Lesson Plan
Comparing and Applying Frameworks
2018

Purpose
The purpose of this interactive class activity is to introduce students to two ways of thinking about the social determinants of health using different conceptual frameworks. First, students will be introduced to the overall concept of the social determinants of health, and then they will consider these ideas in the visual context of two frameworks (one created by the Canadian Medical Association, and the other by public health researchers, Dahlgren and Whitehead). After analyzing the similarities and differences of these different approaches to thinking about social determinants, students will participate in a brainstorming activity that gives them the chance to apply these frameworks to a concrete health challenge.

This is one of four lesson plans in a teaching pack on “Social Determinants of Health.” Other lessons in this teaching pack include:

- “Social Determinants in Data and Pictures”
- “When Words Break Bones, Without Sticks and Stones”
- “Social Status”

Each of the lessons may be taught independently, or sequentially as a complementary module. Additional companion materials in the pack include an instructor’s note, a teaching guide titled “Brief Introduction to the Social Determinants of Health,” an annotated bibliography, and a glossary of terms.

Learner Level
High School, Undergraduate

Time
One 1-hour session

Required Materials

- Print-outs or display of Handout A: Comparing and Applying Frameworks, for use in Part 1.
- Print-outs or display of Handout B: Health Causes Tables, for use in Part 2.

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1 Health Equity and the Social Determinants of Health. Canadian Medical Association 2017. [https://www.cma.ca/En/Pages/health-equity.aspx](https://www.cma.ca/En/Pages/health-equity.aspx).

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Learning Goals

1. To become familiar with multiple frameworks for social determinants of health and how each has unique analytic leverage.
2. To practice applying the social determinants of health to common public health problems.

Procedure

Part 1: Warm Up to Social Determinants of Health Frameworks (20 minutes)

First, introduce students briefly to the concept of the social determinants of health (SDH). Teachers can do this by providing definitions on slides, showing health trends in graphs or maps, showing video clips, or providing anecdotal, illustrative examples. The approach instructors choose will depend on their target learner and their familiarity with social factors. For a brief conceptual overview of SDH, see the box below, or refer to the supplemental materials included in the SDH teaching pack.

A Brief Overview of the Social Determinants of Health:

Social determinants of health (SDH) are all of the social factors external to an individual that may not seem relevant to health, but ultimately shape the conditions in which people live, work, and grow in ways that can both promote well-being and confer disease risk. Understanding SDH in relation to specific health outcomes provides necessary information about the context for the conditions that predict health and disease, but also can help students understand why health inequities (socially produced, systematic inequalities in health between groups) exist in the population. For instance, in order to answer the question of why HIV/AIDS is more prevalent in low-income, marginalized communities, one must first understand the structural factors (i.e. political, cultural, and societal), socioeconomic conditions (i.e. social class, gender, race/ethnicity), and environmental factors (e.g. living and working conditions, neighborhood context) related to disease transmission that disproportionately impact marginalized people.

Adopting a social determinants of health lens to view a health issue requires looking at three different levels of causes:

<table>
<thead>
<tr>
<th>Level of the Cause</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal (farthest away from an individual’s health status) or societal</td>
<td>Cultural, political, and infrastructural causes</td>
<td>Education, income, housing conditions, air quality, access to food and water, road safety</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Relationships, social contexts</td>
<td>Community factors, including those related to work, school, family, and peer environments</td>
</tr>
<tr>
<td>Proximal (closest to an individual’s health status) or individual</td>
<td>Behaviors, capabilities, attitudes, and direct biological threats to health</td>
<td>Hygiene habits, exposure to disease vectors that cause diarrhea, dengue, malaria</td>
</tr>
</tbody>
</table>

At the distal level are the wider circumstances in which people live, including broader cultural values, national or international political forces, laws or policies, or cross-cutting exposures like those related to climate, conflict, or the media. These factors are called distal because they are not directly related to the individual, but rather establish the wider context in which a person lives. At the intermediate level are factors related to communities, workplaces, schools, or families that define an individual’s more immediate social environments. Finally, at the proximal level are the factors based within individuals that impact their health, including their biology, behaviors, capabilities, or attitudes. Considering the different levels at which determinants operate can help students keep track of a complex array of contributing factors, while also highlighting potential pathways between social exposures and physical health.
Next, instructors will distribute Handout A to the students, and instruct them to spend a few minutes looking at the two frameworks depicted on the sheet. Students should consider the following questions:

