

PROMOTING SUSTAINABLE FOOD CHOICES IN HOSPITAL CAFETERIAS

BIG Difference BC
November 3, 2023

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UBC SAUDER
SCHOOL OF BUSINESS
DIBS
Decision Insights for Business & Society

Vancouver Coastal Health

PHCL PLANETARY HEALTHCARE LAB

Land acknowledgement

**Vancouver - Musqueam,
Squamish, Tsleil-Waututh**

**Victoria - Songhees, Esquimalt
and Wesanec**

Kelowna - Syilx Okanagan



Food related pollution

Food-related pollution is a major driver of climate change

- 30% of global emissions, 70% freshwater use
- Beef contributes 25% of all food emissions

The Lancet “healthy diet” could result in 50% reduction of global emissions and save 11 million lives





Influencing food choices

- **Influencing the public regarding sustainable food consumption is an ongoing challenge.**
- **Behavioural Insights has been successful at influencing healthy and sustainable food consumption through choice architecture modifications**

Report 29th Jan 2020

A Menu for Change

Using behavioural science to promote sustainable diets around the world



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12. Edit the choice architecture, to make sustainable options more prevalent, more prominent, and the default choice.

12a. Make sustainable options more *prevalent*, by increasing the relative availability of options, and reducing portion size of less sustainable products.

12b. Make sustainable options more *prominent*, by putting them first in canteens and on menus, and in more salient locations in store.

12c. Make sustainable options the *default* choice, e.g. on flights or at catered events.

- a) High
- b) Modest
- c) Medium

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6. Publicise the desirable norm, and lead by example.

6a. Communicate the desirable prevailing norm, or the shifting trend, in low-meat diets (e.g. 'more and more people are cutting back on meat'), or use peer comparisons among consumers or producers.

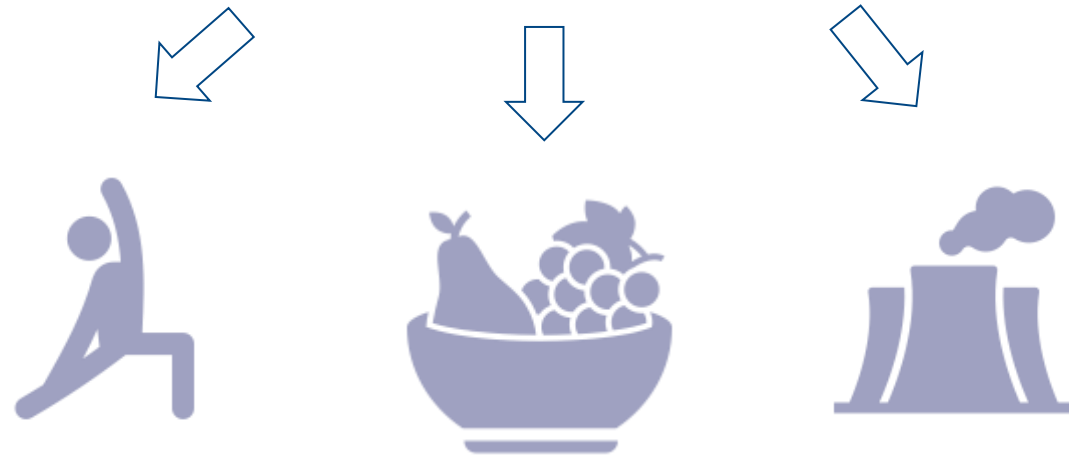
6b. Lead by example in government procurement, by offering more plant-based options and less red meat in hospitals, schools, and government canteens.

