SELF-HARM AND SUICIDE IN FIRST NATIONS COMMUNITIES IN SASKATCHEWAN

FULL REPORT

October 2022

FEDERATION OF SOVEREIGN INDIGENOUS NATIONS
& THE SASKATCHEWAN HEALTH QUALITY COUNCIL

Acknowledgements

Technical and Cultural Advisory group members:

Cathy Stonechild – Starblanket Cree Nation
Cory Cadotte – Keeseekoose First Nation
Janice Straightnose – Keeseekoose First Nation
Jayleen Poitras – Piapot First Nation
John Mirasty – Flying Dust First Nation
Jon Whitestar – Piapot First Nation
Kristen Starr – Starblanket Cree Nation
Rubyn Norman – Flying Dust First Nation
Vanessia Swiftwolfe – Onion Lake Cree Nation
Velma Night – Moosomin First Nation
Wynter Taypotat – Kahkewistahaw First Nation
Tribal Chief Isabel OSoup – Yorkton Tribal Council
Elder Fred Campion
Evelyn Robillard
Gilbert Kewistep
Glenn LaFleur
Judy Pelly
Herman Michell
Lillian McKay
Sheila Chaboyer
Terrence Pelletier
Tori-Lynn Wanotch

FSIN leadership and staff:

David Pratt –Vice-Chief
Rhonda Bear – Director, Youth Empowerment
Brandy Johnson – Administrative Assistant, Youth Empowerment
Laryssa Sutherland – Senior Research Assistant
Delores Netmaker – Executive Director, Education
Tania Lafontaine – Director, Youth Empowerment
Rhonda Bluehorn – Director, Education
Kyle Prettyshield – Executive Director, Health
Cheryl Thomas – Director, Youth Empowerment
Tina Pelletier – Executive Director, Communications

HQC leadership and staff:

Patrick Falastein – Program Director
Jacqueline Quail – Senior Researcher
Shasta Lysohirka – First Nations and Métis Health Lead
Emiliana Bomfim – Researcher
Heidi Abramyk – Manager of Marketing and Communications
Jennifer Wright – Improvement Lead
Riley Woodman – Improvement Lead
Hubert Alimezelli – Researcher, First Nations and Métis Health
Lesley Porter – Senior Marketing and Communications Consultant

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For enquiries about this report, please email: pfalastein@hqc.sk.ca
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Foreword

"Resilience" and "resiliency" are words that First Nations people use to describe recovery from inter-generational trauma while enduring ongoing colonial, discriminatory and racist policies in Canada. If we hope to achieve position change of ongoing disparities, then we must address the root causes that have led to this epidemic within our communities.

We recognize that to address the complex issues of self-harm and suicide within our communities, we must also create a new narrative that challenges the use of "resilience" or "resiliency" in our vocabulary that define who we are as a people. To say this is a new issue is inaccurate as this is a reality that has faced our youth for a long period of time, not to mention the limited and lack of funding our communities that are part of the 74 First Nations in Saskatchewan. Notably, the time for healing will arrive only through community-led, and community-based initiatives centered in culture, language, and identity. Engagement requires trust, and the colonial constructs that have impeded community healing continue to be perpetuated in systems that are not our own, nor does it serve First Nations in a positive manner.

A commitment from federal and provincial governments for on-going, increased funding for mental health supports will increase the likelihood of success for our communities. A First Nation health-care system that is based on our inherent and Treaty Rights will lay the fundamental foundation for a collaborative, collective governmental relationship. We know that limited resources will exacerbate the potential for healing, and only increase the incidents of suicide, and self-harm. Our knowledge of our own lived realities extends beyond the themes outlined in the report, and we hope that once shared, it will be a catalyst that shifts the First Nations' worldview as the original and primary source for healing.

Chief Bobby Cameron (pictured above) and **Vice Chief David Pratt**

Federation of Sovereign Indigenous Nations

Foreword

Data on mental health and suicide among First Nations People in Saskatchewan are very concerning. The partnership between the FSIN and HQC has led to a deeper appreciation of just how deeply troubling this issue is for First Nations People.

This research has provided the impetus for greater and sustained action and highlighted the importance of collaboration and partnership between First Nations organizations, institutions, and communities, and research and improvement institutions such as HQC.

We are grateful for the work of the members of FSIN's Technical Advisory Group and HQC's Cultural Advisory Group; their guidance and contributions helped move this work forward.

We hope that this report will be a catalyst for the change that is needed to close the disparity that exists between First Nations Peoples' rates of suicide and self-harm and the rest of the non-First Nations population in Saskatchewan.

Tracey Sherin

Chief Executive Officer

Saskatchewan Health Quality Council

1.0 Introduction

1.1 Research Objectives

This research project had four main objectives:

(1) Describe the occurrence and trajectory of self-harm and mortality in the 20-year period from 2000 to 2020.
(2) Describe the occurrence and trajectory of hospitalizations due to harm, assault, mental health and addictions, injury, motor vehicle accidents, and falls in the same time period.
(3) Explore the lived experiences of First Nations People in relation to the differences in mortality and self-harm inpatient hospitalizations between Status First Nations people and the rest of the Saskatchewan population.
(4) In partnership with FSIN, engage First Nations communities in the dissemination of findings and in building capacity to address self-harm and suicide using community development tools based on the drivers of suicide and self-harm.

1.2 Background

Despite representing only about five per cent of the general population, Indigenous people in Canada have consistently had disproportionately high rates of suicide that are often multiple times the rates in the non-Indigenous population.[1,2] Alarmingly, the rates among Indigenous youth aged 15-24 have been found to be consistently at least five to six times higher than the rate seen in the general Canadian population.[3] These trends are consistent with the Saskatchewan numbers, where the rates of suicide within the First Nations population are

[1] Statistics Canada. Statistics on Indigenous peoples. [Internet]. [Cited 2022 Feb 10]. Available from: https://www.statcan.gc.ca/en/subjects-start/indigenous_peoples

[2] Government of Canada. Suicide Prevention in Indigenous Communities. [Internet]. [Cited 2022 March 2]. Available from: https://www.sac-isc.gc.ca/eng/1576089685593/1576089741803

[3] Government of Canada. National Aboriginal Youth Suicide Prevention Strategy (NAYSPS) Program Framework [Internet]. [Cited 2022 Jan 10]. Available from: https://www.sac-isc.gc.ca/eng/1576092066815/1576092115467

disproportionately higher than in the rest of the population in the province.[4] The rate of suicide in First Nations People in Saskatchewan was five times higher (55.9 per 100,000) than in non-First Nations People (12.1 per 100,000).[4]

In the general Canadian population, risk factors for suicide include depression, psychosis, previous suicide attempts, recent hospital discharge, substance use, lack of access to services, and lack of social support.[3] Socioeconomic status factors such as extreme poverty, poor housing conditions, and homelessness both on- and off-reserve also play an important role.[3] In addition to these risk factors, intergenerational trauma caused by colonization and mediated by the residential school system has had lasting and undeniable impacts on the mental health and well-being of First Nations People.[3,5,6,7] Unfortunately, the residential school system was replaced by the Sixties Scoop, which continued to remove First Nations children from their

[4] Federation of Sovereign Indigenous Nations (FSIN). Saskatchewan First Nations Suicide Prevention Strategy. 2018 May 24. Available from: DOI: 10.13140/RG.2.2.28183.68000

[5] Government of Canada. The Residential School System. [Internet]. [Cited 2022 Jan 19]. Available from: https://www.canada.ca/en/parks-canada/news/2020/09/the-residential-school-system.html

[6] Mignone J, O'Neil J. Social capital and youth suicide risk factors in First Nations communities. Can J Public Health. 2005 Jan-Feb;96 Suppl 1(Suppl 1):S51-4. doi: 10.1007/BF03405317. PMID: 15686154; PMCID: PMC6976204.

[7] Lemstra M, Rogers M, Moraros J, Grant E. Risk indicators of suicide ideation among on-reserve First Nations youth. Paediatr Child Health. 2013 Jan;18(1):15-20. doi: 10.1093/pch/18.1.15. PMID: 24381486; PMCID: PMC3680266.

families.[8,9] This practice of removal of First Nations children from their families continues today under the foster care system.[10]

In Saskatchewan, Indigenous children continue to be overrepresented in Saskatchewan's child welfare system, with studies showing that Indigenous children are more likely than non-Indigenous children to be removed from parental care and placed in the foster care system and more often, where they remain much longer, and in the end, are less likely to be reunited with their families.[11] This crisis has significant implications on the mental health and well-being of Indigenous People from a very young age and places them at a higher risk of self-harm and suicide.[12] It is therefore not surprising to see that Saskatchewan First Nations People have consistently had higher rates of suicide compared to Saskatchewan non-First Nations and the rest of Canada except for Nunavut as seen in figure 1. During the COVID-19 pandemic, there has

[8] Elias B, Mignone J, Hall M, Hong SP, Hart L, Sareen J. Trauma and suicide behaviour histories among a Canadian indigenous population: An empirical exploration of the potential role of Canada's residential school system. Soc Sci Med [Internet]. 2012;74(10):1560–9. Available from: http://dx.doi.org/10.1016/j.socscimed.2012.01.026

[9] Barker B, Sedgemore K, Tourangeau M, Lagimodiere L, Milloy J, Dong H, DeBeck K. Intergenerational trauma: The relationship between residential schools and the child welfare system among young people who use drugs in Vancouver, Canada. Journal of Adolescent Health 2019; 65(2):248–254. Available from: https://doi.org/10.1016/j.jadohealth.2019.01.022

[10] Sinclair R. Identity lost and found: Lessons from the sixties scoop. First Peoples Child Fam Rev. 2007;3(1):65–82. Available from: https://www.erudit.org/en/journals/fpcfr/2007-v3-n1-fpcfr05299/1069527ar/

[11] Saskatchewan Advocate for Children and Youth. Desperately Waiting. March 2022 Special Report. Available from: https://www.saskadvocate.ca/content/desperately-waiting

[12] Kirmayer LJ, Brass GM, Holton T, Paul K, Simpson C, Tait C. Suicide among Aboriginal people in Canada. Ottawa Aborig Heal Found. 2007;

been an increase in self-harm across Canada, and Saskatchewan, and a disproportionate increase among Saskatchewan First Nations.[13,14]

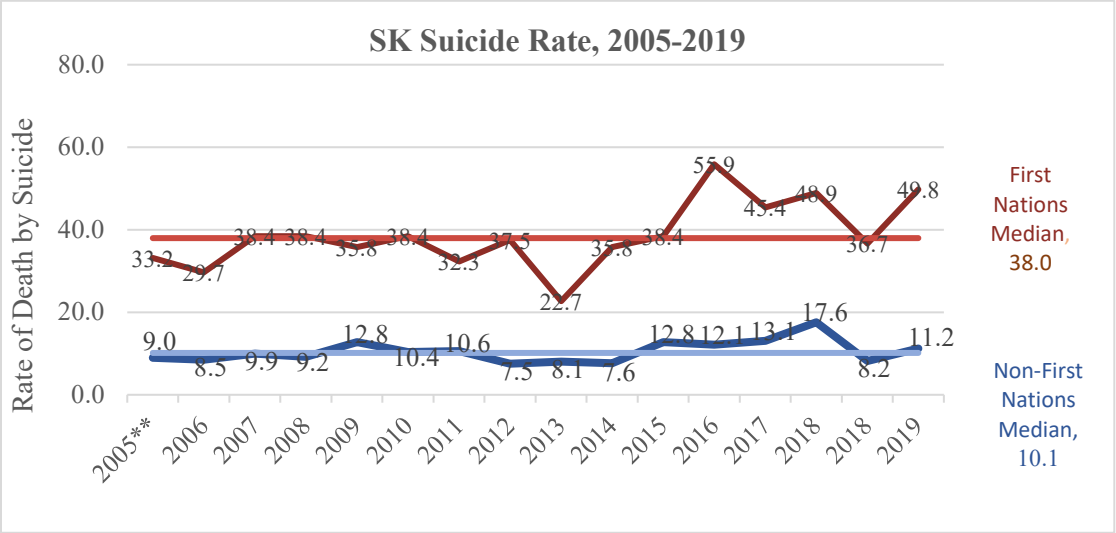


*Figure 1:Rate of Death by Suicide per 100,000 population (** date when publication of statistics on suicide deaths in SK started)*[15]

In 2016, the rate of death by suicide among First Nations People in Saskatchewan was 4.3 times higher than the rate among non-First Nations People in the province. However, the gap was even more significant among First Nations youth, and particularly alarming for First Nations teenage females.[4] Overall, 25 per cent of all suicides by First Nations People are by teenagers, compared to six per cent among non-First Nations People, varying among male and female teenagers and higher than that of non-First Nations.[4]

[13] Power T, Wilson D, Best O, Brockie T, Bourque Bearskin L, Millender E, Lowe J. COVID-19 and Indigenous Peoples: An imperative for action. J Clin Nurs. 2020 Aug;29(15-16):2737-2741. doi: 10.1111/jocn.15320. Epub 2020 May 29. PMID: 32412150; PMCID: PMC7272911.

[14] Hawton K, Lascelles K, Brand F, Casey D, Bale L, Ness J, Kelly S, Waters K. Self-harm and the COVID-19 pandemic: A study of factors contributing to self-harm during lockdown restrictions. J Psychiatr Res. 2021 May;137:437-443. doi: 10.1016/j.jpsychires.2021.03.028. Epub 2021 Mar 18. PMID: 33774538; PMCID: PMC8561648.

[15] Saskatchewan Coroners Service. Suicides by Year, Sex and Age Group 2005 to 2019. 2019. Retrieved February 5, 2020 from https://publications.saskatchewan.ca/#/products/90866

FSIN Vice-Chief David Pratt noted the alarming trend of suicide in First Nations communities across Saskatchewan and called for a "transformed First Nations health-care system that is based on inherent and Treaty Rights" and for "the government to work collaboratively with First Nations to reduce First Nations lives lost to suicide."[4] Vice-Chief Pratt called for "federal and provincial policies contributing to the lack of mental health supports for First Nations" to be addressed as stated in the 2020 Saskatchewan Suicide Prevention Plan's Pillars for Life.[4]

Nested within the Life Promotion model, the Saskatchewan First Nations Suicide Prevention Strategy developed and implemented by First Nations People became an important tool to help address the issue of suicide within First Nations communities. This research conducted in partnership with Saskatchewan's Health Quality Council falls within FSIN's commitment to understand and explore predisposing, contributing, and precipitating risk factors for suicide and self-harm. This works also fits into the Government of Saskatchewan's mandate and commitment as stated in Pillar Five (Research, Surveillance, and Evaluation) of the 2020 Saskatchewan Suicide Prevention Plan by enhancing through research the province's capacity to "undertake mental health, addictions, self-harm, and suicide epidemiological analysis and surveillance."[16] This research also draws from the work that was done for the National Aboriginal Youth Suicide Prevention Strategy (NAYSPS) Program Framework in identifying drivers for suicide and self-harm and suicide.[3]

[16] Government of Saskatchewan. Pillars for Life: The Saskatchewan Suicide Prevention Plan. 2020 May. Available from: https://www.saskatchewan.ca/government/health-care-administration-and-provider-resources/saskatchewan-health-initiatives/suicide-prevention-plan

2.0 Methodology

This section summarizes the methodological approaches used in this research. However, a detailed explanation of the methodology can be found in Appendix 1. The research is grounded in three models or theories: Population health, the socioecological model, and critical race theory all contribute to key aspects of the complex issue of suicide and self-harm in First Nations communities. To understand the lived experiences of First Nations People in relation to mortality and self-harm inpatient hospitalizations and their magnitude, the research team gathered and analyzed data using two methods as listed below.

2.1 Quantitative Methodology

We used Saskatchewan's administrative health data to identify and describe differences in mortality and self-harm inpatient hospitalizations between Status First Nations and everyone else, which includes non-Indigenous Canadians, immigrants, Métis, and non-Status First Nations people.[17] Here's how we defined and analyzed numbers of death, hospitalizations, self-harm, assault, and mental health and addictions:

- *Death*: The number of people who died during a calendar year. Death was reported in five-year groupings to prevent reporting of small numbers and uphold data privacy and confidentiality.
- *Hospitalization:* This was defined as admission to a hospital for care; individuals with multiple diagnostic codes in the same hospitalization were identified as having one diagnosis. Similarly, we used the primary hospitalization for anyone who had multiple hospitalizations related to the same self-harm incident as can occur when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge (see appendix for the definition of an episode-of-hospitalization).
- *Self-harm:* Self-harm was defined as an episode of self-inflicted injury or pain.

[17] Everyone else is used to refer to the rest of the Saskatchewan population which could include Status First Nations due to the self-declared nature of how this variable is captured. For more details see the study limitations section and Appendix 1.

- *Assault:* We identified hospitalizations with at least one intentional injury inflicted by others.
- *Mental Health and Addictions (MHA):* We restricted our investigation of MHA issues to schizophrenia and psychoses, and mental and behavioral disorders due to psychoactive drug use. We identified hospitalizations with at least one of these codes in any of the 25 diagnostic fields. A person with multiple and different diagnostic codes for MHA in the same hospitalization was identified as having one hospitalization. Similarly, a person with multiple hospitalizations related to the same MHA event, as can occur when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge, was identified as having one hospitalization.

