women of childbearing age was not the group most commonly reporting this knowledge. Among all those that heard the messages, 2 out of 10 reported some dietary change in response to this awareness. While a reduction in the consumption of some country food species was the most commonly reported dietary adaptation, a reduction in consumption of some species that are not an important source of mercury exposure was also indicated. Patterns in message awareness, reception and comprehension as well as factors influencing dietary adaptation and maladaptation should be further examined because of the significance of this public health issue in the region.

Engagement in land-based activities have always been an important part of Nunavimmiut identity, health and well-being. Continued monitoring and research to further understand levels of participation, barriers and facilitators to accessing the land and the many resources it provides, and changes in this participation is critical. To continue to promote and protect these activities as part of a healthy life in the region, continued research is needed to inform programs and policies for the future.

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