HOW TO WRITE A RESEARCH PROPOSAL

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Professor, Pediatrics & Emergency Medicine

FoMD, University of Alberta

March 2021

WCHRI Lunch & Learn

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Canadian Child Health Clinician Scientist Program

CCHCSP
PCCCSE

Programme canadien de cliniciens-chercheurs en santé de l'enfant

The Canadian Child Health Clinician Scientist Program (CCHCSP) is a national, multidisciplinary training program that supports highly qualified clinicians in developing the research skills required to pursue a career bridging the gaps between research and clinical care. Trainees receive funding, mentorship and progress review, along with a comprehensive career development curriculum.

THANK YOU CCHCSP SUPPORTERS!

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Alberta Children's HOSPITAL RESEARCH INSTITUTE

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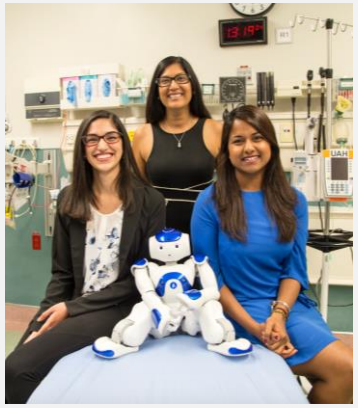
women & children's health research institute

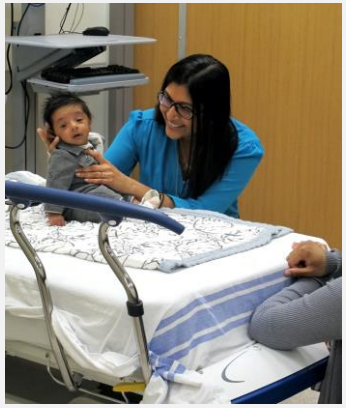
STOLLERY CHILDREN'S HOSPITAL FOUNDATION

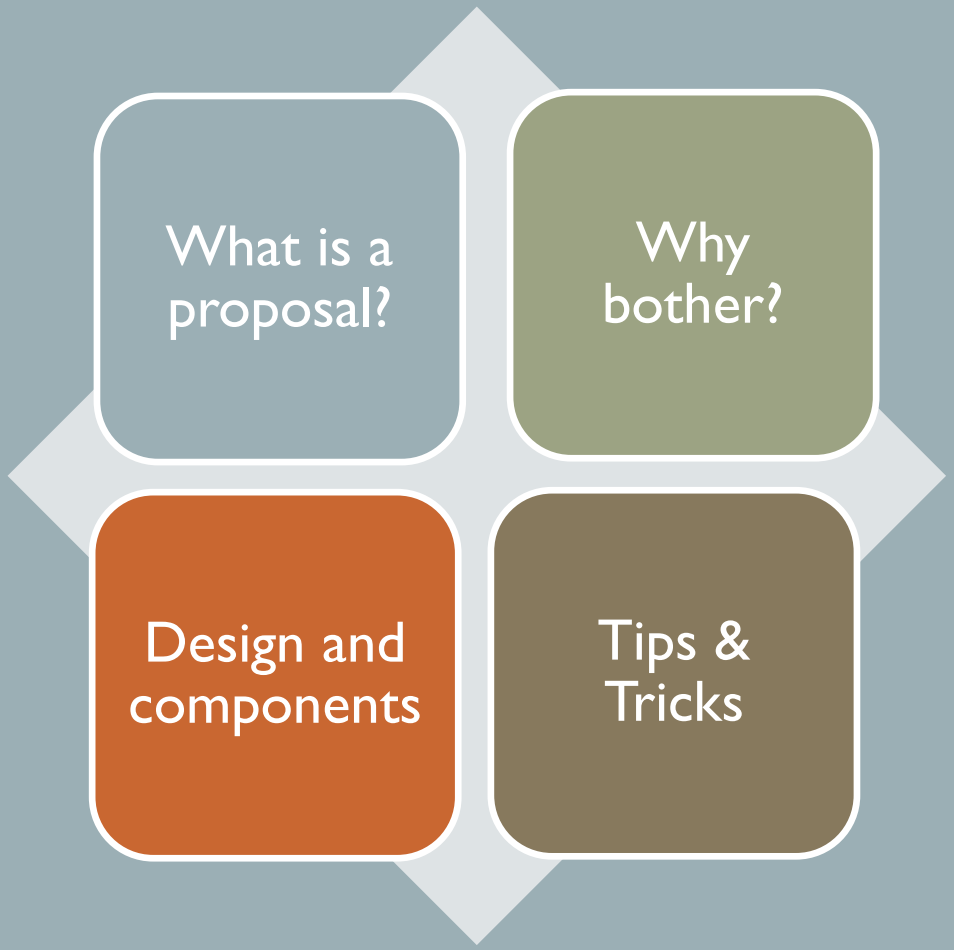
CCHCSP acknowledges the large network of volunteers (centre leaders, mentors, trainees, administrators) who make local and national program delivery possible.

WHO AM I?

- Researcher
- Pediatrician
- Wife
- Mother
- Person







What are we talking about today?

The Proposal

WHAT IS IT?

WHAT IS A RESEARCH PROPOSAL?

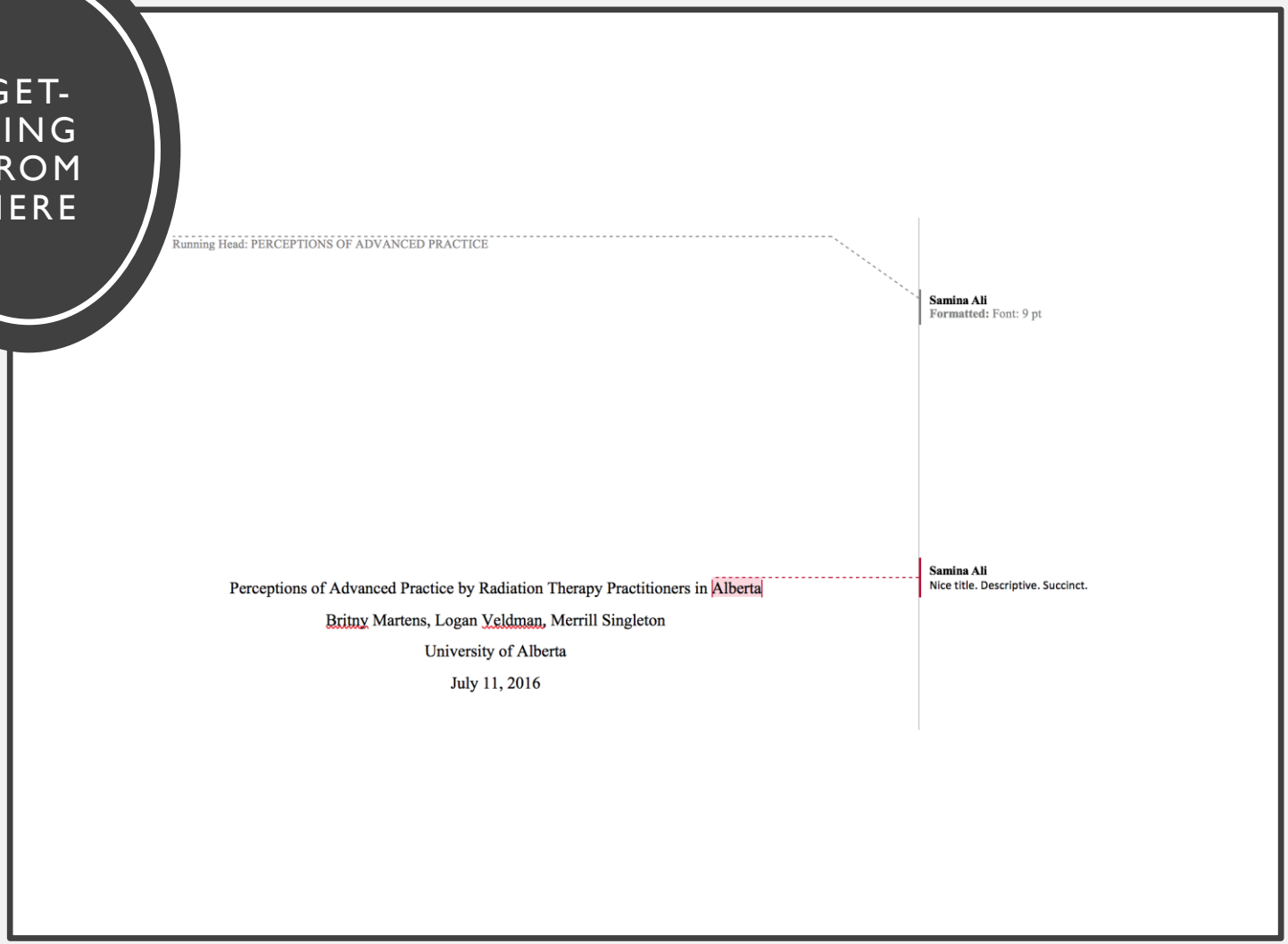
A research proposal is a clear description of the research activity to be carried out and will be a document designed to convince an audience of the merit of the work to be performed. The proposal makes the case for the research activity and can often be considered as the presentation of a business plan.