2.2 Qualitative Methodology

We shared quantitative results with community to interpret data and sought input to inform/guide qualitative inquiry. We conducted semi-structured interviews of 10 key informants with lived experience of self-harm or suicide to explore why self-harm rates among First Nations People were significantly and disproportionately higher than for the rest of the Saskatchewan population. Key informants' backgrounds included women, men, young adults, community leaders, elders, and members of Northern and Southern communities. Key informants' stories and experiences were used to explore and understand the high rates of self-harm among First Nations teenage girls, and why they are higher than in both non-First Nations teenage girls and First Nations teenage boys. Follow-up questions included the roles that individuals, families, communities, and the system play in self-harm based on the socioecological framework guiding this research.

Key informant interviews were recorded, transcribed, and analyzed, in addition to the notes that were taken during the interview. A thematic analysis was used, and common themes emerged from the stories shared by the key informants during the interviews.

3.0 Key Findings

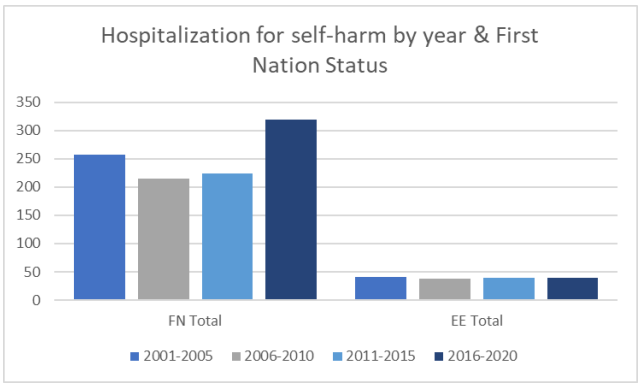
This section highlights the main findings of the analyses. A more detailed description of the findings can be found in Appendix 2.

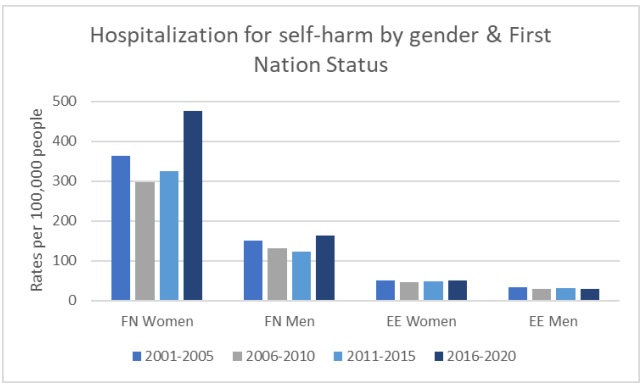
3.1 Findings from the quantitative health data

The main findings for the period from 2000 to 2020 are:

- Teenage and Status First Nations females aged 15-25 years had the highest rates of hospitalization for self-harm. Their rates were higher than other Status First Nations females and males, and everyone else in Saskatchewan (see Figure 2).
- Status First Nations females consistently had higher rates of hospitalization due to self-harm than Status First Nations males and everyone else in Saskatchewan.
- The rates of hospitalization for self-harm were significantly higher for Status First Nations People than for everyone else; on average, rates were more than seven times higher for Status First Nations females and over four times higher for Status First Nations males.
- The rates of hospitalization due to injury were highest in the two former health regions[18] in Northern Saskatchewan and the Athabasca Health Authority
- The rates of hospitalization due to mental health and addictions were highest in Saskatchewan's three southernmost former health regions.

[18] In December 2017, the 12 geographical health regions across Saskatchewan amalgamated and became the Saskatchewan Health Authority. This singular organization replaced the former regions for health service delivery in the province. The two former health regions in Northern Saskatchewan were Keewatin Yatthé, and Mamawetan Churchill River in addition to the Athabasca Health Authority





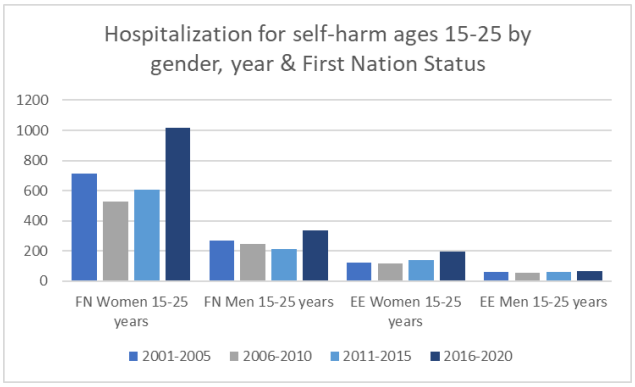


Figure 2: Hospitalization rates for self-harm per 100,000 people (FN stands for Status First Nations and EE stands for everyone else and 19-year average for 2000-2020)

3.2 Findings from the qualitative interviews

This section highlights the main findings gathered from the key informant interviews. Five themes were identified from the interviews with 10 key informants: colonization, trauma, resilience, healing, and education. Colonization and trauma were viewed or reported to consistently have a negative impact on First Nations People and communities, whereas resilience, healing, and education were described more in positive terms.

As seen in Figure 3, there is a natural web of relationships between the various themes and their corresponding sub-themes. Key informants most often described the theme of colonization in the context of the theme of trauma. The trauma was often described as leading to a resilient response that then contributed to the healing of First Nations People and communities. Learnings from that healing journey led to a sense of renewed appreciation for

First Nations land, culture and language, and renewed calls for education at various levels within and outside First Nations communities. Figure 3 summarizes all the themes and sub-themes found in this study.

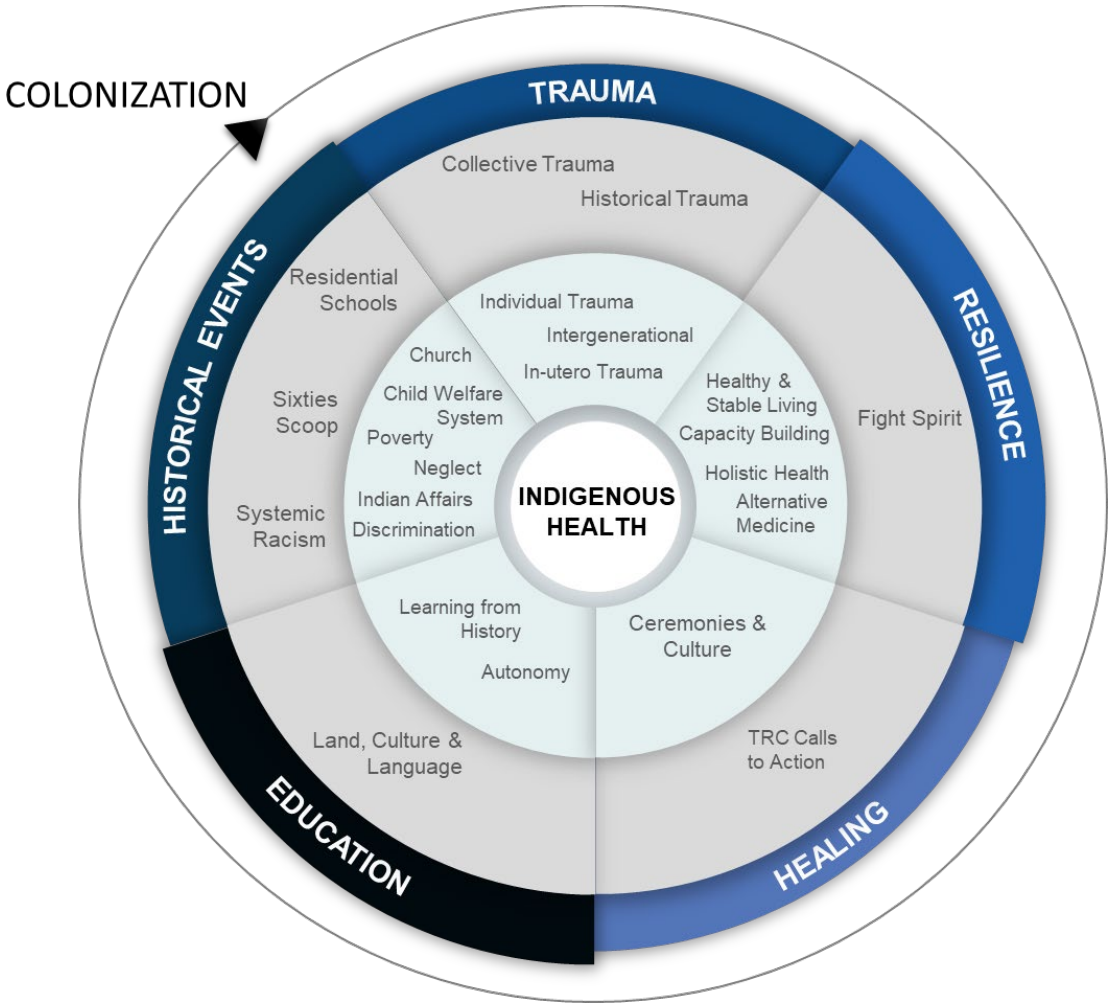


Figure 3: Themes and sub-themes from qualitative interviews

Colonization

The theme of colonization was pervasive throughout all key informant interviews. The people with lived experience we spoke with confirmed that colonization continues to have ongoing effects on the lives of First Nations People.

Residential Schools and Sixties Scoop

European settlers forced their theories and hierarchical ways on Indigenous Peoples. This was the beginning of the Crown dispossessing Indigenous Peoples of their land and relocating them to reserves, which were often undesirable areas that lacked resources and soil amenable to farming. European settlers subsequently sought to exterminate the culture of Indigenous People by a series of forced removal of children from their families to residential schools or to Euro-Canadian families during the Sixties Scoop. Indian Affairs – now called Indigenous Services Canada – and the church (Roman Catholic and Anglican) became institutions that facilitated to a large extent this cultural genocide.[19] As stated by some of the key informants, these practices continue today with discriminatory government policies such as the Indian Act and other social services that lead to the removal of First Nations children from their families.[20]

> "*We have a person with poor mental health because they don't understand why it is that they're in distress in the first place or why the post-traumatic stress is in. And we go to, you know, we take classes, and we understand the, you know, the intergenerational effects of residential school and colonization.*"
>
> "*It was that age and, you know, with my age and those a little older than me, we went to residential schools, and they took away what our grandfathers had. They took away the medicines, the medicine of healing, the medicines of hearing and listening to one another. And we don't have that now. We don't trust society.*"

[19] Government of Canada. Residential Schools Settlement. [Internet]. [Cited 2022 Jan 17]. Available from: https://www.residentialschoolsettlement.ca/settlement.html

[20] McKenzie HA, Varcoe C, Browne AJ, Day L. Disrupting the continuity among. residential schools, the Sixties Scoop, and child welfare: An analysis of colonial and neocolonial discourses. The International Indigenous Policy Journal. 2016;7(2). Available from: https://doi.org/10.18584/iipj.2016.7.2.4

"So, things really haven't changed that much in terms of the supports that are needed in our communities in the aftermath of residential schools. And of course, we had these schools as well, right? And then, of course, the Sixties Scoop and then the child apprehensions, when families were breaking down."

Systemic Racism

The impact of systemic racism was described by key informants as present in every facet of First Nations life. The historic and ongoing discrimination of First Nations People continues to have a significant and negative impact on their health and well-being. Systemic racism, as a by-product of colonization, created an incredible amount of trauma that became intergenerational in nature. Subsequent refusals to address the historical wrongs, on the part of subsequent governments and institutions, perpetuates racism toward First Nations People.[21]

"Well, a big one, I guess it's poverty, right? You know, that's a big factor. Again. Why is it, you know, our people in our lives, like we're living in a Third World country and this rich country, this rich country that we have, and Canada knows that, we all know that. And, you know, give somebody a job and that put food on a table. And you know, the stress, the stress of not being able to feed your families in the stresses of getting cut off with welfare and that. And where is that going to leave you?"

Trauma

As described by key informants, trauma has been experienced in the form of pain and anger for losing one's culture and identity. This has led to poor health outcomes, lateral violence, and abuse, as seen through acts of suicide, suicide attempts, and self-harm, with family and community members often struggling to understand each other's pain.

[21] McQuaid RJ, Bombay A, McInnis OA, Humeny C, Matheson K, Anisman H. Suicide ideation and attempts among First Nations Peoples living on-reserve in Canada: The intergenerational and cumulative effects of Indian residential schools. The Canadian Journal of Psychiatry. 2017;62(6), 422-430. Available from: https://doi.org/10.1177%2F0706743717702075

Collective and historical trauma

It was clear from the key informants' sharing and insights that the trauma caused by colonization has had very damaging consequences that continue to this day. Colonized systems that continue to perpetuate racism and discrimination toward, and control over, Indigenous people lead to mental health challenges at the individual, family, and community levels. These challenges are long-lasting as they are passed through generations.

> *"Back in 1976, one of my first cousins committed suicide using the rifle to his head, and it was traumatizing because I witnessed it. Shortly after that, a brother of that cousin also committed suicide. Afterwards, there was talk in the community among young people who wanted to commit suicide also (…) When my cousin committed suicide, we could look back and see some of the signs where he was talking about suicide, but no one took him seriously."*
>
> *"My best friend, he died, he killed himself on a Sunday. His girlfriend just not too long before that attempted, she ended up giving herself an injury as opposed to causing her death, she became crippled for the rest of her life. She wasn't able to function."*
>
> *"Why, why am I left alone like this? Why doesn't somebody care for me? There's nobody there when a lot of it is because of the big, the big problem that we had with families breaking up during the residential school, and the Sixties Scoop. And it seems to me that it takes more than a generation like for him, it would take him to raise his kids in a proper environment so that his kids would sort of have what we call normal life. And for me to know, to know that it takes a generation of good living, healthy living, stable living in order for them to overcome that residential school and Sixties Scoop influence, because that's devastating when the families try to rebuild and start taking care of their own needs."*

Trauma and suicide

The rates of suicide and self-harm in First Nations adolescents is a trauma in and of itself in First Nations communities. From a trauma-informed perspective, there are many reasons for this phenomenon. Gaps in child-rearing due to the forced removal of children who were raised in

residential schools or in non-Indigenous homes continue to have an impact on First Nations People and their health and well-being today.[29] As well the idea of *in utero* trauma, as one key informant puts it, may result in poor mental health outcomes in First Nations communities. Finally, the premature, untimely death of parents was also described as one of the factors explaining the increase in suicide and self-harm behaviours in First Nations adolescents. Many of the key informants shared personal stories of losing their children or grandchildren to suicide at a very young age. They told us that feelings of hopelessness, helplessness, and lack of opportunities often lead First Nations youth to alcohol and drugs, and ultimately to self-harm and suicide.

> "*Obviously, in my little diagram here, I had posted historical intergenerational trauma. A trauma I feel as though when we have individuals who are traumatized, we have what's called in utero trauma. So, when we have a mother that's in trauma while they're during gestation, they're creating an atmosphere of trauma relatedness for that infant.*"
>
> *"And it's not so much alcohol, but it's the drugs that are that are hurting and killing our young people. What is there for them to do?"*
>
> *"Some of the other things I've seen, too, is where the parents are, have passed on, and the kids are still in their teenage years, both parents are gone, and they really have, like the grandparents are gone, both parents are gone. So these kids are just wandering from place to place. They don't have a home, they live with family members that are like cousins and stuff that'll take them in for the time being, but they don't really have a home they can call a home (...) Those are some of the examples I've seen that the kids didn't want to live anymore because they said, well, what's the point, you know, like they had really nothing to live for, they felt."*

These factors were seen as having their roots in colonization and the residential school system. Many First Nations families whose children were taken away to residential schools did not have the opportunity to raise their children and parent them. This led to a lack of parenting skills that has been transferred from one generation to the next. The root cause of cases of child neglect

in many First Nations families can be traced back to the residential school system. This intergenerational lack of parenting skills is magnified in the case of large families where there are many more children to raise and to care for. Key informants suggested efforts by the Saskatchewan Ministry of Social Services should focus on supporting parents and families to raise their children, rather than removing children from families because they are not being cared for properly.

Resilience

Despite the ongoing trauma that continues to negatively impact First Nations People and communities, the interviews also highlighted the fighting spirit of First Nations People and their determination as survivors to continue to stand strong despite attempts to erase them, their culture, and their communities. As stated by one key informant, responding to past hurt with kindness and generosity helps build resilience and hope. Terms such as “not giving up,” “resilient,” and “fighting spirit” were used to illustrate the strength of First Nations People to thrive in hostile conditions, to choose resilience over giving up, and moving forward over stalling or going backwards. The availability of resources and support facilitates making the right decision and helps build capacity and resilience. Key informants mentioned the raising of children and grandchildren and building the capacity to lead healthy and stable lives as examples of the resilience of First Nations People. One key informant told us that First Nations People’s reliance on culture and traditional ways is at the heart of the resilience.

> *“We have the same, the same person who was born in trauma, and they're shown kindness and they're shown resilience in their life because we have to remember that First Nations are very resilient, [a] very resilient population.”*
>
> *“And we go to, you know, we take we take classes, and we understand the intergenerational effects of residential school and colonization. We get an idea of what's going on inside of our own minds. And you either give up or you fight through it. And there's just people that just go shoot off one way or shoot off the other. And there's no recipe as to guess who goes which direction. So, it's those that, you know, that they have*

resources, that they have people that care about them that can nurture them in the right direction."

"And so, the healing part of it, it's not going to take overnight. (…) And I think a lot of it has to do with a reclaiming of our cultural life ways, you know, the reclaiming of our value systems."

