

PROJECT: FOOD FOR PLANETARY HEALTH AND CULTURAL SAFETY EDUCATION

EXECUTIVE SUMMARY

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Disclaimer

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability and climate action across the region.

This project was conducted under the mentorship of Vancouver Coastal Health staff. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of Vancouver Coastal Health or the University of British Columbia.

Land Acknowledgements

The author acknowledges that the work for this project took place on the unceded ancestral lands of the xwməθkwəyəm (Musqueam), Skwxwú7mesh (Squamish), Stó:lō and Səlílwətaʔ/Selilwitulh (Tseil-Waututh) Nations.

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Introduction

This project commenced on May 1, 2023, and lasted till August 31, 2023. The main objective of the project was to develop curriculum for a course aligning with the project title, to be uploaded on Vancouver Coastal Health learning platform for hospital staff. In accordance with the purpose of the project, the aim of the curriculum is to raise awareness about processes of hospital food services that support environmental health while nourishing the patients, residents, staff and visitors who in one way or the other eat from hospital food outlets, whether through retail or in-patients' section. Interviews, both informative and exploratory, were conducted with food service directors and staff. The outcome of data analysis guided the development of the curriculum. Recommendations were made at the end of the project.

Project Overview

- ✓ This work is aligned with the Canadian healthcare mandate (Health Canada, 2023) to maintain and improve the health of Canadians, while respecting their individual differences, by advancing the delivery of more sustainable and culturally-relevant foods for patients, staff and visitors.
- ✓ This work is also aligned with VCH's foundational pillar of planetary health, and will support a transition to increased sustainability within food services as a climate mitigation strategy.

Research Question

The research aims to develop a course framework for the Vancouver Coastal Health (VCH) learning platform, which focuses on supporting VCH food services staff to embrace sustainable food practices that also support cultural safety and environmental health.

Context

The project derived academic and healthcare background knowledge through review of credible healthcare resources on hospital food systems and global food systems. Other researches on curriculum and sustainable foods, as well as environmental wellness were reviewed to provide sufficient evidence to guide the research project. Thus, the background knowledge is presented as summary of literature review. The preliminary stakeholders' list also supported as background information for the context of the research by defining the scope of the project.

Literature Review Summary

Healthcare journals and articles as well as other studies considering environmental health protection from global to organizational, community and individual levels were reviewed.

Refer to bibliography at end of document for sources of information.

The summary is presented below:

Table 1: Literature Review Summary

| TRENDS IN GLOBAL FOOD SYSTEMS. | KEY CONCEPTS FOR CONSIDERATION | SCOPE RELATED TO THE PROJECT | POTENTIAL ACTIONS |
|--|--|--|---|
| <p>(a) Position of food systems in United Nations Sustainable Development Goals (UN SDGs) to protect planet.</p> <p>(b) Industrial food revolution which impacts the environment through:</p> <ul style="list-style-type: none"> Changes in agricultural practices and impact (monocultures, pesticide use, land use, biodiversity pressures, GMO, etc.) Changes to food processing and preparation strategies in food systems. Health impacts (dietary risks as main | <p>(a) Balancing climate and nutrition through alignment of VCH Planetary Health pillar and food operations</p> <p>(b) Defining sustainable foods systems as those that can support food production and access healthy and adequate food for all, for present and future generations</p> <p>(c) Harm reduction strategies for managing food-related anthropogenic emissions from healthcare.</p> | <p>(a) Environmental footprints of current VCH food system:</p> <ul style="list-style-type: none"> Inpatient and retail menus relying heavily on animal-sourced proteins and dairy. Food delivery distance. Water and pesticides utilized in growing food for healthcare. <p>(b) Measures to reduce environmental footprints of VCH food system:</p> <ul style="list-style-type: none"> Managerial changes to actively implement planetary health diets. Food-related behavioral changes among VCH community. Guided dietary changes. Technological and production changes. Efficient food waste reduction and management. | <p>(a) Purchasing more sustainable foods, for instance: more plant-based, locally-sourced, grown in less environmentally-damaging ways, through regenerative partnerships with Indigenous peoples when applicable.</p> <p>(b) Increasing plant-rich menu choices in healthcare cafeterias and food service to patients, along sales of planetary health diets at vending machines.</p> <p>(c) Food waste management by:</p> <ul style="list-style-type: none"> Efficient portion control strategies. New preparation methods that improve palatability. Managing unserved leftovers through reuse, preservation or conversion to other food types. |

driver of disease and death around the world).

- Changes to food consumption patterns among individuals based on different dietary preferences influenced by personal cravings, new food products in the market, culture/religion, hyperactive work and life engagements.

