

Effect of the COVID-19 Pandemic on Economic Outcomes within the Health Care Sector



INSTITUTE OF
HEALTH ECONOMICS
ALBERTA CANADA

Ellen Rafferty, PhD
Danica Wolitski, MA

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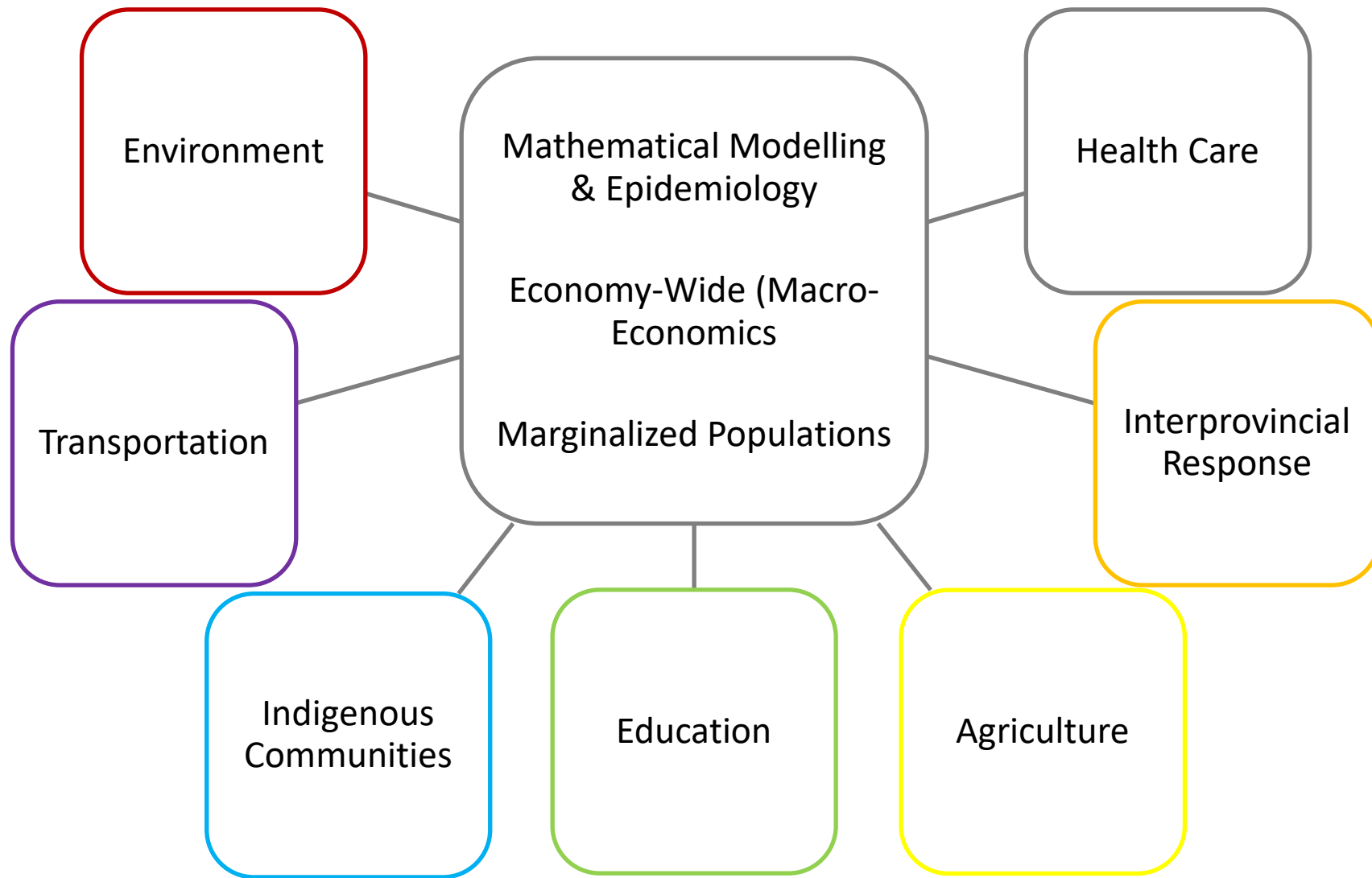
**One Society
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Thanks to: Christopher McCabe, Caroline Colijn & Eric Wasylenko

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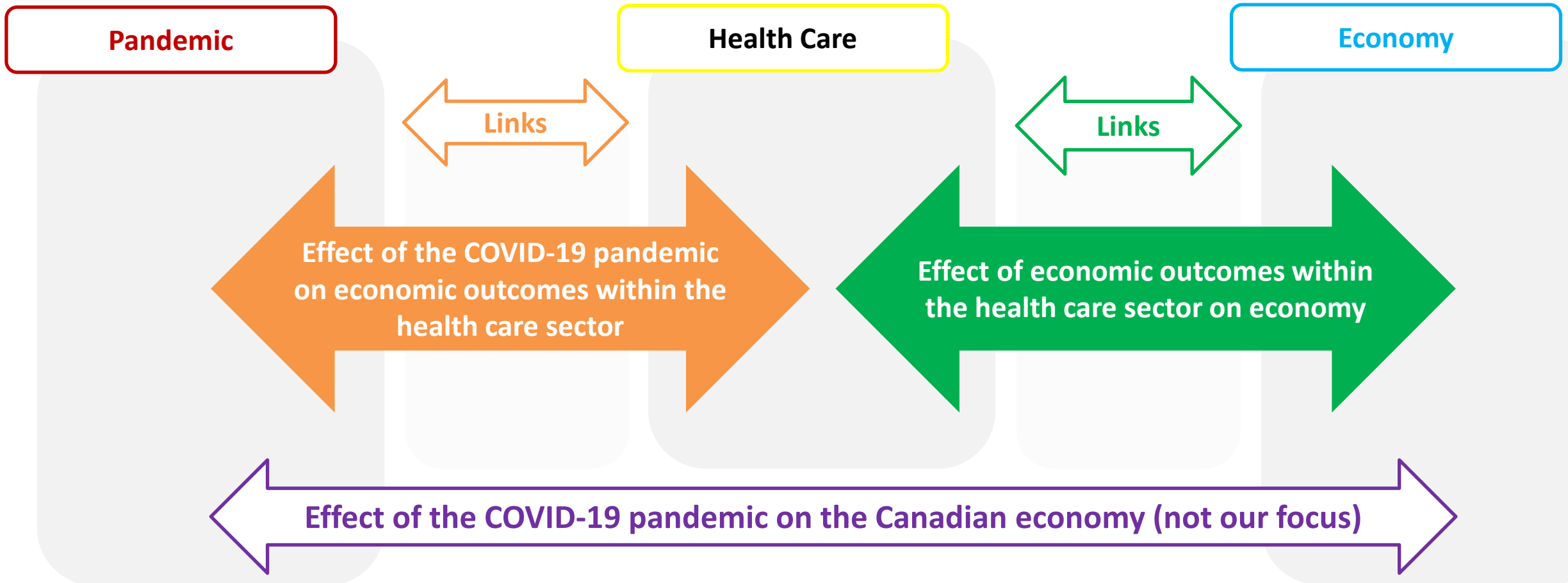
One Society Network