Medium

Hospitals as drivers of change

Healthcare systems should model a healthy and sustainable food system

- Mandate to improve societal wellbeing
- Trusted public institution
- High volume of food procurement





- **POPULATION OF INTEREST:**
Cafeteria consumers
- **TOUCHPOINT:**
Hot entrée/grill station
- **TARGET BEHAVIOUR:**
Choosing a sustainable lunch dish at the hospital cafeteria

Hospital-wide survey

1165 survey responses

- **63%** decide on their meal by looking at the hot display counter
- **56%** not familiar with available plant-based options
- **46%** willing to try plant-based options

Barriers to purchasing plant-based dishes:

- 57%: cost
- 34%: lack of availability

“Warm and fresh”

“Made with love”

DRIVING FORCES:

Animal-welfare

Personal health

Environmental impact

RESTRAINING FORCES:

Lack of knowledge

What options exist

Health/environmental benefits

Perceived lack of availability

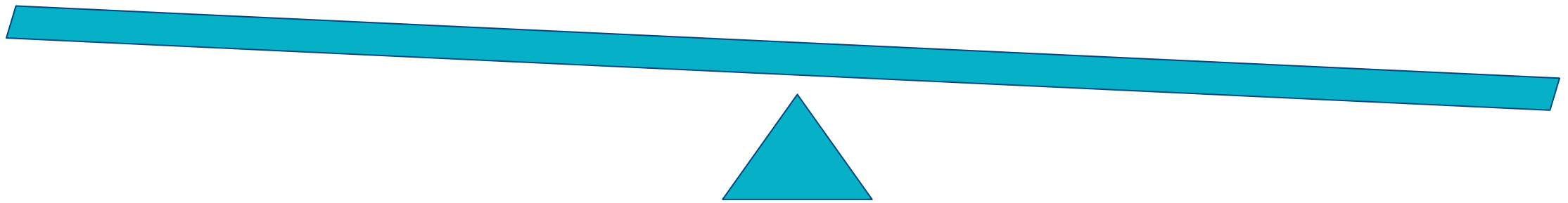
