HOW TO WRITE A RESEARCH GRANT

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IT ALL STARTS WITH A QUESTION…

Research Question must be:

1. **Feasible -**
2. **Interesting** to researchers, communities, patients
3. **Novel -**
4. **Ethical -**
5. **Relevant** – could it influence policy, programs, clinical practice or future research?

Has the question been adequately answered in the literature already?

How would you find out?

FULL PROJECT OR PILOT PROJECT?
BIG MONEY -OR- LITTLE MONEY

- What do we know about the area to date?
- Expertise on team (competiveness in the area)?
- Research experience on team

- Often an excellent strategy is to start with a pilot study
- Pilot study =

BUILDING YOUR TEAM

PI =

Co-PI =

CI =

Collaborator =

Select PI carefully

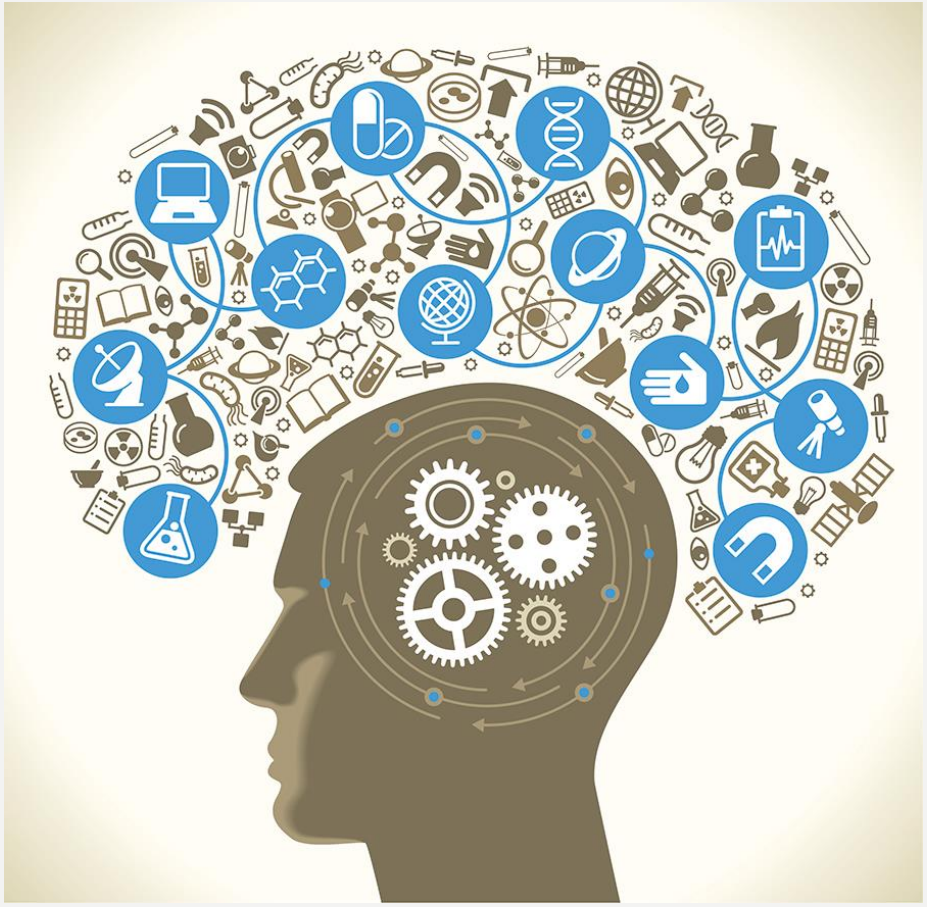
More likely to be funded if you have led of co-led previous projects

GETTING STARTED

COMPLETE THE BEGINNING LAST

- Develop the title, project summary and abstract last, **once you have a strong draft of the full proposal** to work from.
- Then distill this strong draft down to its most essential elements for these sections, and to form a title that really encompasses the work.
- **What should you start with first?**
  - **3 outlines!**

ORGANIZING IDEAS



HOW TO START
MAKE 3 OUTLINES

- **Outline 1**: What funder wants **you** to put in proposal (e.g., Table 19.1 in reading). Work to understand exactly what is wanted in each section – rewrite & shorten in your own words. Can contact funder if unsure about some sections.
- **Outline 2**: What funder wants **peer reviewers** to grade your proposal on.
- Outline 1 & 2 **are often *different*!**
- Revisit Outline 2 – where can the items the peer reviewers are being asked to look for fit into the Outline 1 template?

