



Webinar - Indigenous-specific health impact assessment: What might it look like in Canada?

Description

This webinar will explore what distinctions-based Indigenous-specific health impact assessment (HIA) could look like in Canada, advancing Indigenous Peoples' knowledges, values, and priorities throughout the HIA process. Join Drs. Diana Lewis and Elana Nightingale for a presentation through conversation about the existing base of evidence on Indigenous participation in the assessment of resource and infrastructure development – globally and within Canada. They draw from the findings of Indigenous Health Impact Assessment (2026) - a systematic literature review that examines peer-reviewed and grey literature, published guidelines, and tools relevant to Indigenous health impact assessment. Their dialogue draws on research, case studies, and personal experience to discuss the diverse perspectives of Indigenous Peoples' worldwide on HIA, including gaps in available resources, challenges in collaboration with industry and government, and opportunities for enhanced leadership.

Bios

Dr. Diana Lewis



Dr. Diana Lewis is a member of Sipekne'katik First Nation and Associate Professor/ Canada Research Chair (Tier II) in Indigenous Environmental Health Governance in the Department of Geography, Environment & Geomatics, University of Guelph. She is also Director of the IndigenERA Lab and a Member of the Royal Society of Canada (2025). Her research focuses on promoting understanding of Indigenous worldviews in environmental decision-making and advocating for Indigenous-led approaches to give communities baseline health data and sovereignty over the data in environmental decision-making. She is currently working with Indigenous communities across Canada to develop an Indigenous-led environmental health risk assessment approach.

Dr. Elana Nightingale

Dr. Elana Nightingale is a Postdoctoral Scholar in the IndigenERA lab where she works on Indigenous economic impact assessment. She holds a PhD in Geography from Western University, a



MSc in Local Economic Development from the London School of Economics, and a BA in Economics from Carleton University. Elana aims to support community-led research as a means to advance health and social equity for First Nations, Inuit, and Métis communities in Canada. Her research interests include the social determinants of Indigenous health, community economic development, community-based research methodologies, and knowledge translation.

Transcript

Denica Bleau: Good morning everyone, and welcome to the webinar *Indigenous-specific health impact assessment: What would it look like in Canada?* My name is Denica Bleau and I will be moderating today's webinar. We'd like to acknowledge and thank Health Canada and the Public Health Agency of Canada for their financial contributions to this report and webinar.

Before we start, I'll formally introduce myself. So, tânsi, nitisiyhkâson denica, Treaty 4, oskana ka-asastêki ochi niya, Secwepemc, Puyallup mihkwâkamîw-sîpiy. So hello, my name's Denica Bleau. I currently reside in both Secwépemc Territories and spend half my time in Puyallup Territories, which is across the Medicine Line. I'm grateful for the land, the peoples, and the peoples who I get to spend time with, where I'm a guest, and I get to live, learn, and spend time on the land. I'm Métis from Treaty 4, and my maternal family is registered with MNS (Metis Nation Saskatchewan). And I'm a PhD Candidate at UBC Okanagan. So, I'm very excited today as we get to visit with Dr. Lewis and Dr. Nightingale.

The NCCIH is located at the University of Northern British Columbia, Prince George Campus, situated on the unceded traditional territory of the Lheidli T'enneh First Nation, part of the Dakelh (Carrier) peoples' territory.

For those of you not familiar with the NCCIH, we are one of six national Collaborating Centres for the public health that was established in 2005, with funding from the Public Health Agency of Canada. Our sister NCCs are focused on specific topic areas including infectious disease, environmental health, healthy public policy, determinants of health, and methods and tools for knowledge translation. The NCCIH is unique in that it is the only NCC focused on the health of a population. Our Centre supports health equity for First Nations, Inuit, and Métis peoples by promoting the use of Indigenous-informed evidence to transform practice, policy, and program decision-making across all sectors of public health.

Here are a few webinar housekeeping notes: all questions for panelists, as well as technical questions, can be submitted in the Q&A window, which is at the bottom of your screen. The Raise Hand feature will not function, and all attendees will be muted. Links to resources mentioned by speakers will be



posted in the chat window. Today's webinar is being recorded and will be available on the NCCIH website. And just to note, there will be a brief pause as we switch presenters.

This webinar will explore what distinctions-based Indigenous-specific health impact assessments (HIA) could look like in Canada, advancing Indigenous peoples' knowledges, values, and priorities throughout the HIA process. Join Dr. Diana Lewis and Dr. Elana Nightingale for a presentation through conversation about the existing base of evidence on Indigenous participation in the assessment of resource and infrastructure development globally and within Canada.

Here are today's presenters. Dr. Diana Lewis is a member of the Sipekne'katik First Nation and Associate Professor/Canadian Research Chair (Tier II) in Indigenous Environmental Health Governance in the Department of Geography and Geomatics at the University of Guelph.

Dr. Elana Nightingale is a Postdoctoral Scholar in the IndigenERA lab where she works on Indigenous economic impact assessment.

I'd just like to thank everyone for joining us today. Please note our copyright and unauthorized recording, screen capture, or distribution of this webinar without permission is prohibited. Also, after post-production, this webinar and related resources will be available on the NCCIH website, and there will be a brief pause as we switch to the other presenters.

Dr. Diana Lewis: Thank you, Denica. We are launching the webinar series about Indigenous leadership in, and experiences of, health impact assessment in Canada. Currently, there are no Indigenous health impact assessment guidelines in Canada. The first webinar explores what an Indigenous-specific distinction-based health impact assessment process might look like in Canada. If Canada were to have guidelines or legislative standards, what might these look like? Next slide.

Kwe, n'in teluisi Dr. Diana Lewis, tleyawi Sipeknekatik, aq Mi'kma'ki. Welalioq, tan teli pejitayoq. So, my name is Diana Lewis, people call me Dee. I am from Sipekne'katik First Nation and Mi'kma'ki, what you would know as the Atlantic provinces. Thank you for coming. I'm Associate Professor, Canada Research Chair of Indigenous Environmental Health Governance and Director of the IndigenERA Lab at the University of Guelph. Elana?

Dr. Elana Nightingale: Hi, everyone. I'm Elana Nightingale. I am a settler Postdoctoral Scholar working with Dr. Lewis at the University of Guelph. My academic background is in Indigenous health geography and economic development, so really exploring how land and connections to land support the determinants of Indigenous well-being. And I come to this work on health impact assessment, having spent the past decade partnering with Inuit and First Nations communities on research related to resource development, land reclamation, and health.