WHY DO YOU NEED A RESEARCH PROPOSAL?

WHY IS A PROPOSAL IMPORTANT?

Why?

GET-TING FROM HERE



Running Head: PERCEPTIONS OF ADVANCED PRACTICE

Samina Ali
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Perceptions of Advanced Practice by Radiation Therapy Practitioners in Alberta

Samina Ali
Nice title. Descriptive. Succinct.

Britny Martens, Logan Veldman, Merrill Singleton

University of Alberta

July 11, 2016

TO HERE

ELSEVIER

CrossMark

Journal of Medical Imaging and Radiation Sciences 49 (2018) 62-69

Journal of Medical Imaging and Radiation Sciences

Journal de l'imagerie médicale et des sciences de la radiation

www.elsevier.com/locate/jmir

Research Article

Radiation Therapists' Perceptions of Advanced Practice in Alberta

Britny Martens, MRT(T), BSc[a], Logan Veldman, MRT(T), BSc[a], Merrill Singleton, MRT(T), BSc[a], Susan Fawcett, MRT(T), MA[a] and Samina Ali, MDCM[bc*]

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[b] *Department of Pediatrics, Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alberta, Canada*
[c] *Women & Children's Research Institute, Edmonton, Alberta, Canada*

TIPS AND TRICKS!

A WELL-WRITTEN PROPOSAL = 50-60% OF YOUR MANUSCRIPT

Pediatric Pain Management in the ED: the EM Residents' Perspectives

Introduction & Rationale

Pain is the most common reason for seeking healthcare in the Western world.[1-3] In the emergency department (ED), pain accounts for up to 80% of all visits.[2] Numerous studies indicate that inadequate pain management during medical care, especially among very young children, can have numerous detrimental effects.[4-7] In the short-term, it can result in extended length of stay, slower healing, as well as emotional trauma and suffering. Negative effects can also extend to adulthood and include fear of medical events or healthcare consultations, avoidance or overuse of medical care, and heightened sensitivity to subsequent medical care.[4-6] In light of the high prevalence and potential harm, the World Health Organization has suggested that optimal pain treatment should be a fundamental human right.[8]

Children's pain in the ED is still not well managed in spite of an increase in pediatric pain research over the past decade.[9,10] Oligoanalgesia, or under-treatment of pain, is a well-documented problem in the ED setting.[11,12] A recent large, multicenter study found only 60% of patients in pain receive any analgesia in the ED.[12] Time to analgesia varied from 74-116 minutes, in various studies.[12-15] These studies show that there is much room for improvement in pain management.[12]

Samina Ali
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ORIGINAL RESEARCH • RECHERCHE ORIGINALE

Canadian Emergency Medicine Residents' Perspectives on Pediatric Pain Management

Huma Ali, MDCM*; Janeva Kircher, MD†; Christine Meyers, MDCM*; Joseph MacLellan, MD‡; Samina Ali, MDCM†§¶

INTRODUCTION

Up to 80% of all Emergency Department (ED) visits involve pain as a component of the presenting complaint.[1-3] Numerous studies indicate that inadequate pain management during medical care can have many detrimental short and long-term effects,[4-7] and the World Health Organization has advocated for optimal pain treatment for all.[8]

Children's pain in the ED remains poorly managed despite an increase in pain research over the past decade.[9-12] A recent multicenter study found only 60% of patients in pain receive any analgesia in the ED.[12] Time to initial analgesia across a number of studies varies from 74-116 minutes, suggesting that there is significant room for improvement.[12-15]

CHOOSE A TOPIC!

- What interests you?
- What do you CARE about?
- There is no wrong road to walk down
- Talk it through with a researcher in your field

- AND
- Reality, reality, reality….!

ASK FOR HELP/MENTORSHIP/GUIDANCE

CHOOSE YOUR TEAM

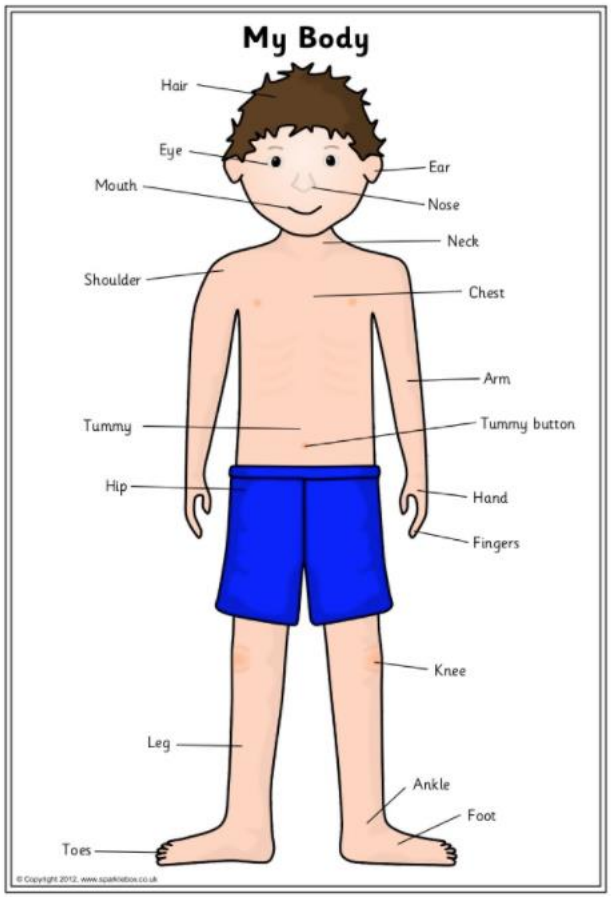
- Each person needs to bring something unique to the table
- Will possibly add others with specific skills, a bit later
- Not a gathering of friends and loved ones

