

2023 Summer Student Poster Day





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Session #5

Maggie Chan
Hannah Chang
Mahnoor Faisal
Rita Jin
Caroline Ruus
Simran Gill

Chen Yu (Daisy) Sun
Erica Zeng
Serena Zhang
Athena Li

#36

Maggie Chan

Undergraduate Student, University of British Columbia

Supervisor: Danielle Decker

*The Patient Facing Roadmap as a
Tool for Overcoming Language Barriers
in New Cancer Diagnosis Education*

Abstract & Poster - <https://bcchr.ca/posterday>

The Patient Facing Roadmap as a Tool for Overcoming Language Barriers in New Cancer Diagnosis Education

Maggie Chan, BSc.

Introduction

The experience of receiving a new cancer diagnosis is stressful for patients and their families, but **language barriers** present an **additional challenge** for families with limited English proficiency or who speak English as a second language (ESL) (1). Currently, the Oncology/Hematology/Bone Marrow Transplant (BMT) unit at BC Children's Hospital (BCCH) has some measures to assist ESL families, such as interpreter services and some translated education materials.

Project Objective

Find additional resources that would be useful to further support ESL families.

Methods

Literature Review

A review of the current literature was performed for new cancer diagnosis education in pediatric patients with ESL families. Searches were performed on PubMed and Google Scholar.

Creation of the Patient Facing Roadmap

The roadmap was created from information about the typical stay of a patient with a new cancer diagnosis at BCCH. The roadmap will allow families to evaluate their learning progress and ask for clarification when needed, as it breaks down the pathway into steps that are easier to follow.

Feedback from Families

Feedback was collected from several families staying on the Oncology/Hematology/BMT unit to see if they would be interested in having the roadmap as a resource, and if they thought any sub-topics were missing.

Results

The literature review showed that language barriers can be difficult to navigate and may contribute to **knowledge gaps** and a **lack of trust** between the family and their healthcare team (2). The literature supported the use of **multiple methods** of education that are **simple and culturally appropriate** (Fig. 1). The patient facing roadmap was created with this in mind. Feedback from several families was positive, and led to the final version of the roadmap (Fig. 2).

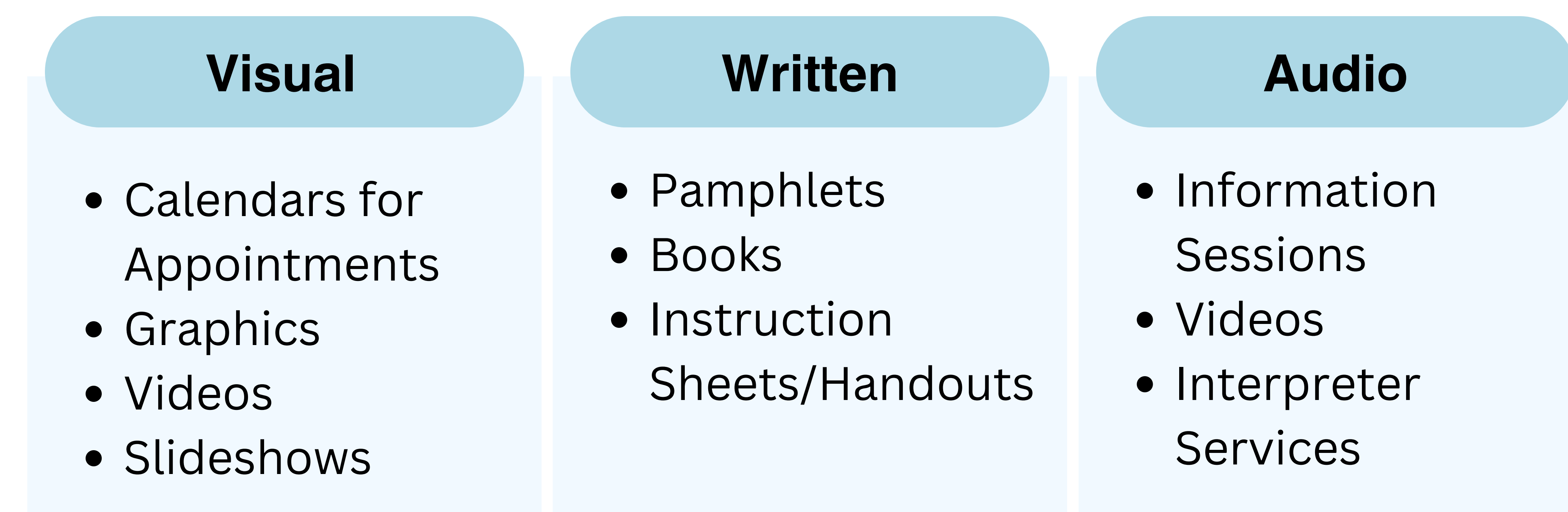


Figure 1. Methods of Education as suggested by current literature.

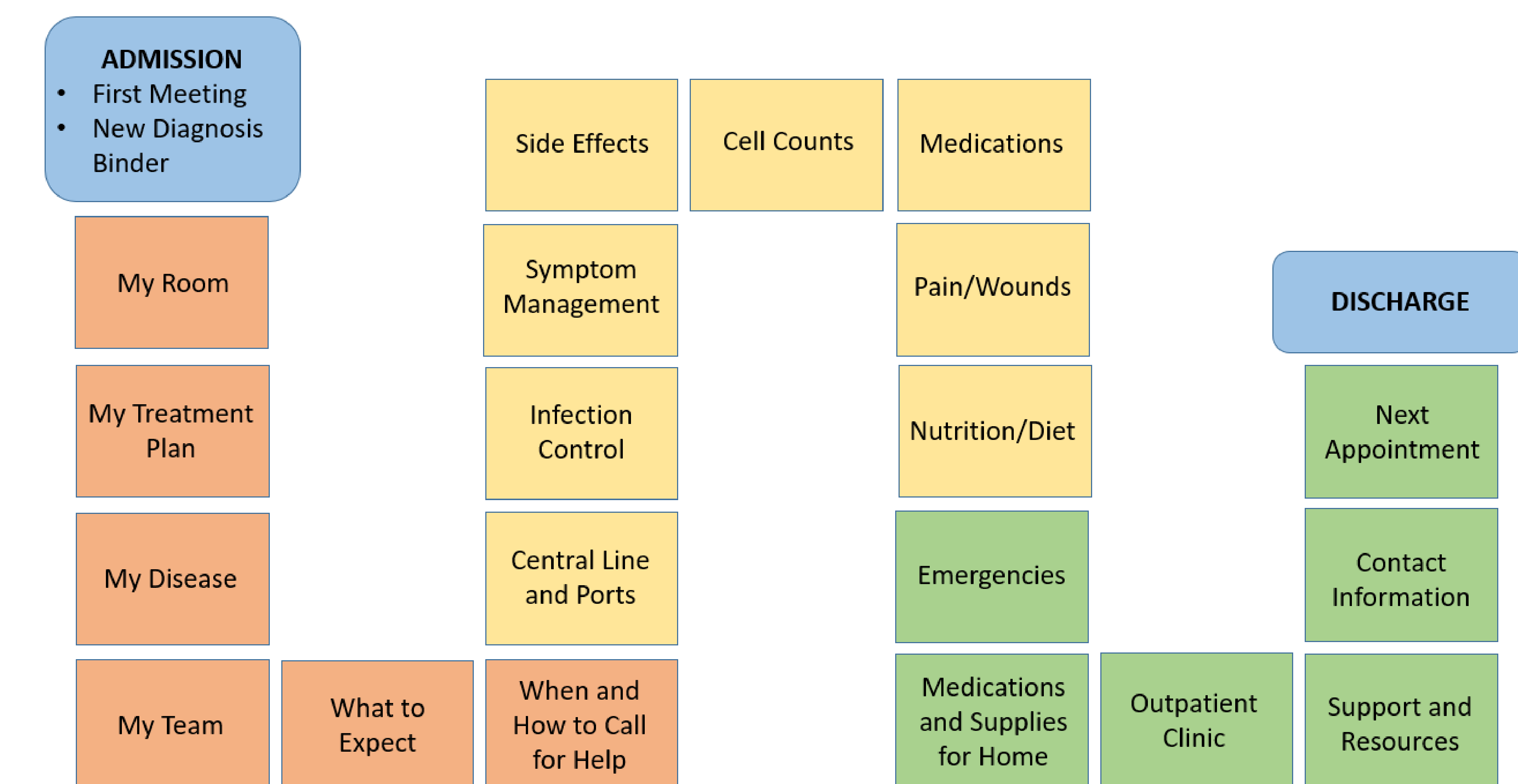


Figure 2. The Patient Facing Roadmap

Conclusion

While the patient facing roadmap cannot solve all of the problems surrounding language barriers in new cancer diagnosis education, it can be a **valuable tool** to help patients and their families **better understand** their hospital stay and may **alleviate some stress**.

Once the roadmap is made an official resource for the families on the unit, more work can be done to assess its **efficacy** and implement changes to further **improve** the resource. Further steps need to be taken to develop resources that address family needs **along** the roadmap.

References

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Acknowledgements

Thank you to everyone who contributed to this work, including the staff and families of the Oncology/Hematology/BMT unit at BC Children's Hospital and the INSPIRE Program. Special thanks to Danielle Decker, Lisa Jacques, and Monica Anand for their involvement in this project.

#37

Hannah Chang

Undergraduate Student, University of Toronto

Supervisor: Mor Cohen-Eilig

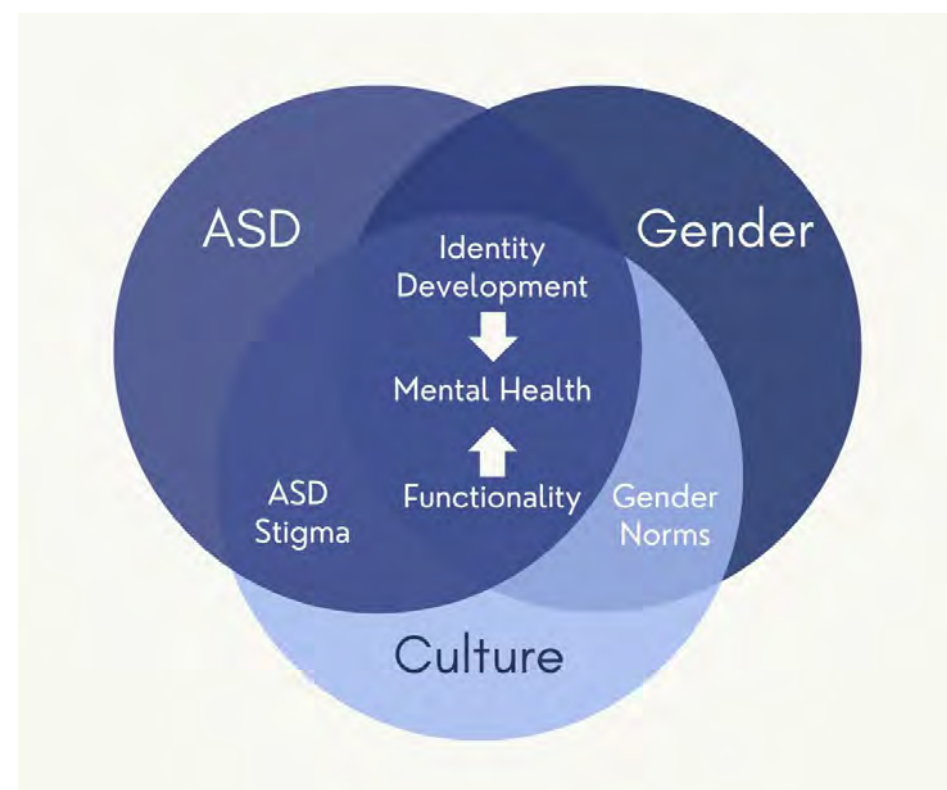
*The role of intersectionality in identity
formation of young adults with ASD*

The role of intersectionality in identity formation of young adults with Autism Spectrum Disorder

Hannah Chang; Mayer Yael, PhD; Cohen-Eilig Mor, MD

Background & Rationale

- Despite increase in autism spectrum disorder (ASD) prevalence, identity development of autistic individuals remains unclear
 - Identity is closely linked to mental health
 - Problematic autism masking
- Gender dysphoria (GD) often comorbid with ASD
 - intersectionality of gender role stress and ASD stigma creates unique implications that has yet been studied
- External social-cultural factors may affect the development of both ASD and gender identities



Study Purpose

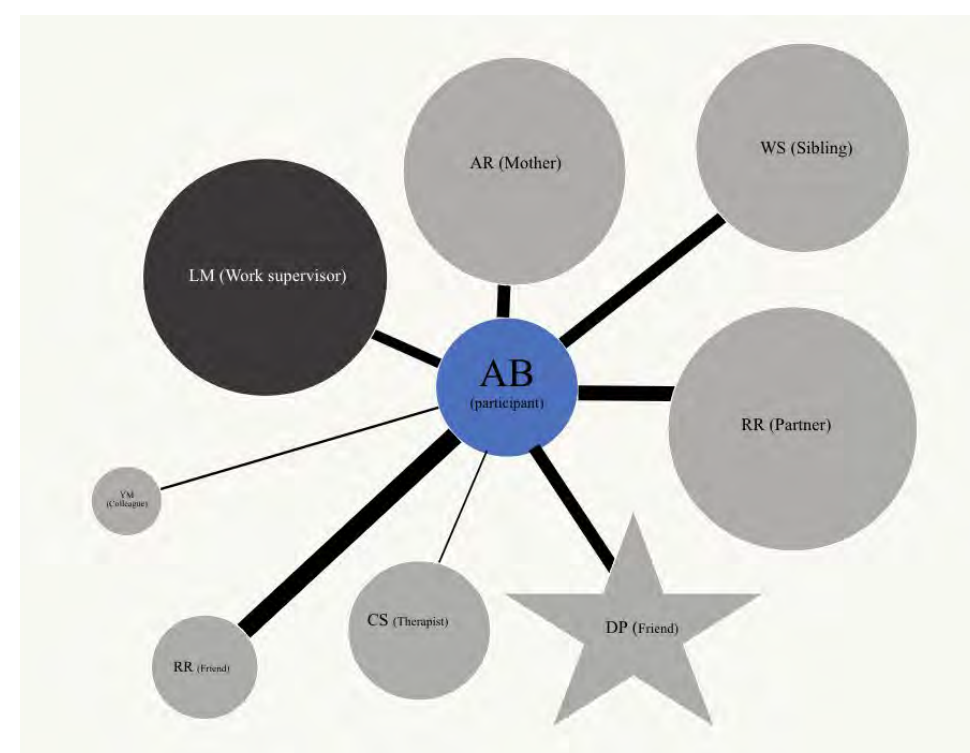
- To investigate how -
 - ASD diagnostic pathway
 - ASD and gender identity development intersectionality
 - Socio-cultural factors
- May impact -
 - Identity formation
 - Mental health
 - Functionality of autistic individuals

Methodology

Participants: 20-30 young-adults (age 18-35) with ASD.

