

# The Pan-Canadian Real-world Health Data Network: Making your research dreams a reality

CAHSPR  
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# Outline for panel

- Brief presentations by subset of PRHDN Consortium Leads
- Current vision and scope for PRHDN
- Purpose of the session is to get input from you to guide priorities / development

# Key questions for you

- What is the current gap? What are your needs?
- What are the burning questions best answered with data from multiple provinces?
- What are the most important / highest priority comparable data?

# Context

- More interest in data and in international comparisons / analyses
- More interest in taking advantage of “natural laboratory” across the country
- Existing examples of national endeavours (CCDSS, CNODES)

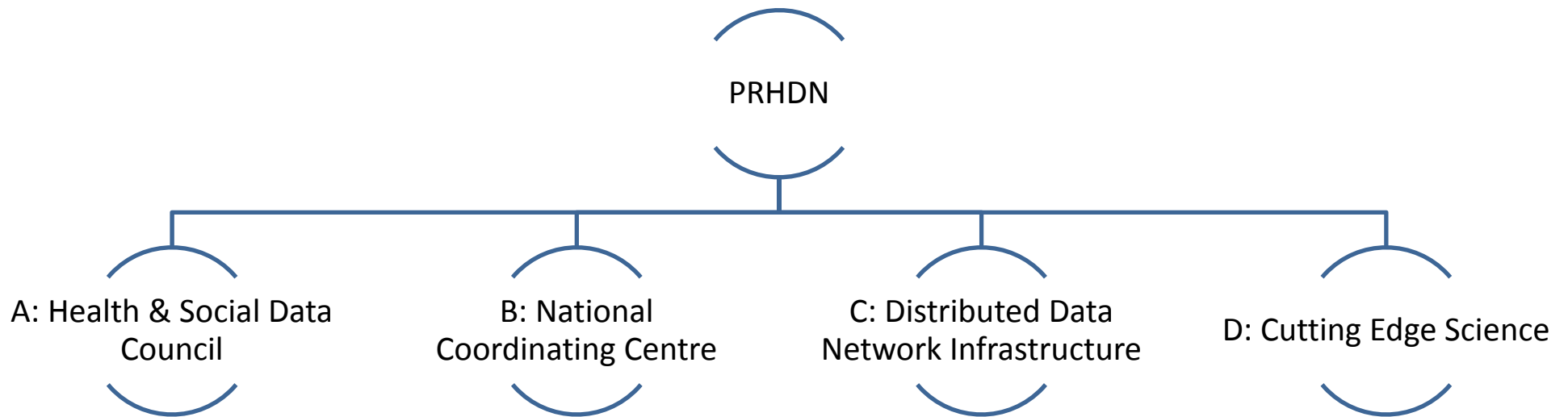
# Who are we? / Why us?

- Consortium Leads from ICES, MCHP, PopData and CIHI
- Building on existing provincial infrastructural and pan-Canadian expertise and standards
- Learning from health care laboratory means:
  - Using all possible common data
  - Harmonizing new data for priority variables
  - Developing methods for cases where harmonization is not possible