Healing

The First Nations People we spoke with said that a very important aspect of healing was the return of things that had been taken away from them whether it was culture, land, or family members lost to the residential school system. Reclaiming and revitalizing their destroyed culture and languages is part of the healing process, as is mending the trust between the Canadian government and Indigenous Nations which was broken when the Treaty agreements weren't upheld. It's a journey, as one key informant puts it, that involves personal healing and forgiveness. Some of the key informants described the Truth and Reconciliation Commission's (TRC) Calls to Action as an important place to start.[22] These actions were seen as playing a vital role in mending the broken connections not only with others such as settlers, the government, and institutions, but also reconnecting Indigenous people to their culture, language, traditions, traditional practices, ways of knowing and being, and ceremonies:

"And that's where I started following them and started working on my recovery, you know, my healing journey, and that saved me. I always tell kids that what saved my life is walking the Red Road, learning about my culture, hearing these stories from elders. One of it was forgiveness. Working on forgiveness because I think, what happened to me at that residential school stuck with me."

"And you know, these spaces, these cultural spaces are really important. They're meaningful to us. They're sacred to us. You know, this is where we go and find our power.

[22] Truth and Reconciliation Commission of Canada (TRC). Honouring the Truth, Reconciling for the Future: Summary of the Final Report of the Truth and Reconciliation Commission of Canada. 2015;411.

And so I think if you take a look at suicide prevention, I think that that's where we need to go and we need to take our kids into these lodges so that they can relearn who they are. They can reclaim who they are. They can reshape their identity, right?"

"Parents (…) need to be taught how to parent again, because they they've been on such a it's like the patterns. They see their parents doing something and then they just continue on with that. (…) It's a cycle that needs to be broken."

"It's about restoring our worldview of connectedness with the world around us. And therein lies the power of our cultural life ways, you know. We do have practices, but we also have healing processes, you know, that that are really important in that whole movement."

These connections were described as essential for holistic health, including mental, emotional, spiritual and social. There was also an understanding that if the community is healthy, the individual will be healthy. Hence, the importance of bringing communities together for the work of reconciliation and healing. Interconnectedness in First Nations communities plays a significant role in how people, land, animals, and in fact all living things interact and affect one another. In order for a person to have holistic well-being they must understand and respect the relationships and connection to the spirit world and the environment. Traditional Indigenous medicine was also highlighted by key informants as a strong, positive, effective, and appropriate way to deal with mental health for First Nations People. Key informants recommended the use of Indigenous health workers who combine the best strategies from Western medicine and traditional Indigenous medicine for holistic healing and wellness.

Education

Education was a recurrent theme across all key informant interviews. The people we spoke with cited two aspects of education. The first involved educating the Canadian population on First Nations history, and the impact of colonization and the residential school system. The second aspect pertained to the education of First Nations People about their culture, traditions, and land (as a means to reclaim and revitalize them), as well as formal education to build capacity

and autonomy in First Nations People and communities as means of supporting them to reclaim of their roots. Key informants emphasized the importance of education being led by First Nations educators; it must be community-led and -driven to avoid it continuing to be used as a means of colonization. Initiatives must come from within First Nations communities to have buy-in and sustained success. Indigenous people know what is best for them, as they are the ones living this life.

All interviews touched on the major role grandparents play in passing on knowledge to the younger generations of children and grandchildren. The power of stories that keep connecting the youth back to their ancestors and traditions is a gift; this is an educational tool that needs to be strengthened and preserved.

In the context of mental health, education also plays an important role in breaking the cycle of suicide and self-harm. It helps restore individual and community health by highlighting the various resources available to support people experiencing poor mental health. Education also normalizes the issue by helping people see how many others also struggle with their mental health; people realize that they are not alone. Key informants cited examples of successful education and treatment programs that made a difference in helping curb suicide and self-harm in their communities. Unfortunately, the colonial funding approach used with those programs meant that they were short-lived.

> *"We're trying to stress a lot more on land-based teachings now because that's a way of connecting them [our youth] to our past."*
>
> *"I think when I say it's about reclaiming our cultural identity, it's about reclaiming our worldview. We have a very powerful worldview that has been disconnected because the systemic forces, you know, it's about when we take kids into the ceremonial lodge, when we take kids out on the land. It's about restoring that worldview of connectedness with the world around you because we have been so disconnected from our lands for such a very long time, it's become normalized, right? And so even land-based educators now, you know, first we had cultural camps."*

"*Now, if you look at Canada, for instance, in the education sector, well, we haven't learned the real history of this country for the longest time. (…) And so now it's starting to, you know, as more and more of our own educators go into the education sector, it's coming out now and people are saying, oh, oh, oh, oh, you know, it's like a shock factor.*"

"I know that there is a lot of potential, a lot of education that that need that needs to occur (…) I have to give this to my grandchildren. I have to tell them there's hope. There's hope and education. Get your education. Learn what you can do to help me. (…) And I look forward to the future and from my kids, not only from my children, but my grandchildren and great-grandchildren on what they have to live with."

"*There have been a lot of suicide attempts and since, but there have been no known assists, where during that time there was a lot of education provided to not only community members, but to the youth themselves, even the school age kids like, you know, if you feel like committing suicide, talk to.*"

"*That was the most awesome thing that ever happened to our community. It was two sets of 20-year-olds that went through a six-week program at a mobile treatment program. (…) Twenty-five of those 40 people who attended, remain sober today, 35 years later. So, I often wonder why they would do away with something that was that good? And I think maybe that's something (…) that can be revisited again, especially for northern communities.*"

"*And what's really important for us is that the programs and initiatives that we have, have to be community-driven. They have to be community-led. That is how you build capacity. And I know in the education sector we've done a really good job (…) and I know we have a lot of social workers now as well.*"

4.0 Study Limitations

There are several limitations to this study. The First Nations Identifier variable was not consistently collected in the administrative databases in Saskatchewan in the time frame covered by this study. This variable identifies First Nations people who are "Registered Indians," meaning they are eligible to receive financial benefits from the federal government. Because it became a self-reported variable in 2008, 10 per cent of First Nations people in Saskatchewan with Registered status who did not self-declare are not identifiable in the database.

Because the administrative databases were created for other purposes, we were limited to using pre-existing variables. Additionally, data on services provided to individuals in hospitals, emergency departments, physician offices, and long-term care facilities, as well as medications dispensed by a pharmacy account for only people who accessed those services. We have no information on the use of support services that occur outside of these institutions (such as community programs, individual or group counselling by non-physicians, and medications provided through community sites).

It would have been helpful to look at emergency department data since many people access emergency services but do not end up being hospitalized. Our current analyses only included people whose self harm injury was serious enough to require them to be hospitalized.

With regards to the qualitative analyses, the use of semi-structured interviews – while effective – had some limitations. The open-ended nature of interviews and the sensitive nature of the subject matter required interviewers to be sensitive to the respondents, as discussions could be triggering. The interviews followed an open-ended approach allowing for sharing to be voluntary in hopes of being less invasive.

Additionally, due to the pandemic, all the interviews were carried out over Zoom video conferencing; the success of qualitative research is often linked to having the researcher physically present in a community. The inability to conduct in-person data collection may disproportionately affect access to geographically isolated or disadvantaged populations (i.e., low computer literacy or lack of reliable communications technology). Online interviews may

also create barriers to building trust with research participants. All these factors limited the potential for engagement, sharing, and identifying non-verbal cues and body language. The pandemic also played a role in the delay of the research and in the in-person engagement of the Technical Advisory Group members.

5.0 Concluding Remarks

Through its theoretical grounding and its findings, this research has strengthened the evidence that supports the FSIN Suicide Prevention Strategy which has 75 actions organized into the following nine commitments:

1	We will take a focused and active approach to suicide prevention - political agreement must happen
2	We will support community-led action and build on cultural and community strengths
3	We will invest in the next generation by taking actions to support healthy early childhood development
4	We will better equip children and youth with skills to cope with adverse life events and negative emotions
5	We will strengthen the continuum of culturally appropriate mental health services
6	We will strengthen the continuum of care for substance use and addiction services
7	We will develop a strategy aimed at reducing our high rates of violence and of child sexual abuse
8	We will communicate about prevention and our progress
9	We will support ongoing culturally relevant research, monitoring and evaluation

The findings of this research highlight the severity of suicide and self-harm negatively affecting Saskatchewan First Nations People. They also highlight the importance of acting now to address a problem that continues to get worse. The complexity of the issue, including the complexity of the factors that affect suicide and self-harm, and the complexity of the solutions needed to address them, cannot be understated. That is why as a starting point, and in collaboration with

FSIN, HQC has developed a community development toolkit that First Nations communities can use to assess their communities, better understand their local circumstances and the factors contributing to self-harm and suicide among their people, and then address those factors effectively. Engagement across all levels – including individual, family, community, society, or system – is mandatory if collectively we are to succeed in addressing this issue. Action is needed at each of the levels and collaboration across all levels. The provincial and federal governments need to strengthen their suicide prevention strategies and work with the FSIN in supporting community-led initiatives in First Nations communities.

Appendix 1: Detailed Methodology Section

Methodology

This research was initiated by FSIN in response to an urgent need to quantify the anecdotal suicide and self-harm epidemic of First Nations in Saskatchewan. We used a mixed methodology that combined quantitative and qualitative approaches to explore the lived experiences of First Nations People in relation to the differences in mortality and self-harm inpatient hospitalization rates between Status First Nations people and the rest of the Saskatchewan population.

Theoretical Framework

This research is grounded on three theoretical pillars: Population health, the socioecological model, and critical race theory. Each contributes to key aspects of the complex issue of suicide and self-harm in First Nations communities. We used population health as the overarching framework to help sharpen the focus on the drivers impacting suicide and self-harm as well as the overall mental health and well-being of First Nations People in Saskatchewan. We used the socioecological model to guide the understanding of and the levels of intervention of the various drivers of suicide and self-harm. Finally, we used critical race theory – in particular, tribal critical race theory, with its specific focus on Indigenous People – to help unpack the impact of colonization, the residential school system, and systemic racism on self-harm and suicide among First Nations People.

Population Health

Research has shown that health is dependent upon a multitude of factors beyond just medical approaches and interventions. These include physical, genetic, social, economic, political, and environmental factors and access to health services, among others. Evans, Barer, and Marmor laid out the groundwork for understanding and even defining population health in their 1994 book, *Why Some People are Healthy and Others Not*.[23] This seminal work shifted the focus from

[23] Evans RG, Barer ML, Marmor TR, editors. Why are some people healthy and others not? The determinants of health of populations. New York, NY: Aldine de Gruyter; 1994.

the individual and the health-care system to the population or sub-groups therein, a broader definition of health, and an emphasis on health determinants and the interactions between them.[24,25] Since then, various definitions of population health have been proposed.

There is evidence of increasing focus in population health on theory conceptualization for use in conducting research.[26] However, population health is primarily concerned with the interplay between factors and structures that systemically enhance or impede health. As such, population health "focuses on the entire range of individual and collective factors and conditions, and the interaction among them that determine the health and well-being of Canadians."[27] Population health is an approach that seeks to "maintain and improve the health of the entire population and to reduce inequities in health status among population groups."[28] Since First Nations People constitute a population group that is constantly and disproportionately negatively impacted by disparities, a population health approach is appropriate in guiding a thorough research inquiry into the root causes of those disparities. As such, population health helps guide the intervention on a broad range of health determinants to achieve its goal.

Population health has been credited with shifting the definition of health from a purely clinical observation of absence of disease to a dynamic understanding that integrates social, economic,

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[24] Kindig D, Stoddart G. What is population health? Am J Public Health. March 2003;93(3):380-3. [Internet]. [Cited 2022 Jan 12]. Available from: http://www.ajph.org/cgi/reprint/93/3/380.pdf

[25] Link BG, Phelan JC. Review: Why are some People Healthy and Others Not? The Determinants of Health of Populations. Am J Public Health. 1996 April;86(4):598-9.

[26] Carpiano RM, Daley DM. A guide and glossary on postpositivist theory building for population health. J Epidemiol Community Health. 2006 July;60(7):564-70. [Internet]. [Cited 2022 Jan 10]. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2566228/

[27] Health Canada. Towards healthy aging communities: A population health approach. October, 1997. [Internet]. [Cited 2022 Jan 7]. Available from: http://publications.gc.ca/collections/Collection/H88-3-30-2001/pdfs/other/toward_e.pdf

[28] Public Health Agency of Canada. What is The Population Health Approach? [Internet]. [Cited 2022 Jan 13]. Available from: http://publications.gc.ca/collections/Collection/H88-3-30-2001/pdfs/other/toward_e.pdf

physical, and environmental factors as all contributing to health. This approach focuses on not just the factors that determine health outcomes, but the interplay between them as the major determinant of health outcomes.[26] Hence, health is not a state of being, but rather a capacity or a resource that helps individuals and communities reach their potential, develop, acquire skills and education, and build stronger and healthier communities. Population health therefore "refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services."[29]

The Socioecological Model

Because mental health is a major focus of this research, we felt it was fitting to use the socioecological model given its history at the beginning as a conceptual model for understanding human development.[30,31] The impact of self-harm and suicide on human development is well-documented, and the causes of self-harm and suicide in First Nations communities as well as their impacts have been well researched and shown to be intergenerational in many cases, and the result of broader environmental factors.

The socioecological model has nesting concentric circles with the smaller and innermost circle representing the individual level. In the adaptation of the model we used for this study, the adapted socioecological model (as depicted in Figure 5) was used to identify drivers of suicide and self-harm, while acknowledging the interplay between some of the factors. The drivers were identified at each of the levels of the model based on the literature and the life experience of members of the advisory group guiding this work who were all Indigenous.

[29] Dunn JR, Hayes MV. Toward a lexicon of population health. Can J Public Health. 1999;90(suppl 1):S7–S10.

[30] Sallis JF, Owen N, Fisher EB. Ecological models of health behavior. In: Glanz K, Rimer BK, Viswanath K, eds. Health Behavior and Health Education. 4th ed. San Francisco: John Wiley & Sons; 2008:465–485.

[31] Kilanowski JF. Breadth of the Socio-Ecological Model, Journal of Agromedicine. 2017;22:4, 295-297. DOI: 10.1080/1059924X.2017.1358971

The socioecological model acknowledges the interwoven and dynamic relationship between the individual and the environment.[32] While individuals are responsible for instituting and maintaining the lifestyle changes necessary to reduce risk and improve health, individual behaviour is determined to a greater extent by the social environment surrounding the individual including the family, the community, and the systemic or policy environment.[28]

[32] Dahlberg LL, Krug EG. Violence: A global public health problem. In: Krug E, Dahlberg LL, Mercy JA, Zwi AB, Lozano R, eds. World Report on Violence and Health. Geneva, Switzerland: World Health Organization; 2002:1-21.

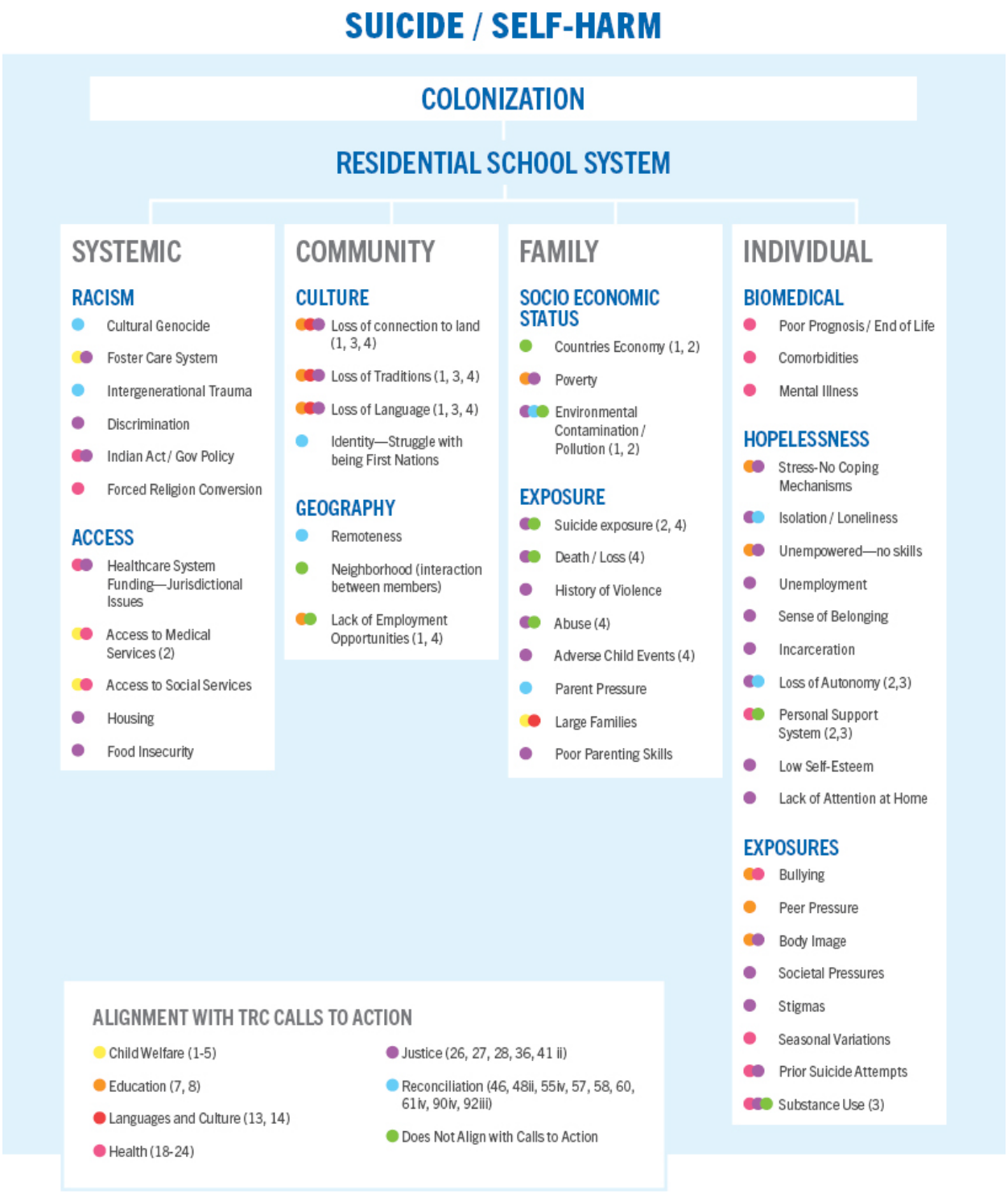

Figure 4: The adapted socioecological model with drivers of mental health and suicide