Stage 1: Quantitative Measures An Online Questionnaire

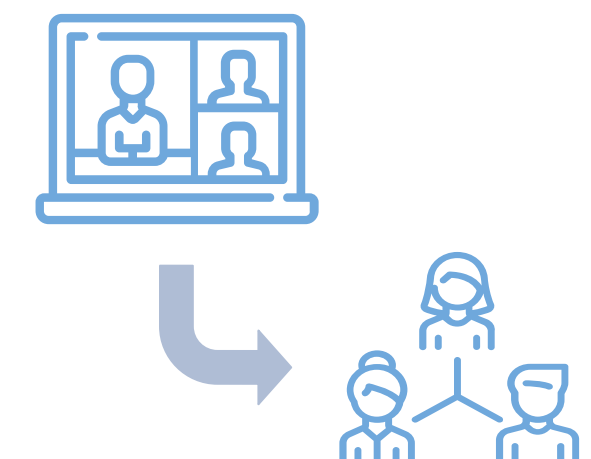
1. Autism, Gender Identity, Culture variables:
 - The Autism Spectrum Quotient
 - The Camouflaging Autistic Traits Questionnaire
 - Demographics
2. Mediator:
 - The Gender role stress scale
 - The minority stress scales adapted for autism
 - The Multidimensional Scale of Perceived Social Support
3. Mental Health Outcome:
 - The DASS-21 scale
 - The Satisfaction with Life Scale (SWLS)



(Example of Ego-network; Mayer et al., 2022)

Stage 2: Qualitative Measures A Semi-structured interview

- Diagnosis disclosure
- Sense of belonging
- Gender and ASD identity development
- Ego-network map
 - Social relationships



Anticipated Results & Conclusion

- Lower identification with stereotypical gender roles + higher masking
 - Lead to higher gender role and minority stress
 - Detrimental to mental health (higher depression, stress, anxiety, and lower life satisfaction)
- Social support will act as buffer for mental health
- Implications:
 - Create meaningful interventions to support healthy identity development

#38

Mahnoor Faisal

Undergraduate Student, University of British Columbia

Supervisor: Hal Siden

*Optimizing the Management of Pain
and Irritability in Children with
Severe Neurological Impairment*

Abstract & Poster - <https://bcchr.ca/posterday>

Optimizing the Management of Pain and Irritability in Children with Severe Neurological Impairment (PIUO)

Presenter: Mahnoor Faisal

PI: Hal Siden

Co-PI: Tim Oberlander

References: Siden H et al. Optimizing the Management of Pain and Irritability in Children with Severe Neurological Impairments. *ClinicalTrials.gov*; 2019:1-20.

INTRODUCTION

Children with severe neurological impairment (SNI) are typically non-verbal, non-mobile, and cognitively impaired. Often, these children experience pain-like sensations called Pain and Irritability of an Unknown Origin (PIUO) on a daily basis. PIUO can be particularly difficult to treat. Children with SNI exhibit ambiguous pain signals, and physicians have no standardized method for investigating PIUO. These children are amongst the most vulnerable seen in any hospital or clinic, underscoring the importance of this research.



OBJECTIVE

Our goal is to improve the assessment and treatment of pain and irritability in children with complex health conditions such as limited communication and cognition. These patients are not able to tell their caregivers where it hurts yet exhibit different kinds of pain behaviours. This study puts participants through a clinical pathway, which is a series of assessments and tests that may help locate the source of pain.



Addressing Pain and Irritability of Unknown Origin in Children who “cannot tell us where it hurts”



METHODS

- Eligibility: children aged 6 months to 18 years with SNI and have PIUO
- Waitlist-controlled RCT design with children randomized to the PIUO Pathway or Waitlist (standard care) treatment groups

THE PIUO PATHWAY

- 1 History and Physical Exam
Screening tests:
 - Urinalysis
 - Ultrasound - abdominal
 - Gastric pH (if G-tube present)
 - Bloodwork
- 2
- 3 Pharmacology

RESULTS



~30% of pain is resolved or identified!

Of the participants who completed Phase I, **19.4%** had their pain resolved and **9.7%** had their pain identified.

If a participant scores in the lowest pain categories for two consecutive visits or their pain is identified, the PIUO pathway is deemed a success. Families benefit from the PIUO pathway as well as the relationships they build with our team.



PHASE II

In Phase II, our objective is to implement the PIUO pathway in community settings using implementation science principles. We will:

- Produce a guideline for pediatricians that can be implemented across British Columbia.
- Investigate the clinical outcomes for patients and families with the pathway in community settings.
- Examine if the nurse's role is key to pain resolution even in the absence of identification.

#39

Rita Jin

Undergraduate Student, University of British Columbia

Supervisor: Todd S. Woodward

*Characterization of a Novel Task-Based
fMRI Functional Brain Network: Auditory*

Abstract & Poster - <https://bcchr.ca/posterday>

#40

Caroline Ruus

Undergraduate Student, University of British Columbia

Supervisor: Rebecca Deyell

*Whole Abdominal Radiotherapy in
Children and Adults with Sarcoma: A CanSaRCC Study*

Abstract & Poster - <https://bcchr.ca/posterday>

Whole Abdominal Radiotherapy in Children and Adults with Sarcoma: A CanSaRCC Study

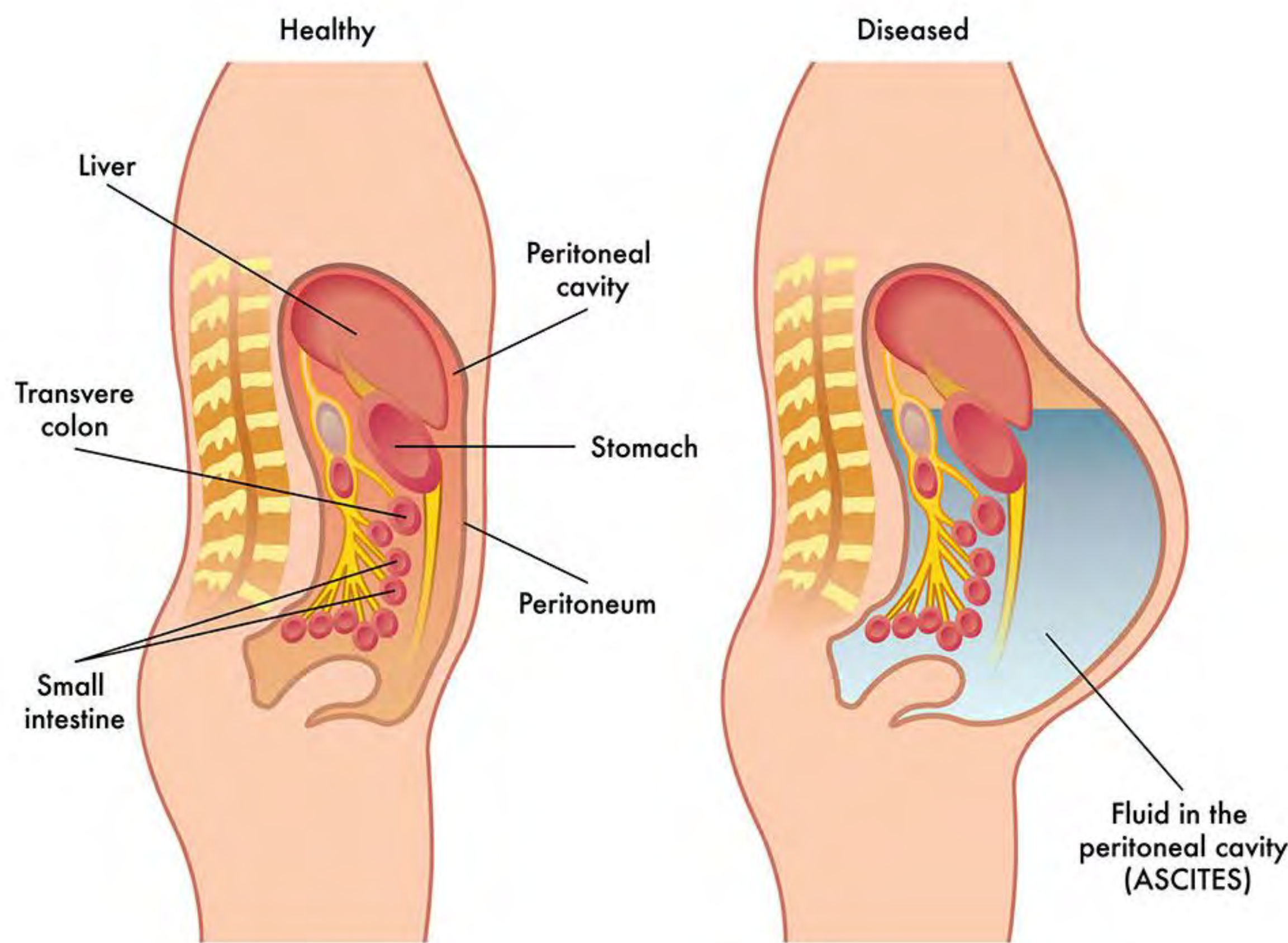
Caroline Ruus⁽¹⁾, Sylvia Cheng⁽²⁾, Hagit Peretz Soroka⁽³⁾, Abha Gupta⁽³⁾, Derek Tsang⁽⁴⁾, Rebecca J Deyell⁽²⁾

(1)University of British Columbia, Vancouver, BC, Canada; (2)Division of Hematology/Oncology/BMT, BC Children's Hospital, Vancouver, BC, Canada; (3)Medical Oncology, Princess Margaret Cancer Centre, The Hospital for Sick Children, Toronto, Ontario, Canada; (4)Department of Radiation Oncology, University Health Network, Toronto, Ontario, Canada

Background

- The **Canadian Sarcoma Research and Clinical Collaboration (CanSaRCC)** is a national registry and virtual biobank
 - Facilitates research to improve outcomes of sarcoma patients
- Sarcoma is an aggressive form of cancer that arises in bones and soft tissues in children, adolescents and young adults (AYA), and can present within the abdominal cavity
- Pediatric and AYA abdominal sarcomas rarely have peritoneal dissemination and/or malignant ascites
- Radiotherapy often has a role in local control in this location of disease
- Whole abdominal radiotherapy (WART)** is recommended, however, there is limited data regarding toxicity or evidence of efficacy¹

Figure 1: Sagittal view of abdominal cavity



Objective

- To describe the indications for WART in pediatric and AYA sarcoma patients
- To evaluate the time to treatment failure (i.e. recurrence within the WART field), progression-free survival, and overall survival in pediatric and AYA sarcoma patients treated with WART

Methods

- Sarcoma patients aged 0-39 years at diagnosis who received WART between January 1, 2000-May 1, 2023 will be identified from CanSaRCC nationally
- Data collection includes patient demographics, clinicopathologic factors including histology, age, extent of disease and therapy, radiation planning and therapy techniques, toxicities and survival outcomes
- Estimated sample size is 40 patients across Canada
- Descriptive statistics will be used to summarize the treatments received
- Kaplan-Meier method will be used to analyze time to treatment failure and survival outcomes

Study Progress

- A total of 45 patients at BC Children's Hospital have been enrolled in CanSaRCC
 - 5/45 patients received WART for the diagnosis of rhabdomyosarcoma or desmoplastic small round cell tumor
- In collaboration with pediatric and adult cancer sites nationally, we are undertaking work to systematically identify, collect data and analyze outcomes of these patients