Cultural integration of meat

Social norms

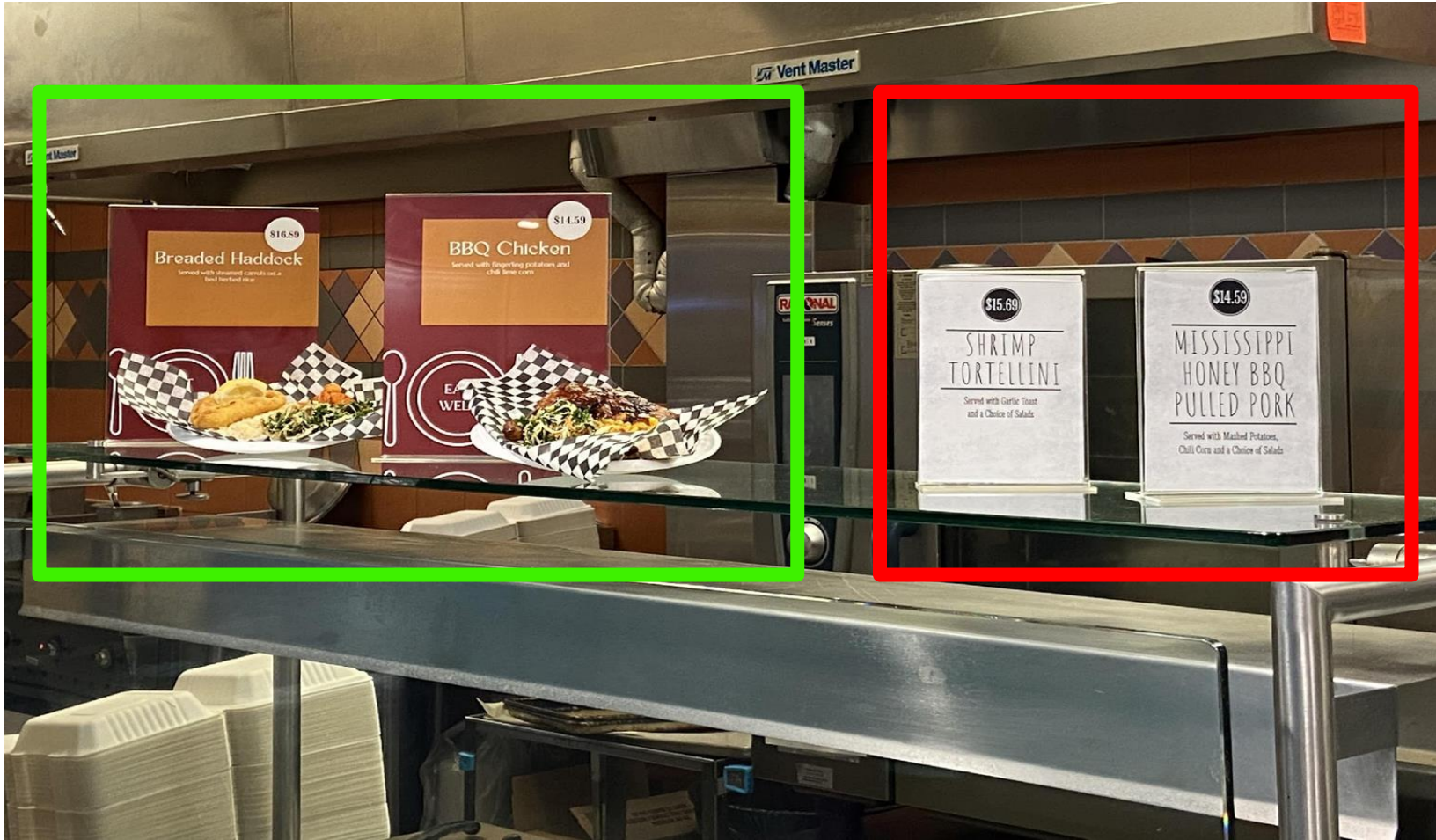
Cost

Perceived inadequacy in “fullness”

Poor taste



BI Intervention



Sustainable dishes:

- BI informed menu placard
- Physical display

Unsustainable dishes:

- Plain menu placard
- No physical display

Sustainability Calculation

*Protein contributes the largest environmental



Coolfood Calculator
We estimate the GHG emissions associated with the food you buy.

Protein type	Protein (kg)	Emissions Factor/kg	Kg CO ₂ e/portion	g CO ₂ e/portion
Lamb	0.13	41.6	5.408	5408
Beef	0.13	41.4	5.382	5382
Prawns	0.13	21.1	2.743	2743
Pork	0.13	9.8	1.274	1274
MEDIAN				1202
Cheese	0.13	8.7	1.131	1131
Fish	0.13	5.0	0.650	650
Poultry (Chicken, turkey)	0.13	4.4	0.572	572
Tofu	0.13	1.8	0.233	234

Study Design

Treatment:

Vancouver General
Hospital (VGH)

March 6, 2023



April 21, 2023

Control:

Lions Gate
Hospital (LGH)

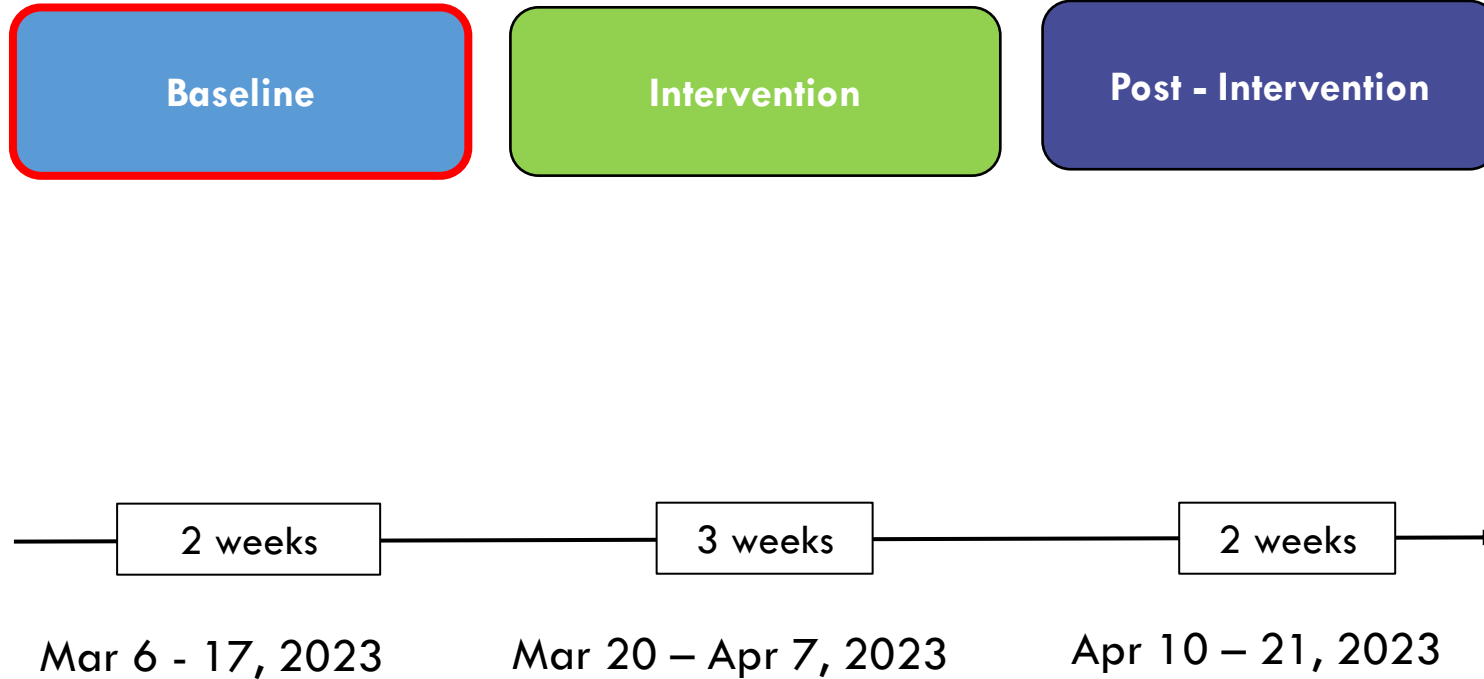
Data collected:

Number of sustainable and unsustainable lunch dishes sold

Study Design

Treatment:

Vancouver General
Hospital (VGH)



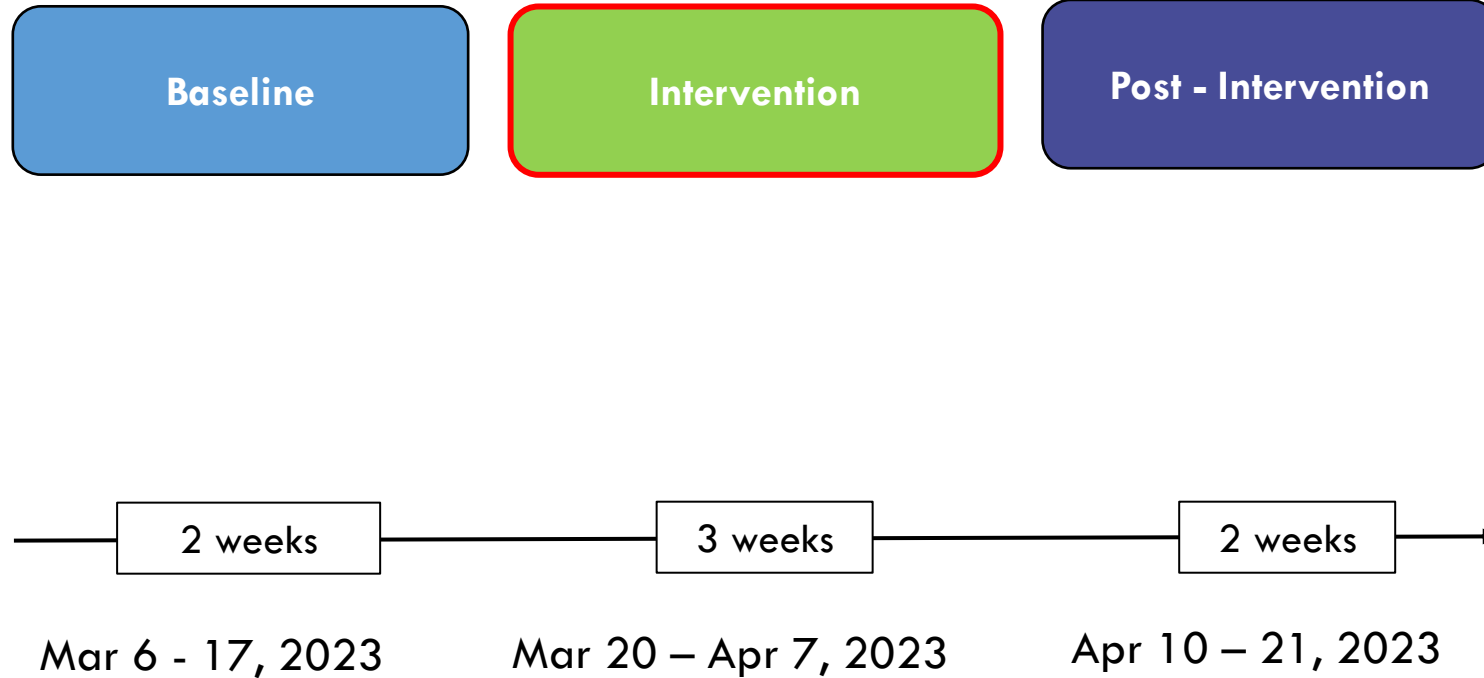
Display during baseline period at VGH