Dr. Diana Lewis: Before we get started, we would like to get a sense of who is here with us today, so we have two quick questions for you all: what best describes your current role that you are in?

[brief pause]

Dr. Diana Lewis: Okay, we're just having a technical difficulty, everyone. We're just having a moment to launch the poll.

[brief pause]

Dr. Diana Lewis: So, what best describes your current role? And the poll has launched.

[brief pause]

Dr. Diana Lewis: So, is somebody seeing responses? We can't – yes, okay, so someone is seeing the responses. Are you able to share it with us on the screen?

[brief pause]

Dr. Diana Lewis: Okay, and so the next question is – oh, here: what best describes your current role? So, we're looking at 42% of the attendees are from government. Great. 5% students, 14% research, 12% community, not-for-profit, 9% Indigenous organization, 3% private sector and other. Great!

So, do I close this poll on my screen? Or – okay, so the next question is: how would you rate your knowledge about Indigenous health impact assessment?

Dr. Elana Nightingale: Dee, that question showed up in the poll.

Dr. Diana Lewis: Oh, it did?

Dr. Elana Nightingale: Yeah, I think it showed up altogether.

Dr. Diana Lewis: Oh, I didn't see that. Okay, I just see Question One on what I have on my screen. If you scroll down – oh, there we are: how would you rate your knowledge about Indigenous Health Impact Assessment? So, we have 3% who would say – hold on – very familiar, 10% somewhat familiar, 33% familiar, and 55% are not familiar with Indigenous health impact assessment. Great. Thank you. Next slide.

Dr. Elana Nightingale: Okay, thanks for answering our questions, everyone. So, our webinar today discusses the main findings of a literature review that we conducted last year on Indigenous health impact assessment, and that is now published on the NCCIH website. And then to bring our findings



to life and demonstrate why this work is so important, we'll be drawing on the work of Dr. Lewis (Dee), in partnership with the Pictou Landing Native Women's Group, as a case study.

But first, to get us started, we'll define a few key concepts and context. Second, we'll introduce our case, the experience of Pictou Landing First Nation. Third, we'll briefly cover the methodology and process of our literature review. And then finally, we'll present the main best practices and challenges put forward by the literature that could inform how Indigenous health impact assessment guidance is developed in Canada.

So, to get started, we have a few key concepts and context to set the stage for our discussion. Today, when we're referring to Indigenous health in our presentation, what we're talking about are community-specific definitions and frameworks for well-being. So, not only do First Nations, Métis, and Inuit all have their own models of health and well-being, but so too do each Nation, each Inuit region, and each community. And these models are shaped by each community's own culture, identity, and relationships to land, among many other factors. And we're going to talk a bit more about this later in the presentation, and then we actually also have another upcoming webinar specifically focused on this topic in March.

So, our presentation today is specifically talking about the process of health impact assessment, (HIA). And broadly, the goal of HIA is to identify and analyze the potential effects of a project or development on the health and well-being of a particular population. And the International Association for Impact Assessment has put together internationally accepted core principles for HIA that emphasize equity and equality in the distribution of health effects, as well as direct engagement of all potentially impacted groups. And when you bring these international principles together with Indigenous health models and experiences, it becomes very clear that an Indigenous, community-specific, health impact assessment process is needed.

But right now, in Canada we don't have any clear guidance or standards on what an Indigenous-specific HIA might look like. We actually don't even have legislation that mandates HIA processes take place. So, while Section 35 of the Constitution protects many determinants of Indigenous well-being, and the Impact Assessment Act mandates that assessment processes consider any potential effects of proposed projects for Indigenous peoples' health, health impact assessment, as a standalone process and report, is currently voluntary, and this means that Indigenous health and well-being are often considered in impact assessment as just one little piece of a larger mainstream assessment process.

So, why does this matter? How are Indigenous peoples affected when Western or mainstream health assessment approaches are used to understand their health? Dee, can you share a bit about the experience of Pictou Landing?



Dr. Diana Lewis: Thank you, Elana. So, in 2010 I was invited by the Pictou Landing Native Women's Group to come and talk to them about concerns they had about the potential impacts from a pulp and paper mill that had been deliberately piping effluent from the mill about six kilometers underwater and overground to dump it into a culturally important body of water bordering the First Nation community. You see it in this figure at Boat Harbour. That body of water became the Boat Harbour Effluent Treatment Facility.

Starting in 1967, the mill dumped 85 million litres a day into this body of water, and this had been ongoing for 47 years by the point the women talked to me in 2010. A federally mandated Joint Environmental Health Monitoring Committee, in place since 1993 – so for 17 years at this point – was tasked with establishing and implementing programs that would be reasonably required to monitor the health of the band members and the extent of environmental contamination on reserve lands and in Boat Harbour. Next slide.

Despite many consultant and government studies coming from the Environmental Health Monitoring Committee over the years – remember, they were tasked to look at the health impacts to the community – their processes always concluded that the health of the community had not been impacted. The women suspected otherwise and had lost confidence in the work being carried out by this Committee. They were seeing health impacts in their members, but without data, they couldn't prove it. Elana?

Dr. Elana Nightingale: Sorry, it wouldn't let me unmute for a second. So, there's strong evidence that Indigenous-specific health impact assessment is needed, but what exactly could this process look like?

So, the goal of our literature review was to search for existing guidance and tools, both across Canada and internationally, but when we started searching, the results were fairly limited. We actually found only two Canadian resources. The first, *A guideline to health impact assessment for BC First Nations* that was published in 2018, and the second were *Impact assessment standards*, produced by the First Nations Major Project Coalition. So, we decided to broaden our search criteria, and we ended up exploring the existing base of evidence on Indigenous participation in impact assessment processes, more broadly, to draw out lessons for health impact assessment. And in this, we included peer-reviewed literature, gray literature, guidelines and tools that were published in the last decade, and that were available in English.

And then, just to briefly summarize our methods – you can find all of this in detail in the report on the NCCH website – our systematic review relied on Web of Science and Google Scholar for the peer-reviewed literature, and then we use Google Search and direct searches to find gray literature. And in our search process, we put a significant emphasis on sources produced by Indigenous researchers, organizations, and governments, so, the direct search process in this review was really important. And



we went directly to Indigenous organizations and governments to find publications, resources, and evidence related to health and impact assessment.