OUTLINE 2: Find the template online that peer reviewers given to assess your proposal

- Grantor has 5 focus areas, so peer reviewers will be asked to assess extent to which a proposal meets 1 or more of them. file:///C:/Users/Owner/Downloads/2017-06JUN-14-Focus-Areas.pdf
  Make this easy for a peer reviewer to find in your proposal!

Demonstrate to peer reviewers the **relevance** of your proposal to priority areas set out in grant.

Relevance of Outputs: CIHR Priority Areas

CIHR Priority Areas	*Distinct Project Outputs*
1. Integrated service delivery models for complex needs	Integrated Service Delivery Map: We will describe integrated service delivery models for individuals/families with psychological trauma, many of whom have complex needs, and evidence on effectiveness.
2. Priority Populations	Mental Illness, those with multi-morbidities, Indigenous populations.
3. Identify & understand complex needs	Needs Assessment Map: We will map strategies to identify and understand the needs of persons/families with psychological trauma.
4. Health promotion integration	Role of Health Promotion: We will highlight models that integrate health promotion strategies to prevent future needs for complex care among household members.
5. How to incentivize integration across the continuum of care	Incentivization/Change Management Map: We will map strategies to incentivize and manage change to prepare staff for integrated service delivery, and evidence on effectiveness.

SUMMARY: RELEVANCE OF AIM-HI NETWORK TO CIHR'S INDIGENOUS MENTORSHIP NETWORK PROGRAM OBJECTIVES

CIHR Objectives	AIM-HI Network Initiatives
1. Increase mentorship of FNMI mentees through networking	Mentee Activities: The work of the AIM-HI Network will revolve around a set of 5 activities designed to engage mentees in networking with scholars, peers and FNMI community supports.
2. Increase mentorship & networking with Canada's North	Intention to Engage: We will build a formal relationship through network co-investigators.
3. Address recruitment, retention, and representation of FNMI mentees in health research	Recruitment Activities: Initiatives including a mini-research day, secondary school presentations, digital storytelling, and undergraduate studentships have been developed to recruit and increase the representation of FNMI mentees in our network. Retention: Mentee activities have been designed to create a sense of belonging, community and support
4. Create mechanisms that support trainees at different stages	Individualized Mentorship Strategy: Each mentee will tailor a strategy for engagement with the network that meets their training/career stage, the effectiveness of which will be tracked over time relative to the mentees career goals in health research.

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Other examples by section of grant:

- https://grants.nih.gov/grants/policy/review_templates.htm
- https://grants.nih.gov/grants/peer/critiques/rpg_D.htm#rpg_01

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- Revisit Outline 2 – where can the items the peer reviewers are being asked to look for fit into the Outline 1 template?
- **Outline 3**: Timeline for team to review, write different sections, for your supervisors to review & approve before deadline. Grant writing is **VERY iterative process.** You will have many, many drafts!

GRANT SUBMISSION TIMELINE

USE GAUNT CHART!

TASK	Year 1 (2017-2018)		Year 2 (2018-2019)		Year 3 (2019-2020)		Year 4 (2020-2021)	
	June-Dec	Dec-June	June-Dec	Dec-June	June-Dec	Dec-June	June-Dec	Dec-June
Recruitment of Trainees								
Ethics Applications								
Recruitment of facilitators and facilities								
Finalize intervention strategies								
Phase I: Lethbridge 8-month trial with 4 months follow-up								
Recruitment of individual participants								
Finalize intervention strategies, cultural adaptation (maybe)								
Phase II: Kainai -month trial with 4 months follow-up								
Data analysis and manuscript preparation								
Phase III: post-intervention consultations (maybe)								
Development of “toolkit” for other communities								

MAP OUT THE INTRODUCTION

- **Start with ideas in point form by building out from your outline**.
- Rearrange ideas in point form to get the right flow. Avoid trying to craft perfect sentences (most of which you will likely delete later)
- **Significance** – what burning problem are you seeking to address? **First paragraph** tells the reader to point of the research – right away. Don't make them wait for this!
- **Innovations** – emphasize how this research will **fill a gap** in scientific knowledge on this topic.
- Use your review of literature to shape and re-shape your research questions.