Effect of the COVID-19 pandemic on economic outcomes within the health care sector
...and their effect on the wider economy.

Research Focus

Effect of the COVID-19 pandemic on economic outcomes within the health care sector
...and their effect on the wider economy.



Spatial Scope

Pandemic

Direct

- COVID Infections
- Cases
- Hospitalizations
- ICU cases
- Deaths
- Long-COVID

Links

Infectious disease control strategies

Policies

Tradeoffs

Habits

Health Care

Demand & Supply

- Labour
- Expenditure
- Resources & Infrastructure

Links

Public funding

Government policy

Market

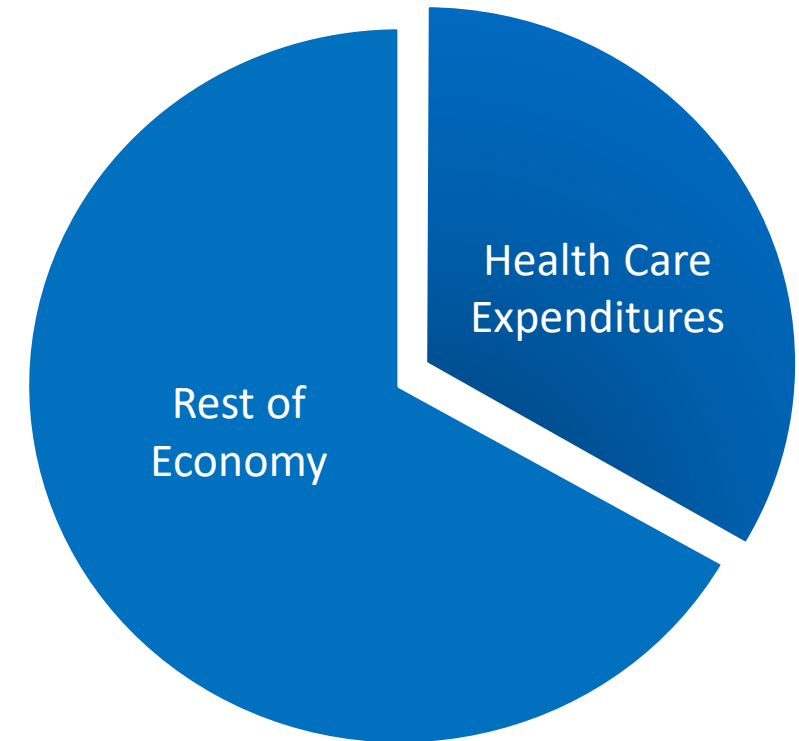
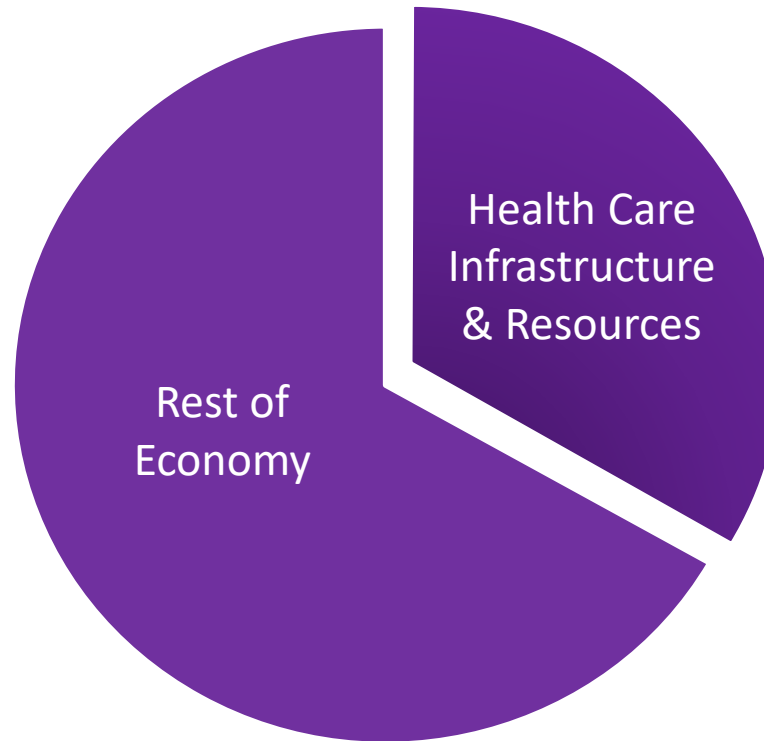
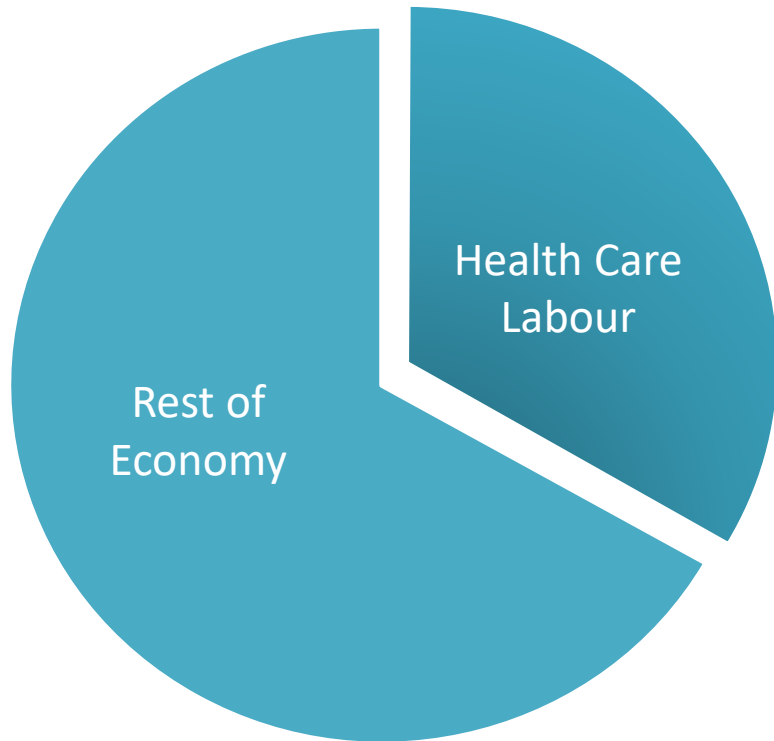
Informal economy