All of the literature, the abstracts from the literature, were reviewed and assessed as a research team, and then I was responsible for the full-text screening for inclusion in the final analysis. And in total, 114 sources were included in the literature review. And then the literature was analyzed based on four guiding questions: one, what are the implications of community-specific health models for health impact assessment? Two, what Indigenous-specific health impact assessment resources and tools currently exist? Three, what best practices for Indigenous leadership in health impact assessment does the literature identify? And four, what challenges or barriers to Indigenous leadership in health impact assessment does the literature highlight?

Dr. Diana Lewis: In the end, 48 of the 114 sources were from Indigenous authors, many of whose logos are up on this slide, just to give you a sense of the variety of Canadian Indigenous sources included. Next slide.

Based on our review of 114 sources, we suggest that in order for health impact assessment processes to be meaningful for Indigenous peoples and be reflective of their knowledges and values, Indigenous-specific health impact assessment should follow eight best practices: be Indigenous-led; determine potential impacts based on community-specific models of health and well-being; assess impacts relative to community-specific baseline health data; draw on Indigenous value-based methodologies; prioritize cumulative effects; respect Indigenous jurisdiction over Indigenous knowledge systems; enhance relationships and communication between Indigenous peoples, government, and industry; and integrate culturally relevant gender-based analysis and equity considerations. Next slide.

Dr. Elana Nightingale: So, the first and most important best practice from the literature is that for Indigenous health impact assessment to be effective and meaningful, it must be led by the potentially impacted communities themselves. It is only when Indigenous communities have the authority to develop and implement their own HIA processes that they can ensure these processes are grounded in their own health frameworks, knowledge systems, laws, and customs. And this doesn't mean that each community has to undertake a full HIA process independently, though they may choose to, but it means that the community has the power to decide how the HIA is conducted and their role in it.

So, the community may still work with external academic researchers or IA practitioners, but the community is choosing these consultants and ensuring that they have the capacity to work appropriately with community knowledge and health frameworks. And the big case studies available on Indigenous-led assessment are from Aotearoa, New Zealand, and Australia, where they've been developing and testing Indigenous impact assessment as a separate, independent process for a while now, that runs parallel to conventional impact assessment. But there are also Canadian



communities who've been working for years on this, on developing their own impact assessment and health impact assessment processes.

So, Dee, you've been working with the Pictou Landing Women for over 15 years now on conducting a community-led health impact assessment. Can you tell us more about why a new community-led process was so essential for understanding the health impacts of the Boat Harbour Facility?

Dr. Diana Lewis: Thank you, Elana. So, I mentioned I had met with the women in 2010, just after I had completed a Master in Resource and Environmental Management degree at Dalhousie University. I asked if I could introduce them to a new researcher at Dalhousie at the time, Dr. Heather Castleden, at their next meeting. Heather is also a member of our team who is doing this work. They agreed. They met her, they liked her, and together with the women, we met over the next year to put a plan in place for how research could support the women in determining whether the health of their community had been impacted.

In late 2011, we were successful in securing a large CIHR-funded research grant to support that work. The women selected the researcher team, and my responsibility would be to work with the women to develop an environmental health survey to assess the health status of the community. In 2012, we started that work, and it became my PhD research for the next 5 to 6 years.

Before I get into the survey, I have to mention the Mi'kmaq concept of Two-Eyed seeing, *Etuaptmumk*, developed by Mi'kmaw Elders Albert and Murdena Marshall, that was just starting to influence how research should be done with Indigenous communities, blending Western and Indigenous knowledges. Everyone listening should know what that is; it is widely accepted today. From the beginning of our meetings with the women and the Elders in the community, it was evident that there was another layer to this story than just looking at self-reported health outcomes. Next slide.

What had struck me in the meetings with the women and the Elders was how, when the Elders recounted the first few days of the effluent flowing into what had been to them a culturally significant body of water next to their community, where they got their food, swam, gathered as families and their *A'se'k* community, where they gathered their medicines and berries around the shores of the water, had within days started to kill off the fish as they watched helplessly from the shore. Next slide.

You see, Boat Harbour was known to the community as *A'se'k*, which in Mi'kmaw translates to 'the other room', an extension of where they lived and what provided them with everything that was important to who they were. Once I came to understand my language a bit better, I came to understand what the Elders were telling us. Our language holds our understandings of who we are, holds our responsibilities and obligations to all our relations.



The figure on the left is a depiction of the Piktukowaq worldview. You will find this in Figure 4 in the article, “Linking land displacement and environmental dispossession to Mi'kmaw health and well-being,” in the *Canadian Geographer*, which was shared with you. The Piktukowaq live in Pictou, one of the seven traditional districts that make up Mi'kma'ki, and you'll find that in Figure 2 in the same article. What this figure tells us is that when our relationships, within a relational worldview – and in Mi'kmaw we call it *Msit No'kmaq*, ‘all my relations’ – when our relationships are intact, strong, thriving, then the Piktukowaq are healthy, well, and thriving.

For example, *Kisu'lt melkiko'tin* is the Mi'kmaw word for the ‘place of creation,’ an ecological order, or vantage point, from which the Mi'kmaw construct their worldview, languages, knowledges, and borders. We have *Weji-sqalia'timk*, ‘where we sprouted from’ – we believe we are rooted in the landscape; *Tilnuo'ti'k*, ‘how we will be Mi'kmaw’, and *Netukulimk*, ‘how we learn our values and norms by being on the land.’ These are all important aspects of the Piktukowaq worldview.

The figure on the right depicts how disruptive putting effluent into A'se'k became for the Piktukowaq. How they know to be where they believe they sprouted from, where they take their younger members to teach them their responsibilities and obligations to their lands; all of this gets disrupted. Not ruptured – that's what colonialism hopes to achieve – it gets disrupted. We can work to get those relationships back. Next slide, Elana.

Dr. Elana Nightingale: And this isn't just the experience of Pictou Landing. A key best practice from the Canadian and international literature is that Indigenous health impact assessment must begin from community-specific environmental health frameworks. So, what health looks like, what the determinants and value components are, and what the measures of change are, must be defined by the impacted community itself based on its own worldview, knowledge system, values, and relational responsibilities.

And it's important to note that even widely accepted social determinants of health, like education, income, can have very different meanings and measures within community contexts, so social determinants of health models are not enough. And then building on community health models is a need for community-specific baseline health data. So, in Canada, the lack of disaggregated, culturally appropriate Indigenous health data is a much bigger issue. No data, no evidence, no problem, right? But in the context of health impact assessment, limited data means that risk estimates are often taken from general population data and then they're applied to Indigenous communities. And this can significantly underestimate the potential impacts of projects because the estimate is not based on actual community practices, relationships, and land usage.