Figure 2: Example PET scan of patient with indications for WART

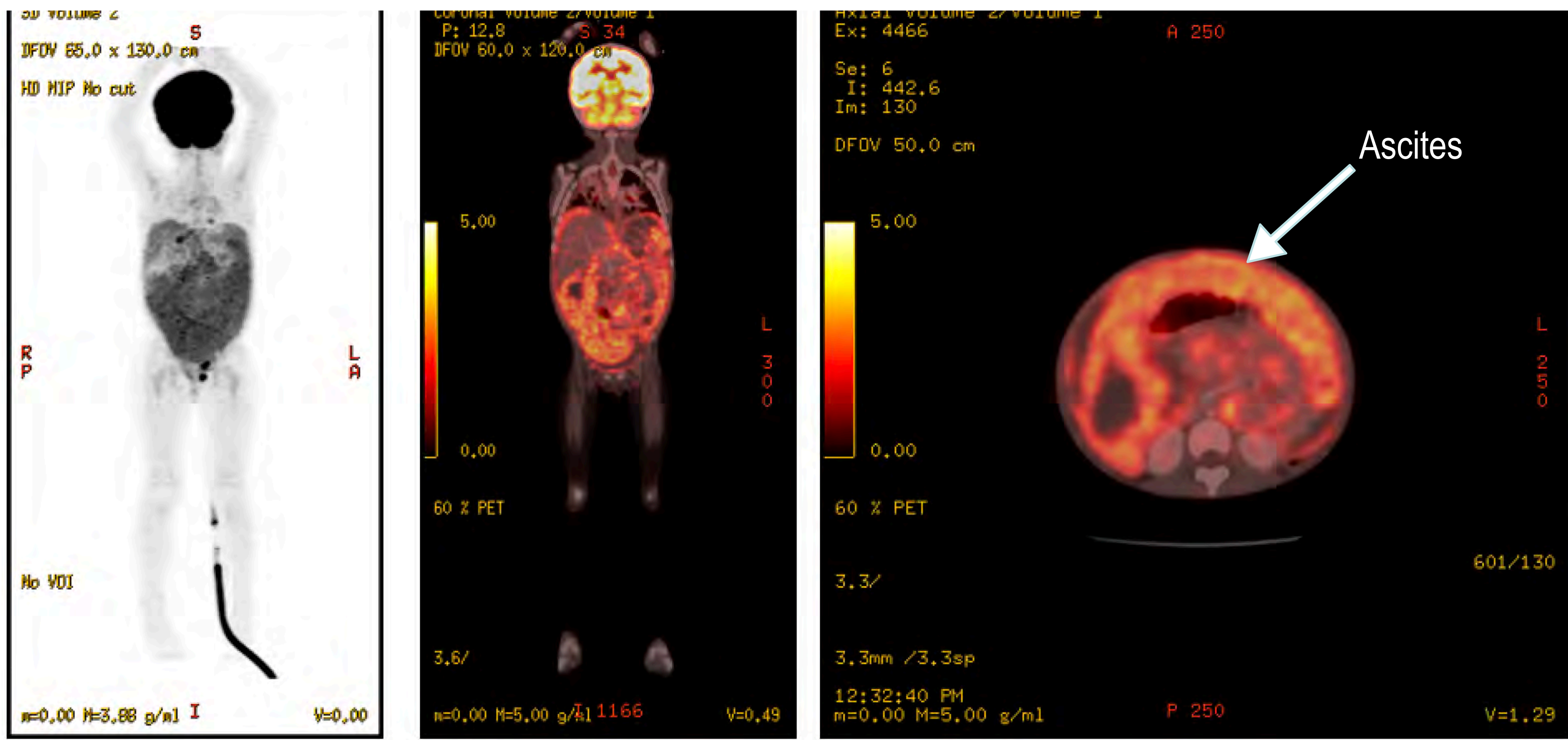


Fig. 2. Patient diagnosed with diffuse peritoneal embryonal rhabdomyosarcoma. Extensive ascites seen in abdomen and pelvis. Subsequently received WART.

Conclusion

We anticipate study results to describe indications, tolerability and efficacy of WART for young patients with abdominal dissemination of sarcoma in Canada.

References

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Acknowledgements

This study is supported by the Canadian Sarcoma Research and Clinical Collaboration and lead by UHN. A CanSaRCC Summer Studentship was awarded for data entry.



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Princess Margaret
Toronto Rehab
Michener Institute



#41

Simran Gill

Master's Student, University of British Columbia

Supervisor: Christine Voss

Physical activity behaviours and determinants thereof in children with type 1 diabetes in the Interior of BC: a mixed methods feasibility study

Physical activity behaviours and determinants thereof in children with type 1 diabetes in the Interior of BC: a mixed methods feasibility study

Simran Gill^{1,6}, Ty Sideroff^{2,6}, Trent Smith³, Tricia S Tang⁴, Christine Voss^{5,6}

¹Faculty of Medicine, Women+ And Children's Health Sciences, UBC, Vancouver, BC; ²School of Health and Exercise Science, UBCO, Kelowna, BC ; ³Interior Health, Kamloops, BC;

⁴Division of Endocrinology, Department of Medicine, UBC, Vancouver, BC; ⁵Department of Pediatrics, Faculty of Medicine, UBC, Vancouver, BC; ⁶Centre for Chronic Disease Prevention and Management, UBC, Kelowna, BC

Background

More than 2500 children in B.C. live with Type 1 Diabetes.¹

- With no known cure, management of type 1 diabetes (T1D) requires extensive lifestyle education, lifelong insulin therapy and frequent monitoring of blood glucose levels.²
- Individuals with T1D are at a higher risk of developing cardiovascular disease. Regular physical activity is encouraged as it is related to better glycemic control.³
- Children with T1D may be significantly less physically active compared to their peers due to fears such as being unable to control blood glucose levels³

Aims

Aim 1: Describe objectively-measured (moderate to vigorous) physical activity (MVPA) levels of children with type 1 diabetes (T1D) aged 8-15yrs in the BC Interior

Aim 2: Explore patient- and parent/(legal guardian)-reported barriers, facilitators and experiences related to their physical activity

Methods

Study Design: sequential mixed methods

Sample: 15 parent-child dyads

Figure 1. Study Participants per Local Health Area

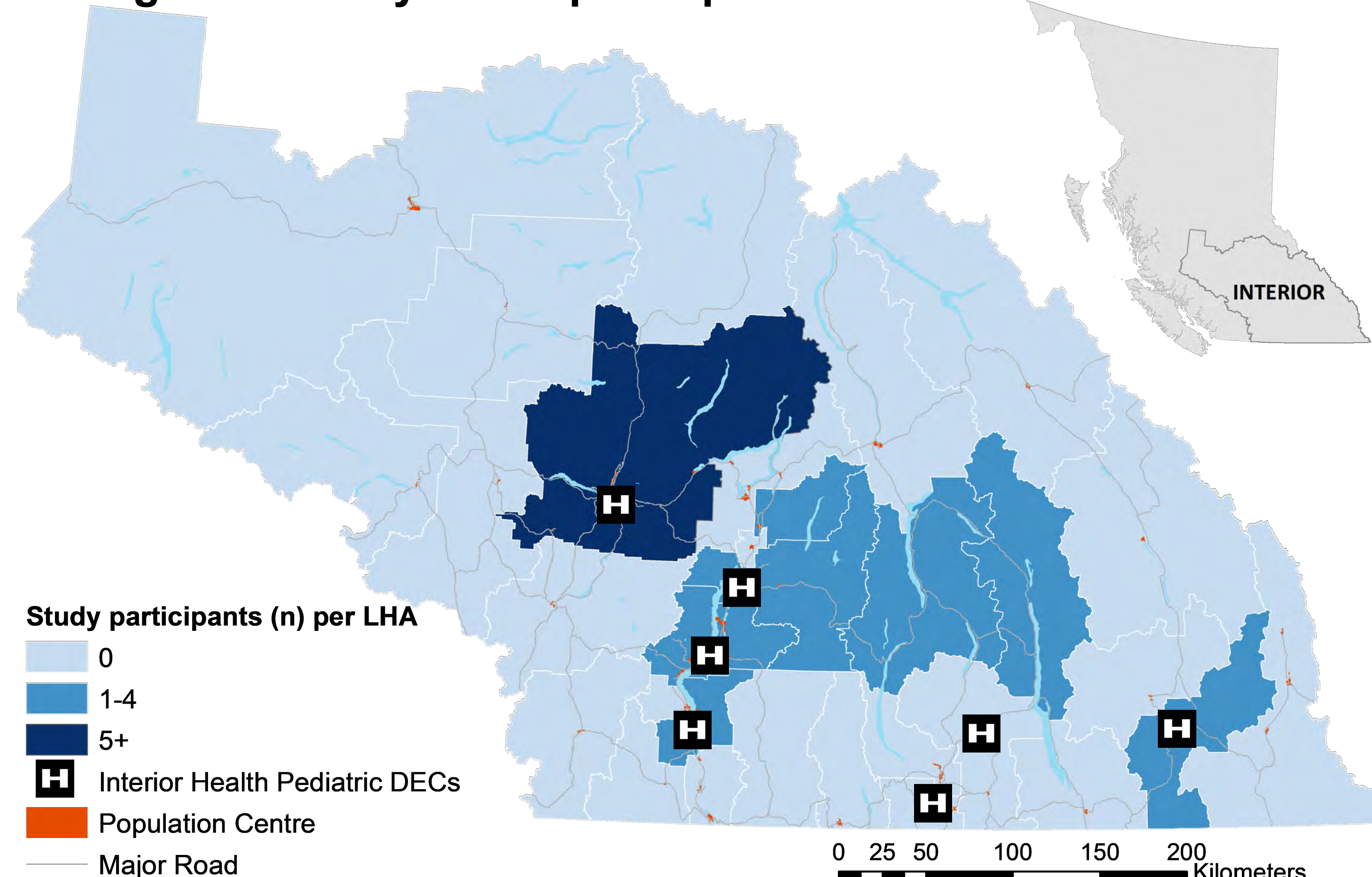


Figure 1 illustrates the geographical distribution of participants per local health area (LHA). Interior Health Pediatric Diabetes Education Centers (DEC) have also been noted.

This map was created in ArcMap (V10.7.1, Esri Inc., Redlands, CA)

Data Collection

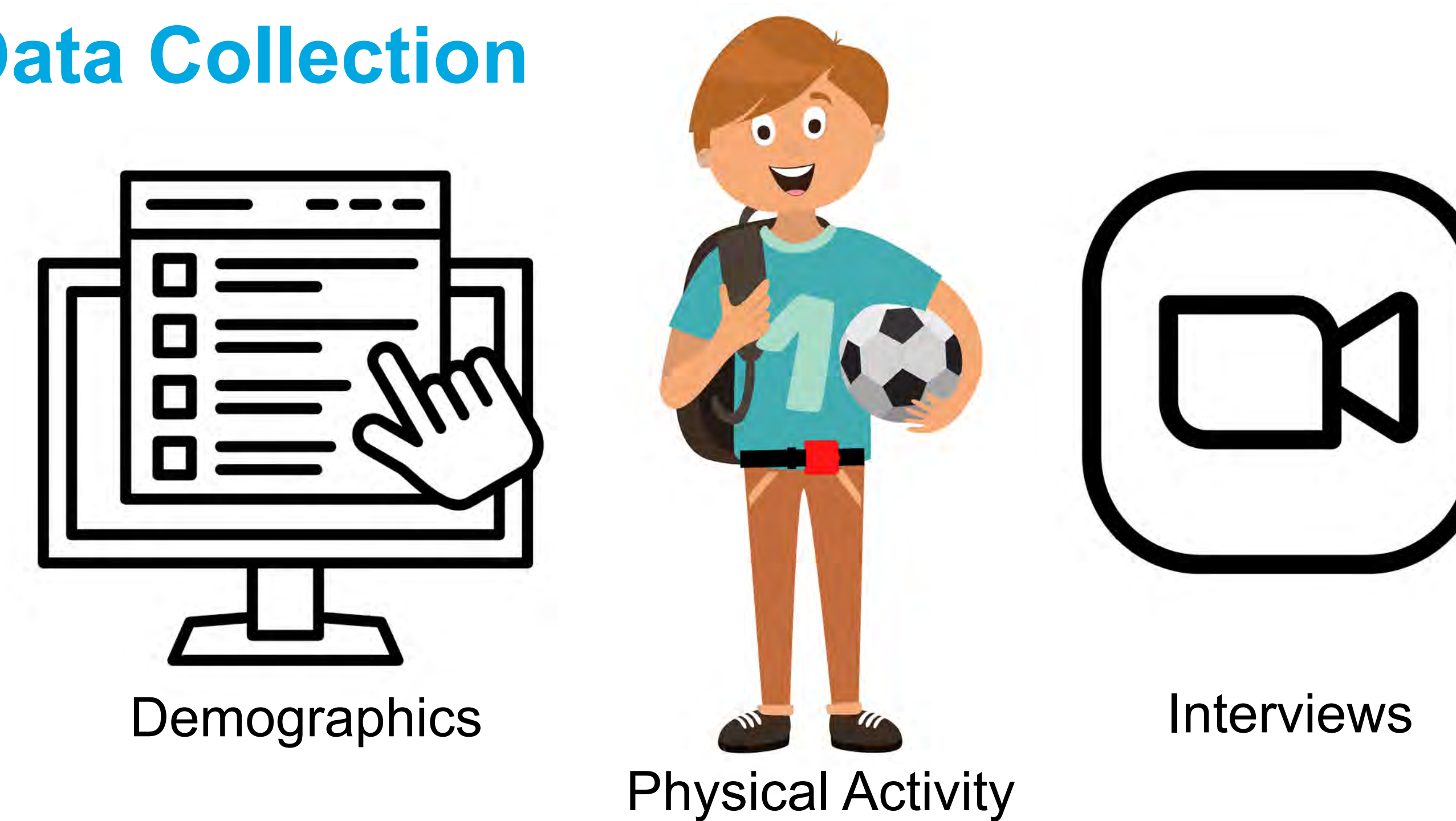
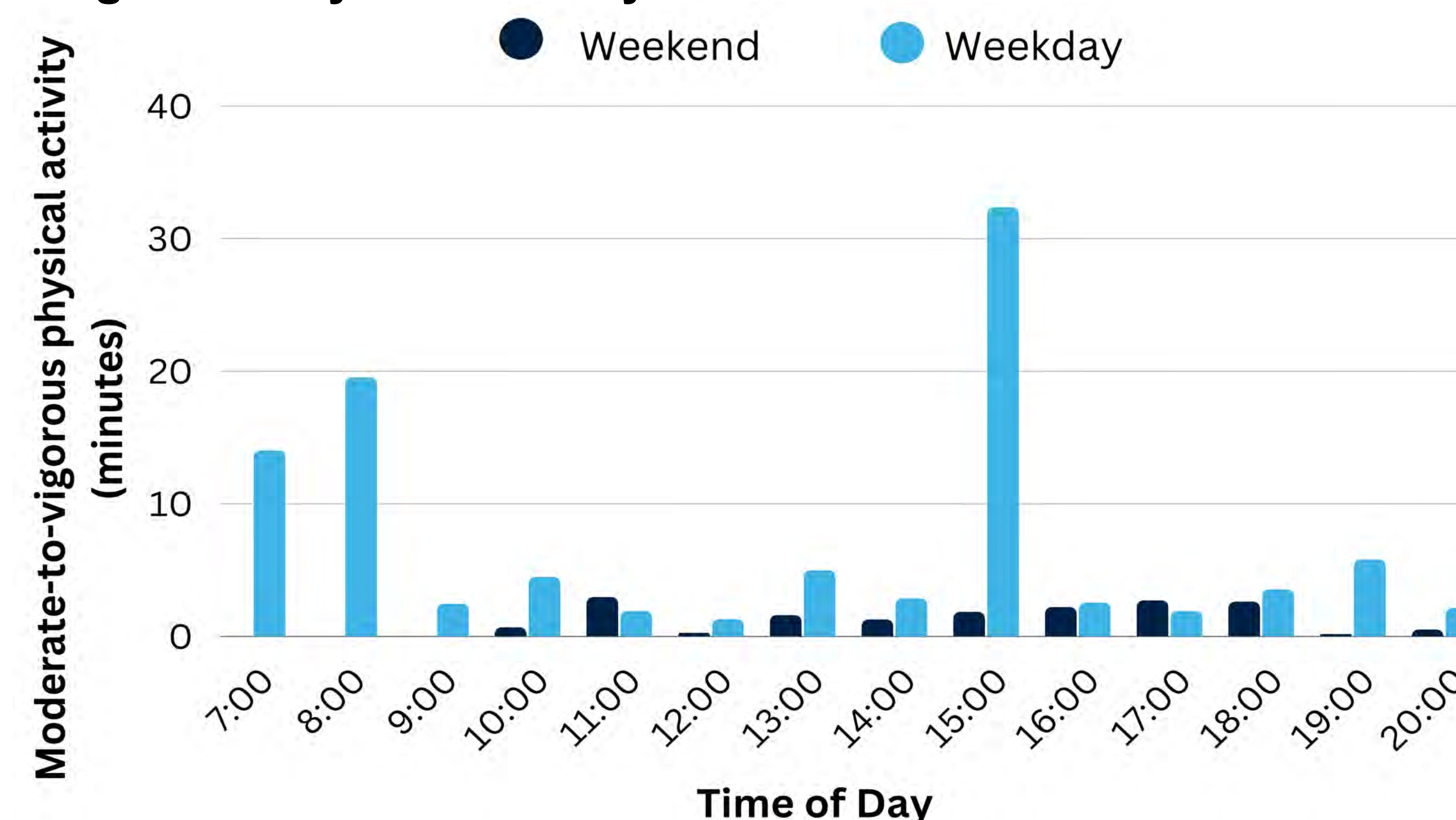