Economy

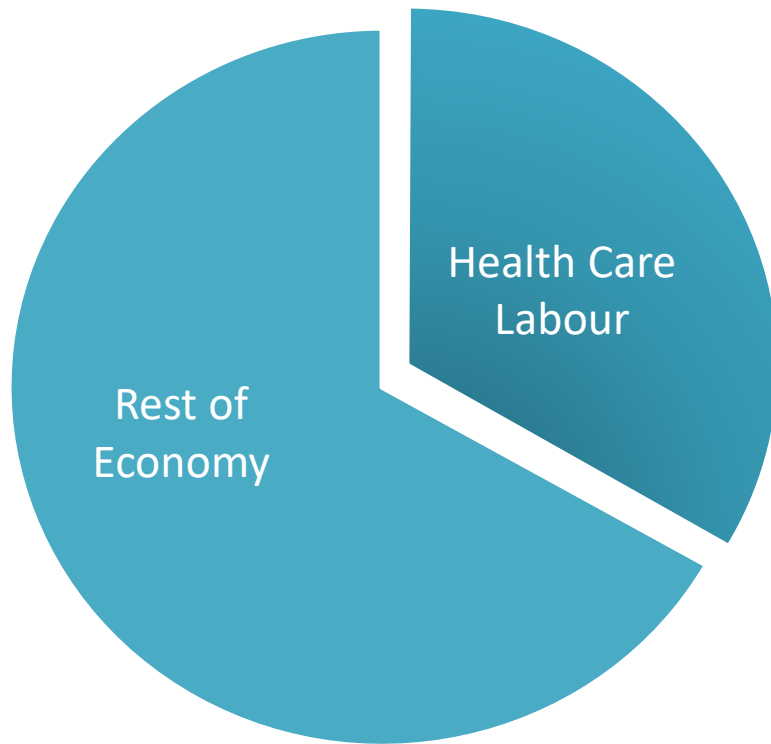
Government spending/debt

GDP

Economic Outcomes within Health Care System



Health Care System: Labour Examples



Doctors

Technicians

Nurses

Educators

Administrators

Custodians

Health Care System: Infrastructure & Resources Examples



Personal Protective Equipment

Virtual Care Platforms

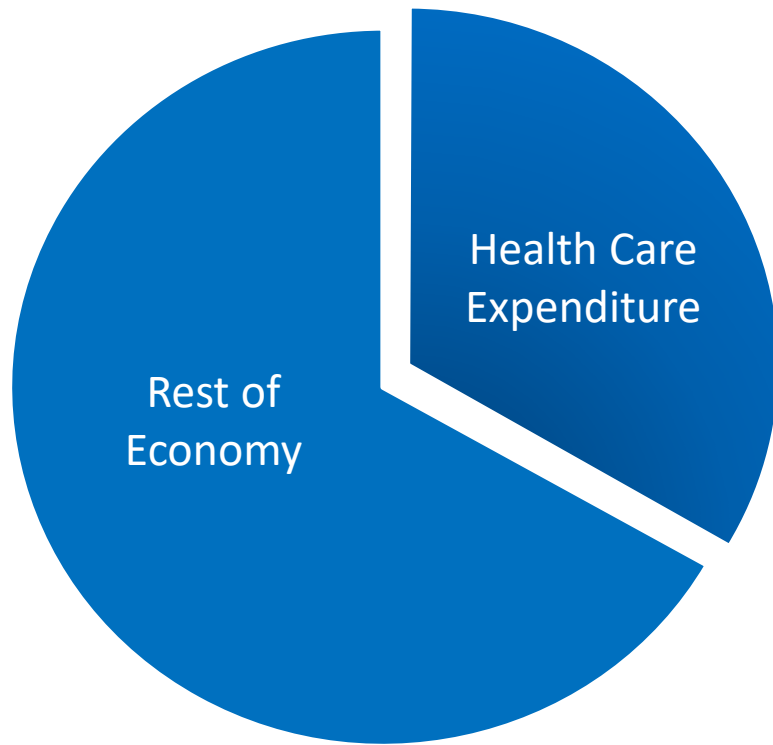
Long-Term Care Facilities

Wastewater

ICU/Hospital Beds

Vaccine Registries

Health Care System: Expenditure Examples



Fee-for-Service
Remuneration

Federal/Provincial
Cost Sharing