So Dee, collecting community-defined health data was a critical step in Pictou Landing. How did you work together with the community to develop and implement a whole data process?



Dr. Diana Lewis: Great question, Elana. As I mentioned before, I worked with the women to develop an environmental health survey, which took about a year. I also mentioned the Two-Eyed seeing approach – *Etuaptmumk*. I worked from an Indigenous knowledge perspective to develop a framework to look at the data through the Piktukowaq lens. But knowing that government wants measures that they can relate to, what they call evidence, we also collected quantitative data to measure health outcomes, and we used data from other sources so we could compare the Pictou Landing First Nation health outcomes to other population levels.

These tables come from “If only they had accessed the data” article that was shared with you, and, I should add, this is only one variable. The Pictou Landing First Nations survey ended up having 297 questions, which generated over 400 variables. Our response rate to the survey was 59% of a population of about 470 at the time. Here, we wanted to compare Pictou Landing First Nation health outcomes to other First Nations at the provincial and national levels. First Nation data comes from the regional health surveys led by the First Nations Information Governance Centre.

First Nations have experienced similar colonial impacts, and you would expect to see similar health outcomes, but as you see, for those 18 years and older, there is a 22-26% gap between those who report good to excellent health in Pictou Landing First Nation than at the other levels. Of course, we can't definitively say that this is because of exposures to the effluent facility, but it should, at the least – had the Environmental Monitoring Committee, in its 17 years of existence, just asked the one universal health question that is used in other surveys: how would you rate your health? – the results would have indicated that something was going on. Next slide.

So here, we wanted to interrogate the social determinants of health. Using data collected from Pictou Landing First Nation, we used the Canadian Community Health Survey to compare outcomes to non-Indigenous populations at the district health authority level, where Pictou Landing First Nation is located, and non-Indigenous populations at the provincial and national levels. The social determinants of health say those who have higher education or are working should experience better health outcomes. What we see here is, despite being educated or working, the gap between those reporting good to excellent health is 31% to 33% in the education category, and 32% to 40% in the working category. At the minimum, we should have seen a lower gap with the Pictou County District Health Authority, as these are the people who experience a similar industrial history. Next slide.

Dr. Elana Nightingale: So, once we have these community-defined health models and data, as Dee just described, we get to the tricky issue of risk assessment methodology. How do we measure or evaluate each potential impact, and then compare and prioritize them in a way that allows a final decision to be made? And we know from the literature that Indigenous concerns are often downplayed or left out from evaluation methodologies because they're deemed to be too intangible and too difficult to quantify.



So, our fourth best practice is that new evaluation methodologies are needed that are capable of integrating and comparing different types or forms of data. But this doesn't mean that non-Indigenous practitioners and consultants should start forcing Indigenous knowledge and oral data into their established evaluation techniques. It means that Indigenous health impact assessment needs new, stand-alone methods that uphold Indigenous peoples' jurisdiction over their own knowledge by giving them the authority over the whole health impact assessment process. So, Indigenous communities need to have the power to define what makes an impact significant, based on their own knowledge system, and then they need to be able to decide what is an appropriate method for assessing and evaluating their local Indigenous knowledge in final decision making.

Dr. Diana Lewis: Thank you, Elana. Since within an Indigenous worldview, we need our relationships with our territory to be intact, strong, thriving, to be healthy, well, and thriving, in the Environmental Health Survey, we ask people their level of agreement, from strongly agree to strongly disagree, with the following statement: “I feel the air, land, and water around me will hurt me,” and then we cross-tabbed those who agreed – yes/no – with those reporting yes/no to having good to excellent physical health, mental health, emotional health, and spiritual health. There is a gap of 43% in reporting good to excellent physical health, and a gap of 21% in mental health, a 3% gap in emotional health, and an 18% gap in spiritual health. The emotional health outcome is explained that those who are stressed often say they are happy as a coping mechanism.

Informed by this, our 2019 work for the preparation of the Environmental Impact Statement for the Boat Harbour Remediation Project, Pictou Landing First Nation defined its own significance determination, building on the Piktukowaq Environmental Health Interpretive Framework. Yes, the effluent facility closed in 2020, not because of anything the research team did but because the community was empowered and pressured the provincial government to close the facility. Another story for a different day.

Until *A'se'k* is reclaimed, impacts are considered significant. If the Piktukowaq do not get back to being who *Kisu'k* (‘the Creator’) intended them to be, then the province has failed in their remediation. Next slide.

To measure the full range of potential health impacts, Indigenous-specific health impact assessment must include cumulative risks related to historic, existing, and proposed projects, and how these risks intersect with ongoing colonialism and structural barriers to well-being. This means potential cumulative impacts include not only the physical effects of multiple projects, but also the cumulative effects of ongoing dispossession from ancestral lands, healthcare systems that are already inadequate and underfunded, and the emotional burden of repeatedly participating in impact assessment processes with little resulting action. Next slide.



Dr. Elana Nightingale: And this emotional burden that you just described Dee, this has been the experience of so many communities. Communities have participated in impact assessment processes with honesty and intention. They've shared their fears, they've shared their land-based knowledges and their values with industry and government, only to see these concerns be totally ignored in final decision-making on projects. And so now, many Indigenous communities have developed a deep mistrust of impact assessment processes and they've begun to see them as really just another method to justify environmental dispossession, justify pushing them off their lands.

So, if Canada is going to push for Indigenous health impact assessment and wants Indigenous communities to engage in, or even lead these processes, there has to be a lot of long-term relational work in the background to start rebuilding relationships between communities, industry, consultants, and government, based on honesty, transparent communication, shared expectations, and mutual respect for Indigenous rights and self-determination. So, for example, industry needs to be willing to accommodate the community timelines that are required to actually engage in impact assessments. Industry cannot show up in communities talking about values and relationships but then at the same time, be lobbying the government to reduce assessment requirements.

And then our final best practice from the literature is that any Indigenous health impact assessment process must be equity focused. So, any HIA must account for the ways that potential health impacts are experienced differently, both within and across communities, based on gender, biological sex, Two-Spirit and LGBTQ identity, diverse ability, Indigenous status, and even geographic location as an urban, rural, or remote environment. And this, again, is where the limited availability of distinctions-based health data, and particularly data disaggregated by gender identity, really lets us down. There is so little research around the specific health impacts of major projects for Indigenous men and for gender-diverse individuals, nor for Indigenous peoples in urban areas. So, there's a lot of gaps in what we know, but what we do know is that there are particular risks associated with cultural gender roles, as well as with industrial workplaces and workforces, that often fall disproportionately on Indigenous women and girls. So, more baseline health data is required to ensure equitable health outcomes can be a focal point in final decision-making on projects.