1. **What are three ways in which these frameworks differ from each other?**

   *Students should point out a number of differences between the two models, including:*
   
   - The Canadian Medical Association (CMA) framework categorizes determinants of health into categories that make people sick, with social determinants in multiple boxes, whereas the Dahlgren-Whitehead (DW) framework organizes the causes of sickness into a chain from distal to proximal causes.
   - CMA ascribes weight to the different categories of causes, attributing 50 percent of sickness to “Your Life” and 10 percent to “Your Environment.” DW instead considers the causes of sickness to be a chain leading from one's life and environment to more individual-level causes, a distinction that is not as effectively captured in CMA.
   - DW includes broader contextual social characteristics as its most distal level of causes, including cultural conditions, which are left out of CMA. DW focuses on the chain from macroscopic contextual causes to microscopic individual-level causes whereas CMA gives less attention to these levels of causes.

2. **Which framework do you prefer to best understand SDH and the overall causes of health in general? Why?**

   *This question does not have a single correct answer, but is rather designed to motivate students to think closely about SDH by having them to choose a framework and explain their choice. Their answers should reflect critical thinking about social determinants.*

**Part 2: Applying SDH Frameworks to a Health Problem (40 minutes)**

For the rest of class, students will use these conceptual frameworks to think about the social determinants impacting real health challenges, starting with malaria.

1. **Instructors should begin by familiarizing students with how malaria is transmitted.**

   *Malaria is a mosquito-borne disease that spreads when uninfected mosquitoes bite infected humans and become carriers of malaria. Infected mosquitoes then transmit the disease by biting uninfected humans. Therefore, in order to prevent malaria, people must protect themselves against getting mosquito bites.*

2. **Once students understand the basic mechanism of how malaria spreads, the instructor should divide the class into small groups and use Handout B to brainstorm about the different social determinants that they think may contribute to the spread of malaria at various levels.**

   *This exercise is designed to have students think beyond the individual-level modes of disease transmission (i.e. mosquito bites) to the more “upstream” social or infrastructural factors that may put people at a greater risk of being bitten. As students complete Handout B, they should refer back to the two SDH frameworks on Handout A for ideas.*

3. **After the students have completed the exercise, they should share their answers with the wider class.**
For the instructor’s reference, the following table summarizes the causes of malaria at various levels:

<table>
<thead>
<tr>
<th>Level of Cause</th>
<th>Malaria-Specific Mechanisms</th>
<th>Prevention Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal</td>
<td>Crowded, low-income communities lack infrastructural support to prevent disease transmission and face risks related to poor sanitation; low-income residents often do not have money to spend on preventive measures (e.g. bed nets, mosquito repellant)</td>
<td>Invest in clean sanitation systems and drainage as well as other measures to ensure neighborhood measures are kept clean to minimize mosquito breeding; Social safety net policies aimed at poverty alleviation</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Lack of knowledge about how malaria works leads residents to not take preventive measures, thereby creating health risks at the community level</td>
<td>Community education campaigns to teach people about the proper disposal of bodily, food, and other refuse, how to eliminate standing water where mosquitoes can breed, and other prevention strategies that can be taken to improve living conditions at the community level</td>
</tr>
<tr>
<td>Proximal</td>
<td>Mosquito bites human</td>
<td>Use of mosquito nets, insect repellent, and long-sleeved clothing to avoid contact with mosquitoes</td>
</tr>
</tbody>
</table>

4. Students will now turn their attention to a health problem of their choosing. Students should reconvene with their small groups and identify a health problem that interests them, or a problem facing their own community. They can choose to focus on anything from heart disease to the flu, and are encouraged to think about particular subgroups of the population that are disproportionately impacted when making their choice.

5. Once each group has selected a health outcome to focus on, they will work together to brainstorm its distal (mostly social), intermediate, and proximal causes. They could accomplish this by filling out the empty table in Handout B, or they can choose to present their work in a different way.