Study Design

Treatment:

Vancouver General
Hospital (VGH)



Display during intervention period at VGH

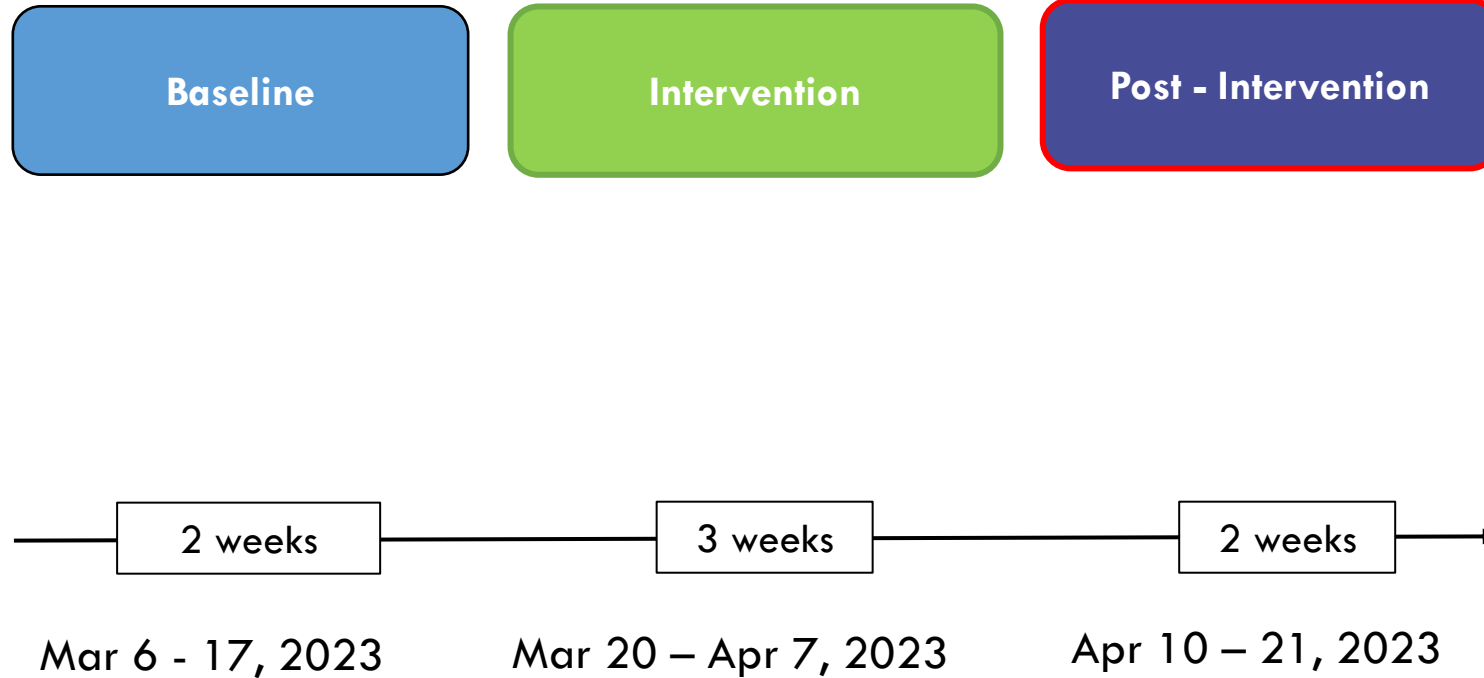


50/50 split of sustainable to unsustainable menu offerings.