FRAMING A RESEARCH QUESTION USING PICO

1. **P**opulation target:
2. **I**ntervention (exposure variable):
3. **C**omparator or control:
4. **O**utcomes (outcome variable):

FINDING A GOOD RESEARCH QUESTION USING FINER

1. Feasible -
2. Interesting -
3. Novel -
4. Ethical -
5. Relevant –

RQs (study aims) must stand out on page.

Research Questions

1. What integrated service delivery models have been implemented in-home to address the needs of individuals and families struggling with psychological trauma/mental illness/addictions?
2. What strategies have been used to identify and understand needs within these households?
3. How have public health/health promotion strategies been integrated into these models?
4. What change management and incentivization strategies have been used to implement these models?
5. What evaluative strategies have been used to examine models, and what evidence has been produced?

Relevance of Outputs: CIHR Priority Areas

CIHR Priority Areas	*Distinct Project Outputs*
1. Integrated service delivery models for complex needs	Integrated Service Delivery Map: We will describe integrated service delivery models for individuals/families with psychological trauma, many of whom have complex needs, and evidence on effectiveness.

DIFFERENCE BETWEEN RQS AND TESTABLE HYPOTHESES?

- What is a hypothesis?

STYLE MATTERS

WHAT DOES SUCCESS LOOK LIKE?

- Read through several successful proposals across different funders.
- Take note of what you like and do not like in the format, writing style, referencing, etc.

STYLE

- Use a serif font as it is most highly readable in printed form (i.e., Times New Roman, Palatino, Georgia, Bookman and Garamond).
- If no formal template given by funder - Use the **search function in Word** (in Word click *File*, *New*, then put *Report* in the search bar) to find a report style you like.
- Headings – must be consistent (level 1, 2, 3) across paper. Select them and stick with them.
  - Use **heading 1** titles to break up the Introduction, Methods, Results. Then includes **heading 2** and **3** titles to break up the different sections of the report for the various sections you need to include to follow PRISMA-P.

Use **white space to increase the readability of the document.**

Go through and **remove unnecessary words** repeatedly.

Marks - You will be marked on report style, and how it adds or takes away from the readability of your report.

READABILITY

WHAT ARE SOME OF THE PROBLEMS WITH THIS LAYOUT?

- Your assignment should look something like a published SR protocol. No double-spacing, no pictures please
- Use a serif font as it is most highly readable in printed form (i.e., Times New Roman, Palatino, Georgia, Bookman and Garamond).
- Use the search function in Word (in Word click File, New, then put Report in the search bar) to find a report style you like. Headings – must be consistent (level 1, 2, 3) across paper. Select them and stick with them.
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Project Rationale

With life expectancy among Indigenous Canadians remaining far lower than the national average, and that gap widening in Alberta, there is an urgent need to address community-identified barriers to wellness.[1] In 2016, Kainai Nation (also called the Blood Tribe) created the *Supportive Families Initiative* and partnered with the University of Lethbridge to address a significant barrier to wellness in their community – the lack of collaboration between agencies supporting households struggling with *psychological trauma*, and the need for information on models they could use to provide wrap-around services to these families. Psychologically traumatic events are typically defined as frightening, often dangerous, and/or violent experiences that would evoke significant symptoms of distress in most people. [2] Trauma symptoms manifest in various ways resulting in service provider involvement across multiple sectors. Kainai stakeholders report they are challenged by funding models that require agencies to work in silos, making it difficult to layer programming throughout the household. Services are at times duplicated, while agency mandates leave gaps in other supports.

In 2016, in an unprecedented formal action, Kainai Nation approached the University of Lethbridge with a specific question: "*What are some examples of integrated service delivery models that have been embedded in homes to support healing, healthy relationships, and the success of individuals and families struggling with psychological trauma*?" They asked for examples of national and international models they could adapt and adopt to collaborate more effectively in their own community, incentivization and change management strategies they might use; and evaluation methods to track outcomes. It became clear in subsequent discussions with a larger group of stakeholders that this question has *national relevance* for Indigenous service providers working on-reserve funded by federal agencies, and for their counterparts working off-reserve within provincial agencies. We developed a team that can speak to the relevance of findings for each sector. ***Knowledge Synthesis Purpose***: To map integrated delivery models and strategies that service providers can use to support Indigenous households struggling with psychological trauma.