In the socioecological model, the closest environment to the individual is the one that exerts the strongest influences and encompasses the interactions and relationships of the immediate surroundings. It is the family level where nurture plays a key role in shaping the individual from the early stages of life until adulthood. Here, a child's upbringing is determined by the family unit as a whole and the parents and parental capacity, ability, health, and socioeconomic status, as well as housing conditions, among other factors. The next circle is the community level, whose influence on the individual is mediated through the family. Community factors that play an important role include workplace, school, church, neighborhood, community organizations, and social networks. The final and outermost circle is the systemic or policy level. This is the level that exerts the strongest influence on the system as a whole and includes societal, religious, and cultural values and influences, as well as policy. Finally, encompassing the various levels is what has been termed as the chronosystem which contains both internal and external elements of time and historical content. As seen in Figure 5, this model also shows that colonization and the residential school system's negative impact on the health, mental, and well-being of Indigenous people is undeniable.[3]

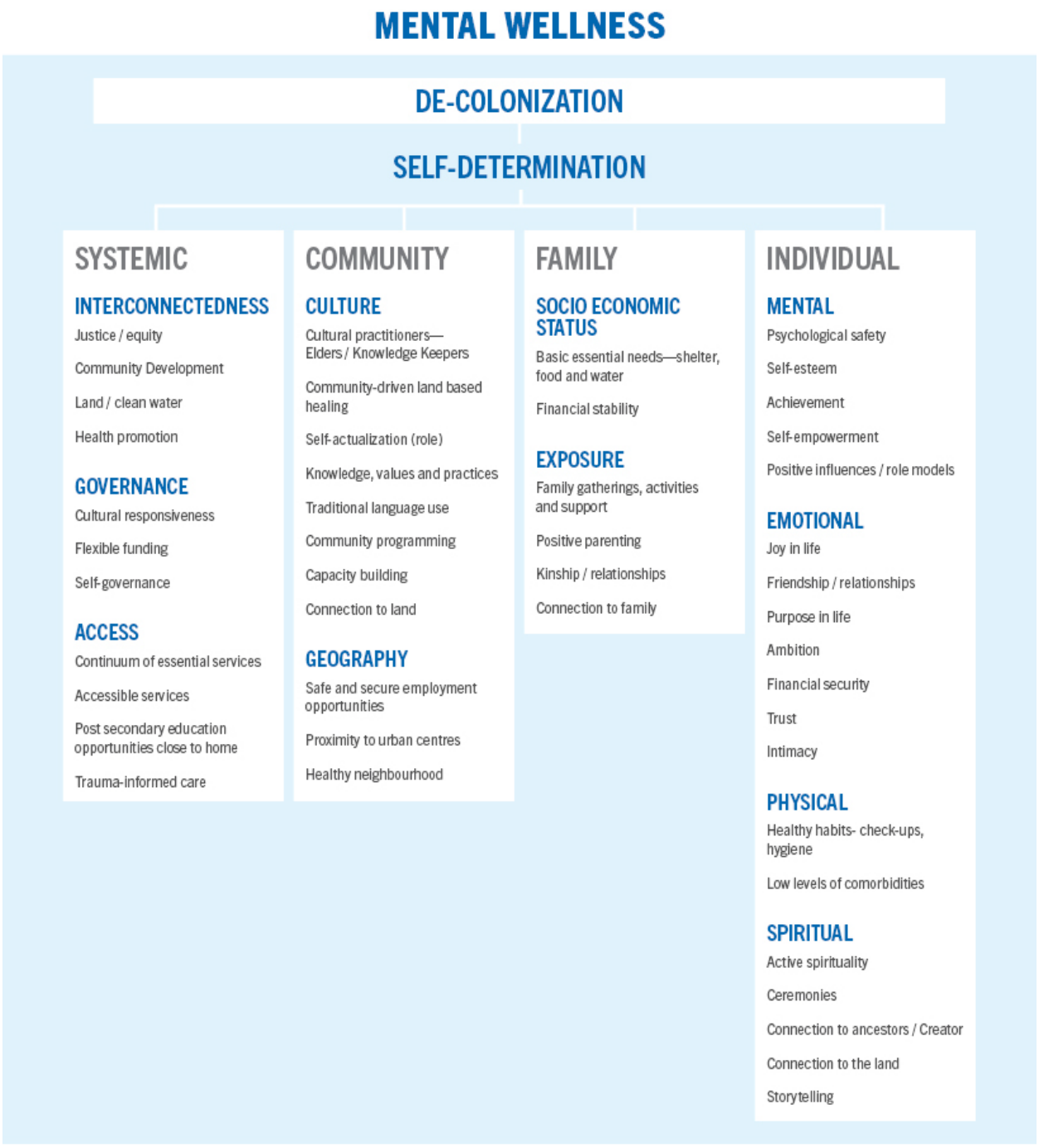

Figure 5: The adapted socioecological model with drivers of mental health and wellness

To achieve optimum health, mental health, and well-being, the socioecological model suggests acting not at one level, but at multiple levels.[33] As barriers are lifted using a population health approach, health or mental health is achieved as a combination of actions and interventions at the individual, family, community, and systemic or societal levels to reduce disparities and improve outcomes. Dismantling the barriers on the one hand – by working on the drivers of suicide and self-harm – and empowering First Nations communities, on the other – by reinforcing the drivers of health and wellness using a strength-based approach – are necessary to achieve optimal results. The First Nations Mental Wellness Continuum Framework offers an example of how this approach can be used to promote mental wellness and address mental health issues at the same time.[34]

Critical Race Theory

Critical race theory (as depicted in the model in Figure 6) is not a single, unified theory, but several theories that challenge the ways that race and racial power are constructed and held as norms to be accepted by all.[35,36] Critical race theorists challenge the status quo, which enhances white privilege and promotes societal structures and systems that negatively impact Indigenous people and people of colour in general.[37] Critical race theorists argue that the rule of law and the constitutional guarantee of equal protection of the law is only aspirational and not a reality for Indigenous people in Canada – as evidenced by the numerous cases of missing

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[33] Salihu HM, Wilson RE, King LM, Marty PJ, Whiteman VE. Socio-ecological Model as a Framework for Overcoming Barriers and Challenges in Randomized Control Trials in Minority and Underserved Communities. Int J MCH AIDS. 2015;3(1):85-95. PMID: 27621990; PMCID: PMC4948176.

[34] Thunderbird Partnership Foundation. First Nations Mental Wellness Continuum Framework. [Internet]. [Cited 2022 Jan 9]. Available from: https://thunderbirdpf.org/first-nations-mental-wellness-continuum-framework/

[35] Movius SE. Critical Race Theory in: Theoretical Models for Teaching and Research. Egbert J, Roe MF (eds). Washington State University. December 2020.

[36] Brayboy BMJ. Tribal Critical Race Theory: An Origin and Future Directions. In: Handbook of Critical Race Theory in Education (2nd ed.). Lynn M, Dixson AD. (Eds.). Routledge. 2021 Nov 15. Available from: https://doi.org/10.4324/9781351032223

[37] Delgado R, Stefanic J, Harris A. Critical Race Theory today. In Critical Race Theory: An Introduction. 2020;101-128. New York; London: NYU Press. Available from: http://www.jstor.org/stable/j.ctt9qg26k.11

and murdered Indigenous women and girls.[38,39,40] In light of this example and many others, critical race theorists insist that societal tools and institutions such as the law or institutions that help enforce it are not neutral but instead part of the problem.[33,34] We only need to look at the rate of incarcerations in Canada to see the disproportionate number of Indigenous inmates compared to the majority population. Why is it that the Indigenous population that makes up five per cent of the Canadian population accounts for over 30 per cent of all incarcerations?[4,41] Why is it that First Nations People in Saskatchewan, who account for 10 per cent of the provincial population, account for close to 30 per cent of all suicide cases in the province?[4] Critical race theorists would argue that, based on evidence, the answers to questions reside in the system of oppression that has created and maintained disparities negatively impacting Indigenous people in general, and First Nations People in particular; research supports this assessment.

Critical race scholars position themselves against racial oppression and other forms of group-based oppression. They view racism as an endemic problem, pervasive throughout the systems that govern human life, and not an aberration prevalent only in certain settings.[42] They challenge liberal anti-racism approaches which, although helpful, do not go far enough in accepting the full expression of Indigenous People's experiences, expressions and self-

[38] Grenier ML. Cultural competency and the reproduction of White supremacy in occupational therapy education. Health Education Journal. 2020;79(6):633-644. DOI:10.1177/0017896920902515

[39] Hansen JG, Dim EE. Canada's missing and murdered indigenous people and the imperative for a more inclusive perspective. International Indigenous Policy Journal. 2019;10(1). DOI:10.18584/iipj.2019.10.1.2

[40] Lucchesi AH. Mapping geographies of Canadian colonial occupation: Pathway analysis of murdered Indigenous women and girls. Gender, Place & Culture. 2019 Jun 3;26(6):868-87. Available from: https://doi.org/10.1080/0966369X.2018.1553864

[41] Singh D, Prowse S, Anderson M. Overincarceration of Indigenous people: a health crisis. CMAJ May 06, 2019 191 (18) E487-E488; DOI: https://doi.org/10.1503/cmaj.181437

[42] Quiros L, Varghese R, Vanidestine T. Disrupting the single story: Challenging dominant trauma narratives through a critical race lens. Traumatology. 2020;26(2):160–168. Available from: https://doi.org/10.1037/trm0000223

determination.[43] For these scholars, adopting a race-conscious approach is paramount in addressing systemic racism often couched in false meritocracy and objectivity that works to maintain the status quo.

Tribal Critical Race Theory

Indigenous scholar Bryan Brayboy recognizes that although critical race theory is broadly applicable to other racial groups in a white majority environment, it is in fact born out of the struggles and experiences of Black people and does not address the specific needs of Indigenous or tribal peoples.[44] He is a proponent of tribal critical race theory, and argues colonization is as endemic in society as racism. [36] It is this key aspect of tribal critical race theory – in addition to insights from members of the advisory group – that led us to incorporate colonization in the population health model as the overarching driver that affects the lives of Indigenous people pervasively at all levels. The use of tribal critical race theory in this research helped us listen to the voices of First Nations People with lived experience of suicide and self-harm with greater sensitivity and empathy, enhanced Indigenous scholarship acuity, and provided a deeper understanding of the importance of Indigenous stories of racial oppression and resilience. All nine core tenets of tribal critical race theory are listed below and have been adapted for the Canadian context and for this research:[36]

1. Colonization is endemic to society.

2. Government policies toward Indigenous peoples are rooted in imperialism, white supremacy, and a desire for material gain.

3. Indigenous Peoples' identities have been significantly affected by both political and racial oppression.

[43] Van Sant L, Milligan R, Mollett S. Political ecologies of race: Settler colonialism and environmental racism in the United States and Canada. Antipode. 2021 May;53(3):629-42. Available from: https://doi.org/10.1111/anti.12697

[44] Brayboy BMJ. Toward a Tribal Critical Race Theory in Education. The Urban Review. 2005;37. 425-446. 10.1007/s11256-005-0018-y. Available from: https://www.iirp.edu/images/pdf/AvNtDE_EDUC_701_-_Brayboys_Toward_a_Tribal_Critical_Race_Theory_in_Education.pdf

4. Indigenous Peoples have a desire to obtain and forge tribal sovereignty, tribal autonomy, self-determination, and self-identification.

5. The concepts of culture, knowledge, and power take on new meaning when examined through an Indigenous lens.

6. Government policies toward Indigenous Peoples are intimately linked around the problematic goal of assimilation.

7. Tribal philosophies, beliefs, customs, traditions, and visions for the future are central to understanding the lived realities of Indigenous Peoples, but they also illustrate the differences and adaptability among individuals and groups.

8. Stories are not separate from theory; they make up theory and are, therefore, real and legitimate sources of data and ways of being.

9. Theory and practice are connected in deep and explicit ways, such that scholars must work toward social change.

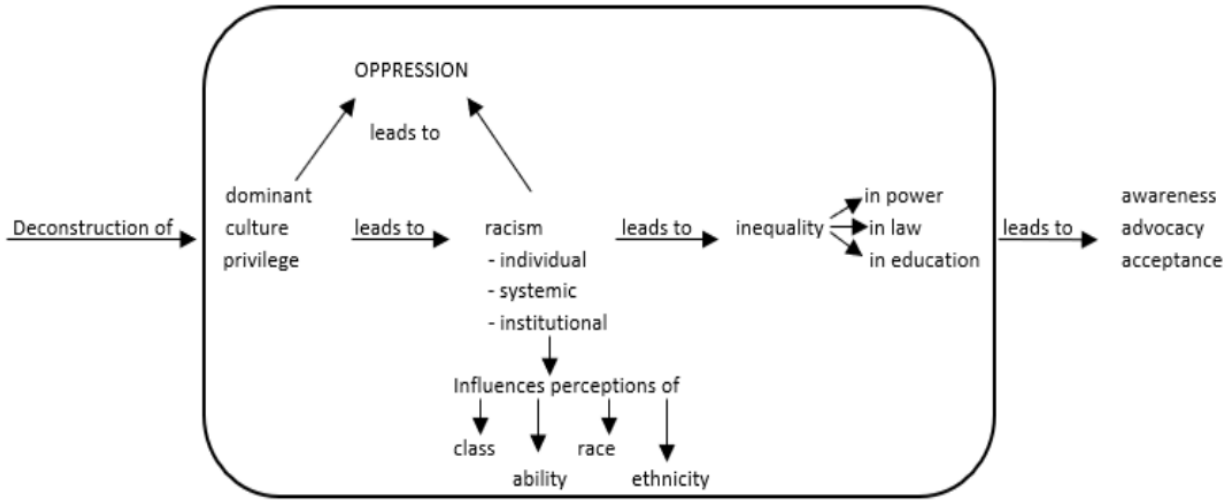


Figure 6: Critical race theory (Movius, 2020)

Quantitative Methodology

Study Design

We conducted a descriptive study of suicide and self-harm among First Nations using Saskatchewan's administrative health data. To carry this out, we identified demographic variables such as age, sex, and Status First Nations, as well as other demographic characteristics such as geographic region of residence for the entire population of Saskatchewan from 2000 onward.

Method

We extracted data from 2000 to 2020. People with missing age or sex were excluded from the study. We grouped data in five-year time periods: 2001-2005, 2006-2010, 2011-2015, and 2016-2020. Grouping data this way helped reduce small cell size which enabled more robust analyses while protecting data privacy and confidentiality. Data analyses included computing rates and rate ratios that were used to identify and describe differences in mortality and self-harm inpatient hospitalizations between Status First Nations and the rest of the Saskatchewan population.

Identifying First Nations People with Registered Indian Status (referred to as "Status First Nations" hereafter) posed some challenges. Prior to 2008, First Nations People with Status were identified in the administrative data without their permission. Status became a self-declared variable after that time. To improve accuracy for this study, we included Status First Nations people who were identified as Status First Nations prior to 2008.

This study underwent ethics review and received approval from the University of Saskatchewan Research Ethics Board.

Data Sources

In Saskatchewan, health services utilization data are collected in electronic databases that can be linked via a de-identified unique personal health insurance number. Data on acute hospitalizations are captured in the Canadian Institute of Health Information's (CIHI) Discharge Abstract Database (DAD). Up to 25 diagnoses are recorded using the Canadian version of International Classification of Disease version 10 (ICD-10-CA).

The Person Health Registration System (PHRS) contains demographic characteristics and the location of residence of insured persons. We obtained dates of birth from the PHRS and identified dates of death by triangulating three databases: the start and end dates of Saskatchewan health insurance coverage (from PHRS), discharge status of 'death' from the long-term care database (RAI-Minimum Data Set), and the permanent cessation of prescription drug dispensations in the provincial Prescription Drug Databases (adjudicated and non-adjudicated).

Variables of Interest

The purpose of this research is to identify and describe differences in mortality and self-harm inpatient hospitalization rates between Status First Nations people and the rest of the Saskatchewan population, which includes non-Indigenous Canadians, immigrants, Métis, and First Nations People who are not Status. The following demographic variables were used: Age as calculated on July 1 of each calendar year, sex, and Status First Nations. Socioeconomic variables included the following: region of residence (13 regions), and geographic area of residence (six areas). For ease of reporting, and to prevent small cell size issues, the 12 former health regions and Athabasca Health Authority were categorized in six larger geographic areas: south Saskatchewan, central Saskatchewan, Regina area, Saskatoon area, north Saskatchewan, and far north Saskatchewan.[45]

Outcome variables of interest included death, hospitalizations, self-harm, assault, and mental health and addiction (defined below).

Death: Death counts included the number of people who died during a calendar year (CY) as the numerator and anyone with at least one day of Saskatchewan health insurance coverage in the CY in the denominator. Death was reported in five-year groupings because of the small numbers involved.

Hospitalization: This was defined as admission to a hospital for care; individuals with multiple diagnostic codes in the same hospitalization were identified as having one hospitalization.

