(Re)Birthing Systems in the Qikiqtaaluk Region of Nunavut: A Place-Based Inquiry into Inuit Birthing, Systems of Care, and Maternal Health Research

by

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(RE)BIRTHING SYSTEMS IN THE QIKIQTAALUK REGION OF NUNAVUT: A PLACE-BASED INQUIRY INTO INUIT BIRTHING, SYSTEMS OF CARE, AND MATERNAL HEALTH RESEARCH

Laura Jane Brubacher
University of Guelph, 2021

Advisors:
Dr. Cate E. Dewey
Dr. Sherilee L. Harper
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Within the Qikiqtaaluk Region (Eastern Nunavut), pregnant women are required to travel outside their home communities for birthing care. This model differs from the prior norm of place-based, midwife-attended birth and impacts Inuit wellness. This research characterized Inuit women’s birthing experiences and perspectives on enriching the medical obstetric system through the lens of place, culture, and health, and explored how maternal health research methodologies might be increasingly place-based and locally-driven. Informed by a community-based approach, a team of Inuit and non-Inuit researchers conducted a case study with Inuit women in Iqaluit, Nunavut, Canada. A systematic critical review was completed to examine prior maternal health research methodology in Nunavut and underscored opportunities for maternal health research to be increasingly Inuit-led through all research stages. Sewing was explored as a locally-specific, arts-based approach for data gathering and was found to enhance data quality and participants’ research experience by creating space for voicing, sharing, relating, and embodying Inuit knowledge.

Qualitative data were gathered (2017-2020) using: (1) focus groups (structured as two-part sewing sessions) (n = 5) with pregnant women (n = 19); and (2) conversational interviews with pregnant women, Inuit Elders, and other community members (n = 22); and validated in meetings with Inuit knowledge-holders (n = 4). Thematic analyses were iterative and guided by a grounded theory approach. Participants described the importance of place-connections to Inuit birth experiences and
the value of Inuit relational supports and knowledge-sharing throughout the birthing process. Inuit women voiced a desire for place-based birthing and further Inuit involvement and integration of Inuit birthing practices into obstetrical care. Women shared knowledge on stewarding birthing resources from the land and using skilled Inuit midwifery techniques: this knowledge connects to three Inuit Qaujimajatuqangit principles important for health system governance in Nunavut (Avatittinnik Kamatsiamiq, Inuuqatigiitsiaamiq, and Pilimmaksarniq) and illustrates the importance of aligning the regional obstetric system with Inuit birthing values. This collaborative research emphasizes how maternal health research and maternity care may be enriched by including place-specific, locally-embedded methods and by providing space for Inuit women to shape the systems that affect them.


**ABSTRACT (INUKTITUT TRANSLATION)**

Laura Jane Brubacher
University of Guelph, 2021

Advisors:
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DEDICATION

To all mothers, mother-figures, and those who mother: Thank you for the beautiful life-worlds you create, nurture, and sustain.

To the Qikiqtaaluk Inuit women I had the honour of sharing time with, Who stitch life, laughter, and love into their places.

To Grandma Laine, BA University of Western Ontario ’54, and her Brescia companions, who carved out a place for women in the academy.

And to Benjamin, who made me a mother: May you always know your place in this world.
ACKNOWLEDGEMENTS

Mentorship has been a mosaic for me in this PhD path. A composite: a patchwork of people who, known or unknown to them, have shaped, grown, taught, prodded, critiqued, encouraged, and changed me. I have received much from – and hopefully given some to – a very diverse group of people, each one contributing uniquely to my development as a researcher and human and significantly to the development of the research that I am privileged to write about in this dissertation.

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To Nunavummiut, and the Persons, Organizations, and Places that have shaped this work: I am honoured to have learned from and with you, and grateful for the time you generously shared with me as I scoped out research questions, discussed ideas and research updates, and was hosted by the diverse, welcoming, and beautiful community that is Iqaluit.

Special thanks to Mary Ellen Thomas for helpful couch conversations at the Nunavut Research Institute; Drs. Patty DeMaio, Madeleine Cole, Sean Dougherty, Fiona Main, and Meridith Penner for your time over email, hospital-grade coffees, and even in some of your homes, to talk research and obstetrical care; multiple maternal-child health coordinators and Dr. Michael Patterson at the Department of Health who provided input to the research topic and questions; Kristine Hutchison for your interest in this work and your incredible hospitality; and Lily Amagoalik at QHRC for excellent research support and interpretation.

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Jean Allen: My favourite Astro theatre-goer and Black Heart Café enthusiast: I’ve loved our times together, even our failed attempt to attend a local theatre production. © Sharon Edmunds: Our heartfelt talks, seasoned with grace and grit, have meant so much to me. I’m so thankful for you.

Jeannie Pishuktie: Your smile and laugh has brightened many a moment for me – thank you.

Taha Tabish: Perhaps my most enthusiastic honey customer: Thanks for the joyful encounters when I came to QHRC!

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Deb Arnold, Becca EG, and Meridith Penner: Though I wish we met earlier in my PhD, our meeting at St.
Jude’s and subsequent conversations brought such warmth and sweetness to one of my final research trips!

To my Co-Supervisors, Sheri & Cate: You are a dynamic duo, who have reflected to me a beautiful professional partnership. You each brought distinct and complementary skills, experiences, and giftings to this mentorship. You have shown genuine care and concern for me beyond academics, mentoring me as a co-learner in the way I hope to mentor others. The amount of time you have invested in supervising me is profound and humbling. I hope you hear my heart in this, thank you.

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Cate: I have called you my academic mom, in referencing you to others, and I mean this with utmost admiration, respect, and appreciation! In their many forms, mothers sustain another in love and care. Since summer 2012, when I met you as a fresh undergraduate student and you took me under your academic wing for a research assistantship, you have nurtured me as a student, mentee, researcher, pseudo-farmer, and person. In challenging moments, you have always made me feel like everything will be okay! Our conversations have often turned from academics to life, faith, and relationships, and to the places we’ve inhabited on hobby farms, in churches, and on campus ministry committees. You have been more than a supervisor to me: You are an inspiring, female academic mentor and person, who has forged ahead in your career – and life – with grace and grit. I hope to continue to learn from and with you throughout life, Cate. Thank you, for everything.

To my Advisory Committee, Gwen, Sally, and Ashlee: You are a powerhouse team! It has been a privilege to receive counsel, guidance, and wisdom from a circle of such strong, intelligent, fiercely caring, and passionate women. Thank you for your time, encouragement, and ongoing support.
Gwen: From chats over a cup of tea in your QHRC office, to the many Zoom meetings and email threads, your input has continually shaped this work in critically-important ways. Your support has been invaluable, and I continue to be inspired by your work and commitment to community health and wellness in Nunavut. Heartfelt thanks for taking me on as a student, and carving out time these past years to support me. I continue to savour your girls’ delicious paungaq jelly!

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As friends and family have heard about this work, women close to me have shared their birthing stories. What a gift to witness the strength and resilience in these stories, when a mama endures and a babe is born! This PhD journey has facilitated deeper relationships with women in my life – my mother, mother-in-law, grandmothers, aunts, cousins, and friends – and that has been deeply meaningful. I come from a lineage of strong, loving women who have instilled me with confidence to imagine who I might be in this world, and modelled how to mother with grace. So to these special women in my life, I say thank you.

Kathryne Elaine Dillon [Grandmother]  
Jane Ann (Forler) Weber [Mother and Me]
To many friends at home who have journeyed with me: Thank you for checking in, for listening, for caring (you know who you are!) Special thanks to Krista Bowman for our life-giving conversations, and visual metaphors that left me with unfettered hope in this process: Indeed, there were many PhD ‘backdoor learnings’ that our conversations illuminated for me. Shoshannah Speers: Our time together in Iqaluit was truly a highlight of this PhD experience for me – thank you for your listening ear (“Mmm, Ahaa, I see!”), for your genuine care and accompaniment in this process, for your friendship. Sara DeMoor: Thank you for faithfully journeying with me these past years; my spirit has needed our chats on the intersections of faith-academics-parenting-feminism and how to flourish amid it all! To Bimi & Doris (Guelph Grandmas) who fed me body and soul, and kept our family freezer stocked with exquisite Indian food – you are so special. Special thanks also to Alex Sawatzky for co-working that inspired creativity and visual expression, as well as meaningful conversation about rhythms of life and work, and to David Borish for inspiring chats that covered everything from visual research methodologies to MasterClass to beekeeping. To Harper Lab Mates, past and present: Thank you for inspiring critical thought about research and academia; thank you for your generous, constructive feedback on practice presentations and defenses; thank you for the memorable conference experiences (CASE 2016 in Homer, Alaska; Inuit Studies Conference 2016 in St. John’s, Newfoundland and Labrador; ArcticNet 2016 in Winnipeg, Manitoba – the list goes on!)

To my Parents, Jane and Mark, Marilyn and Paul: Free and safe pandemic babysitting is not something I take lightly or for granted! Your constancy of support and care have been a mainstay in this PhD, whether that has been manifest as childcare, spiritual and physical nourishment, or the many notes and words of love and encouragement. Thank you for the seeds of confidence you plant in me, and your examples of how to live and love well. Mom W: Special thanks for the beautiful, handknit chunky infinity scarf that kept me warm in the North! To Dan, Danielle, and Miro: To have siblings as close friends is a gift indeed. Thank you for your interest in my work and life.

To Benjamin: You made me a mother! You are a gift, wee one. Thank you for teaching me how to live with wide-eyed wonder and curiosity, and to love without parameters. I love you, little B(ee)!
And to my dearest Jonathan: You have been the best towel-waver I could ever imagine, cheering me on, loving, supporting, and encouraging me in this PhD path. As cheesy as it may be, like Norm and Ruth, you are “all about making my dreams come true” (be they alpacas, chickens, or PhDs) and I hope to continue to nurture yours. We have created a beautiful life together. Thank you for showing me how to live and love well in the places where we are… I love you.
STATEMENT OF WORK

This research began in Iqaluit, Nunavut through a series of consultations with local partners in health research, policy, and practice (November 2016 and April 2017). The purpose of these meetings was to identify research priorities and position a maternal health project to be collaborative, and of concrete benefit to the community. I created and disseminated visual materials to convey these intentions, and to prompt discussion on key maternal health priorities and who else I should meet with [Appendix A]. During the consultative phase of the project, partnerships were formed with Iqaluit-based team members to conduct the research and provide guidance to its conceptualization, implementation, analysis, and knowledge mobilization.

Ultimately, this research was a collaborative, qualitative inquiry into Inuit women’s birthing experiences and perspectives, involving conversational interviews, data validation meetings with Inuit knowledge-holders, and a series of focus group discussions, formatted as sewing sessions (Chapters 3-5). Concurrently with community-based data gathering, I conducted a systematic search and synthesis of the published academic literature on maternal health in Nunavut and a critical review of methodologies employed to study this topic (Chapter 2). Under the supervision of my thesis advisory committee, Drs. Sherilee Harper, Cate Dewey, Gwen Healey Akearok, Sally Humphries, and Ashlee Cunsolo, I wrote Chapters One (Introduction) and Six (Conclusion).

In addition to my thesis research requirements, I wrote and defended an initial research proposal for my collaborative international development specialization qualifying examination. I presented this proposal in a poster at the ArcticNet Annual Scientific Meeting 2016 (“Inuit Childbirth in Canada: An Exploration of the Literature on Place, Culture, and Health”), as well as in oral presentations at University of Guelph conferences (International Women’s Day Conference 2017 and the OVC Graduate Student Research Symposium 2018).

Unless otherwise stated below, all funding for this research was provided by the following scholarships I was awarded: CIHR Banting and Best Canada Graduate Scholarship – Master’s (2016-2017, for first year of direct-entry PhD), Arthur D. Latomell Graduate Scholarship (2016), CIHR Vanier-Canada Graduate Scholarship (2017-2020), Polar Knowledge Canada (Northern Scientific Training Program Grants in 2017-2020), an internal University of Guelph Scholarship (2015-2019), the Canadian Federation of University Women (2017-2018 Dr. Margaret McWilliams Pre-Doctoral Fellowship), the Ontario Confederation of University Faculty Associations (2017 Henry Mandelbaum Doctoral Graduate Fellowship), and the IODE War Memorial Scholarship (2017-2018).
All research protocols were approved by the Nunavut Research Institute (Licenses #01 024 17N-M; 01 012 18R-M; 01 016 19R-M; and 01 005 20R-M) and University of Guelph Research Ethics Board (Certificates #16NV049 and 16-12-718).

CHAPTER TWO:

**Mapping the Maternal Health Research Landscape in Nunavut: A Systematic Search and Critical Review of Methodology**


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I developed the search protocol for this review (including the research question and objectives, search strategy, screening criteria, data extraction tool, and data analysis plan) under the supervision of my advisory committee: Drs. Sherilee Harper, Cate Dewey, Ashlee Cunsolo, Sally Humphries, and Gwen Healey Akearok. Ali Versluis, a Research Librarian at the University of Guelph, assisted with the development and refining of the search strategy. Ellie Stephenson, PhD Candidate at McGill University (at the time), and Amreen Babujee, Research Analyst with the Climate Change and Global Health Research Group at the University of Alberta, conducted Scopus® searches on behalf of the co-authors. I conducted all other database and journal searches, exported and de-duplicated citations in *Mendeley® (Version 1.16.1)* software, then uploaded references and full-text articles to *DistillerSR®* web-based software. Crystal Gong, second reviewer, and I conducted Level 1 (title/abstract), Level 2 (full-text) screening, and data extraction in *DistillerSR®*. I conducted descriptive statistics related to article topics, methodology, study region(s), year of publication, and author affiliation, and also qualitatively analyzed full-text articles.

Subsequently, I wrote the manuscript, which was edited and approved by all co-authors. I created Figures 2.1, 2.2, and 2.6 and all tables and appendices. Dr. Alex Sawatzky, Visual Communications Lead with the Climate Change and Global Health Research Group at the University of Alberta School of Public Health (at the time), edited Figures 2.1, 2.2, and 2.6 for visual appeal, and worked with me to conceptualize and then create Figures 2.3, 2.4, 2.5, and 2.7.
“Sewing is Part of our Tradition”: A Case Study of Sewing as a Strategy for Arts-Based Inquiry in Health Research with Inuit Women

Chapter Three:


Manuscript In Press in Qualitative Health Research

The idea of sewing as a strategy for arts-based inquiry was conceptualized in advisory committee meetings. Then, during two scoping trips to Iqaluit (November 2016 and April 2017), Naomi Tatty and I further discussed this strategy. Between July 2017 and April 2018, I travelled to Iqaluit for data gathering. Naomi and I conceptualized the sewing process, developed broad thematic areas – and potential questions therein – as a flexible data gathering tool, finalized recruitment materials I had drafted [Appendices B and C] and conducted all sewing sessions collaboratively. Makinik Nowdluk, Angel Konek, and Chloe Zivot were involved in recruitment for the Elder’s Qammaq sewing session in Iqaluit, and assisted with facilitating two Boarding Home sewing sessions. Naomi and Makinik conducted two of the post-sewing session interviews, while Naomi and I conducted the remainder.

Naomi interpreted Inuktitut recordings into English while I conducted verbatim transcription of all sewing session data. We debriefed all sessions, and wrote observations and memos. I conducted initial constant comparative and thematic analysis by hand, then imported digital versions of all transcripts into NVivo 12© (Version 12.1.0) software for further analysis. Naomi and I then co-analyzed these data, using my preliminary analysis as a starting point.

My advisory committee (Drs. Sherilee Harper, Cate Dewey, Gwen Healey Akearok, Sally Humphries, and Ashlee Cunsolo) provided guidance from the conceptualization of this research through to and including the preparation of this manuscript. Dr. Alex Sawatzky created Figures 3.1 and 3.2 (with photographs I took), and together we conceptualized and created Figures 3.4 and 3.5. Figure 3.3 is a photograph I produced. I created Table 3.1. All co-authors reviewed and edited this manuscript.

Naomi and I delivered poster and oral presentations on the sewing strategy for arts-based inquiry at the International Congress for Circumpolar Health in Copenhagen, Denmark in August 2018 (entitled “Place-Making in the Research Process: Sewing, Stories, and Sense of Place at a Medical Boarding Home in Iqaluit, Nunavut, Canada”). We also discussed the sewing strategy in a live CBC radio interview in Iqaluit on April 19, 2018.
Funding for the scoping trips was provided by the Canadian Institutes for Health Research (to Sherilee Harper and Ashlee Cunsolo) and Cate Dewey’s University of Guelph General Trust Fund. Conference-related travel was additionally supported through a CIHR Travel Grant provided by the Institute of Aboriginal Peoples’ Health (2018).

CHAPTER FOUR:

**Bodies, Places, and Relations: Enriching Birthing Care and Wellness in the Qikiqtaaluk Region of Nunavut through Government of Nunavut-Identified Inuit Qaujimajatuqangit (IQ) Principles**


*Manuscript in preparation for submission to a peer-reviewed journal (to be identified)*

I conceptualized this chapter under the supervision of my advisory committee (Drs. Sherilee Harper, Cate Dewey, Gwen Healey Akearok, Sally Humphries, and Ashlee Cunsolo), and out of the iterative process of data gathering, debriefing, and co-analysis with my research partner, Naomi Tatty. In December 2019 and January 2020, respectively, I conducted two data validation trips to Iqaluit which included 3 audio-recorded meetings with 4 Inuit knowledge-holders to discuss the data, as well as numerous other discussions with local team members [using Appendix D as a guide for discussion]. I prepared the manuscript under the supervision of my advisory committee. I created all Figures (4.1-4.3) and Table 4.1, while Dr. Alex Sawatzky and I together conceptualized and created the figure in Appendix D. All co-authors reviewed and edited the manuscript.

I created and shared a one-page research update with Nunavut partners in April 2018, including health policy makers and healthcare practitioners at Qikiqtani General Hospital, Iqaluit Public Health, and the Nunavut Research Institute [Appendix E]. Preliminary results were also shared informally in conversation with primary healthcare providers at the Maternal and Paediatric Challenges in the Arctic Conference in Iqaluit (April 2019) and through a written synthesis document that I disseminated in meetings with Nunavut research partners in January 2020 [Appendix F]. I wrote and provided annual summary reports of this research to the Nunavut Research Institute (2017-2019, inclusive), as per licensing requirements. Results from this chapter will be further shared in late Fall 2021 or early 2022 during a trip to Iqaluit.
CHAPTER FIVE:

Inuit Birthing in the Qikiqtaaluk Region of Nunavut: A Place-Based Inquiry of Maternity Care Systems


Manuscript in preparation for submission to a peer-reviewed journal (to be identified)

In addition to the sewing sessions, the conversational interviews in this chapter were co-conducted by Naomi Tatty and I. Naomi provided interpretation concurrently with my verbatim transcription of all audio recordings. We debriefed all data gathering together. I conducted a preliminary constant comparative and thematic analysis of all transcripts, then Naomi and I co-analyzed the data. I facilitated data validation meetings with Inuit knowledge-holders in December 2019 and January 2020 to discuss initial results and authenticate analyses. My advisory committee (Drs. Sherilee Harper, Cate Dewey, Gwen Healey Akearok, Sally Humphries, and Ashlee Cunsolo) provided guidance and oversight to all stages of the research from its conceptualization onwards, and I wrote the manuscript under their supervision. Dr. Alex Sawatzky created Figure 5.1 and together we conceptualized Figure 5.2, which she created. All co-authors reviewed and edited the manuscript.

In April 2018, I created a one-page research update that I disseminated to Nunavut research partners at the Nunavut Research Institute, Iqaluit Public Health, the Government of Nunavut, and Qikiqtani General Hospital [Appendix E]. I shared preliminary findings informally in conversations with primary healthcare providers at the Maternal and Paediatric Challenges in the Arctic Conference in Iqaluit (April 2019) and through a written synthesis document that I disseminated in meetings with Nunavut research partners in January 2020 [Appendix G]. I wrote and provided annual summary reports to the Nunavut Research Institute, in accordance with their licensing protocols, from 2017-2019 (inclusive). I also shared preliminary results from this chapter in three invited undergraduate guest lectures between February and March 2019 at Wilfrid Laurier University (“Placing Birth: Questions of Location, ‘Invisible Policies’, and Health Sovereignty in the Qikiqtaluk?”) and University of Waterloo (“Finding our ‘Places’: Reflections from Place-Based Research”, co-presented with Dr. Alex Sawatzky), as well as in a virtual oral presentation in June 2021 at the International Congress for Arctic Social Sciences. Further results-sharing is scheduled to occur in late Fall 2021 or early 2022 with health policy makers and healthcare practitioners in Iqaluit, the Nunavut Research Institute, and Iqaluit Public Health.
# Table of Contents

ABSTRACT .................................................................................................................. II

ABSTRACT (INUKTITUT TRANSLATION) ................................................................. IV

DEDICATION ................................................................................................................ V

ACKNOWLEDGEMENTS .......................................................................................... VI

STATEMENT OF WORK ............................................................................................ XII

TABLE OF CONTENTS .............................................................................................. XVII

LIST OF TABLES .......................................................................................................... XXII

LIST OF FIGURES ....................................................................................................... XXIII

LIST OF ABBREVIATIONS .......................................................................................... XXV

LIST OF APPENDICES ............................................................................................... XXVI

STATEMENT OF POSITIONALITY .............................................................................. XXVII

CHAPTER ONE – PEOPLES, PLACES, AND SYSTEMS OF BIRTHING WELLNESS AND CARE .......... 1

1.1 Placing the Work: An Introduction ................................................................. 2

1.2 Systems of Birthing Wellness, Maternal Health, & Care .............................. 5

1.3 The People and Place: Inuit, Inuit Nunangat, & Nunavut ............................. 6

1.4 Birthing in Nunavut ...................................................................................... 8

1.5 Birthing and Inuit Qaujimajatuqangit (IQ) .................................................. 10

1.6 Systems Alignment and Enrichment: Rationale for Research ...................... 13

1.7 Thesis Goal and Objectives ........................................................................... 14

1.8 Self-Determination in Inuit Nunangat Research ........................................... 16

1.9 Theoretical & Methodological Frameworks ................................................... 16

1.9.1 Strengths-Based, Community-Based Research Approaches .................. 16

1.9.2 Decolonizing Research ............................................................................. 17

1.9.3 Arts-Based Approaches ............................................................................ 18

1.9.4 Place-Connections .................................................................................... 18

1.9.5 Multidisciplinary Framings: Epidemiology and International Development Studies .... 20
Chapter 3 - Methods

3.2 Methods .......................................................................................................................... 74

3.2.1 Placing the Work: Birthing in Nunavut ................................................................. 74
3.2.2 Research Approach ................................................................................................. 76
3.2.3 Research Process ..................................................................................................... 76

3.2.3.1 Gathering the Group ......................................................................................... 77
3.2.3.2 Gathering the Data ............................................................................................ 78
3.2.3.3 Language Interpretation and Data Transcription ............................................. 79
3.2.3.4 Data Analysis .................................................................................................... 79
3.2.3.5 Theoretical Framings ......................................................................................... 81

3.3 Results: Sewing as Research Strategy ....................................................................... 81

3.3.1 Why and How Did Sewing Enhance Focus Groups? ............................................. 81

3.3.1.1 Sewing as a Flexible and Tactile Practice ......................................................... 82
3.3.1.2 Voicing and Sharing .......................................................................................... 82
3.3.1.3 Relationality and Kinship ................................................................................. 83
3.3.1.4 Sewing as “Keeping our Tradition Going” ....................................................... 83

3.3.2 Pragmatic Lessons Learned on Process & Power .................................................. 84

3.3.2.1 Partnership as Critical to Conversation ............................................................ 85
3.3.2.2 Language and Power in the Sewing Process .................................................... 85

3.4 Discussion: Sewing as Facilitative of Data Gathering .............................................. 86

3.5 Sewing as a Strategy for Arts-Based Inquiry: Implications for Health Research & Practice .................................................................................................................. 89

3.6 References .................................................................................................................... 90

Chapter 4 - Bodies, Places, and Relations: Enriching Birthing Care and Wellness in the Qikiqtaaluk Region of Nunavut through Government of Nunavut-Identified Inuit Qaujimajatuqtangit (IQ) Principles .................................................................................................................. 95

Abstract ............................................................................................................................... 96

4.1 Introduction .................................................................................................................... 97

4.2 Methods ......................................................................................................................... 98

4.2.1 Iqaluit, Nunavut, Canada ......................................................................................... 98
4.2.2 Birthing and Inuit Qaujimajatuqtangit (IQ) Principles for Governance Chosen by the Government of Nunavut: A Framework for Systems Alignment ............................................................. 99
4.2.3 Research Approach ................................................................................................. 100
4.2.4 Data Gathering ........................................................................................................ 100

4.2.4.1 Focus Groups (Sewing Sessions) ....................................................................... 101
4.2.4.2 Conversational Interviews .............................................................................. 102

4.2.5 Data Analysis ............................................................................................................ 102
**List of Tables**

*Table 2.1.* Overview of the geographic and demographic context of Nunavut and its three constitutive regions (from West to East): Kitikmeot, Kivalliq, and Qikiqtaaluk (Statistics Canada, 2011, 2020). Details of the functioning of the maternity care system overall in Nunavut, and within each region, are provided.................................................................34

*Table 2.2.* Search string used in Web of Science™ database and adapted to other databases to identify articles specific to maternal health among Inuit in Nunavut (see Appendix H for a comprehensive list of search strings used in each database, including terms for people, place, and maternal health). ..................................................................................................................................37

*Table 2.3.* Summary of specific maternal health topics included in Level 1 title and abstract eligibility screening and Level 2 full-text review of articles focused on Inuit maternal health in Nunavut........38

*Table 2.4.* List of included articles retrieved from a systematic search of the published academic literature on maternal health in Nunavut. Articles are organized chronologically by year of publication. The author(s), title, study region(s), and study methodology are also indicated for each retrieved article..................................................................................................................................41

*Table 2.5.* Qualitative results reported in this review. An asterisk (*) indicates inductively-developed codes that mapped onto principles of community-based participatory research (CBPR) for health, as outlined by Israel and colleagues (2005, 2008). ..................................................................................................................................52

*Table 3.1.* Details regarding the date of each two-part sewing session, the total number of participants per two-part session, as well as the composition of each group of women (e.g. the duration of participants’ attendance and other research associates present)...............................................77

*Table 4.1.* Graphical table depicting the linking of birthing perspectives and experiences shared by Qikiqtaaluk Inuit participants to three (of eight) principles of *Inuit Qaujimajatuqangit* identified by the Government of Nunavut as important to health system governance. By examining these linkages, the results of this study highlight the importance of aligning systems of birthing care and wellness in the Qikiqtaaluk Region of Nunavut and inform possibilities for an enrichment of the current obstetric care system with desired Inuit birthing practices and means of wellness........................................114
LIST OF FIGURES

Figure 1.1. Map of Inuit Nunangat (Inuit homeland), comprised of four settled land claims regions (from West to East), Inuvialuit, Nunavut, Nunavik, and Nunatsiavut. For Inuit, Inuit Nunangat is not just the land within the land claims areas, but also the sea ice, waters, and air. ..........................7

Figure 1.2. Visual roadmap of dissertation research, including two chapters with a methodological focus (Ch.2 & 3) and two qualitative chapters that highlight Inuit women’s past and contemporary birthing experiences in relation to culture (Ch.4) and place (Ch.5). Underscoring all research chapters is an inquiry into the significance of place and culture to maternal health research methodologies (Ch.2 & 3) and to systems of care for birthing mothers, and their families and communities (Ch.4 & 5) ...................................................................................................................15

Figure 2.1. PRISMA flow diagram, illustrating the number of independent records identified by database searches, assessed for eligibility, and included or excluded from the systematic search and critical review on maternal health research methodology in Nunavut .........................40

Figure 2.2. Summary of the number of publications per year (1975-2016) related to Inuit maternal health in Nunavut. The study methodology used in each publication (mixed/qualitative/quantitative) varies by colour ........................................................................................................................................43

Figure 2.3. A map showing the number of publications related to Inuit maternal health, and the study methodology, by region of Nunavut: Qikiqtaaluk, Kitikmeot, and Kivalliq. Note: This includes only those publications that specified a single region of study (n=19) .........................................................................................................................44

Figure 2.4. Summary of the number of publications per year (1975-2016) related to Inuit maternal health in Nunavut. The number of articles with at least one Northern-affiliated author, or no Northern-affiliated authors, are specified by colour. ........................................................................................................................................44

Figure 2.5. Illustration of 13 inductively-developed, data-driven codes related to maternal health research in Nunavut that mapped onto principles of community-based participatory research (CBPR) for health, as outlined by Israel and colleagues (2005, 2008) .........................................................................................................................45

Figure 2.6. Overall maternal health research topic of the retrieved articles focused on Inuit in Nunavut. The colour and size of the boxes reflect the number of articles for each topic. The topic areas are not mutually exclusive, as some articles had more than one overall research focus........46

Figure 2.7. Visual summary of the contributions of this literature review, as illustrated in the results, as well as the discussed opportunities for future maternal health research. As in, for each stage of the research process – conceptualization, initiation, implementation, reporting, and knowledge mobilization – this review revealed what the current maternal health literature has contributed, as well as how researchers can build on these contributions and further maternal health research that is based on Inuit priorities, is Inuit-led, and Inuit-determined.................................................................62

Figure 3.1. Map of Inuit Nunangat (Inuit Homelands), including the Inuit territory of Nunavut and the territorial capital city of Iqaluit, where this research was located.................................................................74

Figure 3.2. [a] Tammaativvik Boarding Home and [b] Elder’s Qammaq in Iqaluit, Nunavut, Canada, locations where sewing sessions were held during data collection between 2017 and 2018. ....75
Figure 3.3. Photograph of sealskin baby slippers sewn in sewing sessions with pregnant women in 2017-2018 (photograph courtesy of LB).

Figure 3.4. Visual representation of the analytical approach employed in this study’s qualitative analysis. Themes were iteratively generated and refined using a hybrid inductive-deductive approach (Fereday & Muir-Cochrane, 2006), whereby the use of sewing as a strategy for arts-based inquiry was examined through the lens of the data and three categories of literature (in no particular order): (1) relationality and kinship; (2) voicing and storytelling; and (3) knowing (and sharing) from ‘doing’. Specific concepts from both the broader Indigenous scholarship and Inuit-specific scholarship that informed the generation and refinement of themes are denoted in the circles within each category.

Figure 3.5. Visual synthesis of results, including what sewing facilitated in the data gathering process and pragmatic lessons learned from this research. Both sections of results demonstrate how sewing facilitated data gathering among Qikiqtaaluk Inuit in the present study, but also the possibilities for arts-based inquiry when utilized in other research contexts.

Figure 4.1. List of all eight Inuit Qaujimajatuqangit (IQ) principles identified by the Government of Nunavut as being important to governance, including health system governance (GN, 2018:1).

Figure 4.2. Three components of the qualitative data gathering process, including sewing sessions at Tammaativvik Boarding Home (n = 4) and the Elder’s Qammaq (Gathering Place) in Iqaluit (n = 1), as well as conversational interviews with pregnant women (P), boarding home staff (BHS), community members (CM) and Elder (E) in Iqaluit, and an Inuk midwife (M) (n=22 total).

Figure 4.3. Visual representation of results from this study, linking Inuit birthing knowledge and perspectives shared by participants connected to three of eight Inuit Qaujimajatuqangit (IQ) principles identified by the Government of Nunavut as important to governance (GN, 2018), namely Avatittinnik Kamatsiarniq, Inuuqatigiitstsarniq, and Pilimmaksarniq/Pijariuqsarniq.

Figure 5.1. Map of Nunavut, highlighting the Qikiqtaaluk Region, with lines indicating how communities are connected within the obstetrical medical travel system (not exact, specified travel routes by airplane). Women are transported by plane from Qikiqtaaluk communities to and from Iqaluit, and from Iqaluit to and from Ottawa, Ontario.

Figure 5.2. Visual synthesis of results related to past birthing experiences (birthing at home and in place) and contemporary obstetric evacuation experiences (birth and changes in place), which created a foundation for recommendations on the maternity care system (Inuit-identified opportunities for place-based birthing). Interconnections between sub-themes are denoted with dashed (--) lines.

Figure 6.1. Visual synthesis of key findings from this dissertation research. Results from across all four research chapters (Ch.1-4) underscore the importance of prioritizing maternal health research methods, as well as maternity care practices and policies, that are place-specific and place-based, culturally-embedded, and shaped by Inuit concepts of health and wellness.

Figure 6.2. Qikiqtaaluk Inuit women involved in this research: A) (Left to right) Kitigutikarjuk Shappa, Natsiq Kango, Qapik Attagutsiak; B) Angel Konek and her son, Isaiah Konek; C) Annie Kilabuk; D) Jeannie Pishuktie (all photographs taken by Laura Jane Brubacher).
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBPR</td>
<td>Community-Based Participatory Research</td>
</tr>
<tr>
<td>GN</td>
<td>Government of Nunavut</td>
</tr>
<tr>
<td>IQ</td>
<td><em>Inuit Qaujimajatuqangit</em></td>
</tr>
<tr>
<td>ITK</td>
<td>Inuit Tapiriit Kanatami</td>
</tr>
<tr>
<td>MeSH</td>
<td>Medical Subject Headings</td>
</tr>
<tr>
<td>NTI</td>
<td>Nunavut Tunngavik Incorporated</td>
</tr>
<tr>
<td>NWT</td>
<td>Northwest Territories</td>
</tr>
<tr>
<td>PRISMA</td>
<td>Preferred Reporting Items for Systematic Reviews and Meta-Analyses</td>
</tr>
</tbody>
</table>
LIST OF APPENDICES

Appendix A. Visual two-sided postcard handouts provided to local partners in healthcare, health policy, and research in the scoping stage of the research study (2016-2017), to help guide conversations about maternal health research priorities.................................................................168

Appendix B. Poster advertisement and two-sided postcard handouts (in English, French, and Inuktitut, respectively) used for recruitment of participants to the sewing session held among women who regularly live in Iqaluit..........................................................................................................................171

Appendix C. Handmade recruitment flyer given personally to pregnant women at Tammaativvik Boarding Home, to invite participation in the sewing sessions.................................................................174

Appendix D. Discussion guide for data validation with Inuit knowledge-holders and other Inuit community members and healthcare providers (referenced in Chapter Four), as well as the figure used to prompt discussion on the connection between eight GN-identified IQ principles for governance and Inuit birthing perspectives shared in this research.................................................................175

Appendix E. One-page research update created in April 2018 and disseminated to Nunavut partners in research, public health, government, and primary care.....................................................................................176

Appendix F. Synthesis of preliminary results and recommendations from Chapter Four, provided to Nunavut partners in research, public health, government, and primary care during meetings in January 2020........................................................................................................................................177

Appendix G. Synthesis of preliminary results and recommendations from Chapter Five, provided to Nunavut partners in research, public health, government, and primary care during meetings in January 2020........................................................................................................................................179

Appendix H. Comprehensive search strings adapted for each database included in the review .....181

Appendix I. Stacked form created in DistillerSR® software for both level 1 (title/abstract) and level 2 (full-text) screening for eligibility for inclusion in the review. For only level 1 screening, reviewers had the option to select "unsure" as a response. .................................................................................................................................186

Appendix J. Comprehensive lists of specific inclusion and exclusion criteria related to maternal health for Level 1 and 2 screening.........................................................................................................................187

Appendix K. Data extraction form created in DistillerSR®. .................................................................................................................................188
**STATEMENT OF POSITIONALITY**

**PLACING MYSELF IN THIS RESEARCH**

Research relations are social relations and are, therefore, power relations (Merriam et al., 2001). Research is also embedded in colonial practices and policies; some have argued research is a colonial construct in and of itself (McGregor, 2018; G. Smith, 2000; Sylvestre et al., 2018). And, in the context of Northern research, research has all-too-often been an enterprise of Southern researchers (like myself) asking questions of the North, rather than Northerners conducting Northern, place-based research (Cunsolo & Hudson, 2018). In this context, it is imperative for me to discuss my positionality and its bearing on this research, my interpretations of it, and my responsibilities because of it.

I am honoured to have learned from Inuit about birthing, about motherhood, about living deeply into relationships, including those with the land, and the importance of knowing where you come from. I have learned much about relationships and responsibilities to people and to place.

**MY RELATIONSHIPS: TO PEOPLES, TO PLACES, AND TO THIS WORK**

From the beginnings of this research, I was – and continue to be – acutely aware of my positionality. As a white, Settler researcher from Ontario, I am principally an outsider to people and to place in the context of this research (McKinley Brayboy & Deyhle, 2000). In 2016-2017, accompanied by my co-supervisors, we travelled to Iqaluit, as southern-located researchers, seeking to understand what maternal health research question(s) might be most useful to the community. From its beginnings, I have hoped for this work to be collaborative, not extractive. I have intended to approach this work with a posture of deep listening and of openness to relationship, and to learning from perspectives and experiences that differ from my own. While I had no prior relationship to Iqaluit or Iqalummiut at the outset of this research, I benefitted from my advisors' networks of relationships; I also benefitted greatly from the network of scholarly and community relationships of my advisory committee member from Iqaluit, Dr. Gwen Healey Akearok. I am immensely grateful for the privilege of being welcomed by others into their homes, their lives, and their stories – for the friendship and hospitality extended to me, and for honest and forthright feedback on research ideas. Friendship has been a gift, and an important foundation to this work.

Data gathering occurred while I was not a mother and had never experienced pregnancy. The questions I asked of others, and my understandings of what others may be experiencing in their
bodies, were not at all shaped by firsthand experience. In many ways, I think this lack of personal, lived experience made me genuinely curious and interested in others’ experiences, perhaps beyond what I may have been otherwise. Most knowledge related to, for instance, prenatal wellness, favourable birthing positions, or postnatal care, I learned for the first time from Inuit women, from within an Inuit framework. I had fewer preconceived notions of what pregnancy or birthing ‘should’ look like from a Western obstetric lens, or other cultural lenses. Again, I was largely an outsider to this topic, along an insider-outsider continuum (Holmes, 2020; Merriam et al., 2001).

And while I have experienced connection to place and community at home, I am an outsider to the experience of deeply-held place-connections of which I heard Inuit speak. I will never know or understand this depth of connection, relationship, and reciprocity with lands and waters that is central to Inuit life, livelihoods, identities, and worldviews (Cunsolo Willox et al., 2012; Kirmayer et al., 2008; Kral et al., 2011; Middleton et al., 2020; Sawatzky et al., 2019; Stairs, 1992; Waddell et al., 2017). Orienting myself within and in relation to this work, then – a critical, reflexive practice in an Indigenous research context (Russell-Mundine, 2012; L. T. Smith, 2012) and within a qualitative research paradigm (Holmes, 2020) – also involves knowledge of my own ancestry, history, and heritage: My relationships to family, and our relationships to place.

**My relationships to family; our relationships to place**

I am a white, Settler-Canadian, Mennonite female from rural, southwestern Ontario. My mother’s family has Irish and German ancestry, while my father’s line imbues me with Swiss-German heritage, originating from the Alsace region of France. My Mennonite heritage, in particular, cultivates my interest in and sense of place, as my Settler ancestors have attended faithfully to the land as a farming people for multiple generations – albeit, to a land and a place that is not our own. The 20 km² circle within which most of my extended family has resided is within the traditional territory of the Haudenosaunee, Anishinaabe, and Neutral Peoples. I currently live in a farmhouse within the Haldimand Tract, land granted in 1784 to the Six Nations of the Grand River. We are a Settler people. So while I feel deeply connected to this place and see how it contributes to my well-being, I am also very aware of the different dimensions of my place-connections and those of Indigenous Peoples whose livelihoods, spiritualities, ontologies, and epistemologies are inherently, intrinsically place-based (Cunsolo Willox et al., 2012; Richmond & Big-Canoe, 2018). Indeed, while I have stories of how I came to inhabit and contribute to the life of places, “Indigenous Peoples are those who have creation stories, not colonization stories, about how [they] came to be in a particular place – indeed how [they] came to *be a place*” (Tuck & Wayne Yang, 2012:6). This includes the identities and connections to lands and waters of Inuit whom I have had the privilege of meeting and
working with in this research: Our “disparate realities determine not only how place is experienced but also how it is understood and practiced in turn” (Tuck & McKenzie, 2015:635). I also, in no way, believe that by faithfully and caringly attending to the farmhouse place where I live that it somehow “get(s) [me] off the hook from the hard, unsettling work of decolonization” (Tuck & Wayne Yang, 2012:4). I, too, am complicit in ongoing Settler colonialism. I have benefited from the displacement of Indigenous Peoples from the land where I live; I have the privilege of choice regarding my (im)mobility; and I have benefitted economically from my embeddedness within educational and research institutions that privilege and prioritize the Euro-Western learning approaches of a Settler majority, distanced from land and place-based, embodied modes of knowledge co-creation and inquiry (Held, 2019; Sylvestre et al., 2018; Tuck & McKenzie, 2015; Watts, 2013).

**My relationships to Iqaluit, Nunavummiut, and to this work**

In the context of this work, I have also come to know myself as a non-Inuk researcher. My Settler and non-Inuk positionality, and the complex histories and ongoing realities of colonialism embedded therein, undeniably influenced the comfort and willingness of some to participate in this research. I have questioned my role as a white Settler, non-Inuk, and southern-located student-researcher in this work. I resonate with Russell-Mundine (2012), who implores the question of “whether I should even be working in this space” (87). This is an honest, true, and uncomfortable question to sit with, though I recognize the importance of this discomfort as being generative of growth (Boudreau Morris, 2017; Snelgrove et al., 2014). It has probed critical self-reflection on what I can – and cannot – offer to this space (by way of skills, institutional funding, a desire to listen and learn); and it has disrupted my pre-conceived assumptions and notions of what research is or should be (not an isolated, objective inquiry, but necessarily shaped by my subjectivities and accountabilities to an array of relationships) (Haraway, 1988; Jackson, 2006; Tuck & McKenzie, 2015; Wilson, 2008). I have learned the critical place of collaboration and partnership in navigating place-responsive research and the relationships it requires (Jull et al., 2018; Tuck & McKenzie, 2015).

My research partner, Naomi Tatty, with whom all data gathering was conducted, told me retrospectively that she would often ‘place’ me in this research, unbeknownst to me. In Inuktitut, Naomi explained to participants who I was, beyond my self-introduction, and my role in relation to the research and community. In her words, so that I’m “not just another white woman”, she would talk about where I am from; about my family and my heritage – dimensions of who I am that she thought participants would connect to and appreciate knowing. Naomi told me she observed a palpable and positive shift in participants’ sharing after she situated me more fully in the work, sharing what she knew about me. I hope that by bringing more of myself into this research, the depth
and quality of conversation, and the research as a whole by extension, might have been strengthened (Berger, 2015).