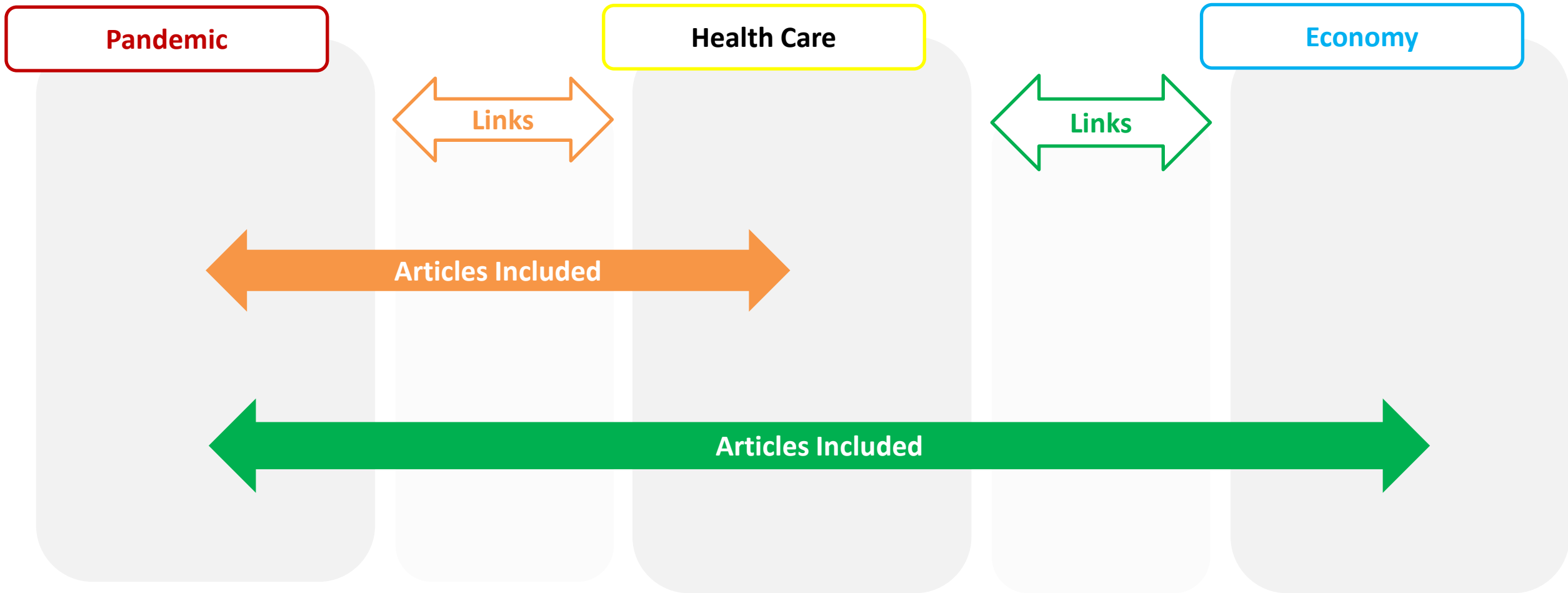
Publicly Funded
Treatments

Insurance

Effect of the COVID-19 pandemic on economic outcomes within the health care sector in Canada.

Scoping Review: Framework

Effect of the COVID-19 pandemic on economic outcomes within the health care sector in Canada.



Scoping Review: Methods

Databases

- Ovid MEDLINE(R)
- OVID Embase
- EBSCO CINAHL
- PubMed

Search Terms

- COVID-19
- Economics
- Health Care
- Canada

Review Strategy

- Phase I: Title & Abstract Review
- Phase II: Full-text Review

Articles were not reviewed for quality.