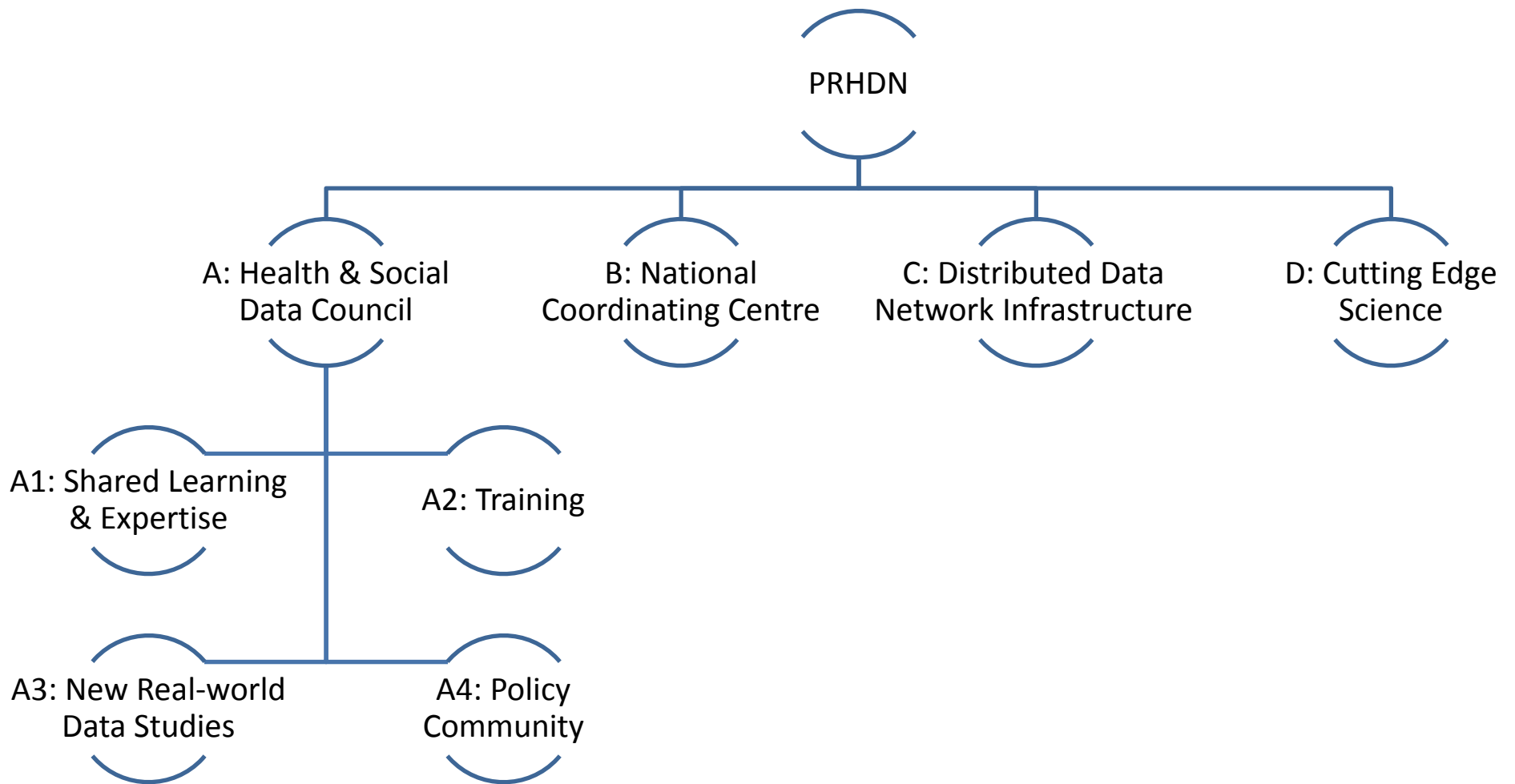
# PRHDN Objectives

- Complement and build on existing structures and processes
- Support knowledge creation that is informed by local connections between researchers and policy/decision makers
- Increase the efficiency of research
- Increase the robustness of research findings with harmonized data and common methods