- Work with people whom you enjoy working with…life is too short to be grumpy

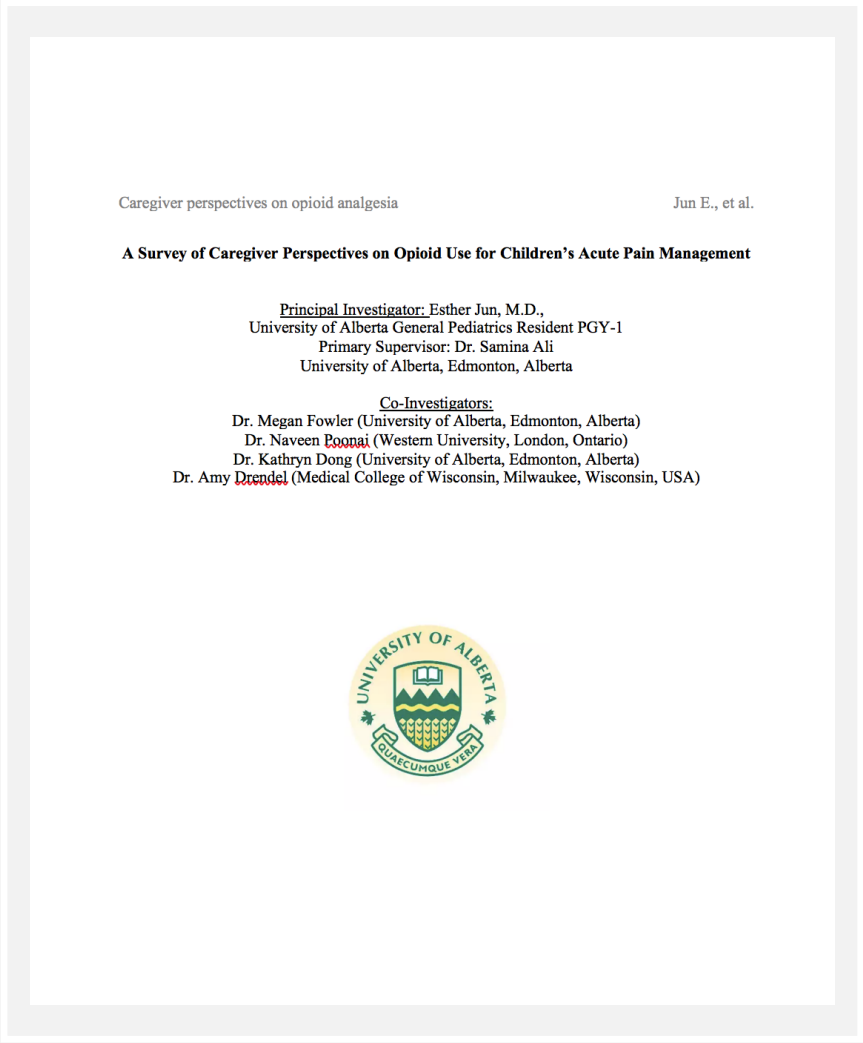
DRAFT PROPOSALS SHOULD BE PREPARED AS EARLY AS POSSIBLE!!

SO WHAT NEEDS TO BE IN A PROPOSAL?

Components

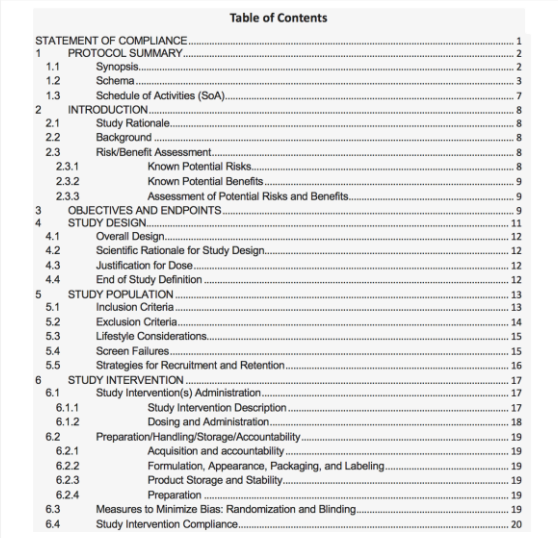


DON'T REINVENT THE WHEEL. ASK FOR A TEMPLATE/EXEMPLAR!



TITLE PAGE

- Generally includes:
  - Concise descriptive title
  - Authors of the proposal
  - Recipient of the proposal,
  - Date and purpose of the proposal
- **The title is important**
  - Very condensed description of the proposal.
  - Avoid extra long titles
  - Avoid jargon or highly technical language



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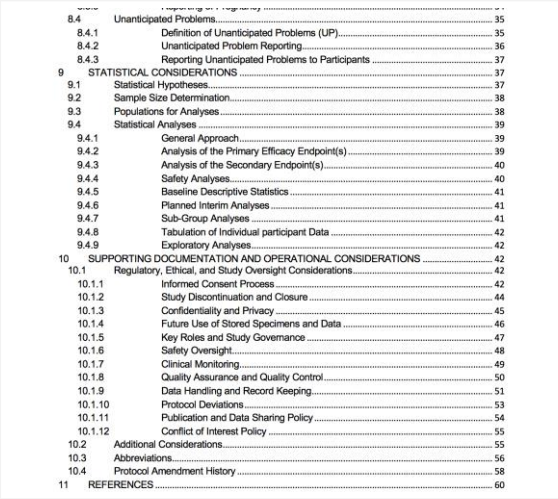

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- Sometimes
- Not critical for shorter protocols
- If you have a page limit, this is the first thing to drop in the final version

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RESEARCH

Pediatric Pain Management in the Emergency Department: The Triage Nurses' Perspective

Authors: Daina Thomas, MD, Janeva Kircher, MD, Amy C. Plint, MD, MSc, Eleanor Fitzpatrick, MN, RN, Amanda S. Newton, PhD, RN, Rhonda J. Rosychuk, PhD PStat, PStat(ASA), Simran Grewal, MD, and Samina Ali, MDCM, Edmonton, Alberta, Ottawa, Ontario, Halifax, Nova Scotia, and Vancouver, British Columbia, Canada

ABSTRACT

- Brief overview of the proposal
- Abstracts do not contain references or supporting data…think broad
- 'Typical' sub-headings
- I often write this last

Physicians' knowledge, attitudes and practices regarding opioid use in the pediatric ED

Structured Abstract

Background: Inadequate pain management in children is a ubiquitous problem in the Emergency Department (ED). It is postulated that "opiophobia", a fear of using opioids, is one of the reasons for sub-optimal management of moderate to severe pain in children. To date, there have been no published studies examining Pediatric Emergency Physicians' perceived facilitators and barriers to opioid use in the ED.