Dates

January 1, 2020 – February 17, 2022

Scoping Review: Inclusion/Exclusion Criteria

Inclusion Criteria

Population: Canada

Language: English

Exposure: COVID-19

Outcomes: Economic

Setting: Health Care Sector

Excluded

Article Types

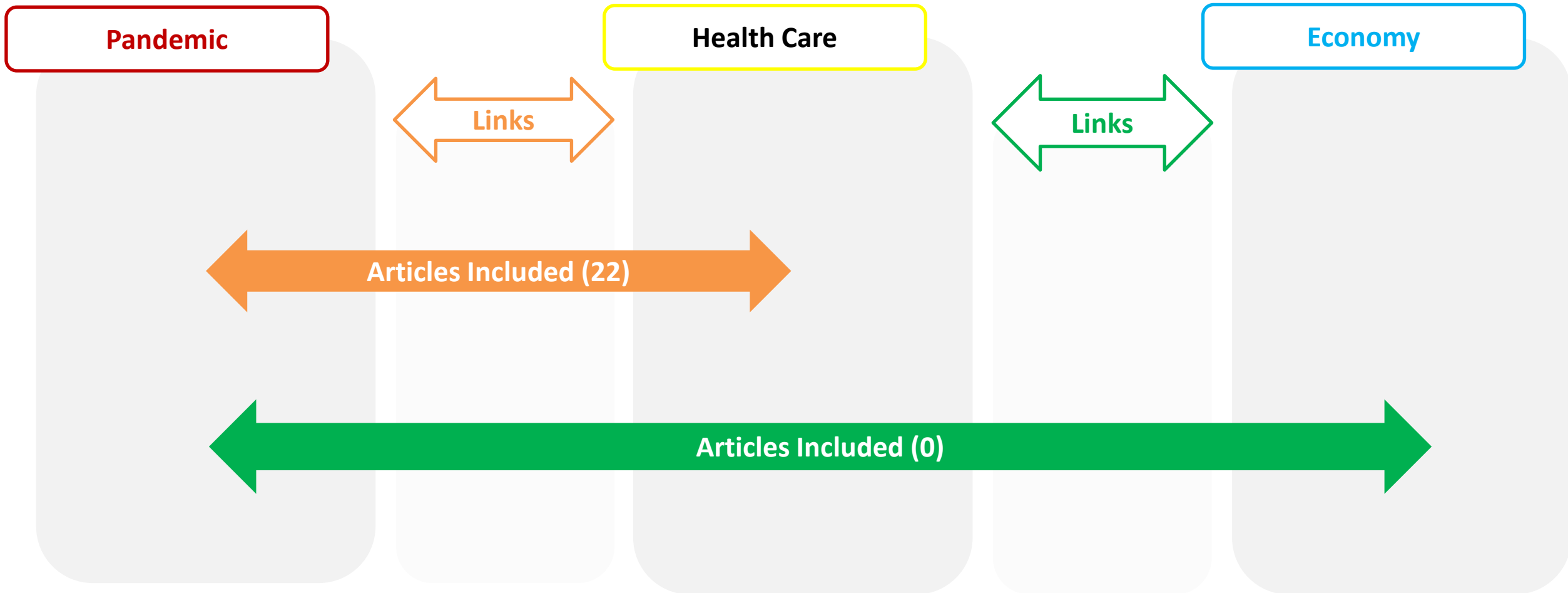
- Conference abstracts
- News
- Commentaries/Comment
- Editorials
- Viewpoint
- GrantWatch
- Perspective
- Letter
- Opinion
- Q&A
- Interviews
- Protocol

Scoping Review: Articles Included



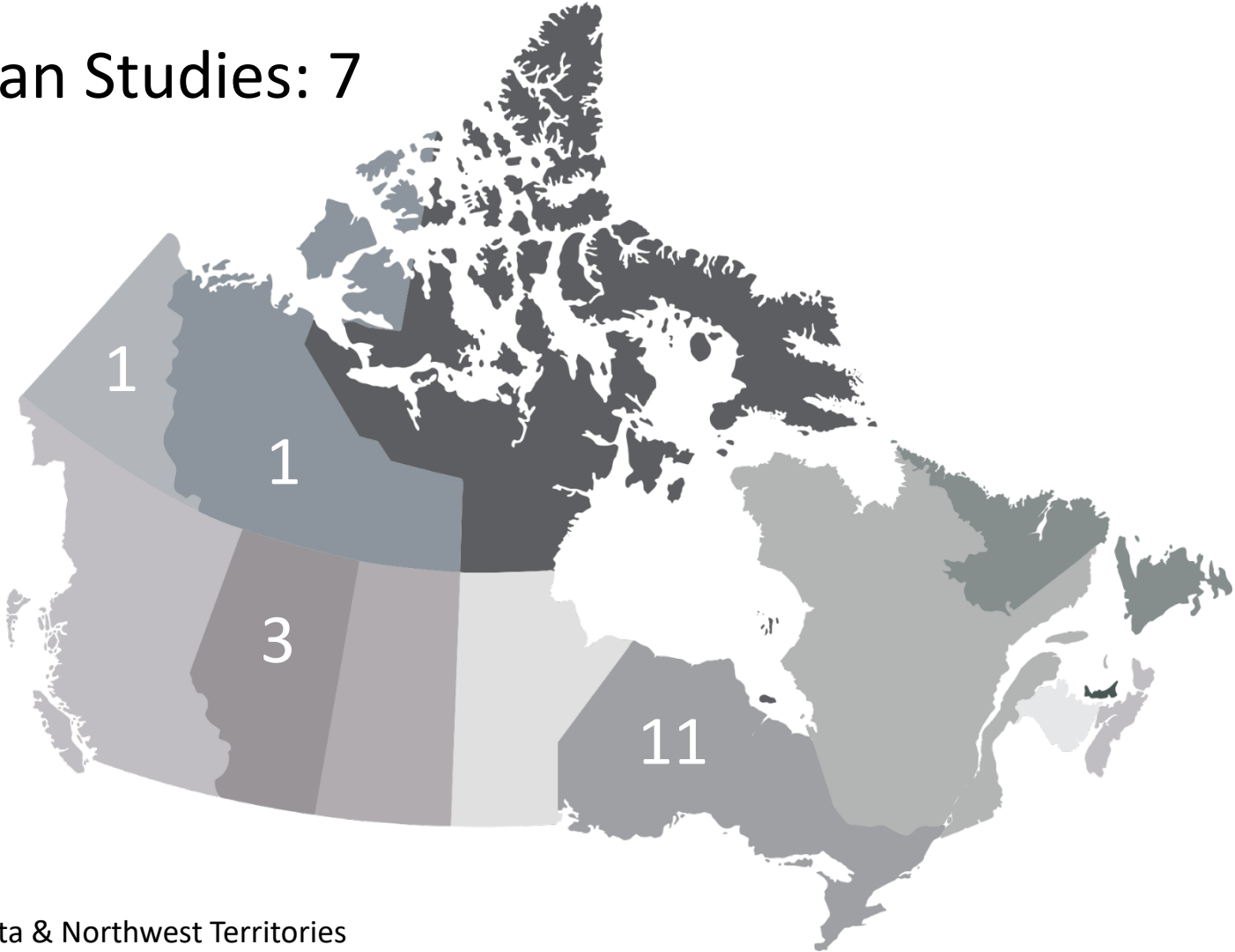
Scoping Review: Articles Included

Effect of COVID-19 Pandemic on Economic Outcomes within the Health Care Sector in Canada