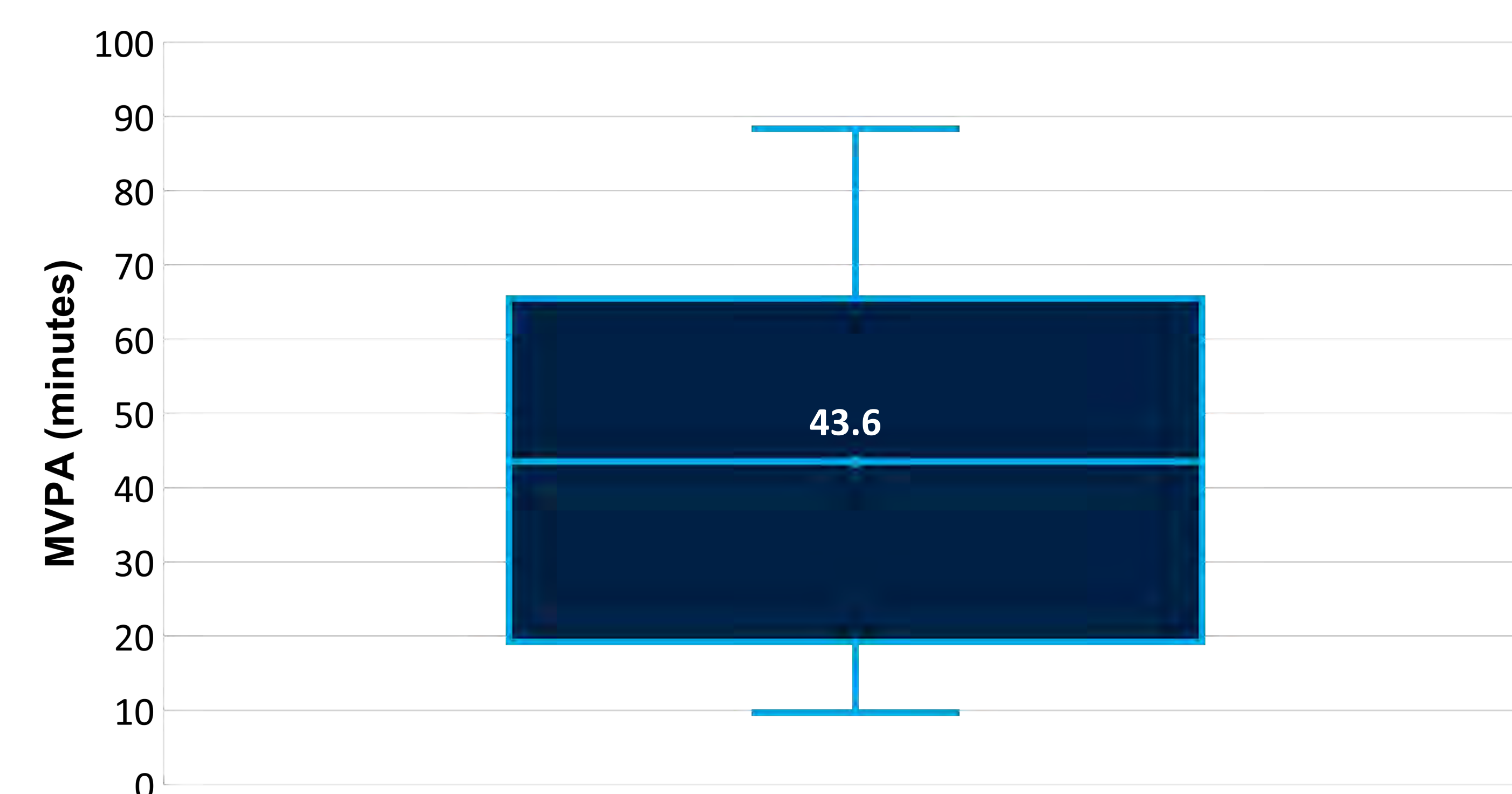
Figure 2. Physical Activity Data from Accelerometer



N = 1 (15-year-old male)

An accelerometer (ActiGraph GT3X) was worn around the waist for 7 consecutive days in September 2022. Conventional wear time validation⁴ (≥ 3 days of ≥ 600 min wear) and intensity cut-points⁵ were applied using ActiLife software. Note the significant contribution of school travel (8:00 and 15:00) to daily physical activity.

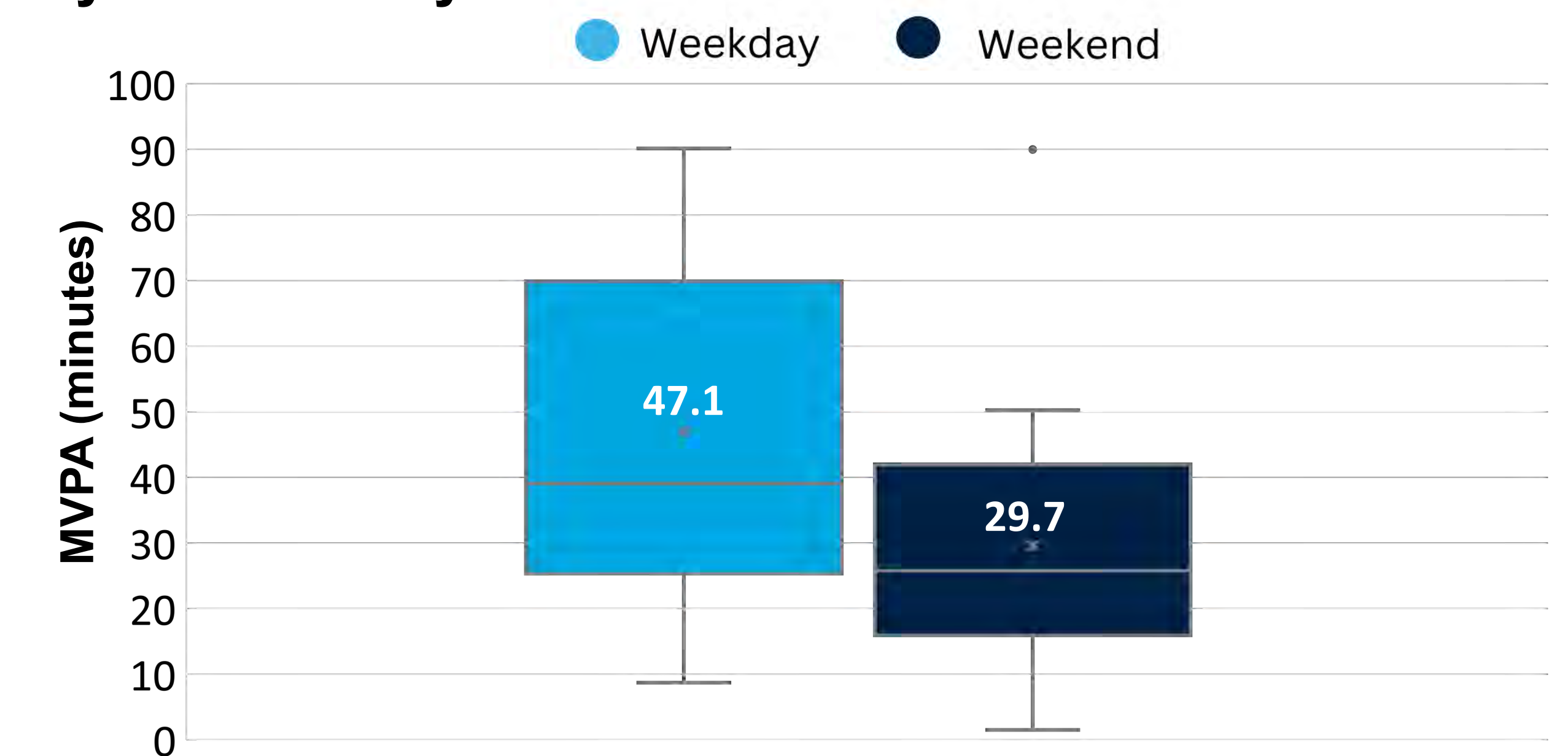
Figure 3. Moderate-to-Vigorous Physical Activity per Day



N = 15 participants

Figure 3 illustrates the distribution of participants' average daily moderate-to-vigorous physical activity

Figure 4. Weekday vs Weekend Moderate-to-Vigorous Physical Activity



N = 15 participants

Children were more active during weekdays (47.1 ± 26.8 mins/day) compared to weekends (29.7 ± 26.4 mins/day) $p=0.002$.

Quotes from interviews:

- "I always look at how much insulin I have in me at the time, because I want to plan it out. There is a possibility my blood sugar might go low, and I'll have to address that."
- "There have been times that I've had to take breaks to stop and let my levels kind of catch back up."

Conclusions

- The findings suggest that children with T1D in BC's Interior are comparatively active to their peers despite barriers to PA such as hypoglycemia.
- Findings from this work may inform future work to optimize education and counselling of this important health behaviour in individuals with T1D.

Acknowledgements

This project was supported by the Centre for Chronic Disease and Management Clinical Research, QI Incubator Initiative, UBCO Pritchard Graduate Fellowship, and the BC Children's Hospital Research Institute Master's Studentship

References

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- Evenson KR *et al.*, J Sports Sci, 2008.