Objectives: We wish to describe Pediatric Emergency Medicine (PEM) Physicians' 1) willingness to prescribe opioids to children for pain management in the ED and at discharge, 2) knowledge regarding common fears and myths about opioid use in children, 3) management approach to hypothetical scenarios of varying musculoskeletal injury pain in children, and 4) perceived facilitators and barriers to prescribing opioids, and relate these findings to their demographic characteristics.

Methods: We will administer a cross-sectional survey to all physician members of Pediatric Emergency Research Canada (PERC). A survey tool unique to this study will be created using survey methodology guidelines by Burns et al. An expert panel will inform survey development. Pilot testing and sensibility testing will be done prior to implementation of the survey. The surveys will be distributed electronically via a secure web-based application. All the data will be collected anonymously and coordinated by an arms-length research coordinator. Biostatistical analysis will be completed under the supervision of a local biostatistician.

Anticipated Outcomes: Gaining knowledge of PEM physician's knowledge, attitudes, barriers and facilitators to opioid use will be invaluable in tailoring pain education efforts for clinicians. The results of this study will be used to help guide development of educational forums, strategies and protocols for pain management in EDs. This study may also provide hypothesis-generating information for development of future research studies.

Fowler, Physician Opioid Survey 2017.

INTRODUCTION

- AKA Background/Rationale
- Literature review
- Research question
- The introduction essentially addresses the question "Why should this study be performed?"
- 50% of your proposal development time should be spent on this
- By the time I finish reading this, I should be convinced that this is the MOST important study in the world ☺

LITERATURE REVIEW

- Place the study in the context of the **present state of knowledge** in the field
- Confirm that the study is novel
  - Clarify and refine the research question
  - Design methodology based on best literature examples
  - Place the project in the context of related research

LITERATURE REVIEW

Background & Rationale

Intravenous (IV) cannulation is one of the most common and painful procedures for children seeking medical attention.[1] In fact, hospitalized children describe IV cannulation as the most painful part of their medical experience.[1] The significant pain and distress associated with this procedure[2] can increase hospital stay, slow the healing process, and cause unnecessary suffering which may be perceived as worse than the pain caused by the original injury.[1,3-4] Left unaddressed, it can result in a scared and uncooperative child, a need for multiple cannulation attempts, needle phobia, and dissatisfaction with care for both family and healthcare workers.[3] Untreated pain in children undergoing medical procedures is epidemic.[5-8] Despite the availability of pharmacological treatments (eg. anaesthetic creams) for pain reduction, their effectiveness can be limited and may even hinder venous access.[9-11] Non-pharmacological treatments are emerging as a newly favoured adjunct to pharmacotherapy,[12] although distraction therapy is not currently considered standard of care. Further, in situations where pharmacotherapy might not be possible (i.e. time restraints, allergy to drug), isolated distraction techniques are, without doubt, preferable to no pain therapy.

Distraction therapy involves engaging children in cognitive tasks, in order to divert attention from painful stimuli and reduce pain and distress. Numerous distractors have been employed with children undergoing medical procedures including audio, video, stories, imagery, and focused breathing.[13-15] The hypothesized mechanism of action of distraction is based on Melzack and Wall's Gate Control Theory of Pain, which suggests that distraction stimulates the brainstem and ultimately inhibits pain perception.[16] A recently updated systematic review of psychological interventions showed a significant reduction in child reported pain for needle-related procedures .[17] Results for other important outcomes such as observed distress and behavioural measures of pain and distress had wider confidence intervals, but this does not preclude the possibility of benefit. More rigorous research was recommended to gain a more precise estimate of the impact of distraction therapy.

Children's rapid uptake of technology offers novel forms of distraction. Given children's growing enthusiasm for technological devices, we propose that the use of a technologically enhanced device may effectively distract children and reduce their pain. It is plausible that devices children find actively engaging will provide greater distraction than passive activities such as watching cartoons. With emerging research suggesting that mobile robot systems and robot arms improve patient care,[18,19] it is timely to examine whether an interactive, humanoid robot can have an impact on the pain and distress associated with pediatric IV cannulation.

Our team is uniquely positioned and highly qualified to assess the effects of using a humanoid robot to distract children during painful procedures. We have an extensive history of high quality research in this area and successful collaborations as a team.[5,8,20-26] In our previous research, we found that interaction with a humanoid robot produced a statistically and clinically significant reduction in distress during children's flu vaccinations.[20] MEDi, the humanoid robot carefully chosen by our team, has been programmed for the use of cognitive-behavioural strategies. These strategies, which are based on cognitive-behavioural therapy (CBT), include several evidence-based distraction and coping behaviours for children: breathing, relaxation, and coaching.[27-29] A review of various combinations of CBT strategies for different medical procedures has demonstrated that rates of pain reduction are between 18-68%.[30] As children rarely use these CBT strategies spontaneously when undergoing medical procedures and are not consistently instructed to do so, we will program the robot to provide this coaching role. Further, our team has recently completed a randomized controlled trial (RCT) comparing music to standard care for children undergoing IV placement in ED.[24] The study showed a significant reduction in self-reported pain for children in the music group and behavioural distress for certain high-risk children. We just completed a second RCT, studying the use of an iPad, compared to standard care. These RCTs inform the feasibility and methods of the currently proposed trial.

This proposal aligns with the WCHRI Innovation Grant objectives. We address Applied Health themes, through both CIHR Theme 2 (Clinical Research) and Theme 3 (Health Services Research), as they pertain to improving health and clinical care for children.[31] Theme 2 is addressed by our team's goal to improve the treatment of procedural pain, thereby improving the health and quality of life of children by minimizing the likelihood of short and long-term consequences of undertreated pain. If proven effective, our study intervention will potentially improve the effectiveness of local health professionals, through changes to procedural pain management practice, as outlined in Theme 3.

Ali, MEDi Robot Distraction Trial, 2016

- 4-6 paragraphs
- 1-1.5 pages
- Each 1st sentence of a paragraph in bold type.
- Reading JUST the 1st sentences should tell me the entire story

RESEARCH QUESTION

Objectives:
For caregivers of children presenting to the pediatric emergency department (PED), we aim to determine caregivers': a) needs, whether informational, physical or emotional b) satisfaction with their child's ED visit and c) past experiences in PEDs

Research Question:
For caregivers of children aged 0-17, what are the medical information, PED flow information, physical, and emotional needs during their child's visit?

Sub-Questions:
1. What are the top unmet needs in the PED for caregivers?
2. Currently, how satisfied are caregivers with PED visits?
3. Does education, income, culture, and familiarity with the PED influence needs during a visit?

Objectives: Primary Objective: To determine families' (parent and child) perceived emotional, practical, and general informational needs related to their current PED visit. Secondary Objectives will include: (a) a comparison of child versus parent-reported needs (b) a comparison of child versus parental satisfaction with their experiences during the PED visit, (c) a description of the health literacy of a population of parents who use PEDs across Canada, (d) association of reported needs and satisfaction (parent and child) to parent health literacy, (e) association of reported needs and satisfaction (parent and child) with demographic and visit characteristics and (f) an assessment of the variation in needs, by site and season.