Dr. Diana Lewis: The background work is long and needs to be done long before any specific impact assessment process starts. Developing a community health framework, collecting a baseline of community health data; these are long-term processes that require significant resources. I had mentioned previously, I started working with the women in 2010. We didn't have the survey developed until 2012. We didn't conclude the survey until 2014. Next slide.

Dr. Elana Nightingale: And also just a shout out to Dee for all the capacity that she brought to her work with Pictou Landing, and all the resources and time that she contributed to that work.



So Dee, you've taken us through the long-term work of Pictou Landing to develop their own health impact assessment and build their own base of evidence. Can you catch us up to where they are now in this process?

Dr. Diana Lewis: Great. So, going back to the Piktukowaq Environmental Health Interpretive Framework, I have to stress that these frameworks evolve. So, click to the next graphic. The framework evolved to include not only looking at what is needed to be a healthy individual, but what is needed for a healthy family, community, and Nation. The Piktukowaq logic model built on the earlier work to inform the remediation process. Next slide.

So, if we can revisit the best practices for Indigenous health impact assessment, I think the case study demonstrates this. Elana?

Dr. Elana Nightingale: A standardized, one-size-fits-all approach is not possible for health impact assessment. Distinctions-based, community-specific, health impact assessment frameworks, guidance, and tools are needed. And then our final conclusion is that Indigenous Peoples need authority in conducting health impact assessments, and they also need authority and a legal role in final decision-making on projects.

So, we hope that you've all enjoyed this webinar, and that you'll join us for the rest of our Health Impact Assessment Series. We do have one coming up on February 17th about what meaningful engagement looks like when you're doing community-led participatory research. We have one on March 3rd about Indigenous values versus Western economic values, so what values are the foundation for impact assessment processes? And then, as mentioned, at the end of March, on the 31st, we have a webinar that is focused specifically on distinctions-based health impact assessment and what it means to do distinctions-based health frameworks.

Dr. Diana Lewis: In closing, before we get to the questions, as we revisit the eight best practices, I remind people that these processes must be Indigenous led. These processes must determine potential impacts based on community-specific models of health and well-being. These processes must assess impacts relative to community-specific baseline health data. They must draw on Indigenous value-based methodologies and prioritize cumulative effects.

Come to meetings having done your homework to know what these cumulative effects might be. Don't expect the community to have the added burden of bringing you up to speed for what these cumulative impacts are. They must respect Indigenous jurisdiction over Indigenous knowledge systems. They must enhance relationships and communication between Indigenous peoples, government, and industry. Indigenous communities are overburdened with consultation that results in no action. Know the colonial history of the region you are working in. Don't ask the community to re-live this for your benefit, there are unlimited publicly available resources for you to access. Know



that health impacts of development are a serious burden on healthcare systems already over capacity and underfunded. Finally, integrate culturally relevant gender-based analysis and equity considerations.

We often get asked, “Where were the men in Pictou Landing First Nation?” They were there. They were supporting the women to do this work, to reclaim their Indigenous roles to care for their communities. Be inclusive of all members.

We hope you take what you've learned today to inform how you move ahead in your respective roles. Welalioq, tan teli pejitayoq. Thank you.

Denica Bleau: Thank you so much, Dr. Lewis and Dr. Nightingale, kinanâskomitin. So, participants, this is your opportunity to ask questions to the presenters. As mentioned in the chat box, please submit your questions in the Q&A section.

Alright, Dr. Lewis and Dr. Nightingale, so our first question is: how did you know you needed to develop the environmental health framework?

Dr. Diana Lewis: Thank you, Denica. So, what happened when we first started to meet with the women in Pictou Landing is they were sharing that whenever they tried to tell the Environmental Health Monitoring Committee that they were seeing health impacts in the community, the studies that the Environmental Health Monitoring Committee would pursue, through consultants or government studies, would conclude using Western frameworks that their health was fine. And so, there are methodologies that are followed that treat human and environment and land as separate, and we asked the one question we showed in the slides.

Indigenous people have a strong connection to land, to the air, land and waters around them, and when you disrupt that relationship, it has an impact on health from the way that Indigenous people understand health. So, we understand health as physical, mental, emotional, spiritual health, but we also are healthy when our families are healthy, our communities are healthy, when our lands and environments are healthy. And in all of the studies that were conducted – up to that point there were 70 studies – they never once took into consideration the connection between human and the environment.

And so when I showed that fish story, and the Elders sharing the story about within days all the fish – there was like a mass kill-off of all the fish in that body of water – at the same time, the emissions from the mill interacted with the lead in the paint on the houses in the community and the houses turned black. And so, they're seeing all the fish die, they're seeing what's happening to the homes in the community, and they become really frightened. And immediately, they're afraid to go to the



water, they're afraid to pick their berries, they're afraid to pick their medicines, and that has consequences for all those aspects of health that we looked at.

And the methodology that I used was to take how we know Indigenous people relate to their air, land, water around them, and we cross-tabbed them across the different aspects of health, and you could see that it impacted those different aspects differently. And so, we knew that the methodology had to take into consideration those connections or they would always just keep concluding that Indigenous communities are fine. And it took me some time working with the Elders in the community and working with an Elder to teach me my language. I wasn't a speaker and I didn't know the language to be comfortable with it, but thankfully we have enough Mi'kmaw people who publish, we have linguists who publish – Marie Battiste is from our community, she publishes – and so I could go to the literature and find the Mi'kmaw words, but I could also talk to the Elders in the community.

Because you're faced with two dilemmas, right? When you're doing research, you need to be backed up by peer-reviewed literature, but you're talking to the language speakers and what they were saying, when I took the framework to them and explained how I thought I saw how they were impacted by that experience of the fish dying in the first few days, they said, “Finally, someone understands what we're talking about.” And so, it was so crucial to the work we were doing then, and it's become really important as a way for people to visually see how Indigenous worldviews are structured so differently from Western worldviews, and the central piece of how we are healthy has to be that connection that gets put into different processes to look at health impacts.

So, that's how I knew something – I mean, I was doing my PhD for a long time. It didn't happen overnight, and it took me like two or three years to get comfortable with the language and to come up with that framework. So, it wasn't a quick process, for sure.

Denica Bleau: Yeah, thank you for sharing that, just the relationality, too, and the meaningfulness and holistic wellness. And yes, PhDs, they're long run.