#42

Chen Yu (Daisy) Sun

Undergraduate Student, McMaster University

Supervisor: Tamara Cohen

Comparing health outcomes of children and adolescents with obesity who attend an in-person vs. virtual multidisciplinary family-based behavioural lifestyle intervention

Comparing health outcomes of children and adolescents with obesity who attend an in-person versus virtual multidisciplinary family-based behavioural lifestyle intervention

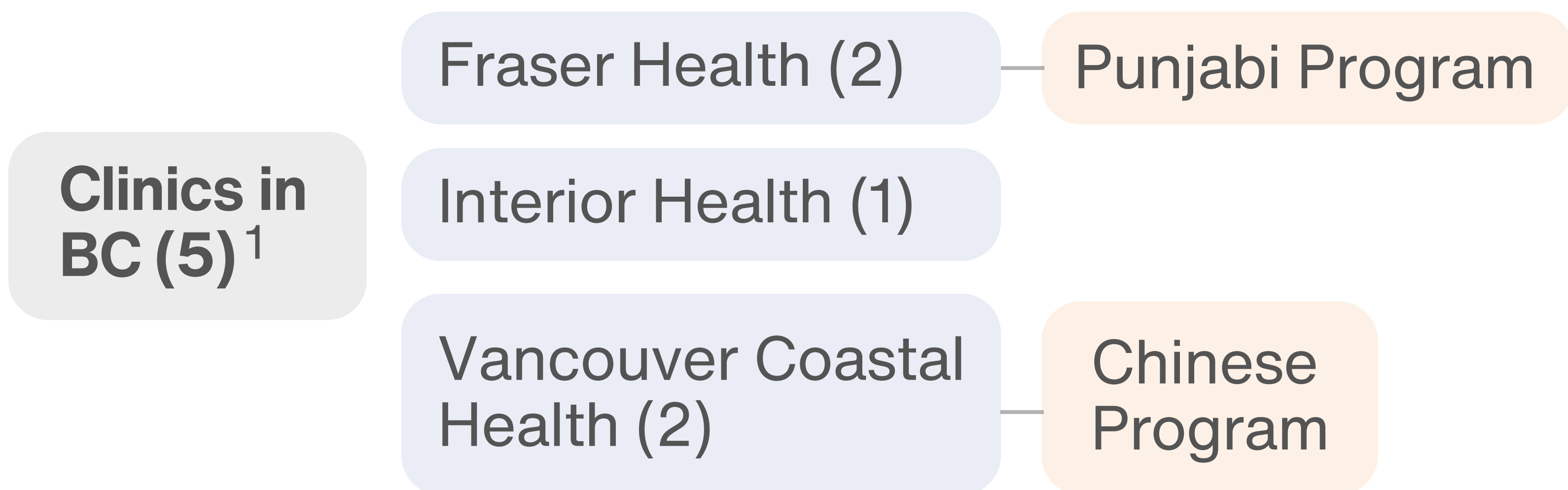
Chen Yu Sun¹; Madelaine Gierc, PhD²; Tamara R Cohen, PhD, RD³

¹Health Sciences, McMaster University ²BC Children's Hospital Research Institute ³Food and Land System, University of British Columbia

BACKGROUND

- In Canada, **1 in 7** individuals between the **ages 2 and 17** live with obesity (defined as BMI greater than the 85th percentile for one's age and sex).²
- Existing literature suggests that children with obesity are at a higher risk of developing chronic **conditions**, which can persist into adulthood and contribute to **obesity in later life**.^{2,3}

SHAPEDOWN BC



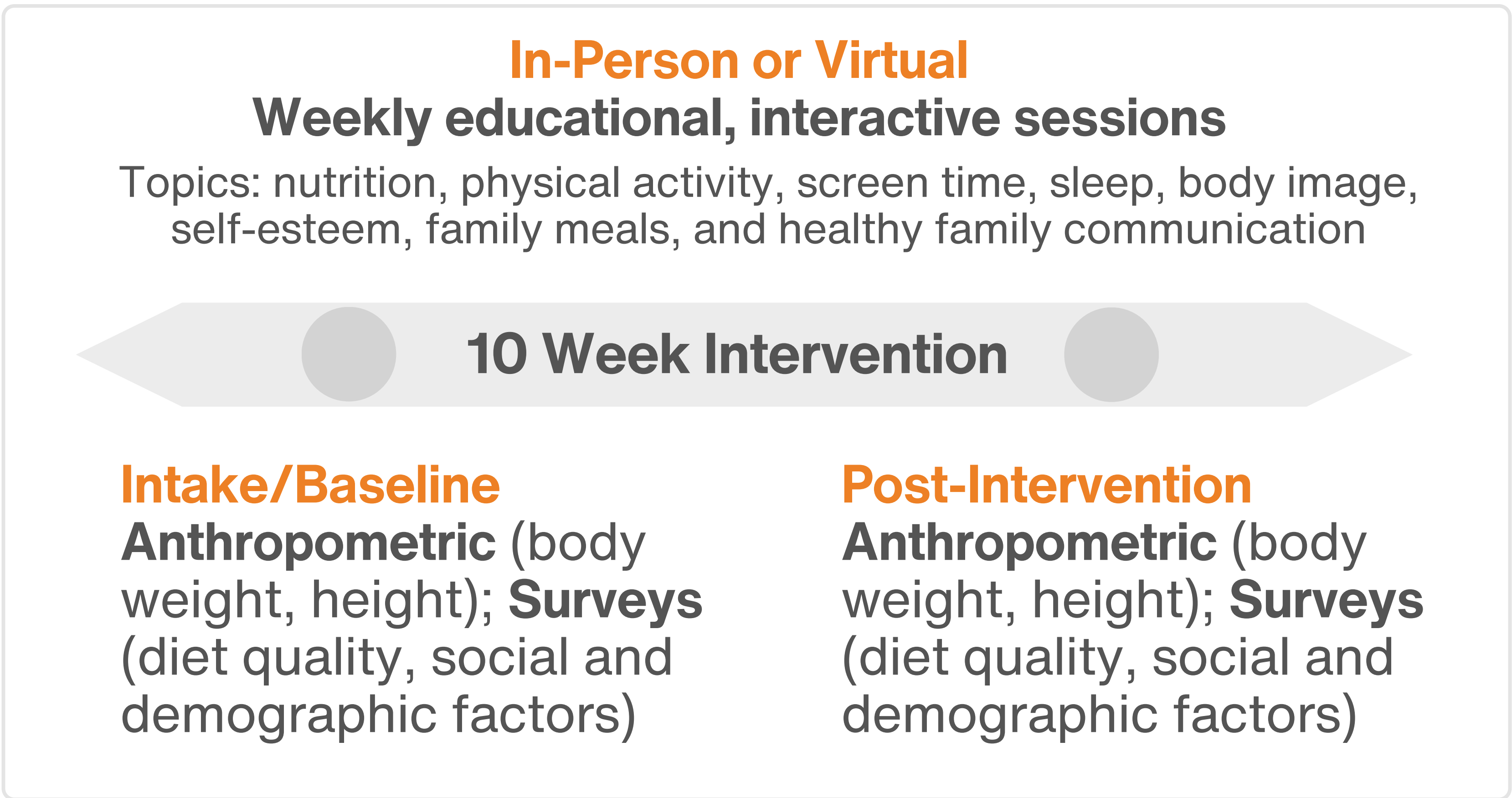
- **Participant eligibility:**
 - Health practitioner referral
 - Six to 17 years old
 - Parental participation
 - English, Chinese, Punjabi speaking
 - BMI-for-age >97th percentile **or**
 - BMI-for-age >85th percentile, with comorbidities

OBJECTIVE

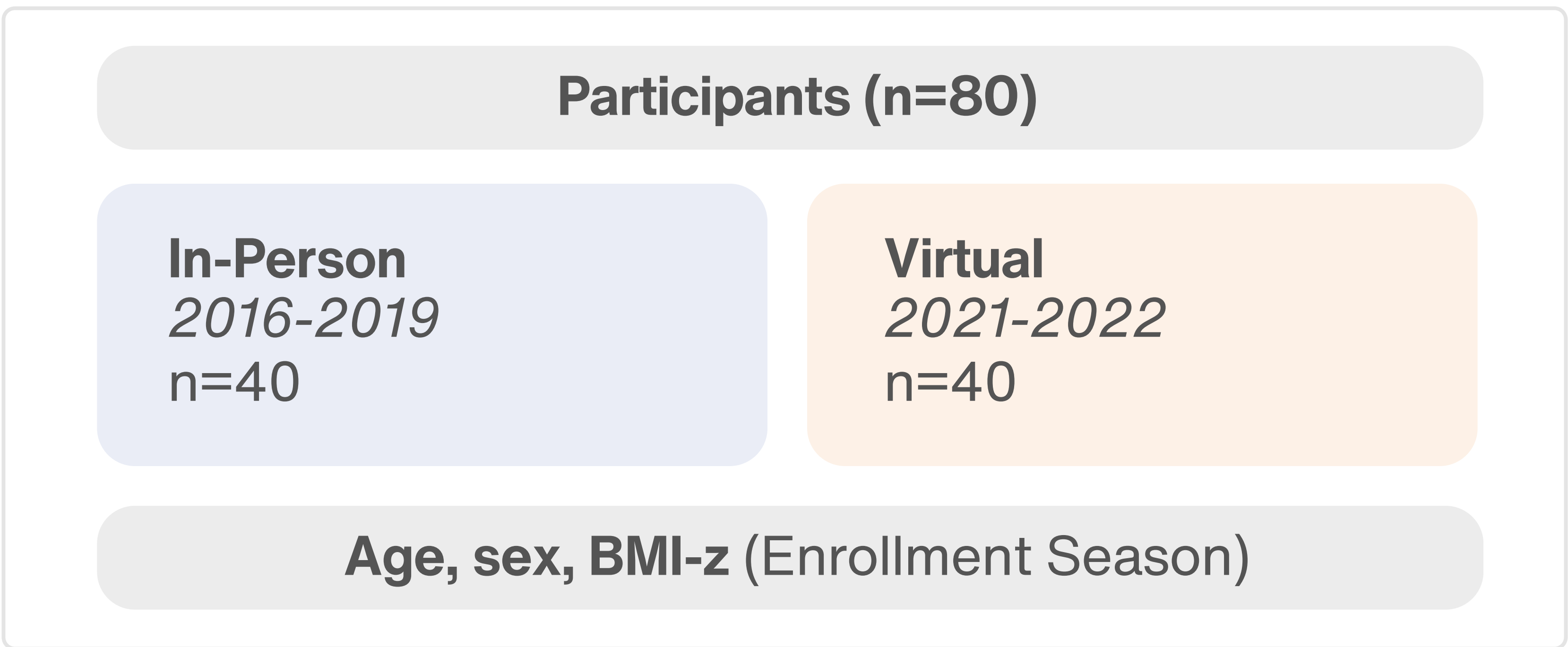
- To **compare the health outcomes** of children and adolescents who participated in the virtual Shapedown program to pre-COVID in-person delivery.

METHOD

- **Shapedown BC** Program is a provincially funded 10-week family-based behavioural lifestyle intervention.



- **Study design:** Retrospective chart review of children ages six to 17 years old (n=80).
- **Matching:** Participants from the virtual intervention will be matched with those from the in-person intervention based on age, sex, BMI-z, and enrollment season at baseline.



- **Analysis:** T-tests performed between participants.

RESULTS

- **Data** is currently being retrieved from the database, to be matched and analyzed accordingly.

REFERENCES

1. Shapedown BC [Internet]. Available from: <http://www.bcchildrens.ca/our-services/clinics/shapedown-bc>
2. Lakshman R, Elks CE, Ong KK. Childhood obesity. Circulation. 2012;126(14):1770-9. doi:10.1161/circulationaha.111.047738
3. Panagiotopoulos C, Ronsley R, Al-Dubayee M, Brant R, Kuzeljevic B, Rurak E, et al. The Centre for Healthy Weights—Shapedown BC: A family-centered, multidisciplinary program that reduces weight gain in obese children over the short-term. International Journal of Environmental Research and Public Health. 2011;8(12):4662-78. doi:10.3390/ijerph8124662



Centre for
Healthy Weights
Shapedown BC

#43

Erica Zeng

Undergraduate Student, University of Western Ontario

Supervisor: Todd Woodward

*Profiling the fMRI derived Language-Based
Network for pre- and post-surgical monitoring*

Abstract & Poster - <https://bcchr.ca/posterday>



Profiling the fMRI derived Language Based Network for pre- and post-surgical monitoring

Erica Zeng^{1,2}, John Shahki², Todd S. Woodward^{2,3}

¹Department of Medical Sciences, Western University ²BC Mental Health & Substance Use Services
³Department of Psychiatry, University of British Columbia



INTRODUCTION

In neurosurgery, pre- and post-surgical monitoring is crucial in ensuring optimal conservation and recovery of cognitive function. A key focus during this process is on the Broca's and Wernicke's area (BWA) as impairment of these areas can negatively impact linguistic function and quality of life^[1]. Task-based fMRI has detected a left-lateralized network that simultaneously engages BWA. This study will assess this network's activation over a range of cognitive fMRI tasks in order to establish a baseline hemodynamic response (HDR) profile of this network.