(d) Shift from quantity to quality food production that focuses on planetary health diets in healthcare.

(e) Partnerships across departments, i.e., food services, facilities maintenance, staff garden with patient focus.

(c) Food-related anthropogenic impacts from:

- GHGs emissions related to meat, animal products and ultra-processed foods (UPF).
- Local and global food processes.
- Food waste and packaging.

(d) Global impacts of healthcare food system's scale of operations based on:

- Quantity of meals served a day for retail and inpatients/

(c) Training of food service staff on planetary health, its diets and culturally safe foods which support planetary health.

(d) Efficient alignment of food in healthcare with planetary health at:

- Inpatients' food.
- Retail outlets/vending machines.
- Food assets such as landscape, gardens, on-site composting/gardening, farmers' markets.
- Community linkages (community public health dietitians for instance, community organizations, vendors who come on site)

(e) (i) Current state of global industrialized food systems and links to healthcare:

- Current challenges: High food waste, lower satisfaction, insufficient culturally-relevant and Traditional foods, shortage of accessible food assets, challenges in linkages with community, prevalence of UPF/unsustainable/unhealthy/unaffordable options in retail.
- Climate change impacts of food transportation and processing.

(ii) Aims and opportunities:

-Tracking and addressing possible causes of large leftovers.

-Adopting technological solutions to food waste.

(d) Improving the sustainability of food services and assets infrastructure, which include hospital kitchen spaces, equipment, serveware, and more.

residents, and how it impacts purchase and available options.

(e) Food transformation strategies to include:

- International and national commitment to planetary health.
- Providing healthy diets for global population.
- Multi-level multi-sector changes to support planetary health.
- Reduced production of crops for animals.
- Managing ecological footprints.

(f) Encouraging safe operating space in food systems through:

- Dietary changes.
- Production processes.
- Management-related measures to tackle planetary health crises.

(g) Food for public health and food for patients' health in communities, e.g BC communities.

-Planetary health transformation through sustainable foods.

-Local gardens with improved farming practices.

-Gardens at hospital sites to supply sustainable foods for the food service unit.

-Increased accessibility to farmer's market.

-Efficient food circulation within communities to curb shortage and waste.

Preliminary Stakeholders' List

As an additional information to provide understanding on the context of the research, the stakeholders' list was developed to guide the themes for interview as well as content and nature of questions which aimed to conform to the interests of the target participants for the curriculum. The following stakeholders were identified as having impact or influence on the successful integration of planetary health diets and culturally relevant foods at Vancouver Coastal Health.

Table 2: Preliminary stakeholders' list

| ROLE | RESPONSIBILITY | IMPLICATIONS FOR THE LEARNING MATERIAL |
|-------------------------|--|--|
| VCH Learning Hub | Provides classroom and online training services. Provides development support to course owners. | Aligning the course to support organisational goals on planetary health. |
| Senior leadership team | Health authority direction including mission, vision, values, and pillars (Planetary Health). | Leadership support for sustainable and culturally-relevant food. |
| Food service directors | Overseeing the kitchen operations to provide food to hospital inpatients, staff and visitors. | Reviewing the course material to make sure it aligns with the managerial priorities of VCH food services. |
| Food service managers | Managing inventory, interpreting and implementing food service directives from the directors and ensuring smooth progression of duties in their various units. | Adopting the course as part of their regular staff trainings courses to enhance utilization of the knowledge in healthcare facilities. |
| Supervisors | Resolve production issues including food item substitute and equipment break down. | Adding the course to their in-service trainings and onboarding trainings for new staff. |
| Diet technicians | Liaising with dieticians to meet patients' needs and managing waste. | Priority audience |
| Production teams | Engaging in overall food production process. | Priority audience |
| Dietary aides | Serves food directly to patients. | Priority audience |
| Culinary Chefs | They cook the stipulated recipes. | Priority audience |
| Receivers | Checking expiry dates and making entry on inventory. | Priority audience |
| Scrappers | Clearing leftovers and cleaning utensils. | Priority audience |
| Ingredient control unit | Measuring appropriate food quantities for each recipe to be prepared. | Priority audience |

| | | |
|------------------------------------|--|--|
| Registered Dieticians | Support regular seasonal update of menu. | Priority audience for course, further engagement needed |
| Menu review Committee | Same as above. | Priority audience |
| In-patients and residents. | Major consumers of hospital foods. | No specific role in course, but will be the primary beneficiaries of menu changes, and their preferences/demographics could dictate course examples. |
| Other hospital staff and visitors. | Moderate consumers of hospital foods. | Culture change will support course objectives. Consider translating key ideas of the course into posters that are placed at strategic spots within those facilities to sensitize them, e.g close to elevators and in cafeterias. |

Research Approach [Methodology]

Research Participants

VCH food service staff preparing foods for inpatients and residents. Consent forms were provided for the participants before commencing collection of data.