Research Questions:
Primary Research Question: For parents of children aged 0-17, and children aged 7-17, what are the emotional, practical, and general informational needs during their PED visit?
Sub-Questions: a) How similar/dissimilar are children's and parents' needs, as they pertain to their PED visit?, b) How satisfied are parents and children with various aspects of their PED visit (e.g., overall care, safety and comfort, nursing care, physician care, communication, pain management, explanation of post-discharge management, follow-up planning)?, c) How health literate are parents presenting to the PED with their child, as measured by the Short Test of Functional Health Literacy in Adults (S-TOFHLA)?, d) Is level of health literacy associated with specific family needs and level of satisfaction in the PED?, e) Are certain child/parent demographics (e.g. age of child, socio-economic status, refugee status, first language) or PED visit details (e.g. triage category, time of presentation, LOS) associated with specific family needs and level of satisfaction?, and f) Do family needs and satisfaction vary by site or season?

Ali/Ma Family Needs Survey 2017

- Many, many, many iterations
- These are the 50-100 most critical words in your proposal
- You CAN'T change them once you start

- I do objectives AND research questions
- They will guide your analysis plan and manuscript writing

EXAMPLE

Research Question: Does a follow up phone call from the therapist after radiation treatment increase patient satisfaction, as assessed by a questionnaire?

Hypothesis: A follow up phone call from the therapist increases patient satisfaction, as assessed by a questionnaire.

METHODOLOGY

- Research Study Design
- Population/ Sample
- Data Collection Tools
- Data Collection Procedure
- Analysis Plan
- Timeline
- Ethical Considerations/ Limitations
- [Budget]

RESEARCH DESIGN

- **What design will best help you meet your goals?**
- What people thought of a service: survey
- What people want to change: interviews
- What was done: medical record review

- What is best current evidence: systematic review
- What might be done in the future: clinical trial

POPULATION/ SAMPLE

Who?

Where?

Think long and hard about this

Not too narrow, nor too broad

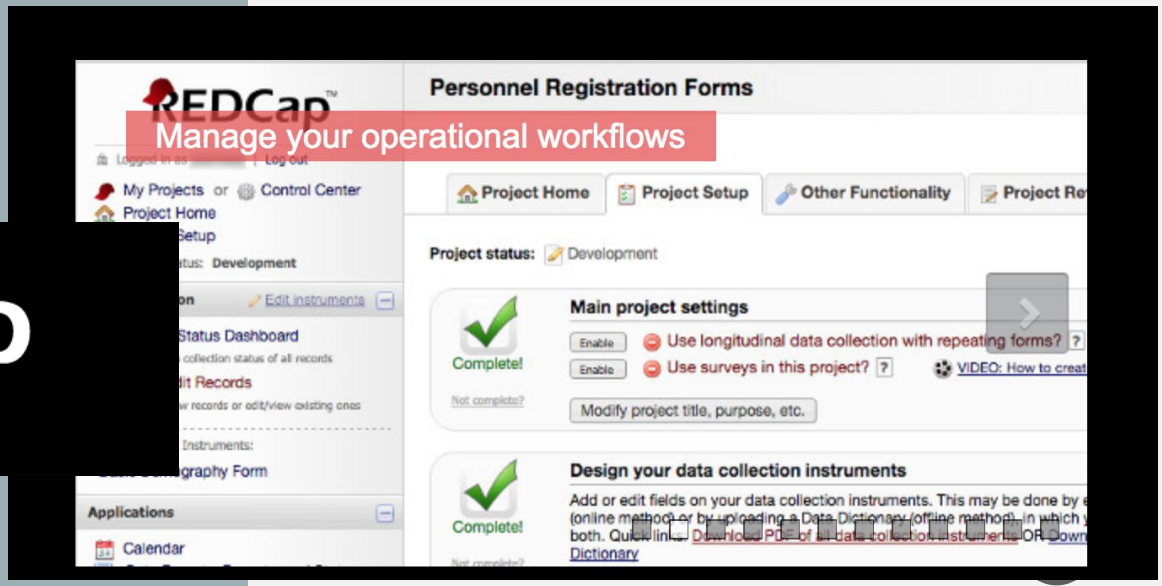
Study Population: We included all caregivers accompanying pediatric patients aged 4-16 years with acute musculoskeletal injuries to the pediatric ED. An acute injury will be considered as sustained within 7 days of presentation. Caregiver functional proficiency in written English will be a pre-requisite for study participation. Our exclusion criteria include caregivers accompanying (a) medically unstable patients as deemed by the healthcare providers, or (b) patients presenting with altered levels of consciousness, due to concussion or other head injury.

Research Setting:
We will consecutively enroll 400 caregivers accompanying pediatric patients with acute injuries presenting to the Stollery Children's ED (Edmonton, Alberta) and the Children's Hospital, London Health Sciences Centre (London, Ontario). The data will be stored and analyzed at the Department of Pediatrics at the University of Alberta. The Stollery Children's Hospital has a well-established pediatric emergency medicine research program; necessary infrastructure and staffing are already in place to support this research project.

Jun, Caregivers' Perceptions of Opioids, 2017.

DATA COLLECTION TOOLS

- Depends on study design
- Might be survey tools, interviews scripts, saliva collection kits, imaging
- Need to describe how they will capture the data you need



DATA COLLECTION PROCEDURE

HOW you will collect your data

WHEN you will collect your data

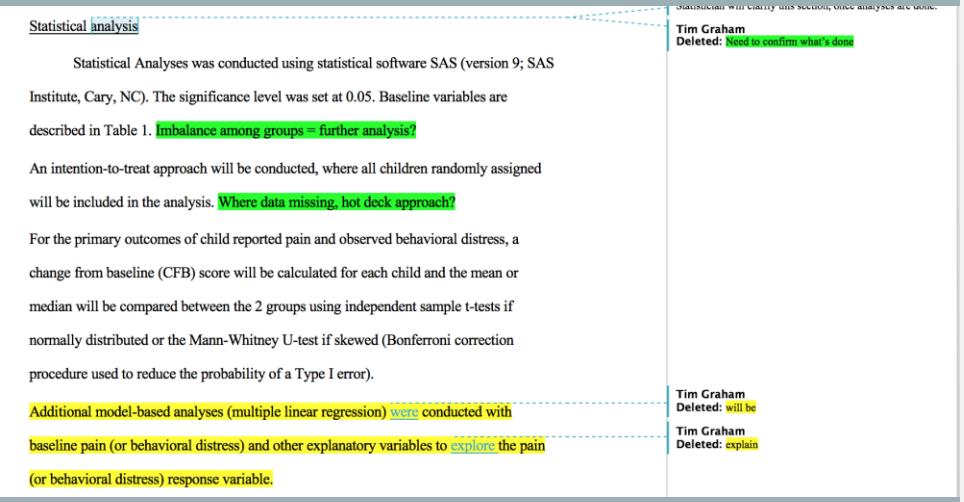
WHO will collect your data

Recruitment: Research assistants (RAs) will identify patients attending the ED between the ages of 6 and 11 years. A RA will be on-site from approximately 14:00 to 22:00 daily to identify children who require IV placement; this time corresponds with peak visits requiring IV placements based on data collected in the ED at the Stollery Children's Hospital in team members' previous studies. For those who require IV placement, the RA will further assess child eligibility based on the inclusion / exclusion criteria outlined below. If the child is eligible, the RA will explain the study and invite the parent and child to participate. After obtaining written, informed consent from the parent and assent from the child, the RA will open a prepared randomization envelope and assign the child to one of the two intervention arms. The RA will ask one parent or caregiver for each child to participate and complete all relevant questionnaires.

