

# Understanding the Phenomenon of Early Childhood Caries in Northern Saskatchewan Indigenous Communities: A Realist Review

Presenter: Maniza Abedin Chowdhury

## INTRODUCTION

**Early childhood caries(ECC) - a growing public health concern in Canada.**



- Oral health inequalities between Indigenous and non-Indigenous children in Canada creates significant obstacle for the development of fair health care policy.
- Indigenous children receive oral surgery 8.6 times more frequently under general anaesthesia than non-Indigenous children in Canada (1).
- In Saskatchewan, approximately \$3.4 million is spent annually for the treatment of ECC among preschool children (3).

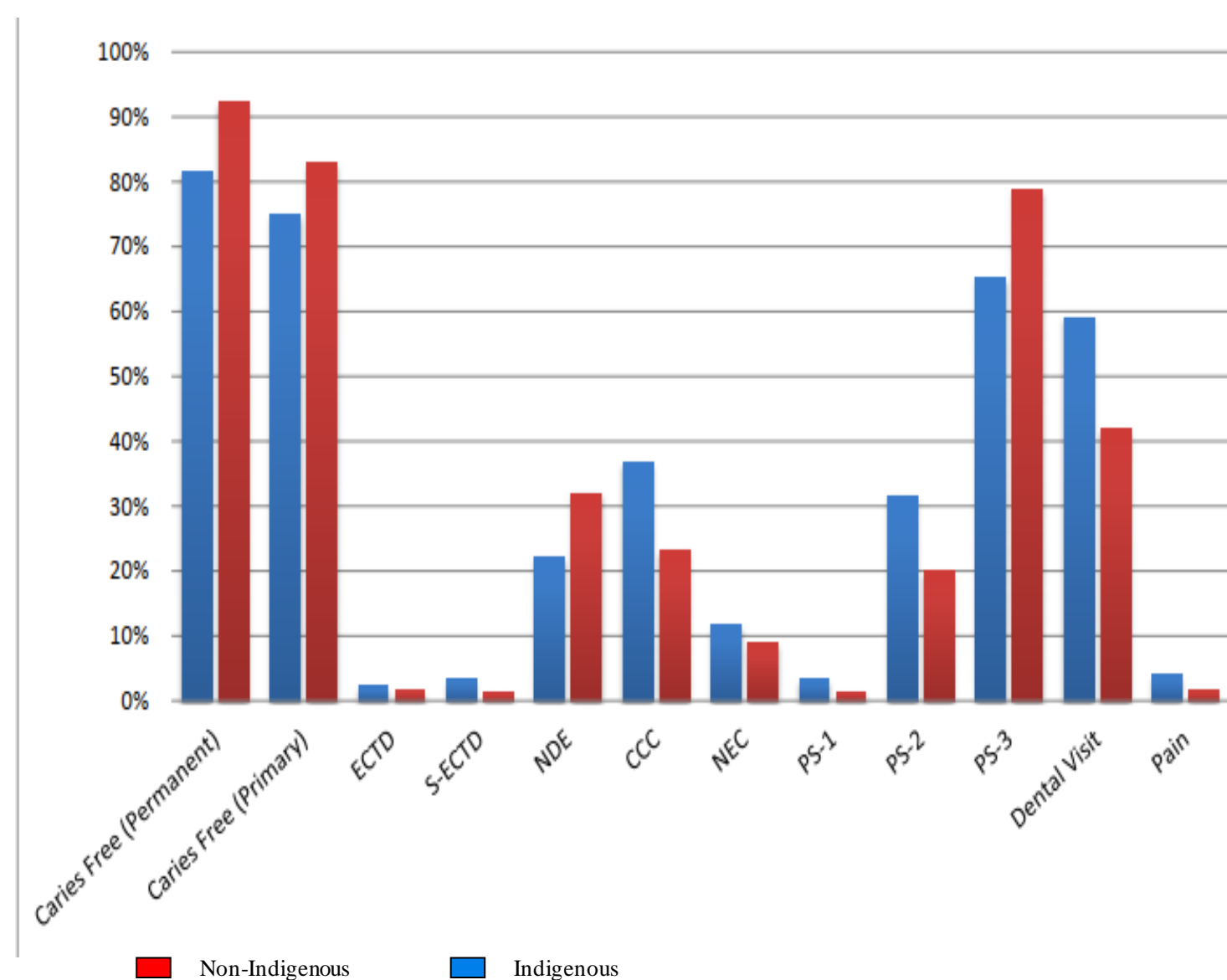


Fig: Dental health of students by Indigenous/Non-Indigenous status, Saskatchewan, 2013-2014 (2).