[45] Small cell size issues include the potential for data that was de-identified identifiable. Pooling cells together helps eliminate the potential for privacy violation and protect de-identified data.

Similarly, we used the primary hospitalization for anyone who had multiple hospitalizations related to the same self-harm incident as can occur when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge.

Self-harm: Self-harm was defined as an episode of self-inflicted injury or pain. We identified hospitalizations with at least one self-harm code (ICD-10-CA: X60-X84) in any of the 25 diagnostic fields. A person with multiple and different diagnostic codes for self-harm in the same hospitalization was identified as having one hospitalization. A person with multiple hospitalizations related to the same self-harm incident, as can occur when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge, was identified as having one hospitalization (see appendix for definition of an episode-of-hospitalization)

Assault: We identified hospitalizations with at least one assault code (ICD-10-CA: X85-X99, Y00-Y09) in any of the 25 diagnostic fields. The numerator was the number of hospitalizations for assault in a calendar year while the denominator was anyone with at least one day of Saskatchewan health insurance coverage in the CY. We reported in 5-year groupings because of the small numbers involved.

A person with multiple and different diagnostic codes for assault in the same hospitalization was identified as having one hospitalization. Similarly, a person with multiple hospitalizations related to the same assault, as can occur when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge, was identified as having one hospitalization (see appendix for definition of an episode-of-hospitalization).

Mental Health and Addictions (MHA): We restricted our investigation of MHA issues to schizophrenia and psychoses (ICD-10-CA: F10-F19), and mental and behavioral disorders due to psychoactive drug use (ICD-10-CA: F20-F29). We identified hospitalizations with at least one of these codes in any of the 25 diagnostic fields. A person with multiple and different diagnostic codes for MHA in the same hospitalization was identified as having one hospitalization. Similarly, a person with multiple hospitalizations related to the same MHA event, as can occur

when they are transferred to a different hospital or are readmitted to the same hospital within 24 hours of discharge, was identified as having one hospitalization.

Statistical Methods

We conducted descriptive analyses using SAS v9.4 (Carey, NC, SAS Institute). The STDRATE (standard rate) Procedure was used for all rate calculations. Crude rates were calculated for Status First Nations and "everyone else" in five-year groupings of calendar years 2001-2005, 2006-2010, 2011-2015, and 2016-2020 inclusive. Rates were age- and sex-adjusted to the 2011 Canadian population. We calculated rate ratios of the adjusted rates in Status First Nations versus "everyone else." Sub-analyses were done, stratifying the rates by sex and geographic area of residence. We computed rate ratios of hospitalizations stratified by First Nation Status, sex (male, female), and by geographical area of residence. Geographic areas of residences were Saskatchewan's former 12 health regions and Athabasca Health Authority.

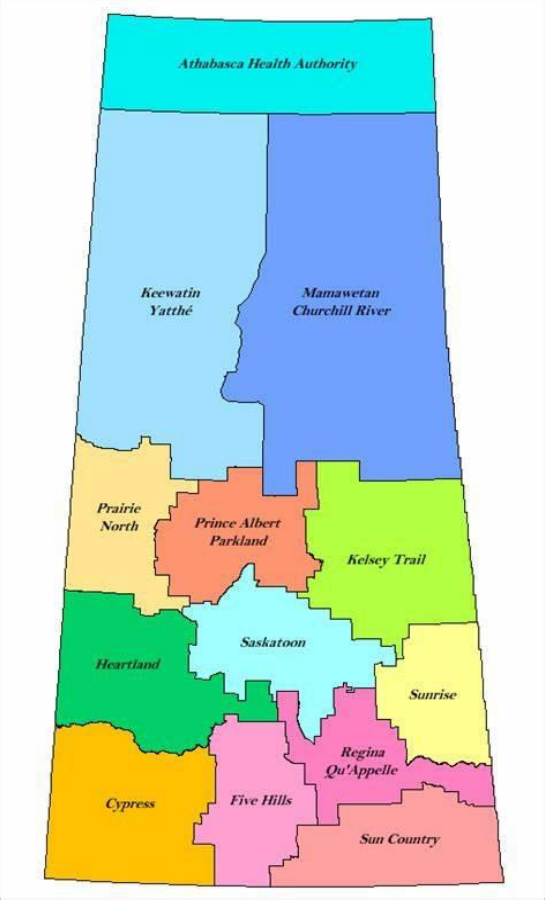


Figure 7: Former Saskatchewan health regions and Athabasca Health Authority

Qualitative Methodology

Study Design and Data Gathering

We conducted semi-structured interviews of 10 key informants with lived experience of self-harm or suicide, to explore why self-harm rates among First Nations People are significantly and disproportionately higher than for the rest of Saskatchewan population. Key informants' stories and experience were used to explore and understand the high rates of self-harm among First Nations teenage girls, why they are higher than in both non-First Nations teenage females and First Nations teenage males. Follow-up questions included the roles individuals, families, communities, and the system play in self-harm, based on the socioecological framework guiding this research.

To explore the hidden stories behind the statistics, we used a semi-structured approach to interviewing, posing open-ended questions to start, then basing our follow-up questions on the experiences shared by key informants. Using semi-structured interviews for data collection helps gather information from people with lived experience, as well as their personal attitudes and beliefs about the issue under investigation. Semi-structured interviewing is an effective method for data collection as it allows the interview subject's responses to guide the direction of the conversation. It allows the researcher to welcome unexpected insights from key informants who have authoritative knowledge about the subject under investigation and is the preferred approach when carrying out research on a topic involving Indigenous people – whose voices have often been stifled. Given the nature of this research topic, all interviewees were members of an existing pool of Indigenous resource people who had a vested interest in the subject as First Nations People who brought a great deal of depth and breadth of knowledge and lived experience to this research. Key informants' backgrounds included women, men, young adults, community leaders, elders, members of Northern and Southern communities. They shared their stories and experiences that helped explore and understand the disproportionately high rates of self-harm among First Nations people compared to the rest of the population.

Thematic analyses

Key informant interviews were recorded and transcribed, then analyzed using NVivo software; notes were also taken by hand during the interview. Transcriptions were reviewed by research team members before the analysis phase to correct for software error. Once the transcripts were deemed satisfactory, researchers explored the data for patterns of meaning or themes, and issues of potential interest were explored in subsequent interviews with other key informants.[46] The process, which is highlighted in the following steps, was recursive and iterative, as themes were revisited throughout the analysis phase.

Step 1: Researchers transcribed the recorded interviews and reviewed the transcripts to become familiar with the data before the coding phase. They noted key observations they felt might be useful for coding, as they did while taking notes during the interviews.

Step 2: Initial codes were generated by highlighting sections of transcripts that held meanings of interest to the interviewee or were related to the research topic. All coded segments or data extracts were collated together under each code. This was done by tagging and naming selections of text within each data item.

Step 3: The codes were sorted into potential themes with corresponding codes collated together under a broad meaning to generate a theme. The codes were re-examined to ensure that they fit under a particular theme.

Step 4: We reviewed the themes by re-examining the coded data. In some cases, some codes were moved under other themes. Some themes were combined, while others were eventually discarded because they lacked significance across the interview pool or had no theoretical basis to be included.

Step 5: The final step was defining and naming the themes, which was aided by the fact that all interviewees clearly articulated their experiences and named their experiences in a way that was consistent across interviews. That dimension of shared experience and the shared expression of their experience helped name of the following final themes: colonization, trauma, resilience, healing, and education.

[46] Braun V, Clarke V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology 2006 (3); 77-101. DOI: 10.1191/1478088706qp063oa.

Appendix 2: Detailed Findings Section

Findings

Findings are presented for mortality, hospitalizations due to self-harm, harm, assault, mental health and addictions, and injury, in Status First Nations stratified by age, sex, and geographical region of residence using former health regions. We used only hospitalization due to mental health and addictions, and hospitalization due to injury for geographic region of residence because these variables had the fewest number of missing cases. Data for health regions are used to see trends over time within each region.

Because this research was focused on self-harm, we present greater detail on this variable – with an exploration of data for the 2016-2019 time period, to exclude the potential skewing effect of the pandemic on the data for the year 2020.

Hospitalizations for intentional self-harm stratified by age, sex, and First Nations status

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	.	.	.	.	.	.	.	.
5-<10	.	.	.	.	.	.	.	.
10-<15	4.41	6.49	5.36	2.84	4.48	2.48	7.10	3.59
15-<20	4.22	3.93	3.55	3.29	3.98	2.54	4.98	4.57
20-<25	8.95	4.95	7.66	6.96	5.65	5.19	5.54	5.66
25-<30	7.69	5.16	7.64	4.17	8.14	3.87	6.92	5.78
30-<35	6.48	5.77	7.40	6.22	7.77	4.43	7.70	6.62
35-<40	8.58	3.45	6.08	3.92	5.07	3.57	6.73	3.95
40-<45	10.37	5.83	7.01	4.48	4.41	6.03	6.25	3.29
45-<50	10.33	8.63	8.70	5.54	6.41	4.11	5.13	2.40
50-<55	7.00	2.37	6.33	5.31	6.31	4.42	8.31	4.12
55-<60	9.60	5.60	3.15	3.60	8.60	3.94	9.36	1.72
60-<65	3.49	14.29	4.19	9.60	2.52	1.18	3.33	0.57
65-<70	8.07	.	8.52	.	4.95	3.47	0.60	2.07
70-<75	5.84	2.36	8.26	2.07	2.80	.	1.48	1.46
75+	.	3.50	.	.	4.97	.	9.45	.
All	**7.29**	**4.58**	**6.42**	**4.47**	**6.80**	**4.02**	**9.30**	**5.63**

Table 1: Hospitalization rate ratios for intentional self-harm stratified by sex, age and Status First Nations Identifier in 2001-2020

The numbers presented in the tables in this report are rate ratios used to help the reader better interpret the data.

In the five-year periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age categories, Status First Nations females were more likely to be hospitalized for intentional self-harm compared to females in the rest of the Saskatchewan population (i.e., “everyone else" category).
- Across all age categories, Status First Nations males were more likely to be hospitalized for intentional self-harm compared to males in the rest of the Saskatchewan population (i.e., “everyone else” category).
- There was an almost 30 per cent increase in the number of hospitalizations due to self-harm among Status First Nations females.
- There was a 20 per cent increase among Status First Nations males.

The data show a consistent picture of disparities negatively affecting Status First Nations females and males identified in our quantitative analyses. Although Saskatchewan First Nations People represent only 10 per cent of the population of the province, the data show that Status First Nations females and males consistently fare worse than “everyone else” on every variable we examined.

For the period of 2016-2020 we compared the observed number of hospitalizations in each age group to the number expected given the proportion of First Nations People within that age group. The 5-year age categories were collapsed for the 2016-2020 data to address the issue of missing cases and low cell count to run more robust analyses and generate reliable findings for all age groups.

Males

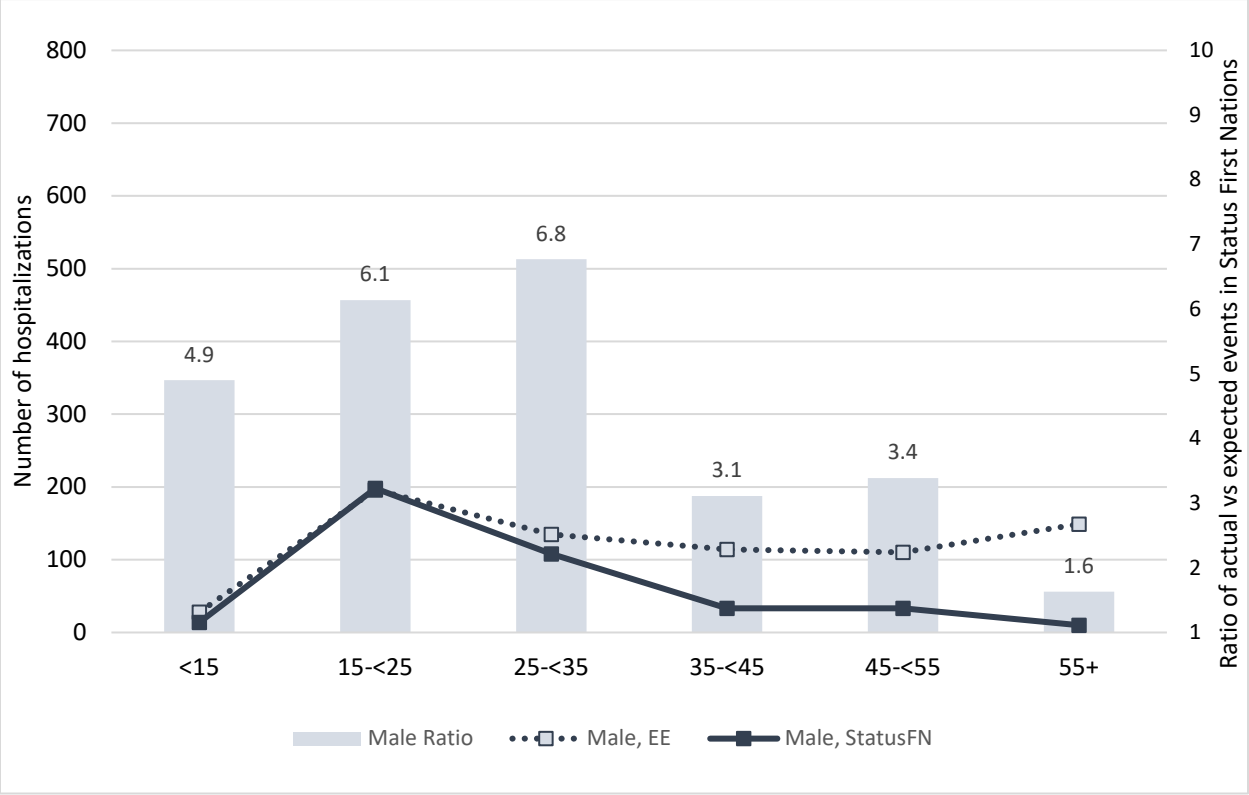


Figure 8: Hospitalizations for intentional self-harm by males with actual versus expected ratios stratified by age and Status First Nations in 2016-2019

Hospitalizations due to intentional self-harm in Status First Nations males:

- Status First Nations males aged 15-25 years (16.5% of total people aged 15-25yrs) and 25-35 years (11.8% of total people aged 25-35yrs) were found to be hospitalized respectively 6.1 and 6.8 times more often than expected, given their respective proportions of the population within each age group.
- This higher number of hospitalizations for Status First Nations males was found to be consistent across all age groups.

Females

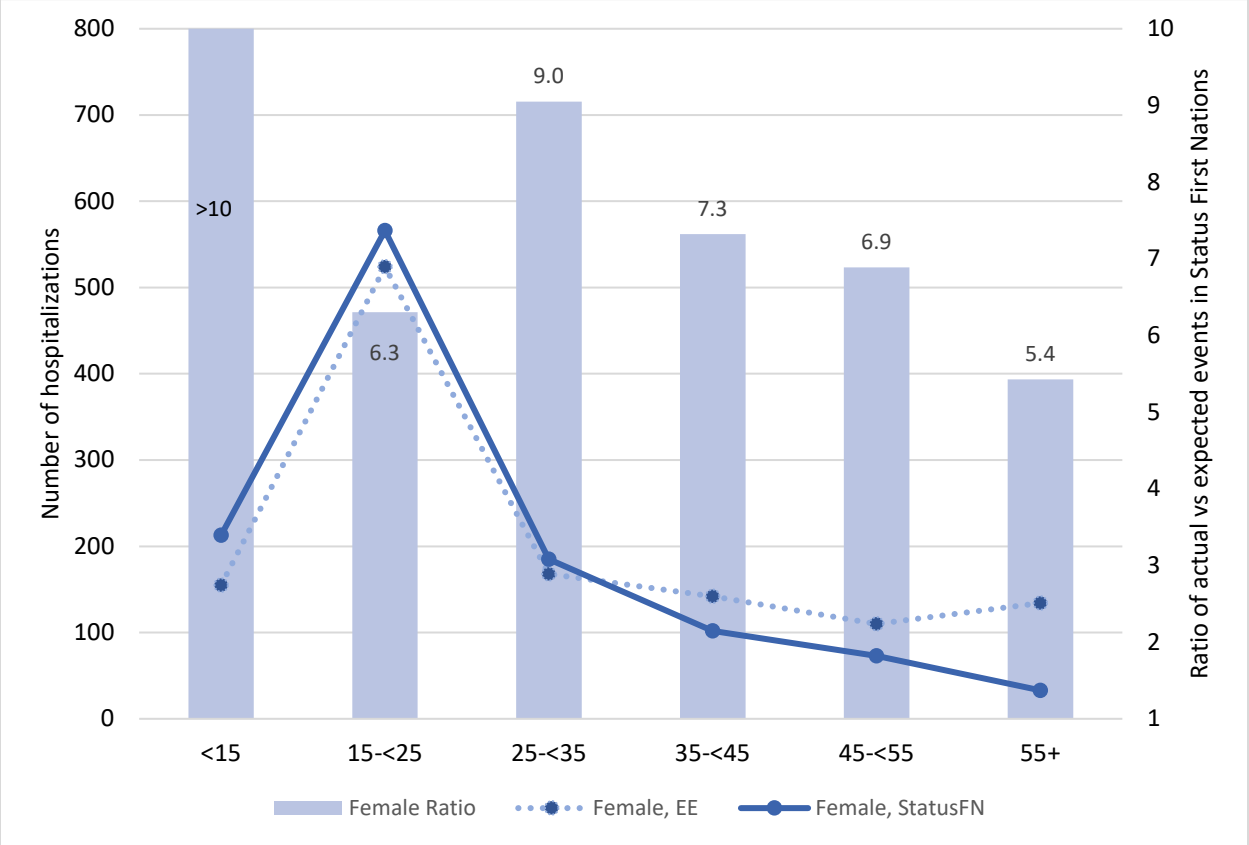


Figure 9: Hospitalizations for intentional self-harm by females with actual versus expected ratios stratified by age and First Nations status in 2016-2019

Hospitalizations due to intentional self-harm in Status First Nations females:

- Across all age groups, the number of hospitalizations for intentional self-harm is significantly higher among Status First Nations females than expected, given their proportion of the population.
- Status First Nations females younger than 15 years were hospitalized 10 times more often than expected, given their proportion of the population.
- Status First Nations females were hospitalized 6.3 times more often for self harm than all other females.