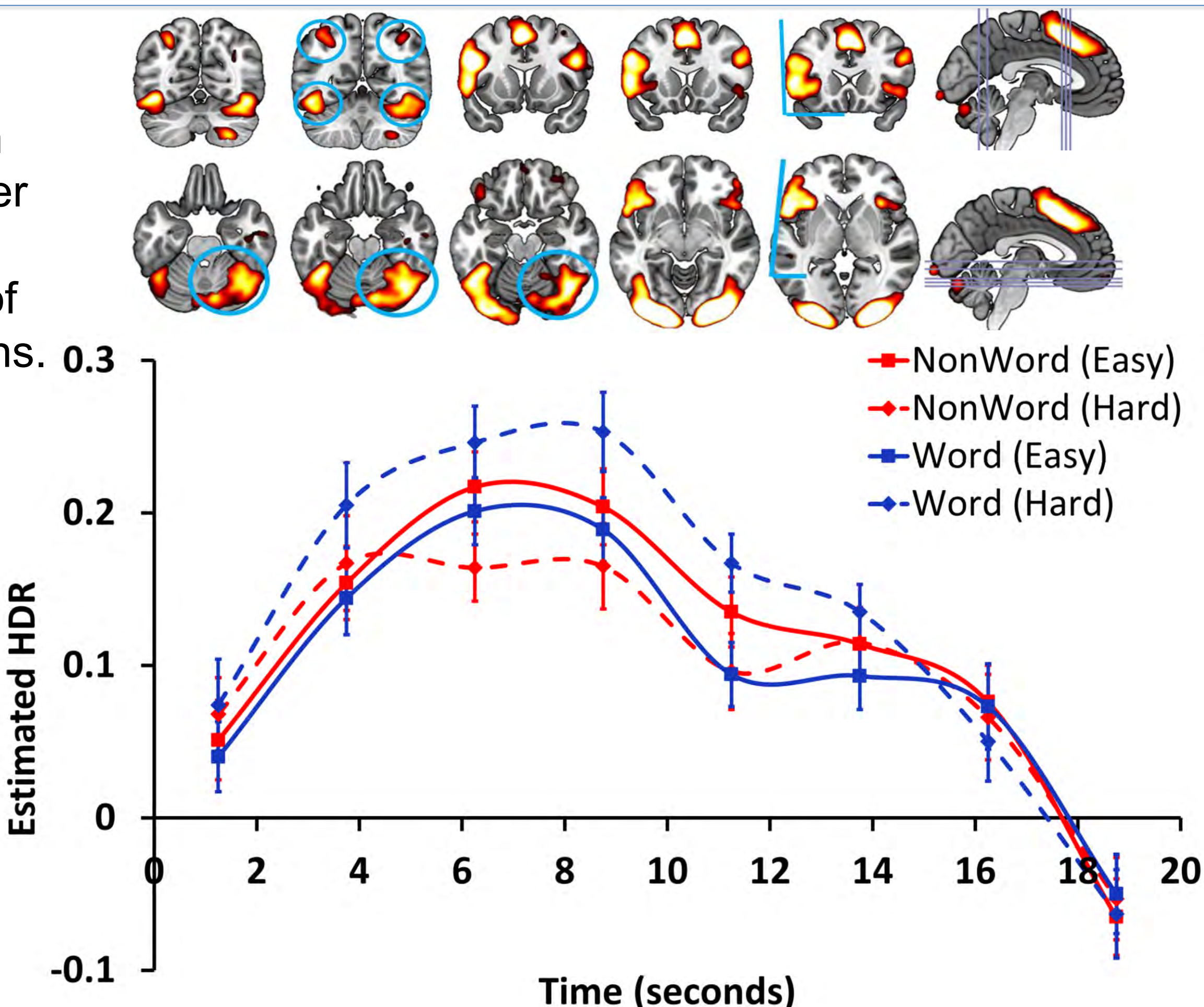
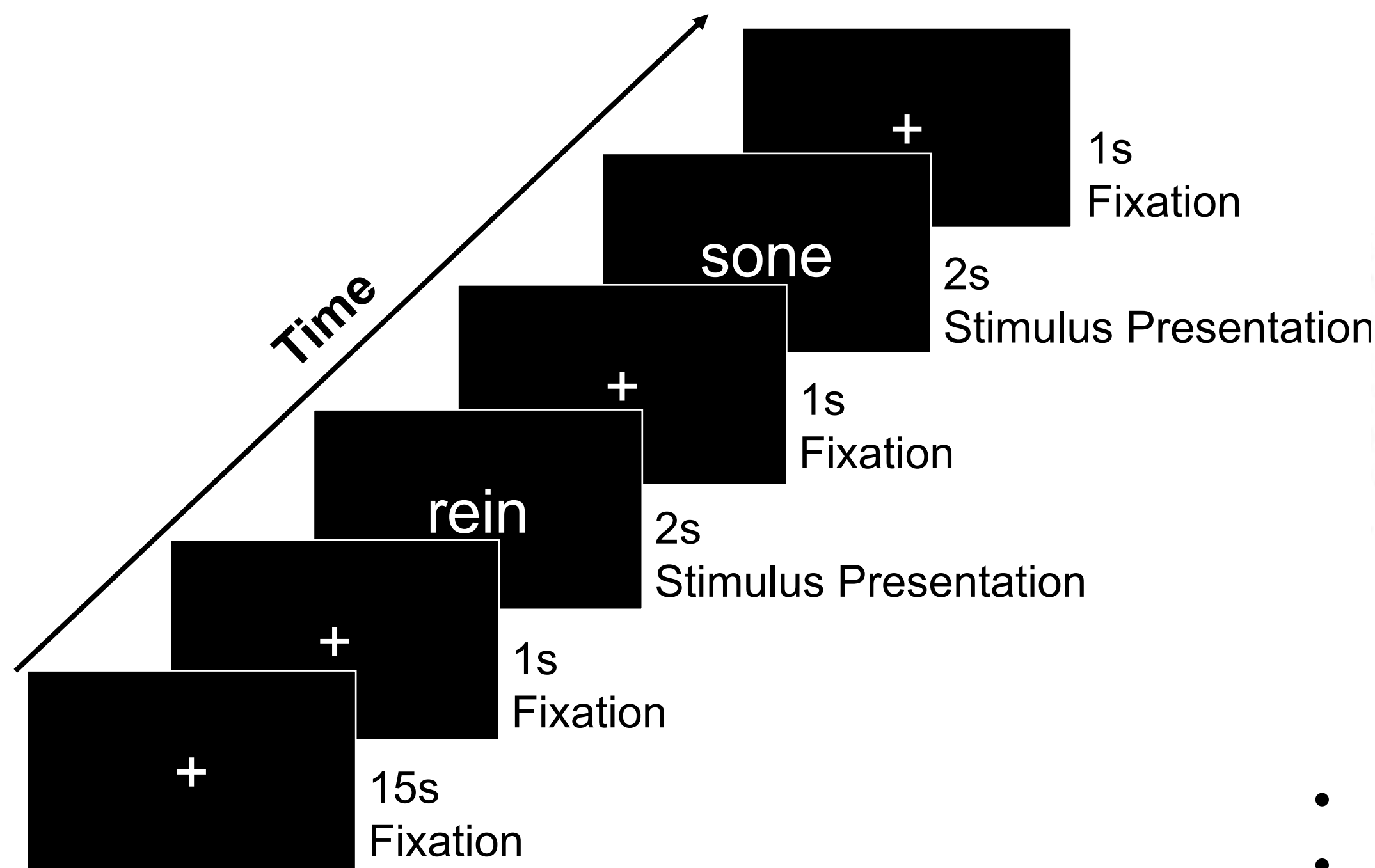
METHODS

Previous works extracted functional brain networks using constrained principal component analysis for fMRI (fMRI-CPCA). Corresponding estimated HDR plots were examined to interpret the role of the Language Based network in each task. A repeated measures ANOVA analysis was used to identify significant interactions and main effects.

RESULTS

Lexical Decision Task

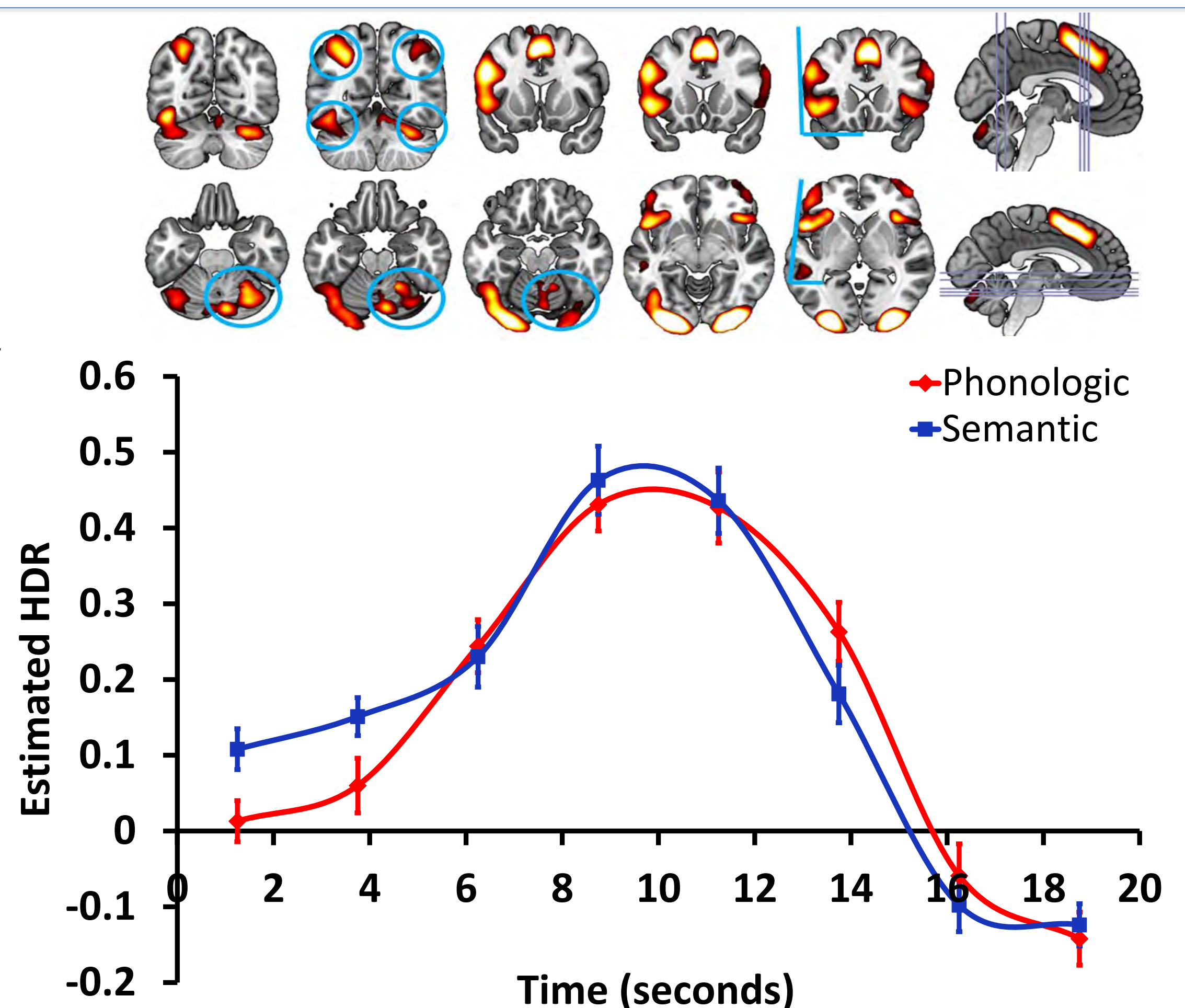
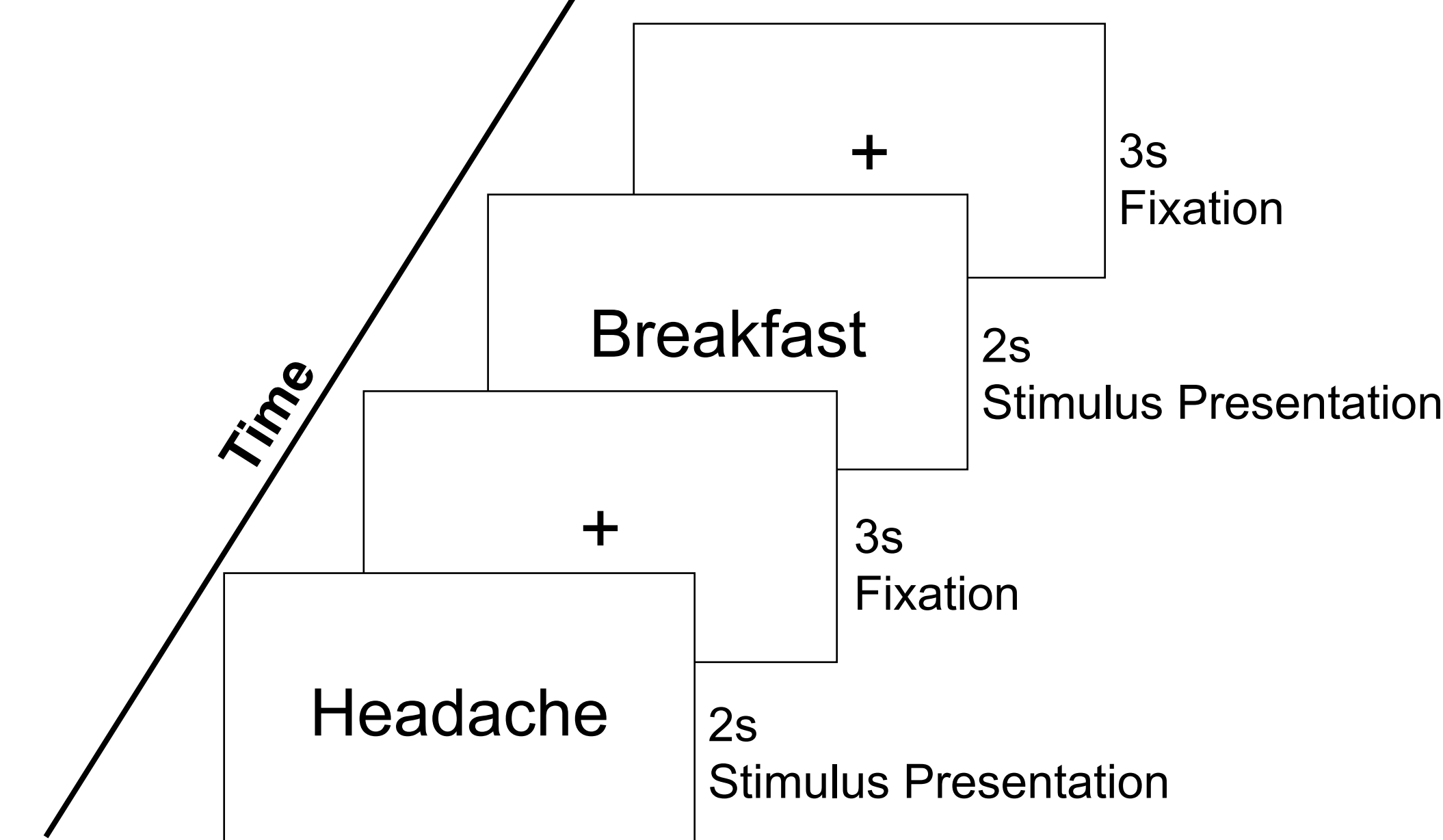
- 59 healthy participants completed the Lexical Decision Task, where they had to decide whether each four-letter sequence represented a real English word or not
- Word and non-word stimuli were shown at two levels of difficulty (Easy vs. Hard) resulting in four task conditions.