Data Collection (Appendix 2): Before the procedure, the RA will give the children in the distraction group the iPad and explain how to use it, as needed. Five minutes prior to the start of the procedure, the RA will begin the video recorder. The staff nurse will then perform the routine set up for IV placement. For the purposes of our study, cleaning of the injection site by the staff nurse will mark the beginning of the procedure. The RA will collect self-reported pain from the child and the parents will complete the STAI-S immediately after the first attempt at IV placement. The end of the procedure will be the last point of contact by the staff nurse (i.e., taping cannula in place with or without arm board, wrapping arm with gauze and taping the gauze in place). Two minutes after completing the IV placement, the staff nurse performing the procedure and the parents will complete the satisfaction questions. While the nurse and parents are completing their questions, the RA will collect post-procedure pain by the child. Five minutes after the procedure is completed, the RA will stop the video recorder. A timer will be used to coordinate all steps; this approach has been used successfully in previous trials in our center (15,16,20). If the first attempt at IV placement is unsuccessful, additional attempts will occur after the study protocol is complete and all measurements are obtained.

ANALYSIS PLAN

Data Analysis: Statistical analyses will be mainly descriptive. The specific data analysis will depend on the types of survey questions that we develop. Categorical data (e.g. sex, hospital/institution) will be summarized with frequency distributions and continuous data (e.g. age, level of comfort scales) will be reported using univariable summaries (means, medians, standard deviations, ranges). Box plots and histograms will display continuous data and bar charts will display categorical data. The relationship between variables (e.g. demographics and level of comfort scales) will be determined using the Fisher-exact or chi-square test, as appropriate. Confidence intervals (95% CIs) for outcomes will be determined and a p-value of <0.05 will be considered statistically significant.



Statistical analysis

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Statistical Analyses was conducted using statistical software SAS (version 9; SAS Institute, Cary, NC). The significance level was set at 0.05. Baseline variables are described in Table 1. Imbalance among groups = further analysis?

An intention-to-treat approach will be conducted, where all children randomly assigned will be included in the analysis. Where data missing, hot deck approach?

For the primary outcomes of child reported pain and observed behavioral distress, a change from baseline (CFB) score will be calculated for each child and the mean or median will be compared between the 2 groups using independent sample t-tests if normally distributed or the Mann-Whitney U-test if skewed (Bonferroni correction procedure used to reduce the probability of a Type I error).

Additional model-based analyses (multiple linear regression) were conducted with baseline pain (or behavioral distress) and other explanatory variables to explore the pain (or behavioral distress) response variable.

Tim Graham
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Tim Graham
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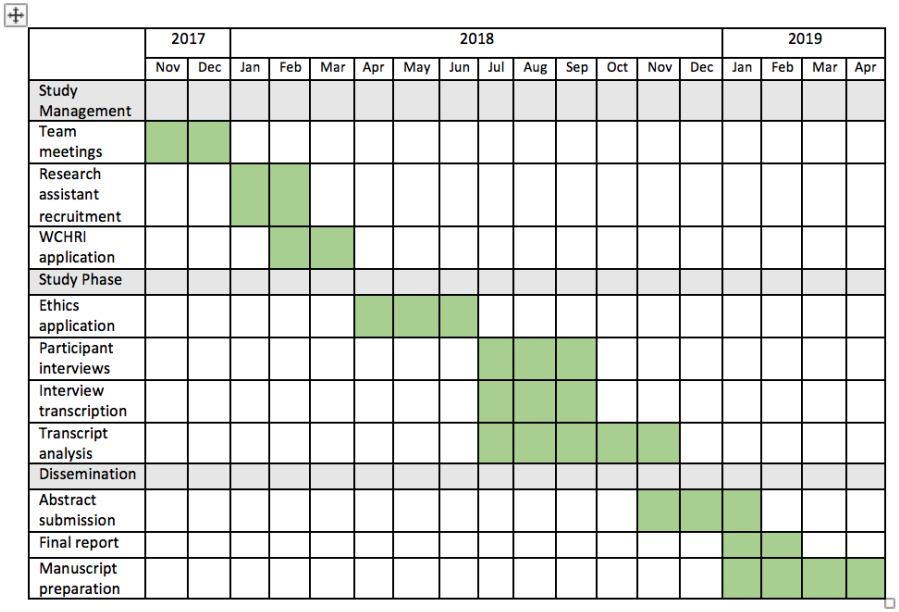
- Talk to a statistician or a supervisor/team member with statistical expertise
- If you have a budget, account for this cost
- Make sure each research question has an analysis plan attached to it

Fowler, Physician Opioid Survey, 2017
Ali/Hartling, iPad Distraction Study 2016

TIMELINES



	2017		2018												2019			
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Study Management																		
Team meetings																		
Research assistant recruitment																		
WCHRI application																		
Study Phase																		
Ethics application																		
Participant interviews																		
Interview transcription																		
Transcript analysis																		
Dissemination																		
Abstract submission																		
Final report																		
Manuscript preparation																		

Golden-Plotnik Qualitative Study of Fracture Outcomes, 2018

- The **duration** and **completion** dates of various phases of the study and the **sequences** of the steps must be presented
- Must be realistic (double the time you think you need for recruitment!!!)
- Should be revisited frequently throughout the project
  - To ensure timely completion of the study
  - To assess problems that are causing delays
- Should be developed during the draft phase of the proposal
  - To assess total time required
  - Ensure that all personnel involved are aware and can properly commit to the study

BE REALISTIC ABOUT THE VOLUME OF WORK THAT CAN BE ACHIEVED AND THE TIME TO COMPLETION.

CONSIDERATIONS/ LIMITATIONS

- Ethical considerations
- Practical considerations
- Limitations
  - The reviewers/readers will think of them, anyways! If you state them, upfront, they are less off-put!

Limitations

Due to logistical constraints, we are unable to provide this survey in languages other than English and French and recognize that this will likely cause an under-representation of the needs of non-English/French-speaking families. Based on the results of this study, our team will plan to address minority group needs in our future, larger-scale study. While we will be collecting the child's perspective in the PED, this will be limited to older children who are developmentally able to understand survey questions. We are limited in distribution of surveys to the hours of RA presence (usually 8-12 hours of day and evening coverage), and this may not represent the needs of families who present to the PED at off-hours. We intend to utilize the information gathered in this study (both procedural and survey responses) to aid in the design of a more comprehensive national study of this issue. Given the ethical and compassionate exclusion of families where children remain critically ill or with an altered level of consciousness during their PED stay, we will likely not capture the needs of those families with the sickest children. However, these are generally a very small minority of patients presenting to the PED.

BUDGET

Often, your research proposals will require minimal funding to complete. However where costs are anticipated these must be carefully described and presented.

Items to be considered in constructing a budget are human resources, cost of services (chemical analysis, sequencing etc.), animals and vivarium services, supplies (office supplies, lab supplies), travel, publication etc.