Scoping Review: Results

National Canadian Studies: 7

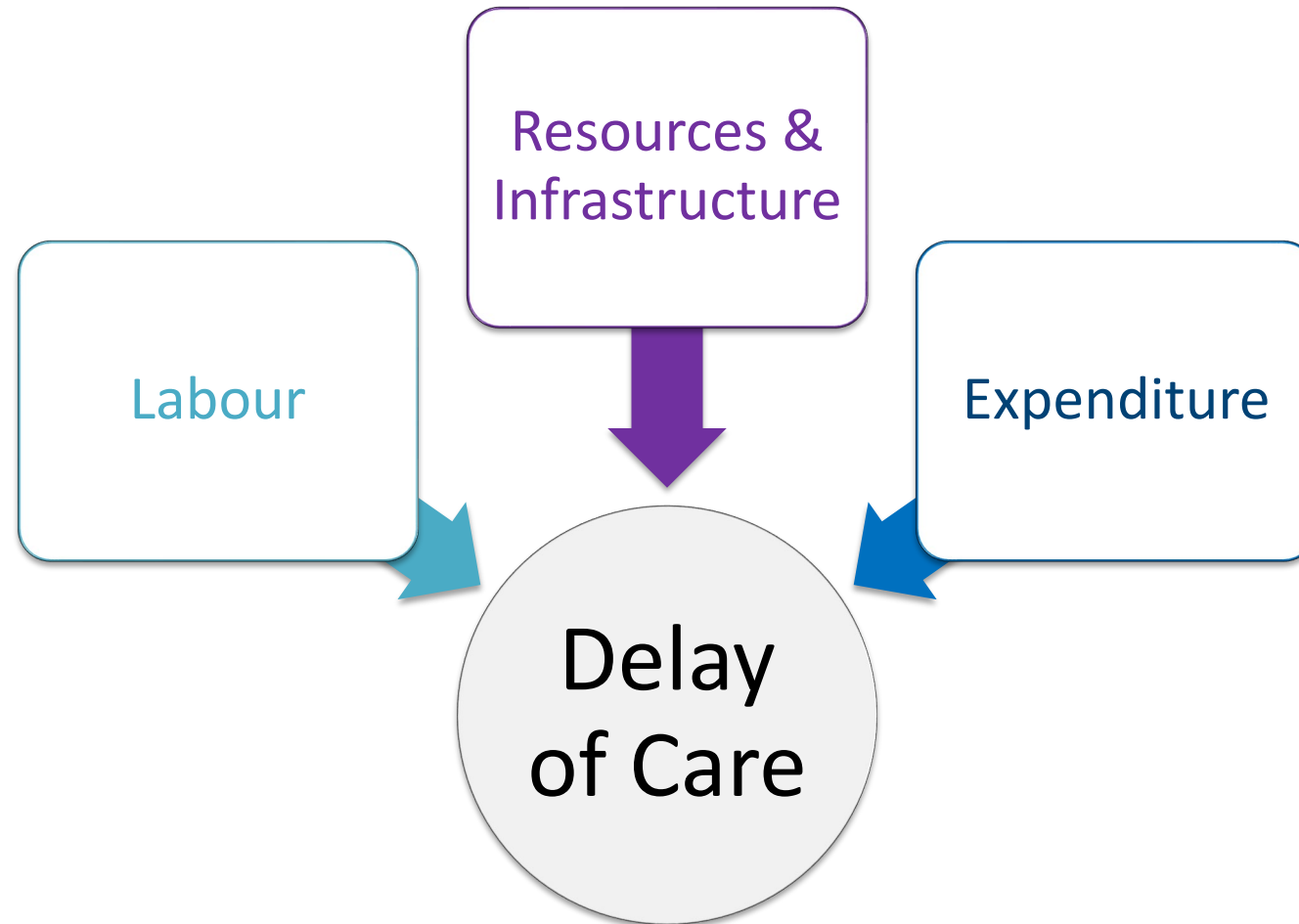


Reece, 2021: Study based in Alberta & Northwest Territories

Scoping Review: Results

	Labour	Expenditure	Resources & Infrastructure
Health Care Demand	<ul style="list-style-type: none"> • Custodial Labour ↓ • COVID-19 Testing Labour ↑ • Diagnostic Labour ↑ • Family Physician Labour ↓ 	<ul style="list-style-type: none"> • Virtual Care ↑ • Syndromic Surveillance System ↑ • MedRec System ↑ • Testing ↑ • Virtual physician remuneration ↓ 	<ul style="list-style-type: none"> • Clinic space ↓ • Health care control strategies ↑ • Antibiotic prescriptions ↓ • TR-PRC COVID-19 Tests ↑ • Virtual education ↑ • COVID-19 treatments ↑
Health Care Supply	<ul style="list-style-type: none"> • Nursing Labour ↓ 	<ul style="list-style-type: none"> • Virtual physician remuneration fees ↓ 	<ul style="list-style-type: none"> • Health care control strategies ↑ • Virtual Care ↑ • Syndromic Surveillance System ↑ • MedRec System ↑ • Testing centres ↑ • Non-COVID-19 Diagnostic Tests ↓ • Elective treatments & procedures ↓ • Non-COVID-19 Hospital beds ↓

Scoping Review: Results (Delay of Care)



Delay of Care

Overview

The COVID-19 pandemic, infectious disease control strategies and fear of viral transmission caused decreased health care capacity resulting in delays of care.