# How will we make this happen? - Deliverables

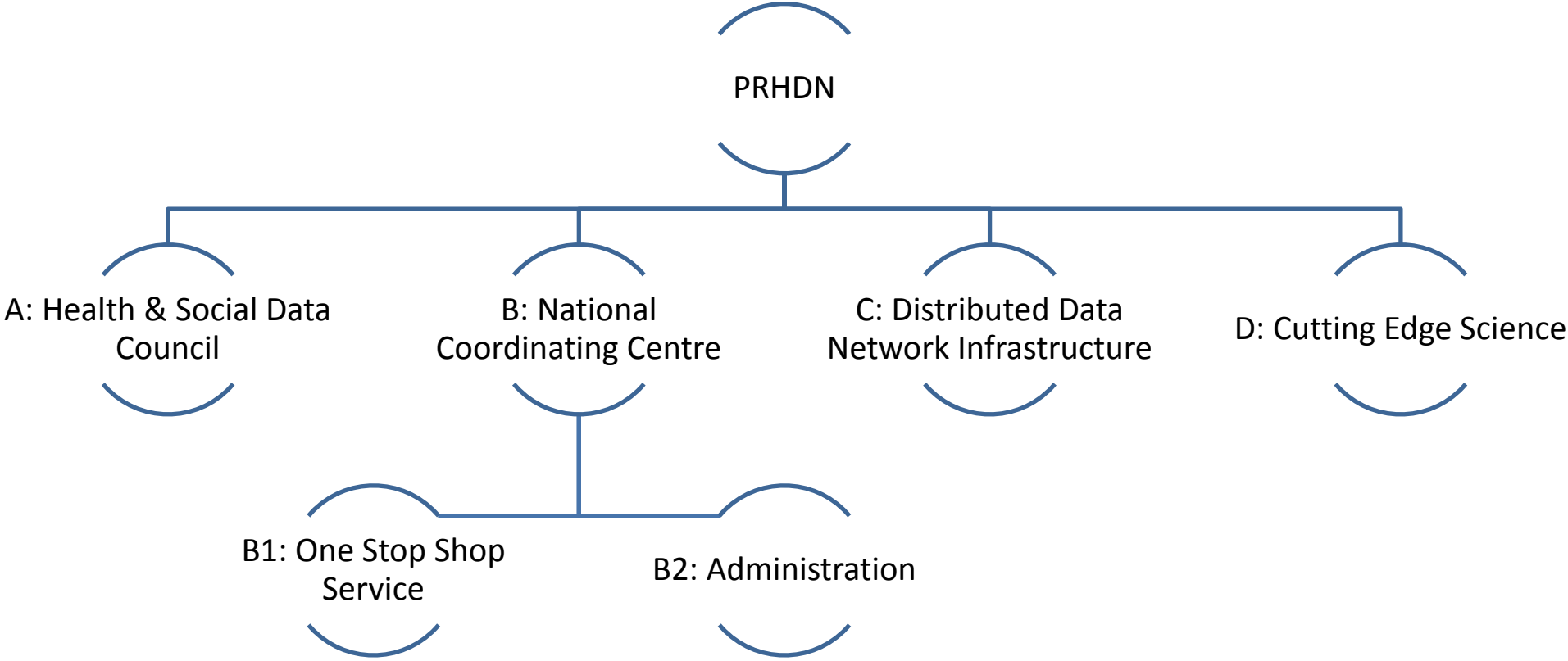


# How will we make this happen? - Deliverables