So, our next question is: how did the work you did with the PLFN (Pictou Landing First Nations) women inform the work in the environmental impact statement on the remediation project?

Dr. Diana Lewis: So, that first round of data collection was 2014, and I finished my thesis in 2018 that definitively concluded the health of the community had been impacted. And when I finished my PhD, I presented to the women first. The women required me to present to the leadership of Pictou Landing First Nations, so, I did that, and the leadership directed me to present to the community. That process happened before my defense, before the data became publicly available through that process. And because of the relationship that I had developed for so long with the community, in 2016 – there's a bit of a complicated story to it, but I'll try and tell you quickly – around 2016, the effluent pipe that took the effluent from the mill, six kilometers under a harbour and over land, burst,



and it burst in an area that had sensitive ecological species, but also a burial ground. And so, the community went – they noticed the burst pipe before the mill or the government did, and so they went up there and they closed off the access to that area and they wouldn't let the mill or the government get in there. So, the mill had to turn off the effluent, and the community was steadfast that they were going to stay there until the province committed to closing the remediation facility. And it took about six days and finally the province, because they were getting all kinds of negative media over what had happened to the community, the Premier of Nova Scotia agreed that he would enact legislation to close the Boat Harbour Effluent Treatment Facility in 2020.

And in 2019, the Proponent, who is the province of Nova Scotia, was going to be doing the environmental impact statement for the Boat Harbour Remediation Project, and the community asked me back to help them with another phase of data gathering for the remediation process. And so, I worked with a Community Advisory that represented women and Elders and youth, and educators and health professionals in the community. And within a very short period of time, we were able to respond to the government timeline of having data input into the Environmental Impact Statement on that remediation. The remediation facility closed January 2020. Within months, the mill had to close because they had not arranged any other place to dump their effluent.

The remediation process went through the Environmental Assessment process, so the Environmental Impact Statement feeds into the decisions that are made by the Minister, and there was someone within the Atlantic Regional Office who saw the value of the work that was done in 2019. The Proponent had included it as Appendix S in the Environmental Impact Statement – it didn't inform the ecological risk assessment or the human health risk assessment – it was stand-alone at the back of the Environmental Impact Statement, but the study was referred to about 16 times in the report that went to the Minister. And it was the work of the community that made that difference, and it was them having that environmental interpretive framework that then evolved into that logic model that I shared, that informed the Environmental Assessment process.

Denica Bleau: Wow, that's such a powerful story, how it led to that, in supporting the community.

Our next question is: are these assessments conducted during a duty-to-consult process?

Dr. Diana Lewis: So, the assessments that I do are to inform Environmental Impact Assessment processes. So that's a whole process in itself. So, how the community uses their data in maybe other duty-to-consult processes is entirely their decision. The data that we collect for communities - because I'm now working with five other communities in Canada – it's their data. I don't dictate what they use it for, but what I develop it for specifically, initially, is to inform Environmental Assessment processes. So that the community – it's their data, they own the data and it informs how they make decisions.



Denica Bleau: Our next question: do you think there's an opportunity to make this assessment a legal requirement prior to the development of new projects on Indigenous lands?

Dr. Diana Lewis: You would hope so, right? If we make a strong enough case how this benefits, I think, everybody, to see what Indigenous people are trying to communicate, why would we not all want to work together? So why would the government not see the value in supporting communities to have similar processes in place? And they don't all look the same, we did say these are distinction-based processes, it's what developed for the Piktukowaq. I'm working with my own community, Sipekne'katik First Nation, just started working with them. Their framework will look a little bit different than the Piktukowaq, even though we're in the same traditional territory of Mi'kma'ki. But I'm also working with Dene, Cree, Métis, Haudenosaunee, and those frameworks all look different. And so, that's when we say these must be Indigenous led. I'm working with community advisories in each of these communities, I don't do anything unless they tell me what to do. And it's not just me, I have a research team, I have a lab – IndigenERA Lab – I have fantastic students that support me.

And the process – we'll be publishing about what this process is – because what we do is such a big process, it's hard to sort of summarize it quickly – but, in order to do this work, we not only work with the communities to develop baseline health data, we also get top-secret security clearance, so we can go into the research data centres to collect Statistics Canada data so we can do the comparative work, so we can show how the community compares to other population levels. We get access to the Canadian Cancer Registry. A lot of our communities are really concerned about cancer rates. Why would government not want to have our communities have that data? So, I think it's a win-win situation if we're looking at supporting communities to make free, prior, informed decisions. What better way to support them than to do this?

Denica Bleau: Yeah, and kind of going along with that question, the next question also talks about process. So, they asked: how much time in total did it take for the entire process, from planning to final reporting, and were there any costs associated to this project?

Dr. Diana Lewis: So, it takes a lot of time. I was invited to the community of Pictou Landing First Nation – and Elana, if you have anything to add, pipe in as well – but I was invited to go and meet with the Pictou Landing Native women. They knew me, they knew my family, the Elders in the community knew my parents and grandparents, so I had an easier introduction into the community because of that.

But knowing that, we still took a year or two to build relationships, to build that trust, and we didn't have the survey finished until the end of the second year. Those women have offered that survey to other Indigenous communities because they don't want what happened to them to happen to anybody else. So that survey now is with the five communities that I work with. We start at the



starting point looking at the Pictou Landing First Nations survey, and then we customize it to each community's needs. It took until 2014 to collect the data. So, that's that first process.

Now, in the process that we're working with, with the five communities – with Pictou Landing First Nation, in the first instance, I mentioned that we had gotten a large CIHR-funded research project. So CIHR is Canadian Institute of Health Research. We have the Institute of Indigenous Peoples' Health as one of those institutes. We get funding through the Institute of Indigenous Peoples' Health. We received, I think it was about \$450,000 to do that process. Since then, I have successfully applied to CIHR again (the Institute of Indigenous Peoples' Health), and I received \$1.3 million, which allows me then to do the work with more communities.

And so that's – it sounds like a lot of money, it takes a lot to support these processes. It takes a lot of time. We have students who need projects for master's degrees and PhDs, so we can tap into resources and really leverage the money we have to make the project bigger. So yeah, it does come with a big commitment of time. I mean, I started working with Pictou Landing First Nation in 2010. We're still meeting with them. We had a meeting on Monday night. We still meet with the women, and we now have the children that were attending the meetings in 2010 are now counselors, and principals of schools, and environmental technicians, and biologists. Like, it really has inspired the children in the community to get involved in these processes.