- Significant main effect of difficulty ($p < .01$)
- Significant interaction for difficulty x lexicality x time ($p < .001$)

Syllable Stress Task

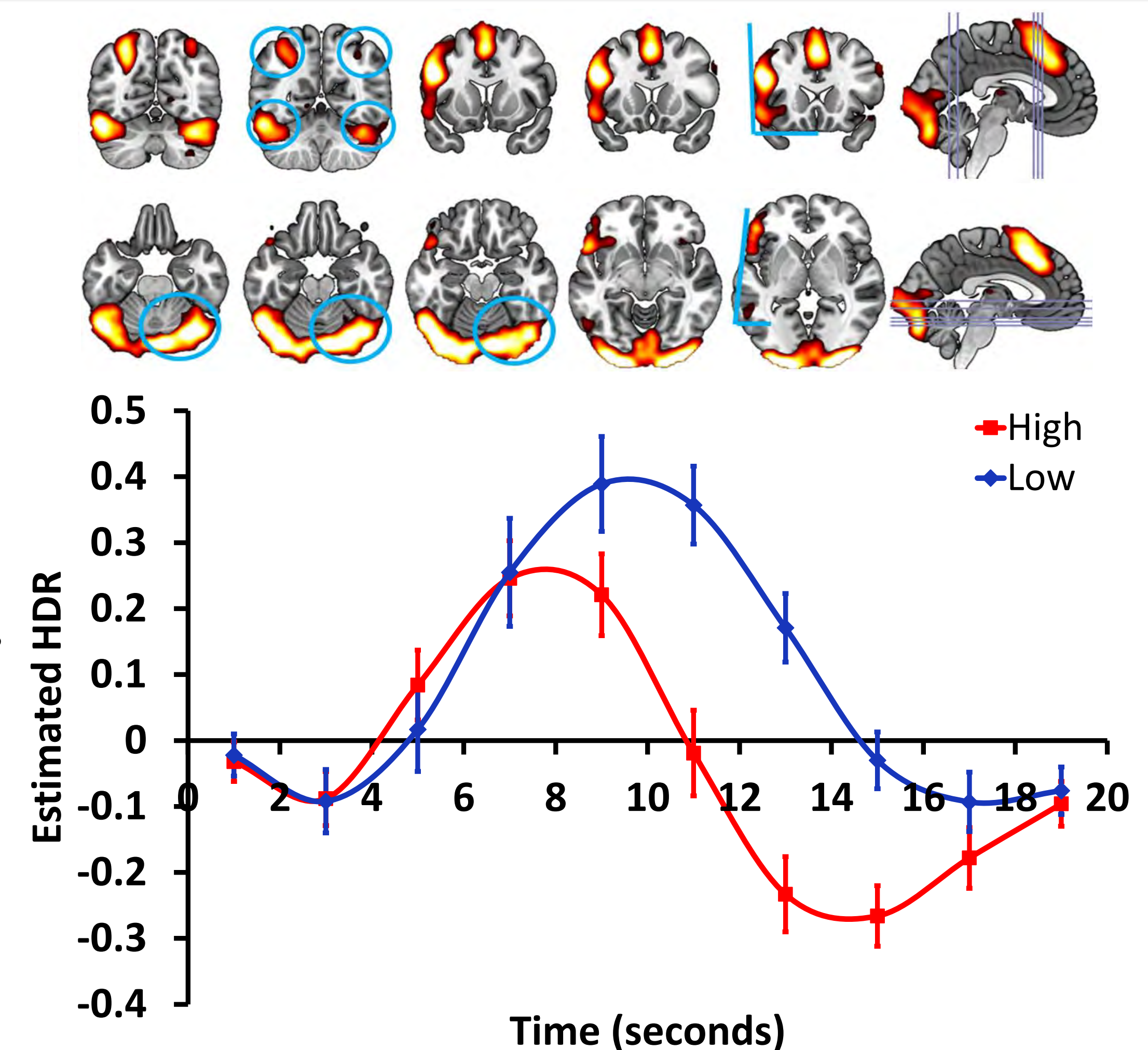
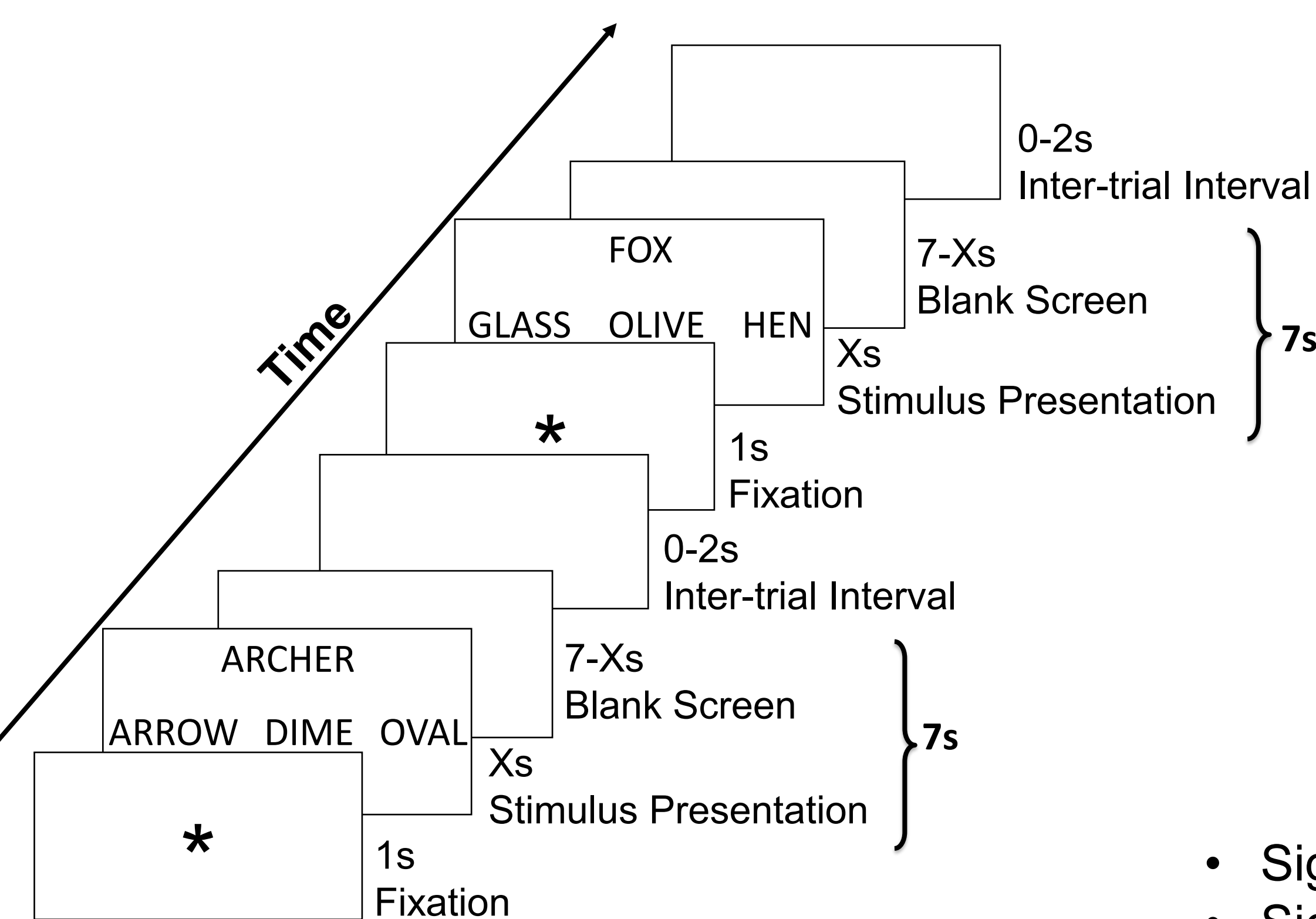
- Participants ($n=32$ healthy controls) were shown 48 two-syllable Dutch words. There were a total of 2 conditions.
- In the phonological condition, participants had to choose where the syllable stress was located
- In the semantic condition, participants evaluated whether the word presented was positive or negative



- No significant interactions

Semantic Association Task

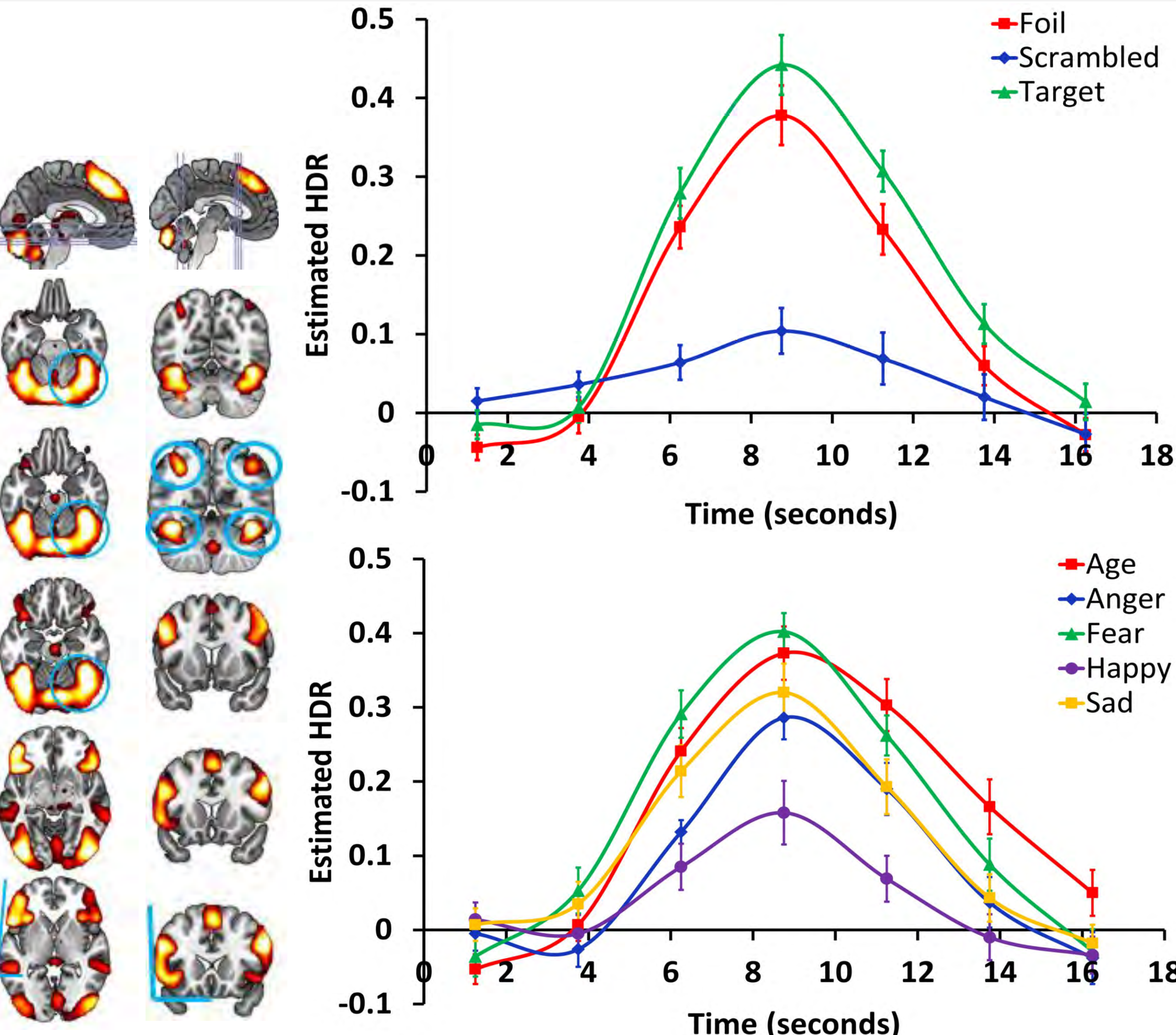
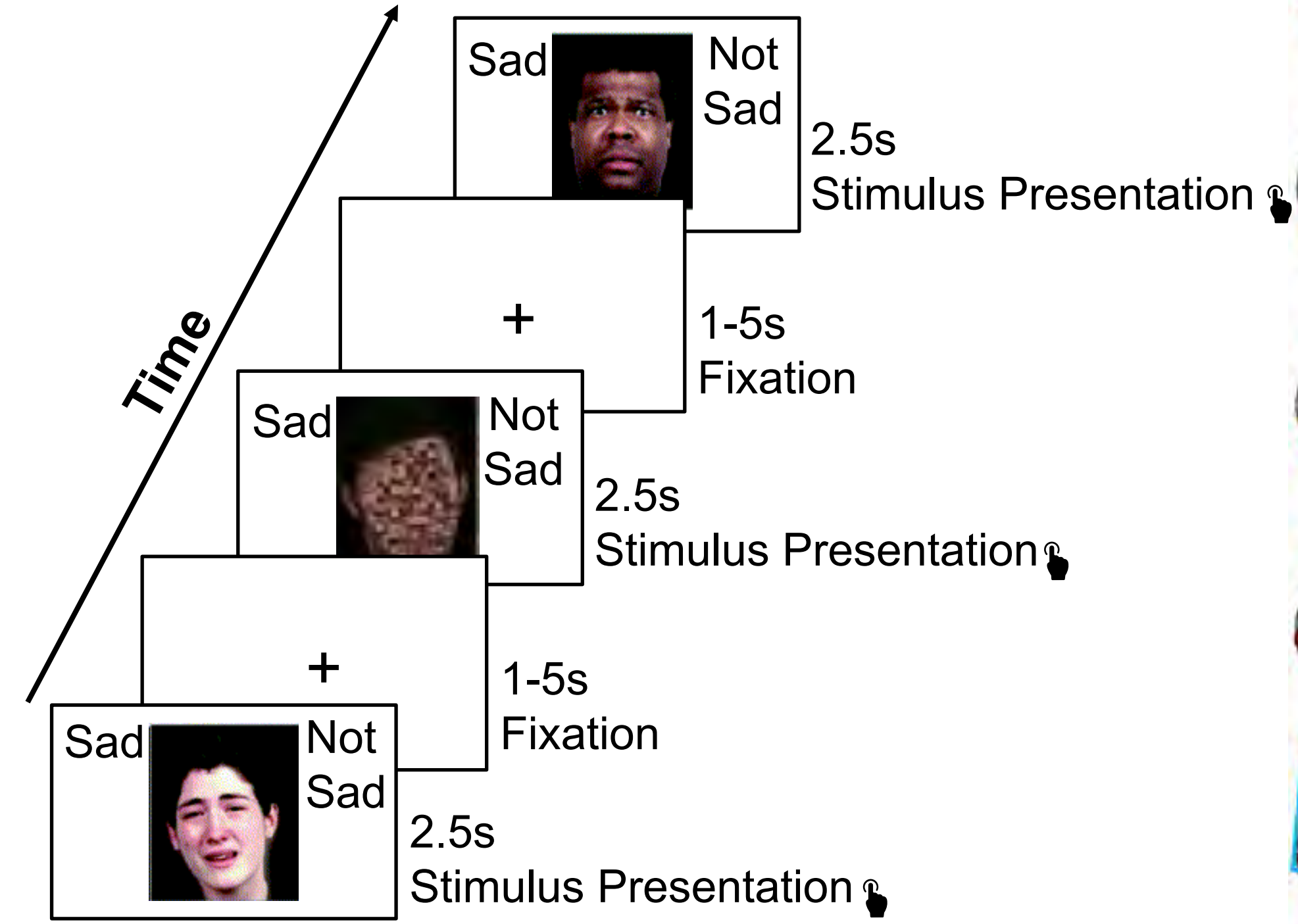
- Participants ($n=32$ healthy participants) were shown three match options for a prompt word and were asked to select the match option that most closely relates to the prompt word.