My partnership with Naomi in this research was, indeed, critical. It was through Naomi’s relationships with those in the community that we identified participants and, I believe, that participants invited us readily into their homes, stories, and perspectives. As an Inuk researcher, Naomi helped mitigate and mediate many of my probable – and enacted – ‘fumblings’ as a non-Inuk, non-Northern researcher: She told me what questions to ask, and not ask; what topics were taboo and which were welcome for conversation; what research ideas made and did not make sense within an Inuit framework. Naomi facilitated the majority of conversation during focus groups; and in extended debrief and data analysis, she patiently explained the meaning in the stories, comments, silences, and subtexts that I am sure to have missed. We spent much time together outside of research in Iqaluit; she introduced me to others; we connected through social media while I was home South; and we had opportunity to share the experience of co-presenting at the 2018 International Congress for Circumpolar Health in Copenhagen, Denmark. Naomi’s friendship, and role in this research, have largely made this work what it is and have shaped me as a researcher and person.

All in all, I spent a minimal amount of time in Iqaluit: 79 days (not including travel), in 10 separate trips, spread over four years. I knew well the history and reputation of researchers in many Indigenous contexts as ‘parachuting’ into communities to extract data, gain educational training, and advance into careers with minimal accountability to people or place (L. T. Smith, 2012). While I could only manage a few months cumulatively over four years, due to my own family and community responsibilities, I took to heart the importance of coming back (Snow, 2018). I hoped it would signify my recognition of the web of relationships to which I was accountable: folks who gave of time in consultation, and in receiving ongoing research updates (multiple maternal-health coordinators with the Government of Nunavut; Iqaluit Public Health; the Nunavut Research Institute; healthcare providers at Qikiqtani General Hospital; research advisors with Nunavut Tunngavik Incorporated); Iqalummiut who generously spoke with me, had me in for a meal, or took me out on the land; and, importantly, to the women I spoke with from across the Qikiqtaaluk Region who shared their stories, experiences, and perspectives on birthing, as they were living it away from home and place.

I wanted to show up repeatedly and, at least, to be a familiar face. I became somewhat known by the small jars of honey, harvested by my family, that I brought to share with folks. Being ‘known by my honey’ was as much heart-warming to me as it was a helpful symbol of my ‘not from here-ness’ and not claiming to be: clearly, one who harvested honey was from another place, with connection to
different lands and activities. It was something I could share that reflected something of me, just as I was receiving much from those sharing their lives and stories with me.

While in Iqaluit, I spent time just being present: playing Saturday night bingo; attending community dances, events, and concerts; thrift shopping on Thursday nights; sewing mittens; driving around town and attending birthday parties with friends; sipping coffee in Caribrew café. This participation in community life enhanced my understanding of the context, which I could bring into my analysis (Castleden et al., 2012). It facilitated informal conversations related to birthing, connection to the land, the health system, Inuit culture, and sense of place that deepened and enlarged my thinking. And, it fostered relationships with people with whom I hope to continue to connect beyond this PhD.

**Birthing, Research, and Gifts**

Notably, my lived experience with birthing changed during this research, and influenced the perspective from which I approached the remaining work. While thesis writing, I experienced my own pregnancy and the birth of my son, Benjamin. It was in this experience that I recognized, more fully, the parallels between research and birthing. While pregnant, just as I was reminded of what I could do to strengthen my body, and nurture health in the habitat within me, I was also deeply aware of how little was up to me. Stories of new life were too-often woven with loss: I had heard these stories in the context of research, from those with lived experience of the fragility of the mothering journey and the precarious line that can exist between new life and loss. This delicate dance between what I could do and what was beyond myself became visceral, bodily reality in my own birthing experience, as I felt what those before me had shared: The body takes over, and that giving oneself to the forceful surges and retreats, permitting the body to do what bodies can do, brings forth something new. Considerable effort wedded with faith in the process brings something to bear that is gift in the truest sense: unelicited, undeserved – something, or someone, beyond oneself.

In this research, there was much I could, and did, do. I kept some pieces moving by co-developing research questions and interview guides, recording, transcribing, co-analyzing, and writing; but, just as birthing was a profound experience of faith – a participation in something far greater than myself – so, too, was research. The best things happened when I could not plan, prepare, or initiate them. All I could do was sit in the recognition of the gift: the honour of listening to others’ stories, the honour of learning, of being invited to grow in my own understandings and assumptions (Kuokkanen, 2007a, 2007b; c.f. L. T. Smith et al., 2019). Data are plural for the Latin datum, meaning “something given”: data means gift (Kovach, 2010). The perspectives shared in this research – the data – are indeed to be received as that: gift. And, perhaps, my role in this work could be seen as that of a
midwife: to guide the voices of the women who participated as their words and stories were being birthed, and to receive what they graciously offered as gift, meant to be honoured and celebrated as such.

Finally, I come to this work recognizing my positionality in relation to Nunavummiut (people of Nunavut): to Inuit and non-Inuit who live and work in Nunavut within health and governance. I am not Nunavummiut. As an outsider to this context, I have had the privilege of time and resources to ask research questions, to listen deeply, and to engage in collaboration with others, without having to experience the challenges of birthing policies and obstetric practices (the ‘topic of study’) Nunavummiut navigate. And so, given my relationships with Iqalummiut, my relationship to Iqaluit, and my relationship to this work, what – then – are my responsibilities?

MY RESPONSIBILITIES

Recognizing ‘data as gift’ - women’s voices, perspectives, and narratives shared as gift – foregrounds the notion of my responsibilities and response to what women have generously given in this research (Kuokkanen, 2007b).

Through this PhD

I have a responsibility to present research evidence (in this thesis and in other forms of knowledge sharing and mobilization) for Nunavummiut to use in ways they see fit to effect change. As much as I resonate with an interest in advocating, this is not my place, metaphorically and literally: I do not know and live the context of this work and thus the appropriate ways in which to utilize research results, nor do Nunavummiut need or desire an outside voice speaking on their behalf. Rather, perhaps something of this work can help Nunavummiut further their agendas, on their terms, in ways they know are appropriate and most effective. Nunavummiut know – from personal, lived experience and that of family and community members who have birthed away – what the impacts of obstetric evacuation are and how they are experienced. While known from lived experience, now that I have heard and witnessed, I have a responsibility through research to support and prioritize Inuit women’s voices, perspectives, and narratives within the spaces of health system policy and planning. And, from the experience of this research as arts-based inquiry, and the critical review conducted, to infuse a few insights into the space of maternal health research.

I plan to share results not only through peer-reviewed publications, but also through presentations to and dialogue with primary healthcare providers, public health practitioners, policy makers, and health researchers in Iqaluit, many of whom I have remained connected to throughout this research
process. Importantly, I also plan to share this research with Iqalummiut in a format or mode (to be determined through consultation) through which women’s voices and narratives shared in these pages can be honoured and celebrated. While COVID-19 did not impact my data gathering processes, it has delayed these important opportunities for me to share and mobilize research results within Iqaluit.

My hope is for this research to be beneficial, beyond its limited, institutional lifespan: that it might inform the spheres of health policy, health research practice, and maternal healthcare in Nunavut with a few insights. Or, that Nunavummiut might find this work to be a useful platform to build from.

### Beyond this PhD

Qablunaat have enjoyed, and continue to enjoy, economic and systemic privilege in Inuit lands, which has led to an ingrained epistemic privileging that, in my observation, is hard for qablunaat to see or acknowledge. There is also “white guilt” that leads qablunaat to say, “It wasn’t me personally who did those things, why do I have to take the blame?” Yet it is not about blame; it is about dialoguing now to “grow something new” (Tamalik McGrath, 2019:312).

*Beyond this PhD, I now ask how my relationships and responsibilities both to this work and to the people and places to which it is connected continue? How do they change?*

Having a sense of relationship to Iqaluit, and relationships with Iqalummiut, I also have a sense of responsibility to my own growth as an allied health scholar. What does this mean to me? In part, it necessitates my commitment to decolonizing the lenses through which I see the world; to listening deeply; to challenging my assumptions and biases rooted in, and fueled by, Settler colonialism; and to being a humble learner, admitting when I am wrong and trying to do better. I know such learning and challenging does not go far enough to disrupt the structures that galvanize my power, privilege, and benefit within and outside of the academy, my complicity in Settler colonialism. Perhaps this is my “Settler move to innocence” and attempt to deflect Settler “feelings of guilt or responsibility” (Tuck & Wayne Yang, 2012:10) without needing to sacrifice or commit to the hard work of lasting change. Some days I am not sure. But, I know this inner work is important. Sylvestre et al. (2018) articulate well the posture of response(ability) I seek to embody as I move forward from this work:

> Listening is one thing, responding is another. But ‘responding’ is not typically code for taking the lead. Instead, it may often mean stepping away or using one’s privilege to play a supporting role and having the humility and wherewithal to learn from Indigenous communities and partners one seeks to engage (755).
So, what does it look like to dialogue and “grow something new”, as Janet Tamalik McGrath (2019) posits? This is a question I will sit with, as I commit to this posture of listening, supporting, learning from and with, and of humility.

My responsibilities also relate to what I do with this PhD, a sign of privilege, and of knowledge I have gained. To me, I feel a responsibility to critiquing and challenging systems within which, and by which, health inequities persist. I feel a responsibility to advance work, at the interface of research, public health, policy, and primary healthcare, that supports and contributes to removing barriers to self-determination and overall well-being for individuals and communities. To grapple with systems that create and reify marginalization and asymmetrical divisions of power. Perhaps this will be the thrust of my life’s work, for which this PhD has created a frame, some tools and skills, and energy.

I am undeniably different than I was when I started this work: it has changed me. People, and their stories, have changed me. I have learned to know – and feel – the privilege of ‘staidness’, on land not my own, and in the context of choice for my own (im)mobility for birthing, in past and possible future experiences. And from my sense of place and relationships, having learned from Inuit to care deeply for one’s place and for other people, I have been inspired to work alongside others who call for change, such that peoples can maintain meaningful place-connections in all aspects of life in ways they have reason to value. And now, I have a responsibility to steward the farmhouse place my family and I have been privileged to attend to for this moment in time – a place I have a sense of relationship to. And I have a responsibility to work for justice and right relationships in the community I am rooted in, as well as places I inhabit and create in other seasons of life.
REFERENCES


CHAPTER ONE

PEOPLES, PLACES, AND SYSTEMS OF BIRTHING WELLNESS & CARE
1.1 Placing the Work: An Introduction

This research began with two scoping trips to Iqaluit (2016-2017). My co-supervisors and I met with various people in government roles (Government of Nunavut Maternal-Child Health Coordinator; Deputy Medical Health Officer; former Medical Officer of Health); research (Nunavut Research Institute; Qaujigiartiit Health Research Centre; research advisors with Nunavut Tunngavik Incorporated) and health (Iqaluit Public Health; primary healthcare providers at Qikiqtani General Hospital). We asked about maternal health research priorities in the territory and, particularly, what research questions might be relevant and yield potentially useful results for communities. I spoke on the phone with a retired midwife who discussed birthing in Nunavut and where research might ‘fit’. Repeatedly, the experience of pregnant women birthing away from home was raised, and often with expressed sympathy for the challenges women and families face. This topic of obstetric evacuation was a cross-cutting theme among those we met with in government, health research, and public/primary health care. We also learned of an internal government Maternal-Child Health strategy being developed, and had met with a consultant hired for research purposes to inform this strategy. Similarly, Qaujigiartiit Health Research Centre expressed its involvement in conducting focus groups in communities to feed into the strategy, with an emphasis on the inclusion of community perspectives related to birthing and birthing away.

Working with key partners from Iqaluit and my advisory team, I sought to build upon this work, to create further space for women’s voices and experiences to be heard, and to hopefully help inform future policy and practice directions. At the time of this scoping research, women travelled alone, unaccompanied. In a quick federal policy change in April 2017, women were permitted one ‘non-medical escort’ of their choice (e.g. friend or family member) to accompany them while away for birthing – a change with some presumable influence on women’s birthing experiences (Bird, 2017; Rogers, 2017). Concurrently, the landscape of midwifery education in Nunavut was also soon to change. During scoping trips, the topic of in-territory midwifery training was discussed, along with questions such as: What happened to in-territory midwifery training (dissolved earlier) and why? What is the place of Inuit midwifery in the current system of obstetrical care, and is that role still valued among birthing Inuit mothers?

In 2019, I attended a conference at Iqaluit’s Frobisher Hotel on Maternal and Paediatric Challenges in the Arctic, organized and attended predominantly by primary healthcare providers in Arctic communities. While I did not gather or present additional data, it was opportunity to further understand the workings of the medical obstetric system. It also impressed upon me the importance of this topic of obstetric evacuation and Inuit midwifery, and the overall receptivity of healthcare
providers to addressing issues of incongruency between how the system operates and how patients can receive the most culturally-safe and supportive care possible.

As this research is bounded in a moment of time, much contextual change throughout and subsequent to this research also shapes the relevance of this work and how it might be understood now, in 2021. At the time of writing, midwifery in Nunavut has had yet further disruption with the suspension of midwifery services in Rankin Inlet (Rogers, 2020; Tranter, 2021b), which has been met with Inuit advocacy around bringing birth back home to communities (Brown, 2021; Tranter, 2021a). And now in 2021, over a year into the global COVID-19 pandemic, stay-at-home orders have been commonplace and enforced and – yet – Inuit women in Nunavut are required to leave home and place for childbirth during this pandemic.

Concurrently, the landscape of Indigenous health research, and Inuit Nunangat research, has also changed substantially over the course of my PhD (the past 5 years). Broader movements for Indigenous sovereignty over lands and waters, systems and structures that affect Indigenous lives and well-being, as well as for transparency and accountability for historical and ongoing colonial violence and injustice – these movements imbue researchers with new responsibilities and accountabilities to people and to place, including maternal health researchers (Tuck & McKenzie, 2015b). Inuit Tapiriit Kanatami, the national representational organization for Inuit in Canada, has called for self-determination in Inuit Nunangat research (ITK, 2018, 2019) and substantive change to researcher and institutional engagement in the North (ITK, 2016). Relatedly, the ethical conduct of research (Bourassa et al., 2020), how it is reported (Huria et al., 2019), and how methodologies might align with place-specific, place-responsive modes of knowledge-creation and -sharing (Tuck & McKenzie, 2015a), are also increasingly of importance within Indigenous, and Inuit Nunangat, maternal health research.

With these changing contexts for maternity care and maternal health research as a backdrop, questions emerge: What are Inuit women’s experiences of maternity care in the Qikiqtaaluk Region of Nunavut, given that it occurs away from home and place? What would they like to see happen? And, how might maternal health research need to be conducted to be of service to Nunavummiut?

In parallel to, and dovetailing with, these meetings with Iqalummiut, the changing contexts of birthing in Nunavut and Inuit Nunangat research, and evolving questions around maternity care and maternal health research, I was privileged to meet Iqaluit researcher Naomi Tatty. Naomi expressed interest in related research and willingness to partner with me (and the broader team of Northern- and Southern-located thesis advisory committee members) to conceptualize a case study that might
respond to these questions. In co-developing an arts-based approach to data gathering, we invited Angel Konek and Makinik Nowdluk to assist in engaging Inuit women in sewing sessions through recruitment, setup of materials, and participation in sewing and conversation on birthing. Our team of Northern- and Southern, Inuit and non-Inuit researchers was formed. Alongside input from those in government, healthcare, research, and public health roles, these individuals would shape the research to follow as it proceeded through data gathering, co-analyses, writing, and discussions of how to most effectively mobilize research results to help inform policy, practice, and research. What evolved is a collaborative case study that uses sewing as a locally-specific mode of arts-based inquiry to provide space for Inuit women to share narratives and perspectives on birthing, on place, on values and practices related to place-based birthing, and on possibilities for enrichment of birthing systems within Eastern Nunavut.

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Place, culture, and health: this dissertation is, then, foundationally about the interface of these three concepts as they relate to Qikiqtaaluk Inuit birthing, in a particular place. These interrelated concepts are also relevant beyond Qikiqtaaluk Inuit, as threads of place attachment and culturally-embedded knowledge and values are woven into the birthing experiences and perspectives on birthing wellness of many peoples in many places worldwide (Adams et al., 2018; Dawson, 2017; Kildea et al., 2019; Montgomery-Andersen et al., 2010; Vylka Ravna, 2019).

This dissertation is also about the importance of the past, how it shapes the present, and how the past-present may illuminate pathways to a healthier future. This theme relates both to maternal health research and methodologies and also to Inuit birthing practices, and on providing space for Inuit women to share their birthing experiences, past and contemporary, to inform and shape systems that affect them. In sharing these birthing narratives and perspectives, this research also celebrates Inuit women: their strength, their knowledge, their insight.

This work also highlights Inuit experiences within a contemporary system of obstetric evacuation in Eastern Nunavut – a system which is reportedly largely distanced from place and the relationships places hold that are important for emotional, mental, physical, and spiritual wellness. This thesis, then, is also intended to highlight the importance of birthing systems’ alignment and inform possibilities for an enrichment of the medical obstetric system with Inuit birthing care and means of wellness in the Qikiqtaaluk Region of Nunavut. Through a place-based and -specific inquiry, this research provides insights for systems of birthing care and wellness in other regions of Nunavut, and among other peoples, in other places.
1.2 Systems of Birthing Wellness, Maternal Health, & Care

Among many peoples in rural and remote locations, present-day birthing systems often differ from the past, whereby childbirth is now frequently centralized to medical facilities (Kildea et al., 2019; Montgomery-Andersen et al., 2010; Vang et al., 2018; Vylka Ravna, 2019). Implicit in these changes is a recognition that birthing can be approached from a multitude of perspectives, and that these perspectives can be underscored by broader concepts of health and wellness (Ram, 2009; Stone, 2009).

From medical health perspectives, birthing often correlates to ‘obstetrics’ and care that is provided within medical facilities (Stone, 2009). Underlying concepts of health and wellness in medical perspectives have, typically, been shaped by largely ‘Westernized’ understandings of wellness as located at the individual level (Allen et al., 2020; Redvers et al., 2020; Thiessen et al., 2020). Moreover, from medical perspectives, health has a tendency to be conceptualized within a biomedical model. Consequently, birthing and maternity care are also frequently viewed within a biomedical model (Stone, 2009). For many Indigenous Peoples, however, health is a multi-faceted construct that encompasses reciprocal relationships with a multitude of environments (Panelli & Tipa, 2007; Richmond & Big-Canoe, 2018; Sawatzky et al., 2019), including social, cultural, physical, spiritual, psychological, and emotional elements, which are not parsed into fragmented entities but inherently integrated and place-based (Kirmayer, Fletcher, & Watt, 2009; Panelli & Tipa, 2007; Wilson, 2003). For Inuit, for example, wellness is tied to the land; the broader social and environmental context, and web of relationships therein, is intrinsic to wellness (Cunsolo Willox et al., 2012; Middleton et al., 2020; Richmond & Ross, 2008; Sawatzky et al., 2019; Waddell et al., 2017). Given these concepts of health and wellness, birthing among Inuit may be conceptualized beyond the moment of delivery and physical experience therein. Instead, birthing may be understood as inclusive of pre-conception through to child-rearing, and inherently affected by one’s social and environmental context (Ekho & Ottokie, 2000; Pauktuutit, 1995).

Birthing is also deeply embedded in cultural perspectives and, thus, situated within the knowledge systems and associated traditions, rituals, and practices of many Indigenous Peoples. Among the Indigenous Tlicho of the Northwest Territories, Canada, for example, birthing practices are land-based. Within Tlicho birthing care, midwives apply essential infection-preventing medicines from the land to a woman’s body following birth and provide them with spruce bough tea for pain relief; treatment of the umbilical cord and burying of the afterbirth are associated with land-based rituals; and Tlicho midwifery knowledge is shared intergenerationally among women and tied to other female responsibilities related to hunting and the effect of a woman’s blood on animals (Dawson,
As Dawson writes, “birth places may be seen as social and cultural spaces endowed with cultural values and meanings fundamental in the rituals of birth” (Dawson, 2017:145). Many Indigenous Peoples in Australia, too, value birthing “on country” in the same place one was born; this concept of “borning” connects a newborn spiritually to the land (Kildea & Wardaguga, 2009:276). Cultural perspectives and underlying worldviews, like these, further illustrate understandings of health as involving more than physical dimensions for many Indigenous Peoples (Shroff, 2011).

As birthing, health, and wellness can be understood from multiple perspectives, clarity in how these terms are used is necessary. Inuit experiences of ‘birthing,’ ‘maternal health,’ and ‘maternity care’ are referred to throughout this dissertation. Birthing was operationalized as the process of bearing new life, writ large, while ‘maternal health’ referred to this process when in relation to the medical obstetric system. ‘Maternity care’ is intended to refer to all forms of support provided to Inuit mothers and newborns, both culturally-embedded and medically-involved.

Additionally, the emphasis on cultural perspectives in this research on birthing builds from the recognition that birthing is invariably intertwined with culture (Davis-Floyd & Cheyne, 2019; Jordan, 1978), and culture can be defined and operationalized in relation to place (Casey, 1996). This inquiry into systems of birthing wellness, maternal health, and care, then, is grounded in understandings of birthing as embedded in culture and culture itself as a derivative of particular peoples living into, and with, particular places.

1.3 The People and Place: Inuit, Inuit Nunangat, & Nunavut

Inuit and their ancestors have lived and thrived on the lands, ice, and sea throughout the global Circumpolar North for thousands of years. Of the approximately 65,000 Inuit in Canada, most live within Inuit Nunangat (Inuit homeland) which is comprised of four settled land claims across the Arctic and Subarctic regions (from West to East): Inuvialuit, Nunavut, Nunavik, and Nunatsiavut (ITK, 2019) [Figure 1.1]. Each of these areas has a distinct model of governance, historic and present relationship to federal and provincial/territorial governments, place-specific cultural practices and knowledges, and dialects (Pauktuutit, 2006); and yet, Inuit are also unified by shared societal values, as well as epistemologies (ways of knowing) and ontologies (ways of being) that are intrinsically land-based (Karetak et al., 2017). Indeed, Inuit lives and livelihoods are profoundly connected to the land (Cunsolo Willox et al., 2012), and to the kin and community relationships that are developed and sustained through practices that occur on and with the land (Sawatzky et al., 2019), such as hunting and sewing with skins (Aariak, 2018; Bennett & Rowley, 2004b; Karetak et al., 2017).
Figure 1.1. Map of Inuit Nunangat (Inuit homeland), comprised of four settled land claims regions (from West to East), Inuvialuit, Nunavut, Nunavik, and Nunatsiavut. For Inuit, Inuit Nunangat is not just the land within the land claims areas, but also the sea ice, waters, and air.

This dissertation research was located in Nunavut ('Our Land' in the Inuit language of Inuktitut). The landmark 1993 Nunavut Land Claims Agreement and subsequent 1994 Nunavut Act culminated with the creation of the Nunavut Territory and recognition as a “formal national political unit” by the Government of Canada (Wenzel, 2004:239). Today, Nunavut contains 25 fly-in communities, with no conjoining road access, located in three distinct regions: Kitikmeot, Kivalliq, and Qikiqtaaluk (Baffin).

Nunavummiut (people of Nunavut) have experienced tremendous societal change over the last century, driven by colonization (Tester, 2017) and ongoing colonial policies and processes. Historically, Inuit moved seasonally; however, increasing Euro-Canadian influence in the Arctic – motivated, in part, by assertions of national sovereignty in the global arena – forced Inuit into settlements (Hicks & White, 2000). Colonization was also accompanied by the imposition of administrative, economic, and political systems of the Settler government (Douglas, 2007), including systems of education and healthcare. Accordingly, historic events such as the formation of residential schools (TRCC, 2015), forced relocation (McElroy, 2008:135), tuberculosis evacuations (Tester, 2017), and creation of Inuit identity discs (Douglas, 2007) have left legacies of multi-and
inter-generational trauma among Inuit (McElroy, 2008:136), and shaped a largely complex relationship to the ‘Canadian nation’ and non-Inuit.

1.4 BIRTHING IN NUNAVUT

Historically, Inuit women gave birth on the land, surrounded by family and community (Douglas, 2007; Healey & Meadows, 2007; Jasen, 1997). Inuit birthing practices, then, are land-based and involve the close support of family members and Elders (O’Brien, 2012; Pauktuutit, 2015). Alongside the broader shifts to life in settlements, birthing also became centralized to community health centres and attended by nurse-midwives (Douglas, 2006). Subsequently, birthing began to occur outside settlements and ‘away from home’, in an effort to improve infant and maternal health outcomes (Healey & Meadows, 2007). By the late 1970s, the standard of care became obstetric evacuation to hospitals, typically located further south (Chamberlain & Barclay, 2000). This evacuation model remains in effect today (Lawford & Giles, 2012).

Presently, each community within the Qikiqtaaluk Region has a community health centre staffed by a small team of community health representatives and nurses or nurse practitioners that are typically trained in public health and/or primary healthcare. Nurses provide routine prenatal care to women at their respective community health centres. In addition, a non-resident physician rotates to each community and aims to examine pregnant women once per trimester. Obstetric referral then proceeds according to territorial policy, as outlined in the Government of Nunavut Department of Health’s Community Health Nursing Administration Manual (2011). Most women travel to Iqaluit for one comprehensive prenatal ultrasound at 20 weeks’ gestational age. Women are then flown, on average, at 36 weeks’ gestational age from their home community to a secondary-care facility in Iqaluit (Qikiqtani General Hospital) or a tertiary-care facility in Ottawa (Children’s Hospital of Eastern Ontario), depending on the anticipated level of risk in delivery. Typical reasons for selection of a tertiary-care facility delivery include premature labour and possible rupture of membranes, antepartum hemorrhage, major congenital malformations, multiple gestation, and/or a previous complicated birth. In Iqaluit, care is provided by an obstetrics team of general practitioners at Qikiqtani General Hospital, where approximately 400 births occur per year (Hansen & DeMaio, 2019). While in Iqaluit, women usually stay at Tammaativvik Boarding Home, or with family. Barring any serious complications in labour, delivery, or the immediate post-partum period, women stay in Iqaluit after birth for, on average, 1-2 days prior to flying home. Women then receive postnatal care through the community health centre or public health office in their home communities (Roberts & Gerber, 2003). Medical travel in the present obstetric care system is funded by the federal Non-Insured Health Benefits Program for Inuit (Government of Canada, 2019).
The current model of care, whereby birthing occurs away from the land, family, and community is, thus, very different than in decades past in Nunavut. While created to protect maternal and infant health, the change from community-based birthing to obstetric evacuation affected – and continues to affect – other determinants of Inuit health and wellness, such as connection to the land, culture, history, language, and knowledge systems (Greenwood et al., 2015). Moreover, obstetric evacuation can also limit Inuit involvement in meaningful birthing traditions, access to country food in pregnancy (Couchie & Sanderson, 2007), and social support from kin and community networks (Richmond, 2009).

Recent movements in policy and research have potential to impact the experience of obstetric evacuation. For instance, as of an April 2017 policy change to the federal Non-Insured Health Benefits Program, pregnant women throughout Inuit Nunangat may now travel with one escort (Government of Canada, 2019), whereas previously they travelled alone. In addition, research into fetal fibronectin testing to predict labour onset has been explored as a possibility to enable women to remain in-community longer, prior to obstetric evacuation (Healey et al., 2018). Many Inuit-led organizations and advocacy groups have spearheaded efforts to advance maternal health and wellness in Nunavut: Pauktuutit Inuit Women of Canada (Pauktuutit, 1995; Sillett, 1988), Nunavut Tunngavik Incorporated (NTI) (NTI, 2007), Inuit Tapiriit Kanatami (ITK) (George, 2019a), Inuit in Rankin Inlet (Cavanaugh, 2009; Douglas, 2011), an Inuit women’s group in Taloyoak (Lowell, 1995), the Midwifery Association of Nunavut (McNiven, 2008), and Inuit midwives from the Nunavik Inuulitsivik Midwifery Service who have supported Nunavut midwifery (McNiven, 2008; Qinuajuak, 1996). This work has been critical to community mobilization, and the expanding and prioritizing of Inuit-directed programs and policies (Gerrard, 2011). In particular, the 2008 regulation of midwifery in Nunavut (MPA, 2009), the creation of two regional birthing centres in Cambridge Bay and Rankin Inlet (Douglas, 2011; James et al., 2010), and the development of midwifery education and maternity care worker programs at Nunavut Arctic College (Government of Nunavut, 2014) were direct results of this work. At present, these programs are not offered; only half the midwifery positions across Nunavut are filled; and no registered midwives work in the Qikiqtaaluk Region, though in recent years, Nunavut’s former health minister discussed increasing support for midwifery (George, 2019b) and Inuit advocates have voiced the importance of enhanced birthing supports in Nunavut (Wright, 2021b). In addition, in June 2021, Pauktuutit and ITK released a National Inuit Action Plan on Missing and Murdered Inuit Women, Girls and 2SLGBTQQIA+ People, affirmed by NTI (Wright, 2021a), that identifies access to Inuit midwifery in communities as a priority and action for territorial/provincial governments (ITK & Pauktuutit, 2021).
1.5 Birthing and Inuit Qaujimajatuqangit (IQ)

Inuit birthing and midwifery are grounded in principles of *Inuit Qaujimajatuqangit* (IQ). IQ has been described as a shared Nunavut Inuit worldview, an “ethical framework and detailed plan” that “links the past and future by teaching important lessons about how to live a good life” (Karetak et al., 2017:3). As stated by Karetak & Tester (2017), “IQ defines Inuit culture. It makes Inuit who they are” (17). Within IQ are four fundamental ethical principles (*maligarjuat*) to be internalized and committed to, cultural “laws” meant to guide Inuit society and ensure respectful, balanced relations between and among people, animals, and the land:

1. Working for the common good and not being motivated by personal interest or gain;
2. Living in respectful relationships with every person and thing that one encounters;
3. Maintaining harmony and balance; and
4. Planning and preparing for the future (Karetak & Tester, 2017:3).

These *maligarjuat* are the basis for all other Inuit beliefs and values (Tagalik, 2005). Taken together, IQ is a holistic, all-encompassing system of Inuit knowledge, beliefs, and values that is integral to Inuit life and livelihoods, the source of Inuit epistemologies and ontologies (GN, 2007; Karetak & Tester, 2017; Tagalik, 2005, 2015).

IQ is foundational to Nunavut Inuit concepts of wellness, and how wellness may be supported within community life (Tagalik, 2005, 2015); thereby, understanding Qikiqtaaluk Inuit perspectives on maternity care and wellness may also begin with IQ. Community-led programs and interventions grounded in IQ, such as the *Inunnguiniq* Pilot Project (Mearns et al., 2020) and The Eight Ujarait (Rocks) Model (Healey et al., 2016) facilitated by the *Qaujigiartiit* Health Research Centre, emphasize the significance of IQ to supporting wellness from early years through to adolescence. Inuit child-rearing practices, in particular, connect to this study as Inuit birthing IQ includes knowledge pertaining to conception and pregnancy through to early years. An array of literature on IQ highlights this process of “*Inunnguiniq* [the making of a human being]” as inherently involving a meshwork of relationships to kin, namesakes, a midwife or “*sanaji* [the one who is making me]” attending a birth and other community members (Akittiq & Akpaliapik Karetak, 2017; Ekho & Ottokie, 2000; Tagalik, 2000). Collectively, a child is taught, supported, and nurtured in forming valued skills, attitudes, behaviours, and ways of thinking (Bennett & Rowley, 2004; Pauktuuttit, 2006; Tagalik, 2000). Karetak & Tester (2017) state that,

For Inuit, the ultimate goal of becoming human is to be as capable as possible in every area of life, but to also know the importance of respectful relationships and to value reliance on and support for others (6).
Birthing IQ also includes beliefs about how to stay healthy during pregnancy (singaijuq) and facilitate a smooth labour (irnisuktuq) and delivery, such as going outside as soon as one awakens (O’Brien, 2012) and massaging one’s pregnant stomach for a faster labour (Ekho & Ottokie, 2000). These beliefs related to singaijuq and irnisuktuq can be diverse between regions, communities, and individuals; for instance, some Elders describe the importance of a woman birthing alone in a separate birthing tent or iglu when on the land, and remaining separate from the community until post-partum bleeding stops (Bennett & Rowley, 2004a), while others discuss the active role of a midwife or other birth attendant (O’Brien, 2012). Other beliefs include the importance of going outside first thing every morning during pregnancy to facilitate a smoother labour (Ekho & Ottokie, 2000), or minimizing stress as it can affect the health of the developing fetus (Ekho & Ottokie, 2000; O’Brien, 2012). Birthing IQ also includes knowledge about pre- and post-natal nutrition and care, such as the value of a country food diet while pregnant and breastfeeding (O’Brien, 2012); birthing positions and techniques for responding to delivery complications, such as positioning a woman on her hands and knees or squatting with an attendant providing fundal pressure during labour (O’Brien, 2012), and manual techniques for delivering a retained placenta (Pauktuutit, 1995). While reflected in this literature, the breadth and depth of birthing knowledge represented by IQ is present in an oral tradition, not in written form (Karetak & Tester, 2017). As such, this dissertation research will not attempt to engage this depth of birthing and childrearing IQ, writ large, but rather more specifically explore connections between Qikiqtaaluk Inuit birthing perspectives and experiences and IQ principles incorporated by the Government of Nunavut.

Indeed, within IQ, eight principles – or underlying values that guide Inuit societal life – have been identified by the Government of Nunavut (GN) as being important to all areas of governance in Nunavut, including that of health (GN, 2013). IQ principles are viewed as having integral applications to, for instance, education (GN, 2007; H. E. McGregor, 2013; Walton et al., 2013), the sciences (Pedersen et al., 2020; Wenzel, 1999, 2004), and ethical engagement in research (Healey & Tagak Sr., 2014; Pedersen et al., 2020; Rand, 2020; Tamalik McGrath, 2005). Six of eight of these principles were identified collaboratively by the GN and Inuit Elders across the territory, with the GN subsequently adding two principles (GN, 2018a; Tagalik, 2005). Only within the last two decades, following the formal establishment of the Government of Nunavut in 1999, have the following IQ principles been defined within written text for the purpose of informing governance structures in the territory (Arnakak, 2000, 2002; GN, 2006, 2013).

**Innuqatigiitsiarniq**, defined within GN operations as “respecting others, relationships and caring for people” (GN, 2013, 2018a:1), involves seeing individual behaviour as embedded within a community context (Wihak & Merali, 2003), treating all peoples as equal (GN, 2006), and “living well together”
through positive relationships (GN, 2007; Karetak & Tester, 2017). Inherent in this foundational principle is a belief in the intrinsic value of all other human beings and responsibility to care for others (GN, 2007; Karetak & Tester, 2017). Alice Ayaliq discusses this “kindness and caring for others”:

Our parents guided us to be human beings. It’s our turn to do the same. I try to pass on the knowledge to students in school whenever I’m invited to speak. When we see someone sad or lonely, it is our responsibility to cheer them up in our own little ways. When I see someone sad, I try to think of ways to help them and cheer them up. I would say: “Let’s go out fishing.” “I need you to start my snowmobile.” They would cheer up right away. It’s good to see someone happy and doing things. I would tell them that I need their help to do something, rather than saying that I’m doing this for them. Our young people need to learn to cheer someone up. Who knows, it might turn out to be a turning point for someone in need (2017:100).

Pijitsirniq, defined as “serving and providing for family and/or community” (GN, 2013, 2018a:1), refers to elevating the needs of the group above own’s own needs and aspirations (Wihak & Merali, 2003); it connotes willingness to serve, and “serve well”, for the common good (GN, 2007; Karetak et al., 2017:222). Drawing from conversations with Elder Nilaulaaq Miriam Aglukkaq, Tamalik McGrath positions the Inuktitut for “serving or service” in relation to the English concept of “usefulness” (McGrath, 2005:45). Atuat Akittiq’s description refers to this concept of serving, providing, or being useful to others:

I have been told to make sure that I am prepared to help others at all times by sewing clothing or anything else that I am able to make to give to a needy person. These are the commands that were passed down to us. If we try to help other people at all times, we will feel much better about ourselves. When there is an emergency in your community, you are able to help with things, provide food and, in the past, if you had fire, you were able to help by cooking something for someone else (2017:67).

Pilimmaksarniq/Pijariuqsarniq, the “development of skills through observation, mentoring, practice, and effort” (GN, 2013, 2018a:1) is rooted in the need for honed skills and acquisition of knowledge to be capable of survival on the land (Wihak & Merali, 2003). As knowledge is acquired, it is passed onto others (Rand, 2020), who “learn from seeing and doing” (Karetak & Tester, 2017:7) – it is knowledge with application. As Louis Angalik states:

Whether I knew it or not, when I saw my parents (grandparents) doing day-to-day things, I was learning by observing how these things were done. In this way, they prepared me for the time when I could take on a task (2017:87).

Pilimmaksarniq/Pijariuqsarniq relates to raising children to become capable, able human beings (inunnuqtitauniq) (Akittiq & Akpaliapik Karetak, 2017). Donald Uluadluak describes this process of “pilimmaksarniq (becoming able)” as learning-by-doing: “What we call pilimmaksarniq is when you are training anyone using concrete materials and tools that children can feel and practice with” (2017:164).
Avatittinnik Kamatsiarniq, “respect and care for the land, animals and environment” (GN, 2013, 2018a:1), speaks to the concept of environmental stewardship and recognizing human behaviour as intrinsically linked to other non-human species, lands, and waters (Kalluak, 2017; Wenzel, 2004). This “interdependency and inseparability” of humans and the natural world is central to Inuit worldviews (McGrath, 2005:48). As Karetak and Tester (2017) state, from Inuit perspectives, “all things are integrated and intertwined. All things are impacted by each other so that we can only exist successfully when we are in respectful relationship with animals, as well as rocks, land, plants, water systems, [and] seasonal changes” (6). Mark Kalluak echoes this importance of “responsible environmental stewardship”:

The environment that is around us – the air, water and land – are the main life sustainers and were treated with the most respect and care. An unpredictable force can lead to instant danger. Preparedness should always be practised. The only way our environment can protect us, with its abundant resource of wildlife, plants and other sources, is for us to protect it (Kalluak, 2017:59).

Other principles, less prominent in this research, include: “Tunnganarniq (fostering good spirits by being open, welcoming and inclusive), Aajiiqatigiinniq (decision making through discussion and consensus), Piliriqatigiinniq/Ikajuqtigiinniq (working together for a common cause), and Qanuqtuurniq (being innovative and resourceful)” (GN, 2013, 2018a:1). A number of these principles speak to collectivity and collaborative decision-making and problem-solving, seeking common ground through hearing all viewpoints (Wihak & Merali, 2003). They are intended to maintain harmony, foster good relations between and among people and all living things, and nurture collective, community well-being (Karetak & Tester, 2017)

From its beginnings, the GN has centered these eight IQ principles as an anchoring and orienting framework to all its operations and integral to its institutional culture, as communicated in the 1999 Bathurst Mandate, Pinasuaqtavut (GN, 1999) and subsequent strategic plans: Sivumut Abluqta, 2014-2018 (GN, 2014) and Turaaqtavut, 2018-2022 (GN, 2018b). Considering its importance within the GN, it is likely that these eight IQ principles and the holistic philosophy and guiding framework of IQ underpins Qikiqtaaluk Inuit perspectives on birthing shared in this study, with possible implications for enrichment of the maternity care system in Eastern Nunavut.

1.6 Systems Alignment and Enrichment: Rationale for Research

Evidently, within Inuit Nunangat and specifically Nunavut, the birthing system embedded in Inuit knowledge and values is distinct from the current medical obstetric system. Moreover, these systems have remained largely separate and, often, incongruent (Douglas, 2007; Wenzel, 1981). Previous literature has suggested a need for alignment of systems by emphasizing the impact of OE
on wellness for Inuit mothers, newborns, families, and communities (Chamberlain & Barclay, 2000; Couchie & Sanderson, 2007; O’Neil et al., 1988). A gap exists, however, in research that explores possibilities for meaningful integration and an enrichment of the medical obstetric system with that of Inuit birthing care, and that further highlights the importance of systems alignment. Moreover, given a complex history of research and systems-change often being driven by outside influences (ITK, 2018; Kaufert & O’Neil, 1990), a need also exists for this research into systems alignment and enrichment to be deeply informed by – and to highlight – the lived experiences, knowledge, perspectives, and voices of Inuit women themselves. Thus, research informing birthing systems alignment and wellness must also involve an understanding, from Inuit, of how the culture of a particular People in a particular place shapes their experiences of, and perspectives on, wellness and care. For Inuit in the Qikiqtaaluk Region of Nunavut, these connections between culture, place, and wellness have rarely been explored in relation to birthing experiences but may have important implications for how the medical obstetric system might be enriched within this particular region.

1.7 Thesis Goal and Objectives

Intending to help inform possibilities for an enrichment of the medical obstetric system in Nunavut, and explore the intersections between place, culture, and health as it relates to birthing, a case study was conducted in Iqaluit, Nunavut. By grounding this research in a particular place, it may also highlight the importance of systems alignment in this context and underscore particular implications for Qikiqtaaluk Region Inuit, as well as non-Inuit healthcare providers, policy makers, and public health practitioners. This research, then, had four specific objectives:

1. To systematically and critically question how Inuit maternal health research has been conducted in Nunavut, as reported in the published literature (Ch.2);
2. To explore the methodological possibilities and importance of arts-based health research through a case study in Iqaluit, Nunavut (Ch.3);
3. To characterize connections between Qikiqtaaluk Inuit birthing knowledge and perspectives and Government of Nunavut-incorporated principles of Inuit Qaujimajatuqangit (IQ) identified as important for health system governance (Ch.4); and
4. To explore the importance of place to Inuit, and how the interrelated concepts of place-based identity and place attachment may frame and underscore Inuit birthing experiences (Ch.5).

Taken together, this dissertation aimed to be a collaborative, place-based inquiry into maternal health research and methodologies in Nunavut (Ch.2 & 3), and the critical engagement with relevant maternal health literature (Ch.2) was the impetus for an exploration of arts-based research in the Qikiqtaaluk Inuit context (Ch.3). Utilizing research approaches and principles identified through this
methodological inquiry, this dissertation research then sought to highlight Inuit women’s voices, experiences, and perspectives in relation to past and contemporary birthing scenarios in the Qikiqtaaluk, recognizing that Inuit culture and *Inuit Qaujimajatuqangit* (Ch.4) and place-connections (Ch.5) may invariably be intertwined with the health, wellness, and lived maternity care experiences of birthing women, their families, and their communities [*Figure 1.2*]. Thus, it may be important for maternal health researchers (Ch.2-3) and maternal health practitioners and policy makers (Ch.4-5) to prioritize the shaping of their research methods, as well as their obstetric care approaches, and maternity care policies and practices, respectively, by place-specific and culturally-specific dimensions.