Areas Identified as Impacted

- Cancer
 - Outpatient
 - Inpatient
 - Diagnostics
- IBD
 - Outpatient
 - Diagnostics
- Family Medicine

Articles (10): 3, 10 - 12, 14, 15 17, 19, - 21

Delay of Care

During Pandemic Decreases

- In-person clinic visits ↓ [4, 10, 17]
- Elective procedures ↓ [4, 12, 15, 19]
- In-patient capacity ↓ [15]
- Out-patient capacity ↓ [4]
- Diagnostic Imaging ↓ [11]
- Non-COVID hospitalizations ↓ [11]
- Surgeries & Radiation ↓ [14, 15]
- Oncology referrals ↓ [14]
- Patients seeking care ↓ [19]

During Pandemic Increases

- Cancellation of procedures ↑ [4, 19]
- Surgery wait times ↑ [11]
- Treatment modifications ↑ [14, 15]
- Drug shortages ↑ [21]
- Equipment Shortages ↑ [15, 21]
- Supply chain disruptions ↑ [20]

Articles (10): 3, 10 - 12, 14, 15 17, 19, - 21

Virtual Care

Overview

The COVID-19 pandemic, infectious disease control strategies and fear of viral transmission accelerated the implementation of virtual care to combat decreased capacity for in-person clinical care across Canada.

Areas Identified as Impacted

- Mental Health
 - Outpatient
- Epilepsy
 - Outpatient
- Cancer
 - Outpatient
- IBD
- Family Medicine

Articles (12): 1-11, 17 & 19

Virtual Care

During Pandemic Increases

- Virtual patient volume ↑ [1-5, 10-11, 17, 19]
- Virtual Infrastructure ↑ [1-5, 10-11, 17, 19]
- Virtual platform education ↑ [17]
- Integration of digital infrastructure ↑ [6, 8]

During Pandemic Decreases

- Overall patient volume ↓ [4, 10, 17, 19]
- Physical Infrastructure ↓ [3]
- Physician remuneration fees ↓ (on average) [9, 10, 19]
- Medication adherence ↓ [11]
- Quality of Care ↓ (walk-in clinics) [9]
 - Inequity

Long-term Consequences

- Family medicine doctors ↓ [10]

Articles (12): 1-11, 17 & 19

Other Outcomes in the Literature

A single round of COVID-19 PCR testing across Canada would cost:

- \$2.3 million for hospital employees
- \$6.6 million for community health workers & long-term care facility workers
- \$14.4 million for other essential workers
- \$45.6 million for schools [7]

The COVID-19 pandemic caused the implementation of community-led #Caremongering Facebook support groups. [18]

Articles (2): 7, 18

Research Gap Examples (Delay of Care)

Delay of Care

- What is the magnitude of the care & diagnostic deficit?
- What labour, resources & infrastructure, and expenditure are required to resolve the care deficit?
- Is there inequality in the care deficit?
- Are there solutions to address delay of care other than virtual care?

Research Gap Examples (Virtual Care)

Labour

- What changes in the demand for labour were a result of the shift to virtual care?

Resources & Infrastructure

- What change in resources & infrastructure occurred as a result of the shift to virtual care?

Funding

- How will public health funding change due to the shift to virtual care?

Inequity

- Has inequity occurred due to the shift to virtual care?

Risk

- What are the risks of virtual care?

More Research Gaps

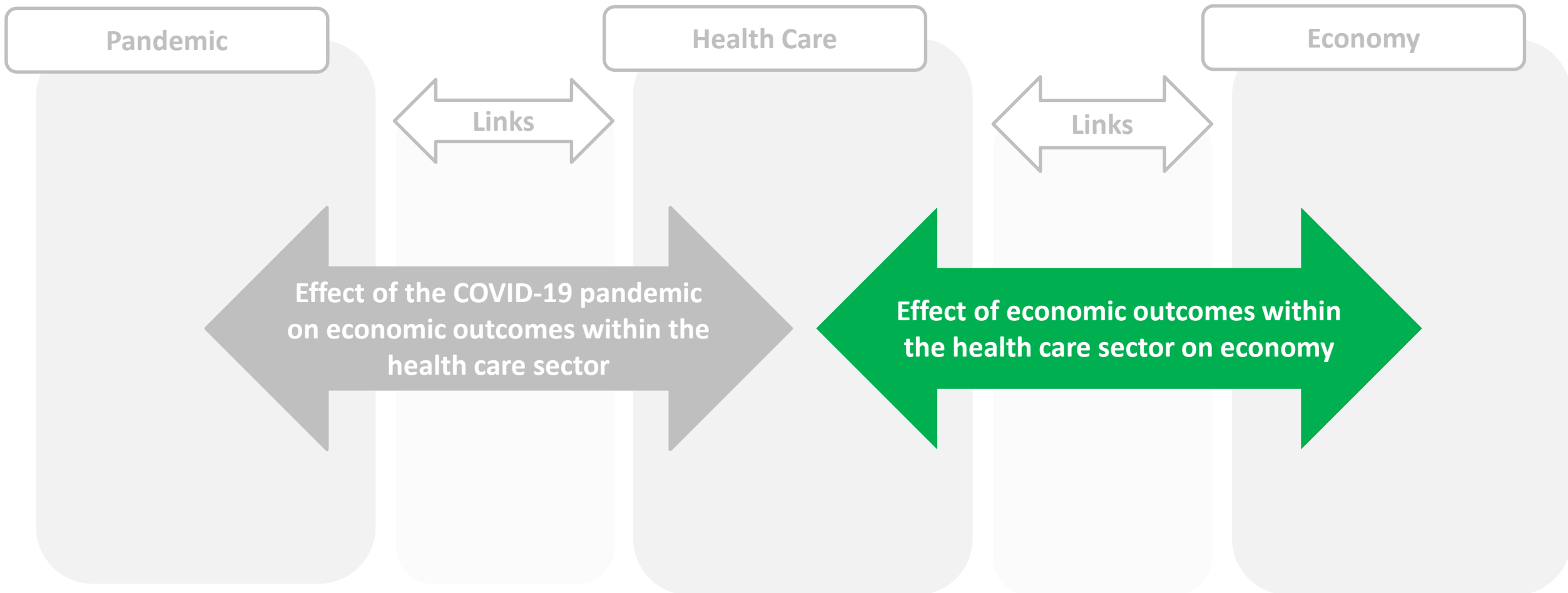
- **Health Care Labour Market**
 - Overall changes in health care labour market due to the COVID-19 pandemic.
- **Funding**
 - Should funding structures change within in the health care system?
 - Federal funding & purchasing of vaccines, drugs & tests
- **ICU Capacity:**
 - Should ICU capacity increase?
 - What are the implications of increasing ICU capacity on other parts of the health care system and the economy?
- **Long-term Care:**
 - Should resources for long-term-care change?