- Significant main effect of task condition ($p < .001$)
- Significant interaction for task condition x time ($p < .001$)

Facial Emotion Discrimination Task

- 21 healthy participants evaluated whether a presented face reflected a particular target emotion or age
- Significant main effect of image type ($p < .001$)
- Significant main effect of discrimination condition ($p < .001$)



CONCLUSION

Activation of this network during the linguistic and emotion recognition tasks suggests that this network's function lies in the extraction of linguistic- and emotion-based meaning. The derived task-specific HDR profiles will serve as a baseline against which a patient's HDR profile can be compared to. This comparison will allow for the monitoring of linguistic changes in patients pre- and post-operation.

REFERENCES

[1] Benjamin, C. F., Walshaw, P. D., Hale, K., Gaillard, W. D., Baxter, L. C., Berl, M. M., Polczynska, M., Noble, S., Alkawadri, R., Hirsch, L. J., Constable, R. T., & Bookheimer, S. Y. (2017). Presurgical language fMRI: Mapping of six critical regions. Human Brain Mapping, 38(8), 4239–4255. <https://doi.org/10.1002/hbm.23661>

#44

Serena Zhang

Undergraduate Student, University of British Columbia

Supervisor: Kevin C. Harris

*READYorNot™ Feasibility Trial:
Assessing the Efficacy of an App-Based
Transition Intervention in Adolescents with
Congenital Heart Disease*

Abstract & Poster - <https://bcchr.ca/posterday>

Serena Zhang¹, Bianca Fukakusa¹, Najah Adreak¹, Simran Gill¹, Venessa Thorsen¹, Kevin C. Harris¹

¹Children's Heart Centre, BC Children's Hospital; Department of Pediatrics, University of British Columbia

BACKGROUND

Many adolescents with congenital heart disease (CHD) face challenges continuing regular cardiology follow-up into adulthood¹⁻³.

E-Health transitions in care (TiC) interventions have the potential to offer cost-effective, accessible, and long-term support for young adults.

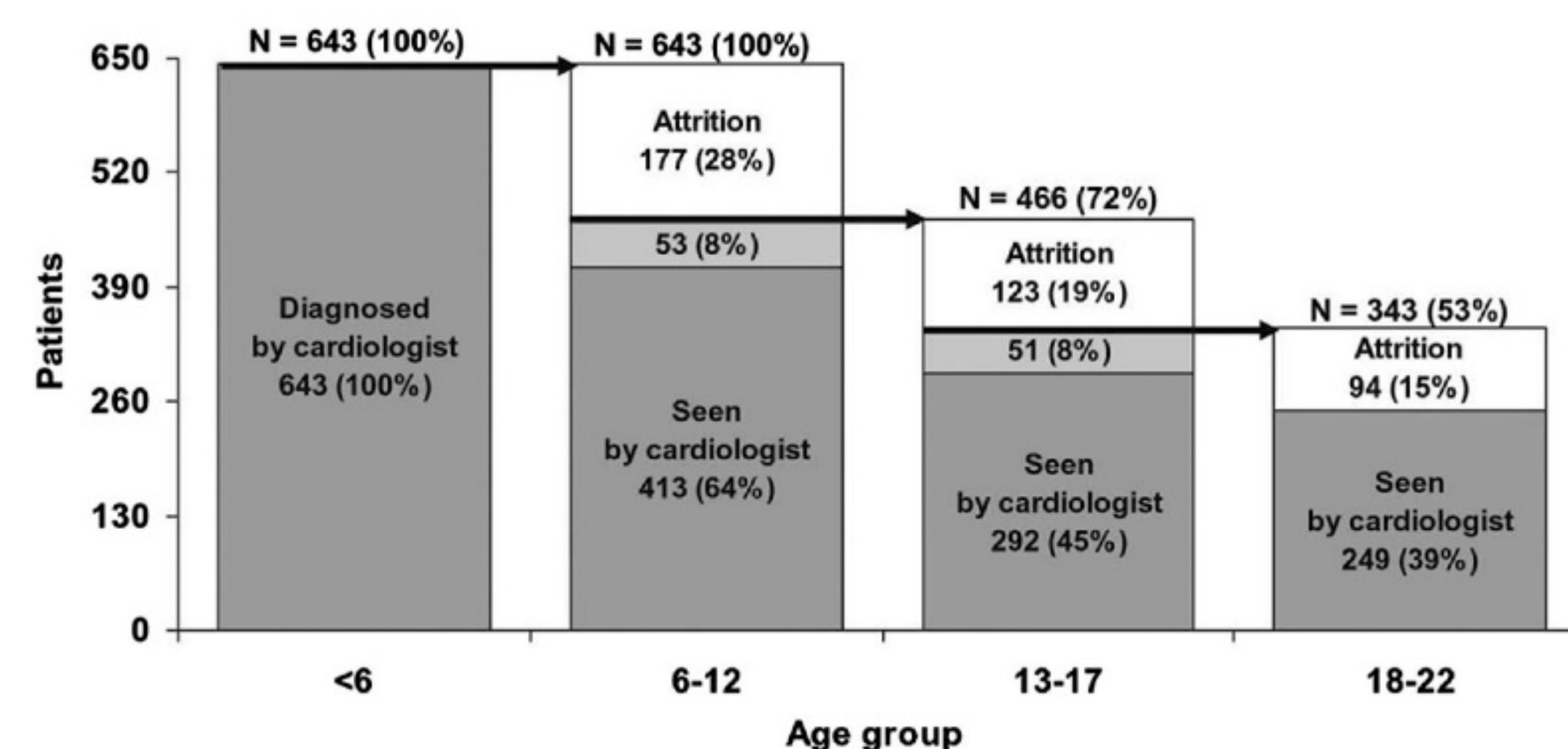


Figure 1. Loss of follow-up from age 6 to 22 years. Dark grey bars indicate patients who would be expected to be seen by a cardiologist³.

METHODS

Inclusion criteria

- 16-17 years old
- Have moderate to complex CHD
- Patients at outpatient cardiology clinics at one of four hospitals across Canada

METHODS

Intervention timeline

Baseline

Assessments:

- Transition Readiness Assessment Questionnaire (TRAQ)
- MyHeart Scale
- General Self-Efficacy (GSE) Score



Intervention

Randomization to app or nurse group

App group: 30 minute session with nurse + access to the app for 18 months

Nurse group: 1 hour TiC intervention with nurse

1 Month Post-Enrolment

Repeated measures: TRAQ, MyHeart Scale, GSE

Optional Qualitative Interview (3-6 months)

6 Months Post-Enrolment

Repeated measures

12 Months Post-Enrolment

Repeated measures

18 Months Post-Enrolment

Repeated measures

OBJECTIVE

To compare the efficacy of the MyREADY Transition™ CHD app with a 1-on-1 nurse-led TiC intervention in improving self-management skills.

EXPECTED OUTCOMES

Primary outcomes

App group participants will see greater improvement in self-management skills over 18 months compared to the nurse-led intervention, as measured using the TRAQ.

Secondary outcomes

The app will result in:

1. Superior CHD knowledge
2. Superior self-efficacy
3. Shorter time to first Adult CHD (ACHD) clinic appointment
4. A valuable and engaging experience
5. Cost savings relative to the nurse-led intervention

ACKNOWLEDGEMENTS

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#44A

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*Review of Quality Indicators in Pediatric
Lab and Future Steps Towards Better Pediatric Care*

Abstract & Poster - <https://bcchr.ca/posterday>

Review and Gap Analysis of Pediatric Lab Quality Indicators and Future Steps Towards Better Pediatric Care.

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ABSTRACT

To objectively measure and manage lab quality, labs need to define their service goals and objectives. Clinical quantitative quality requirements in the form of quality indicators (QI) are then established to meet set goals. Starting from 2008, the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) established the Working Group on “Laboratory Errors and Patient Safety” (WG-LEPS project) to define specifications for QI’s across labs independent from the size of organization and type of activities, the complexity of processes undertaken and the different degrees of knowledge and ability of the staff. The final goal is to establish a Model of Quality Indicators (MQI) that can provide labs with a way to monitor processes, improve performance and decrease error rates. However, established MQIs so far do not generally differentiate between adult or pediatric labs. This review seeks to explore and search through any existing literature on QI’s in pediatric labs and other quality assessment methods in pediatric healthcare. Search parameters will focus on the *Quality Indicators* consisting of the 10 key core lab indicators recommended by the Laboratory Medicine and Pathobiology (LMP) Quality Council and *population* set to neonates (0-28 days), infants (>28 days to 1 year) and pediatrics. Then a general search for quality assessment in pediatric healthcare will be conducted to gather information about this gap in knowledge of lab QI’s in pediatrics.

Objectives

1.Are there any literature on quality indicators or quality assessment for pediatrics lab?



If YES, what do they talk about, are there differences for quality indicators for pediatrics labs vs. Adult labs, should there be?



If not, are there general quality standards in pediatric health care in general?

2.How should we go about developing more specific quality indicators and assessment for pediatric labs?

METHODOLOGY

#	Query	Results from 24 Jul 2023
1	child/ or infant/ or infant, newborn/	2,652,619
2	(Neonate* or child* or newborn* or newborn infant*).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]	3,377,911
3	1 or 2	3,491,591
4	"outcome and process assessment, health care"/ or quality assurance, health care/ or benchmarking/ or laboratory proficiency testing/ or total quality management/ or quality improvement/ or quality indicators, health care/	150,785
5	(lab qualit* or quality indicator* or quality assessment* or lab quality assessment* or lab quality measurement* or quality measurement*).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]	58,416
6	4 or 5	188,025
7	3 and 6	19,027
8	(mis-identification error* or misidentification error or incorrect fill level or hemolysed sample* or hemolyzed sample* or Clotted sample* or External Quality Assessment* or Proficiency test* or turn-around time for STAT potassium or TAT for STAT potassium or turnaround time for STAT potassium or turn-around time for STAT INR or TAT for STAT INR or turnaround time for STAT INR or turn-around time for STAT International Normalized Ratio or TAT for STAT International Normalized Ratio or turnaround time for STAT International Normalised Ratio or turn-around time for STAT International Normalised Ratio or turnaround time for STAT International Normalised Ratio or turn-around time for STAT WBC or TAT for STAT WBC or turnaround time for STAT WBC or turnaround time for STAT white blood cells or TAT for STAT white blood cells or turnaround time for STAT white blood cells or turn-around time for STAT troponin or TAT for STAT troponin or turnaround time for STAT troponin or critical results notification).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms, population supplementary concept word, anatomy supplementary concept word]	5,291
9	6 and 7 and 8	115

RESULTS

➤ 115 hits from above searching strategy

➤ 33 articles selected for further review

➤ Out of 33 articles distribution of countries is as follows: US (13), EU (7), China (6), UK (2), Korea (1), Peru (1), India (1), Australia (1), International (1)

➤ Articles fell into three categories: 1. Report of Quality 2. Highlighting specific difficulties in pediatric labs 3. Advocacy for establishment or systemic implementation of quality assessment programs

RECOMMENDATIONS

- 3 out of the 33 articles will be read in full
- Two articles found about quality assessment in pediatric care in general
- Both quantitative and qualitative quality indicators should be considered especially in a pediatric setting
- Quality management of specific areas should be placed more into focus with pediatric care in mind (ex. Focus on point of care/take home kits quality assessment and quality indicators)

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