*Figure 1.2.* Visual roadmap of dissertation research, including two chapters with a methodological focus (Ch.2 & 3) and two qualitative chapters that highlight Inuit women’s past and contemporary birthing experiences in relation to culture (Ch.4) and place (Ch.5). Underscoring all research chapters is an inquiry into the significance of place and culture to maternal health research methodologies (Ch.2 & 3) and to systems of care for birthing mothers, and their families and communities (Ch.4 & 5).
**1.8 Self-Determination in Inuit Nunangat Research**

Ethical research with Indigenous communities requires ongoing, critical appraisal of the research methodology used (Sherman et al., 2012), especially in light of problematic research (and often ongoing) histories in many places (Simonds & Christopher, 2013). For Inuit, health research has a complicated history and present reality (ITK, 2018). Research areas like that of physical anthropology (Heathcote, 1974) and the study of birthing seasonality (Condon, 1982), for example, reduce humans to mere specimens or objects of study. The removal of Inuit from families to tuberculosis sanatoria (Møller, 2010) is but one example of how the interface of health research and the Northern health system’s policies and practices is a backdrop with complicated and, at times, painful associations for many Inuit (ITK, 2018). In response, Inuit have strongly voiced a call-to-action for non-Inuit to recognize and respect Inuit sovereignty in research (ITK, 2018). Increasingly, non-Inuit researchers are expected to prioritize and support Inuit-directed and Inuit-led health research in Inuit Nunangat; they have a responsibility to advance Inuit self-determination in Inuit Nunangat research (ITK, 2018).

**1.9 Theoretical & Methodological Frameworks**

**1.9.1 Strengths-Based, Community-Based Research Approaches**

Working to rectify power imbalances and facilitate opportunities for bi-directional sharing of knowledge are key constituents of both strengths-based (Fenton et al., 2015) and community-based research approaches (Castleden et al., 2012). A strengths-based approach involves the recognition of participants’ capabilities; building on individual, family, and community strengths to mobilize change; and, fundamentally, the centering of participants’ voices and political agency (Kanaka, 2004). Community-based participatory research (CBPR) approaches are guided by similar tenets. CBPR is often centred around processes of shared decision-making power between researchers and communities and the co-creation of research from its conceptualization through to the mobilization of results (Castleden et al., 2012; Israel et al., 2005, 2010).

Despite the value of CBPR principles to facilitating research by, for, and with Inuit (Delemos, 2006), this orientation to research is not without limitations. Conflicting researcher responsibilities and networks of accountability to institutions and funders (Sylvestre et al., 2018), as well as a chasm between CBPR theory and praxis (Castleden et al., 2012) can circumvent even the best-intentioned CBPR practitioners. Further, CBPR originated within a non-Indigenous framework. For this reason, positioning the CBPR model alongside a decolonizing research paradigm may more appropriately align research with the epistemological and ontological contexts of Indigenous Peoples (LaVeaux &
Christopher, 2009; Simonds & Christopher, 2013; Wilson, 2008), and also engage important questions of research sovereignty and self-determination (Smith, 2012).

1.9.2 Decolonizing Research

Decolonizing research, then, becomes a critical methodological guide for this dissertation research, as it aims to prioritize and highlight Inuit women’s voices and also lay groundwork for supporting Inuit self-determination in research on maternal health and birthing. Decolonizing research “privileges indigenous concerns, indigenous practices and indigenous participation” (Smith, 2012:111). It is predicated on dismantling harmful distinctions between “researchers and researched” (Smith, 2012:111) that are rooted in colonial thought and discourse of ‘otherness’, and that have marginalized Indigenous knowledges within a project of Western academics (Kovach, 2009:75).

Rather, in a decolonizing paradigm, Indigenous Peoples are active agents in shaping and creating research to be of benefit to an agenda of “decolonization, healing, transformation and mobilization” (Smith, 2012:120). Such research may be grounded in methodologies derived from Indigenous practices that enable sharing on participants’ terms (Kovach, 2009:82) and are meaningful within an Indigenous context (Chilisa, 2011), with its particular ontologies and epistemologies (Wilson, 2008).

In this research, a decolonizing lens probes these questions and considerations:

- **How might our methodological approach be inclusive of Inuit modes of knowledge-creation and knowledge-sharing** (Cochran et al., 2008) and **foreground Inuit knowledge** (Ermine et al., 2004; Simonds & Christopher, 2013)? This work intends for recognition and respect for Inuit birthing knowledge to be the foundation for inquiry in this study, not as peripheral to Euro-Western birthing knowledge and approaches which have often been prioritized within medical health systems (Jasen, 1997; Kaufert & O’Neil, 1990).

- **How might this research be of service to others: to Iqalummiut and the Inuk individuals who we are privileged to hear from** (Smith, 2012)? In referencing Linda Tuhiiwai Smith, Gaudet incites that “research as a service be based on the voices and experiences of the people themselves” (2014:79). This work aims to center Inuit women’s birthing perspectives and experiences through methods that allow for storytelling (Smith, 2012) and by prioritizing women’s voices within health systems recommendations. Moreover, through consultation and ongoing engagement with local partners, we aim to channel and mobilize this work to be of utmost benefit (ITK, 2018; Jull et al., 2018).

- **How might our research praxis involve a “constant attentiveness to colonial influences”** (McGregor, 2018:819), **mindful of the possibilities for research to further entrench stereotypes and inflict harm, and actively seeking to disrupt power differentials between**
“researchers and researched” (Smith, 2012)? This may involve reflexivity as researchers and the use of methodological approaches that facilitate knowledge co-creation.

Importantly, as a white Settler PhD student, I am cognizant that it would be another “form of settler appropriation” for me to ‘tack on’ a decolonizing approach to this work, in the interest of creating a more ethical, equity- and justice-oriented framework for research (Tuck & Wayne Yang, 2012:3). Decolonization is “not a metaphor for other things we want to do to improve our societies and schools” – a metaphor for how research can be done well, or a manoeuvre to “reconcile Settler guilt and complicity” for myself (Tuck & Wayne Yang, 2012:1). I am challenged, then, to commit to decolonizing the ways in which I see this research and the world – a journey that goes beyond this PhD work. Moreover, I see this work as attempting to inhabit a paradigmatic ‘third space’: a critical engagement of Western interpretivist approaches with Indigenous forms of inquiry, carried out in collaboration, intending to validate Indigenous knowledges, sciences, and worldviews within academic institutions where Eurocentric, Western-style inquiry has typically been hegemonic (Held, 2019).

1.9.3 Arts-Based Approaches

Arts-based approaches may resonate within an Indigenous and decolonizing research paradigm, given the nature of these approaches as experiential and embodied (Ritenburg et al., 2014). These ways of knowing and coming to know form the foundation of many Indigenous knowledge systems and pedagogies (L. B. Simpson, 2014). In health research, the process of creating art has facilitated representation and sharing of lived health experiences and perspectives on participants’ terms (Boydell et al., 2012, 2016). In this light, arts-based approaches offer possibilities for hearing Inuit women’s lived birthing experiences and perspectives on care and wellness on their terms, in a context more aligned with their frameworks for knowing and being.

1.9.4 Place-Connections

For a study of birthing experiences and systems of maternity care, place becomes another important theoretical underpinning. Basso, in his foundational work alongside the Western Apache Peoples, posits, “places, we realize, are as much a part of us as we are of them” (Basso, 1996:xiv). Increasingly, health research is exploring this “mutually reinforcing and reciprocal relationship between people and place” that has importance for health and wellness (Cummins, Curtis, Diez-roux, & Macintyre, 2007:1825). People-place relationships are also culturally-embedded – an understanding from which has emerged literature on the interface of culture, place, and health (Gesler & Kearns, 2002). For Inuit, particularly, an ancestral and abiding attachment to place (Low &
Altman, 1992) is at once constitutive of Inuit identity (Cunsolo Willox et al., 2012; Kirmayer et al., 2008; Stairs, 1992) and also foundational to embodied practices like hunting and preparing country food that are critical to wellness (Karetak et al., 2017). These close Inuit place-connections are evident in relationships to country food (Borré, 1991; Newell et al., 2020); sea ice (Durkalec & Furgal, 2012), and berry-picking (Boulanger-Lapointe et al., 2019), for instance.

Critical place inquiry provides a theoretical frame within which to engage the concept of place, and the people-place connections explored in this research (Tuck & McKenzie, 2015a). Recognizing the dynamism of place, and places as nexuses of mobility and activity that (re)shape place, is central to this inquiry (Tuck & McKenzie, 2015b). An array of literature similarly conceptualizes place as animate and interactive (Abram, 1996; Cruikshank, 2006); a summation of local relations, both human and non-human (Johnson & Larsen, 2013); place as event, that “places not only are, they happen” (Casey, 1996:26) and that attachment to places can be understood as a tripartite process, with behavioural, affective, and cognitive dimensions (Scannell & Gifford, 2010). Common to these understandings is the notion that places are relational and lived with relationally. So, too, does critical place inquiry center the notion of relational validity, which both compels researchers to consider the interdependencies of people with land and other non-human species in their work and also “impels action and increased accountability to people and place” (Tuck & McKenzie, 2015b:636). Engaging in critical place inquiry, then, can imbue this research with an analytical lens fitting for better understanding Inuit lived birthing experiences as they have occurred on the land and away from home and place. Moreover, this framing probes self-reflection on my role, responsibilities, and accountabilities to people and place in this research.

In the context of this work, land is central to place and place attachment. Land attachment is understood as a vital determinant of health (Greenwood et al., 2015; Lines et al., 2019; Tobias & Richmond, 2014). Moreover, Simpson (2014) characterizes land as “both context and process” (7) – that processes of learning, coming to know, and deriving meaning come through “a compassionate web of interdependent relationships”, with and through the land (11). In this research, the birthing knowledge shared, and underlying worldview and philosophy of Inuit Qaujimajatuqangit, is understood as always and ever connected to the land. Scholars theorize differences between place and land, though this is a challenging theoretical terrain, marked by questions of the rurality/urbanity or the individualist/collectivist ontologies of land vs. place, and shaped by Euro-Western or Indigenous interpretive lenses (Tuck & McKenzie, 2015a). Suffice it to say, references both to place and land are threaded throughout this research.

Further, in theorizing place, Tuck and McKenzie urge researchers to:
Reconsider place and its implications, not because it offers a generalizable theory or universal interpretation, but because generalizability and universality are impossibilities anyway, in no small part because place matters and place is always specific (Tuck & McKenzie, 2015b:637).

While this study engages place as particular, local, and specific, it is also informed by feminist understandings of the local and particular as interrogating the universal and global (Haraway, 1988; Mohanty, 1991): power operates at various spatial scales to distance people from place (Tobias & Richmond, 2014; Tuck & McKenzie, 2015a). The dynamics of place-making and engagement are global, and yet manifest in local, particular ways. Massey (2005) theorizes this relationship between the local and global, stating: “The global doesn’t just exist ‘up there’. It is made in places and there is hardly a place on the planet that in some ways isn’t party to that making” (412). Applied to this work, Inuit are affected by – and affect – place in very specific terms; they engage relationally, physically, emotionally, and politically with place in all its specificity (Cunsolo Willox et al., 2012; Durkalec et al., 2015; Middleton et al., 2020; Sawatzky et al., 2019), including as it relates to mothers’ attachment to local and known places while birthing. Yet, the dynamics of these people-place connections can, too, be examined through the lens of the global, with broader implications. The force of Settler colonialism in undermining the ability of peoples to self-determine the circumstances and environments within which they live (and birth) is, for instance, a global dynamic (Morgensen, 2011, 2014). Further, Tuck draws upon feminist theories of power and place by referring to Settler colonialism itself as a “scalular structure”, present in such scope as ideologies down to the granularity of research tools (Tuck & McKenzie, 2015a:129). This dynamic calls for a critical examination of the processes and structures – both broad and specific – that uphold colonial relations as they continue to affect people-place connections in many societies worldwide.

1.9.5 Multidisciplinary Framings: Epidemiology and International Development Studies

The disciplinary lenses through which I approach this work are multi-fold: I am embedded within the Population Medicine (Epidemiology) department at the University of Guelph, and also have a collaborative specialization in International Development Studies (IDS) through the Guelph Institute for Development Studies. While not located in an international context, per se, this research does exist within a context of ongoing Settler colonialism, not unlike that which characterizes people-place relationships in other locales worldwide. I draw upon my IDS training to critically question and engage my positionality and place in the research; to practice reflexivity (Berger, 2015); to question how power may operate and be reified in research, and to be guided by participatory processes (LaVeaux & Christopher, 2009); and to imbue this research with a “critical population health approach” (Labonte et al., 2005), namely that it aims to be theoretically-, community-, and politically-
engaged work, oriented towards social and health-systems change and advancing health equity (Prussing, 2018). Being interested in intersections between culture and health, and place effects on health, I draw from anthropological and geographical perspectives to inform inquiry, to create context for understanding the ‘health of the population’ (Popay, 2003). This dissertation research, though, ultimately centers on informing health research, praxis, and policy. It aims to privilege local voices and perspectives in shaping the work and its outputs to be as applied and useful as it can be (Leung et al., 2004).

1.10 SUMMARY

In summary, this dissertation research highlighted the importance of aligning systems of birthing care and wellness in the Qikiqtaaluk Region of Nunavut. Moreover, our research sought to inform possibilities for an enrichment of the present system of obstetric evacuation in Eastern Nunavut with the Qikiqtaaluk Inuit culturally-embedded birthing system. In the context of calls for Inuit self-determination and decolonizing research, we were interested in what forms of maternal health research had been conducted in Nunavut to date, and what opportunities may exist for furthering Inuit-led research within this discipline, focused on an Inuit agenda and priorities (Chapter 2). Because of its significance to Inuit culture, sewing was chosen as a strategy for arts-based inquiry with potential to facilitate a data collection process whereby women could voice birthing experiences on their own terms and in a familiar context for knowledge-sharing (Chapter 3). Furthermore, this dissertation aimed to highlight Inuit women’s lived birthing experiences and perspectives on maternal health and wellness. We prioritized centering women’s voices as active agents in shaping what systems recommendations emerged (Chapters 4 and 5). Moreover, all stages of this research were guided and informed by a close collaboration among Inuit and Northern researchers in Iqaluit and Southern-located researchers. Taken together, this dissertation was a place-based inquiry into Inuit birthing and wellness, guided by principles of community-based and strengths-based approaches, and intended to highlight the importance of alignment of maternity care systems and explore possibilities for research to inform action.
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CHAPTER TWO

MAPPING THE MATERNAL HEALTH RESEARCH LANDSCAPE IN NUNAVUT:
A SYSTEMATIC SEARCH & CRITICAL REVIEW OF METHODOLOGY

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ABSTRACT

Nunavut’s maternal healthcare system is characterized by rapid transition from community-based birth to a practice of obstetric evacuation and institutionalized birth. Given calls for Inuit self-determination in research, maternal health research – which informs healthcare practices and policies – may need to be conducted differently, using different research methodologies, to include Inuit women’s voices and lived experiences. In light of these calls, this article systematically synthesized the published maternal health literature in Nunavut and critically examined reported research methods. This systematic search and critical review involved a comprehensive database search and multi-level eligibility screening conducted by two independent reviewers. Data on the temporal, geographic, methodological, and topical range of studies were extracted, then descriptive statistics were calculated to summarize these data. A hybrid inductive and deductive qualitative analysis of the full-text articles was conducted to critically analyze research methodology. The initial search yielded 2,656 distinct articles and twenty-eight articles met the inclusion criteria. These articles were published from 1975-2016, mostly used quantitative research methodology (71.4%), were written from clinical perspectives (57.1%), and focused on maternity care (53.6%). Emergent themes related to both the contributions and areas for growth of research methodology in the conceptualization, initiation, implementation, reporting, and knowledge mobilization stages of the research process. This review revealed opportunities for maternal health researchers to: redress the ongoing impacts of colonization; further include Inuit definitions of health and perspectives on birth in study designs; explore new methodologies that resonate with Inuit ways of knowing; continue (re)aligning research with community priorities; and move from consultation and collaborative partnership in research to Inuit leadership and data ownership. Indeed, this review illustrates that at each step of the research process, opportunity exists for Inuit perspectives and active involvement to shape and define maternal health research in Nunavut.

Key Words: Nunavut; Inuit; maternal health; childbirth; systematic search and critical review; research methodology
2.1 INTRODUCTION

Maternal health across the Circumpolar North is profoundly shaped by remote healthcare systems that require most pregnant women to fly out of their home communities for birth in southern institutions (Moffitt & Vollman, 2006; Paulette, 1990; Rich et al., 2016; Van Wagner et al., 2007). In Nunavut, Canada this practice of obstetric evacuation – coupled with on-going rapid socio-cultural, economic, and political changes (Douglas, 2007; Healey & Meadows, 2007; Jasen, 1997; Kaufert & O’Neil, 1990) – has created a maternal health landscape marked with complexities for Inuit. Obstetric evacuation emerged to address health resource challenges in communities, and was implemented to improve maternal and infant health outcomes; however, obstetric evacuation can also mean that childbirth now becomes a medicalized event for many women (Chamberlain & Barclay, 2000; Kaufert & O’Neil, 1990; O’Neil et al., 1988). This current childbirth model looks very different than in decades past, when birth was embedded in place, grounded in Inuit knowledge, and regularly celebrated within family and community (Pauktuutit, 1995; Voisey et al., 1990).

In Nunavut, birthing historically occurred at home, in Inuit communities, and was attended by community members knowledgeable in culturally-embedded midwifery practices (Pauktuutit, 1995; Voisey et al., 1990). Birthing was located on the land, as Inuit life and livelihoods were land-based and nomadic (Douglas, 2007). With colonization, since the mid-1900s, Inuit have been forced into life in settlements, where healthcare – including birthing care – was gradually centralized into health facilities and attended by non-Inuit nurse-midwives (Douglas, 2007; Healey & Meadows, 2007; Jasen, 1997). By the 1970s and 1980s, motivated by concerns about maternal and infant safety, the standard of care was medical transfer to southern-located facilities (Kaufert & O’Neil, 1990). Today, this practice of obstetric evacuation persists, though functions differently within each of Nunavut’s three regions [Table 2.1].
Table 2.1. Overview of the geographic and demographic context of Nunavut and its three constitutive regions (from West to East): Kitikmeot, Kivalliq, and Qikiqtaluk (Statistics Canada, 2011, 2020). Details of the functioning of the maternity care system overall in Nunavut, and within each region, are provided.

<table>
<thead>
<tr>
<th>Geographic Region</th>
<th>Overview of Setting &amp; Maternity Care System</th>
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<tr>
<td>Nunavut (Overall)</td>
<td>25 Communities; Population 38,873 (Statistics Canada, 2020); 84% Inuit</td>
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<tr>
<td></td>
<td>- Maternity care delivered differently within each of 3 regions (below):</td>
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<tr>
<td></td>
<td>- Regional Birthing Centres in Kitikmeot and Kivalliq; Nunavut's only hospital in Qikiqtaluk</td>
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<td></td>
<td>- Out-of-territory travel for women in all regions if specialist care is required</td>
</tr>
<tr>
<td></td>
<td>- Obstetric travel funded by the Government of Nunavut</td>
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<tr>
<td>Kitikmeot Region</td>
<td>Western Nunavut; 5 Communities; Population 5,350; 88% Inuit</td>
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<td></td>
<td>Regional Administrative Centre: Cambridge Bay</td>
</tr>
<tr>
<td></td>
<td>- Maternity care delivered to women living in Kitikmeot communities at a regional birthing centre in Cambridge Bay (staffed by nurses and midwives)</td>
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<tr>
<td></td>
<td>- For specialist care: Women travel by air to Yellowknife, Northwest Territories, Canada or Edmonton, Alberta, Canada</td>
</tr>
<tr>
<td>Kivalliq (formerly Keewatin) Region</td>
<td>Central Nunavut; 7 Communities; Population 8,310; 90% Inuit</td>
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<td></td>
<td>Regional Administrative Centre: Rankin Inlet</td>
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<td></td>
<td>- Maternity care delivered to women living in Kivalliq communities at a regional birthing centre in Rankin Inlet (staffed by nurses and midwives)</td>
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<td></td>
<td>- For specialist care: Women travel by air to Winnipeg, Manitoba, Canada</td>
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<tr>
<td>Qikiqtaluk (Baffin) Region</td>
<td>Eastern Nunavut; 13 Communities; Population 15,665; 80% Inuit</td>
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<td></td>
<td>Regional Administrative Centre (and territorial capital): Iqaluit</td>
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<tr>
<td></td>
<td>- Maternity care delivered to women living in Qikiqtaluk communities at Qikiqtani General Hospital in Iqaluit (staffed by an obstetrics team of family physicians and nurses)</td>
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<tr>
<td></td>
<td>- For specialist care: Women travel by air to Ottawa, Ontario, Canada</td>
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These historical shifts in birthing care and obstetric practice were, in part, influenced by biomedical research and research methodologies (Kaufert & O’Neil, 1990). Increasingly, health research, writ large, should be understood within the broader context of the history of health research with Indigenous populations in Canada; a history underpinned by practices through which research was often inextricably connected to a colonial project of forced displacement, appropriation of lands, cultures, and languages, harm to Indigenous peoples, and the imposition of Western perspectives, policies, and processes (Adelson, 2005; McGregor, 2018). Maternal health research is no different. Given this context, Inuit women continue to advocate for meaningful involvement and leadership in research that affects Inuit lives and livelihoods, including maternal health research (Pauktuutit, 1995; Watt-Cloutier, 2015; c.f. ITK, 2018). There is a need, then, to critically analyze the historic and present maternal health research landscape in Nunavut, as reported in the published academic
literature, and to question – from an Inuit-led perspective – how researchers might respond to these imperatives voiced by Inuit.

Many dissertations (Douglas, 2009; Nelson, 2012), short communications (Lawford & Giles, 2016), and review articles have been written, pertaining to Inuit childbirth (Douglas, 2006, 2007), midwifery (Douglas, 2011), and women’s health (Healey & Meadows, 2007). Given the diversity and breadth of research, however, a review is required that both systematically and critically engages the question of how Inuit maternal health research has been conducted in Nunavut, as reported in the literature. This review will, then, build on this literature by: (1) characterizing maternal health research in Nunavut, by describing the temporal, geographic, topical, and disciplinary range of published academic research; and (2) synthesizing and critically evaluating the contributions and gaps of reported methodology, as it relates to studies’ conceptualization, initiation, implementation, reporting, and knowledge mobilization. Despite its regional specificity, this review has global relevance to researchers working with Indigenous peoples, as the critical analysis of methodology in this review may reveal opportunities for furthering respectful and ethical praxis in their respective research contexts. Moreover, maternal health researchers may recognize parallels between the changes to obstetric care and birthing experiences in Nunavut and in many places worldwide; therefore, findings from this review may be applicable to these similar landscapes of maternal health research globally.

2.2 Methods

This systematic search and critical review (Grant & Booth, 2009) involved a comprehensive search and critical analysis of the published literature. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018) was used to guide the presentation of the methods and results.

2.2.1 Search Strategy

To ensure multidisciplinary coverage of health, natural, and social sciences literature, the following databases were searched on November 10, 2017: Web of Science™, JSTOR®, MEDLINE®, CINAHL Plus®, and Scopus®. An additional eight journals were hand-searched to confirm the sensitivity of the search strategy: International Journal of Circumpolar Health; Arctic Anthropology; Arctic Review on Law and Politics; Northern Review; Health and Place; Canadian Medical Association Journal; Canadian Journal of Public Health; Ethnicity and Health; and Social Science and Medicine. Three additional relevant databases, Women’s Studies International, Bibliography of Native North Americans, and Anthrosource were also searched to confirm sensitivity by using the
search strings to search the abstract field. The search was updated on October 23, 2019 to include articles published up to, and including, December 31, 2018. A final hand-search was conducted on February 26, 2020 to further refine the search strategy.

A comprehensive search string was developed and refined in consultation with a University of Guelph research librarian [Table 2.2]. “People” and “place” terms were collated from a list of communities on the Government of Nunavut website (Government of Nunavut, 2018), former community names from the Atlas of Canada archives (Government of Canada, 2018), geographic landmarks (e.g. islands), names for the Nunavut regions and territory, and people terms (e.g. “Inuit” and “Inuk”). Maternal health terms were identified through the search strategy used by Cochrane© information specialists to retrieve records for a specialized register of 22,000 articles for the Cochrane© Pregnancy and Childbirth Review Group (ICC, 2018), and adapted to each of our selected databases. The Medical Subject Headings (MeSH terms) used by Cochrane© to maintain their CENTRAL database were used for searching databases with controlled vocabulary (e.g. MEDLINE® and CINAHL Plus®). The search did not include date restrictions.

2.2.2 Screening and Eligibility

Mendeley© (Version 1.16.1) was used for citation management and automated de-duplication, followed by manual removal of duplicates. Then, a two-stage screening process was conducted: two researchers independently reviewed the title and abstracts using a stacked screening form in DistillerSR© [Appendix I] followed by a full-text review of remaining citations. To be included, articles had to discuss either human birth, maternal health, obstetrics, and/or neonatal health [Table 2.3; Appendix J]; focus on Inuit in Nunavut, or in pre-1999 Northwest Territories communities that are now part of the Nunavut territory; be a published primary research article; be available in English or French; and the citation had to be exported with sufficient data to source the material. Herein, we focus specifically on Nunavut, as we recognize the diversity of healthcare practices, norms, standards, and culture across Inuit Nunangat, in addition to the differences in how and by whom healthcare services are funded across Inuit Nunangat. An a priori decision was also made to include multiple articles published by the same research team, provided that each article reported distinct data analyses. In both stages of screening, the two reviewers discussed conflicts until a consensus was reached on article inclusion. A Cohen’s Kappa (κ) statistic was calculated as a measure of interrater reliability between reviewers for the full-text stage of screening.
Table 2.2. Search string used in Web of Science™ database and adapted to other databases to identify articles specific to maternal health among Inuit in Nunavut (see Appendix H for a comprehensive list of search strings used in each database, including terms for people, place, and maternal health).

<table>
<thead>
<tr>
<th>Category</th>
<th>Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>People &amp; Place</td>
<td>(Arctic OR Subarctic OR Circumpolar OR “Northwest Territor*” OR NWT OR Nunavut OR “Northern Canada” OR “Arctic Bay” OR Aniak OR “Eskimo Point” OR “Baker Lake” OR “Cambridge Bay” OR “Victoria Island” OR “Cape Dorset” OR “Chesterfield Inlet” OR “Clyde River” OR “Coral Harbor” OR “Southampton Island” OR “Grise Fiord” OR “Ellesmere Island” OR “Gjoa Haven” OR “King William Island” OR “Hall Beach” OR Igloolik OR Igyluilik OR Igualuit OR “Frobisher Bay” OR Kimmirut OR “Lake Harbour” OR Kugaaruk OR “Pelly Bay” OR Kugluktuk OR Coppermine OR Naujaat OR “Repulse Bay” OR Pangnirtung OR “Pond Inlet” OR Qikiqtarjuaq OR “Broughton Island” OR “Rankin Inlet” OR Resolute OR “Resolute Bay” OR “Cornwallis Island” OR Sanikiluaq OR “Fatherty Island” OR Taloyoak OR Talurjuaq OR “Spence Bay” OR “Whale Cove” OR Baffin OR “Baffin Island” OR Keewatin OR Kivalliq OR Kitikmeot OR Qikiqtaruk OR Qikiqtani OR Inuit OR Irukk OR Eskimo)</td>
</tr>
</tbody>
</table>

AND

| Maternal Health Terms     | (pregnancy OR “pregnancy complications” OR “fetal therapies” OR “labor pain” OR infant OR “fetal development” OR “extraembryonic membranes” OR “fetal heart rate” OR “placental function tests” OR “umbilical cord” OR “prenatal diagnosis” OR “uterine monitoring” OR pelvimetry OR “fetal monitoring” OR “obstetrical nursing” OR “tocolytic agents” OR “obstetrical anesthesia” OR “obstetric surgical procedures” OR “maternal health services” OR “maternal-child nursing” OR “obstetrical analgesia” OR midwifery OR “perinatal care” OR parity OR “apgar score” OR “postpartum period” OR “breast feeding” OR “human milk”) |

OR

| Maternal Health Key Words | (pregnan* OR fetus OR foetus OR fetal OR foetal OR newborn OR “new born” OR birth OR childbirth OR labor OR laboring OR labour* OR antepart* OR prenatal* OR antenatal* OR perinatal* OR postnatal* OR postpart* OR caesar* OR cesar* OR obstetric* OR oxytoc* OR tocoly* OR placenta* OR prostaglandin parturi* OR preeclamp* OR eclamp* OR intrapart* OR puerper* OR episiotom* OR amnio* OR matern* OR gestation* OR lactati* OR breastfe*) |

2.2.3 Data Extraction and Analysis

Two independent reviewers extracted the following data in DistillerSR© [Appendix K]: the author(s) and affiliations; article title; year(s) of data collection and publication; maternal health research topic; disciplinary perspective of the study; study region(s) and communities within Nunavut; and the study methodology, methods, and participants. Descriptive statistics were conducted to analyze this extracted information.

The full-text of included articles were also analyzed qualitatively, using a constant comparative and thematic analysis (Fereday & Muir-Cochrane, 2006). A coding framework was developed iteratively by the first author (LJB), using a hybrid inductive and deductive analytical approach, to critically analyze the reported research methodology. A codebook was further refined during the coding process (DeCuir-Gunby, Marshall, & McCulloch, 2011; Fereday & Muir-Cochrane, 2006), then
reapplied in finalized form to all included articles. These codes were synthesized into broader sub-themes and themes that corresponded to the following components of the research process: conceptualization, initiation, implementation, reporting, and knowledge mobilization (Braun & Clarke, 2006; Green & Thorogood, 2004). Additionally, we inductively identified codes and mapped these codes onto general health-related principles of community-based participatory research (CBPR) (Israel et al., 2008) and also a "determinants of health" framework articulated by Marmot (2005) and the World Health Organization (2008).

Table 2.3. Summary of specific maternal health topics included in Level 1 title and abstract eligibility screening and Level 2 full-text review of articles focused on Inuit maternal health in Nunavut.

Summary of Topics Considered as “Maternal Health Topics” for Eligibility Screening

- Maternity care "system": Access to healthcare or birthing centres for pregnant women and women giving birth; place of birth and birthing, as it relates to a mother’s and/or neonatal infant’s health; midwifery; medical travel for birth; boarding homes
- Prenatal education and support
- Gestational diabetes
- Environmental contaminants in human breast milk or a pregnant or breastfeeding woman’s blood plasma
- Maternal smoking or alcohol or drug use while pregnant
- Nutrition of pregnant and/or lactating women
- Breastfeeding
- Pregnancy-activated viral infections or other bacterial/parasitic infections in a mother during pregnancy
- Sharing/transmission of traditional knowledge and practices regarding pregnancy or childbirth
- Sudden Infant Death Syndrome (SIDs) or other cardio-respiratory neonatal health issues, such as respiratory syncytial virus (RSV) in neonatal infants

2.2.4 Consultation and Engagement

This synthesis and critical analysis of research methodology involved consistent engagement with Nunavut partners in healthcare, research, and policy, in addition to ongoing relationships with Inuit research partners that span back to 2010. This collaboration has taken the form of a series of meetings to discuss maternal health research priorities, conversations about health research methodology with research partners, and involvement in several Northern health-focused conferences. By providing insight into local partners’ perspectives on research, and knowledge of the context of maternal health in Nunavut, these opportunities have informed the objectives and search protocol of this review and subsequent analysis and interpretation of results.
2.3 RESULTS

A total of 4,221 citations were retrieved from the database searches, and no additional articles were retrieved through the hand-search [Figure 2.1]. A total of 28 articles met the inclusion criteria [Table 2.4]. A Cohen’s Kappa (κ) statistic of 0.89 indicated a “strong level of agreement” between reviewers in the full-text stage of screening (McHugh, 2012).
Figure 2.1. PRISMA flow diagram, illustrating the number of independent records identified by database searches, assessed for eligibility, and included or excluded from the systematic search and critical review on maternal health research methodology in Nunavut.
Table 2.4. List of included articles retrieved from a systematic search of the published academic literature on maternal health in Nunavut. Articles are organized chronologically by year of publication. The author(s), title, study region(s), and study methodology are also indicated for each retrieved article.

<table>
<thead>
<tr>
<th>Year</th>
<th>Author(s)</th>
<th>Title of Article</th>
<th>Region(s)</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975</td>
<td>Hobart, C.W.</td>
<td>Socioeconomic correlates of mortality and morbidity among Inuit infants</td>
<td>Qikiqtaaluk, Kitikmeot</td>
<td>Mixed</td>
</tr>
<tr>
<td>1975</td>
<td>Clow, C.L. et al.</td>
<td>Neonatal hyperprolinemia and evidence for deficiency of ascorbic acid in Arctic and sub-Arctic peoples</td>
<td>Qikiqtaaluk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1978</td>
<td>Baskett, T.F.</td>
<td>Obstetric care in the central Canadian Arctic</td>
<td>Kivalliq</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1979</td>
<td>Murdock, A.I.</td>
<td>Factors associated with high-risk pregnancies in Canadian Inuit</td>
<td>Qikiqtaaluk, Kitikmeot</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1988</td>
<td>O'Neil, J.D. et al.</td>
<td>Inuit concerns about obstetric policy in the Keewatin Region, N.W.T.</td>
<td>Kivalliq</td>
<td>Qualitative</td>
</tr>
<tr>
<td>1990</td>
<td>Kaufert, P.A. and O'Neil, J.D.</td>
<td>Cooptation and control: the reconstruction of Inuit birth</td>
<td>Kivalliq</td>
<td>Qualitative</td>
</tr>
<tr>
<td>1991</td>
<td>O'Neil, J.D. et al.</td>
<td>Obstetric policy for the Keewatin Region, N.W.T.: Results of the childbirth experience survey</td>
<td>Kivalliq</td>
<td>Mixed</td>
</tr>
<tr>
<td>1991</td>
<td>Kaufert, P.A. et al.</td>
<td>The Delivery of Prenatal Care to Women from the Keewatin: 1979-85</td>
<td>Kivalliq</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1991</td>
<td>Sennett, E.S. and Dougherty, G.E.</td>
<td>Evacuation for childbirth in the Baffin Region, N.W.T.: Factors associated with the length of family separation</td>
<td>Qikiqtaaluk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1991</td>
<td>Gerrard, J. et al.</td>
<td>Dietary omega-3 fatty acids and gestational hypertension in the Inuit</td>
<td>Qikiqtaaluk, Kivalliq</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1992</td>
<td>Finnemore, B.I.</td>
<td>Low birth weight in the central Canadian Arctic</td>
<td>Kivalliq</td>
<td>Quantitative</td>
</tr>
<tr>
<td>1998</td>
<td>England, J.J.</td>
<td>Rankin Inlet birthing project: outcome of primipara deliveries</td>
<td>Kivalliq</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2000</td>
<td>Chamberlain, M. and Barclay, K.</td>
<td>Psychosocial costs of transferring Indigenous women from their community for birth</td>
<td>Kivalliq</td>
<td>Qualitative</td>
</tr>
<tr>
<td>2003</td>
<td>Butler Walker, J. et al.</td>
<td>Organochlorine levels in maternal and umbilical cord blood plasma in Arctic Canada</td>
<td>Unspecified</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2004</td>
<td>Muggah, E. et al.</td>
<td>Preterm delivery among Inuit women in the Baffin Region of the Canadian Arctic</td>
<td>Qikiqtaaluk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2010</td>
<td>Luo, Z-C. et al.</td>
<td>Birth outcomes in the Inuit-inhabited areas of Canada</td>
<td>Qikiqtaaluk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2010</td>
<td>James, S. et al.</td>
<td>Meeting the needs of Nunavut families: a community-based midwifery education program</td>
<td>Unspecified</td>
<td>Qualitative</td>
</tr>
<tr>
<td>2010</td>
<td>Mehaffey, K. et al.</td>
<td>Maternal smoking at first prenatal visit as a marker of risk for adverse pregnancy outcomes in the Qikiqtaaluk (Baffin) Region</td>
<td>Qikiqtaaluk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
<td>Location</td>
<td>Design</td>
</tr>
<tr>
<td>------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------</td>
<td>-----------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>2014</td>
<td>McIsaac, K.E. et al.</td>
<td>Exclusive breastfeeding among Canadian Inuit: results from the Nunavut Inuit child health survey</td>
<td>Unspecified</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2014</td>
<td>Curren, M.S. et al.</td>
<td>Comparing plasma concentrations of persistent organic pollutants and metals in primiparous women from northern and southern Canada</td>
<td>Qikiqtaruk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2015</td>
<td>McIsaac, K.E. et al.</td>
<td>Prevalence and characteristics associated with breastfeeding initiation among Canadian Inuit from the 2007-2008 Nunavut Inuit child health survey</td>
<td>Unspecified</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2015</td>
<td>Curren, M.S. et al.</td>
<td>Assessing determinants of maternal blood concentrations for persistent organic pollutants and metals in the eastern and western Canadian Arctic</td>
<td>Qikiqtaruk</td>
<td>Quantitative</td>
</tr>
<tr>
<td>2016</td>
<td>McIsaac, K.E. et al.</td>
<td>Household food security and breast-feeding duration among Canadian Inuit</td>
<td>Unspecified</td>
<td>Quantitative</td>
</tr>
</tbody>
</table>
2.3.1 What Methodologies Have Been Used, When, and Where, to Study Maternal Health Topics?

2.3.1.1 Temporal and Geographic Scope of Articles

The 28 articles spanned a wide temporal range (1975-2016), with the greatest number of articles per year published in 1991 [Figure 2.2]. Nineteen studies (67.9%) were conducted regionally [Figure 2.3]. The remaining studies were either conducted in more than one region of Nunavut (n=3) or did not specify the region (n=6). Only 13 articles (46.4%) specified participating communities.

![Figure 2.2. Summary of the number of publications per year (1975-2016) related to Inuit maternal health in Nunavut. The study methodology used in each publication (mixed/qualitative/quantitative) varies by colour.]

2.3.1.2 Methodological Scope of Articles

Overall, the majority of articles (71.4%) used quantitative research methodology, while mixed (14.3%) and qualitative (14.3%) methodologies were used in the remaining publications. Fifteen articles (53.6%) were co-authored by at least one individual with a Northern-based affiliation [Figure 2.4]. Several research teams published multiple articles included in this review. Of 65 inductively-developed codes, 13 mapped onto general CBPR principles for health research [Figure 2.5].
CHAPTER TWO – Mapping the Maternal Health Research Landscape in Nunavut

Figure 2.3. A map showing the number of publications related to Inuit maternal health, and the study methodology, by region of Nunavut: Qikiqtaaluk, Kitikmeot, and Kivalliq. Note: This includes only those publications that specified a single region of study (n=19).

Figure 2.4. Summary of the number of publications per year (1975-2016) related to Inuit maternal health in Nunavut. The number of articles with at least one Northern-affiliated author, or no Northern-affiliated authors, are specified by colour.
CHAPTER TWO – Mapping the Maternal Health Research Landscape in Nunavut

<table>
<thead>
<tr>
<th>PRINCIPLES OF CBPR FOR HEALTH (ISRAEL ET AL. 2005, 2008):</th>
<th>CORRESPONDING INDUCTIVELY-DEVELOPED, DATA-DRIVEN CODES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize community as a unit of identity</td>
<td>Inuit voice, perspectives, agency evident</td>
</tr>
<tr>
<td>Build on strengths and resources within the community</td>
<td>Consultation prior to commencement</td>
</tr>
<tr>
<td>Facilitate collaborative, equitable partnerships in all research phases and involve an empowering and power-sharing process that attends to social inequalities</td>
<td>Study design shaped by consultation</td>
</tr>
<tr>
<td>Promote co-learning and capacity-building among all partners</td>
<td>Questions/indicators influenced by consultation</td>
</tr>
<tr>
<td>Integrate and achieve a balance between research and action for the mutual benefit of all partners</td>
<td>Co-analysis with participants/community</td>
</tr>
<tr>
<td>Emphasize public health problems of local relevance and also ecological perspectives that recognize and attend to the multiple determinants of health and disease</td>
<td>Employment of local research associates</td>
</tr>
<tr>
<td>Involve systems development through a cyclical and iterative process</td>
<td>Capacity to benefit Inuit communities</td>
</tr>
<tr>
<td>Disseminate findings and knowledge gained to all partners and involve all partners in the dissemination process</td>
<td>Launching point to further research with potential benefits beyond academia</td>
</tr>
<tr>
<td>Focus on a long-term process and commitment to sustainability</td>
<td>Benefit to public health, primary healthcare practice, policy-makers/administrators</td>
</tr>
<tr>
<td></td>
<td>Basic &quot;determinants of health&quot; framework employed</td>
</tr>
<tr>
<td></td>
<td>&quot;Issues of interest&quot; attributed to the health system (and its challenges)</td>
</tr>
<tr>
<td></td>
<td>Onus on broader organizations or systems to effect change and/or ameliorate the &quot;issues&quot;</td>
</tr>
<tr>
<td></td>
<td>Accountability to participants and their data</td>
</tr>
</tbody>
</table>

**Figure 2.5.** Illustration of 13 inductively-developed, data-driven codes related to maternal health research in Nunavut that mapped onto principles of community-based participatory research (CBPR) for health, as outlined by Israel and colleagues (2005, 2008).
2.3.1.3 Topical and Disciplinary Scope of Articles

The most common research topic was maternity care (53.6%), while the topic of neonatal health was also studied frequently (32.1%) [Figure 2.6]. Eleven articles (39.3%) focused on the issue of obstetric evacuation and birthing locations for expectant mothers in Nunavut. Specifically, these articles commonly reported Inuit concerns about the practice of obstetric evacuation, particularly the impact of family separation on the psychological, emotional, and social well-being of mothers, their families, and communities at-large. Studies were most frequently conducted by researchers from clinical and/or epidemiological backgrounds, and few articles reported employing an inter- or multidisciplinary approach. Ten articles (35.7%) were published in the *International Journal of Circumpolar Health* or its predecessor, *Arctic Medical Research*.

![Figure 2.6](image)

*Figure 2.6.* Overall maternal health research topic of the retrieved articles focused on Inuit in Nunavut. The colour and size of the boxes reflect the number of articles for each topic. The topic areas are not mutually exclusive, as some articles had more than one overall research focus.
2.3.2 How Has Maternal Health Research Reportedly Been Conducted in Nunavut?

2.3.2.1 Conceptualization: How has maternal health and health-seeking behaviour been defined?

Seventeen studies approached maternal health through a clinical lens: for example, research questions were clinical in nature (Sennett & Dougherty, 1991); obstetrical record data were analyzed (Mehaffey, Higginson, Cowan, Osborne, & Arbour, 2010); and resultant recommendations were geared toward a clinical audience (Murdock, 1979) [Table 2.5]. Clinicians often identified physiological risk factors and their respective associations with pregnancy-related or birth outcomes (Clow, Laberge, & Scriver, 1975; Luo et al., 2010; Popeski et al., 1991). As such, maternal health was defined in some articles as a physiological outcome or experience. Eight studies discussed psychosocial and emotional stressors as being important to maternal health and well-being; for instance, Chamberlain & Barclay (2000) examined the psychosocial impacts of obstetric evacuation. By extension, these articles articulated birth as encompassing psychological, emotional, and social dimensions, rather than a medicalized event.