Background

Kainai is geographically the largest First Nation community in Canada and has more than 12,000 members. Three residential schools operated within or adjacent to Kainai for more than 100 years, denying an environment of culturally positive parenting and the success of many families.[3-4] Generations of children were forcibly separated from families and sent to these schools, where many were emotionally, physically and sexually abused; and chronic neglected by staff. Children in at least one school - the Blood School - were selected as the control group for the Canadian government's nutritional experiments, and severely malnourished for years in the 1950s-60s without the consent of their families.[5] Findings from the Truth and Reconciliation Commission (TRC) indicate such cross-generational experiences of child maltreatment occurred not only to Kainai families, but to Indigenous families across the country until the last school closed in 1996.[4]

Child maltreatment is a form of psychological trauma that has serious consequences for the mental health, physical health, and social wellbeing of children and subsequent adults.[6-7] An extensive body of evidence documents that chronic child maltreatment, such as that described by the majority of residential school survivors, is a form of complex traumatic stress that interferes with developing neural networks, resulting in a shift from a learning brain to a *survival brain*.[8-9] The survival brain is focused on automatic, unconscious scanning for and escape from threats, and represents a biological

Building Wellness in Indigenous Households
Currie, Research Proposal

trade-off between dealing with danger and facilitating growth, healing, and learning within the developing child.[8-9] These brain-based changes result in emotional and physical hyperarousal in the face of stress (fight or flight), entrenched beliefs that survival is in jeopardy, and a sense of hopelessness and defeat among children; with symptoms that remain apparent in adult life.[9-11] Suicide ideation and attempts, substance abuse and addictions, and other at-risk behaviours are common as youth and adults seek to escape these symptoms.[11-12] These long-lasting biological, psychological, and behavioural effects make it difficult for several generations of residential school survivors to live together in supportive and nurturing ways. In addition, lessons learned about "parenting" in the chaos and violence of the residential school system have fueled additional traumas within these households.[4]

A Multigenerational Approach

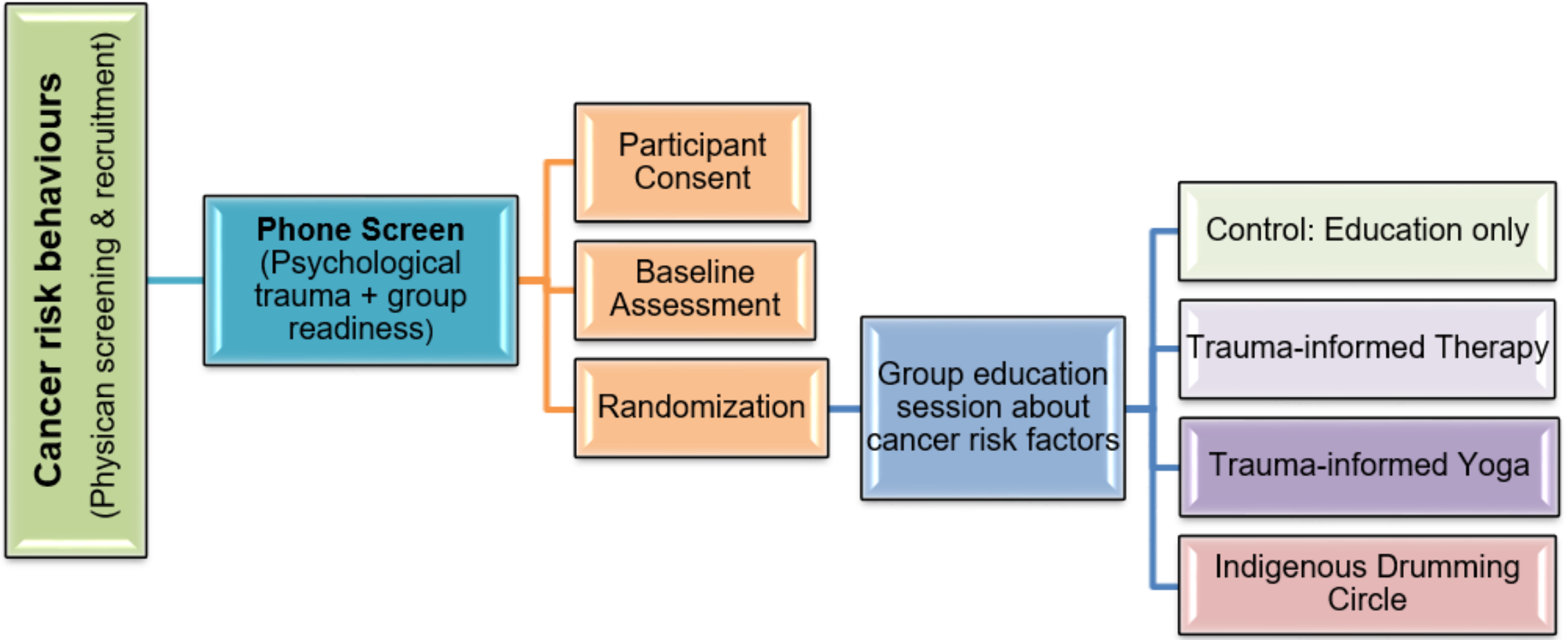
The cross-generational impacts of residential school on families has been exacerbated by a lack of adequate housing in many Indigenous communities.[13] Knowledge users on our team describe the challenge of working with large, overcrowded households of extended families struggling with severe mental health/addictions problems, interpersonal discord, and violence. The severity of mental health needs in many of these homes is best described as moderate to severe, persistent, and complex with several adults unable to carry out normal daily activities due to substance dependence and mental illness. Children in the home may not be attending school regularly; there are health, public health and food insecurity issues; the home may be in need of major repairs; and child welfare and criminal justice agencies are often involved.[14] Although such households represent a minority of families in most Indigenous communities, the impacts of living under such conditions has dire consequences for the health and wellbeing of children, youth, adults and seniors in these homes.[14] While some family members may not have experienced residential school trauma, their wellbeing is linked to the reactions and responses of others in the home. As Kainai stakeholders have described, individuals in these homes - particularly youth and young adults – want to change their lives. They will begin accessing health, social and vocational services to more forward, but they often meet resistance and face barriers in their home.