A. Salary Support:
We will recruit a research coordinator to oversee continued data collection by volunteer students at the Stollery Children's Hospital Emergency Department. The research coordinator will provide 20 hours of work at a rate of 40$/hour..
Total A Costs = $800

B. Materials, Supplies and Services:
1) Database Management and study-relevant software: Will be provided by the Clinical Research Informatics Core of the Women and Children's Health Research Institute of the University of Alberta at a cost of $495. RedCAP will be used for survey distribution and data collection. They will support data entry form development, study configuration and validation, data and discrepancy management, data extraction, and project management. 495$ (see attached cost quotation)
2) Expendables: There will be a poster generation cost for result dissemination at conferences totally approximately $100.
3) Electronic data capture: two iPads will be provided by Dr. Samina Ali's research program at cost of $600 each, which will be an in-kind contribution by Dr Samina Ali.
Total B Costs = $595

C. Recruitment Expenses:
1) Participant gift cards: Coffee Cards, as a token of appreciation for participating in research will be purchased. We aim to gather responses from approximately 400 caregivers. The budget is $5 x 200 participants = $ 1000
Total C Costs = $1000. Dr. Samina Ali will grant $395.00 towards the cost of these gift cards.

D. Other Expenses
1) Poster printing for presentation at a conference. 100$
Total D Costs = $100

E. Statistical Consultation:
1) Statistical Consulting: A biostatistician at WCHRI has been identified to assist with statistical analysis and interpretation of results, at a cost of: $ 480 (see attached cost quotation)
Total E Costs = $480 (provided in kind by WCHRI)

Total Costs Requested from Women and Children's Research Health Initiative: $2480
Expenses exceeding the $2480 requested from WCHRI will be funded in-kind by Dr. Samina Ali's research program (see attached letter of support).

Jun, Caregivers' Perspectives on Opioids, 2017.

READ THE INSTRUCTIONS!

Font, Spacing

Allowable Expenses

Page Limits

Deadlines

STUDY TEAM

- Describe each person's credentials. Their role. What they specifically add to your team.

Study Team

Dr. Esther Jun (PI) is a first year pediatric resident. She will be responsible for creating the proposal and survey tool, overseeing implementation of the project, leading data analysis, and manuscript preparation. **Dr. Samina Ali** (co-PI, supervisor, knowledge user) is a pediatric emergency physician at the Stollery Children's Hospital and has a research program in children's acute pain management in the ED. She brings expertise in survey methodology and knowledge translation capacity through her national leadership roles in pediatric pain. **Dr. Megan Fowler** (co-I) is fourth year pediatric emergency resident. She brings expertise in emergency settings. **Dr. Naveen Poonai** (co-I) is a pediatric emergency physician who brings expertise in pediatric pain management. **Dr. Amy Drendel** (co-I) is a pediatric emergency physician who brings expertise in quality of life measurements for children with injuries. **Dr. Kathryn Dong** (co-I) is an emergency medicine and addiction medicine specialist with research experience who brings expertise in addiction and addiction potential.

Jun, Caregivers' Perspectives on Opioids, 2017.

KNOWLEDGE TRANSLATION PLAN

- Who will you share this with? How will you share it?
- Main groups: clinicians, researchers, administrators, patients/public

End of Grant Knowledge Translation Plan

The results of this study will inform whether further studies or interventions are required to better understand child and caregiver perspectives in the PED. Our KT strategy is to target policy makers, HCPs, families, and researchers through a tailored approach.

Policy-makers: An executive summary will be prepared so that each local site can present findings to local administration. In Edmonton, we will share results with PED administration (Suranyi, Wright), as well as SCH (Westerlund). The MNCY SCN is currently working on key provincial indicators for pediatrics. The results of this project will be directly relevant to the provincial efforts of the SCN and will be shared with them (Wright). Our KT goal is to inform these stakeholders about the study results to discuss clinical implications and help them initiate a strategy to implement tangible changes into PEDs.
HCPs: Our KT goals include informing HCPs about our findings and discussing the clinical implications. We will achieve this by organizing presentations and face to face discussions at local rounds at each participating site (e.g. Pediatric Grand Rounds), and at Pediatric Emergency Research Canada's PERC's annual meeting. An infographic will be developed as a tool to provide the results in an easily digestible format. Moreover, we will capitalize on existing relationships of our team members to share results through TREKK (TREKK.ca), a national knowledge translation initiative (Scott, Hartling), PERC (Ali), and the Canadian Association of Pediatric Health Centres (CAPHC) (Ali) through presentations and summary reports.
Families: An executive report using lay language will be prepared for the SCH to share with families. Our caregiver advisors (Leung, Schreiner) will bring the results of this study directly to the TREKK patient/parent advisory group. We will develop a family-focused infographic/tip sheet for use within the PEDs, which will highlight how best to prepare yourself for the PED visit. We will utilize TREKK (@TREKKca) and CAPHC (@CAPHCtweets) social media platforms to extend our reach beyond the hospital and into the community.
Researchers: We plan to publish this study in a high-impact peer-reviewed publication (CMAJ) and present the results at national meetings (e.g. Canadian Pediatric Society and Canadian Association of Emergency Physicians annual meetings). We will develop infographics to disseminate results through social media, to increase our reach to a range of research groups. Through the PERC (Ali), CAPHC (Ali), and TREKK (Scott, Hartling), we will be able to optimize dissemination and leverage the results of this study to inform subsequent study planning.

IMPACT/FUTURE PLANS

Study Impact and Future Plans

This study contributes a unique perspective into the pervasive problem of under-treatment of children's pain. Under-treatment of children's acute pain is a significant problem throughout pediatrics. Literature is lacking on caregiver attitudes toward opioid analgesia for acute pain management. A better understanding of their beliefs and values surrounding this topic will allow for more effective communication and improved pain management in the ED.

This study will aid clinicians and allied health professionals. Results of this study will allow physicians and nurses to gain an understanding into the attitudes and preferences of caregivers surrounding opioids for their children's acute pain management.