## PURPOSE, METHOD AND STEPS

### Purpose :

- This study aims to understand the phenomenon of ECC in Saskatchewan Northern Indigenous communities in all of its complexity. More specifically, the following things will be explored:
  1. Identify key mechanisms at the individual, community, societal and system-level that result in ECC among Indigenous children.
  2. Develop causal mid range theories to influence policy and practice.

### Method:

- Realist review (analytical framework of this study) is a theory-driven evidence synthesis process.
- Researcher works with the secondary data such as policy documents, grey literature, editorials, published studies etc., in order to confirm, refute and refine realist theory or theories about the phenomenon of interest (5).
- Based on realist philosophy, realist review tries to create a generative explanation for causation - that is, an outcome (O) of interest was generated by relevant mechanism(s) (M) being triggered in context (C) (4).
- Constructing CMO serves as a foundation for developing the theory that will be the review's final product. They should be expressed at the level of abstraction to contain enough data to generate testable hypotheses while being abstract enough to apply to other circumstances as well (4).

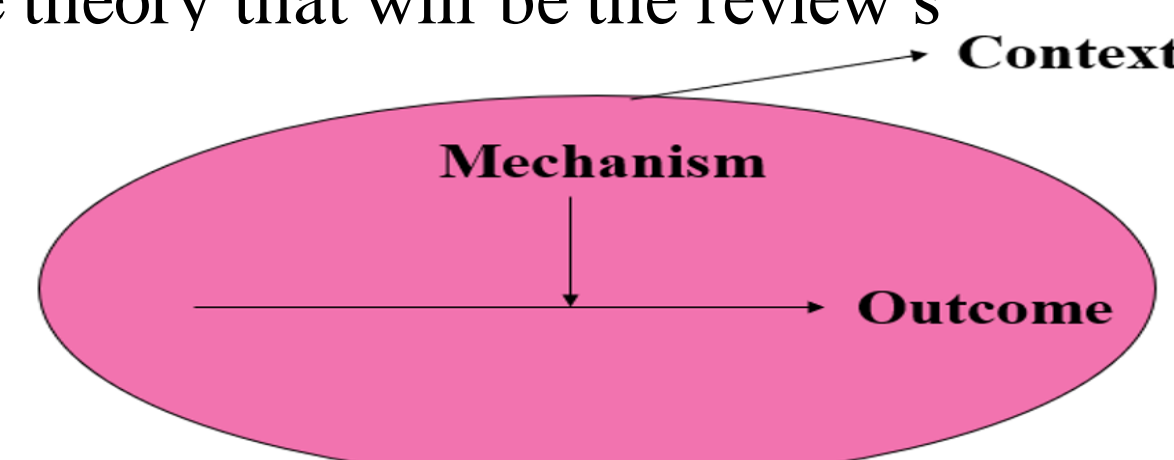
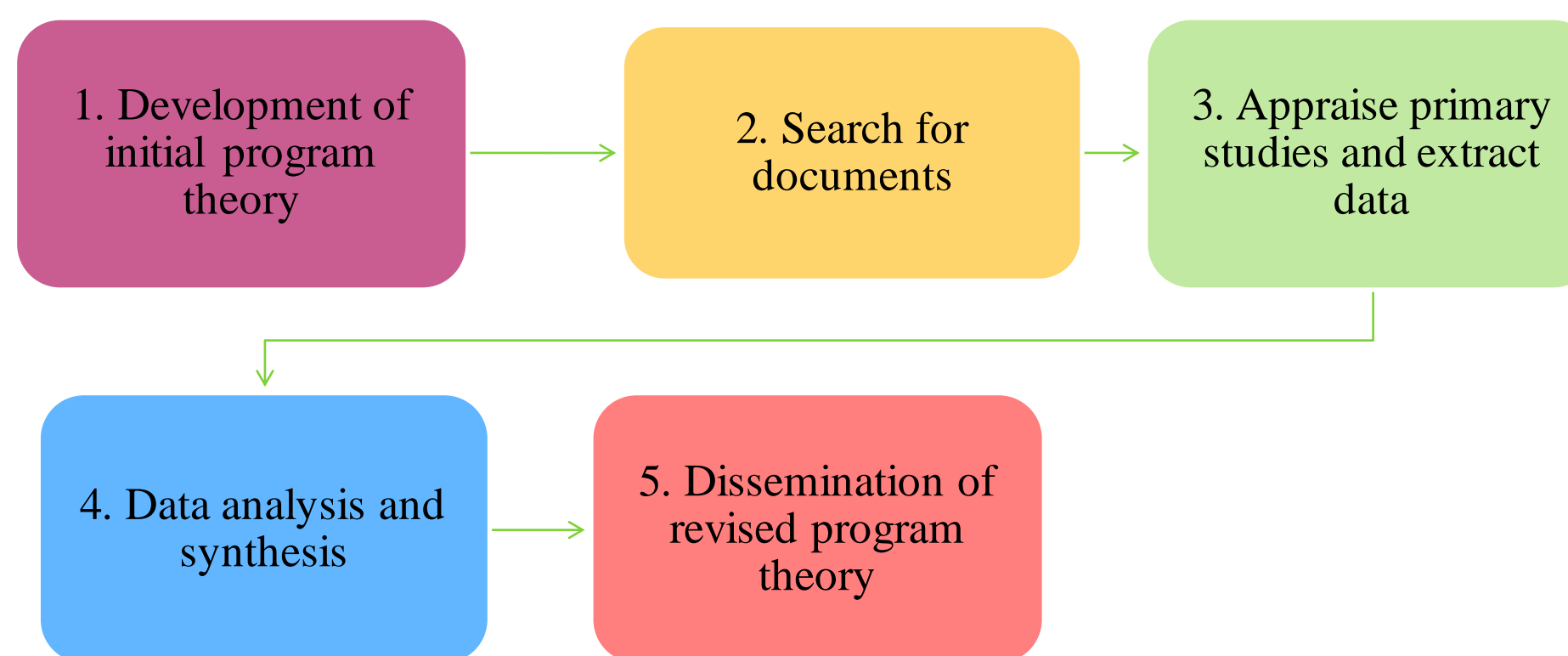


Fig: CMO configurations. Source: Pawson R, Tilley N, Tilley N. Realistic evaluation. sage, 1997 Jun 23.

### Step

- In this study, I will follow the Pawson's realist review stages (5).