Multigenerational service integration models that serve the whole household intentionally are needed. Kainai would like to create integrated, embedded supports that address mental health and social wellbeing throughout a household so that all individuals learn to support each other as they implement their personal goals. Multigenerational models have been implemented in several jurisdictions in an effort to reduce child poverty.[15] Such models serve both individuals and the family unit through tailored interventions based on individual and family goals.[17] A key focus of these models has been providing education and employment services to working-age adults so that they may offer a more economically stable home for children.[15] Yet vocational supports alone would not address the psychological trauma identified by Kainai knowledge users and the TRC, nor will they help caregivers *unlearn* lessons about "parenting" from residential schools. There is a need to map mental health service delivery approaches that: (1) have been integrated with one or more of social, vocational, housing, legal, parenting, basic living, primary health care and/or child services; and (2) that have adopted a multigenerational approach.

In-Home Delivery of Services

Our stakeholders have stressed the need for some level of in-home service delivery for affected households as community-based programs outside the home are not well-attended by these families.

USE FIGURES TO DESCRIBE YOUR STUDY (see Smart Art in Word)



RESEARCH TIMELINE USE GAUNT CHART!

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REFERENCING

- **A reference section** must be included with a funding proposal
- Vancouver is preferred as a referencing style in the health field (use of #s in text)
- Citations from Wikipedia, news articles and other non-academic/not reliable sources should never be used. This will lower your credibility (almost to zero)
  - X non-profit highlights on their website that cancer rates in Canada are some of the highest in the world (website link)
  - A systematic review of developed countries highlights Canada has the highest incidence of stomach cancer (2).

LANGUAGE MATTERS

LANGUAGE MATTERS

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is too dumb or too lazy to keep pace with the ~~writer's~~ train of thought. My sympathies are ~~entirely~~ with him. ~~He's not so dumb.~~ If the reader is lost, it is generally because the writer ~~of the article~~ has not been careful enough to keep him on the ~~proper~~ path.

This carelessness can take any number of ~~different~~ forms. Perhaps a sentence is so excessively ~~long and~~ cluttered that the reader, hacking his way through ~~all~~ the verbiage, simply doesn't know what it ~~the writer~~ means. Perhaps a sentence has been so shoddily constructed that the reader could read it in any of several ~~two or three different~~ ways. ~~He thinks he knows what the writer is trying to say, but he's not sure.~~ Perhaps the writer has switched pronouns in mid-sentence, or ~~perhaps he~~ has switched tenses, so the reader loses track of who is talking ~~to whom~~ or ~~exactly~~ when the action took place. Perhaps Sentence B is not a logical sequel to Sentence A -- the writer, in whose head the connection is ~~perfectly~~ clear, has not bothered to provide ~~given enough thought to providing~~ the missing link. Perhaps the writer has used an important word incorrectly by not taking the trouble to look it up ~~and make sure.~~ He may think that "sanguine" and "sanguinary" mean the same thing, but ~~I can assure you that~~ the difference is a bloody big one ~~to the reader.~~ The reader ~~he~~ can only ~~try to~~ infer ~~what~~ (speaking of big differences) what the writer is trying to imply.