Similar to how maternal health was defined, twelve of the 28 total articles situated maternal health within a systems-level, “determinants of health” framework. That is, researchers identified a constellation of interrelated and mutually-reinforcing social, environmental, and economic factors connected to a health outcome of interest. For example, McIsaac and colleagues identified household overcrowding, socioeconomic status, place of residence, and healthcare access as possible determinants of breastfeeding duration (2014). Low birth weight (Finnemore, 1992), perinatal mortality (Collins et al., 2012; Hobart, 1975), preterm delivery (Muggah et al., 2004), or health behaviours such as maternal smoking (Mehaffey et al., 2010), were considered in articles to be multi-factorial and complex in etiology. Reference to distal determinants of health – for example, colonialism as a political determinant of social or economic conditions – was explicitly mentioned through references to colonization, control, and power in the studies’ reporting, though not specifically examined in study designs or analyses (James et al., 2010; Kaufert & O’Neil, 1990). Colonization was also implicitly mentioned in some articles’ description of changes to healthcare, as these changes paralleled the broader imposition of administrative and economic systems by the federal government in the mid- to late-20th century (Chamberlain et al., 1998; England, 1998). In one article, however, the effects of colonization and forced settlement were framed as benefiting social determinants of health for Inuit, as “the threat of starvation is permanently abolished, infants are
almost never subjected to the stresses of winter sled travel and all are easily accessible to the modern, well equipped nursing stations now located in all settlements" (Hobart, 1975:37).

In some articles, patterns of healthcare access and motivations for healthcare use were reported to be complex and nuanced; the picture of health-seeking behaviour among Inuit was comprised of myriad interacting component parts. For example, Chamberlain et al. (1998) identified “issues relating to [a woman’s] satisfaction, choices, wishes, help, and stress” as related to obstetric evacuation (119). Kaufert et al. (1988) identified factors contributing to declining use of nursing stations for birth as "changes in the characteristics of patients, the care givers and the physical setting" and "changes in obstetric policy and philosophy" (481). Just as policy and practitioners’ ideologies were features of a changing obstetrical landscape, so too were women’s preferences for birthing location. Kaufert (1991) reported that women’s choice for a nursing station birth shaped maternity care between 1979 and 1985, as it proceeded “without the agreement of the nurse” (578). The loss of community-based maternity care was also reported as complex in the literature, with a multiplicity of interrelated political, ideological, and logistical factors, among others, both historically and in the contemporary health system (England, 1998; James et al., 2010; Kaufert & O’Neil, 1990; O’Neil et al., 1988).

2.3.2.2 Justification: Why was maternal health research initiated?

Articles reported a number of distinct rationales for their research and how their research developed, including: to fill gaps in health research (McIsaac et al., 2014; McIsaac, Sellen, Lou, & Young, 2015; McIsaac, Stock, & Lou, 2016; Muggah et al., 2004); to respond to Inuit concerns (Kaufert & O’Neil, 1990; O’Neil et al., 1988); to address territory- or regionally-based objectives (Butler Walker et al., 2003; Chamberlain et al., 1998; Collins et al., 2012); and to investigate potential causes for health disparities between Inuit and non-Inuit (Clow et al., 1975; McIsaac et al., 2016). Research was often reported to be used as a tool to examine unusually high prevalence or incidence of negative health outcomes, and subsequently inform ameliorative interventions (Clow et al., 1975; James et al., 2010; Luo et al., 2010; Mehaffey et al., 2010). This rationale for maternal health research was critiqued by Kaufert & O’Neil (1990), who discussed how a narrative of obstetrical risk and safety has been paramount among researchers and policy-makers. Action by Inuit to lobby policy-makers for changes to obstetric policy was sometimes followed by research that was reportedly a platform for further articulating Inuit concerns. For example, England (1998) reported on the Rankin Inlet Birthing Project that “was the direct result of a lobby by Keewatin residents to bring birthing back to the region and the community” (113). O’Neil et al. (1988) and Kaufert et al. (1990) also framed their
research as “a forum for the articulation of the Inuit perspective on childbirth” (485), and initiated in response to “protests against the new [obstetric evacuation] policy from the communities” (428).

2.3.2.3 Implementation: How were maternal health studies designed, data collected, and results interpreted?

Collaborative and participatory practice, as reported in some articles, spanned all stages of the research process, and reportedly involved community consultation prior to research (Butler Walker et al., 2003; Chamberlain & Barclay, 2000; Gerrard, Popeski, Ebbeling, Brown, & Hornstra, 1991; O’Neil et al., 1988); a study design that was reportedly shaped by community input (McIsaac et al., 2014); and co-analysis of data with research participants that was reported by authors (Chamberlain & Barclay, 2000; Chamberlain et al., 1998). Many articles reported employing local research associates to conduct interviews (n=6 articles). Articles reporting these practices used quantitative, qualitative, and mixed methodologies, and were published from 1988 through to 2016 [Table 2.5]. The first reference in the included literature to consultation with local “stakeholders” prior to commencement of the research was in 1988 by O’Neil et al. Since the introduction of the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2), Chapter 9: Research Involving the First Nations, Inuit and Métis Peoples of Canada (CIHR, NSERC, & SSHRC, 2010), a CBPR approach was explicitly mentioned in 2015 and 2016 articles by McIsaac et al.

A number of articles reported that the cultural context of the research shaped the data collection tools (McIsaac et al., 2014, 2015, 2016; Popeski et al., 1991). In some quantitative studies, variables such as “speaking Inuit dialects in the household” (McIsaac et al., 2014:232) or “culture-specific eating patterns and concepts of time” (Popeski et al., 1991:447) were included in surveys and analyses. New questions were reportedly added to a standardized questionnaire in one study to improve its cultural relevancy (McIsaac et al., 2016:66). Three articles included Inuit traditional knowledge as a variable in their quantitative analysis (McIsaac et al., 2014, 2015, 2016), and two discussed traditional knowledge in relation to their qualitative analysis (Kaufert & O’Neil, 1990; O’Neil et al., 1988). Other articles presented ‘tradition’ and ‘acculturation’ as dichotomous, and as modifiable risk factors (Finnemore, 1992; Hobart, 1975).

Researchers highlighted the distinctiveness of the Northern health system, in terms of the culture, geography, and politics that give it shape (England, 1998; Lessard & Kinloch, 1987; O’Neil et al., 1991, 1988). They identified that Inuit have distinct traditions around birth (McIsaac et al., 2015), which were affected by changes to obstetric policy that occurred more rapidly than in the South (Kaufert & O’Neil, 1990). Articles advocated for the use of new evaluation tools for obstetrical risk
(Baskett, 1978; Chamberlain et al., 1998; England, 1998) – or critically evaluated the concept of risk (Kaufert et al., 1988; Kaufert & O’Neil, 1990) – in a health system that serves Inuit. Scoring systems used to determine place of birth were described as “culturally-biased” (Chamberlain et al., 1998:118) and “based on western health models” (Chamberlain & Barclay, 2000:117). “Cultural safety” (James et al., 2010) or “cultural sensitivity” or “appropriateness” were discussed, in reference to healthcare or programs (Chamberlain & Barclay, 2000; Collins et al., 2012; McIsaac et al., 2015).

Healthcare access and use, then, was described as being shaped by people, and their complex motivations; place, as it affects the access and observed use of services or supports; and policies that govern people in places (Baskett, 1978; Chamberlain et al., 1998; James et al., 2010; Kaufert & O’Neil, 1990; McIsaac et al., 2014). Accordingly, ten articles situated their results in the social, cultural, and political context of Nunavut. For instance, Baskett (1978) posited that “in the context of modern obstetrics in the Western world it is difficult to defend patients delivering their babies in isolated areas without medical help or hospital facilities” (1004) and yet, Baskett still identified the social and cultural importance of home birth to Inuit. Similarly, other articles discussed their results on diet and associated contaminants exposure in light of the “substantial cultural, nutritional, and economic benefits [of traditional foods]” (Curren et al., 2014:307, 2015). Still other articles discussed results in cultural, political, and historical context. For example, Chamberlain and Barclay situated their number of study participants in the context of Inuit livelihoods, and described how seasonal activities impacted the availability of interviewees (2000). Kaufert and O’Neil, in a critical appraisal of obstetric policy, also grounded their analysis and discussion in the broader context of political and historical changes to childbirth in the Keewatin (1990).

2.3.2.4 Reporting: How were maternal health research participants and research processes discussed?

Researchers described Inuit as having political agency. For instance, Kaufert & O’Neil (1990) discuss an “Inuit political agenda” (439) with respect to childbirth, while Lessard & Kinloch (1987) emphasize Inuit concerns about obstetrical policies which are “expressed politically” and “an important determinant of future obstetric care in the North” (1021). This contrasted one article’s depiction of Inuit as being passive victims of colonization and “enticed into small communities over the last 50 years by the allure of permanent housing, schools, churches, and stores” (Finnemore, 1992:118). Other articles used language of emergency such as reporting “the dire situations of maternal and infant health in Inuit-inhabited areas compared with the rest of Canada” (Luo et al., 2010:241); and that “any reduction in the level of these services would be potentially disastrous” (Baskett, 1978:1004). This differed from reporting that used phrases like “public health challenge” or
“potential health implications” (McIsaac et al., 2014:233-4). Some articles used language to convey the research process such as “using these scoring criteria on the Keewatin population” (Baskett, 1978:1003, emphasis added), or taking “serial observations on mother-newborn pairs” (Clow et al., 1975:626, emphasis added). Given that many reviewed articles were clinical, research participants were often discussed as patients (Gerrard et al., 1991; Muggah et al., 2004; Murdock, 1979; Popeski et al., 1991).

Generally, articles with a more recent year of publication used language that framed Inuit as active agents in the research process, more so than earlier publications. That said, in the late 1980s and early 1990s, particular research groups were also employing similar language of Inuit agency and voice (Kaufert & O’Neil, 1990), drawing attention to an “Inuit perspective on childbirth” (O’Neil et al., 1988:485) and “community concerns” (Kaufert et al., 1988:481).

2.3.2.5 Knowledge Mobilization: What was maternal health research reportedly intended to do?

Maternal health research was often reported in this literature to be for the good of someone or something beyond the intellectual pursuit. Research was reported to benefit public health, by providing evidence for health messaging or promotion (Collins et al., 2012; Luo et al., 2010; McIsaac et al., 2014; Mehaffey et al., 2010); primary healthcare practice, by recommending certain clinical interventions (Popeski et al., 1991; Sennett & Dougherty, 1991); and policy-makers or administrators, because results set a precedent for changes to the health system, most notably to obstetric policy (Kaufert & O’Neil, 1990; O’Neil et al., 1988; Sennett & Dougherty, 1991). Many of the benefits reported in the articles related to intervention or prevention of a health issue, such as low birth weight or preterm birth (Finnemore, 1992; Luo et al., 2010; Mehaffey et al., 2010). While some research recommendations were reported to align with local priorities (Collins et al., 2012; James et al., 2010; Lessard & Kinloch, 1987), no articles reported efforts to disseminate results to communities in timely and context-specific ways, or other mechanisms of accountability to participants.
Table 2.5. Qualitative results reported in this review. An asterisk (*) indicates inductively-developed codes that mapped onto principles of community-based participatory research (CBPR) for health, as outlined by Israel and colleagues (2005, 2008).

<table>
<thead>
<tr>
<th>CONCEPTUALIZATION</th>
<th>JUSTIFICATION</th>
<th>IMPLEMENTATION</th>
<th>REPORTING</th>
<th>KNOWLEDGE MOBILIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>How has maternal health and health-seeking behaviour been defined?</td>
<td>Why was maternal health research initiated?</td>
<td>How were maternal health studies designed, data collected, and results interpreted?</td>
<td>How were maternal health research participants and processes discussed?</td>
<td>What was maternal health research reportedly intended to do?</td>
</tr>
<tr>
<td>Maternal health situated within the &quot;determinants of health&quot;</td>
<td>Maternal health and/or birth discussed as multi-dimensional</td>
<td>To address territory- or regionally-based objectives</td>
<td>How were maternal health research participants and processes discussed?</td>
<td></td>
</tr>
<tr>
<td>Maternal health approached through a clinical lens</td>
<td>To fill gaps in health research</td>
<td>To investigate health disparities or negative health outcomes</td>
<td></td>
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<tr>
<td>Healthcare behaviour, access, &amp; use as multi-factorial</td>
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<tr>
<td>To respond to Inuit concerns and/or priorities</td>
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| REFERENCES | | | | |
| Hobart (1975) | | | | |
| Clow et al. (1975) | | | | |
| Baskett (1978) | | | | |
| Murdock (1979) | | | | |
| Lessard et al. (1987) | | | | |
| Kaufert et al. (1988) | | | | |
| O’Neil et al. (1988) | | | | |
| Kaufert et al. (1990) | | | | |
| O’Neil et al. (1991) | | | | |

52
Kaufert et al. (1991)
Popeski et al. (1991)
Sennett et al. (1991)
Gerrard et al. (1991)
Finnemore (1992)
Chamberlain et al. (1998)
Chamberlain et al. (2000)
Butler Walker et al. (2003)
Muggah et al. (2004)
Luo et al. (2010)
James et al. (2010)
Mehaffey et al. (2010)
Collins et al. (2012)
Mclsaac et al. (2014)
Curren et al. (2014)
Mclsaac et al. (2015)
Curren et al. (2015)
Mclsaac et al. (2016)

Total # of Articles

12  8  17  13  9  12  7  13  4  4  2
13  4  9  6  13  6  6  15  10  20  15  4  5  7  10  13  18  10  13
2.4 Discussion

The findings from this review illustrate temporal, geographic, and topical gaps and areas of concentration in the published maternal health literature in Nunavut to date. This research spans a wide temporal range, though with intermittent lulls and surges in publication, such as a surge in the late 1980s and early 1990s. Included articles from this time frame were often related to place of birth; therefore, this notable increase in research may be in response to the obstetric evacuation policy established by the early 1980s in Nunavut (Kaufert & O’Neil, 1990). Research has also been geographically concentrated in the Kivalliq Region of Nunavut, an area with the highest birth rate in the territory (Statistics Canada, 2015) and a regional health board actively involved in maternal health research (Kaufert et al., 1991; O’Neil et al., 1991). In addition, relative concentration of research in the Qikiqtaaluk Region may partially be explained by the presence of Qikiqtani General Hospital in Iqaluit, a secondary care centre in-territory where pregnant women from across the region deliver and detailed obstetrical record data is available for analysis. Clinical and quantitative epidemiological research on maternal health has been predominant thus far (67.9% of articles), though researchers have employed qualitative and mixed methodologies for further inquiry into childbirth experiences and Inuit perspectives on obstetrical policy and healthcare. Overall, the emphasis of included literature is on the topic of maternity care, likely reflected in the broader health system changes that occurred in the last half of the 20th century in Nunavut to prompt research related to obstetrical care (Healey & Meadows, 2007; Jasen, 1997). This review reveals a gap in multi- and interdisciplinary approaches to maternal health research, approaches which could further understandings of how social, political, and cultural contexts influence maternal health and healthcare. For example, despite significant foci in the included articles on Inuit concerns regarding obstetric evacuation, more research is required that specifically investigates connections between this practice and broader socio-cultural or health implications, such as male involvement in childbirth and parenting, or mental health outcomes. Overall, opportunity also exists for diversifying approaches to maternal health research, expanding leadership in maternal health research by Northern-affiliated and Northern-located academics, and also involving Inuit healthcare professionals, midwives, patients, and others with lived experiences in shaping and leading this research.

Inuit Tapiriit Kanatami (ITK), the national organizational voice for Inuit, recently released the National Inuit Strategy on Research, which outlines a vision for research across Inuit Nunangat (ITK, 2018). For research to be “efficacious, impactful, and meaningful to Inuit”, ITK states five priority areas with associated actions that researchers must engage as a central, orienting framework, including to: “(1) advance Inuit governance in research; (2) enhance the ethical conduct of research; (3) align funding
with Inuit research priorities; (4) ensure Inuit access, ownership, and control over data and information; and (5) build capacity in Inuit Nunangat research” (ITK, 2018:5-6). In light of these calls, a systems shift may be needed in the area of maternal health research, based on a concerted effort to effectively respond to these prerogatives, as well as to align research with principles of community-based participatory research (CBPR), Inuit epistemologies (Healey & Tagak Sr., 2014), and decolonizing methodologies. Indeed, the results of this review illustrate multiple opportunities throughout the research process – from the conceptualization and initiation stages of research through to the implementation, reporting, and knowledge mobilization – for maternal health researchers to engage these priorities put forward by ITK.

An overarching message communicated in this literature is that context matters to understanding and ameliorating maternal health issues through research, policy, and practice. While some attention was given to ongoing structures of colonization, which continue to shape much of the social and economic landscape of the included literature, opportunities exist for maternal health researchers to further question the ongoing impacts of colonization as a foundational determinant of well-being for Inuit women, families, and communities. Increasingly, scholars assert that colonialism is a root determinant of the social determinants of health (Bourassa, Mckay-Mcnabb, & Hampton, 2004; Greenwood, De Leeuw, & Lindsay, 2015; Moffitt, 2004). Indeed, colonial processes have profoundly altered the system of maternity care existent in Nunavut today, which has led to several articles describing these ongoing processes and related impacts as the ‘colonization of birth’ (HPWFNIM Consensus, 2013; Wright, 2015). As such, further research may continue to study the ongoing impacts of colonization on maternal healthcare access and experiences for Inuit, with an eye to strengthening Inuit-directed and Inuit-led supports available to women in pregnancy and childbirth.

A critical determinant of maternal health and well-being for Inuit women includes place attachment and connection to the land. For Inuit, this collective, ancestral attachment to place has emotional, spiritual, psychological, and behavioural dimensions (Cunsolo Willox et al., 2012; Low & Altman, 1992; Scannell & Gifford, 2010); Inuit identity is defined by connection to land and to place, just as place-based practices – on and with the land – are central to Inuit birthing knowledge and traditions (O’Brien, 2012). If maternal health research is to be responsive to and inclusive of deeply-held Inuit values, epistemologies, and ontologies, researchers may need to consider the central importance of place attachment to Inuit maternal health and well-being. For instance, opportunity exists not only for researchers to explore birth in home and in place, but also for increased Inuit leadership in creating research that emerges directly from the priorities and concerns of Inuit communities, and understands the connections among Inuit health, wellness, and place (ITK, 2018).
Many of the clinical and quantitative epidemiological articles focused on the physiological dimensions of maternal health, which furthered understandings of maternal health outcomes, informed clinical interventions to respond to obstetric complications, and contributed to public health initiatives aimed to improve maternal health and well-being. This work can be expanded upon by the inclusion of additional studies that define and operationalize maternal health as a multi-dimensional construct, constitutive of psychosocial, emotional, and spiritual elements. Davy et al. (2016) highlight a contrast between the biomedical model of health central to the dominant healthcare system and a definition of well-being valued by many Indigenous peoples, including Inuit. This extends to how birthing is perceived, as nested within familial and community relations (Van Wagner et al., 2007) and reaching all aspects of the self, beyond the physical (Wright, 2015). This holistic, relational model of maternal health and birth valued by Inuit may, at times, be incongruous with the biomedical model existent in hospitals and health centres, and research situated therein, in which birthing is a medicalized event (Couchie & Sanderson, 2007; Kaufert & O’Neil, 1990; Moffitt & Vollman, 2006). An opportunity exists, then, for more research to prioritize Inuit definitions of maternal health and well-being in how studies are designed; this may require, for example, the inclusion of new metrics for well-being that resonate with Inuit values, concepts, and worldview (Healey & Tagak Sr., 2014).

Maternal health research was reported to be initiated for a variety of reasons in this literature, often in response to Inuit concerns or in the service of territory- or regionally-based objectives. In other instances, research rationale was reportedly underscored by health disparities between Inuit and non-Inuit. In both the justification for maternal health research and the language used in reporting, opportunities may exist for researchers to consider a strengths-based approach, which involves recognition of participants’ capabilities and the empowerment of participants by centering their voices and political agency (Kana’iaupuni, 2005). In practice, this may involve continuing to develop maternal health research that dovetails with Inuit agendas and, in so doing, reinforces an empowering perspective of Inuit as capable agents, with dignity and autonomy (ITK, 2018; Kana’iaupuni, 2005). Research that focuses on health disparities can benefit public health efforts and health policy development, particularly when it also employs a strengths-based lens. According to Cunningham (2010) and Lofters and O’Campo (2012), this may require identifying foundational causal mechanisms for negative health outcomes, emphasizing health-improving risk factors, and proposing actionable interventions to reduce inequities. Accentuating strengths – rather than deficits – can thus avoid galvanizing stereotypes of a research context as intrinsically flawed (Cochran et al., 2008), and facilitate nuanced and more accurate understandings of a place (Bourke et al., 2010). Indeed, by continuing to focus resources and intellectual prowess on identifying and explaining fundamental determinants of health inequities, and questioning the systems and structures that uphold them (Fenton et al., 2015), maternal health researchers in Nunavut can deepen their inquiry
and present research that augments the work of local stakeholders with agency to effect change. With respect to reporting, maternal health research may also be strengthened by concerted efforts to adhere to recently-developed reporting guidelines for health research involving Indigenous Peoples and, further, to ensure these guidelines shape research praxis in Nunavut (Huria et al., 2019).

Many of the collaborative practices noted in the articles can be situated within literature on CBPR, characterized by shared ownership of the research process and co-creation of knowledge with communities throughout the conceptualization, design, implementation, and dissemination of the research (Castleden, Morgan, & Lamb, 2012; Cochran et al., 2008; Israel et al., 2010; Leung, Yen, & Minkler, 2004; Tobias, Richmond, & Luginaah, 2013). This type of meaningful participation goes beyond “token inclusion”, which has often been the extent of participation by Indigenous peoples in health research (Cochran et al. 2008:24), to “relational accountability” (Tobias, Richmond, & Luginaah, 2013:130; Wilson, 2008; Kovach, 2009). Smith underscores the importance of a respectful process to all community research, stating that “in many projects the process is far more important than the outcome…[Processes] are expected to lead one small step further towards self-determination” (2012:130). Thus, CBPR approaches, reflected in a number of reviewed articles, can help to situate maternal health research within a framework for ethical research with Indigenous communities (Brant Castellano, 2004; LaVeaux & Christopher, 2009), as well as ITK’s framework for meaningful and ethical research in Inuit Nunangat (ITK, 2018). Further, CBPR approaches can improve the quality and validity of maternal health data. For instance, partnership with local researchers (McIsaac et al., 2014, 2016) can reduce interviewer bias in questionnaire responses and improve data quality and quantity, due to participants’ increased comfort. With significant community input and participation, results may also be more readily mobilized to effect changes to maternal health policy or healthcare practice (Leung et al., 2004).

Opportunities exist for maternal health research in Nunavut to move beyond partnership and consultation with Inuit to leadership. This may require researchers to critically engage questions of research sovereignty, data ownership and control, and research benefits, and for more Inuit researchers to be involved in – and lead – maternal health research. A number of articles reported on how the cultural context of the research and research partnerships shaped their data collection tools and interpretation of results. Indeed, local research partners may provide insight on what variables are meaningful to gather data on, and may more effectively interpret results within the cultural, political, and social context in which they are situated (Leung et al., 2004). Drawson, Mushquash, & Mushquash (2017) propose that such contextualization may reveal new statistically significant variables or changed observed associations between variables. Beyond interpretation, however, Smylie et al. (2012) call for a shift in systems of data collection and management, whereby
“communities are fully and centrally involved in data decision making”, such that “data become(s) a tool for social empowerment and social change” (69). Other Indigenous First Nations Peoples within Canada have identified principles of data ownership, access, control, and possession (OCAP™) as imperative to ethical research praxis (TFNIGC, 2014); such principles may similarly guide or serve as a starting point for maternal health researchers to move towards ethical and decolonial approaches in other locales. While in some studies, researchers adapted their data collection tools, following consultation with Inuit stakeholders, opportunity exists for Inuit involvement to expand beyond consultation to active leadership in – and direction to – all stages of data collection, analysis, and stewardship (ITK, 2018; Smylie & Firestone, 2015). By critically considering how data may be increasingly owned and governed by Inuit, researchers may work to ensure that data itself are of service and benefit to Inuit communities (ITK, 2018; TFNIGC, 2014).

Inuit Tuttarvingat (2010), as cited by Riddell et al. (2017) identified a key principle of research with Inuit as, “mutually beneficial research through knowledge sharing with individuals, regions, and government” (6). A gap this review revealed is effective knowledge mobilization of maternal health research results with Nunavummiut, such that communities can respond with policy or programmatic changes. Many reviewed articles reported the potential benefits of research; these benefits may be amplified and realized through locally-relevant knowledge translation initiatives, co-created with Inuit (Jull et al., 2018; Maar et al., 2011). In addition, Ermine et al. (2004) posit that research participants should be empowered to shape what those benefits are. Indeed, maternal health research may be increasingly meaningful to Inuit communities, should Inuit be given opportunity from the conceptualization stage of research to inform the intended benefits to align with the priorities of Nunavummiut (ITK, 2018).

Opportunity also exists for maternal health research in Nunavut to privilege Indigenous voices, epistemologies, and ontologies, which – broadly speaking – have been systematically marginalized by non-Indigenous researchers and their agendas (LaVeaux & Christopher, 2009; Simonds & Christopher, 2013; Smith, 2012; Wilson, 2008). This can lead to the emergence of maternal health research methodologies that resonate with an Inuit epistemological framework (Healey & Tagak Sr., 2014), and value the contribution of Inuit ways of knowing and being to understanding a topic, such as storytelling and arts-based methodologies (Fanian et al., 2015; Fraser & al Sayah, 2011; Jackson & Coleman, 2015; Kovach, 2009; Simonds & Christopher, 2013). Quantitative methodologies, too, may meaningfully integrate Indigenous models of health and wellness (Cameron et al., 2010), both as ethical research practice (Cochran et al., 2008), and as that which improves the relevance of data to local-level health assessment and planning (Smylie et al., 2006). Not all research methods will be logical or practical for addressing every research question; however, opportunity exists for maternal
health researchers to engage the ongoing process of evaluating their methodological decisions and
specific practices, in light of the Inuit epistemological, ontological, and cultural contexts in which they
work and to explore new methodologies (Healey & Tagak Sr., 2014; Simonds & Christopher, 2013).
Inuit leadership in maternal health research will also guide these methodological decisions, in order
to ensure that research processes and outcomes are increasingly relevant, useful, and meaningful
for Inuit, and reflective of their cultures, worldviews, and lands.

Articles also engaged concepts of “culturally sensitive” or “culturally appropriate” healthcare and
health promotion. One article, by James et al. (2010), employed the framework of “cultural safety”
(Papps & Ramsden, 1996), which resonates with current discourse in primary healthcare practice
and research related to healthcare experiences in cross-cultural settings (Brown, Varcoe, & Calam,
2011; Browne & Varcoe, 2006; Vang et al., 2018). Proponents of cultural safety purport that this
concept is more expansive than cultural awareness, sensitivity, or appropriateness – which involves
having knowledge of cultural diversity (Papps & Ramsden, 1996) – to reflexivity and a critical self-
reflection on how one’s attitudes and behaviours may contribute to an experience of ongoing
oppression for racialized peoples within the context of healthcare provision (Anderson et al., 2003;
Moffitt & Vollman, 2006). Cameron, et al. (2010) extend the cultural safety paradigm to include
quantitative epidemiological research, and issue an imperative for researchers to co-develop
culturally-safe methods and protocols with Indigenous communities. This call to action has relevance
for all forms of maternal health research in Nunavut, regardless of methodology, for which cultural
safety may be an important guiding framework for the development and implementation of research,
as well as the application of research results to obstetrical care and policies.

More broadly, many of the identified opportunities for maternal health research and researchers in
this review can also be situated within global context, whereby present realities of settler colonialism
exist alongside calls by Indigenous communities for increased recognition, leadership, and self-
determination within health research and governance (ITK, 2018; Morgensen, 2011, 2014).
Decolonial approaches to health research might require re-conceptualizing research within an
Indigenous paradigm, rather than training researchers in Western-style inquiry (Drawson, Toombs, &
Mushquash, 2017; Palafox, Buenconsejo-Lum, Riklon, & Waitzfelder, 2002). Moreover, important
questions for research may relate to how colonial legacies and ongoing settler colonialism manifests
within health systems and governance globally (Morgensen, 2014). This may be of particular
relevance to research on Indigenous maternal health and health systems as processes such as
obstetric evacuation and similar forms of relocation are replicated in many nations worldwide (Abel
& Kearns, 1991; Begay, 2009; Corrado, 2017; Kildea & Wardaguga, 2009; Kruske, Kildea, & Barclay,
2006; Montgomery-Andersen, Willen, & Borup, 2010).
2.4.1 Limitations
This review critically analyzed the maternal health research methodology reported in published academic literature in order to question how mainstream research might respond to calls for increased Inuit leadership and direction in Inuit-focused research. By concentrating on this type of literature, this review did not include grey literature, such as maternal health research conducted by Inuit organizations like Pauktuutit Inuit Women of Canada (Pauktuutit, 1995), or reports from midwifery gatherings (McNiven, 2018), which model research that centers the voices and priorities of Inuit women, and is embedded in community. These processes, documented in grey literature, are often Inuit-led, and tuned to local, emergent concerns; it is politically-engaged, action-oriented research. Thus, research that exists outside the academic sphere may offer insights for furthering academic, maternal health research that prioritizes Inuit agendas and self-determination (ITK, 2018). Indeed, these perspectives may create a framework for reconceptualizing and redefining what maternal health research is and, perhaps, ought to be in Inuit Nunangat. Additionally, this review included multiple articles published by the same research team; for instance, Kaufert and O’Neil published five included articles, and McIsaac et al. published three. Researchers may have used similar methodology across multiple articles, which could have resulted in under- or overemphasis of their research processes in the results.

2.5 Conclusion
This review article synthesized both the contributions of prior maternal health research and opportunities for improvement at each stage of the research process from conceptualizing a study to mobilizing results. Research that examines colonization as a distal determinant of maternal health outcomes and healthcare experiences, and is inclusive of Inuit-identified metrics and models for maternal health, was largely absent from the literature; this may be a rich inquiry with context-specific results for healthcare practice and policy. Likewise, more research is needed that emerges from the priorities of Nunavummiut, employs a strengths-based approach, and co-creates knowledge sharing initiatives with communities. In so doing, maternal health research may be positioned to more effectively contribute results with practical implications for local stakeholders.

Moreover, this article communicates an overarching and cross-cutting theme: at each step of the research process, more opportunity exists for Inuit voices, perspectives, knowledge, and experiences to shape and define maternal health research in Nunavut, both as an ethical imperative and to strengthen the quality and usefulness of research [Figure 2.7]. Consultation and respectful partnership may need to be expanded to include Inuit leadership in and oversight for maternal health research (ITK, 2018). Questions of data ownership and control must be critically engaged, alongside
the exploration of new Inuit-led methodologies for gathering these data which may center and prioritize Inuit ways of knowing and understandings of maternal health. Indeed, by its critical engagement with reported methodology throughout the research process, this review presents opportunities for maternal health researchers to respond to these important and timely imperatives.
Figure 2.7. Visual summary of the contributions of this literature review, as illustrated in the results, as well as the discussed opportunities for future maternal health research. As in, for each stage of the research process – conceptualization, initiation, implementation, reporting, and knowledge mobilization – this review revealed what the current maternal health literature has contributed, as well as how researchers can build on these contributions and further maternal health research that is based on Inuit priorities, is Inuit-led, and Inuit-determined.
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CHAPTER THREE

“SEWING IS PART OF OUR TRADITION”: A CASE STUDY OF SEWING AS A STRATEGY FOR ARTS-BASED INQUIRY IN HEALTH RESEARCH WITH INUIT WOMEN

Qualitative Health Research, In Press
ABSTRACT

In this article, we present a case study of sewing as a strategy for arts-based inquiry in health research, situated within a broader project that highlighted Nunavut Inuit women’s childbirth experiences. Five focus groups were hosted as sewing sessions with pregnant women (n = 19) in Iqaluit, Nunavut (2017-2018). Women’s reflections on the sessions, and the significance of sewing to Inuit, were integrated with researchers’ critical reflections to examine the value of sewing as a strategy for arts-based inquiry within a focus group method. Results related to the flexibility of the sessions; how collective sewing created space for voicing, sharing, and relating; sewing as a tactile and place-specific practice tied to Inuit knowledge and tradition; and lessons learned. Our results underscore the possibilities of arts-based approaches, such as sewing, to enhance data gathering within a focus group method and to contribute to more locally-appropriate, place-based methods for Indigenous health research.

Key Words: Arts-based research; qualitative health research; Inuit; Nunavut
3.1 **Introduction**

Sewing is part of our tradition, our culture. It gives a warm welcoming into the group. It really puts your mind focused on our group. It’s grounding. Once you start sewing, you forget about everything around you. Like being out on the land. You get away from technology, you get away from everything. Like out on the land – you get away from reality, and you receive what the land has to offer you, what the animals in the water are. You see a seal, and it’s swimming very calmly, smoothly in the water when you see it. It’s nothing chaotic out there. It’s very peaceful. You don’t hear the city. You don’t hear anything. All you hear is the motor of the boat. Or the sound of the skidoo. Or the snow. It’s just a real peaceful state, your entire body and soul is feeling around you. That’s how it feels also with sewing. ‘Cause you’re keeping the tradition going, you have all these different reasons to be motivated to be able to participate in these sewing groups. Not only that, you feel proud in the end of your accomplishment. It’s such a satisfying feeling of emotion that, ‘Oh, I finished this! It’s going to be useful. It’s going to be used and kept warm.’ Something you can provide for your family.

-Naomi Tatty, Inuk team member & co-author, on sewing

Arts-based approaches are increasingly emergent in health research and practice as creative, engaging, and empowering means to explore participants’ lived experiences of health issues, perspectives on health systems, and concepts of health (Archibald & Blines, 2021; Smit et al., 2021). Researchers have used drawing (Caldairou-Bessette et al., 2020), photography (Watchman et al., 2020; Woodgate et al., 2021), visual artifacts (Talsi et al., 2021), and filmmaking (Baumann et al., 2020), for instance, as modes for both generating health research data and for mobilizing results. These arts-based approaches are increasingly recognized as both valuable approaches to inquiry in their own right (Boydell et al., 2012), and also as strategies to use concurrently with or embedded within more conventional qualitative methods, such as interviews or focus group discussions (Fraser & al Sayah, 2011). Indeed, the interface of the arts and health research is an expansive, evolving, and imaginative space within which researchers may continue to discover new methodological possibilities that broaden our understandings of health and well-being (Boydell et al., 2012). For populations with rich artistic traditions – such as many Indigenous communities worldwide – arts-based approaches often align with important and culturally-embedded forms of knowledge-sharing (Flicker et al., 2014), and thus have potential to facilitate rich dialogue within the data gathering process (Boydell et al., 2012). For instance, researchers have used photovoice (Harper et al., 2015; Lardeau et al., 2011), collaborative podcasting (Day et al., 2017), digital storytelling (Cunsolo Willox et al., 2012; Harper et al., 2012), and participatory film (Borish et al., 2021; MacDonald et al., 2015) to engage Indigenous Peoples in community-based and community-led, action-oriented health research (Bell et al., 2021; Hammond et al., 2018).
Importantly, when working with Indigenous communities and with Indigenous Peoples, Kovach (2009) discusses the process of gathering data through “making and doing” as resonating with Indigenous epistemologies, ontologies, and axiologies. Indeed, to avoid a continuation of the “colonial project” in research (Smith, 2012), researchers face an ethical imperative to adapt their methods to reflect Indigenous ways of knowing and being (Simonds & Christopher, 2013), privilege the voices, perspectives, and worldviews of Indigenous participants (Chilisa, 2011), and engage in research rooted in “relational accountability”, reciprocity, and respect (Wilson, 2008:77). While in some arts-based approaches, the art form also constitutes the data, such as digital media in photovoice (Castleden et al., 2008), or digital storytelling (Cunsolo Willox et al., 2012; Harper et al., 2012), this research utilized sewing as a strategy for arts-based inquiry to facilitate knowledge-sharing and data gathering, not as a data source or knowledge mobilization product. This aligns with Boydell et al.’s definition of arts-based research as the “use of any art form (or combinations thereof) at any point in the research process in generating, interpreting, and/or communicating knowledge” (2012:3), as well as Leavy’s use of the term “arts-based research” as “an umbrella category that encompasses all artistic approaches to research” (2018:4). While sewing has previously been used in arts-based research with Indigenous Peoples (Healey, 2019; Jackson & Coleman, 2015), opportunity exists for further exploring this strategy for arts-based inquiry to facilitate data gathering within an Inuit context.

We explore the methodological possibilities and value of arts-based inquiry in health research through a case study on maternal health in Iqaluit, Nunavut. Specifically, this paper (1) critically analyzes the process of using sewing as a strategy for arts-based inquiry to enhance focus groups with pregnant Inuit women in Iqaluit; (2) explores sewing as a strategy for arts-based inquiry that is embedded in Nunavut Inuit culture and context; and (3) evaluates the use of sewing as a strategy for arts-based inquiry in an Indigenous health context and identifies key ‘lessons learned’ that have relevance to researchers who may employ this strategy. In so doing, we draw connections from our research process to the broader context of critical public health research and praxis, particularly with Indigenous populations.
3.2 METHODS

3.2.1 Placing the Work: Birthing in Nunavut

This research focused on childbirth in the Inuit territory of Nunavut, within Inuit Nunangat (Inuit Homelands) [Figure 3.1]. Nunavut is a vast area, inclusive of 2.093 million km² of lands and waters that Inuit have lived on and with for thousands of years (Mancini Billson & Mancini, 2007; McElroy, 2008). Within Nunavut are 25 fly-in communities, located in three regions (from West to East): Kitikmeot, Kivalliq, and Qikiqtaaluk. Eighty-four percent (83.8%) of Nunavut’s population, of approximately 36,000, identify as Inuit (Statistics Canada, 2017).

![Map of Inuit Nunangat (Inuit Homelands), including the Inuit territory of Nunavut and the territorial capital city of Iqaluit, where this research was located.](image-url)
This research was located in the territorial capital of Iqaluit, a hub for maternity travel (‘obstetric evacuation’) in Eastern Nunavut. Women within Qikiqtaaluk Region communities fly to Iqaluit for delivery at approximately 36 weeks’ gestation [Figure 3.1]. While awaiting delivery, women stay at one of three residences in Iqaluit, one of which is the Tammaativvik Boarding Home [Figure 3.2], unless they require care at a tertiary care centre in Ottawa. This model differs from the tradition of community-based birth and midwifery practiced by Inuit for millennia in the pre-colonial era (Kaufert & O’Neil, 1990). Over the last 50 years, birthing has transitioned from being located on the land to medical facilities to improve maternal and infant health (Healey & Meadows, 2007) – a medicalization of birthing that accompanied broader changes to health, economic, and administrative systems driven by colonial processes (Douglas, 2006). Inuit have long advocated for a return to community-based birthing and investment in midwifery training and regional birthing centres (McNiven, 2018; Pauktuutit, 1995).

Figure 3.2. [a] Tammaativvik Boarding Home and [b] Elder’s Qammaq in Iqaluit, Nunavut, Canada, locations where sewing sessions were held during data collection between 2017 and 2018.
Inuit have fulsome knowledge of birth-in-place; just as Inuit know and are of the land, so too are Inuit birthing practices intimately tied to place (Voisey et al., 1990). As the research team discussed possible modes for facilitating rich focus group conversations about pregnancy and childbirth, attention turned to another significant element to Inuit culture and livelihoods – sewing – which deeply connects Inuit to culture, spirituality, and kinship, familial, and ancestral relations (Aariak, 2018). Sewing also facilitates intergenerational teaching, learning, and dialogue between and among families and communities (Emanuelsen et al., 2020; Wachowich, 2018). Given this context, the hope was for sewing to be a research strategy that would resonate with pregnant Inuit women and create a more comfortable space for sharing. This exploration of sewing as a strategy for arts-based inquiry was situated within a multi-year, collaborative research project on the topic of Inuit women’s past birthing experiences in Nunavut and present experiences of obstetric evacuation. The larger project prioritized Inuit perspectives on birth and sought to also highlight Inuit perspectives on how birthing supports could be enhanced.

### 3.2.2 Research Approach

This research project was guided by principles of community-based research (Israel et al., 2005; LaVeaux & Christopher, 2009); namely, that the research was designed, implemented, and analyzed by a team that included a Settler PhD candidate (LB) and an Inuk public health expert and researcher from Iqaluit (NT), who provided methodological direction, facilitation of data gathering, and interpretation of results within the cultural, epistemological, and ontological context of the research, as well as a team of Northern and Southern-based academic researchers. This research was licensed by the Nunavut Research Institute (Licenses #01 024 17N-M; 01 012 18R-M; 01 016 19R-M; and 01 005 20R-M) and approved by the University of Guelph Research Ethics Board (Certificates #16NV049 and 16-12-718).

### 3.2.3 Research Process

The research process consisted of four broad steps, including recruitment (gathering the group), data collection (gathering the data with a focus group method), language interpretation and data transcription, and data analysis. Sewing was a strategy for arts-based inquiry that facilitated and enhanced the data collection component of the research.
3.2.3.1 Gathering the Group

The sewing sessions were facilitated by a female Inuk team member from Iqaluit (NT) and a female Settler PhD candidate from Guelph, Ontario (LB). Two other female Inuit research associates and one Settler research associate were each involved in one session and helped with logistical preparations, including recruitment for one session hosted with women living in Iqaluit [see recruitment materials in Appendix B]. For recruitment for the other four sessions, pregnant women currently residing at the Tammaattivvik Boarding Home were invited and informed of the time and location of the sessions, and given the option of whether or not to attend [see recruitment flyer in Appendix C]. A range of two to seven pregnant women voluntarily attended and actively participated in each session (a total of 19 participants across five sessions). The composition of each group was fluid: not all women stayed for the full three-hour duration of each sewing afternoon, as they sometimes had appointments to attend [Table 3.1]. Participating women were from four communities in the Qikiqtaaluk Region of Nunavut.

Table 3.1. Details regarding the date of each two-part sewing session, the total number of participants per two-part session, as well as the composition of each group of women (e.g. the duration of participants’ attendance and other research associates present).

<table>
<thead>
<tr>
<th>Date of Session</th>
<th>Total # of Participants</th>
<th>Details on Composition of Group¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1: August 2-3, 2017</td>
<td>3</td>
<td>• In addition to 3 participants: 1 Inuk research associate, 1 Settler research associate present</td>
</tr>
<tr>
<td>Session 2: August 5, 2017²</td>
<td>2</td>
<td>• In addition to 2 participants: 2 Inuit research associates present</td>
</tr>
<tr>
<td>Session 3: November 29-30, 2017</td>
<td>4</td>
<td>• 3 participants attended only the first afternoon; 1 new participant attended the second afternoon</td>
</tr>
<tr>
<td>Session 4: February 28-March 1, 2018</td>
<td>7</td>
<td>• 7 participants attended the first afternoon; only 3 returned for the second afternoon</td>
</tr>
<tr>
<td>Session 5: April 17-18, 2018</td>
<td>3</td>
<td>• 1 participant left for an appointment partway through the first afternoon, then returned for the full duration of the second afternoon</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>19</strong></td>
<td></td>
</tr>
</tbody>
</table>

¹For all five sewing sessions, the same Inuk team member and Settler team member were present as facilitators (in addition to the ‘Total # of Participants’ and the additional individuals noted in this column).