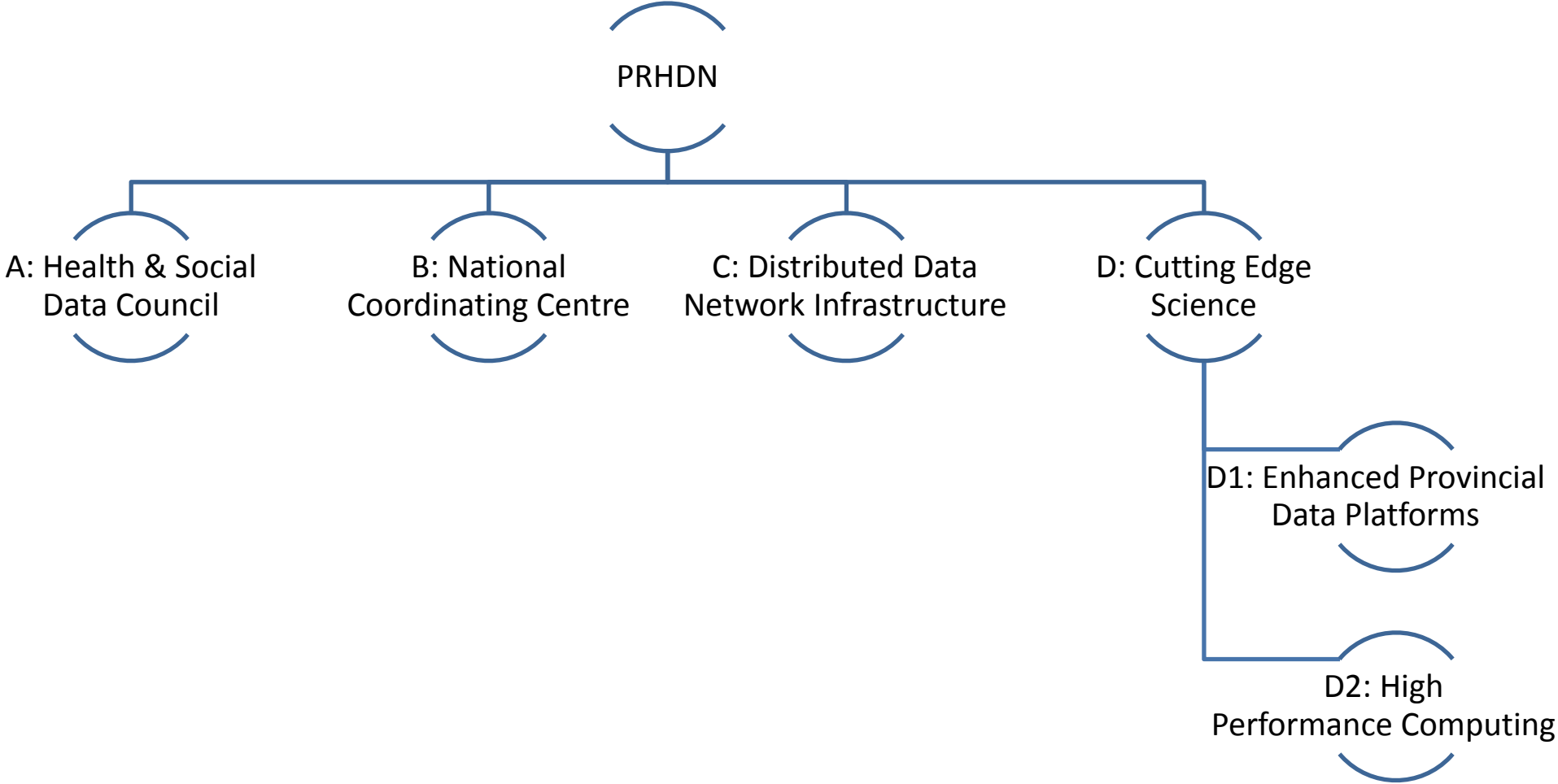




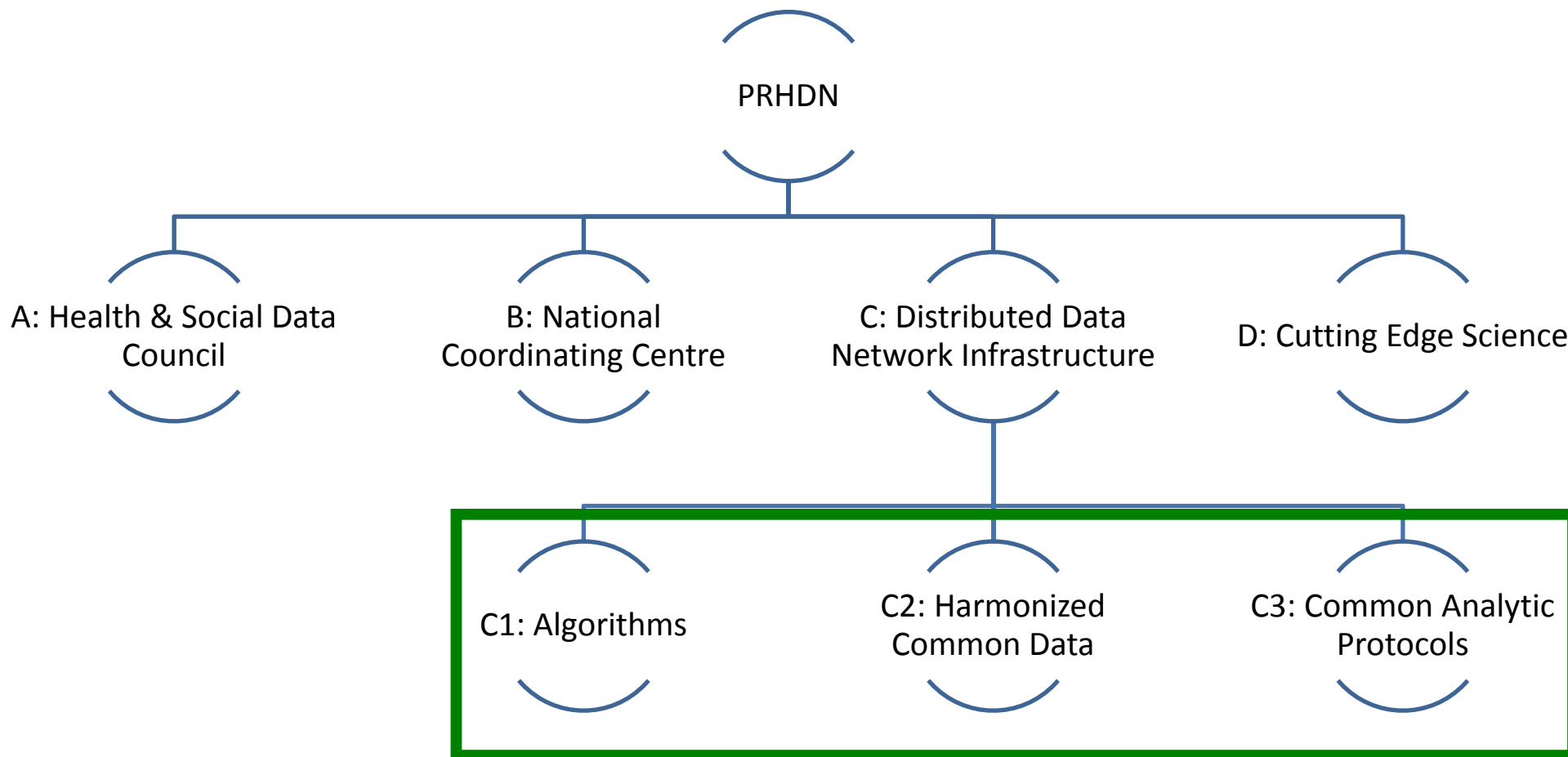
# How will we make this happen? - Deliverables