Females relative to males

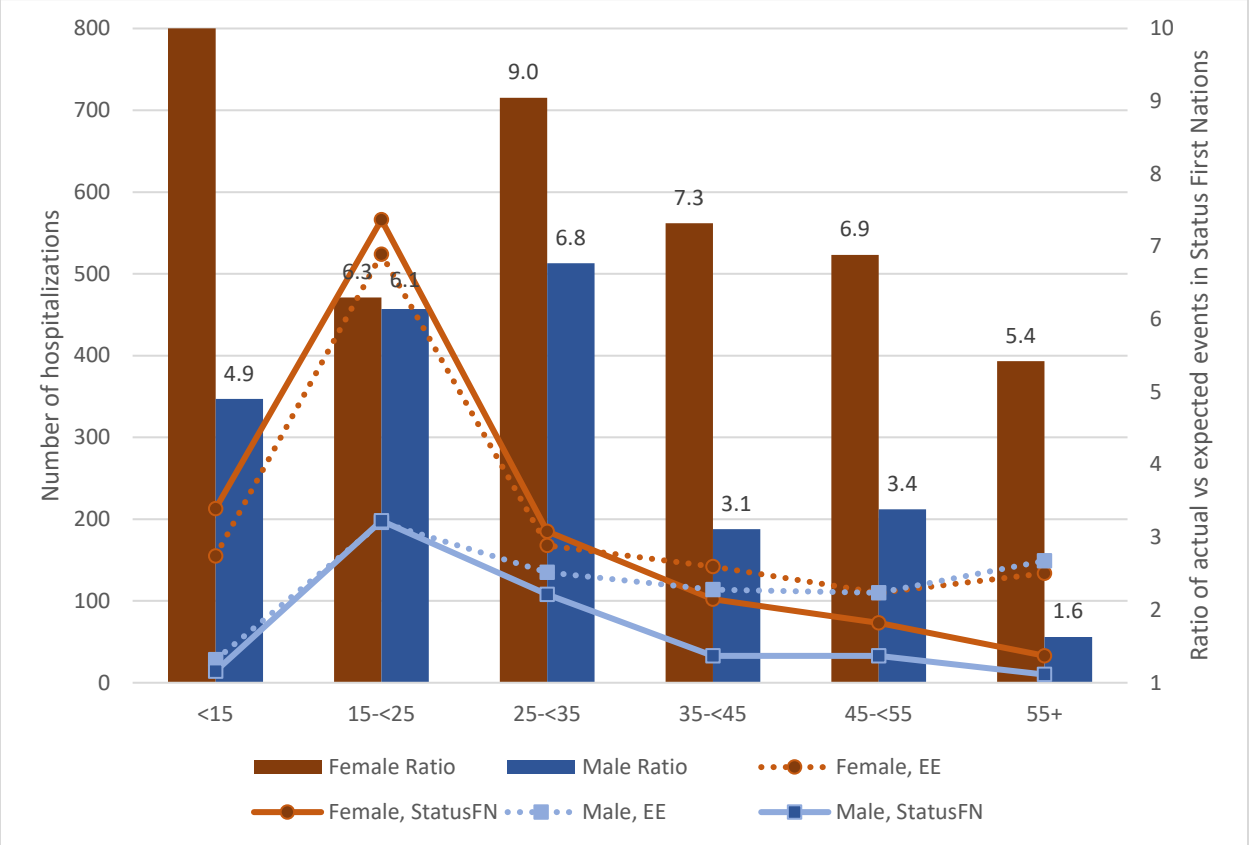


Figure 10: Number of hospitalizations and ratio of actual to expected hospitalizations with diagnosis of self-harm in 2016-2019 stratified by age, sex, and First Nations status in 2016-2019

Both Status First Nations females and males face significant disparities compared to the general population with regards to hospitalization due to self-harm and across all age groups; however, when Status First Nations females are compared to Status First Nations Males (Figure 10):

- There were over 1,300 hospitalizations of Status First Nations females from 2016-2020 compared to just over 450 hospitalizations for Status First Nations males.
- The number of hospitalizations due to self-harm for Status First Nations females is three times higher than that of Status First Nations males, despite both groups having similar population levels in the province.

Hospitalizations for harm stratified by age, sex, and First Nation status

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	2.93	2.09	3.74	3.16	3.72	1.87	s	s
5-<10	5.58	4.71	s	3.44	s	s	s	s
10-<15	4.57	4.49	4.63	3.40	4.82	2.82	6.85	2.41
15-<20	4.47	4.14	3.73	3.51	4.10	2.51	5.16	4.42
20-<25	8.78	4.77	7.13	6.20	5.21	4.48	5.42	4.06
25-<30	8.12	5.66	8.70	5.04	8.38	4.82	6.95	5.43
30-<35	7.26	7.08	8.04	6.68	8.65	6.54	10.20	7.64
35-<40	9.33	4.84	6.79	6.74	7.28	5.36	8.75	6.26
40-<45	10.64	8.39	8.84	5.16	5.84	7.29	9.22	5.44
45-<50	12.88	7.08	9.36	7.82	7.22	6.41	9.64	4.09
50-<55	8.48	4.22	7.51	5.70	9.47	5.99	9.75	5.58
55-<60	8.39	5.14	4.42	8.38	10.10	3.75	8.04	4.68
60-<65	10.56	10.81	7.45	8.53	6.47	4.67	5.53	3.30
65-<70	6.81	s	8.87	4.13	9.61	4.09	5.03	2.21
70-<75	4.85	s	5.70	s	8.97	s	3.65	s
75+	4.51	3.46	s	s	s	2.88	3.06	s
All	**6.69**	**4.50**	**5.89**	**4.75**	**6.46**	**4.14**	**8.57**	**5.15**

Table 2: Hospitalization rate ratios for harm stratified by age, sex, and Status First Nations Identifier (cells with s indicate data suppression due to small cell size)

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, Status First Nations females were more likely to be hospitalized for all-cause harm compared to "everyone else" females.
- Across all age groups, Status First Nations males were more likely to be hospitalized for all-cause harm compared to "everyone else" males.

Hospitalizations for assault stratified by age, sex, FN status

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	4.38	7.75	6.35	3.55	6.74	2.35	s	s
5-<10	s	s	s	s	s	s	s	s
10-<15	6.28	5.47	6.04	7.17	5.72	3.44	9.28	s
15-<20	14.70	7.93	16.98	8.08	12.85	10.43	11.85	7.08
20-<25	26.04	9.59	23.02	10.52	36.09	9.17	13.53	11.52
25-<30	28.09	11.08	23.77	12.27	34.40	17.65	39.05	15.34
30-<35	22.27	11.36	27.60	12.38	20.29	15.40	20.75	19.93
35-<40	19.05	16.84	21.63	16.34	15.40	15.69	22.26	16.18
40-<45	24.32	15.37	26.06	14.90	28.06	19.10	23.05	16.85
45-<50	19.85	22.00	19.20	16.74	18.38	23.44	25.44	17.46
50-<55	33.68	11.13	14.43	10.96	28.17	16.65	17.29	12.60
55-<60	17.52	19.21	s	19.84	s	12.43	25.65	10.52
60-<65	s	s	s	18.76	s	19.42	12.78	12.93
65-<70	s	s	s	s	s	14.82	s	17.28
70-<75	s	s	s	s	s	s	s	s
75+	39.19	s	s	35.93	s	s	s	s
All	**18.97**	**11.61**	**20.13**	**12.48**	**18.44**	**14.86**	**21.38**	**16.84**

Table 3: Hospitalization rate ratios for assault stratified by age, sex, Status First Nations Identifier (cells with s indicate data suppression due to small cell size)

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, rate ratios showed that Status First Nations females were more likely to be hospitalized for assault compared to "everyone else" females.
- Across all age groups, Status First Nations males were more likely to be hospitalized for assault compared to "everyone else" males.

Hospitalizations for mental health and addictions (MHA) stratified by age, sex, and First Nations status

Hospitalizations for mental health and additions were restricted to schizophrenia and psychotic disorders, and addictions issues. Depression and anxiety were excluded.

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	s	s	s	s	s	s	s	s
5-<10	s	s	s	s	s	s	s	s
10-<15	5.69	3.16	6.68	4.41	9.84	7.42	11.14	6.36
15-<20	4.97	4.18	5.57	4.70	5.94	4.39	7.15	3.91
20-<25	11.00	3.51	11.93	5.25	6.86	4.66	7.24	4.58
25-<30	7.71	4.79	9.68	4.71	10.67	6.09	8.75	5.49
30-<35	7.60	5.10	8.27	6.14	11.49	6.13	12.89	6.93
35-<40	7.52	5.30	7.86	6.03	8.47	7.21	10.45	7.61
40-<45	8.39	7.83	9.01	6.23	7.76	5.35	9.86	7.61
45-<50	8.67	6.86	8.76	7.61	7.54	6.83	8.77	7.05
50-<55	7.40	6.64	7.18	7.99	8.00	8.32	7.22	6.05
55-<60	6.18	5.45	8.04	6.46	5.36	5.47	6.05	5.35
60-<65	8.31	6.10	5.91	5.98	5.28	4.94	3.71	4.87
65-<70	5.44	6.41	7.15	5.60	3.42	6.61	6.06	4.74
70-<75	4.59	6.57	6.61	7.51	6.29	7.60	3.26	3.86
75+	s	s	s	s	s	s	s	s
All	**5.59**	**3.62**	**6.54**	**4.22**	**7.02**	**4.89**	**9.89**	**6.13**

Table 4: Hospitalization rate ratios for mental health and addictions (MHA) stratified by age, sex, and Status First Nations Identifier (cells with s indicate data suppression due to small cell size)

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, Status First Nations females were more likely to be hospitalized for mental health and addictions than "everyone else" females.
- Across all age groups, Status First Nations males were more likely to be hospitalized for mental health and addictions compared to "everyone else" males.

Hospitalizations for injury stratified by age, sex, and First Nations status

Hospitalizations for injury included physical injury resulting from trauma (e.g., broken leg, laceration to head, etc.).

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	1.97	2.47	2.48	2.14	1.82	1.88	2.33	1.57
5-<10	1.79	1.98	1.68	1.95	1.97	1.77	1.62	1.86
10-<15	1.38	1.38	1.99	1.25	1.68	1.07	2.09	1.33
15-<20	2.58	1.86	2.77	2.21	2.97	2.26	3.22	2.19
20-<25	6.22	3.27	5.83	3.54	5.57	3.48	5.95	3.74
25-<30	6.01	3.70	5.78	4.22	6.16	4.78	6.25	4.98
30-<35	6.19	3.95	6.48	4.01	5.38	4.62	5.43	5.56
35-<40	4.85	4.60	5.15	4.13	4.70	3.91	4.49	5.56
40-<45	5.00	4.24	5.45	4.21	3.93	4.13	4.03	4.58
45-<50	3.78	3.23	3.92	3.95	4.11	4.23	4.08	4.23
50-<55	4.64	3.14	3.15	2.76	3.38	3.63	3.59	3.20
55-<60	3.47	2.46	3.24	3.27	2.24	2.61	2.82	2.85
60-<65	4.85	3.18	2.55	3.61	2.46	2.36	2.60	2.25
65-<70	2.74	3.29	3.13	3.53	2.29	2.38	2.24	2.37
70-<75	2.90	2.69	3.15	2.36	2.47	2.46	2.22	1.93
75+	1.84	1.42	1.28	1.44	1.50	1.20	1.40	1.48
All	**1.55**	**2.23**	**1.44**	**2.31**	**1.39**	**2.24**	**1.55**	**2.46**

Table 5: Hospitalization rate ratios for injury stratified by age, sex, and Status First Nations Identifier

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, Status First Nations females were more likely to be hospitalized for injury than "everyone else" females.
- Across all age groups, Status First Nations males were more likely to be hospitalized for injury compared to "everyone else" males.
- Status First Nations males were consistently more likely to be hospitalized for injury than Status First Nations females
- Status First Nations females aged 15-30 years were consistently more likely to be hospitalized for injury than Status First Nations males, relative to the general population.

Hospitalizations for motor vehicle accident stratified by age, sex, and First Nations status

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	2.59	3.06	4.20	2.46	2.25	3.00	s	s
5-<10	2.25	2.39	1.66	2.38	2.12	1.58	3.51	1.63
10-<15	1.44	1.37	2.18	1.34	1.96	0.96	3.02	1.28
15-<20	1.86	1.18	1.97	1.17	2.27	1.39	2.37	1.75
20-<25	3.34	1.74	3.51	1.84	4.09	1.79	4.68	1.95
25-<30	4.73	2.32	5.21	2.39	4.60	2.46	5.21	2.46
30-<35	5.64	2.27	4.90	2.75	4.53	2.74	4.92	3.01
35-<40	3.88	3.15	3.27	1.88	3.57	2.23	3.40	3.90
40-<45	5.04	3.29	4.01	2.41	3.52	2.42	4.16	3.50
45-<50	3.16	2.51	4.79	2.89	3.68	2.33	3.72	3.26
50-<55	2.95	3.49	3.97	1.80	2.34	3.04	1.99	2.12
55-<60	3.20	1.64	3.34	1.51	2.32	2.07	1.73	1.72
60-<65	3.73	2.84	2.58	3.07	3.64	1.36	3.85	2.02
65-<70	s	3.33	4.56	4.01	s	2.25	2.61	2.11
70-<75	3.81	s	s	3.20	s	s	s	s
75+	s	s	s	1.75	1.75	s	2.15	2.23
All	**2.81**	**2.03**	**3.02**	**1.93**	**3.00**	**2.03**	**3.56**	**2.51**

Table 6: Hospitalization rate ratios for motor vehicle accidents stratified by age, sex, and Status First Nations Identifier (cells with s indicate data suppression due to small cell size)

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, Status First Nations females were more likely to be hospitalized for a motor vehicle accident than "everyone else" females.
- Across all age groups, Status First Nations males were more likely to be hospitalized for a motor vehicle accident compared to "everyone else" males.
- Starting at the age of 10 years, Status First Nations females were also consistently more likely to be hospitalized for a motor vehicle accident (compared to the general population) than Status First Nations males.

Hospitalizations for falls stratified by age, sex, and First Nations status

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	1.86	2.32	2.17	2.12	1.50	1.80	2.34	1.25
5-<10	1.63	1.96	1.65	1.77	1.85	1.85	1.51	1.80
10-<15	1.21	1.29	1.71	1.32	1.27	1.24	1.55	1.36
15-<20	2.22	1.13	2.28	1.09	2.46	1.15	2.90	1.25
20-<25	5.06	1.97	5.25	2.10	5.33	2.39	4.63	1.91
25-<30	4.95	3.44	3.59	2.28	5.27	3.44	5.12	3.58
30-<35	4.61	4.10	4.93	2.93	5.23	3.26	4.17	3.63
35-<40	3.90	4.07	5.02	3.50	3.88	2.91	5.32	4.69
40-<45	4.26	3.43	4.41	3.30	3.24	3.53	3.44	4.41
45-<50	3.54	2.62	3.29	3.09	3.29	3.52	3.88	3.60
50-<55	4.37	2.87	2.49	2.72	3.50	4.01	3.81	3.14
55-<60	3.60	2.32	3.24	3.47	2.23	2.94	2.81	3.01
60-<65	4.83	2.84	2.55	4.03	2.49	2.36	2.57	2.39
65-<70	3.11	3.71	3.28	3.11	2.54	2.27	2.31	2.30
70-<75	2.80	2.91	3.21	2.34	2.64	2.60	2.22	1.70
75+	1.83	1.37	1.23	1.37	1.47	1.15	1.28	1.41
All	**0.95**	**1.42**	**0.81**	**1.28**	**0.87**	**1.23**	**0.95**	**1.30**

Table 7: Hospitalization rate ratios for falls stratified by age, sex, and Status First Nations Identifier

In the five-year time periods of 2001-2005, 2006-2010, 2011-2015, and 2016-2020:

- Across all age groups, Status First Nations females and Status First Nations males were consistently and many times more likely to be hospitalized for falls compared to "everyone else" females and males respectively.

Hospitalizations for any cause stratified by age, sex, First Nations status, and health region

Of all the variables, hospitalizations for mental health and addictions and hospitalizations for injury were the only ones with complete data allowing for comparisons across all regional health authorities. For the other variables such as mortality, all harm, self-harm, assault, injury, motor vehicle accidents and falls, there were too many missing cases that prevented adequate analyses. Data for mental health and addictions as well as injury show that Status First Nations females and males were, throughout the five-year periods 2000-2005, 2006-2010, 2011-2015,

and 2016-2020 and across all age groups, consistently more likely to be hospitalized for mental health and addictions and for injury respectively than “everyone else” females and males.