²This session was hosted in a single afternoon (at the Elder’s Qammaq) with pregnant women living in Iqaluit.
3.2.3.2 Gathering the Data

Data gathering occurred intermittently between 2017 and 2018, in order to include multiple, different groups of women. During this time, a total of four focus groups were held in the form of sewing sessions in a common room at the Tammaativik Boarding Home [Figure 3.2a]. Each session spanned two afternoons (approximately six hours total per session). In addition, one session was held in a single afternoon at the Elder’s Qammaq (Gathering Place) with pregnant women who regularly lived in Iqaluit [Figure 3.2b].

Each session unfolded as a blend of sewing, conversation, storytelling, and moments of shared and companionable silence. All sewing materials were provided by the research team. Women sat in a circle and sewed sealskin baby slippers and mittens [Figure 3.3]. An Inuk team member (NT), who is a very knowledgeable seamstress, shared patterns with the women and assisted with their sewing, as needed. A Settler team member (LB) opened with a welcome and an introduction to the team and overarching project. Subsequently, participants provided verbal informed consent to participate in the research and, with permission, three audio recorders were turned on and situated around the circle. Then, a team member posed open-ended, conversational questions to build familiarity within the group: for example, what communities women were from, when they arrived at the boarding home, how many children they have, and how they learned to sew. From there, while sewing, conversation was mostly unstructured. The research team occasionally asked a question pertaining to four broad birthing-related research topics.

Data pertaining to participants’ views of the sewing sessions emerged organically as women commented on the sewing sessions as they unfolded or responded to a question from the team members; therefore, the 19 sewing session participants provided feedback on the sewing session approach. Three of these participants also responded to an invitation for a brief, individual, conversational follow-up interview within a day or two of the experience to further evaluate the sewing session. Concepts that informed the second section of results, related to ‘lessons learned’ in this research, were drawn from the literature.
3.2.3.3 Language Interpretation and Data Transcription

Sewing sessions were conducted in both English and Inuktitut. The language spoken emerged organically as women initiated or responded to conversation in one language or another. The gathered data consisted of audio recordings, which were transcribed verbatim by the research team (total recording time = 14.1 hours). The Inuktitut portions of the recordings were interpreted into English and subsequently transcribed and integrated among the English portions. To account for the challenge of interpreting Inuktitut concepts, and the potential for meaning to be lost, this process also involved a thorough debrief between team members LB and NT. An Inuk team member (NT) interpreted to provide additional clarity and context to the recorded audio (Temple et al., 2006). This approach avoided “fixed – one word – translations” and, instead, produced “fluid descriptions of meanings” which helped contribute to the validity of this cross-language qualitative research (van Nes et al., 2010:315).

3.2.3.4 Data Analysis

Analysis of these qualitative data was a multi-layered process that consisted of weaving together data from sewing sessions and interview transcripts, as well as annotations, memos, and written reflections from the team members, who critically reflected on and debriefed the sewing strategy in relation to the data gathered and the nuances of non-verbal cues, silence, facial expressions, and vocal tone and inflection in the audio recordings (Creswell & Miller, 2000). Initial open coding and annotating of the transcripts was done by hand (DeCuir-Gunby et al., 2011). Detailed memos and

![Figure 3.3. Photograph of sealskin baby slippers sewn in sewing sessions with pregnant women in 2017-2018 (photograph courtesy of LB).](image_url)
journaling were critical to synthesizing and making analytical links from the text to broader concepts (Birks et al., 2008). Further analysis was conducted in NVivo 12©, Version 12.1.0, and consisted of a thematic analysis, using a constant comparative method between and within transcripts (Braun & Clarke, 2006), and a hybrid inductive-deductive approach to iteratively generate and refine themes (Fereday & Muir-Cochrane, 2006) [Figure 3.4].

**Figure 3.4.** Visual representation of the analytical approach employed in this study’s qualitative analysis. Themes were iteratively generated and refined using a hybrid inductive-deductive approach (Fereday & Muir-Cochrane, 2006), whereby the use of sewing as a strategy for arts-based inquiry was examined through the lens of the data and three categories of literature (in no particular order): (1) relationality and kinship; (2) voicing and storytelling; and (3) knowing (and sharing) from ‘doing’. Specific concepts from both the broader Indigenous scholarship and Inuit-specific scholarship that informed the generation and refinement of themes are denoted in the circles within each category.
3.2.3.5 Theoretical Framings

The use of sewing as a strategy for arts-based inquiry in an Indigenous health context more broadly (Obj.3) – and as a strategy for inquiry embedded in Nunavut Inuit culture in particular (Obj.2) – was examined through the lens of literature (both Inuit-specific scholarship and broader Indigenous scholarship) and the data. This literature can relate to three general categories, which provided theoretical framing to, and helped to generate and refine, themes from the data. Several results map directly onto these categories:

- **Relationality and Kinship:** Wilson’s discussion of relationality, and the significance of relationships to Indigenous Peoples (2008); Healey and Tagak Sr.’s discussion of a relational paradigm for health research with Inuit (2014).

- **Voicing and Storytelling:** Smith’s decolonizing “project” of voicing (2012); importance of story-sharing within an Inuit context (Healey & Tagak Sr., 2014).

- **Knowing (and Sharing) from Doing:** Creating research by “doing” (Kovach, 2009); an Inuit learning continuum (McGrath, 2011); Simpson’s discussion of embodied knowledge (Simpson, 2014); Inuit Qaujimajatuqangit (IQ) and Inuit ways of knowing (Aariak, 2018; Karetak et al., 2017).

3.3 Results: Sewing as Research Strategy

The results presented relate to the significance of collective sewing for participants, and how sewing together facilitated data gathering. These broader themes provided the context for subsequent results on the particularities of how the sessions functioned, and ‘lessons learned’ from the process.

3.3.1 Why and How Did Sewing Enhance Focus Groups?

Sewing as a strategy for arts-based inquiry was flexible and tactile, invited voicing and storytelling among participants, and reflected relationality and kinship. Sewing was described as place- and people-specific, and as an experience of embodying Inuit knowledge and tradition.
3.3.1.1 Sewing as a Flexible and Tactile Practice
Our results indicated that sewing, as a tactile act of creation and imagination, enabled women to share in a different way. Less bounded by the parameters of a structured question-response format, the research team observed that sewing created flexibility for engaging in dialogue and storytelling as it naturally unfolded amid sewing. The concreteness of tying a knot or threading a needle were evident focal points for participants and team members alike and facilitated breaks in conversation. From the silence of sewing together, verbal sharing – when it occurred – was observed to be rich. The tactile experience of sewing was also described as a reminder of home for many women, a concrete practice that rooted women in a different place, emotionally. As one interviewee explained, “when you’re keeping busy, you forget about [family members] for awhile, and enjoy yourself. You get less worries from them, doing something.”

3.3.1.2 Voicing and Sharing
Women expressed their present and past experiences of pregnancy and childbirth to those gathered. They embodied a receptivity to each other’s stories; and, in turn, gave voice to their own experiences in the context of the group. For example, voicing concern about loved ones at home, one participant received validation and empathy from another, who responded with: “This will be over and done with eventually, and we’ll get home to them.” Both the particularities and shared commonalities of women’s lived realities of being away from home for childbirth were given voice; incarnate in word, tone, and inflection – and audible to those gathered – these stories were real, lived-in, and heard.

Excited and often humorous sharing of previous pregnancy and birthing experiences animated conversation around the circle, accompanied by ready sharing, hearty laughter, and tears. Many anecdotes shared in each session brought vibrancy and vitality to the dialogue. Stories from the past segued to stories of present pregnancies, and sharing of joys, as well as complications, from prior pregnancies. One woman who previously experienced a stillbirth reflected on her story of loss, and also of her memories of pregnancy and feelings therein. Women also shared of their hopes and dreams for their unborn children, and vocally expressed what they imagined their children might be like. They audibly marveled at the strength of their bodies: “God blessed us with this amazing gift. I mean, we could grow human beings in our body, which men can’t do. I was like, ‘men are strong’, and then I’m like, ‘no, women are strong!’” Women also told stories of the re-orienting connections they felt to their children:
Participant 1: Fall in love with the heartbeat, fall in love with the movement, fall in love with the ultrasound, fall in love with everything!
Participant 2: Changes your whole world. You see the whole world differently.

While women gathering to share experiences during pregnancy is not unique to this research, the inclusion of sewing as a strategy for arts-based inquiry that created a space that was generative, and an opportunity for the collective voicing and sharing of experiences while doing a familiar activity, enriched the focus group format, and allowed for participants to share organically and in a different manner than other types of focus groups would normally allow.

3.3.1.3 Relationality and Kinship
The sewing sessions created new relationships both between and among participants and also between and among participants and local team members, who offered to take women berry picking and accompanied several women on a post-sewing group trip to a fabric store in town. Pre-existing relationships were identified between participants, as women often discovered common friends or kinship relations. “That’s my [insert family member]’s [relation]” was a commonly-echoed refrain around the room. While interpreting some Inuktut conversation, a team member described what was happening as “talking about how they’re related, and not strangers with each other.” These relational ties were expressed by one woman’s escort as likely to shape the boarding home experience that ensues, as “now that they’ve met each other, they won’t feel so much as strangers to each other in the boarding home…It’s a lot better.” Sewing together was observed to be generative of connections to carry forward beyond the session. Sewing as a strategy for arts-based inquiry, then, involved women gathering and having time and space to relate. After meeting and sewing together, even local team members discussed making kamiks (boots) together outside of the sewing sessions.

3.3.1.4 Sewing as “Keeping our Tradition Going”
“Keeping our tradition going” or a living of Inuit tradition – these were ways women described what sewing was to them. In the context of sewing together, women shared the rich traditions Inuit have around sewing, and the depth and breadth of knowledge Elders have about sewing. It was discussed as a highly-developed art, associated with much skill and technicality, and for which there exist knowledge holders in Inuit communities. Women discussed differences in sewing techniques from one community to another, as well as across regions and territories in Inuit Nunangat. Just as Qikiqtaaluk Region communities are diverse, so also are the expressions of sewing, according to participants. The patterns created, used, and passed among Inuit and generationally, as well as the styles and types of sewing projects, were discussed as reflecting a particularity to place and people.
In the context of the sewing groups, women also shared patterns and practices, asked sewing questions, and taught one another. Sewing, then, was described and enacted as a way to teach and carry on Inuit culture, and embody Inuit knowledge and traditions. Women expressed enthusiasm for this collective learning, for – as one participant shared – “I’m glad I came. It’s gonna motivate me to make an amauti!”

### 3.3.2 Pragmatic Lessons Learned on Process & Power

In addition to the significance of sewing to Inuit women, and what sewing together facilitated in the research process, this study also revealed some ‘lessons learned’ [Figure 3.5]. These observations on the process, including both challenges and strengths associated with this sewing method, emerged as the research team reflected on the sessions.

*Figure 3.5.* Visual synthesis of results, including what sewing facilitated in the data gathering process and pragmatic lessons learned from this research. Both sections of results demonstrate how sewing facilitated data gathering among Qikiqtaaluk Inuit in the present study, but also the possibilities for arts-based inquiry when utilized in other research contexts.
3.3.2.1 Partnership as Critical to Conversation

At times, conversation appeared stilted by what a Settler team member perceived as a benign question from her cultural lens. Conversely, other questions she considered surface-level elicited unexpectedly rich responses. Upon reflection, we noted the critical place of partnership in this research – and, perhaps, more broadly in research that crosses cultural, socio-economic, and Indigenous-Settler bounds (Castleden et al., 2008; Fisher & Ball, 2003). Indeed, this research would not have existed in the form it did as an isolationist research endeavour. As an Inuit and Settler team, we worked in partnership from the research design to the iterative refinement of question topics, and to data gathering, interpretation, and analysis. The nuances of how and when to ask questions, and what questions were appropriate, were also engaged and directed collaboratively. Further, an Inuk team member consistently adjusted and fine-tuned the phrasing of questions to invite conversation in ways that resonated with Inuit culture and respected people’s dignity and differing comfort levels in sharing.

3.3.2.2 Language and Power in the Sewing Process

Throughout the sessions, a Settler team member (LB) questioned how power existed, the effects it had on the process, and how she might creatively engage the power imbued in her social identity and redress power imbalances (Castleden et al., 2008; Wallerstein & Duran, 2006). Importantly, participants could choose what language to speak, thereby controlling the course of conversation, and helping to shift the balance of power to them (Wallerstein & Duran, 2006). Participants had further agency in the discussion, then, given that language can affect presentation of self, as well as one’s processing of – and contributions to – conversation (Du, 2015). This point of power had particular relevance when considering the extent of difference between English and Inuktitut languages, and the complexity of Inuktitut, whereby concepts are likely be described and understood very differently than in English (Joanis et al., 2020); women were freer, then, to contribute to conversation using the language they felt would best convey what they wished to share.

Beyond language, a LB’s positionality as a white Settler academic researcher also created multiple, interrelated and reinforcing gradients along which power affected interactions with participants. She was also not skilled in the act of sewing nor a mother – two facets for which she was evidently not ‘expert’ and instead positioned as learner (Sword, 1999). Participants knew this, as she shared her lack of sewing and birthing knowledge, stumbled through sewing with skins, and often needed to ask for help. More than once, women articulated insights they wanted to pass to the ‘non-mother’ in the room, in the form of cautionary tales or advice for healthy pregnancy, should she be pregnant in the
future. The session format was conducive to this ‘researcher as learner’ posture, possibly more than other methods.

3.4 DISCUSSION: SEWING AS FACILITATIVE OF DATA GATHERING

Some of these women haven’t sewn before. I want our tradition alive as long as possible. ‘Cause our ancestors survived without all the equipment we have today. They survived on just the land. They carved needles, they made ulus. I feel spoiled today because we have sewing machines, we have needles, we have all these things to make it easier for us. Our ancestors would have been proud, if they’d see what I can make today and provide for everyone. And that’s a big part of who we are as Inuit. It identifies how powerful our ancestors were. And not only that, whatever we create, it becomes beautiful! That’s what encourages me in passing it on, ‘cause if you practice, you’ll only get better each time you try. I want these women to represent our culture, and only get better through practice.

-Naomi Tatty, Inuk team member & co-author, on sewing and Inuit tradition

As illustrated by these results, sewing as a strategy for arts-based inquiry has broader applicability to other contexts, due to its flexible and tactile nature, and in how it creates space for voicing and sharing, as well as connection among participants. Importantly, these results can be situated among literature on intersecting and interrelated “projects” that Indigenous communities are engaged in, outlined by Linda Tuhuiwai Smith (2012), as well as prominent literature on Indigenous knowledge systems (Simpson, 2014), research methods (Wilson, 2008) and methodologies (Aariak, 2018; Chilisa, 2011; Kovach, 2009). This sewing strategy – with Qikiqtaaluk Inuit in the present study – is, thus, one example of how arts-based approaches embedded in place- and culturally-specific forms of knowledge sharing have potential to contribute to decolonizing health research.

The use of sewing as a strategy for arts-based inquiry was engaging for women. The research method itself – not just any future outcome or output – was identified as meaningful for participants, as it resonated with cultural values and locally-specific forms of communicating and knowledge-sharing (Emanuelsen et al., 2020). In The Hands’ Measure, Eva Aariak says of sewing: “Taught in its proper way, the wide range of Inuit sewing practices incorporates trusted, age-old knowledge of the environment, of the seasons, and of the life cycles and anatomy of the animals on which we depend” (13). The specific materials and other sewing resources used depended on what is – and has been historically – available in one’s specific environment, and clothing is known to vary by season, according to the land-based activities it would be needed for (Bennett & Rowley, 2004:322). Inuit sewing practice, then, reflects a connectedness to community, lands, and place, and relates to the decolonizing “project” of connecting (Smith, 2012).
Moreover, Karetak and Tester state that, for Inuit, “knowledge without application has no value” (2017:19). Rather, knowledge is produced and sustained through embodied practices such as sewing; it is experiential and ‘lived-in’ (Simpson, 2014) – a means of “wearing your teachings” (Simpson, 2014:11, quoting Elder Edna Manitowabi). Leanne Simpson describes this ‘coming to know’ from an Indigenous perspective as “taking place in the context of family, community and relations” and a process that is “learner-led…the pursuit of whole body intelligence” (2014:7). This ‘doing’ reflects an Inuit worldview of how knowledge and wisdom is formed, from the tactile and embodied practices of life (Karetak et al., 2017; Kovach, 2009; Ritenburg et al., 2014). As illustrated in the results, the experience of sewing was not a transcending of reality; rather, reality was described as being grounded by this tactile practice (Healey, 2019). The present was portrayed as focused and lived more vibrantly. The physicality between the sewing materials, the participant, and the shared sewing experience may have facilitated an embodiment of childbirth narratives and perspectives, as the tactile nature of the craft was familiar, focusing, and grounding (Bunce et al., 2016; Emanuelsen et al., 2020); Eva Aariak describes “efforts to become proficient in skin sewing” as “making us feel centred and more grounded as Inuit” (2013). Importantly, as reflected in the Inuit Qaujimajatuqangit (Inuit knowledge and worldview) principle of Pilimmaksarniq, Inuit value practicing and honing skills, such as sewing, which contribute to family and community life and wellness (Karetak et al., 2017). Donald Uluadluak references materiality when describing this learning-by-doing principle: “What we call pilimmaksarniq is when you are training anyone using concrete materials and tools that children can feel and practise with” (2017:165). Thus, sewing as a strategy for arts-based inquiry aligns with an Inuit epistemological, as well as ontological, framework of coming to know and be through making and doing (Healey, 2019).

Sewing as a strategy for arts-based inquiry can be further situated within Healey & Tagak Sr.’s framework for health research methodology in an Inuit context, by creating a relational research space and co-creating research through storytelling and sharing of knowledge (2014). This “method of discovering relations”, evident in the sewing sessions, reflects the centrality of relationships to the lives of many Indigenous Peoples (Wilson, 2008:84), including Inuit. Relational, storytelling methodologies, then, such as sharing circles (Waddell et al., 2020) or the use of yarning in interviews (Byrne et al., 2021), are often used in Indigenous research contexts. The voicing of stories, described in the results, can also be situated within the decolonizing “project of storytelling”, wherein Smith states that “intrinsic in story telling is a focus on dialogue and conversations amongst ourselves as indigenous peoples, to ourselves and for ourselves” (2012:146). Among Inuit, this sharing of stories while sewing reflects the Inuit concept of Unikkaaqqatiginniq, related to storytelling, which is central to Inuit ways of knowing and being (Healey & Tagak Sr., 2014). Embedded in this
philosophy is the understanding that story is a powerful mode for knowledge-generation and sharing (Healey & Tagak Sr., 2014). Storytelling often emerges from tactile ‘doing’ – such as sewing, carving, or other forms of crafting – among Inuit (Healey, 2019; McGrath, 2011). Consequently, arts-based inquiry, including sewing, may be an effective modality for facilitating and supporting data gathering both with Inuit and in other research contexts, particularly when processes of making and doing align with modes of conversation, knowledge-creation, and knowledge-sharing in the cultural context of the research.

Importantly, the use of arts-based approaches as pathways to knowledge generation and sharing is not new in Nunavut. For instance, Qaujigiartiit Health Research Centre in Iqaluit has long used arts-based methods to facilitate community-based health research (G. Healey Akearok, personal communication, December 16, 2019). Likewise, community sewing programs, such as that of the Rankin Inlet Friendship Centre (Greer, 2019) and through the Tukisigiavik Centre in Iqaluit (City of Iqaluit, 2012) are spaces where Inuit knowledge of sewing is mobilized and practiced; and the Mittimatalik Arnait Miqsuqtuit Collective in Pond Inlet continues to explore the rich possibilities for knowledge-sharing that exist at the interface of an emerging digital media landscape in Nunavut and skills like sewing (Wachowich, 2018). Accordingly, while application of the arts for knowledge-creation and knowledge-sharing is common and important practice in Nunavut, arts-based approaches are less prevalent in the peer-reviewed methodological literature in this region, which this article aims to contribute to.

Our case study of sewing also fits within a broad spectrum of arts-based health research approaches that are increasingly, and regularly, utilized in other research contexts. For instance, body mapping and drama are used as an arts-based sexual health intervention and method to facilitate data collection in the Northwest Territories (Lys et al., 2018). Related research on illness prevention (Helm et al., 2015) with Indigenous youth in a global context further underscores how arts-based methods have been used effectively as engaging and empowering tools for public health research, particularly with Indigenous populations (Fitzpatrick & Reilly, 2019; Hammond et al., 2018). Also of significance to public health, photovoice is an arts-based method that has been used to evaluate access to and use of community programs (Ford et al., 2013; Lardeau et al., 2011); and more broadly to explore concepts of health among Indigenous children and youth (Kellock, 2011). Within this array of research contexts, arts-based methods, and health-related topics, our case study of sewing contributes an example of the arts as facilitative of research with Indigenous women on lived experiences of healthcare and perspectives on health and wellness (Poudrier & Mac-Lean, 2009).
Thus, sewing is but one example of a strategy for arts-based inquiry that may contribute to a decolonizing research agenda beyond an Inuit context. Since there was no structured interview guide used in the sewing sessions, women were freer to share on their own terms, when and if they felt comfortable doing so. Overall, the design was flexible and adaptable; it was iteratively created as the research team debriefed what went well and implemented changes for subsequent sessions to facilitate further opportunities for women to share in ways that resonated with them. Labonté, quoting Paulo Freire, states that “the first act of power people can take in managing their own lives is ‘speaking the world,’ naming their experiences in their own words under conditions where their stories are listened to and respected by others” (2011:156). Indeed, this strategy attempted to shift the power imbed in a researcher’s identity to participants, by creating a context where they could “speak their worlds”, less driven by the parameters of a researcher’s questioning. It involved shared experience of an activity together, whereby participants’ stories and perspectives could emerge over the course of time and companionable silence. The design was also driven by an Inuk team member with sewing expertise, who provided leadership to the sewing process and asked the majority of questions. This attempt to redress power imbalances within the research process, challenging the distinctions between ‘researcher’ and ‘researched’ (Smith, 2012), and prioritizing Inuit forms of knowledge-creation and sharing, may, in part, illustrate how strategies for arts-based inquiry, like sewing, have potential to contribute to a decolonizing research agenda.

3.5 SEWING AS A STRATEGY FOR ARTS-BASED INQUIRY: IMPLICATIONS FOR HEALTH RESEARCH & PRACTICE

This study illustrates that, in light of calls for Inuit-led and -directed research (ITK, 2018), strategies for arts-based inquiry – such as sewing – offer possibilities for expanding Inuit leadership in research design and implementation, and rooting research in an Inuit epistemological and ontological framework. Hammond et al. (2018) situate arts-based inquiry in relation to many Indigenous ontologies, which often involve this co-creation of knowledge from experience – from doing. Thus, our case study of sewing with Inuit women in Iqaluit, Nunavut more broadly illustrates the potential of arts-based inquiry to resonate with local ways of knowing and being in the context of health research with other Indigenous populations, thereby situating research to respond more effectively to a decolonizing research agenda.
3.6 REFERENCES


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CHAPTER FOUR

BODIES, PLACES, AND RELATIONS:
ENRICHING BIRTHING CARE AND WELLNESS IN THE QIKIQTAALUK REGION OF
NUNAVUT THROUGH GOVERNMENT OF NUNAVUT–IDENTIFIED INUIT
QAUJIMAJATUQANGIT (IQ) PRINCIPLES
ABSTRACT

Across Inuit Nunangat, pregnant women travel away from home for delivery. This system of obstetric care differs from the system of birthing care embedded in continued Inuit values and principles. These differences create complexities for Inuit within the current medical travel model, in terms of being able to experience culturally-embedded care and wellness throughout the birthing process. The purpose of this research was to explore connections between Inuit birthing knowledge and the Inuit Qaujimajatuqangit (IQ) principles – which underpin an Inuit worldview and holistic philosophy of life – that are identified by the Government of Nunavut (GN) as important to health system governance. By doing so, this research intended to inform possibilities for enrichment of the medical obstetric system with the Inuit birthing system in the Qikiqtaaluk Region of Nunavut. Specifically, we (1) explored and characterized connections between Qikiqtaaluk Inuit birthing knowledge and perspectives and GN-identified IQ principles; and (2) examined how these governance principles can help contribute to desired integration of Inuit birthing practices into the current health system. Qualitative data were gathered (2017-2018) through sewing sessions (n = 5) with pregnant women (n = 19) in Iqaluit, Nunavut and conversational interviews with community members (n = 22). Data were analyzed thematically using a hybrid inductive-deductive approach. Results illustrate connections between the Inuit birthing knowledge shared and three of eight GN-identified IQ principles, namely: Avatittinnik Kamatsiarniq (respect and care for the land, animals, and the environment), as birthing was shown to be intertwined with the land and its provision; Inuuqatigiitsiarniq (respecting others, relationships and caring for people), as birthing was illustrated by participants as expansive and relational – beyond a moment of delivery, and encompassing life and loss; and Pilimmaksarniq/Pijariuqsarniq (development of skills through observation, mentoring, practice, and effort), as participants shared how birthing inherently involves the skilled support of family and community members. This research has particular relevance to non-Inuit healthcare providers, public health practitioners, and health policy-makers who are required to embed the eight government-identified IQ principles into their practices and policy approaches. By illustrating connections between these principles and Inuit birthing, this research may help guide systemic approaches to maternity care with Inuit and highlight the importance of aligning the current obstetric care system in Nunavut with that of Inuit birthing care.

Key Words: Birthing; Inuit; Nunavut; Birthing Care; Inuit Qaujimajatuqangit (IQ); Health Systems
4.1 INTRODUCTION

For many Indigenous Peoples in rural and remote settings, maternity care systems are challenged by lack of access to health facilities and personnel (Brubacher et al., 2020; Corcoran et al., 2017; Felton-Busch & Larkins, 2019; Vang et al., 2018). While in most places, birthing was historically situated within home and community, a shift began in the mid- to late-1900s towards centralizing birth within westernized medical systems, in an effort to improve infant and maternal mortality rates (Moffitt & Vollman, 2006; Montgomery-Andersen et al., 2010; Van Wagner et al., 2007). This centralization often required travel from rural and remote places to urban centres. This model of obstetric care away from home (‘obstetric evacuation’) is intended to improve physical maternal and infant health outcomes (Couchie & Sanderson, 2007; Healey et al., 2018); however, it has also been associated with many challenges, including women’s lack of choice related to birth setting, the constraints of absence from family and work, the emotional implications of birthing away from one’s relational support system, and – among some places and peoples – the incongruence of this birthing model with cultural knowledge systems and values associated with birthing (Chamberlain & Barclay, 2000; Corrado, 2017; Douglas, 2007; Kildea et al., 2019; Lalonde et al., 2009; Marriott et al., 2019).

Across Inuit Nunangat, and specifically among Qikiqtaaluk (Baffin) Inuit in Nunavut, community-based birth was the norm for millennia (McElroy, 2008). Inuit epistemologies and ontologies are intrinsically and relationally tied to the land (Karetak et al., 2017; Kirmayer et al., 2008) and land-based activities, such as hunting, preparing country food, and sewing with skins, that are important to Inuit physical, economic, emotional, psychological, and spiritual well-being (Aariak, 2018). As such, birthing is also associated with valued knowledge and experiences that, for Inuit, are intimately connected to the land (O’Brien, 2012; Voisey et al., 1990). For families and communities, a loss of community-based birth due to the practice of obstetric evacuation has been described as inhibiting both relational support and bonding between and among families, mothers, and newborns (GN, 2014; O’Neil et al., 1988), and also reflecting an ongoing struggle for Inuit sovereignty and political agency in shaping the health system (Kaufert & O’Neil, 1990).

Inuit birthing knowledge – and the practices, values, beliefs, and principles contained therein – has been documented in the literature, and sustained through a predominantly oral Inuit tradition of sharing and mobilizing knowledge (Ekho & Ottokie, 2000; O’Brien, 2012; Pauktuutit, 1995). The underlying philosophy and guiding principles of Inuit Qaujimajatuqangit (IQ) have been shared by Elders in literature, in part, to convey the importance of IQ to present-day societal life (Karetak et al., 2017). Given this importance, eight IQ principles were selected out of many by the Government of Nunavut (GN) as being particularly significant to all aspects of governance, including that of the
CHAPTER FOUR – Enriching Birthing Care and Wellness in the Qikiqtaaluk Region

health system (GN, 2018)\(^3\). Less research has characterized the linkages between Inuit birthing knowledge and these GN-identified IQ principles intended to guide health system governance; this inquiry may have importance to how Inuit birthing perspectives and experiences are understood and responded to by non-Inuit healthcare personnel, public health practitioners, and health policy-makers who are required to shape the current obstetric care system to better serve Inuit.

The purpose of this article is to explore connections between Inuit birthing knowledge and perspectives and the *Inuit Qaujimajatuqangit* (IQ) principles identified by the GN as important to health system governance. The specific objectives were to: (1) explore and characterize connections between Qikiqtaaluk Inuit birthing knowledge and perspectives and GN-identified IQ principles; and (2) examine how these selected principles can support desired Inuit birthing practices within the current obstetric care system. By embedding the birthing perspectives shared by Qikiqtaaluk Inuit participants within the framework of these GN-identified IQ principles, this research may both broaden understandings of how Inuit might be more fully supported within the current obstetric care system and highlight the importance of aligning the medical obstetric system with the Inuit birthing system in the Qikiqtaaluk Region of Nunavut. Moreover, this research contributes to literature examining the congruency of medicalized maternity care systems with Indigenous knowledge systems (Kandasamy et al., 2017; Kildea et al., 2019), an important and timely consideration within the present context of calls for self-determination in health systems that affect Indigenous Peoples’ lives and livelihoods (Auger et al., 2016; ITK, 2018).

4.2 METHODS

4.2.1 Iqaluit, Nunavut, Canada

This research was located within Inuit Nunangat (Inuit Homelands), in Nunavut’s territorial capital of Iqaluit, a hub for the maternity travel system in the Qikiqtaaluk (Baffin) Region of Nunavut (Statistics Canada, 2017). Within this region, pregnant women fly from their communities at 36 weeks of gestation (for healthy pregnancies) and stay with family, or at one of three medical boarding homes, in Iqaluit until delivery. Obstetrical care for all women is provided at Qikiqtani General Hospital, a secondary care facility where approximately 400 births occur per year (Hansen & DeMaio, 2019). If specialist care is required, women are transported farther south to a tertiary care facility in Ottawa. The other two regions within Nunavut – Kitikmeot and Kivalliq – have obstetric care systems that operate independently of the Qikiqtaaluk Region and have different medical travel routes. Thus, by

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\(^3\)These principles (6 of 8) were chosen in consultation with Inuit Elders and outlined early on by the Government of Nunavut (GN) in its strategic planning, as noted in the Bathurst Mandate, *Pinasuaqtavut 1999-2004* (GN, 1999). Two were later added by the GN (GN, 2018; Tagalik, 2005).
locating our research in the community of Iqaluit, it has a distinctly Eastern-Nunavut, Qikiqtaaluk-specific focus.

4.2.2 Birthing and Inuit Qaujimajatuqangit (IQ) Principles for Governance Chosen by the Government of Nunavut: A Framework for Systems Alignment

Inuit Qaujimajatuqangit (“what Inuit have always known to be true”) has been described by Karetak and Tester (2017) as “an ethical framework and detailed plan for having a good life” (3), and a worldview that encompasses Inuit “ways of being and looking at things” (1) that spans generations and “links the past and future” (3) (Karetak et al., 2017). Embedded in IQ are guiding values or principles for Inuit society, eight of which were selected by the Government of Nunavut to guide governance, including that of the health system (GN, 2018) [Figure 4.1]. If these eight principles are intended to guide the health system – including the medical obstetric system – the linking of Inuit birthing perspectives shared in this study to these principles may illustrate the importance of aligning systems of birthing care and wellness in the Qikiqtaaluk Region of Nunavut.

| Inuqatigiitsiarniq | Respecting others, relationships and caring for people |
| Tunnganarniq       | Fostering good spirits by being open, welcoming and inclusive |
| Pijitsirniq         | Serving and providing for family and/or community |
| Aajjiqatigiinniq   | Decision making through discussion and consensus |
| Pilimmaksarniq/Pijariuqsarniq | Development of skills through observation, mentoring, practice, and effort |
| Piliriqatigiinniq/Ikajuqtigiinniq | Working together for a common cause |
| Qanuqtuurniq        | Being innovative and resourceful |
| Avatittinnik Kamatsiarniq | Respect and care for the land, animals and the environment |

*As articulated in the report, Ivitqipallialujut: In the process of falling into place, 2018-2023 (GN, 2018:1)

Figure 4.1. List of all eight Inuit Qaujimajatuqangit (IQ) principles identified by the Government of Nunavut as being important to governance, including health system governance (GN, 2018:1).
4.2.3 Research Approach

This research was guided by principles of participatory health research (LaVeaux & Christopher, 2009; Tobias et al., 2013). As a team of Northern and Southern-based researchers with interest and experience in community-led Inuit health research and participatory frameworks, we aimed to create and position respectful, reciprocal relationship as the central, orienting, and driving force of this work, both as an ethical imperative and in an effort to co-create research that resonates with an Indigenous framework (Kovach, 2009; Wilson, 2008). This process was iterative and involved collaboration among Inuit and Settler team members from conceptualization through to data analysis (Israel et al., 2005; Israel et al., 2008). Direction to methodological decisions and framing of the research was also provided by an Inuk team member (NT) and Northern researcher (GHA). This collaboration enhanced the validity of the qualitative research process (Creswell & Miller, 2000), and also guided the work to be as applied and useful to the community of Iqaluit as possible. Moreover, guided by participatory research principles, the team consistently engaged with local partners in health research, healthcare, and policy to ascertain maternal health research priorities and the type of outputs that would be most beneficial to them. This research was licensed by the Nunavut Research Institute (#01 024 17N-M; 01 012 18R-M; 01 016 19R-M; and 01 005 20R-M) and approved by the University of Guelph Research Ethics Board (Certificates #16NV049 and 16-12-718). Participant identities are kept confidential according to this study’s ethics protocols (except the identities of most Elders, who prefer to be directly associated with the knowledge they share)⁴.

4.2.4 Data Gathering

Qualitative data were gathered between 2017 and 2018 using two distinct methods: focus groups (n = 5), hosted as sewing sessions (n = 19 participants) and conversational interviews (n = 22) [Figure 4.2]. Sewing was chosen as a strategy for arts-based inquiry within the focus group method to enhance discussion and the research experience for participants (Chapter Three), as sewing is known to be a valued practice for Nunavut Inuit (Bunce et al., 2016; Emanuelsen et al., 2020). All data gathering was facilitated by team members NT and LB. Sewing sessions and interviews were facilitated in both English and Inuktitut, spoken intermittently according to participants’ preferences, and audio-recorded with informed consent.

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⁴A coding system was used to differentiate participants’ voices and link participants’ voices to individual quotes, as follows: Pregnant women, both interviewees and focus group participants (P); boarding home staff (BHS); community members (CM); Elders (E); and an Inuk midwife (M).
4.2.4.1 Focus Groups (Sewing Sessions)

Sewing sessions were held with pregnant women both at Tammaativvik Boarding Home and the Elder’s Qammaq (Gathering Place) in Iqaluit, Nunavut, Canada. Boarding home participants were recruited in-person by NT and LB, while Qammaq participants arrived in response to recruitment posters and a radio advertisement in Iqaluit [Appendix B]. Boarding home participants were residing in Iqaluit for, on average, the final four weeks of pregnancy. One participant had recently been pregnant and experienced a stillbirth. Qammaq participants were typically in their final trimester; these women, however, could remain in Iqaluit, where they were living, to deliver and thus offered distinct birthing perspectives in comparison. Both types of sessions were largely unstructured and consisted of an introduction to the research and the informed consent process, and initial conversation to build familiarity. Next, team members (NT and LB) asked questions pertaining to one of two broad themes: (1) knowledge that Inuit Elders had previously shared with women about wellness during pregnancy and childbirth; and (2) women’s experiences of obstetric evacuation, or birthing at home in Iqaluit, and perspectives on how to enhance perinatal support for women (total recorded discussion time = 14.1 hours; average recording time of a group = 2.8 hours)\(^5\).

\(^5\)The average recording time of a focus group (sewing session) was less than the total time gathered, as each session involved unrecorded time informally conversing, as well as assembling and cleaning up supplies, at the beginning and end of the session.
4.2.4.2 Conversational Interviews

Participants that team members perceived as particularly interested in the research were invited for a pre- or post-sewing session interview to share more of their lived birthing experiences outside of the sessions (n = 9). An additional thirteen conversational interviews were conducted and audio-recorded with informed consent (Kvale & Brinkmann, 2009). The purpose of these interviews was to hear multi-generational, varied perspectives on the history of birth in Nunavut, present lived realities for pregnant women in the Qikiqtaaluk Region of Nunavut, and how birthing supports for Qikiqtaaluk Inuit might be enhanced. Interviews were conducted in Inuktitut or English, based on a participant’s preference (total interview time = 17.5 hours; average recording time = 43 minutes).

4.2.5 Data Analysis

Audio recordings were concurrently interpreted (from Inuktitut into English) and transcribed collaboratively by NT and LB, so that Inuktitut concepts could be explained in the context of the transcript text (van Nes et al., 2010). During this process, extensive peer debriefing on initial observations of the qualitative data contributed to the validity of the analysis (Creswell & Miller, 2000); these conversations provided additional context and, at times, relevant data to this research as verbatim notes were recorded and analyzed. Memos were also written from this debrief and throughout the subsequent analyses, and integrated into data interpretation (Birks et al., 2008).

Data analysis proceeded sequentially and consisted of a hybrid inductive-deductive approach (Fereday & Muir-Cochrane, 2006). First, open coding and an inductive thematic analysis was conducted by Settler team member, LB (DeCuir-Gunby et al., 2011). Guided by a grounded theory approach (Charmaz, 2006), LB iteratively derived data-driven codes using a constant comparative method within and across sewing session and interview data (Fereday & Muir-Cochrane, 2006). NVivo 12©, Version 12.1.0 software was used for ease of retrieval and organization of codes, which were altered, merged, and expanded throughout the process to eventually develop a parsimonious codebook that fit the data (DeCuir-Gunby et al., 2011). Next, LB examined initial coding and preliminary themes alongside the eight GN-identified IQ principles and mapped initial coding and themes against three of eight principles that the data appeared to most accurately and thoroughly reflect. For initial validation and authentication of the analysis, these preliminary themes and linkages were discussed among Inuit and Settler team members, and revised as necessary (Creswell & Miller, 2000). Then, NT and LB facilitated meetings with Inuit knowledge-holders in birthing (n = 4 individuals) to thoroughly discuss all eight of the GN-identified IQ principles as they relate to birthing. Considered through the lens of these principles, initial data-driven codes and themes were merged, re-framed, and distilled to three final themes (corresponding to three
principles). In parallel with these meetings, extensive input from a Northern team member (GHA) shaped the content, organization, and presentation of results. These processes were undertaken to verify that final results reflected an appropriate interpretation of GN-identified IQ principles as they relate to birthing [see Appendix D for discussion guide and figure used to prompt discussion], and also to shape the framing of this article to be as useful to the community of Iqalulit as possible. Moreover, for data validation, results were also triangulated with the literature and across data gathering methods, including the sewing sessions, interviews, and observations on the data from peer debriefing; and a data audit trail was created (Creswell & Miller, 2000).

4.3 RESULTS

The birthing knowledge and perspectives shared by participants particularly connected to the following three IQ principles, as they are articulated within the GN's framework for governance [Figure 4.3]: Avatittinnik Kamatsiarniq (respect and care for the land, animals, and the environment); Inuuqatigiitsiarniq (respecting others, relationships and caring for people); and Pilimmaksarniq/Pijariuqsarniq (development of skills through observation, mentoring, practice, and effort) (GN, 2018:1).

Figure 4.3. Visual representation of results from this study, linking Inuit birthing knowledge and perspectives shared by participants connected to three of eight Inuit Qaujimajatuqangit (IQ) principles identified by the Government of Nunavut as important to governance (GN, 2018), namely Avatittinnik Kamatsiarniq, Inuuqatigiitsiarniq, and Pilimmaksarniq/Pijariuqsarniq.
4.3.1 **Avatittinnik Kamatsiarniq**  
(Respect and Care for the Land, Animals, and the Environment):

“Everything we had was from the land.” - Community Member

Participants spoke to the IQ principle of *Avatittinnik Kamatsiarniq* in how they described resources Inuit steward from the land to support women in pregnancy and childbirth. Various country foods were identified as important sources of nutrients in pregnancy and when breastfeeding: for example, blood, liver, and broth made from cooking meat such as seal or caribou. As described by Elder Qapik Attagutsiak, “if the mother isn’t developing as much milk, then they would give her broth. More broth to develop more milk.” Further, “if cooking seal meat and the broth is not as dark as it should be, they would add blood to the broth, in order to have good nutrition” (Qapik Attagutsiak).

Participants expressed the land’s abundance in its provision for a pregnant woman’s body. For instance, in reference to the stories she heard from Elders about birthing on the land, one participant shared that, “they had so much. The traditional food that we eat from the land – and still do, and they did in the past – gave all the vitamins and everything the body needed to survive” (CM1). Similarly, Elder Aalasi Joamie explained how the land provided nourishment in her pregnancies:

> When we were pregnant, we didn’t have that sugar in our diet. Our diet was balanced by our mothers and given to us to eat throughout the day, and lots of water. We had such, you know, pure water from the land with no additives, no nothing, ice water. I drank a lot of ice water throughout my pregnancies.

Other resources from the land, such as rabbit fur and Arctic cotton flower plants were also identified as being used, more so in the past, for post-partum bleeding. Plants and animals from the land were stated by an Inuk midwife as being “our essential tools” (M1).

Moreover, this stewarding of resources was described as a community responsibility; the community ensured a diversity of country foods were available to a mother and baby:

> In order to have a healthy development for both the mother and the baby, the food was very well taken care of, in order for the mother to have a healthy food source for the duration of her pregnancy...If she was eating seal constantly – seal meat, seal meat, seal meat, that will make her sick. So they made sure they have another kind of food, and another kind of food. ‘Cause that’s what they were all living off of – animal. Nothing else but animal. Animal – that was their way. So they made sure they had other different foods available, especially for the mother...other country foods, whatever they had (Qapik Attagutsiak).

Insofar as the community provided for the needs of a pregnant woman or child, through practices like community food-sharing, participants also connected this principle of *Avatittinnik Kamatsiarniq* to *Pijitsirniq* (serving and providing for family and community). The importance of providing for one’s family and community was articulated as a value instilled in children from a young
age and included the involvement of a child in supporting a birthing mother and ensuring her comfort; a midwife likened this children’s support to that of a doula. As shared by participants, birthing-related practices were situated against a backdrop of significant community and familial roles and responsibilities, tied to stewardship of the land, animals, and the environment:

It’s the same as the men out there, building their qamutiqs or hunting. But for us women, it’s also working with our hands and providing our family and our hunter from their catch, making it into something useful for him to be able to have the gear to be able to hunt and provide again. And you know he’s going to be warm because you [emphasized] made it. It’s a cycle, because what men are expected to do as a hunter and provide for his family – and us women also are the same because we need the tools built by our hunter, like the avvik, the ulu. So it works both ways, because from what he has harvested, I make that into our food on the table. He puts it there, I prepare it and cook it and feed the family, and then I also use the hides and skins. I work on them, and then I create what he needs to be able to provide for us and stay warm. So it’s a cycle. And it’s not just you appreciating what you’re making, it’s also this item you made for your loved one – you know he will be warm when he’s hunting in the cold. This cycle is always between man and woman and the animal, how we’re all connected. Sense of belonging to your land, too. And the uniqueness of being an Inuk (Inuit researcher, in peer debrief).