Faced with these ~~such a variety of~~ obstacles, the reader is at first a remarkably tenacious bird. He ~~tends to~~ blames himself. ~~He~~ obviously missed something, ~~he thinks,~~ and he goes back over the mystifying sentence, or over the whole paragraph,

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piecing it out like an ancient rune, making guesses and moving on. But he won't do this for long. ~~He will soon run out of patience.~~ The writer is making him work too hard ~~—> harder than he should have to work —~~ and the reader will look for ~~a writer~~ one who is better at his craft.

The writer must therefore constantly ask himself: What am I trying to say? ~~in this sentence?~~ Surprisingly often, he doesn't know. ~~And~~ Then he must look at what he has ~~just~~ written and ask: Have I said it? Is it clear to someone ~~who is coming upon~~ encountering the subject for the first time? If it's not, ~~clear,~~ it is because some fuzz has worked its way into the machinery. The clear writer is a person ~~who is~~ clear-headed enough to see this stuff for what it is: fuzz.

I don't mean ~~to suggest~~ that some people are born clear-headed and are therefore natural writers, whereas ~~other people~~ others are naturally fuzzy and will ~~therefore~~ never write well. Thinking clearly is ~~an entirely~~ a conscious act that the writer must ~~keep forcing~~ force upon himself, just as if he were ~~starting out~~ embarking on any other ~~kind of~~ project that ~~calls for~~ requires logic: adding up a laundry list or doing an algebra problem ~~or playing chess.~~ Good writing doesn't ~~just~~ come naturally, though most people obviously think ~~it's as easy as walking.~~ it does. The professional

Two pages of the final manuscript of this chapter from the First Edition

LANGUAGE MATTERS

- Learning how to write in a plain language style – excellent reference: https://journals.uvic.ca/journalinfo/ijih/IJIHPlainLanguageGuidelines.pdf

METHODOLOGY

METHDOLOGY

- Use guidelines set out in proposal template (if provided), but be sure to inform your writing by the key checklist for the method you are using:
- Observational quantitative research: STROBE Checklist and Statement
- Experimental research (RCT): CONSORT Checklist and Statement
- Systematic review/scoping review: PRISMA-P Checklist and Statement
- Qualitative research: SRQR Checklist & Guidelines

- Full set of links to Checklists (right side of page)

DESCRIBE YOUR TEAM

TELL A STORY!

Project Team

The Primary Applicant **Cheryl Currie**, is an Associate Professor of Public Health and AIHS Translational Research Chair in Aboriginal Health & Wellbeing, ULeth with 14 years experience working in partnership with Indigenous communities to address psychological trauma, mental health and addictions through a public health lens. She brings expertise in epidemiology, knowledge synthesis methods, implementation science, and program evaluation. Cheryl is the senior project lead with staff supervision and team leadership responsibility to ensure project deliverables are met. As Co-Primary Applicant **Linda Many Guns**, member of Siksika Nation is an Assistant Professor in Native American Studies, ULeth. Her background in Indigenous health and law is vital to this project as justice issues often surround high-risk families. Linda will also provide project leadership, staff supervision, and serve as a member of the *Supporting Families Initiative* on behalf of the team. **Cheryl Ward** is a BC knowledge user, member of the Kwakwaka'wakw Nation has a strong social work and educator background. She holds a leadership position within the BC Provincial Health Services Authority and is ideally positioned to provide feedback on the relevance of the findings from a provincial government perspective through the lens of cultural safety, and share findings through her extensive national and international networks. BC knowledge user **Leslie Varley MBA** is a member of the Nisga'a Nation and ED of the Association of 25 Aboriginal Friendship Centres in BC, serving urban-based Indigenous families. She has worked to integrate service delivery in creative ways using limited resources within the non-profit sector and has a particular interest in incentivization strategies. She will consider the findings through the lens of an organization working to serve urban Indigenous families. **Anne**

DON'T FORGET…

- **Team Summary**: The leads, knowledge users, co-applicants and collaborators are all successful individuals committed to active roles in this project – providing expert opinion and feedback from an academic, patient, and knowledge user perspective. This is a winning team for the work to be done.

BUDGET

$


IMPACT!
PROJECT IMPACT