The data also show that the likelihood of Status First Nations females and males being hospitalized for mental health and additions was higher than the likelihood of hospitalizations for injury compared to the general population and across all geographic areas. The findings are presented showing how hospitalization rate ratios over time within each geographic area.

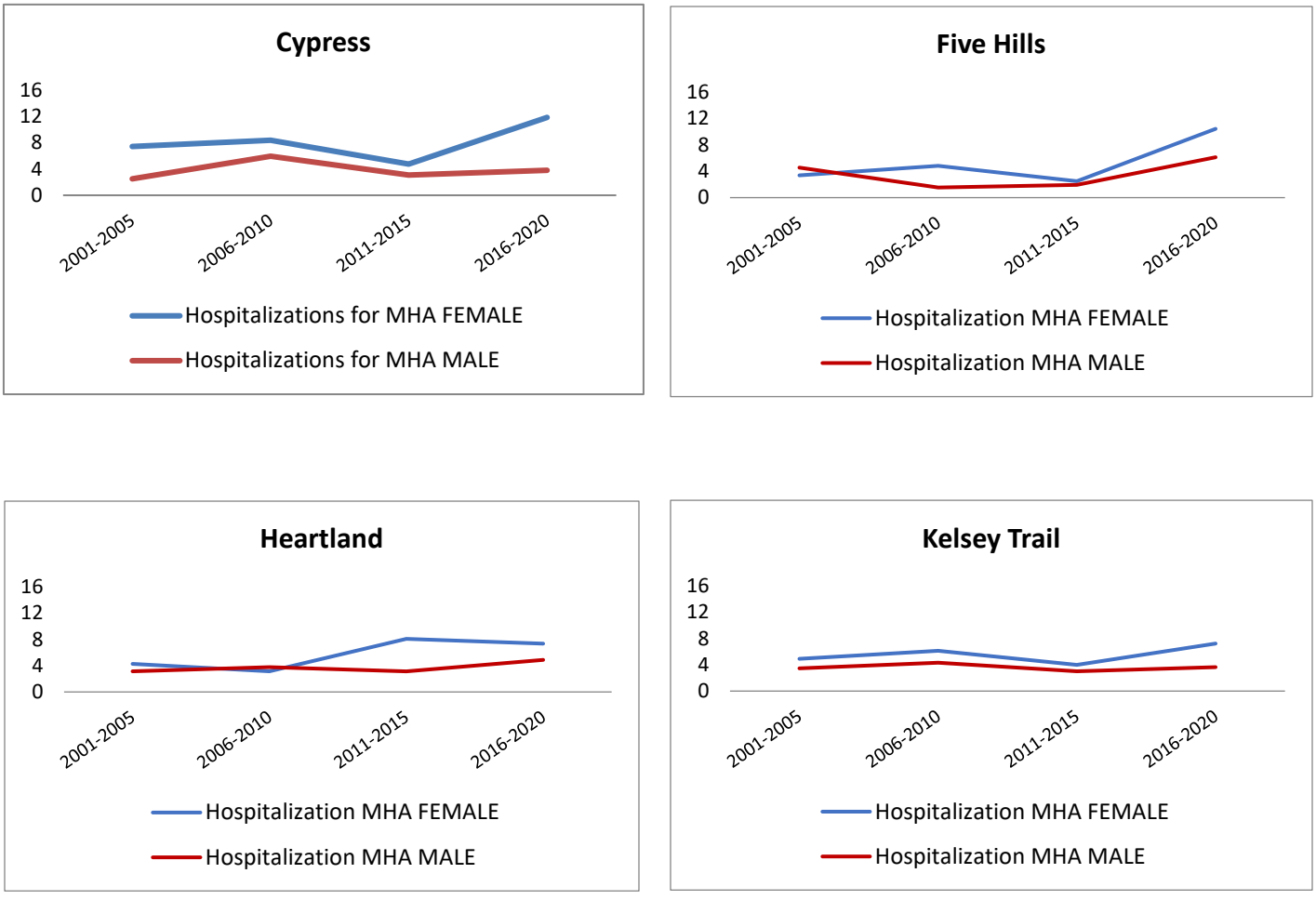
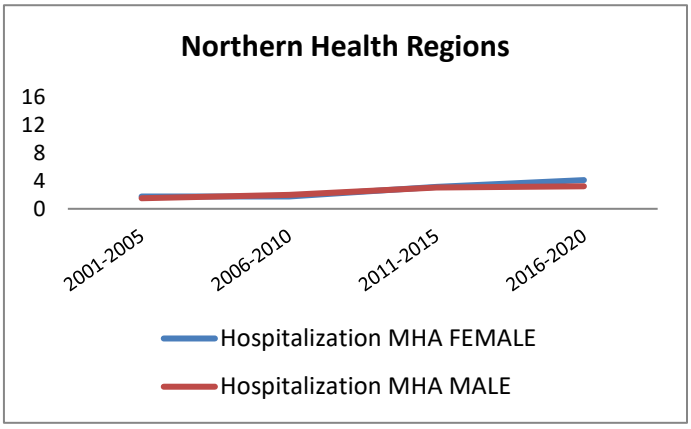
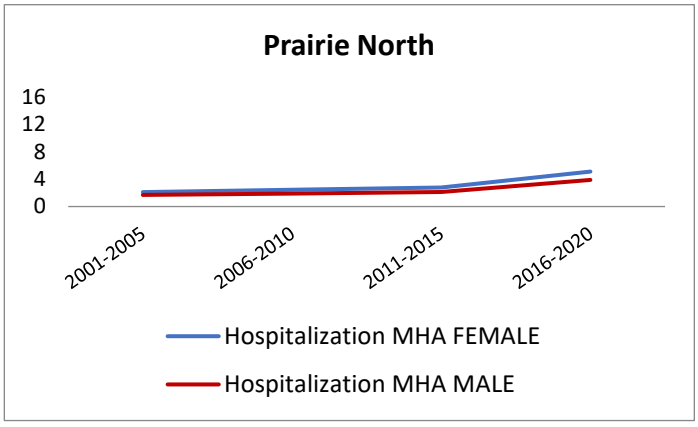
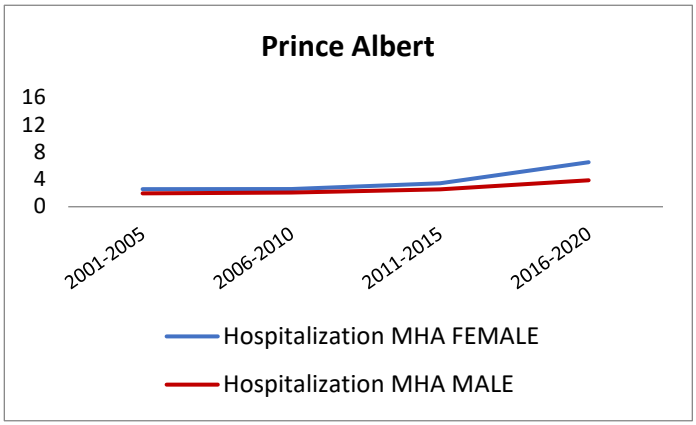
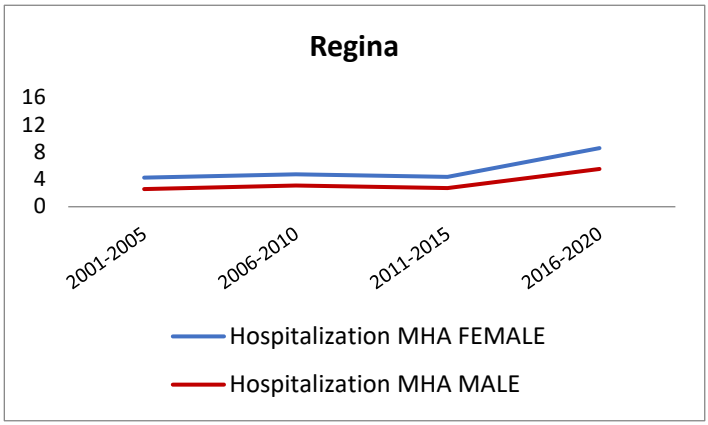


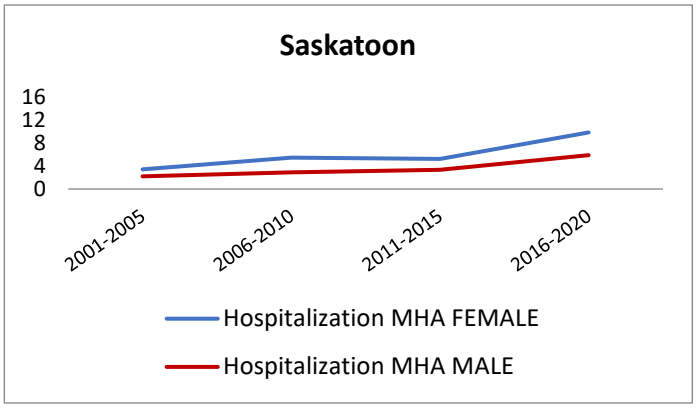
Figure 15: Rate Ratios of hospitalization for MHA among status first nations for males/females, 2000-2020, by former Health Region











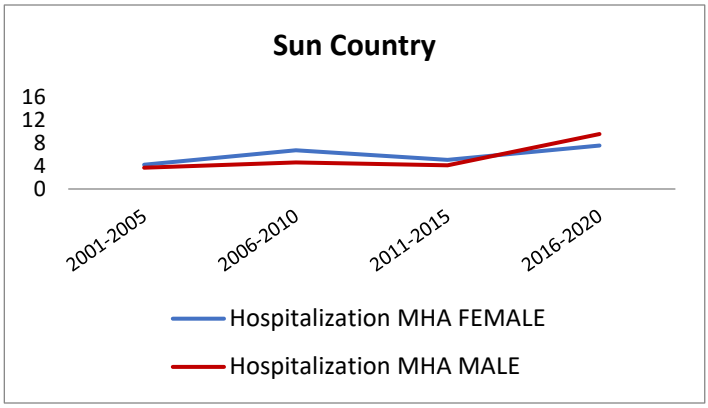


Figure 15 (Cont'd): Rate Ratios of hospitalization for MHA among status first nations for males/females, 2000-2020, by former Health Region

Trends of hospitalization for MHA within each health over the 20-year period

As seen in figure 15, each of the health regions in the 2000-2020 period below showed an increase in hospitalization rates for MHA across the board for both males and females. Females consistently had higher rates of hospitalization for MHA than males.

For the five-year period of 2000-2005:

- The health region with the highest likelihood for hospitalizations was Cypress Health Region for females (7.46) and Five Hills Health Region for males (4.55).

For the five-year period of 2006-2010:

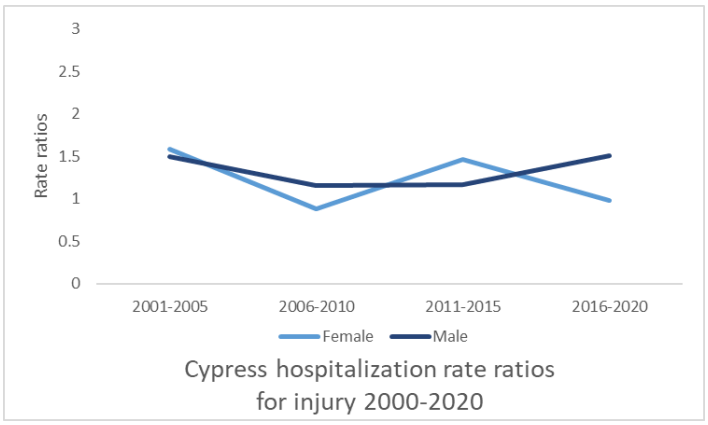
- Status First Nations males (5.96) and females (8.39) in Cypress Health Region had the highest likelihood of being hospitalized for MHA than “Everyone Else” in Saskatchewan.

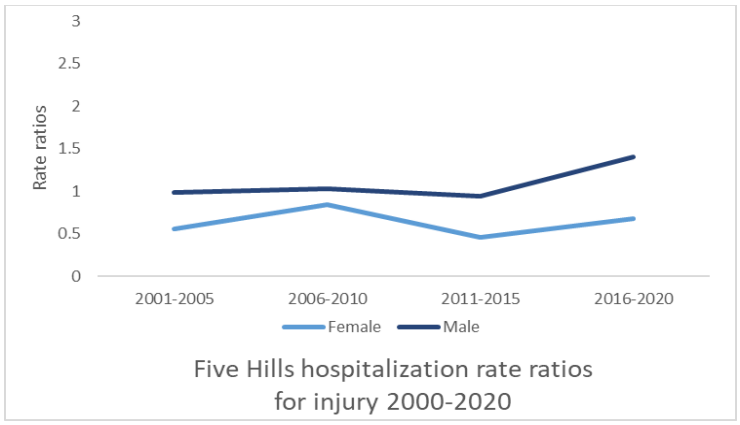
For the five-year period of 2011-2015:

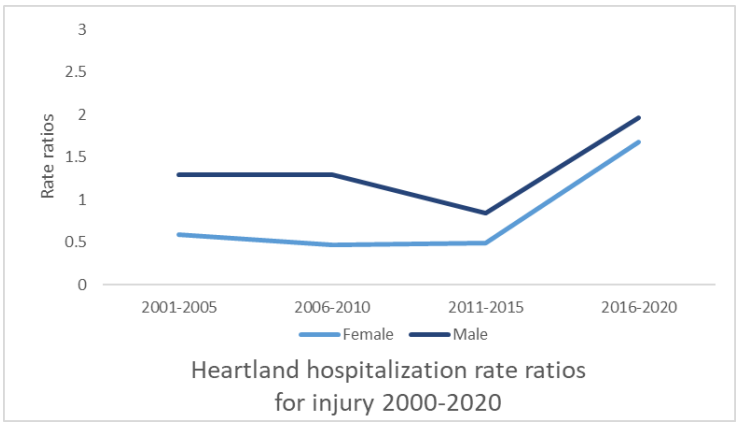
- Status First Nations males (6.59) and females (9.85) in Sunrise Health Region had the highest likelihood of being hospitalized for MHA than “Everyone Else” in Saskatchewan

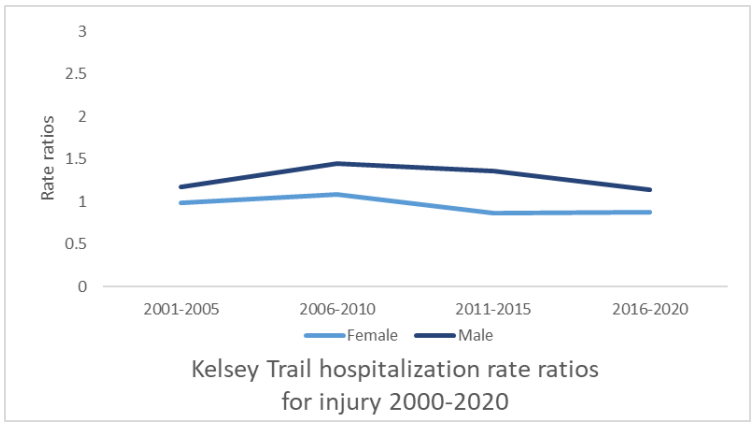
For the five-year period of 2016-2020:

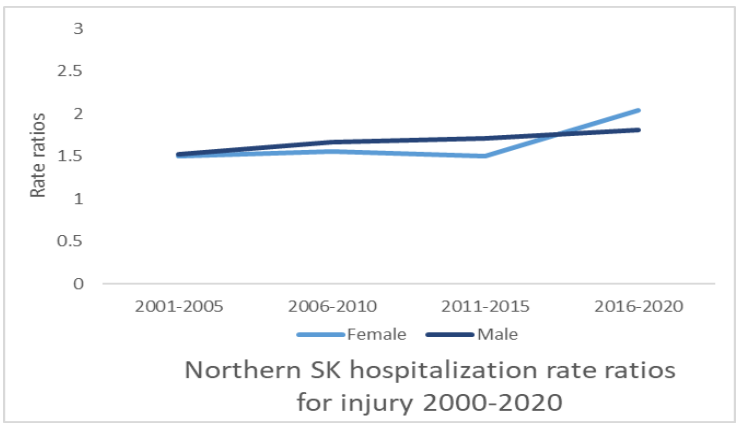
- Status FN males (9.60) in Sun Country Health Region and females (15.18) in Sunrise Health Region had the highest likelihood of being hospitalized for MHA than “Everyone Else” in Saskatchewan.