4.3.2 Inuqaqtigiitsiarniq
(Respecting others, relationships and caring for people):

“In order to practice Inuqaqtigiitsiarniq – for her caring – then she will pass on her knowledge, by being a caring person and attending to the person.”
- Inuk Midwife, in reference to an Elder sharing birthing knowledge

In how participants described Inuit birthing, and particularly the associated community and family supports, they illustrated the IQ principle of Inuuaqtigiitsiarniq. Birthing, as articulated by participants, was conceptualized as a relational process – not a discrete moment-of-birth event so much as a continuum of life from pre-conception to conception, pregnancy, delivery, and childrearing that implicated more than just a mother and baby. Birthing was described as part of a cycle of living and dying in the lives of families and communities; part of “inunnguiniq (the process of making a human being)” (Karetak et al., 2017:4). Relationships of care and respect were then mobilized in this life journey of birthing, and also grieving birth-related losses, as shared by participants.

4.3.2.1 Birthing as a Relational Process

An Inuk nurse discussed the role of the sanaji (maker) in Inuit society as one exemplar of the broad understanding Inuit have of the birthing process, rooted in Inuuaqtigiitsiarniq: “The [sanaji’s] biggest role is to guide you through pregnancy, whether or not it was successful…her role would then be to help her through that grieving process, if needed, and to prepare her if the baby was stillborn” (CM1). Furthermore, the sanaji’s role was reported to endure throughout the life of the child whose birth they assisted with, by way of guiding them as they grow and mature through life: “[The sanaji
has] her wishes upon that child, what they expect of that child as they’re growing up and how to be successful. In everything, like hunting, sewing. Living in general” (CM1). Similarly, an Inuk midwife described the Inuit midwifery approach as underscored by a conceptualization of the birthing event as embedded in a broader process:

To me, [midwifery is] very holistic...And as a midwife, we not only think of birthing, we think of everything else to the mother. If there’s a stillbirth, we care for the mother...Now, if we were to practice midwifery, and our traditional midwives were given this opportunity to practice, they too would be like a guide in parenting. A guide in relationship, a guide in...anything and everything towards the family (M1)!

Midwifery was further explained to be a familial support, not delivery-centric:

The information not only starts from birthing, it goes all the way back to the young couple. That’s when the advisory of the midwives, of the Elders, starts. On the relationship, on the roles of both individuals for their relationship, for their families to be...first, relationship and the development of the family, [then] pregnancy and the development of the pregnancy and the roles and the responsibilities of both parents (Qapik Attagutsiak).

Similarly, in the words of Elder midwife Qapik Attagutsiak: “We are supporting a life.” The roles of a sanaji or midwife were thus presented as exemplifying the relational ontology of Inuit; kinship relations were reportedly already present from birth, relating a newborn to family and community members.

4.3.2.2 Relationality and Grief Associated with Childbirth

Participants also described relational supports for grief associated with childbirth. They shared stories of loss, of a child or relative passing away in childbirth. Children themselves and birthing were described as part of the healing process from grief, as shared by an Inuit researcher: “I miscarried a child between my son and daughter. I was almost 5 months. I was so devastated, and I said, ‘I have to have another child for this baby grief to go away.'” For this individual, the relationship to a newborn after a previous pregnancy loss was portrayed as follows:

When you do have another baby, all the emotions seem to go forward into the newborn...you’re able to move on and give that bond that you were very willing and able to give towards your unborn child. And it lets you give your affection and love even more because your baby’s even here [emphasized]! So it’s another way of expressing such a more powerful bond between your newborn that is here and alive.

Participants further emphasized how children were a form of emotional support. As illustrated by one mother, her children “changed my life. I don’t know what I would do if I didn’t have kids. ‘Cause before I had kids, I used to be suicidal” (P13). Another woman was “praying to have a baby that can make me more relaxed...something that can make my mind think of something else” (P5).
Other supports for grief associated with pregnancy and infant loss were described as rooted in familial and community relationships. Multiple participants shared that they found strength and support from relating to other women whom they know have experienced grief in childbirth. In the words of one woman:

They know [emphasized] you, you don’t need to tell your story to them, you don’t need to explain yourself to that person. And you feel that comfort. And you realize, ‘I’m not alone. There are many women who’ve gone through this. I’m not alone. And they are still up and walking around. How do they do that?’ (P11).

Another participant who recently experienced a stillbirth expressed that “I met a lot of people [with similar experiences]. There were a lot of people coming to me and talking to me” (P14). Family relationships, particularly with female family members, were described as healing during grief, as illustrated by this participant’s sharing:

Even just talking about it, I used to be so sensitive and crying really fast. Now that it’s been 4 months and talking to my mom’s aunt and partner’s grandmother, like they were healing me. I was like I can talk about it now, and I can think about him…Without them I think I would have fallen into a deep depression. I kept fighting and fighting and talking to them – say what I feel and just wanna be heard (P14).

As reflected in these results, birthing supports, particularly those in grief, were described as embedded in familial and community relationships. In this way, participants illustrated how the IQ principle of Inuuqatigiitsiamiq is mobilized in Inuit birthing.

### 4.3.2.3 Respect for Inuit Midwives

Participants also spoke to the importance of recognition and respect for the specialized, highly-skilled role of Inuit midwives, and situated this form of respect in relation to the IQ principle of Inuuqatigiitsiamiq. For example, in reference to a community health centre in the Qikiqtaaluk Region, one participant described how her relative, a midwife, is sometimes called by nurses at the health centre to help deliver a baby, and this demonstrated how “[the nurses] respect Inuit midwives…they respect the Inuit way of birthing” (M1) In the Qikiqtaaluk Region, this same participant noted that “we are no longer midwives, unfortunately. We are saddened by it”, that “we want to see Inuit midwives put to use” and that opportunity exists for a collaborative birthing model with midwives alongside other healthcare practitioners: “We need to get the message across to the medical people [that] birthing is natural. It’s not sickness. If there’s a risk, they’re there on standby. Then they can take over” (M1).
4.3.3 Pilimmaksarniq/Pijariuqsarniq
(Development of skills through observation, mentoring, practice, and effort):

“Inuit should be invited to do those [prenatal or breastfeeding clinics] and pass on their knowledge...there are others with better, beautiful knowledge to pass on. And we are losing them. Very fast, we are losing them.” - Inuk Midwife

Pilimmaksarniq/Pijariuqsarniq was illustrated as a guiding IQ principle for the processes of learning highly specialized birthing knowledge and skills, and the particular support roles associated with Inuit birthing. As shared by participants, multiple generations of women learned midwifery skills from one another. Qapik Attagutsiak noted that, while not everyone can learn midwifery skills or have the passion to do so, “everyone can understand the need to know it in order to help the younger generation.” Mothers and grandmothers were frequently referenced as mentors in teaching younger women how to provide support in birthing, particularly among a few Elder participants whose mothers had much knowledge of Inuit birthing techniques:

I was fourteen years old when my mom started guiding me through the pregnancy and births within our camp. I’ve experienced many things, more so when complications arose in deliveries. I started learning how to deal with those at an early age. One fine example from what I have learned that I got to practice here in the hospital setting was a woman had given birth to a stillborn baby, and time had passed and we were preparing the stillborn infant for the morgue, and I decided that I wanted to practice what my mother had taught me when I was younger, what to do with a stillborn infant. So, even though the doctors and nurses were telling me, “don’t touch, get away” and “we’re gonna call the cops”, “we’re gonna call the police and get you removed because this is not your place.” And so I didn’t listen to them. I said, “let me practice what my mother taught me, what to do in a situation with a stillborn child.” So I put that baby on the mother’s belly, and then covered the baby with the placenta that had come out. And probably about 15 minutes had passed since after I put the placenta over the child on the mother’s belly, and I started noticing the big toe twitching. And then I noticed the hands twitching, then even to a point where the head was moving, and then the baby started crying...and he’s alive up to today (Aalasi Joamie).

Midwifery was described by an Inuk midwife as a profound experience of empathy and guidance:

As a midwife, when a woman is in labour, like for me, I tend to want to go into her soul. So I know what she’s going through, understand what she’s going through. When she’s telling me the pain is this way, the pain is that, I’m too hot – I like to feel whatever she’s feeling. I want to become part of her soul, within her soul. But guide her at the same time (M1).

In addition to taking an empathetic approach, midwives were characterized as being “very good at their practice, when it came to labour,” as noted by Annie Kilabuk who described their assistance while birthing on the land. Beyond the specific roles and knowledge of a midwife, women continue to share Inuit knowledge of how to be well in pregnancy and birthing across generations, according to participants. As Ida Atagoyuk explained: “Back there in Qikiqtarjuaq, my mother and grandmother both taught me well about being active and having to wake up first thing in the morning and get up
right away and go outside... so your labour would be quicker.”. When asked how she knew so much about birthing, a midwife responded with, “I learned from my mother-in-law, from my own pregnancies, from talking to midwives” (M1). As illustrated by these results, then, the IQ principle of Pilimmaksarniq/Pijariuqsarniq underscores Inuit approaches to multi-generational knowledge sharing and skill development, particularly as it relates to honing midwifery skills and being well in pregnancy and birthing.

These principles of Avatittinnik Kamatsiamiq, Inuuqatigiitsiamiq, and Pilimmaksarniq/Pijariuqsarniq, as articulated by the GN, then, provide a framework within which Qikiqtaaluk Inuit birthing experiences and perspectives can be more broadly understood and engaged in healthcare systems across Inuit Nunangat.

4.4 DISCUSSION

As these results highlight, Inuit women’s perspectives are embedded in Inuit Qaujimajatuqangit (IQ); they are actively sharing, learning, practicing – and embodying – these GN-identified IQ principles for governance through their approaches to and experiences of birthing. Moreover, these results have practical implications, for if principles of Avatittinnik Kamatsiamiq, Inuuqatigiitsiamiq, and Pilimmaksarniq are intended to guide health system governance in Nunavut, the linking of Inuit birthing perspectives to these principles underscores the importance of aligning the system of medical obstetric care with the system of culturally-embedded Inuit birthing care. Indeed, these government-chosen IQ principles can then become tools for further integrating valued Inuit birthing practices into the present obstetric care system.

Many of the specific Inuit birthing practices women shared have been discussed by Elders in the literature (Douglas, 2007; O’Brien, 2012; Pauktuutit, n.d.,1995; Qinuajuak, 1996). This literature underscores the depth of Inuit birthing knowledge, though much of this knowledge also exists within an oral and embodied tradition (Karetak, Tester, & Tagalik, 2017). This dynamic system of care has developed over millennia, and is characterized by relational supports, such as Elders attending births (O’Brien, 2012; Pauktuutit, 2006); distinct birthing positions and specialized skills for responding to birthing complications (O’Brien, 2012); and a belief in the natural process of birth, which is “completely integrated into life on the land” (O’Brien, 2012:23). As shared by an Inuk Elder, though, “there is a lot of work to be done. We need to have more discussions about midwifery and childrearing. Young mothers need training in Inuit ways” (Karetak et al., 2017:130). This Inuit system of care, and particular means of supporting Inuutsiamiq (wellness), can, at times, be in tension with the present obstetric care system in Nunavut (Chamberlain & Barclay, 2000; Douglas, 2007; James
et al., 2010). Opportunities might exist, then, for more of an alignment and an enrichment of the obstetric care system with that of Inuit birthing care and means of wellness.

Participants’ illustrations of how the IQ principle of \textit{Avatittinnik Kamatsiarniq} relates to women’s bodies, the baby-in-utero, and the environment may more broadly reflect Inuit concepts of wellness and care. While a westernized biomedical model can tend towards dissociating individual health from the environmental context, for Inuit, land is central (Cunsolo Willox et al., 2013; Karetak et al., 2017; Kirmayer et al., 2008; Sawatzky et al., 2019; Wenzel, 1981). Indeed, participants spoke to the land’s abundant provision for perinatal health and healing. Within these perspectives, the consumption and sharing of country foods among family and community was crucial to health and wellness (Borré, 1991, 1994; Kirmayer et al., 2008; Newell et al., 2020), particularly as it pertains to a birthing mother and infant. Opportunity might exist for increasing the availability of country foods to Inuit women as they birth away from home and place, recognizing that food and food-sharing point to underlying values of \textit{Avatittinnik Kamatsiarniq} and \textit{Pijitsirmiq} in an Inuit birthing system.

Furthermore, Elders have discussed that women typically received birthing support from within the family and community when birthing occurred on the land, as people lived in close proximity (O’Brien, 2012:38). As such, public health practitioners might consider how prenatal information may be most effectively mobilized, and whether the model of prenatal care needs to adapt in order to align with Inuit modes of knowledge-sharing (Lonsdale & Akulukjuk, 2019). Prenatal recommendations for women might also be shaped by considering the close mother-environment relations described in this research, supporting women in receiving “comprehensive and culturally relevant prenatal care” (Government of Nunavut, 2014:13). For example, prenatal recommendations and programming might include a land-based component and consumption of a nutrient-rich country food diet, knowing many Inuit value this. Moreover, considering the importance of \textit{Pijitsirmiq} (serving and providing for family and community), opportunities for enhanced involvement of Elders or Inuit midwives in perinatal care, including while birthing away, might be valued.

As illustrated in the results, Inuit birthing is also grounded in a foundational value in Inuit society: \textit{Inuuqatigiitsiarniq}. This identity of self-in-relationship (Stairs, 1992) and responsibility to respect and care for one another underpinned birthing perspectives. Indeed, \textit{Inuuqatigiitsiarniq} mobilized through birthing demonstrates how Inuit participants valued being able to nurture supportive, respectful relationships as children are born and raised. Opportunities might exist for \textit{Inuuqatigiitsiarniq} to be increasingly mobilized within the medical obstetric system, and for an enrichment of medical health approaches with Inuit birthing supports. For instance, more availability of Inuit relational supports throughout the birthing process might be valued (BSRC, 2017; Pauktuutittit, 2006), such as an Elder’s
involvement during labour and delivery, and in situations of pregnancy or infant loss. Those within the medical health system might consider how other forms of support, such as grief counselling, might need to be adapted to be both culturally-safe and to reinforce Inuit relational supports.

Furthermore, participants’ perspectives on birthing as part of a continuum of life and loss in communities, beyond the moment of delivery, also highlights the importance of systems alignment. These results illustrate the value of supports throughout this continuum and, for instance, might implicate increased availability of Inuit-designed and Inuit-led supports for inunnguiniq – the process of making a human being, writ large. Importantly, inunnguiniq involves parenting, too, and thus further support might be provided to expanding the work of initiatives such as the Inunnguiniq Parenting Program (BSRC, 2017; Healey & Tagalik, 2018), as means of community wellness. Moreover, if birthing is understood as beyond the event of delivery, support for Inuit women need not be delivery-centric but take a holistic approach to perinatal care. Thus, reinforcing supports throughout the pre- and postnatal periods might help support Inuit birthing wellness in the current obstetric system (NTI, Health Canada, & Government of Nunavut, 2005). Examples could include reimagining the place of midwifery within the medical health system, or in parallel with the current model of obstetric care (Gold, Neil, & Van Wagner, 2005; James et al., 2010; NIMMIWG, 2019:606) or re-instating certificate programs for maternity care workers to provide family-centered care at the community level (NTI, Health Canada, & Government of Nunavut, 2005:58).

Participants’ birthing perspectives and experiences were also underpinned by the guiding Inuit principle of Pilimmaksarniq. As shared, Inuit value honing, mentoring, observing, and sharing skills (Karetak et al., 2017; Tagalik, 2005), including those of midwifery and other birthing-associated roles (O’Brien, 2012; Pauktuutit, 1995). Elders have echoed this desire to continue mentoring young people in Inuit ways of birthing (O’Brien, 2012; Chapter 4). The obstetric care system might further examine opportunities for overlap between Inuit and medical health systems in their provision of maternity care. This might include increased recognition for the technicality and specialization of Inuit birthing, and further integration of maternity care systems within Nunavut. Integration of systems has been impactful in shaping Inuit birthing experiences in other regions of Inuit Nunangat (Van Wagner et al., 2007, 2012). In Nunavut, too, evidence of some integration might already be present (NTI et al., 2005), whereby opportunity exists for building upon this important work.

Finally, the Inuit concept of Piliriqatigiinniq (working collaboratively for the common good) both applies to the conduct of future maternal health research (Healey & Tagak Sr., 2014) and might inform this discussion of systems alignment and enrichment. This concept might be mobilized by increasing opportunities for Inuit and non-Inuit to collaboratively guide approaches to obstetric care
in a way that resonates with IQ. Such efforts would align with broader calls for “build[ing] Inuit societal values into programming, services, and supports” (BSRC, 2017:38). For example, increased involvement of Inuit midwives, Elders, or other knowledge-holders alongside obstetrical teams at births – who have honed skills and specialized birthing techniques (Plimmsarniq) – might help ground women’s birthing experiences within a meaningful framework. Additionally, a collaborative approach to grief supports for birth-related loss might include supports embedded in family and community – and shaped by the IQ principle of Inuutatigiitsiariniq – alongside western medical approaches to grief support.

This study has several limitations to consider. The lead author (LB) is a Settler, southern-located researcher; while shaped by close collaboration with Inuk and Northern researchers from Nunavut (NT, GHA) and other team members with experience in participatory and community-led research (CED, AC, SH, SLH), LB’s positionality inevitably influenced the depth of data gathering and analysis pertaining to IQ. Relatedly, this research examined linkages between participants’ birthing perspectives and only three of eight GN-incorporated IQ principles, themselves a select subset of the many rich and multifaceted values and principles related to birthing that exist within Inuit Qaujimajatuqangit. As such, further Inuit- and Northern-led research might consider broadening and deepening the scope of inquiry to examine how other values and principles within IQ might inform this discussion of systems alignment and enrichment.

As this study’s results illustrate, Inuit birthing perspectives are embedded in IQ principles. As such, strengthening health policies, public health initiatives, or other systems planning through the lens of IQ might help to collectively further and sustain community wellness (Tester & Irniq, 2008). This form of ‘embedded intervention’ within Inuit societal values and principles has had demonstrated impact already within the context of youth mental health (Healey et al., 2016) and the sciences in general (Pedersen et al., 2020; Wenzel, 2004), and, thus, might apply to the obstetric care system, as well. Overall, health systems planning might be strengthened by an enhanced understanding of Inuit birthing values and principles (GN, 2014); namely, that for Inuit, wellness and systems of care will necessarily encompass bodies, places, and relations beyond a pregnant or birthing woman.

4.5 Conclusion

Gold et al. (2005) propose that a “sustainable model of maternity care” for Nunavummiut “must recognize the importance of place and be informed by Inuit knowledge, experience, expertise, and Inuit Qaujimaajuqtjqangit” (13). Indeed, this article has explored how Qikiqtaaluk Inuit birthing perspectives connect to three IQ principles for governance, as they are framed by the Government of Nunavut. In so doing, we highlight the importance of aligning systems of care within Nunavut and
possibilities for how the obstetric care system might be enriched by the system of Inuit birthing care and wellness [*Table 4.1*]. This recognition of the importance of alignment does not emerge solely from this research. Rather, this research builds on the effort of Health Canada and Nunavut partners for a "health integration approach" that aims for "integrated, holistic approaches to service delivery" (Tagalik, 2005:7). This movement to align systems has similarly been guided by such Inuktitut concepts as “Pilirigatigiinniq – Working Together for the Common Good”, the title of this working group’s document (NTI, Health Canada, & Government of Nunavut, 2005). Furthermore, our research also resonates with the Government of Nunavut’s commitment to align policies and practices with IQ (GN, 2018), as well as the consolidated public health act that requires that the Minister of Health and Chief Public Health Officer ensure the integration of IQ throughout Nunavut's public health system (COPHA, 2016). We support the movement of maternal health system policies, programs, and practices towards this enhanced consistency with IQ principles (GN, 2014; Pauktuutit, 2006).

Given the breadth of research on the links between health and one’s sense of identity and place (Cunsolo Willox et al., 2012; Kirmayer et al., 2008; Richmond & Ross, 2009), Tagalik (2005) posits that "it should be expected that if *Inuit Qaujimajatuqangit* strengths were applied in policies and health-based practices and programs, health indicators for Inuit would significantly improve" (7). Moreover, collaborative efforts to align birthing systems might not only be health improving, but also a response to calls for the right for Inuit to self-determine how the systems that affect Inuit wellness and life-ways function and thrive (ITK, 2018).
Table 4.1. Graphical table depicting the linking of birthing perspectives and experiences shared by Qikiqtaaluk Inuit participants to three (of eight) principles of Inuit Qaujimajatuqangit identified by the Government of Nunavut as important to health system governance. By examining these linkages, the results of this study highlight the importance of aligning systems of birthing care and wellness in the Qikiqtaaluk Region of Nunavut and inform possibilities for an enrichment of the current obstetric care system with desired Inuit birthing practices and means of wellness.

**Possibilities for Enrichment**

- Increase availability of country foods
- Consider how food-sharing networks can be mobilized to provide country food, as well as other resources from the land, to women for pre- and postnatal care
- Consider how prenatal information may be most effectively, and meaningfully, mobilized
  - Adapt model of prenatal care/education to align with Inuit modes of knowledge-sharing
  - Evaluate and adapt prenatal programs/education through the lens of place- and land-attachment (e.g. incorporate a land-based component, further develop prenatal materials including country food uses/nutrients)
- Enhance involvement of Elders and/or Inuit midwives in prenatal and immediate postnatal care
CHAPTER FOUR – Enriching Birthing Care and Wellness in the Qikiqtaaluk Region

Possibilities for Enrichment

- Increase availability of Inuit relational supports (e.g. Elders to support during labour and delivery, situations of loss, etc.)
- Adapt provided emotional/psychological support to be culturally-safe and embedded in Inuit relational supports
- Increase availability of Inuit-designed and Inuit-led supports for Inunnguiniq (e.g. expanding the work of initiatives such as the Inunnguiniq Parenting Program)
- Increase investment in prenatal wellness supports
- Expand training of non-Inuit healthcare practitioners in understanding Inuit birthing perspectives
- Develop a strategy for how Inuit-led and IQ-embedded initiatives can be further integrated into birthing systems, considered as wholistic and involving all stages from conception through to parenting

Possibilities for Enrichment

- Increase recognition for the technicality and specialization of Inuit birthing systems (e.g. prioritizing maternity care systems-integration or alignment)
- Increase involvement of Inuit midwives, Elders, or other knowledge-holders in birthing alongside obstetrical teams

More Broadly:

- Continue developing maternal health policies, public health initiatives, or other maternity care systems planning through the lens of IQ
- Create opportunities for further Inuit-led teaching about birthing values and principles, in order to guide health systems planning
- Continue investing in collaborative efforts among partners in health service delivery to explore specific possibilities for systems-integration, alignment, and enrichment as it relates to maternity care in Nunavut
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CHAPTER FIVE

INUIT BIRTHING IN THE QIKIQTAALUK REGION OF NUNAVUT:
A PLACE–BASED INQUIRY OF MATERNITY CARE SYSTEMS
ABSTRACT

Many Indigenous women in remote areas need to travel away from home for childbirth; however, their birthing traditions and practices are intimately tied to place. This qualitative research study characterized Inuit women’s lived childbirth experiences and recommendations to enhance birthing supports in the Qikiqtaaluk Region of Nunavut in Inuit Nunangat, Canada. Birthing experiences were underscored by relationality and place attachment, and recommendations related to birthing places and increased Inuit involvement in maternity care systems. Place attachment is an important determinant of Inuit maternal health and may also be for other Indigenous Peoples with intrinsically place-based livelihoods, knowledge systems, and identities.

Key Words: Qualitative health research; Inuit; Nunavut; Place Attachment; Maternal Health; Birthing
5.1 INTRODUCTION

Maternity care systems worldwide can be characterized by the complexities and juxtaposition of differing priorities, preferences, and perspectives. For example, healthcare practitioners experience challenges with negotiating differing perceptions of risk, while still ensuring women’s agency and choice, in healthcare decisions (Barclay et al., 2016; Nicholls et al., 2021; Rich et al., 2016; Yuill et al., 2020). Other complexities are rooted in the existence of many approaches to and models of maternity care, which are accompanied by myriad perspectives among care providers and women as to what these approaches involve (Hardeman et al., 2020; Hunter et al., 2017; Marriott et al., 2020; Moridi et al., 2020). Similarly, the juxtaposition of enduring socio-cultural birthing practices with emergent obstetric practices and techniques (Marriott et al., 2019; Ohaja & Murphy-Lawless, 2017; Simmonds et al., 2012) is a backdrop that shapes how maternity care systems are experienced by birthing women, their families, and their communities.

Globally, maternity care systems for some Indigenous women involve birthing away from home and in a hospital environment (Akter et al., 2020; Felton-Busch & Larkins, 2019; Marriott et al., 2019; Montgomery-Andersen et al., 2010; Stevenson et al., 2020; Vang et al., 2018). In rural and remote locations, particularly, Indigenous women are often required to leave their home communities and travel extensively during pregnancy (Lawford et al., 2018, 2019; Vylka Ravna, 2019). Researchers have explored the impacts of this birthing model, termed 'obstetric evacuation', in relation to the potential emotional, psychological, and practical implications for a woman and her family (Corrado, 2017; Vang et al., 2018). Far less literature has explored these experiences through the theoretical lens of place and place attachment (Brubacher et al., 2020), despite the centrality of the land and place to many Indigenous worldviews, epistemologies, and ontologies (King et al., 2009). In the case of many Indigenous Peoples, for instance, an abiding, ancestral connectedness to the land in a particular place, and to practices which occur in relation to one’s kin and community networks – including birthing – is foundational to their livelihoods, epistemologies, and worldviews (Alfred & Corntassel, 2005; King et al., 2009). For many Indigenous Peoples, birthing is tied to valued cultural practices that are land-based, such as the preparation of spiritually- and culturally-important country foods that provide perinatal nutrition (Adams et al., 2018; Dawson, 2017; Kildea et al., 2019); yet, in many places worldwide, birthing has become centralized to hospital settings in an effort to support maternal and infant safety (Kildea et al., 2019; Montgomery-Andersen et al., 2010).

The impact of obstetric evacuation has also been documented as it relates to Indigenous women in multiple regions of Canada (Corrado, 2017; Kornelsen & Grzybowski, 2004; Lawford et al., 2018, 2019; Moffitt & Vollman, 2006; O'Driscoill & Payne, 2011), and specifically for Inuit (Chamberlain &
Barclay, 2000; Kaufert & O’Neil, 1990; Van Wagner et al., 2007). Among Inuit regions, changes to obstetric care have occurred rapidly, driven by underlying social, economic, and political movements that were often rooted in policies and processes of colonization (Douglas, 2007; Healey & Meadows, 2007; Jasen, 1997; Kaufert & O’Neil, 1990). Historically, Inuit birthing occurred on the land, in the context of family and community (Healey & Meadows, 2007). Referred to as the ‘colonization of birth’ (HPWFNIMCG Consensus Guideline, 2013; Wright, 2015), these land-based experiences shifted throughout the 1950s to 80s to being increasingly medicalized, in parallel with the broader centralization of health, economic, and administrative systems to Inuit settlements (Jasen, 1997).

Like in other Northern regions, the standard of care in Nunavut by the 1980s was medical travel for childbirth from one’s home community to a hospital in a larger – typically more southern-located – centre (Douglas, 2006; Van Wagner et al., 2007). At the time, this medical travel improved the high infant and maternal mortality rates (Couchie & Sanderson, 2007; Healey et al., 2018). This present-day practice of birthing away from home and place has also, however, been reportedly associated with experiences of isolation and loneliness for Inuit women (Chamberlain & Barclay, 2000; Roberts & Gerber, 2003; Voisey, Okalik, Brown, & Napayok, 1990).

Given the centrality of place to Inuit identities and life-ways (Cunsolo Willcox et al., 2012; Durkalec et al., 2015; Kirmayer et al., 2008; Sawatzky et al., 2019; Stairs, 1992), place may have critical significance to how maternity care systems are experienced. Based on a socio-ecological model of health, “what occurs in a place (in terms of the relations between people and elements of their environment) has profound importance to health” (Kearns, 1993:141). Individual and collective attachment to place is conceptualized as a tripartite phenomenon with psychological, affective, and behavioural dimensions (Scannell & Gifford, 2010), whereby place attachment is not solely a deep connectedness to landscape, but also having to do with the “meanings of and experiences in a place” (Low & Altman, 1992:7). Moreover, for Inuit, these experiences of place have been described in relation to being “from this place and of this place” (Cunsolo Willcox et al., 2012:542, emphasis added) – with collective, ancestral identities deeply tied to a place (place-based identity) – as well as to being emotionally, spiritually, and reciprocally connected to place (Sawatzky et al., 2019).

Examining the importance of place to Inuit, and how the interrelated concepts of place-based identity and place attachment may frame and underscore Inuit birthing experiences, may inform one’s understanding of the complexity and nuances of these experiences. Given Inuit attachment to place, the objectives of this research were to: (1) characterize Inuit women’s lived childbirth experiences, including their experiences of obstetric evacuation and residence at a medical boarding home in the Qikiqtaaluk Region of Nunavut; and (2) synthesize Inuit-identified recommendations to enhance pregnancy and childbirth support for Inuit women, families, and communities in the Qikiqtaaluk
Region. While previous research has referenced the importance of the land and community to Indigenous women’s childbirth experiences (Lawford & Giles, 2012), our research characterizes these experiences through the lens of place and place attachment. Understanding the role of place in Inuit birthing experiences may have broader relevance to other peoples who, similarly, engage in a system of birthing away from home and whose cultures and worldviews are intimately connected to place.

5.2 Methods

5.2.1 Indigenous and Inuit Place-Connections and Health

Place, and human attachment to it, affects all facets of health and well-being (Crooks et al., 2018; Cummins et al., 2007; Dunn & Cummins, 2007; Gesler & Kearns, 2002; Kearns, 1993; Macintyre et al., 2002), and a sense of place, place-based identity, and place attachment are recognized as having culturally-specific dimensions and influences (Kornelsen et al., 2010; Richmond & Big-Canoe, 2018; Richmond & Ross, 2009; Wilson, 2003). For example, Indigenous conceptualizations of place itself are often distinct from understandings of place emergent from Western frameworks, as for many Indigenous Peoples, place and land involve a totality of shared relations over individualist experience – being collectively named for a place and “known by their places” (Basso, 1996:21; Tuck & McKenzie, 2015). Inuit-specific scholarship emphasizes place as being ‘lived with’ reciprocally and relationally (Sawatzky et al., 2019), and Inuit as being ‘of’ a place, with identities and livelihoods deeply tied to – and formed from – place (Cunsolo Willox et al., 2012; Sawatzky, 2018) and the place-based context of family, community, land, and ancestral relations (Kirmayer et al., 2008; Waddell et al., 2017). Moreover, this literature situates Inuit place-connections in relation to health and wellness, recognizing the psychological, physical, spiritual, and affective pathways through which place attachment mediates, and is a foundational determinant of, Inuit health and wellness (Durkalec et al., 2015; Middleton et al., 2020; Ostapchuk et al., 2015). It follows, then, that healthcare systems may also be nexuses where Inuit place attachment and health intersect, particularly in Northern healthcare systems that can often require travel away from home places to access care. Examining Inuit characterizations and meanings of place within healthcare systems, specifically medical obstetric systems, may be a theoretical inquiry that presents insights for how these systems can continually adapt and evolve to be responsive to Inuit preferences and priorities, as well as inclusive of Inuit conceptualizations of health and wellness as inherently place-based.
5.2.2 Research Context

This research was conducted in the Qikiqtaaluk Region of Nunavut, in the territorial capital city of Iqaluit. The population of this region is 18,988, 78.3% of whom self-identify as Inuit (Statistics Canada, 2017). For healthy pregnancies, at 36-weeks of gestation, pregnant women in this region fly out of their communities to Iqaluit [Figure 5.1]. While there, many women stay at a medical boarding home (Tammaativvik Boarding Home) to await childbirth at Qikiqtani General Hospital (QGH), a secondary care facility with obstetrical care provided by general practitioners. Approximately 400 births occur per year at QGH (Hansen & DeMaio, 2019). Pregnant women who live in Iqaluit typically remain in-community for birth. If specialist care is required, all women in the region are flown to a tertiary care centre in Ottawa.

Figure 5.1. Map of Nunavut, highlighting the Qikiqtaaluk Region, with lines indicating how communities are connected within the obstetrical medical travel system (not exact, specified travel routes by airplane). Women are transported by plane from Qikiqtaaluk communities to and from Iqaluit, and from Iqaluit to and from Ottawa, Ontario.
5.2.3 Research Approach
This research was guided by principles of participatory health research (LaVeaux & Christopher, 2009; Tobias et al., 2013), including ongoing collaboration with local partners in healthcare, research, and policy to shape the research topic, design, and possible outputs to have practical benefit for them. Furthermore, this research was designed and implemented with close guidance provided by an Inuk research team member (NT), who gave direction to methodological decisions, co-facilitated data gathering, and interpreted results in the context of Inuit culture, epistemologies, and ontologies (LaVeaux & Christopher, 2009). Close collaboration among research team members, including Inuit and non-Inuit, was present throughout the co-development of research questions, data gathering, and co-analysis of data, both to ensure validity in the qualitative research process (Creswell & Miller, 2000) and to support research capacity within the community. All research processes were approved by the University of Guelph Research Ethics Board (Certificates #16NV049 and 16-12-718) and the Nunavut Research Institute (Licenses #01 024 17N-M; 01 012 18R-M; 01 016 19R-M; and 01 005 20R-M), and were consistent with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans, TCPS 2 (CIHR et al., 2018). In accordance with this study’s ethics protocols, participant identities are reported confidentially by using a participant code for each direct quote (with the exception of most Elders, who prefer to be associated with the knowledge and perspectives they share)\(^6\).

5.2.4 Data Gathering
5.2.4.1 Focus Groups (Sewing Sessions)
Four focus groups were held at the Tammaativvik Boarding Home in Iqaluit, Nunavut between July 2017 and April 2018. Each group was structured as two consecutive afternoons of sewing (~6 hours per group), designed to enhance data quality and the experience of research for participants, as sewing is an important, culturally-embedded practice for many Nunavut Inuit (Bunce et al., 2016; Emanuelsen et al., 2020). For recruitment, researchers delivered personal invitations to women staying at Tammaativvik and a flyer that detailed the session times and location. Three to six pregnant women (P) participated per group (n = 16 women total), all of whom were from a variety of Qikiqtaaluk communities. Women were primarily in their final month of pregnancy, except for a few participants present for prenatal ultrasounds, and two older women who were not pregnant but accompanying family members who were. In addition to four groups at Tammaativvik, one three-hour group was held at the Elder’s Qammaq (Gathering Place) in Iqaluit (n = 3 participants). The purpose of the group at the Qammaq was to include the birthing experiences of women who live in

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\(^6\)Pregnant women, both interviewees and focus group participants (P); boarding home staff (BHS); community members (CM); and an Inuk midwife (M).
Iqaluit. Team members LB and NT facilitated all groups, which integrated sewing, companionable silence, and conversation. During the groups, LB and NT opened with a question related to one of two broad thematic areas, followed by largely unstructured discussion: (1) knowledge that Elders have previously shared with participants about well-being during pregnancy and childbirth; and (2) experiences of the boarding home and opportunities for enhanced support for women during obstetric evacuation. Sessions were conducted in both English and Inuktitut, spoken intermittently based on the preference of participants, and audio recorded with informed consent (total time of recorded discussion = 14.1 hours; average recording time of a group = 2.8 hours)\textsuperscript{7}.

### 5.2.4.2 Conversational Interviews

Conversational, multi-generational interviews (Kvale & Brinkmann, 2009) were conducted with pregnant women at Tammaativvik and living in Iqaluit (P), either before or after the focus groups (n = 9 individuals), as well as with female boarding home staff (BHS) (n = 2), female adult community members in Iqaluit (CM) (n = 6), female Elders (E) (n = 4), and an Inuk midwife (M). These interviews were opportunities for women to share more of their pregnancy and childbirth experiences outside of the focus groups, and for others to offer insight into the history of birth in Nunavut and how pregnancy and birthing support for Inuit might be enhanced. Interviews were audio-recorded, with informed consent, and conducted in Inuktitut or English, depending on a participant’s preference (total time of recorded interviews = 15.8 hours, average recording time = 43 minutes).

### 5.2.5 Data Analysis

Audio recordings consisted of Inuktitut and English spoken intermittently; as such, they were collaboratively transcribed by LB and NT, whereby NT interpreted Inuktitut into English concurrently with LB’s verbatim transcription of the English portion of the recordings. This process enabled NT to provide descriptions of meanings for Inuktitut words and concepts in the context of the broader interview or sewing conversation (van Nes et al., 2010). During transcription, LB and NT engaged in team debriefing, which involved discussion of initial observations of the data – related to what participants said and with what intonation or vocal inflection and the cultural significance of what was shared – as well as observations on the data gathering process, and other non-verbal communication during the groups (Creswell & Miller, 2000). Corresponding reflective memos were written during team debriefing, and consistently throughout data gathering (Birks et al., 2008). These debriefs informed how and what questions were asked in subsequent sewing sessions and

\textsuperscript{7} The average recording time of a group differs from the approximate duration of each group (~6 hours) due to the format of the sewing sessions. Each session involved setup and cleanup of sewing materials at the beginning and end of the session, respectively, as well as informal conversation or extended silence that was not audio-recorded.
interviews; thus, the data gathering, transcription, and debriefing processes were iterative and
guided by a grounded theory approach (Charmaz, 2006).

Once all data were gathered and transcribed, the transcripts were repeatedly read for
familiarization, and initial open coding was conducted by hand (DeCuir-Gunby et al., 2011), then
later transferred to NVivo 12©, Version 12.1.0 for additional thematic analysis (Braun & Clarke,
2006). Transcripts were further coded in this software, using a constant comparative method across
and within interviews and sewing sessions (Fereday & Muir-Cochrane, 2006). A codebook was
iteratively developed by modifying existing codes, collapsing multiple codes, and creating new
codes, then inducing preliminary themes from this coding tree (DeCuir-Gunby et al., 2011). An Inuk
team member provided insight on how themes and constitutive codes resonated with Inuit culture
and knowledge. Further qualitative validation and authenticity of results were ensured by
triangulation across methods and across participants; researcher reflexivity with respect to
recognizing the positionality of research team members and critically questioning how that may have
affected data gathering and analysis; and the creation of a data audit trail (Creswell & Miller, 2000).
In December 2019 and January 2020, results were also validated through member checking with
Inuit Elders (Creswell & Miller, 2000).

5.3 RESULTS
Participants situated their past and contemporary experiences of pregnancy and childbirth in relation
to place, including the emotional and relational connections to their home places. These results
created a foundation for discussing opportunities for enhanced pregnancy and childbirth support,
including how the present maternity care system might more fully integrate Inuit birthing knowledge,
values, and practices.

5.3.1 Contemporary Birthing Scenarios in Historical Context: Inuit Birthing and
Place-Connections
Interview participants shared stories of birthing on the land and Inuit place-based knowledge of
pregnancy and childbirth. These experiences illustrated the connections between pregnancy,
birthing, and Inuit attachment to place, and also created a foundation for understanding the
historical, socio-cultural, and political changes leading up to the contemporary obstetric evacuation
model for childbirth. For currently pregnant women at the boarding home living away from home for
birth, this experience was reported to involve longing for home, existing in the boarding home but not
having a sense of place, noting many changes in place between their home communities and Iqaluit,
and yearning for the kin- and community-based relationships present in their home places.
5.3.1.1 Place and Time: Birthing and (Dis)Connection to the Land and Seasonal Activities

Elders shared their childbirth experiences, which often occurred on the land. Birthing was described as connected to place and seasonal place-based activities, as some individuals told stories of delivering on a moving qamutiq (sled) or while out on the land. Elder Ida Atagoyuk explained, "My mother was telling me I was born outside of Pangnirtung. And where it happened was the hunting grounds for caribou. So out on the land, in outpost, I was born". Similarly, Elders shared that:

Back then, you had your children right at your camp, and it's a far distance from where Kipisa [a particular camp] is, to Pangnirtung. Even now, it's a long distance for them up there...They had no complications to be able to deliver at their camp, 'cause suddenly if there was a pregnant woman, she'd deliver there, on the spot. At their camp (Annie Kilabuk).

Comparing pregnancy back then and today – back then, you were always told to be active, and as soon as you wake up, you were told to get up right away, as soon as you open your eyes, and go out the door…that was our tradition (Ida Atagoyuk).

In contrast, for many of the currently pregnant participants, the experience of birthing away from home was described as one of longing for home, and land-based activities tied to the Inuit seasonal calendar. As one woman explained, the experience of a change in place from home to Iqaluit was affected by season: “Especially in summer and spring it's hard to be here when back home is really nice. It makes you homesick so much” (P5). She went on to describe the fishing derbies in her home community that occur during the summer months. Similarly, being away from home during particular hunting seasons was also accompanied by feelings of missing home. As described by one couple who were “missing out so bad” on narwhal season, “my partner doesn't go hunting here, so he’s more homesick than me” (P1). When women mentioned their home communities, it was often in reference to experiences tied closely to the land, such as seasonal celebrations, or land-based activities their children enjoy.

Similarly, participants differentiated the boarding home space from their personally-held meanings and concepts of ‘home’ and the activities therein. As stated by one participant, “It’s supposed to be a boarding home. It’s not a home [emphasized]” (P2). Iqaluit, too, was not home for most, as “home is…home. Where my family is, my baby. I prefer my home” (P2). Only sarcastically was the boarding home experience referred to as a home, whereby for the sake of humour, one woman presented the residence as the place she eats and sleeps, and therefore her ‘home’ (P12). The boarding home, then, was not described as ‘home’, but something else. Many women described their experience as one of mere existence in the space, devoid of meaningful activity. As one woman shared, “it’s like we’re next to nothing. We’re just here. Just eat, sleep, and that’s it. With nowhere to go” (P1). A day at the boarding home was reported by many to pass slowly, “cause sometimes we just go room to room, nothing else” (P5) and “we’re just sitting there doing nothing a lot of the time” (P6). An Inuk
midwife, commenting on the current model of obstetric care, used the similar phrasing: “they’re just there” (M1). Not only was the experience at the boarding home depicted as dull and monotonous, but also described with language of being trapped and of coming to Iqaluit for “confinement” (P4, P10): “Well what do you want me to do, be trapped in my room, twenty-four-seven” (P8)? In contrast to the place-based activities central to home life – like caring for family and being out the land – women’s experiences of “medical confinement” were described in relation to a lack of sense of place.

