

Teaching Guide: Canada's PaRx Program - Greening Physical Activity

Introduction

Set in Canada, a high-income country in North America, this case looks at the important relationship between rising Non-Communicable Diseases (NCDs) and planetary crises, and the benefits of Park Prescription Programs for both people and the planet. It also considers the role of dominant ideologies in the current planetary crises and the importance of Indigenous perspectives and advocacy.

As rising numbers of NCDs across the globe strain health systems in both high- and low-income settings, and people experience increasing negative health effects from climate change and other planetary crises, solutions that have co-benefits for both people and the planet are increasingly important.

In Canada, rates of NCDs are high, which has a significant impact on its publicly funded health care system. Many NCDs can be attributed to behaviours and there is therefore the opportunity to try to improve health and wellbeing through behavioural interventions such as increasing physical activity. Similarly, many planetary health crises, such as climate change and air pollution, are exacerbated by behaviour choices; there are opportunities to steer people towards behaviours that will help both their health and the health of the planet.

This case study looks at the benefits of Park Prescriptions as a low cost, readily available health intervention, that is applicable across settings, and can be used to help prevent and treat NCDs.

The case study focuses on the “PaRx” program in Canada, but aims to convey that Park Prescriptions can be used in varying contexts. In fact, there are many countries that have already implemented Park Prescription programs

Many of the behaviours that put people at risk of NCDs such as a sedentary lifestyle and dependence on the use of fossil fuels, also harm the planet. Spending time in nature not only has positive physical and mental health effects, reducing healthcare system costs, but also helps to foster an appreciation for nature and a desire to protect the natural environment. Furthermore, Park Prescription programs necessitate access to green spaces and can therefore help ensure that

conservation of these spaces is a priority. Park Prescriptions are therefore presented as an opportunity to improve people's health while also benefitting the planet.

Indigenous Peoples' worldviews, values, and their advocacy and protection of the planet are highlighted and are an essential part of this case study. Learning from Indigenous ways and protecting Indigenous rights is framed as an opportunity in the face of rising planetary crises. Students should make the connection that valuing nature is an essential part of being able to have programs such as Park Prescriptions.

In the epilogue, the case describes the large global Park Prescription movement and highlights the role of Indigenous communities in protecting the planet. It leaves the reader to reflect on the transdisciplinary nature of planetary health and the importance of collaboration.

Educational Objectives

This case explores the relationship between non communicable diseases and planetary crises and describes Park Prescription programs as a solutions-oriented approach to improving the health of people and the planet. After examining this case, learners will be able to:

1. Understand the effects of non-communicable diseases on health in Canada and globally.
2. Analyze the link between non-communicable diseases, such as diabetes and hypertension, and planetary crises as well as be familiar with the concept of "Planetary Boundaries."
3. Discuss how Indigenous worldviews, which value and respect the land, differ from dominant ideologies such as western worldviews, and recognize the role Indigenous communities have played in protecting the environment.
4. Explain the benefits of nature prescriptions for health.
6. Assess the barriers and challenges to prescribing nature as a health and planetary intervention, including social factors
7. Understand the importance of collaboration between community organizations and health teams in implementing planetary health initiatives.

Curricular Positioning

This case study is intended for a 60-90 minute in-class session examining the link between non-communicable diseases and the planetary crises faced in the Anthropocene. There should be a discussion of the benefits of Park Prescriptions for both people and the planet.

Many of the questions in this case study are meant to help learners not only delve more deeply into the material presented but to also consider their own context. If appropriate, the prompts in the case study can be used throughout the discussion to enrich the conversation and make it applicable to the learners' own contexts.

This case could be taught as part of courses exploring planetary health, environmental health, public policy, global public health, ethics, or climate change.

Topics addressed in the case study:

1. Epidemics of Non-Communicable Diseases and the Importance of Physical Activity
2. Connections between Non-Communicable Diseases and the Planet
3. The Importance of Connecting within Nature for People and the Planet
4. Indigenous Perspectives on the Earth and Indigenous Advocacy
5. Prescribing Nature
6. Canada's Health Care System and the Parks Prescription Program
7. Barriers and Challenges to Accessing Nature
8. Collaborating for Better Health

Overview of Classroom discussion

In an effort to ensure that students feel comfortable participating in a discussion, it may be useful to start with an icebreaker. One climate-focused exercise is to ask students to share their favorite temperature and why.

Alternatively, students could be asked, either at the start of the session or during the session how they have recently or previously been able to connect within nature.

The instructor could lead the discussion with some of the following questions:

What non communicable diseases are common globally? What about in your community?

How do non communicable diseases affect the health of populations?

What are the links between non communicable diseases and planetary crises?

How do Indigenous worldviews and values differ from other dominant ideologies?

How do Park Prescriptions fit in with Indigenous practices/views?

What are the co-benefits of Park Prescriptions?

How do social determinants of health impact NCDs and access to green space/nature?

Why is it important that planetary health be transdisciplinary?

Case Analysis

In preparing for the case discussion, learners could familiarize themselves with the Canadian Health Care System and population health indicators, especially as these relate to NCDs. They may be interested in learning more about NCDs in their own context.

Learners may also want to broaden their understanding of the history of Indigenous Peoples in Canada and the ongoing and inter-generational effects of colonialism, including the legacy of residential schools. These realities have significantly affected the health and well being of Indigenous Peoples in Canada.