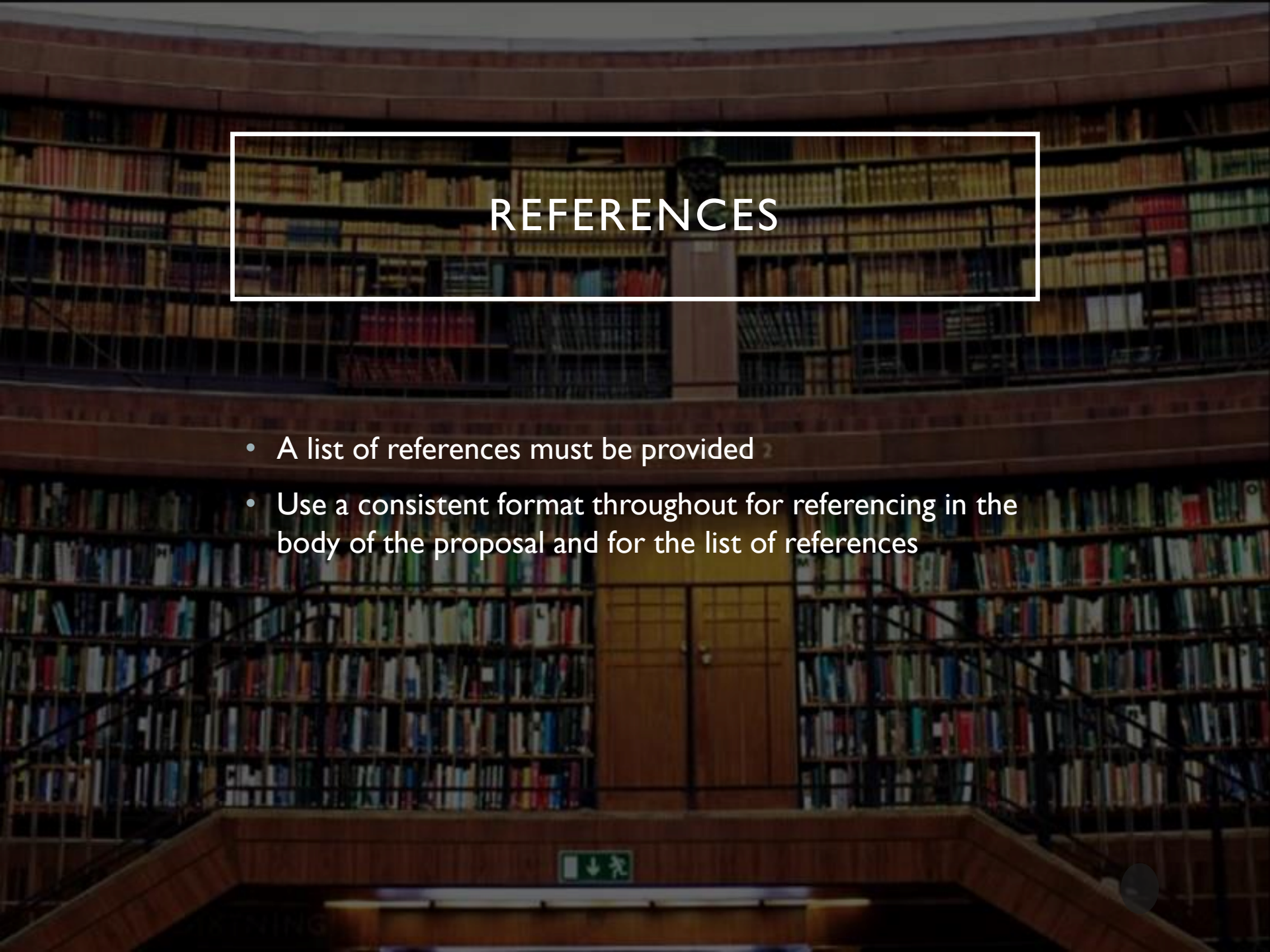
This study will be disseminated to clinicians and researchers. The results of this study will be compiled into a final report. An abstract will be submitted to the Women and Children's Health Research Institute research day in November, and the Canadian Pediatric Society Annual Meeting. A manuscript will be prepared and submitted to the Canadian Journal of Emergency Medicine. Future intentions include extending this study to other centers for broader generalizability, and conducting focus groups for a deeper, qualitative exploration of this issue.

Avoid grandiose statements:

"This study will revolutionize the practice of radiation therapy."

"We expect to publish our results in Nature AND NEJM".

Jun, Caregivers Perceptions of Opioids, 2017.



REFERENCES

- A list of references must be provided
- Use a consistent format throughout for referencing in the body of the proposal and for the list of references

POSSIBLE APPENDICES

- Ethics approval
- Operational approval
- Letters of support
- Curriculum Vitae
- Copies of survey tools, case report forms, etc

APPENDIX B: Interview Script

INTRODUCTION:
Hello! My name is ____ and I am a researcher from the University of Alberta. A few weeks ago in the emergency department someone spoke with you about participating in a research study, I'm calling today about that. We want to learn about how the day-to-day lives of children and families are affected after a child has a broken bone. I'd like to talk to you about how things have been since your child's injury. There are no right or wrong answers. I would like to hear about what you really think and how you really feel. If it's okay with you, I will be electronically recording our conversation since it's hard for me to write everything down while we talk. The reason I'm recording is so that I can go back and re-listen to our conversation to learn from what you say. Everything that you say will be kept confidential, meaning that only myself and my research teammates will be aware of what you say. If at any time you feel that you don't want to keep talking with me, we can stop the interview.

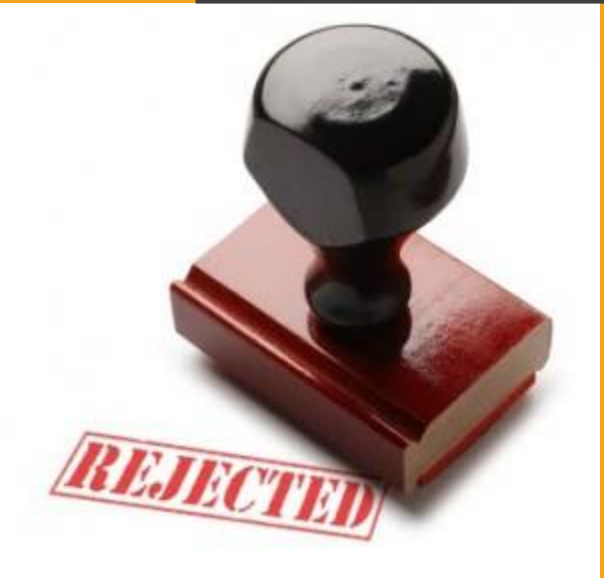
GATHER BASIC INFORMATION:
What is the name of the child who had a broken bone?
Just so we have our information correct, you are (child's name)*'s* (mother, father, legal guardian, etc.)*?*
Have you have been taking care of (child's name) *since s/he was seen in the emergency department?*
(child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*. is that correct?*

INTRODUCTORY QUESTIONS:
How have things been since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*?*
How has (child's name)*'s typical day been since his/her broken bone?*
How have things been at home, for your family since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*?*

TOPIC GUIDE:
Can you tell me about (child's name)*'s appetite since s/he broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about (child's name)*'s sleep since s/he broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about how (child's name) *has been playing since s/he broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about how things have been for (child's name) *at school or daycare since s/he broke his/her* (arm, leg, wrist, ankle, etc.)*?*
What does (child's name) *enjoy doing? What sports or activities does s/he participate in? Can you tell me about how s/he has been participating in* (sport or activity) *since s/he broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about how (child's name) *has been doing with daily tasks like getting dressed, eating or bathing?*
Can you tell me about how (child's name) *has been doing with moving around? Like walking, crawling or climbing stairs.*
How have you been doing since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about how things have been for you since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*?*
Can you tell me about how things have been for you at work since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*? Have you had to miss work?*
Are there any other children living in your home? How have they been doing since (child's name) *broke his/her* (arm, leg, wrist, ankle, etc.)*?*

THOROUGHLY REVIEW YOUR PROPOSAL FOR ERRORS IN GRAMMMAR AND SPELLING. HAVE A SECOND PERSON DO THE SAME.

WHEN YOUR PROJECT IS REJECTED DON'T DESTROY IT IN DESPAIR. THERE WILL BE USEFUL CRITIQUE THAT WILL ALLOW REVISION AND RESUBMISSION.



Thank you!

STOLLERY
CHILDREN'S
HOSPITAL
FOUNDATION

AWHF
alberta women's health foundation