Methods

The study adopted a narrative inquiry methodology and specific methods were selected to support the project in understanding the current level of knowledge of the priority audience, in relation to the project themes. The methods were:

- Group interviews for food service directors to inform the next phases of interviews.
- Individual interview of managers.
- Group interviews of food production teams and dietary aides at Vancouver General Hospital (VGH) and University of British Columbia Hospital (UBCH).

Questions and Responses

Questions for each category are attached at the appendix. Interview responses will not be included in this report in order to protect confidentiality.

Data Analysis

Thematic analysis was employed in regrouping data to understand the knowledge gap among the participants, and the expectations of the directors in relation to the course development. This information served as the basis for framing the curriculum.

Summary

The curriculum framework represents the summary of the research outcomes.

Recommended Course Framework on Planetary Health and Cultural Safety

Based on the literature review and interviews, it is recommended that the following topics and learning objectives be included in the learning hub course:

Table 3: Course framework recommendations

| TOPIC | LEARNING OBJECTIVES |
|--|--|
| 1. Food as medicine for people and planet. | Broadly, through this course, learners should be able to: <ul style="list-style-type: none"> (a) Understand the definition of a planetary health diet. (b) Understand how food activities and choices impact the health of the planet. (c) Identify different ways they can protect the health of the planet through their food activities and choices. (d) Situate the relevance of planetary health diets and support the process in health care facilities. |
| 2. Growing Foods | (a) Explain how some agricultural practices negatively impact the environment in different ways. |
| 3. Transporting foods | (a) Explore the environmental impacts of the different means of food delivery and individual transportation for grocery shopping. (b) Understand at a high level how local, global, and seasonal foods impact sustainability |
| 4. Preparing food | (a) Explore how different food preparation roles are connected to planetary health diets. (b) Identify planetary health opportunities within these roles |
| 5. Eating food. | (a) Understand the importance of food for patient recovery and individual health (b) Recognize the components of a planetary health diet (c) Define culturally-relevant foods and understand their importance in supporting patient nutrition |
| 6. Disposing food waste | (a) List 3 impacts of food waste to the environment. (b) Identify possible causes of food waste in healthcare food services. (c) Understand possible strategies for managing food waste to protect the environment. |

| | |
|------------------------------|---|
| | (d) Know the VCH food waste related targets |
| 7. Vision (Closing the loop) | <p>(a) Understand possible ways of improving sustainability in healthcare food system.</p> <p>(b) Identify measures that address environmental impacts of food production and service in healthcare, such as agro-ecology, permaculture, considering food as medicine, reducing packaging, tackling food waste and sourcing more sustainably</p> <p>(c) Recognize how this work contributes to advancing UN SDGs to protect the planet.</p> |

Additional Educational Recommendations [Next Steps]

Based on the learnings from this project, consider the following recommendations:

1. A similar project should be carried out with a focus on clinical dietitians, physicians, clinicians, clinical nurse educators, to understand how they can be supported to encourage sustainable food prescriptions and follow-up for inpatients and resident, and similar project is required to support retail food services in expanding their sustainability capacities.
2. Food-related education should be included as part of onboarding and in-service trainings for hospital staff whose responsibilities are connected with food, either as a refresher's course or in-service training course, depending on each staff pre-service educational experiences.
3. Evaluation of VCH educational activities on an ongoing basis is necessary, with updates of learning activities related to planetary health diets and culturally safe foods.
4. Public campaigns on planetary health diets should be extended to communities and individuals outside hospital settings to increase environmental care and awareness, as well as support the health of the public.

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Appendix

Interview Questions:

- **Batch 1 Interview with Directors:**

SECTION 1. BACKGROUND ABOUT INTERVIEWEE AND FOOD SERVICES STRUCTURE

1. Briefly introduce yourself and highlight how your office is engaged in sustainable foods at VCH.
2. Please itemize the roles performed by the staff serving under your office in VCH food system, with brief description of each.
3. How many sub-units exist in your department? Kindly name and briefly state the responsibility of each unit.

SECTION 2. FOOD SERVICES STAFF CHARACTERISTICS

4. How many staff do you have in each unit?
5. What are the first languages of staff (list only the languages without the employees' names)?
6. What is the extent of their expertise in terms of education, training, previous and on-the-job experiences? (Please list only the nomenclature of their educational training, names of certifications and other trainings they had before joining VCH, without linking it to staff name/identity).
7. Please list on-boarding courses offered by your staff at VCH.
8. What sustainable food course(s) are currently undertaken as part of the training at VCH food service department?