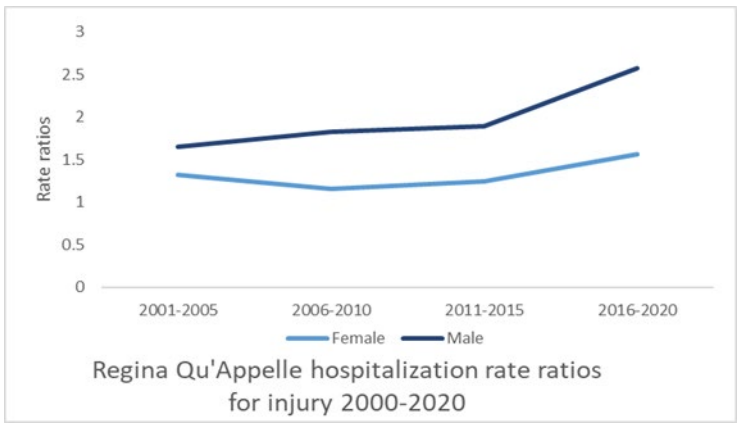
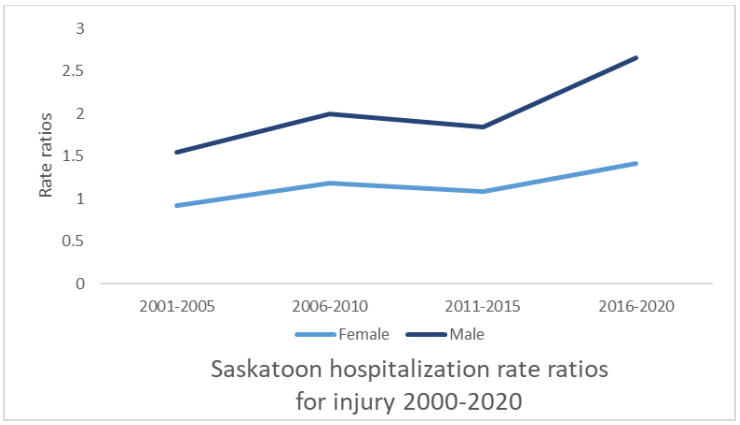
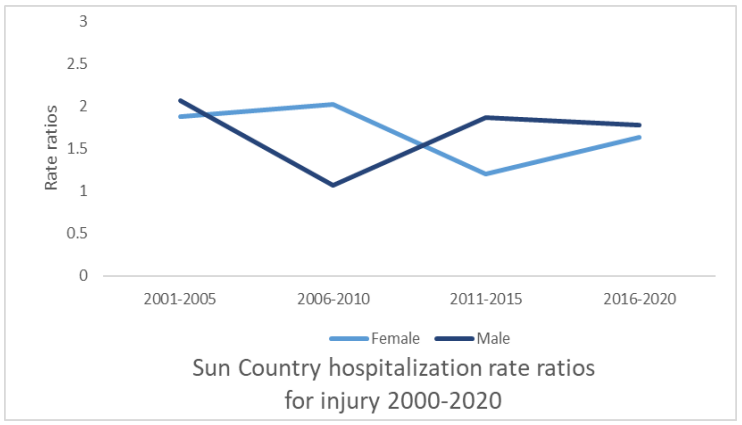
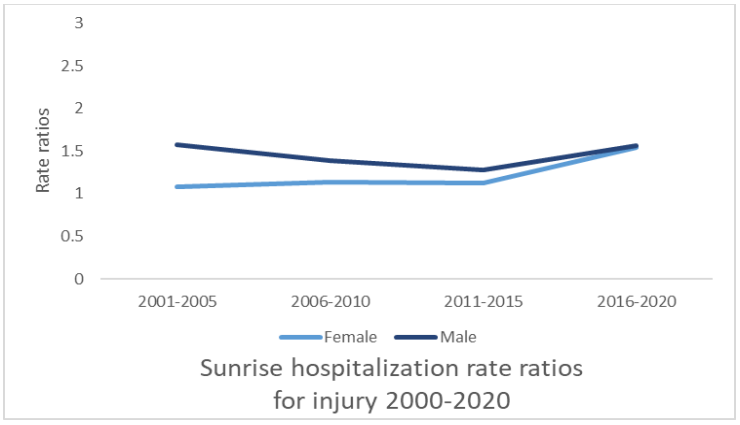
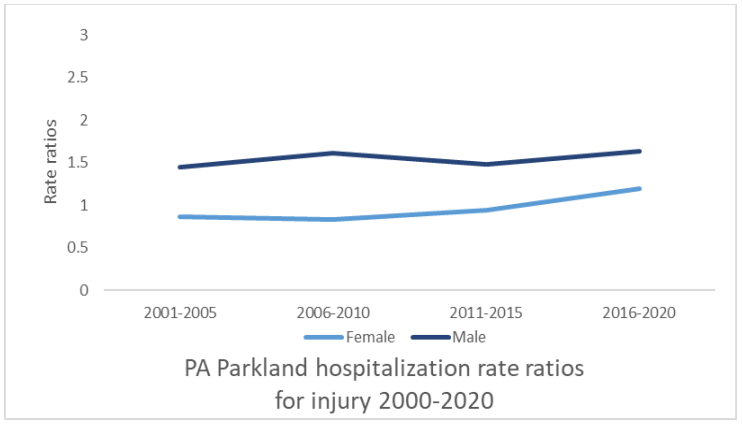


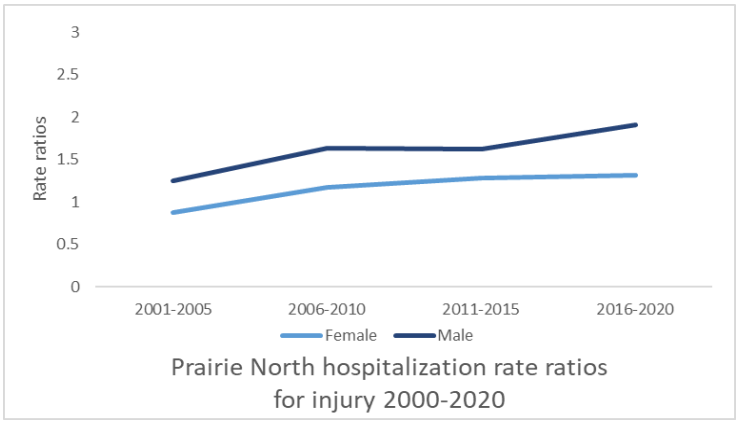
Figure 16: Rate Ratios of hospitalization for Injury among status first nations for males/females, 2000-2020, by former Health Region











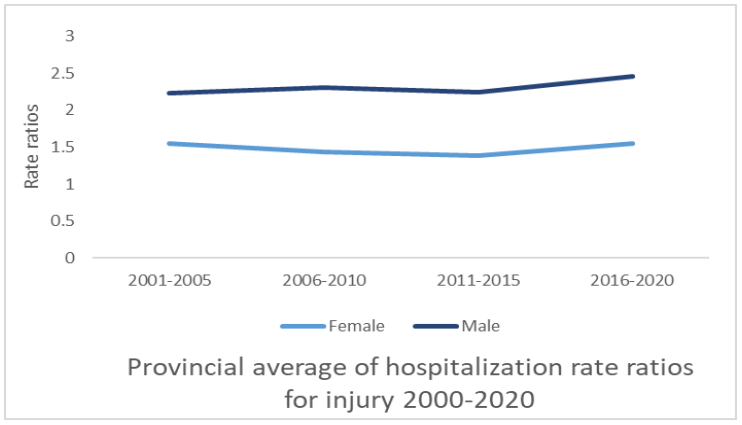


Figure 16 (Cont'd): Rate Ratios of hospitalization for Injury among status first nations for males/females, 2000-2020, by former Health Region

As seen in Figure 16, although hospitalization rates for injury tended to increase over time in most health regions in the 2000-2020 period, the increase was minimal with males in general having higher rates of hospitalization for injury than females.

For the five-year period of 2000-2005:

- Status First Nations males (2.06) and females (1.87) in Sun Country Health Region had the highest likelihood of being hospitalized for injury than "everyone else."

For the five-year period of 2006-2010:

- The health region with the highest likelihood for hospitalizations was Sun Country Health Region for females (2.02) and Saskatoon Health Region for males (2.00).

For the five-year period of 2011-2015:

- The highest likelihood for hospitalizations for females was in Northern Saskatchewan's two former health regions and the Athabasca Health Authority (1.50) and for males, Regina Qu'Appelle Health Region (1.89).[47]

For the five-year period of 2016-2020:

- The region with the highest likelihood for hospitalizations for females was Northern Saskatchewan (2.04) and Saskatoon Health Region for males (2.65).

[47] Northern Saskatchewan is not a health region. It is used to refer to two former health regions in Northern Saskatchewan that were Keewatin Yatthé and Mamawetan Churchill River, and the Athabasca Health Authority

Crude Rate Ratio for deaths between Status FN and everyone else (EE)

Age at CY	CY2001-2005		CY2006-2010		CY2011-2015		CY2016-2020	
	Female	Male	Female	Male	Female	Male	Female	Male
0-<5	2.21	2.13	2.27	3.17	3.04	1.86	3.29	4.22
5-<10	1.93	1.95	3.10	1.59	s	s	s	s
10-<15	2.52	1.25	2.67	2.31	s	s	s	s
15-<20	2.71	3.03	3.58	3.55	4.07	3.05	4.83	2.86
20-<25	5.55	3.57	6.28	3.67	7.10	4.21	5.96	3.70
25-<30	5.59	3.90	4.96	4.45	5.04	4.11	8.47	4.72
30-<35	7.84	3.89	6.96	4.09	7.23	4.99	7.10	4.49
35-<40	4.52	3.89	5.30	4.04	6.80	4.24	6.14	4.45
40-<45	4.65	3.55	4.78	3.65	4.69	4.32	5.58	4.34
45-<50	3.42	2.53	3.67	3.68	3.67	3.50	4.19	3.14
50-<55	3.08	3.04	2.69	2.83	2.99	3.12	3.69	3.62
55-<60	2.50	2.54	2.99	2.48	3.14	2.49	2.94	3.22
60-<65	2.64	2.00	2.74	2.61	2.57	2.34	2.59	2.33
65-<70	2.27	2.36	2.79	2.51	2.36	2.37	2.37	2.10
70-<75	2.61	1.70	2.03	1.65	2.56	1.86	2.43	2.13
75+	1.36	1.21	1.23	1.26	1.21	1.25	1.15	1.24
All	**0.46**	**0.54**	**0.50**	**0.63**	**0.60**	**0.72**	**0.78**	**0.92**

Table 8: Crude rate ratio for deaths from all causes between Status First Nations and everyone else (cells with s indicate data suppression)

All-cause mortality data shows Status First Nations males and females were more likely to die than “everyone else” (Table 8). No significant change was observed over time from 2001 to 2020.

Findings from the qualitative interviews

There were five themes generated from our interviews with 10 key informants: colonization, trauma, resilience, healing, and education. While colonization and trauma were consistently cited as having a negative impact on First Nations People and the communities’, resilience, healing, and education were described more in positive terms.

As seen in Figure 17, there is a natural web of relationships between the various themes and their corresponding sub-themes. However, the findings show a corresponding relationship of cause and effect between the identified themes, from colonization to education. Colonization

was responsible for much of the trauma described by key informants. Trauma subsequently led to a resilient response that contributed to the healing of First Nations People and communities. Learnings from that healing journey led to a sense of renewed appreciation for First Nations land, culture, and language, and renewed calls for education at various levels within and outside First Nations communities.

Colonization

The theme of colonization was pervasive throughout all key informant interviews; it was mentioned either directly or in relation to its various sub-themes. Many of the key informants felt poor mental health among First Nations People (as shown in our quantitative analysis) was due in large part to colonization and its ongoing effects on the lives of First Nations People. Poverty and substandard living conditions were identified as one of the ongoing effects of colonization.

Trauma

Colonization created an incredible amount of trauma that became intergenerational in nature. Subsequent refusals on the part of subsequent governments and institutions to address the historical wrongs further traumatized First Nations People.[48] As described by key informants, trauma has been experienced in the form of pain and anger from losing one's culture and identity. This has led to poor health outcomes, lateral violence, and abuse as seen through acts of suicide, suicide attempts, and self-harm with family and community members often struggling to understand each other's pain.

One key informant explained that the indirect impact of trauma on the family and the community is the pain caused by suicide, assault, and injury. It was clear from the key informants' sharing and insights that the trauma caused by colonization takes many forms – all with damaging consequences. Colonized systems that continue to perpetuate racism,

[48] McQuaid RJ, Bombay A, McInnis OA, Humeny C, Matheson K, Anisman H. Suicide ideation and attempts among First Nations Peoples living on-reserve in Canada: The intergenerational and cumulative effects of Indian residential schools. The Canadian Journal of Psychiatry. 2017;62(6), 422-430. Available from: https://doi.org/10.1177%2F0706743717702075

discrimination against, and control over Indigenous People lead to mental health challenges at the individual, family, and community levels. These challenges are long lasting, as they are passed down through generations as trauma that leaves Indigenous People feeling helpless and hopeless.

Gaps in child rearing due to the forced removal of children who were raised in residential schools or in non-Indigenous homes continue to have an impact on First Nations People and their health and well-being today.[29] As one key informant stated, many of today's Indigenous children are born with predispositions to mental health challenges due to what is known as *in-utero* trauma.[49,50]

The rates of suicide and self-harm in First Nations adolescents is a trauma in and of itself in First Nations communities. Many of the key informants shared personal stories of losing their children or grandchildren to suicide at a very young age. The sentiments of hopelessness, helplessness, and lack of opportunities lead First Nations youth to alcohol and drugs, and ultimately to self-harm and suicide.

Key informants also cited the untimely death of parents – leaving children without their parents or parental figures – as one of the factors driving the increase in suicide and self-harm behaviours in First Nations adolescents.

Resilience

Although the impact of colonization and the related ongoing trauma continue to impact First Nations People and communities negatively, the interviews also highlighted the fighting spirit of First Nations People and their determination as survivors to continue to stand strong despite

[49] Yehuda R, Lehrner A. Intergenerational transmission of trauma effects: putative role of epigenetic mechanisms. World Psychiatry. 2018 October;17:3. Available from: https://onlinelibrary.wiley.com/doi/epdf/10.1002/wps.20568

[50] Flom JD, Chiu YHM, Hsu HHL, Devick KL, Brunst KJ, Campbell R, Enlow MB, Coull BA, Wright RJ. Maternal Lifetime Trauma and Birthweight: Effect Modification by In Utero Cortisol and Child Sex. The Journal of Pediatrics. 2018;203:301-308. Available from: https://doi.org/10.1016/j.jpeds.2018.07.069.

attempts to erase them, their culture, and their communities. One key informant felt responding to past hurt with kindness and generosity helps build resilience and hope.

Terms such as “not giving up,” “resilient,” and “fighting spirit” were used to describe the capacity of First Nations People to thrive in hostile conditions, to choose resilience over giving up, and moving forward over stalling or going backwards. The availability of resources and support facilitates making the right decision.

Raising children and grandchildren and building the capacity to lead healthy and stable lives were cited as examples of the resilience First Nations People. One key informant said reliance on culture and traditional ways lies at the heart of First Nations People’s resilience:

Figure 17: Themes and sub-themes from Qualitative Interviews

Healing

Key informants told us that a very important aspect of healing – regardless of the type of healing – is the return of things that are missing, whether it was culture, land, or family members lost to the residential school system. Reclaiming and revitalizing their destroyed culture and languages is part of the healing process, as is mending the trust between the Canadian government (Crown) and Indigenous Nations, which was broken when the Treaty agreements weren't upheld. It's a journey, as one key informant put it, that involves personal healing and forgiveness:

> *"And that's where I started following them and started working on, my recovery, you know, my healing journey, and that saved me. I always tell kids that what saved my life is walking the Red Road, learning about my culture, hearing these stories from elders. One of it was forgiveness. Working on forgiveness because I think, what happened to me at that residential school stuck with me."*

Key informants highlighted the sacred importance of cultural spaces in the healing and empowerment of First Nations People. They described healing as taking the place of trauma as the cycle is broken. The ongoing negative impact of the residential school system on the parenting skills of today's Indigenous parents needs to be addressed.

Some key informants described the Truth and Reconciliation Commission's (TRC) Calls to Action as an important place to start. These actions were seen as playing a vital role in mending the broken connections not only with others – such as settlers, the government, and institutions – but also reconnecting Indigenous People to their culture, language, traditions, traditional practices, ways of knowing and being, and ceremonies.

These connections were described as essential for holistic health, including mental, emotional, spiritual, and social health. There was also an understanding that if the community is healthy, the individual will be healthy. Hence, the importance of bringing communities together for the work of reconciliation and healing. Interconnectedness in First Nations communities plays a

significant role in how people, land, and animals interact with and affect one another. In order for a person to have holistic well-being, they must understand and respect their relationships and connection to the spirit world and the environment. Traditional Indigenous medicine was also highlighted as a strong, positive, effective, and most appropriate way to deal with mental health in First Nations People. Key informants recommended Indigenous health workers apply culturally appropriate approaches that combine the best that Western medicine and traditional Indigenous medicine have to offer.

Education

Education was a recurrent theme across the majority of key informant interviews. The individuals we spoke with said Canadians should be educated about on First Nations history and the impact of colonization and the residential school system. They also emphasized that in addition to pursuing formal education, First Nations People should be educated about their culture and traditions, and their land to reclaim and revitalize them. All these efforts play a significant role in capacity building, autonomy and the reclaiming of their roots by First Nations People and communities. As one key informant stated, education is an approach that, over time, helps in reclaiming a paradigm that was destroyed through colonization, in order to reinstate the Indigenous worldview and identity.

Building capacity in First Nations People should be led by First Nations educators rather by others who use education as a means of colonization. Decolonizing education requires First Nations leadership to deliver education within their communities.

Key informants stated that grandparents have a major role to play in passing on knowledge to the younger generations of children and grandchildren. The power of stories that keep connecting the youth back to their ancestors and traditions is a gift that grandparents bring to the younger generations; it is as an educational tool that needs to be strengthened and preserved.

Education is also seen as playing an important role in breaking the cycle of suicide and self-harm. It can play an important role in restoring individual and community health by highlighting the various resources available to support people suffering with poor mental health. Education

also helps normalize the issue by showing people that they are not alone in their struggles with mental health.

Key informants noted that while some education and treatment programs helped curb suicide and self-harm in their communities, the colonial approach to funding meant that initiatives were short-lived. They felt strongly that education initiatives must be community-led and community driven and that in order to get buy-in and sustained success, programs must be rooted in the communities they are intended to support. Indigenous People know what is best for them.

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