The process in 2019 with Pictou Landing First Nation: the province gave Pictou Landing, I think it was about three months, to participate in the preparation of the Environmental Impact Statement. Pictou Landing leadership said, “We'll do it, but it's going to cost you,” and they worked out an agreement. And I flew down from Ontario to Nova Scotia every weekend for three months and worked with the Community Advisory, and we met the province's deadline.

It ended up with, I think it was about 200 – and I'm forgetting exactly – but similar to the first survey, it was about 280 questions, let's say. But we had electronic equipment this time to do the survey, and we ended up – we had targeted 300 people, we did a blitz in one weekend, we did the survey. And we targeted that on any given weekend, maybe about 300 of the whole population would be home. And we got 287.

So, they're intensive, they do cost money, but the more we duplicate this process, the less time and money it should take. That's what I'm thinking.

Denica Bleau: Wow, how beautiful to have that intergenerational continuance, though, of the youth then being in leadership. That is so cool, throughout the process.



Okay, so our next question is: Dr. Lewis, you mentioned that people who are stressed often respond that they feel they are happy. What would be a reference resource to understand this phenomena a bit better?

Dr. Diana Lewis: I had to go to publications about the work being done at Aamjiwnaang. If anybody knows Aamjiwnaang, it's in Sarnia, Ontario. It's a reserve that is surrounded by Chemical Alley, I think they call it, and the studies that I looked at said when people hear warnings that there's chemical releases, where they are supposed to take cover, it's become sort of a joke now, and it's just sort of a coping mechanism that people use in stressful situations. You can look at my thesis, it's online. We had embargoed the thesis for two years after the thesis defense because we were still working with the community and wanted the community to be really conversant in the data before it went public. This is a good question.

Denica Bleau: Yeah, so this question is: did any/many community members work at the mill, and was there any concern about health effects on the mill closing due to loss of jobs, income, etc.? Or was the community fairly homogenous in their perspective that the closing of the mill was positive for health?

Dr. Diana Lewis: So, shockingly, not shockingly, only one person from the community worked at that mill out of about 500 employees. So, they were paying all the price of the negative consequences of the mill and not participating in the benefits from the mill.

The community experienced a lot of environmental racism. They were targeted when the effluent facility was going to close, and then subsequently when the mill had no choice but to close. They didn't experience any of the employment benefits, yeah.

Denica Bleau: Yeah. How could you see this applying to major Canadian building projects that the government is prioritizing now?

Dr. Diana Lewis: As I said, the more we duplicate this methodology, the faster it should become. We know where the data is, we know how to extract the data now, we know how to work with the data sets, we know how to work with the communities, to develop surveys. We know how to analyze the data. We've got a great group of people already trained in doing this work in a good way, including lots of Indigenous trainees as well that go back to their communities.

And so, I think that it would be wonderful if the government were to look at what we've done here as a possible solution. If they're going to speed up the process, then they need to support the communities to be able to do this kind of work.



Denica Bleau: Yeah. Our next question: how do you feel that the Indigenous languages are key in supporting research to assist in the worldview translations?

Dr. Diana Lewis: So, we are developing cultural frameworks with the communities that we work with. So, I said, the Piktukowaq framework will work to a certain extent for Sipekne'katik, but there's differences in the language between even traditional districts within Mi'kma'ki. We have worked with the – it's called *Yukwanulha Yukwanikubliyo*, which are the women in Oneida – and they – I hope I pronounced that properly – we are incorporating Haudenosaunee Oneida words into the work that we do with them. We work with Mikisew Cree, Athabasca Chipewyan, and Fort Chipewyan Métis, and they have their languages that inform who they are as people and their connections to their territory. So, Indigenous languages are very important to supporting this research.

And I told you about my process, I'm not a Mi'kmaw speaker. I know that what I learned during that period of time. I took Mi'kmaw language online with an Elder in Cape Breton, and we did it. She had a little laptop and I had my laptop, and we just communicated that way till I felt comfortable. But it's very key in supporting the work that we do, and we work with language speakers so that we can do that.

Denica Bleau: Yeah, that's such a great process with all the different communities and then understanding that those contexts are going to rely on those languages as well.

So, are you able to comment on what you learned about data ethics and sovereignty in your literature and case study, especially for projects that would not be going through academic/university ethics approvals? And then the second part of the question is: who, even within a community, would decide what to collect, how it would be stored, who and how it would be shared?

Dr. Diana Lewis: So, of course, we have to do university ethics – it's part of our requirement as academics – but everything that I do, I sign research agreements with the communities. It honours OCAP® [ownership, control, access, and possession] and OCAS [ownership, control, access, and stewardship]. The communities own the data. We steward the data until such time that they're able to house the data themselves. We have, in our research agreement, it's very clearly data management agreements about repatriating the data back to the community. We never shared the data with anybody, unless at the direction of the individual communities.

And when we think about ethics from the community perspective, it's not how you think about it with university ethics. University ethics is looking at protecting themselves from liability. In community, their ethics process determines whether they're comfortable in working with you or not. And if they say that they're comfortable to work with you, you have passed their ethics. In Mi'kma'ki, we have a Mi'kmaw ethics watch. In some provinces, they do have formal ethics. ACFN (Athabasca Chipewyan



First Nation) has just imposed an ethics process for their community. So, it's all different. I feel that if the community is comfortable with working with you, and they don't have an internal ethics process, then allowing you to work with them is their ethics. And if there is a formal process, then we would honour that as well. And, as I said, we would only share it at the direction of the community advisories that we work with.

Denica Bleau: Kind of with that question: how would that information be stored? Is it community-dependent? Kind of the second part of that question.

Dr. Diana Lewis: Do you want to take one, Elana?

Dr. Elana Nightingale: Oh, sorry, I was just looking for a link to your thesis for a chat question.

Denica Bleau: So, we were just talking a little bit about OCAP, the storage of information, the difference in university ethics versus community ethics, so a community accepting you is a form of ethics. And so the second part of this question was just talking about how would that information be stored, and then who would store it and how would it be shared? So, we kind of talked about how it would be shared, but how would that information be stored in communities? Is there a different process?

Dr. Elana Nightingale: Yeah, I feel like you're the best to answer this question, because you've been working for so long on the data infrastructure.