Learners may want to look at recent legislation, such as Bill 226 in Canada, that seeks to address environmental racism and injustice.

Learners may want to research whether Park Prescriptions Programs exist in their community/country/continent and think about how these programs may be beneficial in their own context.

This case study looks at the relationship between rising Non Communicable Diseases (NCDs) and planetary crises, and the benefits of Park Prescription Programs for both people and the planet. We suggest the case analysis be divided into the following moments:

Non-Communicable Diseases and their consequences: This section of the discussion should emphasize the importance of Non-Communicable Diseases globally, and the impact that these are having on health and social systems. It should relay how NCDs are tied to current lifestyles and behaviours and therefore represent an essential opportunity for action. Instructors can prompt students to reflect on the importance of physical activity as an intervention and the fact that many people are not achieving minimum physical activity recommendations across the globe.

Resources:

<https://www.ifrc.org/our-work/health-and-care/community-health/non-communicable-diseases>

Muka T, Imo D, Jaspers L, Colpani V, Chaker L, van der Lee SJ, Mendis S, Chowdhury R, Bramer WM, Falla A, Pazoki R, Franco OH. The global impact of non-communicable diseases on healthcare spending and national income: a systematic review. *Eur J Epidemiol.* 2015 Apr;30(4):251-77

Non-Communicable Diseases and Planetary Health Crises: This section of the discussion should emphasize the link between NCDs and planetary health crises. Learners should understand how lifestyle choices, behaviour patterns, and the way we have designed our lived environments have led to both increasing NCDs and also planetary crises such as climate change and air pollution. Students should appreciate the health threats posed by pollution and climate change, especially to people with NCDs. Furthermore, they should start to appreciate how spending time in nature can lead to people wanting to protect the planet. It may not be readily apparent to learners that spending time in nature is protective of health and that those who do so are more likely to value and protect nature. The instructor could prompt learners to reflect on how people wanting to spend time in nature may affect decisions/policies at a local, provincial, federal level.

Resources:

Landrigan PJ, Fuller R, Acosta NJ, Adeyi O, Arnold R, Baldé AB, Bertollini R, Bose-O'Reilly S, Boufford JI, Breysse PN, Chiles T. The Lancet Commission on pollution and health. *The lancet*. 2018 Feb 3;391(10119):462-512.

Friel S, Bowen K, Campbell-Lendrum D, Frumkin H, McMichael AJ, Rasanathan K. Climate change, noncommunicable diseases, and development: the relationships and common policy opportunities. *Annu Rev Public Health*. 2011;32:133-47

Wells NM, Lekies KS. Nature and the life course: Pathways from childhood nature experiences to adult environmentalism. *Children, youth and environments*. 2006;16(1):1-24.

Indigenous worldviews and advocacy: This section of the discussion should emphasize how Indigenous worldviews and values often differ from Western ideologies and are protective in terms of planetary health. The students should gain an appreciation of the role that Indigenous Peoples have played in caring for the planet, valuing Mother Earth, and actively protecting her. The instructor could prompt learners to think about the role that Indigenous Peoples play in their own context and what Indigenous values or concepts resonate with them.

Resources:

Redvers N, Celidwen Y, Schultz C, Horn O, Githaiga C, Vera M, Perdrisat M, Plume LM, Kobei D, Kain MC, Poelina A. The determinants of planetary health: an Indigenous consensus perspective. *The Lancet Planetary Health*. 2022 Feb 1;6(2):e156-63.

[Learning how to care for Mother Earth | CBC News](https://www.ienearth.org/wp-content/uploads/2021/09/Indigenous-Resistance-Against-Carbon-2021.pdf)

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Park Prescriptions: Scaling up: This section of the discussion should highlight the benefits of time in nature and the opportunity to incorporate Nature Prescriptions into mainstream health care. Students should be able to name some of the health benefits of spending time in nature, especially for NCDs.

Instructors should have learners think about what barriers and challenges exist in ensuring that Park Prescriptions can be rolled out in an equitable way. They should also have learners think about how Park Prescriptions could be scaled up globally. Furthermore, learners should start to

reflect on what partnerships may be possible in their own context to facilitate access to nature. The instructor can emphasize the importance of collaboration and transdisciplinary approaches.

Resources:

Besenyi GM, Hayashi EB, Christiana RW. Prescribing Physical Activity in Parks and Nature: Health Care Provider Insights on Park Prescription Programs. *J Phys Act Health*. 2020 Aug 31;17(10):958-96

Twohig-Bennett C, Jones A. The health benefits of the great outdoors: A systematic review and meta-analysis of greenspace exposure and health outcomes. *Environ Res*. 2018 Oct;166:628-637

Lemieux CJ, Lazarescu C, Reining CE, Groulx MW, Lem M, Astell-Burt T, Feng X. Prescribing Nature for Human Health: An Examination of Public Interest, Barriers, and Enablers Related to Nature Prescription Programming in Canada. *Wellbeing, Space and Society*. 2025 Jun 1;8:100251.

Concluding comments

The instructor could provide a brief recap of the session or could ask learners to summarize what they have learned. This could be done by having students express in a sentence the most important thing that they learned in the session. If the session is virtual, instructors could consider having students write a sentence that captures the most important thing that they learned in the session in the chat. Alternatively in person or virtually, a word cloud could be created with each student providing one word that comes to mind when they think about Park Prescriptions.