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# How will we make this happen? - Deliverables



*This is the core research data infrastructure – and where we want to focus today*

# Algorithms

A reusable approach, ideally in the form of documented code, that implements a common approach or definition.

*Algorithms can define*

- Case or Case definition
- Derived variables
- Emergent properties

# MCHP concepts

- Over 200 research concepts
- Detailed operational definitions of variables or measures used in MCHP research
- Include a discussion of the issue(s) involved, approaches used, programming tips/cautions, SAS code (where not restricted for internal use), additional readings, and references
- E.g. Teen pregnancy: 8 diagnostic codes, 6 procedure codes

# Harmonized common data

- **Common data** – A collection of variables that are (already) comparable across time and/or jurisdictions, e.g. Discharge Abstract Database.
- **Harmonization:** The process through which variables from different time periods, sources, or jurisdictions are made to be inferentially equivalent and thus can be considered common data. Can be prospective or retrospective.
- **Harmonized common data:** A collection of variables including common data and harmonized data

# Common analytic protocol

A series of technical and process documents detailing the steps for analyses designed to yield results that can be pooled or combined even though the studies are performed using non-harmonized data.

May include simple and/or more complex methods.

Dataset Creation Plans + process guidance

## Standardized approach across sites

- A priori analysis plan
- Detailed, with some SAS code included
- Empty tables included for analysts

Use meta-analytic techniques to produce a single point estimate combining effects from multiple jurisdictions