9. In interviewing your staff on this project, what methods will you suggest based on the nature of their daily schedule, is group interview per unit possible?

SECTION 3. FOOD SERVICES PROCUREMENT

10. What percentage of foods at VCH are directly purchased from local farmers?
11. What percentage of foods at VCH are imported brands?
12. Are whole and organic foods prioritized at VCH? To what extent?
13. What percentage of foods at VCH are ethically sourced foods?
14. What delivery methods are approved by VCH for vendors to supply foods?
15. Do foods undergo multiple processing before they are served at VCH? If yes, what are those processing methods?
16. What kinds of packaging are utilized for foods served at VCH's vending machines, cafeterias, and what packaging do vendors use in delivering food products? Are these packages environmentally friendly?
17. How is the food stored at VCH (or VGH), and how do you manage food waste prior to production?
18. What are the procedures for food waste management in your department, and how can the process be made sustainable?

SECTION 4. INPATIENT MEAL SERVICE DELIVERY AND RETAIL

19. List the typical food preparation methods utilized in preparing foods at VCH, and are those methods environmentally friendly?
20. Do in-patients have multiple sustainable food varieties to choose from per meal, based on their nutritional need?

21. How are in-patients' food served at VCH, in terms of packaging and being appealing?
22. What strategies do you adopt for portion control to reduce food waste at VCH?
23. Do in-patients' food reflect their cultural values?
24. What strategies are adopted by your department to ensure that in-patients' foods are culturally responsive based on patient's cultural identity (noting the cultural diversity of Canadian residents)?
25. Does the VCH cafeteria and other food outlets reflect cultural diversity in foods served? How? And is any culture represented in Canada omitted?
26. Does the VCH cafeteria and other food outlets offer a variety of sustainable options to staff and visitors? What are strengths of the systems, and where could improvements be made?

SECTION 5. FOOD SERVICES PRIORITIES, SUSTAINABILITY AND CULTURAL SAFETY

27. How familiar is VCH food services with the term "sustainable foods", and in what specific ways has your department been engaging in sustainable foods?
28. In what ways has sustainable foods impacted your department (positively and negatively)?
29. Do you find spaces in your department through which sustainable food practices could be incorporated? Are there some that would be more visible or actionable for your staff? How would these changes affect your staff?
30. Considering the food chain in your department, from budgeting to purchase, delivery, preparation, serving/distribution, to waste management, are there aspects of this cycle in VCH that negatively impact the environment? If yes, how?
31. What do you think could be done by your department (and your personnel) to manage those impacts listed in your response above?
32. What does the phrase "cultural safety through foods" mean to you?

33. Do you feel the phrase “cultural safety through foods” would be a strange concept to the personnel working with you in your department?

34. In aligning your personnel with these phrases – “sustainable foods” and “cultural safety through food” – what NEW key themes/information will you like them to know? Please list below.

35. Are there other inputs you would like to offer in relation to this project?

- **Batch 2 Interviews regarding culturally relevant foods:**

1. What does “cultural mindfulness”, “cultural safety”, “culturally relevant foods” and “ethically sourced foods” within healthcare food services mean to you?

2. How do you perceive the role of foods in healthcare in advancing cultural safety, promoting equity, inclusion and decolonization? Are there spaces where offering culturally-relevant and Traditional foods is particularly critical, and why?

3. Are there spaces in healthcare where cultural relevance (including Traditional foods) and planetary health principles are in conflict, and how do you navigate those tensions?

4. a) How well do the current menus meet the patients’ needs for culturally-relevant and Traditional foods from both your perspectives? Where could we do better, and what would it take?

4. b) Are there specific kinds of cultural food preparation practices or types of meal offerings you would suggest to be included and/or prioritized in healthcare food services?

5. What role do you perceive the food services staff to have in promoting culturally-relevant and Traditional foods? What would they need to know to do this well?

- **Interview with production teams and dietary aids:**

1. What does sustainable foods mean to you?
2. What are the environmental impacts of serving beef, dairy and pork products?
3. What are your roles in improving the sustainability of food in healthcare?
4. What do you think are the main reasons for food waste in the hospital?
5. What is culturally safe food in healthcare?

- **Questions for Managers**

- a. What does sustainable foods mean to you?
- b. What are the environmental impacts of serving beef, dairy and pork products?
- c. What are your roles in improving the sustainability of food in healthcare?
- d. What do you think are the main reasons for food waste in the hospital?
- e. What is culturally safe food in healthcare?
- f. What are the learning needs of production team and dietary aides in embracing food sustainability