5.3.1.2 Changes in Place: Birthing in (Un)Familiar Places

The change in birthing places for pregnant women today, from communities in the Qikiqtaluk to Iqaluit, in some ways mirrored the change in place that Elders described when birthing was incrementally relocated from being on and with the land, to occurring within outpost camps on the land, and finally to within the hospital in Iqaluit. For both generations of women, Iqaluit was reported to be simply a place one had to go. Indeed, for many currently-pregnant participants, Iqaluit was described as a different and unfamiliar place, with different temperatures, daylight hours, food prices and choices, and a more urban environment than in other communities in the Qikiqtaluk. As one woman stated, “We get our twenty-four-hour daylight at home, the whole summer. And it gets dark here” (P2). Many women commented on the noise of traffic coming through the boarding home windows, as Iqaluit has many more vehicles present than in their home communities. Furthermore, Iqaluit varied significantly from women’s home communities in environmental conditions. As one woman stated, the weather was “so mixed up here, it’s always raining” (P3)! Unfamiliarity with Iqaluit was also described as participants conversed with one another about the cheaper food prices compared to their communities and commented on Iqaluit having “so many people here. And so many stores, like we only have two stores in [my community]” (P1). Iqaluit, thus, contrasted women’s experiences of their home places; flying to Iqaluit for birth, then, constituted a change in place.

For Elders, especially, this contrasted their description of birthing on the land, which was accompanied by very specific place-names and birthing landmarks: women shared stories of birthing in a camp called Kipisa, and in particular types of settings, like a tupiq (tent), qammaq (sod house), and qamutiq (sled). For most participants, birthing in place, in one’s home community, was described as a particular and known experience, in contrast to the reported unfamiliarity of Iqaluit.
5.3.1.3 Relationality and Birthing in (New) Places

When interviewees discussed Inuit practice and knowledge around childbirth, they emphasized relational support for pregnant and birthing women. An Inuk midwife described how birth used to unfold on the land, in the midst of supportive relationships:

Way back when they were living in camps, they made sure that the mother is well looked after. A midwife will go hand and hand with everybody. Midwife then will make sure that the mother is fed well, that there’s healthy food, making sure that the hunters provide good food (M1).

Not only did this relational support involve providing women with country food from the land, but participants described how it also included creating a sense of place for the mother and the newborn baby – a place and identity in society, and a pathway to a good future. Elders discussed the relational support role of the sanaji in Inuit society, that “there’s no actual word to describe what it is in Inuktitut…I guess you can translate it into, ‘your maker’. The child’s maker would be the one cutting the cord” (Ida Atagoyuk). Ida went on to explain that:

Back then, the person who did cut the umbilical cord was a very important person to be for the child. While the child was being brought up, the child would be told by the person who cut it – ‘this is the life you’re gonna live. This is how you’re going to turn out to be the person you are, once you turn into an adult’.

This relationship between sanaji and the child was described by a participant as enduring support. She explained that the sanaji might say, “you’re gonna be the greatest hunter, or you’re gonna be the best seamstress…[the child’s] first catch would go to them. Of any animal or of anything they catch in their lives” (CM1). Being a sanaji herself, she shared that:

My role is to guide them through their entire lives, as long as I’m living. And to guide them to the best of my ability, through any barriers or complications or any issues they may come up with in life (CM1).

Relationships, then, were described as nurturing the well-being of a birthing mother, but also grounding the newborn in a particular societal place and relationship structure, providing a pathway for the child to thrive.

An Inuk midwife commented on the changes experienced with the arrival of obstetric evacuation, notably the impacts on family relationships:

So there were a lot of family damages when they started [obstetric evacuation]. And unhealthy food. And, you know, lots of family abuse started happening. Lots of negative things started happening when the mother left. Because it becomes insecure for the family. It’s so unfortunate (M1).

Contemporary birthing scenarios involved sustaining these relational ties, and they involved loss, as shared by participants. In sewing sessions, most participants shared the aching they felt to be with
their children again, who were back home and unable to accompany the women to the boarding home. As one woman shared, “myself I get really sensitive and cry easily. I don’t feel like talking to them. I don’t feel like going online, missing them. Makes me cry” (P7). While sewing mittens or slippers, one participant shared, “I’m just thinking of my daughter, making these for her, missing her” (P9). Similarly, the experience of separation from one’s children was filled with emotion for both a mother and child, who shared:

My baby didn’t phone so it felt like a long evening. And then when they finally called, as soon as he heard my voice, he started crying, missing me. He said, “I want to go to you”, and then continued crying, and then we hung up. I started crying too. And after crying together, we felt better. And then I called back and [my child] is feeling better too (P2).

Participants further expressed concern about their children back home and uncertainty while they were away from their home places. As described by one woman, “it would be better if we could bring our own baby, like mostly when they’re a few years old only. We never know what they’re doing…we’re away from them” (P2). Another participant explained the process of trying to bring a child along to Iqaluit:

[An earlier child] was born at 35 weeks, almost 36 weeks. That’s why the doctors wanted me to come at 35 weeks. The doctor said I would have to wait until 38 weeks [to bring my older child], but I kept trying to bring her. So, I got approved. I got information from Facebook about patient relations. Breastfeeding babies should be able to come up. I kept bothering them for like 3 weeks to bring her (P3).

One woman expressed concerns about this process: “I was scared about the cost of the stay, never knowing how much it would be [to bring a child along]” (P2). For another participant, routine ultrasound (also away from home) impacted a partner relationship: “When I came down just for an ultrasound by myself, I was here for six days! Not just an overnight trip for an ultrasound. My partner didn’t escort me for this trip, he was really missing me from home” (P1). An older participant – a medical escort for a pregnant woman – voiced, too, that, “it was really hard back then for me with the same way my partner was, when we were younger. Me being away, him being home, that would cause conflict between us, through communication over the phone” (P12).

In addition to relationship to one’s children and partners, other kin and community relationships were implicated in participants’ experiences of obstetric evacuation. Parents of the pregnant women, particularly mothers, cared for their children back home and also supported the women through other means. As one woman explained,

I came down with absolutely no amauti [parka designed to carry a small child] for when I have my baby. And my mother sent one along with my muktaaq [whale skin and blubber, Inuit country food]…My mother said, hopefully you’ll get your baby tonight (P11)!"
Not only were participants connected to family in their home places, however, but also to one another and to others at the Boarding Home or living in Iqaluit. These networks of kin and community relationships were expansive, spanning across places in the Qikiqtaluk, from one part of the region to another. Sewing session participants from the same communities knew one another, or were related; in a few instances, these women attended one another’s births for support and shared that experience in the session. Much sewing session conversation involved women discussing common relationships they shared, or family members they were visiting in Iqaluit. When asked how women cope with the stress of being away from home, many reported relationships as a source of strength and resilience:

There’s some Elders downstairs who are also here and it’s nice to talk to them as well (P6).

[In response to P6] And talking to a friend makes you feel a lot better and less worries. All that goes away. But when you keep it all to yourself, it gets harder and harder [agreement from another woman]. This meeting makes you a lot better too (P5).

5.3.2 Opportunities for Place-Based Birthing and Systems of Care

Participants, most often Inuit Elders, discussed opportunities to enhance the maternity care system in Nunavut. These related to birthing places, and a desire to have birthing occur within a family context, as well as how Inuit and their knowledge could be more integrated into the current model of care.

5.3.2.1 Birthing Places

Many participants expressed a desire for pregnant women to be able to remain within their families and communities for birth. As one Elder shared:

I would like to see a lot more of not having to travel to be away from your family, and also for the other children to see and experience the newborn being born, and being there for their love and affection, to make them happy as a family together (E4).

Not only was this desire for community-based birth expressed, but also confidence that women could safely deliver at home, given that “Inuit are able to help deliver, because they’re very knowledgeable and it’s still possible today” (E2). Elder Aalasi Joamie emphasized, “I know they can deliver in their own community. There’s no reason for them to come here to deliver.” Other Elders shared a desire for birthplace to be determined by risk and a more nuanced approach to obstetric evacuation. As expressed by Elder Qapik Attagutsiak: “Those who are not at risk, we would like to see them have their babies at home. But those at risk, by all means, send them [away from home].” Similarly, an Inuk midwife stated that:

I know for a fact that in the past, the government had policies saying, ‘at risk are the first pregnancy’ and the ‘6th pregnancy are at risk’ and so on. But today, each and every pregnancy seems to be at risk, so they’re all sent out, even though they’re not at risk (M1).
These discussions of assessing risk to determine birthplace were also accompanied by the recommendation to stagger the evacuation of a mother and partner. In the context of describing the impact of evacuation on children at home, Qapik Attagutsiak shared this recommendation for “*the husband [to] wait at least a couple weeks before she will deliver, then he can follow afterwards. Not right away, to wait for 4 to 5 weeks until the baby’s born.*”

### 5.3.2.2 Inuit Involvement, Inuit Knowledge, and Maternity Care Systems

Alongside opportunities for new birthing places, participants’ identified possibilities for further integration of Inuit birthing knowledge and practices into the current model of maternity care. As Annie Kilabuk explained:

> I would really like to see more Inuit be involved in labour. ‘Cause there’s lots of doctors here. Doctors are available now. But if Inuit could help in that practice, I would love to see that more…Even though the whole tradition will not come back completely, but at least maybe some things.

Similarly, an Inuk health practitioner interviewed for this study discussed the traditional role of the *sanajjii* throughout the pregnancy and birthing process and suggested opportunities for further integration of this role into present-day birthing practices. This could be facilitated by providing “*resources for mothers and how they were able to deliver successfully traditionally in the past*” and “*more education and preparation of what the different roles were in different families, in traditional deliveries*” (CM1). This participant further commented on the involvement of a *sanajjii*:

> A lot of women say that they come across barriers who will be present with them during the delivery ‘cause all their family can’t come down. Not all [experience barriers], some are financially stable. But I’ve heard roles where women were living alone and they didn’t have that *sanajjii* role, even though, you know, they had that nursing perspective. I mean, nursing role, doctor role, person, but it’s not the same as when you have someone (CM1).

Many participants suggested an increased connection between pregnant women and Elders that could be facilitated, for instance, at the boarding home in Iqaluit: “*Maybe it’d be helpful if we brought in some Elders [to the boarding home], ‘cause they could help so much with talking about pregnancy and also teaching with these sewing classes and different types of patterns they might have or want to share. And you can also ask the Elders too some questions about pregnancy*” (P12). Multiple participants suggested a separate boarding home for pregnant women and Elders only, noting, “*pregnant women and Elders should be together, ‘cause pregnant women can learn more from Elders, like how they are*” (BHS1) and that, “*because the Elders, often when they’re here, they’re not sick with something that would spread. And they would probably like to see pregnant ladies and kids around*” (P5). Alternatively, as expressed by an Inuk midwife: “*That’s where a good program would fit in, to invite the Elders. Right. Not necessarily for them to stay with [pregnant women]. But to have a program like that*” (M1).
Other Elders discussed the importance of teaching Inuit birthing knowledge to healthcare providers as a way of strengthening the present health system and valuing the contribution of Inuit knowledge. Aalasi Joamie, a knowledge-holder with respect to pregnancy and childbirth, expressed a desire “to go to communities and engage with other Elders and teach the healthcare workers...to get them prepared and to teach them the knowledge that I know.” Likewise, Inuit knowledge was described as instructive for healthcare providers, yet with the changes to obstetric policy, Inuit have had less opportunity to embody and teach this knowledge to others. As shared by Ida Atagoyuk:

> I wish doctors and nurses could get more experience from the knowledge of the Elders that are around today that already still have the knowledge. To pass it onto them. I feel ‘cause our Inuit tradition was very strong, that it could still stand today. Compared to today, it’s like we’ve fallen from that. Like we’re just here today. ‘Cause today we’re following too much with the white people. We do as they say. It was never really like…it wasn’t really that we had a choice.

Similarly, as an Inuk midwife reiterated, “even for us as midwives, it’s devastating. We have no room to…say. We don’t have a say anymore” (M1).

Past and contemporary birthing experiences shared in this research, then, created a foundation for exploring opportunities for enhancing the maternity care system in Nunavut. Taken together, these results highlight the importance of place to Inuit birthing knowledge, values, and practices, and to how maternity care can more fully support Inuit in childbirth [Figure 5.2].
Figure 5.2. Visual synthesis of results related to past birthing experiences (birthing at home and in place) and contemporary obstetric evacuation experiences (birth and changes in place), which created a foundation for recommendations on the maternity care system (Inuit-identified opportunities for place-based birthing). Interconnections between sub-themes are denoted with dashed (-- lines).

5.4 DISCUSSION

As this research illustrates, Inuit women’s experiences of obstetric evacuation and multi-generational perspectives on the maternity care system are underscored by individual and collective attachment to particular places, and the relational birthing practices located therein. For Inuit, this place attachment is deeply rooted in Inuit culture, knowledges, identities, and overarching worldview, and tied to emotional, psychological, and spiritual health and well-being (Cunsolo Willox et al., 2012, 2013; Sawatzky et al., 2019). These research results related to birthing away from home places, and Inuit women’s shared experiences of social isolation, unfamiliarity, and lack of connection to place. As such, this research illustrates how place attachment is a determinant of maternal health and well-being for Inuit. More broadly, a sense of place may be an important determinant of maternal health and well-being for many peoples, for whom meaningful birthing practices and rituals are tied to their home places (Adams et al., 2018; Dawson, 2017; Kildea et al., 2019). Indeed, this research indicates that maternity care systems, globally, may be strengthened by considering how connection to place may shape, define, and support maternal healthcare experiences. Moreover, by broadening perspectives on and understandings of health determinants for pregnant and birthing women.
(Healey & Meadows, 2008), health systems can more effectively respond to the particular health needs, preferences, and priorities of peoples whose cultures, livelihoods, and well-being are intimately connected to the land.

Most participants situated their birthing experiences in the context of relationships: relationships within their families and communities, and also relationships to and with the land and land-based activities. These social-ecological relations are constitutive of Inuit identity (Richmond, 2009), such that Inuit identity has been described as ‘eco-centric’ (Kirmayer et al., 2009; Stairs, 1992). Stairs (1992) contrasts a Western self-concept with an Inuit “world image”, suggesting that “Inuit find their identity in a richly detailed and all-encompassing ground and that the process of becoming a mature person is directed toward grounding rather than toward autonomy” (119). As in, the Inuit ‘self’ is the self in relationship (Kirmayer et al., 2008), becoming ever more placed – ever more embedded in relationships with community and community with the physical environment, including the animals, lands, and sea. These relationships are nurtured and sustained, then, through “focal activities” or subsistence practices like hunting, fishing, preparing country food, and sewing with skins (Aariak, 2018; Karetak et al., 2017; Stairs, 1992:120); these activities were described by participants as associated with longing for their home places and the family and community context in which these practices occur. Moreover, these place-based activities and practices referenced by participants were tied to the Inuit seasonal calendar: temporal cycles of harvesting and gathering, and the associated food and material preparations, sharing, and celebrations (Bennett & Rowley, 2004; Karetak et al., 2017; Mancini Billson & Mancini, 2007). In contrast to being “just there” – currently pregnant participants’ descriptions of the passage of time while awaiting birthing – connection to home and place involved temporally-defined activities, important practices specific to place and time. For Inuit, experiences of birthing away from home may also, then, be grounded in the broader experiences of the self being distanced from the embedded, relational, and seasonal life-ways that give oneself meaning and connection. These experiences may also resonate with people of other Indigenous cultures whose epistemologies and ontologies are, similarly, deeply tied to the land (Alfred & Comtassel, 2005; King et al., 2009; Tobias & Richmond, 2014).

Furthermore, the concept of an ‘eco-social’ self may underscore Inuit understandings, and thereby experiences of, the maternal healthcare system. Obstetric evacuation could be considered an “isolating and decontextualizing effect of Western institutions” (Stairs, 1992:121): many participants emphasized this isolation in their birthing experiences. Even in terms of understanding health and illness, Wenzel (1981) highlighted an Inuit approach as contextual, in comparison to a Westernized healthcare system that can more frequently dissociate the individual and their physical health from the environment. Inuit perspectives of health during pregnancy and birthing may, thus, involve such
context as the health of one’s environment, family, and community. Indeed, many participants articulated concern for their families, particularly their children, when asked about their personal experiences of birthing from home.

In addition, Inuit identified opportunities for maternity care systems, including public health programs, health policies, and primary healthcare practice. Participants described the unfamiliarity of Iqaluit and the environment-related changes they experienced while birthing away from home. This unfamiliarity may be addressed by responding to the identified opportunity for more prenatal resources that are grounded in Inuit birthing knowledge. Public health units may increase efforts to prepare women for the experience of birthing from home – and increase prenatal resources available to women at boarding homes (Lawford & Giles, 2016) – specifically tailoring resources to reflect Inuit connection to place and place-based birthing practices and knowledge. For example, opportunities to facilitate multi-generational sharing of birthing knowledge between Elders and pregnant women (BSRC, 2017; Pauktuutit, 1995); and a more concerted integration of Inuit birthing knowledge into prenatal resources and education (Lonsdale & Akulukjuk, 2019) may more effectively prepare women for this change in place. These resources and education should be designed, conducted, and driven by Inuit (ITK, 2018). Moreover, frameworks for policy analysis – such as those policies pertaining to obstetric evacuation – may be strengthened by including culturally-specific, place-related metrics (Jeffery et al., 2006; Napier et al., 2017). For instance, Pauktuutit Inuit Women's Association of Canada et al. (2012) released a framework for “Inuit-specific” and “culturally relevant health indicators”, citing indicators for well-being like “multi-generational proximity” and “access to and learning from Elders”. Based on the results of this study, these sample indicators may have importance for Inuit maternal health and well-being; thus, future policy analysis may benefit from the inclusion of such Inuit-specific metrics like these.

Finally, participants emphasized a desire for Inuit birthing to occur ‘in place’: within home communities, guided by a more-nuanced risk assessment to determine birthplace; within a network of familial and community relations facilitated, in part, by increased involvement of Elders or a sanaji; or by the staggered arrival of a medical escort so that family disruptions caused by evacuation can be minimized. Increased involvement of and connection to Elders may help strengthen the link between birthing at home and in place (‘past experiences’) and contemporary birthing scenarios; this may be a possible pathway for mediating birthing on the land versus in Iqaluit. Similar pathways to place-based birthing have been explored in other Indigenous contexts through the creation of regional birthing centres and less centralized models of birthing care where it is more cost-effective for families to accompany a woman for birth (Houd et al., 2004; Van Wagner et al., 2012); or through a focused integration of place-based birthing ‘principles’ into care models (Kildea et al., 2016, 2018,
2019). Based on diverse evidence, policy-makers and clinicians might consider, then, possibilities for place-based birthing within the Qikiqtaaluk Region, informed by maternity care models and recommendations in similar Circumpolar or other rural or remote contexts (Corcoran et al., 2017; Kildea et al., 2019; Marriott et al., 2019; Olson & Couchie, 2013).

This research has a number of potential limitations. Focus group data gathering occurred with five separate groups of participants, each of whom participated in a maximum of two afternoons of sewing and conversation. As such, this research offers a limited, discrete, cross-sectional snapshot of Inuit women’s lived birthing experiences, particularly contemporary birthing scenarios, at single points in time. Many contextual and influential factors, such as the presence of medical escorts, women’s experiences throughout pregnancy and post-partum, or varied experiences based on parity or pregnancy complications, for instance, could not be explored in depth due to time and resource constraints; future research might engage participants over the course of pregnancy, taking pre- and post-natal experiences into account. Moreover, this research was conducted as a case study in the Qikiqtaaluk Region of Nunavut, within a distinct, regionally-specific maternity care system and the culturally-specific birthing traditions of Qikiqtaaluk Inuit. As such, this study’s findings and the place-based theoretical framing should be approached with ‘moderatum generalization’ to other research contexts (Payne & Williams, 2005): moderate in the scope of what is claimed – for example, the experience of Qikiqtaaluk Inuit may differ from Inuit of other regions of Inuit Nunangat – and moderately held generalization, open to the possibilities of very different childbirth experiences in other Indigenous contexts. Nevertheless, this study has important and broad relevance to maternity care systems in that it highlights the necessity of including place-specific, community-specific, and culturally-specific meanings of maternal well-being in the design and iterative enhancement of health systems.

5.5 CONCLUSION: THE PARTICULARITY OF POLICIES & PATHWAYS TO BIRTHING

Understanding Inuit birthing experiences and maternity care *vis-a-vis* place and place attachment uncovered further opportunities for pregnancy and childbirth support, particularly how maternity care systems might be increasingly underscored by the knowledge, values, and principles of the peoples in the particular places these systems aim to serve.

The birthing experiences portrayed in this research reveal very distinct pathways to childbirth for Inuit women in the Qikiqtaaluk Region: birthing on the land and birthing away from home places. Changes experienced by Inuit in the past, driven by policies like obstetric evacuation, have largely shaped the maternal health system to be what it is today. Evidently, policies and practices – like obstetric evacuation and medical confinement – are manifested in particular, local ways. As this
research illustrates, the impact of policies is felt acutely in place. A critical examination of lived birthing experiences through this place-based lens can elucidate nuance and particularity; this is useful for refining maternal health systems to be ever-more responsive to the particular needs, preferences, and priorities of the peoples these systems are designed to serve.

As stated by Elder Annie Kilabuk, “even though the whole [Inuit birthing] tradition will not come back completely, but at least maybe some things.” Just as Inuit in this study have identified how past and present birthing experiences can reveal healthy pathways forward, so too may maternity care systems in all places benefit from a particular examination of past and present practices, which may guide health system planning and policies.
5.6 References


CHAPTER FIVE – Place-Based Inquiry of Inuit Birthing and Maternity Care


Montgomery-Andersen, R. A., Willen, H., & Borup, I. (2010). “There was no other way things could have been.” Greenlandic women’s experiences of referral and transfer during pregnancy. Anthropology and Medicine, 17(3), 301–313. https://doi.org/10.1080/13648470.2010.526696


145


CHAPTER SIX
(RE)BIRTHING SYSTEMS IN THE QIKIQTALUK: A CONCLUSION

It has been an immense honour and privilege to work alongside Inuit women to support and center the voices of multiple generations of Qikiqtaaluk Inuit — women who shared their birthing experiences, narratives, and perspectives on the maternity care system, many of whom were presently living the reality of birthing away from home and place. At its essence, birthing is inherently — profoundly — relational. As women spoke of birthing, it was evident that these relationships inherent to birthing extended to the lands and waters of their home places, as well as to significant familial, community, and ancestral relations.

Women talked about the land in past birthing experiences, and how birthing happened as life unfolded on the land; they talked about the contemporary centralization of birthing to hospitals and its medicalization, on their experiences of birthing away; and they spoke of continued birthing practices and values, embedded in Inuit Qaujimajatuqangit. In this research, Inuit women shared perspectives on how birthing scenarios might change — how past and present experiences might frame possibilities for the future. And, in providing space for sharing birthing stories and experiences, this research celebrated the beauty of birthing and the strength, knowledge, and relationships among generations of Inuit women. As research associate Makinik Nowdluk shared while sewing together: “My grandma was still alive when I gave birth, but she became blind from old age, and she never got to see [my baby], but she held him. And she felt him. She said, ‘beautiful!’”

Alongside this focus on birthing, place, and systems of maternity care in the Qikiqtaaluk Region, this research also explored possibilities for maternal health research to respond to place, culture, and Inuit concepts of health and wellness. These include expanding the use of arts-based approaches that align with place-specific forms of knowledge-sharing (like sewing) or further considering place and place attachment as determinants of Inuit wellness in maternal health research.

This concluding chapter will highlight the cross-cutting themes in this dissertation. This chapter begins by synthesizing research findings, and situating these findings within larger contexts. Relatedly, this opening section will also draw out implications for maternal health research, as well as birthing systems, and the policies, practices, and public health programs and initiatives embedded within. Next, the strengths, limitations, and challenges associated with our research
methods and approaches will be outlined. This chapter concludes with a discussion of next steps for research, building from this dissertation, and some final ‘take-aways’ from this dissertation research.

6.1. SYNTHESIS OF FINDINGS

We return to this nexus of place, culture, and health and why it matters to Qikiqtaaluk Inuit birthing, the regional systems of birthing care, and to maternal health research approaches and methodologies. Findings from this work point to the importance of prioritizing maternal health research methods, care approaches, policies, and practices that are place-specific and place-based, culturally-embedded, and shaped by Inuit concepts of health and wellness [Figure 6.1].

Figure 6.1. Visual synthesis of key findings from this dissertation research. Results from across all four research chapters (Ch.1-4) underscore the importance of prioritizing maternal health research methods, as well as maternity care practices and policies, that are place-specific and place-based, culturally-embedded, and shaped by Inuit concepts of health and wellness.
6.1.1. Place Attachment as a Determinant of Maternal Health and Wellness

Underscoring much of this dissertation – from the literature reviewed in Chapter 2, to the findings articulated in Chapters 4 and 5 – is a desire voiced by Inuit to birth ‘in place’, embedded within the social structures of family and community, as well as the systems of birthing knowledge and values intrinsically tied to land and place. Indeed, an abiding attachment to land and place was evident in the past birthing experiences shared by Inuit and the lived experiences of Inuit currently away from their home places for birthing. The reviewed literature in this thesis (Chapter 2) would suggest that Inuit have been advocating for changes to the obstetric evacuation policy, and the right to birth in their home places, for at least twenty years (England, 1998; Kaufert & O’Neil, 1990), and across Inuit Nunangat (Gold et al., 2005; Van Wagner et al., 2007, 2012). More recent advocacy has highlighted the implications of this policy in light of the COVID-19 pandemic (Brown, 2021a, 2021b; Lawford & Sivajohan, 2021; Tranter, 2021); a desire to birth ‘in place’ is, then, of timely importance in the context of pressing public health challenges at present, and in future.

In this research, contemporary birthing scenarios were contextualized among past experiences and valued birthing practices described by Inuit Elders and other Iqaluit community members. Largely, the perspectives shared by currently pregnant women at the boarding home, away from home for birthing, were characterized by loss and disconnection. As one woman shared in relation to her family, “myself, I get really sensitive and cry easily. I don’t feel like talking to them. I don’t feel like going online, missing them. Makes me cry” (Ch.5, pp.132). Participants also described disconnection and loss in relation to the land and seasonal place-based activities they missed while birthing away, as expressed by one woman: “Especially in summer and spring it’s hard to be here when back home is really nice. It makes you homesick so much (Ch.5, pp.129). An imbalance between past and contemporary birthing experiences of Inuit women in the Qikiqtaaluk Region has been known anecdotally, lived viscerally by women themselves, discussed in prior research (Chamberlain & Barclay, 2000; Gold et al., 2005; Healey & Meadows, 2007; Kaufert & O’Neil, 1990; O’Neil et al., 1988; Roberts & Gerber, 2003; Silver et al., 2021; Voisey et al., 1990), and now highlighted again in this dissertation, as we aimed to center women’s voices and experiences, as well as their perspectives on enrichment of the medical obstetric system given these experiences.

Indeed, Inuit women spoke to the importance of place in their birthing experiences and to maternity care systems, a finding echoed in research related to the value of incorporating place into delivery of healthcare services (Kildea et al., 2018; Nelson & Wilson, 2021). As women shared, place was not solely constitutive of the lands and waters of their home communities, but also the deep relational ties to family, community, ancestors, and the land. Place, then, involves the social supports firmly
embedded in Inuit birthing values and practices; place affects Inuit maternal health and wellness, writ large. Further research might explore place attachment as a determinant of maternal health and wellness, particularly considering outcomes that are grounded in Inuit, and Indigenous, conceptualizations of health and wellness (Davy et al., 2016; Sawatzky et al., 2019), and inclusive of emotional and mental health outcomes. Moreover, frameworks for health system evaluation and public health programming and policy, as related to maternal health, might incorporate place-related metrics (McCubbin et al., 2013; Pauktuutit et al., 2012) and understandings of place as intrinsically, and integrally, connected to Inuit maternal health and wellness.

### 6.1.2. Inuit Qaujimajatuqangit (IQ) as Guiding and Informing Maternity Care

Importantly, this dissertation narrative is about more than loss and disconnection from home and place while birthing in contemporary scenarios – it is also about the breadth and depth of knowledge and valued traditions embedded within Inuit birthing, grounded in *Inuit Qaujimajatuqangit* (IQ). A desire to birth ‘in place’ has to do with Inuit knowledge, for, as articulated by an Inuk midwife from Nunavik: “bringing birth back is about bringing back the knowing that goes along with it too” (Epoo et al., 2020:94). Findings from this dissertation research relate to possibilities for enriching the system of medical obstetric care and enhancing maternal wellness in Eastern Nunavut when systems reflect Inuit societal values and principles (as they are articulated in the Government of Nunavut’s framework for governance). Indeed, participants expressed a desire for Inuit birthing practices and knowledge to be actively shared and integrated into obstetrical care: “Inuit should be invited to do those [prenatal or breastfeeding clinics] and pass on their knowledge…there are others with better, beautiful knowledge to pass on” (Ch.4, pp.107) and that, “we want to see Inuit midwives put to use” (Ch.4, pp.106). Opportunity exists for enhanced integration and inclusion of Inuit and IQ within the medical obstetric system, recognizing that maternity care models more congruent with cultural values can be more culturally-safe, supportive, and sustainable (Kildea & Van Wagner, 2013).

Overarchingly, Inuit women (Elders, especially), expressed this desire for *Inuit Qaujimajatuqangit* to guide maternity care in the Qikiqtaaluk and to share Inuit birthing practices with others. As Elder Ida Atagoyuk shared, “I feel ‘cause our Inuit tradition was very strong, that it could still stand today” (Ch.5, pp.135) and Elder Aalasi Joamie, “[I want] to go to communities and engage with other Elders and teach the healthcare workers…to get them prepared and to teach them the knowledge that I know” (Ch.5, pp.135). Considering that birthing exists within the domain of many knowledge systems (Davis-Floyd, 2018), the question of how to enrich birthing care in Eastern Nunavut may be, as Felton-Busch & Larkins (2019) suggest, “fundamentally an epistemological one, of what and whose knowledge is or should be valued” (14). As our research findings suggest, by increasingly centering
and valuing IQ within Qikiqtaaluk maternity care, Inuit maternal health and wellness may be
strengthened (Tagalik, 2005). Moreover, as Janet Tamalik McGrath states, IQ can be guiding and
informing of relationships – applied to this research, between and among Inuit and those involved in
the obstetric care system, such as maternity care providers, policy makers, and public health
practitioners:

IQ is not a reified traditional knowledge, something in competition with science, but rather IQ
becomes a framework for scientists [e.g. maternity care providers] to understand how to have
accountable and appropriate relations with Inuit, Inuit knowledge systems, and in relation to Inuit
traditional homelands (2019:313, emphasis added).

6.1.3. Desire for Systems-Alignment and Enrichment

And while many voices in this dissertation called for birthing ‘in place’ (at home), many also called for
systems-enrichment and highlighted the importance of systems-alignment. As in, many women
expressed recommendations that may facilitate some sense of place while birthing away or, at least,
help to mediate birthing at home versus birthing away. Taken together, the results from this research
(threaded through Chapters 4 and 5) help inform multiple related and reinforcing possibilities for
place-based birthing and an enrichment of the medical obstetric system in the Qikiqtaaluk Region.

Focusing on relational birthing supports: Findings across this dissertation point to the centrality of
relationships to Inuit maternal health and wellness: relationships between and among people,
animals, lands, and waters. Results highlight a role for Inuit Elders in supporting birthing women
while away from home and a desire for enhanced involvement of Inuit midwives/sanajis within the
medical obstetric system, to work alongside other primary healthcare providers. In part, this might
necessitate increased investment in in-territory midwifery training, and enhanced opportunities for
multi-generational knowledge-sharing about Inuit midwifery skills and techniques in formalized
settings. Some research has explored the role of Indigenous doulas as helping to mediate home-
based versus hospital-based birthing (Ireland et al., 2019). Reinvigorating Nunavut-based midwifery
training programs, and supporting the integration of Inuit midwives, Elders, and other relational
supports like doulas, into the model of obstetrical care, might be steps toward enriched birthing
experiences for Inuit women in the Qikiqtaaluk and – indeed – across Inuit Nunangat (Epoo et al.,
2020; Gold et al., 2005; Van Wagner et al., 2012).

More wholistic approaches to birthing care: Recognizing that birthing is understood by Inuit as more
than a discrete event, this work also highlights the importance of strengthening supports and
continuity of care throughout all stages of pregnancy and childbirth – from conception to post-partum
and, even child-rearing. This also includes Inuit relational supports for birth-related grief, identified as
significant to Inuit women within this research. Supporting mental, emotional, and spiritual wellness,
alongside physical wellness, throughout birthing is an important component of a culturally-safe, place-responsive obstetric system (Corcoran et al., 2017).

*Strengthening prenatal care*: Relatedly, findings in this research point to the unfamiliarity of Iqaluit and lack of connection to place and land that women experience while awaiting birth (Ch.5). This research also highlights how Inuit value land-based activities and country food, for instance, while pregnant (Ch.4 and 5), with women referencing a desire for country food while awaiting childbirth at the boarding home (Ch.5). Further public health outreach might involve orienting women to Iqaluit prior to leaving home, and embedding women within a network of prenatal supports upon arrival (e.g. providing prenatal resources and education, grounded in Inuit Qaujimajatuqangit; integrating a land-based component into prenatal support while in Iqaluit; or involving Elders in prenatal education through a formal program or one-on-one meetings). Planning and implementation of prenatal care might be strengthened through Inuit leadership and oversight, such that prenatal supports further align with Inuit values and concepts of maternal health and wellness (Smylie et al., 2016).

*Prioritizing Inuit-determined birthing*: In line with calls for supporting Inuit self-determination and sovereignty in research (Cunsolo & Hudson, 2018; Inuit Tapiriit Kanatami, 2018; Pfeifer, 2018) and, more broadly, in systems that affect Inuit lives and livelihoods (c.f. ITK, 2019; ITK & Pauktuutit, 2021), this research also suggests a need for enhanced Inuit leadership, oversight, and governance of maternity care in the Qikiqtaaluk Region – and across Inuit Nunangat. In other places in Inuit Nunangat, this takes the form of Inuit-led community ‘risk assessment committees’ that collaboratively determine appropriate birthing location for a pregnant woman, taking into account provider perspectives of risk, alongside other place- and culturally-defined dimensions of risk (see Inuulitsivik Health Centre in Nunavik, Van Wagner et al., 2012). Other possibilities might include the creation of Inuit advisory roles within the medical obstetric system to provide ‘cultural supervision’ to clinical care and ensure culturally-safe practices and protocols are in place (Hickey et al., 2019); or the implementation of other ‘Birthing on Country’ principles, as among Indigenous Peoples in Australia, where maternity care systems are shaped by the inclusion of Indigenous values and principles, and a prioritization of Indigenous leadership within the system of care (Kildea et al., 2018, 2019; Kildea & Van Wagner, 2013)8.

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8'Birthing on Country' defined for a commissioned rapid review as maternity care incorporating some (or all) of the following: “community-based and governed; incorporation of traditional practice; connection with land and country; incorporate a holistic definition of health; value Indigenous and non-Indigenous ways of knowing and learning, risk assessment and service delivery; culturally competent; developed by, or with, Indigenous People” (Kildea & Van Wagner, 2012:15).
Creating a comprehensive strategy/framework: Finally, the findings from this research emphasize the importance of birthing systems alignment. This process of alignment could be shaped by the creation of an up-to-date, comprehensive strategy or framework for the maternity care system in the Qikiqtaaluk that builds from prior work (GN, 2014; Lauson et al., 2011). Such a framework could be informed by the results of this study, but more significantly, also be informed by a range of evidence from other locales on the value of a framework that links cultural values and principles to maternity care practices and policies, such as the ‘Birthing on Country’ framework (Kildea et al., 2018, 2019, 2021). This framework could incorporate regular monitoring and evaluation activities that use place- and Inuit-specific metrics (Pauktuutit et al., 2012) and are based on Circumpolar-specific performance indicators for maternity care systems (Rich et al., 2016, 2021). Furthermore, such a framework or strategy could also recognize the important work of many ‘actors’ in the Qikiqtaaluk Region (e.g. Nunavut Tunngavik Incorporated (NTI), the Government of Nunavut, Iqaluit Public Health, community-level health centres, primary healthcare providers); outline a detailed strategy for coordination of care (from prenatal through to childrearing); build in designed roles for Inuit to further a maternal-child health agenda in the Region; and create a plan for ensuring ongoing, iterative enrichment of the medical obstetric system, led by Inuit.

6.1.4. Place-Based Maternal Health Research: ‘Placing’ Research in Context

Building from Inuit frameworks for research and policy (ITK, 2018; Pauktuutit et al., 2012), this dissertation research also identifies the expressed need for research itself to be ‘placed’ – driven by people in the places to which research is intended to be of service. Chapter 2 discussed an identified need for community-led maternal health research that utilizes methods and metrics that are place-specific. These findings contribute to a growing body of literature on the importance of context-specific, embedded methodologies in health research, particularly with Indigenous populations (Borish et al., 2021; Cunsolo Willox et al., 2012; Day et al., 2017; Fitzpatrick & Reilly, 2019; Flicker et al., 2014; Hammond et al., 2018; Harper et al., 2012; Jackson & Coleman, 2015; MacDonald et al., 2015). Considering this literature, Chapter 3 reported on the use of sewing within a data gathering process, and intended to explore the possibilities of sewing as one such context-specific strategy for arts-based inquiry (Emanuelsen et al., 2020; Healey, 2019; Wachowich, 2018). Opportunity exists for maternal health researchers to continue to embed their methods and approaches within culture and place, to characterize their work by “relational accountability” to people and place (Tuck & McKenzie, 2015; Wilson, 2008:77). As Booth implores, citing Anderson et al. (2010:600), “[There is] a need to systematically and reflexively account for place and places in research, alongside the social position of the researcher and methods, and call for methodologies to be operationalized ‘as if place mattered’” (2015:20).
6.1.5. Scope of Research Findings

As shown by these synthesized findings, the implications of this dissertation research are particular: they relate acutely to Qikiqtaaluk Inuit and their particular birthing systems. These findings also have concreteness: one of the primary aims of this research process was to underscore tangible Inuit recommendations for maternal health policy, healthcare practice, and research.

Yet, by situating birthing within this narrative of systems-alignment and enrichment, the implications of this research may also have broader scope. As alluded to throughout this thesis, maternity care systems globally, especially within rural or remote contexts, face similar complexities in their delivery of care to diverse populations (Adams et al., 2018; Marriott et al., 2019; Montgomery-Andersen et al., 2010; Vylka Ravna, 2019). Evaluating maternity care systems through the lens of systems-integration or enrichment may be a helpful reframing as policy makers and clinicians address challenges related to incongruency of culturally-embedded and medical obstetric birthing systems. Implicit in this framing is a recognition that neither system is ‘wrong’, per se; however, systems may require ‘alignment’, integration, and/or an enrichment in relation to one another. This reframing of the conversation around maternity care may promote the inclusion and prioritization of Inuit women’s voices as key partners in shaping approaches to care.

6.2. Strengths, Limitations, and Challenges

A strength of this research was its collaborative approach. From the outset of the work, we identified partnerships with community researchers and formed a team of Northern- and Southern-based, Inuit and Settler, researchers who provided oversight to and implemented this research in its entirety. We also prioritized connecting with individuals from Nunavut organizations, government, and healthcare and research institutions, who helped inform the focus of this work. This consultative and collaborative approach afforded a very applied dimension to this work and – hopefully – shaped it to be as useful to the community of Iqaluit (and the Qikiqtaaluk Region, as a whole) as possible. As those who know – and live – the context of this work, Nunavummiut are positioned to use this research evidence to support and advance their priorities and interests. In part, this work is likely to reiterate realities they are already aware of and have lived experience of. Our hope is that this research can be another tool, another form of storytelling, to support the elevation and prioritization of Inuit voices within the maternity care system. For instance, in 2020, NTI released a report entitled, “Nunavut’s Infrastructure Gap”, identifying a lack of healthcare infrastructure as having an impact on childbirth for mothers (NTI, 2020); perhaps this work can bolster NTI’s advocacy, by Inuit and for Inuit, to affect systems-change, and promote alignment and enrichment.
Additionally, a strength of this work was also in our use of an arts-based approach to data gathering, namely our use of sewing as a strategy for enhancing a focus group method. By aligning our approach with place- and locally-specific modes of knowledge-sharing and -generation, the quality of data and experience of research for participants was enhanced. Moreover, this work serves as a case study for future research to continue to explore arts-based inquiry and, more importantly, to prioritize research approaches that are contextually-appropriate and culturally-embedded.

While this research was informed and guided by principles of community-based research, intended to center and prioritize the voices of Inuit women, and consistently engaged/consulted individuals from Nunavut research, health, and government institutions, this work was not predominantly community-led or community-driven, nor were participants fulsomely involved in co-creating research, co-analyzing data, and co-developing knowledge mobilization outputs (Israel et al., 2008). These are valued processes in community-based, participatory research (LaVeaux & Christopher, 2009; Morton Ninomiya & Pollock, 2017; Tobias et al., 2013). This research was constrained by Ritchie et al.’s “proximity paradox” (2013:184), that a community-based approach can be most challenging to implement alongside geographically-distant Indigenous communities with which this type of approach can be most important and beneficial. Most pregnant participants were from communities spread throughout the Qikiqtaaluk Region; this research involved a cross-sectional ‘snapshot’ of time in the course of their pregnancies in Iqaluit, after which women delivered their babies and returned home. It would have been possible, though logistically challenging, to engage women throughout the research process, given the nature of their time in Iqaluit being discrete and for a particular purpose. We also did not incorporate other strategies that may have helped make this work community-based and community-led, such as engaging with different levels of community rightsholders and leaders. Given women were in Iqaluit for birthing, they also had appointments to attend and had other related priorities that limited their availability; as such, some interviews were very short. To account for these challenges, we prioritized engagement with Iqaluit-based individuals (noted above) to help shape the research design and outputs to be as useful and applied as it could be, and implemented a collaborative approach within our team of Northern- and Southern-located, Inuit and non-Inuit researchers to data gathering, analysis, and planning of knowledge mobilization outputs. Given that some interviews were short, we engaged Iqaluit Elders and other community members in interviews and data validation to help provide further depth and context to the data.

Additionally, the challenges of accurately interpreting between English and Inuktitut is an important limitation, and created potential for meaning to be lost or misconstrued during data gathering and analysis. As Tamalik McGrath notes, Inuktitut is “not just a language, but [a] way of being and an intellectual system” (2019:190); it is not easily phonetically translated into English or vice versa.
Moreover, given these communication challenges; my positionality as a non-Inuk researcher; and the nature of IQ as being predominantly an oral tradition (Oosten & Laugrand, 2002; Tester & Irniq, 2008), there is the possibility of misinterpretation or thin interpretation in the linking of women’s perspectives shared to IQ principles in the format of this written, academic thesis. In response to this limitation, we met with Inuit knowledge-holders in the area of birthing to discuss and revise preliminary results and linkages, and to provide further depth to the analysis.