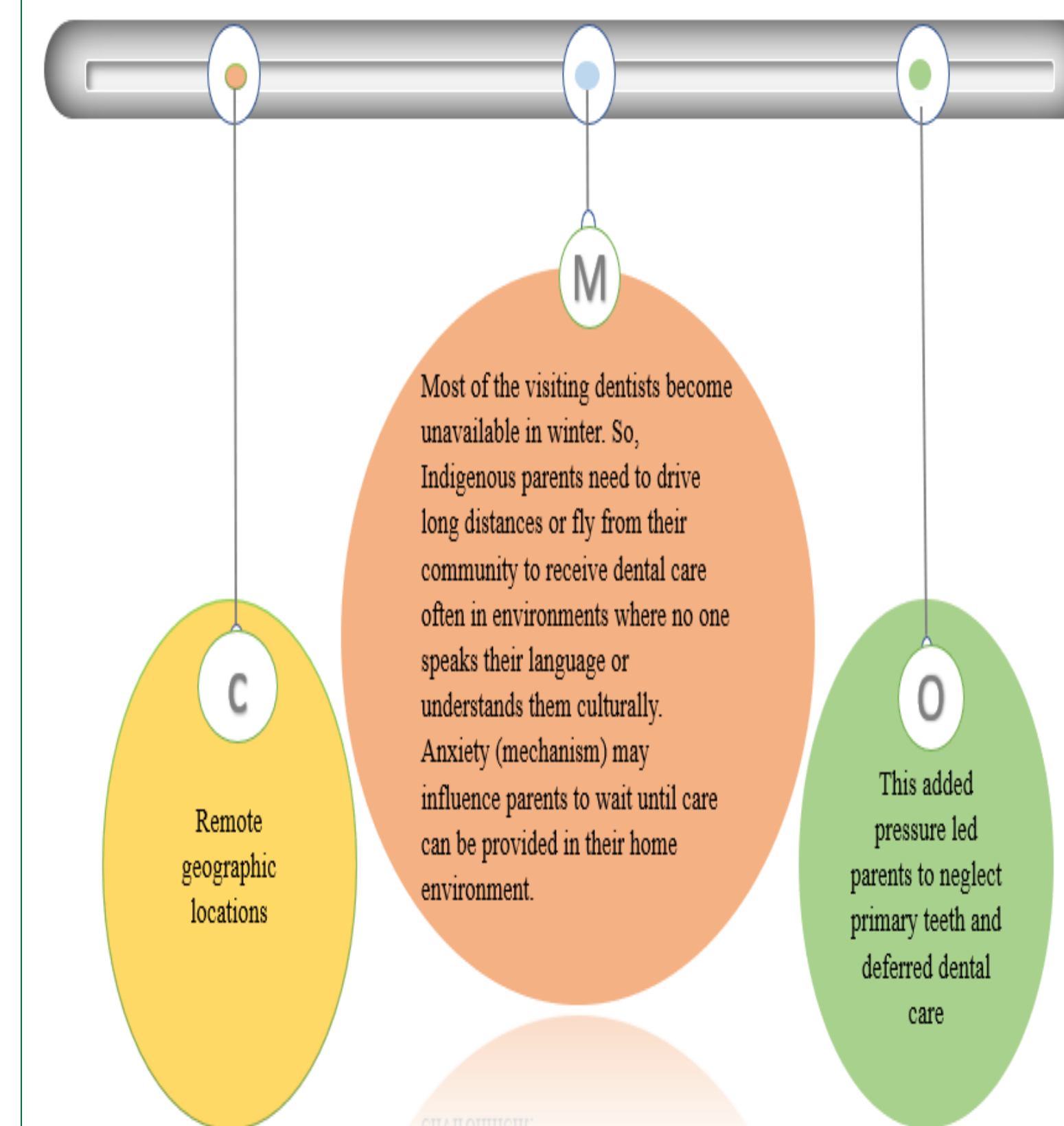


## REFERENCES

1. Treatment of preventable dental cavities in preschoolers : a focus on day surgery under general anesthesia : H118-94/2013E-PDF - Government of Canada Publications - Canada.ca [Internet]. Publications.gc.ca. 2021 [cited 15 May 2021]. Available from: <http://publications.gc.ca/site/eng/9.698831/publication.html?wbdisable=true>
2. Gill SS. Saskatchewan Dental Health Screening Program Report.
3. Jafari M. Young Children's Oral Health Status Report
4. Wong G, Westhorp G, Pawson R, Greenhalgh T. Realist synthesis. RAMESES training materials. London: The RAMESES Project. 2013 Jul.
5. Pawson R. Evidence-based policy: a realist perspective. sage; 2006 Apr 7.

## EXAMPLE

Let's see one of the community level CMO that I have identified from my literature review.



## CONCLUSIONS, & ACKNOWLEDGEMENTS

- 1<sup>st</sup> study in Saskatchewan that will develop a multilayer map showing reasons behind the ECC among Indigenous children that is based on mid-range theories.
- This will aid policymakers develop policies and programmes based on a complex understanding of the phenomena allowing future researchers to further test and refine the hypotheses based on the program theory.
- This project will be benefitted from the time and energy contributed by the advisory committee members, patient partners as well as my supervisor Dr. Gary Groot.