# A common analytic protocol from CNODES

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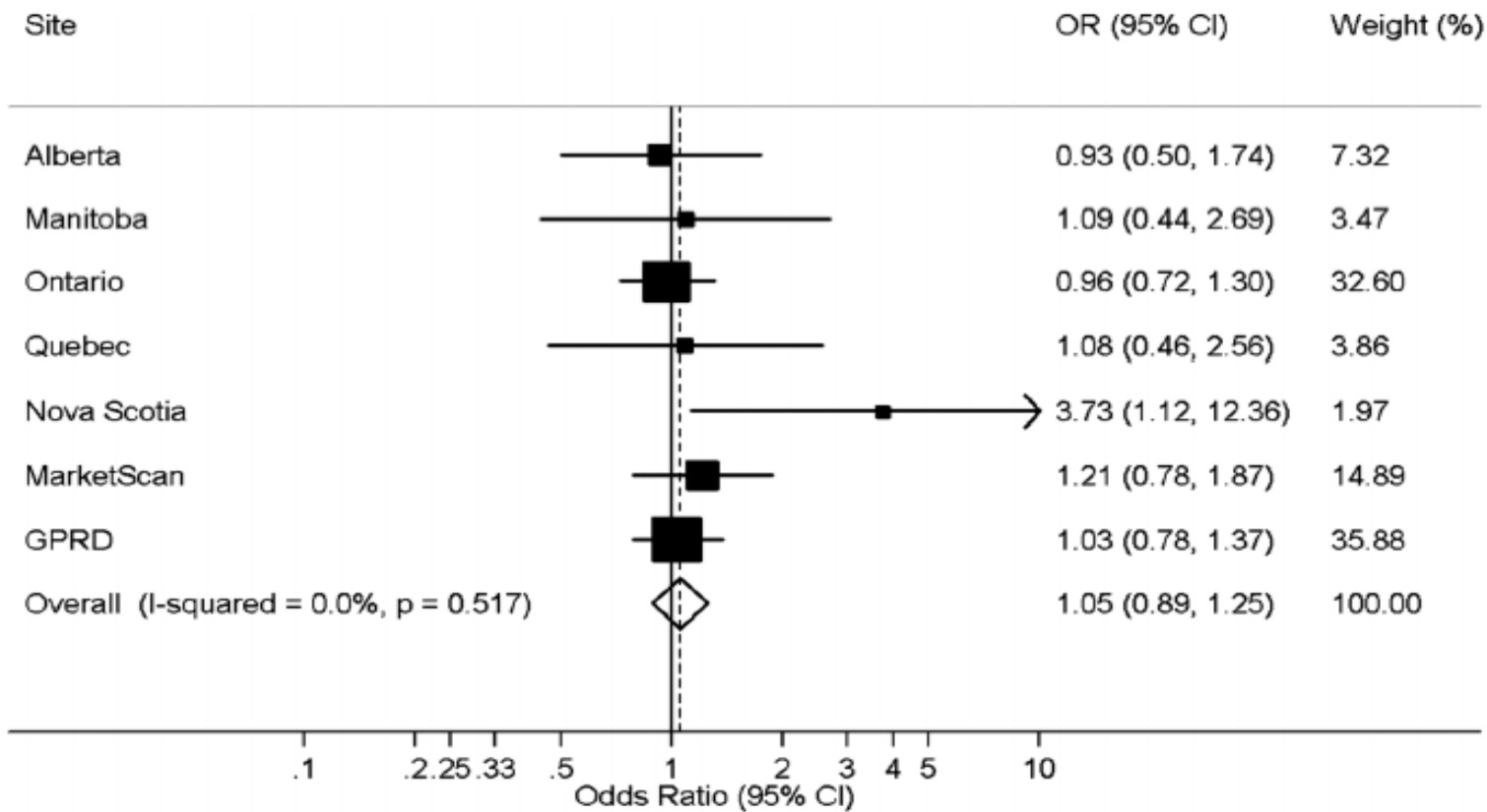


# Proton pump inhibitors and the risk of hospitalisation for community-acquired pneumonia: replicated cohort studies with meta-analysis

Kristian B Filion,<sup>1</sup> Dan Chateau,<sup>2</sup> Laura E Targownik,<sup>3</sup> Andrea Gershon,<sup>4</sup> Madeleine Durand,<sup>5</sup> Hala Tamim,<sup>6</sup> Gary F Teare,<sup>7</sup> Pietro Ravani,<sup>8</sup> Pierre Ernst,<sup>1</sup> Colin R Dormuth,<sup>9</sup> the CNODES Investigators

► Additional material is

ABSTRACT



# We need your input!

- Comments/suggestions on the main elements of core research data infrastructure including
  - Priorities for new algorithms, new harmonized data, common analytic protocols
- What would be *most helpful* to you as a researcher contemplating multi-province analyses?
- How would you like to be engaged / involved:
  - In the short-term if we are invited to expand our NOI for PRHDN-Primary Care (as the first step toward the full PRHDN) to a full application for CFI Cyber-infrastructure funding?
  - With PRHDN development generally?

# Key questions for you

- What is the current gap? What are your needs?
- What are the burning questions best answered with data from multiple provinces?
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# Thank you!

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# Appendix – Work Breakdown Structure Showing Full PRHDN Scope