More Research Gaps

- **Inequity:**
 - Has the COVID-19 pandemic exacerbated inequity within the health care system?
- **Testing:**
 - What are the benefits of testing outside of the health care sector?
 - Ex: wastewater
 - What are the impacts of public use of rapid antigen testing on the health care system?
- **Public Health**
 - How can the expansion of public health strategies be used outside of the COVID-19 pandemic?

The BIG Question

Due to COVID-19, what are the effects of changes in economic outcomes within the health care sector on the broader economy?



Next Steps: Research

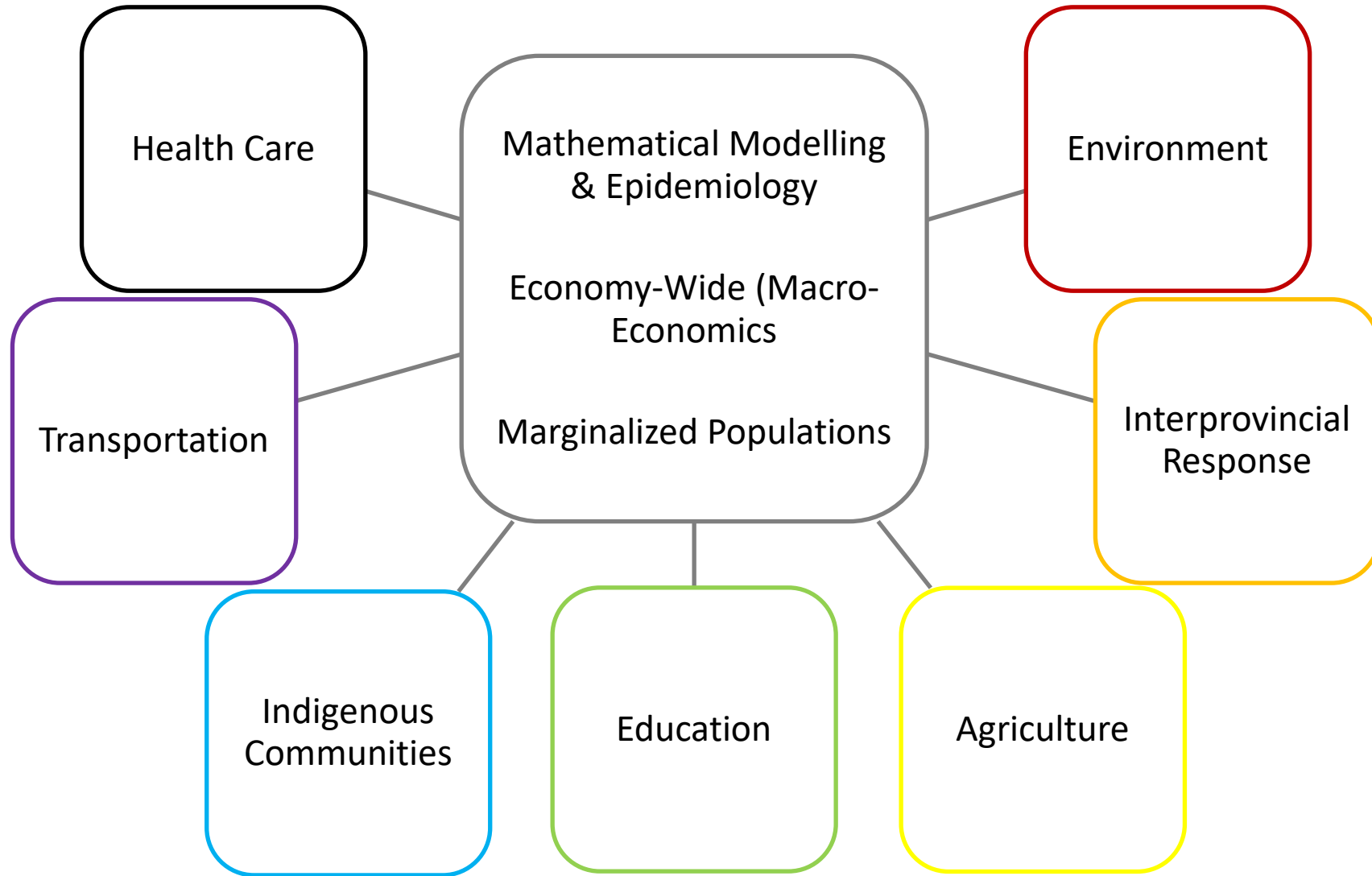
Scoping Review

**Labour within
the Health Care
Sector**

**Impact on
Economy**

Methods

Link to Other OSN Research



Questions & Feedback

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INSTITUTE OF
HEALTH ECONOMICS
ALBERTA CANADA



One Society
Network



erafferty@ihe.ca
dwolitski@ihe.ca



780.448.4881



OneSocietyNetwork.ca
IHE.ca