Moreover, Tamalik McGrath’s discussion of IQ and government systems speaks to an important limitation of this research, insofar as this research frames GN-identified IQ principles (as linked to participants’ perspectives and knowledge) as informing possibilities for enrichment of the medical obstetric system:

> The discourse is based on the assumption that IQ should be integrated into qablunaaq (white person) standard systems and modes of operation to effectively enrich or enhance systems pertaining to health, economics, education, government, or other qablunaaq-generated structures. The assumption that IQ is only an enhancement has served to reinforce and further legitimize colonial structures – not to challenge or question how they are structured, and whether or not that structural design is consistent with Inuit well-being (2019:200, emphasis added).

While this research focused on principles already identified by the government as informative for governance (so, in essence, aimed to highlight how principles seen as important might be increasingly actionable within the obstetric care system), Tamalik McGrath’s insight does challenge the notion of working within systems and structures established outside of an Inuit framework. She suggests the need for more fundamental considerations of whom those systems/structures serve; in what way; and whether broader structural shifts are needed to better serve Inuit. These types of questions might point to future research directions for the system of medical obstetric care in Nunavut.

Finally, while this research aimed to be guided by decolonizing approaches and methodologies (Kovach, 2009; Smith, 2012), ultimately, the work is still primarily embedded within a Southern-based research institution, housed in a dissertation, in a repository, clearly linked to my name and associated with my acquisition of a PhD degree. I am benefiting from this research, and I must be critical of – and creative with – how I use the benefits I have received, the experience and credentials acquired, to support Inuit self-determination, leadership, and advancement, and the continued decolonization and Indigenization of the academy. This work is a lifelong endeavour, one to which I am responsible and accountable. While I will be stepping away from this research – beyond community knowledge-sharing and mobilization still to come (post-COVID-19) – my hope is that this research might be useful in serving the interests of Nunavummiut with whom I have worked and met with these past five years; perhaps, as research evidence, it may support the work of Inuit

(Joanis et al., 2020). Moreover, given these communication challenges; my positionality as a non-Inuk researcher; and the nature of IQ as being predominantly an oral tradition (Oosten & Laugrand, 2002; Tester & Irniq, 2008), there is the possibility of misinterpretation or thin interpretation in the linking of women’s perspectives shared to IQ principles in the format of this written, academic thesis. In response to this limitation, we met with Inuit knowledge-holders in the area of birthing to discuss and revise preliminary results and linkages, and to provide further depth to the analysis.

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organizations, health researchers, and others seeking to strengthen Inuit maternal and community wellness in the territory.

6.3. NEXT STEPS FOR RESEARCH

In summary, I wish to draw out future research directions identified throughout this chapter, and drive home some key considerations for the research community. Building upon this research, four key directions for maternal health research include to:

- **Further explore place attachment as a determinant of maternal health and wellness**
- **Examine possibilities for an enrichment of the medical obstetric system based on additional Government of Nunavut-identified Inuit Qaujimajatuqangit (IQ) principles and their connections to Inuit birthing practices and values**
- **Advance community-led and community-directed research on Inuit birthing and maternity care systems, specifically exploring opportunities for place-based birthing in the Qikiqtaaluk Region**
- **Expand arts-based inquiry, and other forms of place- and culturally-embedded methods and approaches for maternal health research**

Opportunity exists for research to explore place attachment as a determinant of maternal health and wellness, not only among Inuit across Inuit Nunangat, but also among other non-Indigenous and Indigenous Peoples globally. This form of inquiry could have implications for the evaluation and iterative enhancement of maternity care systems, epidemiological research, and public health programs and frameworks, for instance, if place attachment (and other place-related variables) are considered alongside social determinants of health and wellness (Greenwood et al., 2015).

Relatedly, further research could explore opportunities for an enrichment of maternity care in the region, building from this work on GN-identified IQ principles and place-based birthing. Specifically, in-depth data gathering related to additional GN-identified IQ principles (of the 8) and how they are actionable within maternal health system governance could be beneficial, as well as a broadened Inuit-led inquiry into how birthing IQ, writ large, may shape and guide maternity care in Nunavut. Additionally, future research might be based in other Qikiqtaaluk Region communities and explore community-based pre- and post-natal supports for women – on either end of the obstetric evacuation process – and how IQ might further shape care throughout the birthing spectrum. A further case study might be conducted in Iqaluit that explores the potential impact of introducing additional...
country food and/or Elder support (as a pilot program to be evaluated) on the pre-natal and/or post-natal experiences of women birthing away.

Moreover, future work could specifically draw upon and synthesize research on maternity care models in similar Circumpolar and other rural and remote locations to help inform these possibilities for maternity care enrichment. For instance, future research could involve a knowledge synthesis study on rural/remote models of maternity care, in global context, identifying best practices, challenges, and opportunities relevant to place-based birthing in Nunavut. Building from this, an interview guide could be developed to conduct in-depth interviews with individuals from Inuit organizations, government (territorial/federal), primary healthcare (Nunavut/southern hospitals), and public health to identify and characterize key challenges to implementing place-based birthing in the Qikiqtaaluk Region. This form of applied research could also take a comparative approach by conducting virtual or phone interviews and identifying relevant ‘lessons learned’ from individuals associated with other regional birthing systems (Kivalliq or Kitikmeot), other areas of Inuit Nunangat (e.g. Nunavik) and/or other similar rural or remote locations (e.g. Indigenous communities in Australia or Aotearoa).

Taken together, this dissertation work may also be a stepping stone to further research on the use of arts-based approaches, and other forms of place- and culturally-embedded methods and methodologies, for maternal health research. For example, sewing or other forms of “making as method” (Fitzpatrick & Reilly, 2019:vi), or audio-visual and digital media methodologies such as film (Borish et al., 2021) or collaborative podcasting (Day et al., 2017) may be effective tools for co-creation and mobilization of future maternal health research, particularly with Indigenous Peoples.

6.4. In Conclusion

I am writing these concluding thoughts in spring 2021, a full year into the COVID-19 pandemic, a global health crisis with drastic implications for health systems, including maternity care systems (Davis-Floyd et al., 2020; Gutschow et al., 2021; Kane, 2020; Karavadra et al., 2020; Rocca-Ihenacho & Alonso, 2020). Among Nunavummiut, COVID-19 has also had particular bearing on expecting mothers. In addition to being distanced from place, and familial and community-based support systems, now obstetric evacuation occurs in the midst of a pandemic where physical distancing and social isolation are not only reality for evacuated mothers, but also the recommended, necessary public health measures for keeping the virus at bay. COVID-19 has underscored – and exposed – the challenges of the medical travel system more broadly, as news stories hit the Canadian Press and triggered responses from many across the country, some
previously unaware of the realities of this system for Nunavummiut (Brown, 2021a, 2021b; Lawford & Sivajohan, 2021; Tranter, 2021). In particular, the tragic story of Silatik Qavvik, an Inuk woman from Sanikiluaq who passed away in a Winnipeg hospital from COVID-19 shortly after giving birth in the South, highlights yet a new consequence of birthing away from home and being exposed to additional public health risks (Brown, 2021b; Lawford & Sivajohan, 2021). Further, the context of a changing climate, which is also changing health and health systems, is a backdrop that may necessitate changes to systems, including health systems and specifically, maternity care systems (Gutschow et al., 2021).

It remains to be seen how COVID-19 – and future global, public health ‘grand challenges’ – shape the way maternity care is delivered to particular peoples, in particular, local places. Has COVID-19, by its disruption, illuminated gaps in how maternity care is provided (Gutschow et al., 2021), or brought important topics to the forefront of research, such as the significance of support persons and birth setting to maternal health (Kane, 2020; Karavadra et al., 2020)? Has it accentuated chasms between culturally-embedded and medical obstetric systems of care in many places, globally, and the importance of alignment (Ali et al., 2021)? Through the lens of COVID-19, and future public health challenges, does the concept of risk require reconceptualizing in relation to place-based birthing (Davis-Floyd et al., 2020; Rocca-Ihenacho & Alonso, 2020)?

Perhaps it is time for a re-birthing of birthing systems: for (re)birthing systems. Inuit leaders and advocates have recently underscored place-based and enhanced birthing supports as priorities within Nunavut (Brown, 2021a; Wright, 2021b), with Pauktuutit Inuit Women of Canada and Inuit Tapiriit Kanatami calling for territorial government action on the establishment of infrastructure, resources, and training to support birth-in-place (ITK & Pauktuutit, 2021; Wright, 2021a). Among these calls to action, this research stands as continued evidence on the impacts and experience of birthing away from home and place; of Inuit women’s perspectives on enriching maternity care in the Qikiqtaaluk Region; on the importance of aligning the obstetric system with continued Inuit values and principles, embedded in Inuit Qaujimajatuqangit; and how maternal health research might continue to center Inuit voices, priorities, and modes of knowledge-sharing through place-based methodologies.

From Inuit women’s voices within these pages, I hear a hope for something to shift, as far as birthing in the Qikiqtaaluk Region. The question becomes: towards what? My sense is that the something to which birthing might move – to reflect the desires of Inuit women, families, and communities for place-based birthing – would reflect both continuity from the past and a changing context. As Elder
Annie Kilabuk expresses in this research: “Even though the whole [Inuit birthing] tradition will not come back completely, at least maybe some things will” (Ch.5, pp.134) [Figure 6.2].
Figure 6.2. Qikiqtaaluk Inuit women involved in this research: A) (Left to right) Kitigutikarjuk Shappa, Natsiq Kango, Qapik Attagutsiak; B) Angel Konek and her son, Isaiah Konek; C) Annie Kilabuk; D) Jeannie Pishuktie (all photographs taken by Laura Jane Brubacher).
6.5. REFERENCES


CHAPTER SIX – (Re)birthing Systems in the Qikiqtaaluk: A Conclusion


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Appendices

Appendix A. Visual two-sided postcard handouts provided to local partners in healthcare, health policy, and research in the scoping stage of the research study (2016-2017), to help guide conversations about maternal health research priorities.

We would like to learn about...

1. The Maternal Health Landscape in Nunavut
2. Inuit Connection to Place
3. Who we should Talk to

We're interested in planning collaborative maternal health research in Nunavut. We'd love your input!

Contact us:

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We're interested in planning collaborative Maternal Health Research in Nunavut.

What should we focus on? What are the key priorities?

We'd love your input!

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We are interested in facilitating **Scoping Research on Maternal Health in Nunavut** in the form of sewing circles with pregnant women in Iqaluit.

**The idea:**
- A two-stage sealskin mitten-sewing activity:
  - Two sessions each four hours long
  - Choice to participate in Inuktitut or English circles
- While sewing, women will have the opportunity to share their experiences and perspectives on pregnancy

**The goal:**
For women to further define the maternal health research priorities in Nunavut & shape our research question, objectives, & methods.

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Appendix B. Poster advertisement and two-sided postcard handouts (in English, French, and Inuktitut, respectively) used for recruitment of participants to the sewing session held among women who regularly live in Iqaluit.

Hello! Bonjour!

We’re a team of researchers from Nunavut and Guelph who are interested in maternal health!

Nous sommes une équipe de chercheurs du Nunavut et de Guelph qui s’intéressent à la santé maternelle!

All are invited to join us for a time of conversation and sewing together!

Tout le monde est invité à nous rejoindre pour discuter et faire de la couture ensemble!

WHO, Pa, Qui:
WHAT, Qb, Quoi:
WHEN, qb, Quand:
WHERE, a, Où:

Hope to see you there!

Nous espérons de vous y voir!

Contact us: Contactez-nous
A Time of Stories and Sewing

We’re interested in facilitating

**Scoping Research on Maternal Health in Nunavut**
in the form of sewing circles with pregnant women in Iqaluit.

---

**Conversation will focus on 4 Broad Themes:**

1. **Country Food & Nutrition**
2. **Connection to the Land**
3. **Family & Community**
4. **Experiences of Pregnancy & Childbirth**

---

**Hope to see you there!**

---

**Contact Us:**
Laura Jane Brubacher
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1-519-807-6629
Un moment de partage de récits et de couture

Nous créons des cercles de couture avec des femmes enceintes à Iqaluit afin de faciliter la recherche de portée qui porte sur la santé maternelle au Nunavut.

Le groupe discutera de 4 grands thèmes:

1. La nourriture traditionnelle et l'alimentation
2. La连接性和自然
3. Famille et communauté
4. Expériences de grossesse et d'accouchement

Nous espérons de vous y voir!

Contactez-nous
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Université de Guelph
Appendix C. Handmade recruitment flyer given personally to pregnant women at Tammaativvik Boarding Home, to invite participation in the sewing sessions.

Sewing Group for Pregnant Women:

This Week! 3rd floor TV room.

Tuesday 1-4pm
Wednesday 1-4pm

Come at 1pm for a free raffle ticket (for a baby gift).

$40 Ventures card and handmade baby quilt are gifts for coming both days!
Appendix D. Discussion guide for data validation with Inuit knowledge-holders and other Inuit community members and healthcare providers (referenced in Chapter Four), as well as the figure used to prompt discussion on the connection between eight GN-identified IQ principles for governance and Inuit birthing perspectives shared in this research.

1. These are 8 IQ principles the Government of Nunavut identified as important for the health system. What do each of these principles mean?

2. How does birthing relate to these principles?
   Prompt: For example, how does birthing relate to Inuujigiitigiitsiarniq?

3. What could be happening so that these principles are further respected and practiced in the health system?
   Prompt: For example _____.
   Prompt: I’ve heard that in Inuktitut, these are all verbs, or action words/concepts.
   How can these become actionable in the health system, and in maternity care specifically?

4. What IQ principle or Inuit value does this quote bring to mind?
   Prompt: Tell me more about that principle.
   Prompt: Are there other principles (of these 8) that relate?
Purpose: The purpose of this research is to provide opportunities for women, their families, and community members in Iqaluit to share stories of their historical experiences of childbirth ("what was"), their current experiences of childbirth ("what is"), and what healthcare and health policy "could be" going forward.

Goals & Objectives: The goal of this research is for participants to celebrate Inuit culture and traditional knowledge of pregnancy and childbirth. The objectives are to:

1. explore Inuit experiences of birth in Iqaluit, historically and currently; and to
2. identify specific recommendations for how the health system and policies may continue to support Inuit in childbirth, and reflect Inuit culture, priorities, and ways of knowing.

Between August 2017 and April 2018:

- Development of a research team, including 3 local research associates;
- 4 focus group conversations (in the format of 2-day sewing groups) conducted with currently pregnant women: 3 at the Boarding Home, 1 with women living in Iqaluit;
- 24 in-depth interviews with Elders, Boarding Home staff, community members, and currently-pregnant women at the Boarding Home.
  - Sewing groups and interviews involved sharing specific feedback on experiences at the Boarding Home.

Next Steps:

- Sewing Groups, continuing with pregnant women at the Boarding Home;
- Podcast recording with Elders, to be shared with pregnant women (who expressed interest in hearing Elders’ birthing experiences) and made publicly available;
- Preliminary analysis of qualitative data (in collaboration with the local research team);
- Sharing of preliminary results with health stakeholders in late Fall 2018 to discuss the applicability of results to healthcare practice and policy.

Research update prepared by Laura Jane Brubacher, PhD Candidate, University of Guelph and Naomi Tatty, Iqaluit.

For more information, contact Laura Jane Brubacher (weberl@uoguelph.ca), Sherilee Harper (harpers@uoguelph.ca), or Cate Dewey (cdewey@uoguelph.ca).
Appendix F. Synthesis of preliminary results and recommendations from Chapter Four, provided to Nunavut partners in research, public health, government, and primary care during meetings in January 2020.

Qualitative Maternal Health & Healthcare Project: Laura Jane Brubacher, PhD(c) (weberl@uoguelph.ca)

PRELIMINARY RESULTS (ABBREVIATED): QUALITATIVE PAPER #1

HIGH-LEVEL SYNTHESIS:

- Results link Inuit birthing knowledge & practices (shared in interviews/sewing groups) to the GN-identified IQ principles;
- Highlights how 3 of these 8 principles might be made 'actionable' within the current system – opportunities for re-alignment of two 'systems' of birthing care – current obstetric model and Inuit birthing model
- For public health practitioners, primary healthcare providers, and policy-makers: they may have a broad understanding of these 8 IQ principles, but perhaps not how they specifically link to birthing; may guide approaches to care.

(1) AVATITTINIK KAMATSIARNIQ (RESPECT & CARE FOR THE LAND, ANIMALS, & ENVIRONMENT)

- Elements in the environment used in birthing & post-natal care (e.g. rabbit fur and cotton flowers to stop bleeding; country food for pregnancy and breastfeeding women, such as broth, blood, and liver)
- [in process] Will expand this section and/or include results linked to another principle, based on data validation meetings I’ve been conducting with Inuit in Dec ‘19/Jan ‘20

(2) INUUQATIGIITSIARNIQ (RESPECTING OTHERS, RELATIONSHIPS, & CARING FOR PEOPLE)

- Birthing conceptualized as a relational process – expanding beyond a moment of delivery to instead include a continuum of life from conception through to childrearing; part of a cycle of living/dying, newness/loss in the lives of families and communities;
- Family and community relationships, centered around care and respect, are then involved in this process:
  - Sanaaq (‘maker’): Guiding a woman through pregnancy and/or associated grief
  - Midwives: Guides not only in birthing, but in parenting & supporting families
  - Grief-related supports:
    - Children themselves being a form of emotional support
    - Relationships with others who’ve experienced similar losses

(3) PILIMMAKSARNIQ/PIJARIUQSARNIQ (DEVELOPMENT OF SKILLS THROUGH OBSERVATION, MENTORING, PRACTICE, & EFFORT)

- Learning specialized midwifery knowledge and skills (& learning by doing)
- Multi-generations of women teaching how to be healthy and well in pregnancy & birthing (mothers/grandmothers passing on beliefs related to prenatal wellness)
Recommendations Based on Results: Qual Paper #1
What of these ‘fit’ (or not)? What’s appropriate to call for?
What other recommendations could you see coming out of these preliminary results?

Public Health:
- Building on the GN’s (2014) strategy for “comprehensive and culturally relevant prenatal care”:
  - Considering how prenatal information may be most effectively mobilized, and adapting the model of prenatal care to align with Inuit modes of knowledge-sharing (e.g. involving Elders/midwives in prenatal & new mother/baby care)
  - Content of prenatal education/support: co-creating plans for pregnancy wellness with women that incorporate Inuit practices/beliefs (e.g. time spent outdoors in the morning, etc.)

Health System (more broadly):
- Birthing environments: Considering who’s present in the room (e.g. presence of a particular support person, other qualities of the birthing room perhaps that relate to Inuit birthing practices, knowledge, or beliefs)
- Relational supports:
  - Presence of an Elder to support women and families during labour & delivery, or in situations of pregnancy or infant loss (considering how other forms of support, e.g. grief counselling, can reinforce Inuit-driven relational supports)
- (More generally): Birth conceptualized as beyond a moment of delivery; considering how to implement supports within this continuum, from conception through to childrearing
  - Expanding support to initiatives, like the Inunnguiniq Parenting Program (QHRC)
  - Re-imagining the place of midwifery within the medical health system, or in parallel to the current model of obstetric care
  - Re-instating certificate programs for maternity care workers to provide family-centered care at the community level
- Given how much Inuit value honing, mentoring, observing, and sharing skills and knowledge (including those of midwifery and other birthing-associated roles):
  - Examine opportunities for overlap between Inuit & medical health systems in how maternity care is provided to Inuit:
    - Opportunities for Elders to continue to mentor younger people in Inuit ways of birthing
    - Increased recognition for the technicality/specialization of Inuit birthing systems, and further integration of systems of maternity care within Nunavut (building on work like NTI, Health Canada & GN’s “Health Integration Initiative Project in Nunavut, 2005 – taking a ‘health integration approach’)
- (More generally): Developing maternal health policies, public health initiatives, or other systems planning through the lens of IQ (culturally ‘embedded intervention’ within Inuit societal values and principles)
Appendix G. Synthesis of preliminary results and recommendations from Chapter Five, provided to Nunavut partners in research, public health, government, and primary care during meetings in January 2020.

Qualitative Maternal Health & Healthcare Project: Laura Jane Brubacher, PhD(c) (weberl@uoguelph.ca)

Preliminary Results (Abbreviated): Qualitative Paper #2

High-Level Synthesis:

- Birthing experiences (when it occurred on the land, and now away from home) are underscored by deep connection to place, and the relational birthing practices/supports located therein
  - ‘Sense of place’, ‘connection/attachment to place’ to be considered as a possible determinant of maternal health and well-being?
- Inuit perspectives of what it means to be healthy and well during pregnancy and birthing involves social context: involves the health of family and community
- Results include Inuit-identified opportunities for the maternity care system in Nunavut

(1) Birthing at Home and in Place (Past Experiences, Mostly Elders’ Experiences):

- Birthing on the land; deep connection to place
- Known birthing places
  - Described with very specific place-names where they birthed on the land, and in very particular settings (Elders said a ‘qammaq’ or a ‘qamutiq’)
  - Iqaluit was non-descript in recounting of birthing experiences (for currently pregnant women too); it was unfamiliar to people, in contrast
- Relational supports:
  - Midwives making sure the mother is well fed, that hunters provide nutritious food
  - Sanaaq (‘maker’) – a guide throughout life, relational support

(2) Birth & A Change in Place (Present Experiences, from Sewing Groups)

- Longing for home & land-based, seasonal activities – missing narwhal season, fishing derbies, other seasonal celebrations
- Existing in space, not being ‘placed’:
  - “It’s supposed to be a boarding home. It’s not a home [emphasized]”.
  - Time drones on, lack of meaningful activity (“it’s like we’re next to nothing. We’re just here. Just eat, sleep, that’s it. With nowhere to go.”)
  - Described feeling trapped in their room (boarding home is also referred to as ‘confinement’, connotations of being trapped)
- A change in place:
  - Iqaluit is different & unfamiliar: different temperature, daylight conditions, traffic, weather, food prices, number of people
- Relationships with family:
o Aching to be with children; uncertainty about their kids (challenge finding childcare)
o Family still caring for them while away (e.g. mothers of the pregnant women sending them along with country food, an amauti)
o Women coped with stress of being away through conversing with Elders at the home who were there on medical travel; talking to friends they know
o Boarding home also a place where people connected to family in Iqaluit, or found family connections with one another

(3) **INUIT-IDENTIFIED OPPORTUNITIES FOR THE MATERNITY CARE SYSTEM IN NUNAVUT**

- **Birthplace:**
  o Desire to birth at home and remain within their families & communities – Inuit are very knowledgeable about birth
  o Birthing centre in Iqaluit; under the health department, but driven by Inuit

- Further integration of Inuit, as well as Inuit birthing knowledge & practices, into the current model of care: “Even though the whole [Inuit birthing] tradition will not come back completely, but at least maybe some things.”
  o More Inuit involvement in labour/delivery
  o More resources/education for mothers, grounded in Inuit birthing practices & knowledge (including education around roles/responsibilities of different family members in the birthing process)
  o Inuit sharing knowledge with healthcare providers, learning from Inuit Elders

**RECOMMENDATIONS BASED ON RESULTS: QUAL PAPER #2**

*What of these ‘fit’ (or not)? What’s appropriate to call for? What other recommendations could you see coming out of these preliminary results?*

**Public Health:**
- Increased efforts to prepare women for the experience of birthing from home
- More prenatal resources grounded in Inuit birthing knowledge
  o Increased prenatal resources/support available at boarding homes, which integrates Inuit birthing knowledge
- Opportunities to facilitate multi-generational sharing of birthing knowledge between Elders & pregnant women

**Policy:**
- Analysis of obstetric policy, procedures, guidelines using metrics specific to – and meaningful for – Inuit (e.g. Pauktuutit’s framework & culturally-relevant health indicators, “multi-generational proximity”, “access to and learning from Elders”)

**Healthcare Practice:**
- More Inuit involvement in hospital births
- Opportunity for Inuit to guide healthcare providers in culturally-meaningful birthing practices, as a way of integrating Inuit knowledge into the current care model
- Considering an Inuit-driven birthing centre within the Qikiqtaaluk Region
Appendix H. Comprehensive search strings adapted for each database included in the review.

Search Strings and Preliminary Results

**WEB OF SCIENCE™:**
Searched for topic terms in the Titles, Abstracts, Author, Keywords, Keywords Plus© fields within a record (Field Tag: TS=)

<table>
<thead>
<tr>
<th>Place &amp; People Terms:</th>
<th>AND</th>
<th>Maternal Health Terms:</th>
<th>Combined Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>TS=(Arctic OR Subarctic OR Circumpolar OR &quot;Northwest Territor*&quot; OR NWT OR Nunavut OR &quot;Northern Canada&quot; OR &quot;Arctic Bay&quot; OR Arviat OR &quot;Eskimo Point&quot; OR &quot;Baker Lake&quot; OR &quot;Cambridge Bay&quot; OR &quot;Victoria Island&quot; OR &quot;Cape Dorset&quot; OR &quot;Chesterfield Inlet&quot; OR &quot;Clyde River&quot; OR &quot;Coral Harbor&quot; OR &quot;Southampton Island&quot; OR &quot;Grisse Fiord&quot; OR &quot;Ellesmere Island&quot; OR &quot;Gjoa Haven&quot; OR &quot;King William Island&quot; OR &quot;Hall Beach&quot; OR Igloolik OR Iqaluit OR &quot;Frobisher Bay&quot; OR Kimmirut OR &quot;Lake Harbour&quot; OR Kugaaruk OR &quot;Pelly Bay&quot; OR Kugluktuk OR Coppermine OR Naujaat OR &quot;Repulse Bay&quot; OR Pangnirtung OR &quot;Pond Inlet&quot; OR Qikiqtarjuaq OR &quot;Broughton Island&quot; OR &quot;Rankin Inlet&quot; OR Resolute OR &quot;Resolute Bay&quot; OR &quot;Cornwallis Island&quot; OR Sanikiluaq OR &quot;Flaherty Island&quot; OR Taloyoak OR Talurjuaq OR &quot;Spence Bay&quot; OR &quot;Whale Cove&quot; OR Baffin OR &quot;Baffin Island&quot; OR Keewatin OR Kivalliq OR Kitikmeot OR Qikiqtaruk OR Qikiqtani OR Inuit OR Inuk OR Eskimo)</td>
<td>MeSH Terms from CINAHL and MEDLINE searches, that I will consider “maternal health terms” in Web of Science: TS=(pregnancy OR “pregnancy complications” OR “fetal therapies” OR “labor pain” OR infant OR “fetal development” OR “extraembryonic membranes” OR “fetal heart rate” OR “placental function tests” OR “umbilical cord” OR “prenatal diagnosis” OR “uterine monitoring” OR pelvimetry OR “fetal monitoring” OR “obstetrical nursing” OR “tocolytic agents” OR “obstetrical anesthesia” OR “obstetric surgical procedures” OR “maternal health services” OR “maternal-child nursing” OR “obstetrical analgesia” OR midwifery OR “perinatal care” OR parity OR “apgar score” OR “postpartum period” OR “breast feeding” OR “human milk”)</td>
<td>= 1,303 (Nov.10, 2017)</td>
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“People and Place” Results: 76,666 (Nov.10, 2017)

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CINAHL PLUS WITH FULL TEXT®: All Fields

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<td>AND</td>
<td>Maternal Health MeSH Terms: MH &quot;Pregnancy+&quot; OR MH &quot;Pregnancy Complications+&quot; OR MH &quot;Fetal Therapies+&quot; OR MH &quot;Labor Pain+&quot; OR MH &quot;Infant, Newborn+&quot; OR MH &quot;Fetus+&quot; OR MH &quot;Fetal Development+&quot; OR MH &quot;Extraembryonic Membranes+&quot; OR MH &quot;Heart Rate, Fetal+&quot; OR MH &quot;Placenta+&quot; OR MH &quot;Placental Function Tests+&quot; OR MH &quot;Umbilical Cord+&quot; OR MH &quot;Prenatal Diagnosis+&quot; OR MH &quot;Uterine Monitoring+&quot; OR MH &quot;Pelvimetry+&quot; OR MH &quot;Fetal Monitoring+&quot; OR MH &quot;Obstetrical Nursing+&quot; OR MH &quot;Oxytocics+&quot; OR MH &quot;Tocolytics+&quot; OR MH &quot;Tocolysis+&quot; OR MH &quot;Anesthesia, Obstetrical+&quot; OR MH &quot;Obstetric Surgical Procedures+&quot; OR MH &quot;Maternal Health Services+&quot; OR MH &quot;Maternal-Child Nursing+&quot; OR MH &quot;Analgesia, Obstetrical+&quot; OR MH &quot;Midwifery+&quot; OR MH &quot;Perinatal Care+&quot; OR MH &quot;Parity+&quot; OR MH &quot;Apgar Score+&quot; OR MH &quot;Postpartum Period+&quot; OR MH &quot;Breast Feeding+&quot; OR MH &quot;Milk, Human+&quot;</td>
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“People and Place” Results: 1,820 (Oct.31, 2017)

Maternal Health Key Words: (pregnan* OR fetus OR foetus OR fetal OR foetal OR newborn OR "new born" OR birth OR childbirth OR labor OR laboring OR labour* OR antepart* OR prenatal* OR antenatal* OR perinatal* OR postnatal* OR postpart* OR caesar* OR cesar* OR obstetric* OR oxytocin* OR tocoly* OR placenta* OR prostaglandin OR partur* OR preeclamp* OR pre next eclamp* OR eclamp* OR intrapart* OR puerper* OR episiotom* OR amnio* OR matern* OR gestation* OR lactati* OR breastfe* OR breast next fe*)

SCOPUS®:

Place & People Terms:
(Arctic OR Subarctic OR Circumpolar OR "Northwest Territor" OR NWT OR Nunavut OR "Northern Canada" OR "Arctic Bay" OR Arviat OR "Eskimo Point" OR "Baker Lake" OR "Cambridge Bay" OR "Victoria Island" OR Cape Dorset OR "Chesterfield Inlet" OR Clyde River OR "Coral Harbor" OR "Southampton Island" OR "Grise Fiord" OR "Ellesmere Island" OR "Gjoa Haven" OR "King William Island" OR "Hall Beach" OR Igloolik OR Igloolik OR Iqaluit OR "Frobisher Bay" OR Kimmirut OR "Lake Harbour" OR Kugaaruk OR "Pelly Bay" OR Kugluktuk OR Coppermine OR Naujaat OR "Repulse Bay" OR Pangnirtung OR "Pond Inlet" OR Qikiqtaaluk OR "Broughton Island" OR "Rankin Inlet" OR Resolute OR "Resolute Bay" OR "Cornwallis Island" OR Sanikiluaq OR "Flaherty Island" OR Taloyoak OR "Spence Bay" OR "Whale Cove" OR Baffin OR "Baffin Island" OR Keewatin OR "Kivalliq" OR Kitikmeot OR Qikiqtaaluk OR Qikiqtaani OR Inuit OR Inuk OR Eskimo)

AND Maternal Health Terms:
MeSH Terms from CINAHL and MEDLINE searches, that I will consider “maternal health terms” in SCOPUS:
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OR

Maternal Health Key Words:
(pregnant* OR fetus OR foetus OR fetal OR foetal OR newborn OR "new born" OR birth OR childbirth OR labor OR laboring OR labour* OR antepart* OR prenatal* OR antenatal* OR perinatal* OR postnatal* OR postpart* OR caesar* OR cesar* OR obstetric* OR oxytoci* OR tocoly* OR placenta* OR prostaglandin OR parturi* OR preeclamp* OR eclamp* OR intrapart* OR puerper* OR episiotom* OR amnio* OR matern* OR gestation* OR lactati* OR breastfe*)

Combined Results = 1,688 (Nov.7, 2017)
Appendix I. Stacked form created in DistillerSR® software for both level 1 (title/abstract) and level 2 (full-text) screening for eligibility for inclusion in the review. For only level 1 screening, reviewers had the option to select “unsure” as a response.

1. Does the article discuss human birth\(^1\) or human maternal health\(^2\) or human obstetrics\(^3\) or human neonatal health\(^4\)? [yes/no/unsure];
2. Does the article discuss Nunavut or Northwest Territories (NWT) before Nunavut was created?\(^5\) [yes/no/unsure];
3. Is the article focused on Inuit in Nunavut?\(^6\) [yes/no];
4. Is the article a published, peer-reviewed, primary research article?\(^7\) [yes/no/unsure]

\(^1\)Birth: “the act or process of bearing or bringing forth [human] offspring” (dictionary.com), AND a mother’s experience of doing so.

\(^2\)Maternal Health: “the health of women during pregnancy, childbirth and the postpartum period” (WHO 2017); that is, during the acute and subacute postpartum periods, up until 6 weeks after delivery (Romano et al. 2010). For specific inclusion and exclusion criteria related to maternal health, see Appendix C.

\(^3\)Obstetrics: “the branch of medical science concerned with childbirth and caring for and treating women in or in connection with childbirth” (dictionary.com). This includes, for example, studies related to healthcare access for pregnant women and those giving birth.

\(^4\)Neonatal Health: the health of a newborn within the period of 4 weeks after birth (medicinenet.com), AND neonatal health which is related to the health of the mother AND/OR the functioning and/or accessibility of the healthcare system AND/OR the social determinants of health for the mother or infant, for the purposes of this review.

\(^5\)As in, an article published prior to April 1, 1999 that discusses communities in NWT that are now captured in the Nunavut land claim area?

\(^6\)Consider the research question. If the article discusses or mentions Inuit in Nunavut, but the research question focuses on a different population (e.g. Greenland Inuit), don’t include it.

\(^7\)Please only include secondary research articles (e.g. review articles) if the article is a literature review and includes a meta-analysis (e.g. a review of the review). To emphasize, this review does not include editorials, commentaries, conference proceedings, published abstracts, theses, or dissertations.
Appendix J. Comprehensive lists of specific inclusion and exclusion criteria related to maternal health for Level 1 and 2 screening.

<table>
<thead>
<tr>
<th>Articles that discuss the following will be included</th>
<th>Articles that discuss the following will be excluded</th>
</tr>
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<tbody>
<tr>
<td>- Maternity care “system”: Access to healthcare or birthing centres for pregnant women and women giving birth; place of birth and birthing, as it relates to a mother’s and/or neonatal infant’s health; midwifery; medical travel for birth; boarding homes</td>
<td>- Fetal Alcohol Syndrome Awareness/Prevention</td>
</tr>
<tr>
<td>- Prenatal education and support</td>
<td>- Allelic variants or any diseases related to genetic mutations in pregnant women or neonatal infants; birth defects (provided the article focuses on the genetic association with the defect, and not various social or environmental factors that could contribute to these)</td>
</tr>
<tr>
<td>- Gestational diabetes</td>
<td>- Pharmacokinetics or drug prescriptions for pregnant women or neonatal infants</td>
</tr>
<tr>
<td>- Environmental contaminants (e.g. Persistent Organic Pollutants (POPs), Polychlorinated biphenyls (PCBs), or mercury) in human breast milk or a pregnant or breastfeeding woman’s blood plasma</td>
<td>- Cancer (including breast, ovarian, or pediatric cancers)</td>
</tr>
<tr>
<td>- Maternal smoking or alcohol or drug use while pregnant (provided the emphasis is clinical and not on awareness or prevention)</td>
<td>- Studies on chronic disease (e.g. obesity, diabetes) that do not relate to the maternal health outcome, or are not focused specifically on pregnant women</td>
</tr>
<tr>
<td>- Nutrition of pregnant and/or lactating women (provided this is the focus of the article, and not simply that this was a group included in a larger study)</td>
<td>- Dental caries, oral health; otitis media; vision; (when these are the primary outcomes of interest in the study, or the focus of the study)</td>
</tr>
<tr>
<td>- Breastfeeding (provided the emphasis is clinical or on breastfeeding initiation or practices and not on awareness, education, or promotion)</td>
<td>- Fertility (female or male-specific fertility), unless it is linked to actually being pregnant and a maternal health outcome; birth seasonality/natality rhythms</td>
</tr>
<tr>
<td>- Pregnancy-activated viral infections (e.g. maternal Epstein-Barr Virus) or other bacterial/parasitic infections in a mother during pregnancy (provided the emphasis is clinical, rather than focused on the specific pathogenesis/pathology of the pathogen)</td>
<td>- Sexual or reproductive health rights or access to sexual health resources and/or education; contraception (tubal ligation, vasectomy, other contraceptive methods); sexually-transmitted infections (STIs) and presence of antibodies to STIs in a pregnant woman or placenta</td>
</tr>
<tr>
<td>- Sharing/transmission of traditional knowledge and practices regarding pregnancy or childbirth</td>
<td>- Immunization of a mother or infant; (or physiological response to immunization); Pathophysiology or etiology of immunological diseases (provided there is no discussion of social determinants of health or other aspects of maternal or neonatal health, e.g. nutrition, substance use, environmental contaminants)</td>
</tr>
<tr>
<td>- Sudden Infant Death Syndrome (SIDs) or other cardio-respiratory neonatal health issues, such as respiratory syncytial virus (RSV) (provided that the infant is within the period of 4 weeks after birth, a.k.a. is a neonatal infant)</td>
<td>- Indigenous health or maternal health (broadly, with no specific focus on Inuit in Nunavut/NWT), for example, papers that include First Nations and Métis</td>
</tr>
<tr>
<td>- Dental caries, oral health; otitis media; vision; (when these are the primary outcomes of interest in the study, or the focus of the study)</td>
<td>- Remote healthcare technologies (e.g. e-consult), even if used for obstetrics/gynecology</td>
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<tr>
<td>- Fertility (female or male-specific fertility), unless it is linked to actually being pregnant and a maternal health outcome; birth seasonality/natality rhythms</td>
<td>- Physical anthropology</td>
</tr>
<tr>
<td>- Sexual or reproductive health rights or access to sexual health resources and/or education; contraception (tubal ligation, vasectomy, other contraceptive methods); sexually-transmitted infections (STIs) and presence of antibodies to STIs in a pregnant woman or placenta</td>
<td>- Specific, in-depth histological or serological studies, with no reference to broader health implications or factors influencing health</td>
</tr>
<tr>
<td>- Immunization of a mother or infant; (or physiological response to immunization); Pathophysiology or etiology of immunological diseases (provided there is no discussion of social determinants of health or other aspects of maternal or neonatal health, e.g. nutrition, substance use, environmental contaminants)</td>
<td>- Calls for research, or methodological papers</td>
</tr>
<tr>
<td>- Indigenous health or maternal health (broadly, with no specific focus on Inuit in Nunavut/NWT), for example, papers that include First Nations and Métis</td>
<td>- Teenage pregnancy</td>
</tr>
<tr>
<td>- Remote healthcare technologies (e.g. e-consult), even if used for obstetrics/gynecology</td>
<td>- Experimental studies on animals, designed to simulate the effect of an exposure on an outcome in humans</td>
</tr>
<tr>
<td>Question</td>
<td>Possible Responses</td>
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<tr>
<td>-------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>(1) What year was the article published?</td>
<td>(select one) – drop-down menu</td>
</tr>
<tr>
<td>(2) What year(s) was the data collected?</td>
<td>(select all that apply)</td>
</tr>
<tr>
<td>(3) In what region was this study conducted?</td>
<td>(select all that apply)</td>
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<tr>
<td></td>
<td>• Qikiqtaaluk/Qikiqtani/Baffin</td>
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<td></td>
<td>• Kitikmeot</td>
</tr>
<tr>
<td></td>
<td>• Kivalliq/Keewatin (Northwest Territories prior to Apr. 1, 1999)</td>
</tr>
<tr>
<td></td>
<td>• Unspecified</td>
</tr>
<tr>
<td>(4) In what community was this study conducted?</td>
<td>(select all that apply)</td>
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<tr>
<td></td>
<td>• Qikiqtaaluk: Cape Dorset, Kimmirut, Iqaluit, Pangnirtung, Qikiqtarjuaq, Clyde River, Pond Inlet, Hall Beach, Igloolik, Arctic Bay, Resolute Bay, Grise Fiord, Sanikiluaq</td>
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<td></td>
<td>• Kitikmeot: Taloyoak, Gjoa Haven, Cambridge Bay, Kugluktuk, Kugaaruk</td>
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<td></td>
<td>• Kivalliq: Arviat, Whale Cove, Rankin Inlet, Coral Harbour, Chesterfield Inlet, Baker Lake, Naujaat</td>
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<td>• Other (please specify)</td>
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<td></td>
<td>• Unspecified</td>
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<tr>
<td>(5) What is the overall topic of the maternal health research?</td>
<td>(select all that apply)</td>
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<tr>
<td></td>
<td>• Maternity care (access to care; place of birth; medical travel)</td>
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<td></td>
<td>• Midwifery</td>
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<td></td>
<td>• Traditional birthing/pregnancy knowledge</td>
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<td></td>
<td>• Prenatal education and support</td>
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<td>• Gestational diabetes</td>
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<td></td>
<td>• Environmental contaminants in breast milk or blood plasma during pregnancy</td>
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<td></td>
<td>• Maternal smoking, alcohol, or drug use</td>
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<td></td>
<td>• Nutrition of pregnant or lactating women</td>
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<td></td>
<td>• Breastfeeding</td>
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<td></td>
<td>• Post-birth care of the mother (e.g. Pregnancy-related infections)</td>
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<td></td>
<td>• Neonatal health</td>
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<td>• Other (please specify)</td>
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<tr>
<td>(6) From what disciplinary perspective is this study designed and implemented?</td>
<td>(select all that apply)</td>
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<tr>
<td></td>
<td>• Epidemiology</td>
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<td>• Biomedical Sciences</td>
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<td>• Dietetics and Nutrition</td>
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<td>• Nursing/Medicine</td>
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<td>• Anthropology</td>
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<td>• History</td>
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<td>• Other (please specify)</td>
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<tr>
<td>(7) What study methodology is used to address the research objectives?</td>
<td>(select one)</td>
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<td></td>
<td>• Qualitative</td>
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<td></td>
<td>• Quantitative</td>
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<td></td>
<td>• Mixed</td>
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<tr>
<td>(8) What study methods* are used to address the research objectives?</td>
<td>(select all that apply)</td>
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<td></td>
<td>• Focus groups</td>
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<tr>
<td>(9) Who are the study participants?</td>
<td>(10) Are any of the authors affiliated with a Northern organization/institute?</td>
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</tr>
<tr>
<td>Who are the study participants?</td>
<td>Are any of the authors affiliated with a Northern organization/institute?</td>
</tr>
<tr>
<td>• Pregnant women</td>
<td>(select one)</td>
</tr>
<tr>
<td>• Women in labour or delivery</td>
<td>• Yes</td>
</tr>
<tr>
<td>• Mothers of newborn infants (4-weeks post-partum)</td>
<td>• No</td>
</tr>
<tr>
<td>• Newborn infants (4-weeks post-natal)</td>
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<tr>
<td>• Public health nurses</td>
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<td>• Primary healthcare nurses</td>
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<td>• Medical doctors (e.g. obstetricians, pediatricians)</td>
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<td>• Midwives</td>
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<tr>
<td>• Policy-makers and/or administrators</td>
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<tr>
<td>• Other (please specify)</td>
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</tbody>
</table>

*Note: Answer according to the true design of the study, not how the author reports it (if they differ). Often times, authors will report they used one design, but they actually did another. As in, they say they did a cohort, but they actually did a cross-sectional study.*