The table below summarizes one example for the instructor’s reference, using mechanisms related to heart disease as a hypothetical health outcome.
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Example of table for heart disease:

<table>
<thead>
<tr>
<th>Level of Cause</th>
<th>Heart Disease-Specific Mechanism</th>
<th>Prevention Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal</td>
<td>Having a low income confers risk by limiting people’s ability to buy healthy foods or engage in healthy behaviors; it also increases the stress they experience day-to-day</td>
<td>Implement social safety net policies aimed at poverty alleviation</td>
</tr>
<tr>
<td>Intermediate</td>
<td>Low-resource neighborhoods have limited access to healthy foods and green space where people can exercise</td>
<td>Open green grocers in low-income neighborhoods or start community garden initiatives; launch park clean-up projects or create new parks so residents have clean and safe community spaces</td>
</tr>
<tr>
<td>Proximal</td>
<td>Eating unhealthy foods; lack of exercise</td>
<td>Deliver education campaigns that teach people about healthy lifestyle choices they can adopt to improve their heart health; encourage individual-level interventions to increase physical activity and healthy eating</td>
</tr>
</tbody>
</table>

At this point, the instructor could choose to have a more open-ended discussion about health in the community, especially if the exercise has sparked thoughts that students wish to share. Discussions can be structured similarly to the group exercises. First, open the floor for students to share the health problems they find interesting (these can include topics they did not focus on in their small groups), and list them on the board. As a class, choose a single health issue to focus on for the rest of the discussion. Together, the class can then brainstorm about the proximal, intermediate, and distal determinants of the health problem, with students sharing from their own experiences as they relate to the determinants of that problem at any level. For example, a student who volunteers in a hospital may want to share an experience of observing healthcare providers treating the health problem at a proximal level. Another student may share how a family member prefers fast food over home cooking and may relate that back to a more distal factor of how unhealthy foods are cheaper than fresh produce. By sharing these experiences, students see how particular actions can have an impact on health outcomes.

6. Instructors should wrap up the teaching session with a broader discussion about the similarities between the social determinants of malaria and the health problem the students chose to think about.

Again, this question can be answered in a number of ways and teachers should use their own judgment when framing this discussion. One suggestion is to make a list of similarities and a list of differences on the board. Teachers can then ask students to analyze the differences between these determinants to more fully understand how distal determinants of health (e.g. poverty) can affect both health outcomes while other determinants (e.g. mosquito bites) will affect fewer health outcomes. Highlighting this point will demonstrate that intervening on distal determinants not only has the benefit of impacting
more people by virtue of targeting social factors, but could also have the benefit of leading to better outcomes in relation to multiple unrelated health issues (e.g. malaria and the flu). Be sure to note that many practitioners of public health contend that targeting determinants of health that impact many health outcomes is the most efficient and logical way to improve public health.

Summary

In this lesson, students examined two frameworks for the social determinants of health to gain a basic understanding of the connection between distal, intermediate, and proximal causes of health. The differences between the two frameworks included in this lesson show that this same idea—of underlying factors leading to tangible health outcomes—can be represented in different ways. After understanding and comparing these frameworks, students were tasked with applying a health condition into the framework. They first went through this process for the health condition malaria, and then did the same for a health condition of their own choosing. In this process, students practiced thinking analytically about a health condition in systematic terms of its proximal causes and circumstances, intermediate factors, and root causes.
Handout A
Comparing and Applying Frameworks

Canadian Medical Association Framework (CMA)

[Diagram of the Canadian Medical Association Framework showing the factors that make Canadians sick, such as income, education, and environment.]

Source: Health Equity and the Social Determinants of Health. Canadian Medical Association 2017. [https://www.cma.ca/En/Pages/health-equity.aspx]

Dahlgren & Whitehead Framework (DW)

[Diagram of the Dahlgren & Whitehead Framework showing various factors affecting health, such as education, social and community networks, and individual lifestyle factors.]

Handout B
Comparing and Applying Frameworks

Causes of Malaria

Based on the information you discussed in class about the causes of malaria at the proximal and intermediate levels, fill in the empty cells in the table below with examples of possible mechanisms. Brainstorm about “upstream” social or infrastructural characteristics of a society or neighborhood that lead to the intermediate and proximal causes of malaria that you see below, and identify some ideas for prevention at each of these levels.

<table>
<thead>
<tr>
<th>Level of Cause</th>
<th>Malaria-Specific Mechanisms</th>
<th>Prevention Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximal</td>
<td>Mosquito bites human</td>
<td></td>
</tr>
</tbody>
</table>

Causes of a Health Problem of Your Choosing

Fill in the table below with problem-specific mechanisms and prevention ideas that pertain to the health problem you selected, at each level of cause.

<table>
<thead>
<tr>
<th>Level of Cause</th>
<th>Health Issue-Specific Mechanisms</th>
<th>Prevention Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intermediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proximal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>