Dr. Diana Lewis: Yeah, so we were funded – I didn't just get money from the Canadian Institute of Health Research, I got funding from Canada Foundation for Innovation, Ministry Colleges and Universities, the University of Guelph, to establish my lab. And my lab is structured so that we meet HIPA [Health Information Protection Act] requirements and international standards for protecting data. So, we have data that's stored on secure servers in our lab, and with no internet connections or ability of people to put flash drives in and save data on any sources, then we restrict who can see the data. And then once we clean the data and present it back to the community, they give us permission then to put it into reports that might go more public. So, we will store it here until such point that the community has the infrastructure, the software, to do this work.

We use the same software that First Nations Information Governance Centre uses when they do their survey work. The survey is very expensive, the data software is very expensive, but we have the funding to be able to secure the software that we need. And then at some point, if the communities have the infrastructure in place, we have it in our data research agreements that we will repatriate it back to the community. I think that should answer.

Denica Bleau: Yeah, thank you for that, Dr. Lewis.



So, Dr. Nightingale, you might be able to answer this as well: did either of the presenters in their work come up against any of the poverty of community and the damage of industrial impacts on the lands and waters? If so, how did you move forward?

Dr. Diana Lewis: Do you want me to say anything?

Dr. Elana Nightingale: I mean, I can speak to other research projects that I've worked on and been part of, but this isn't something that I directly encountered in this work, since I was mostly focused on the findings from the literature. I don't know if you want to start with the experience of Pictou Landing?

Dr. Diana Lewis: Yeah, I think that there's an assumption that all of the communities that are impacted are poor. That's not necessarily the case, so I wouldn't start with that premise. I don't quite know how to answer, like, how we handled coming up against poverty of community. The reality is all the communities are different, and you have to be able to adjust to whatever social, economic conditions you encounter when you go to community. You have to be flexible.

And yeah, damage from industrial impacts; I showed the slide of that Effluent Treatment Facility beside Pictou Landing First Nation, their shore – the effluent washes up against the shores of the First Nation. You saw what it looked like, and we had a tour around that Effluent Treatment Facility. Yeah, it's very difficult work and you see a lot of impacts.

Denica Bleau: So, we have time for about one or two more questions, but this question's a little bit of a longer one: as some projects can be larger, do you have some insight for when multiple First Nations are involved but may not be in agreement to an approach? It is important to have consultation from the beginning, but there can be challenges depending on what the anticipated area and communities impacted would be. Kind of different perspectives from different communities.

Dr. Diana Lewis: Yeah, I haven't worked with [...] maybe if you're working with a tribal council and you've got, let's say, six First Nations that you're working with, how might that be a challenge? I haven't had that experience. The experience I have is working in a community that is two First Nations and a Métis community. So that's Fort Chipewyan, which is Athabasca Chipewyan, Mikisew Cree, and Fort Chipewyan Métis, and we work individually with each of those communities.

So, yeah, I don't have any insight to give you about how that might work. I think it probably would have a lot of challenges because they would proceed at their own pace.

Denica Bleau: There's another question that came up in the chat that I noticed earlier that's not in ours, but someone had asked how you spoke about earlier with recognizing cancer increases, etc. Were



there any specific diseases or health determinants saying it that way, that came up, that you'd recognize within the work? Disease-wise or as impacted from the land?

Dr. Diana Lewis: You know, while you – the first few words of that question – I have to admit, I wasn't focused on you. I was looking at what that next question was, so just repeat the question.

Denica Bleau: Yeah, sorry, there's two little chat boxes going on. There was a question in the chat box earlier that had asked, similar to how you spoke about cancer, recognizing the impact of cancer: was there anything that came up within the research that focused on other diseases that had come up as a result of effects on land and water?

Dr. Diana Lewis: So, Pictou Landing First Nation was worried about skin conditions – I'm just trying to think what's publicly out there and what's not publicly out there – worried about skin conditions from exposures, people getting boils and things. And we collected data on that to see like were they environmentally induced or were they sort of allergic reactions to something? And we do collect a lot of data for the communities, and unless it's in published form, I wouldn't be really comfortable sharing the specific data from the communities.

Denica Bleau: Yeah, thank you for sharing that, and also just respecting communities' privacy there.

All right, this might be our last question: any suggestions on how to have discussion with funders regarding recognizing the need to respect community engagement and time versus granting timelines in research?

Dr. Diana Lewis: Elana, I feel like maybe you could handle that question.

Dr. Elana Nightingale: Sure. Funders and the need to respect community engagement. I think that's also a big challenge that you've been working on for a long time, Dee, and you've spoken to that today, just the timeline and the time it takes to do this work in a good way. As you mentioned, it takes years just to build relationships, and that's a community that you are a member of. For me, as a settler scholar, that time of relationship building and initiating the work takes even longer. In my own PhD, it takes more than half the time just to develop those relationships and start working with a new community. So, when you think about the funding timelines, especially for students, there's such a mismatch there, and it's such a challenge to do the work. I'm sure you know Denica, too, it's such a challenge to do the work in a good way, and in a way that meets community needs when you're feeling the pressure to do your annual reporting and finish up within a grant timeline.

So, I think that's a bigger question in terms of research funding, and the direction that moves as we really look to fund research projects that come from community and are initiated by community.



Denica Bleau: Yeah, thank you for that answer. Dr. Lewis, did you want to add anything to that as we start to wrap up?

Dr. Diana Lewis: Yeah, I would say that what Elana said is very true in terms of government funding timelines. They're flexible to a certain extent, and you can work with government on that flexibility a little bit, but it puts a lot of demands on people when the funding is coming from government.

My students get funded through scholarships, and Indigenous Mentorship Networks have scholarships, as well as Ontario Graduate Scholarships, for example, but there's timelines to those scholarships. Usually master's [is] two years, PhD, four. This work, I just had four master's students finish last term. Two of them had to go over the timeline because they just couldn't finish the work within the timelines that universities have, and then they run out of their scholarship money. So, this is a real challenge on so many levels. Yeah.

Denica Bleau: Yeah. Thank you, Dr. Lewis and Dr. Nightingale, for today's presentation, and just interweaving so many important parts of holistic wellness within the community, but also recognizing some barriers that are still focused, even within the funding sphere. So, thank you both, and thank you also to our background tech team.

We encourage everyone to complete the webinar survey after, and the link is in the chat. You'll also receive an email with the link tomorrow. Thank you to everyone who attended, and again, thank you so much, Dr. Lewis and Dr. Nightingale, for your time in this, but also all the work and heart that you continue to put into this work. So, thank you, kinanâskomitin.

Dr. Diana Lewis: We'la'lin. Welalioq.

Dr. Elana Nightingale: Thank you, Denica.

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