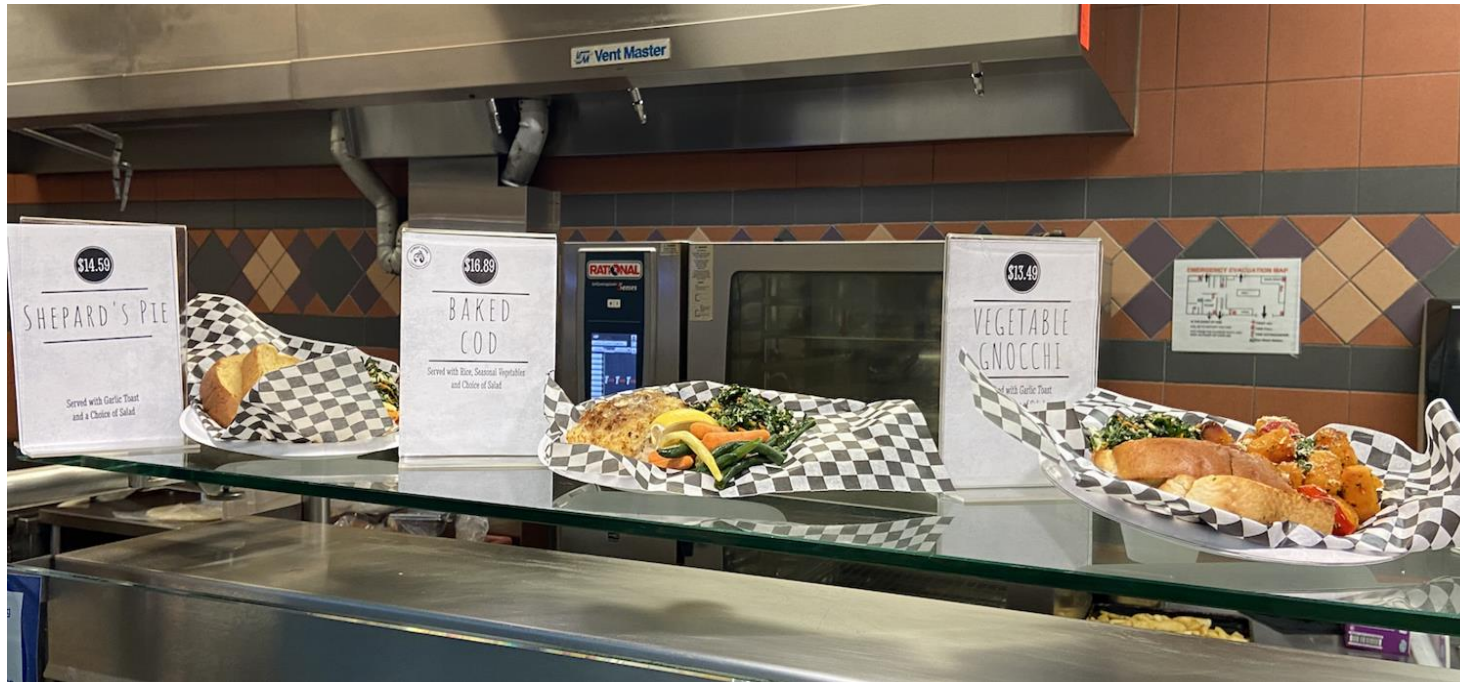
Study Design

Treatment:

Vancouver General
Hospital (VGH)



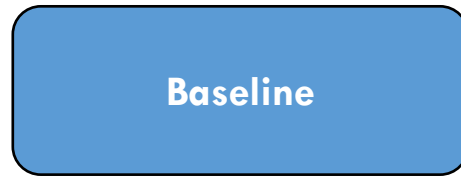
Display during post-intervention period at VGH



Study Design

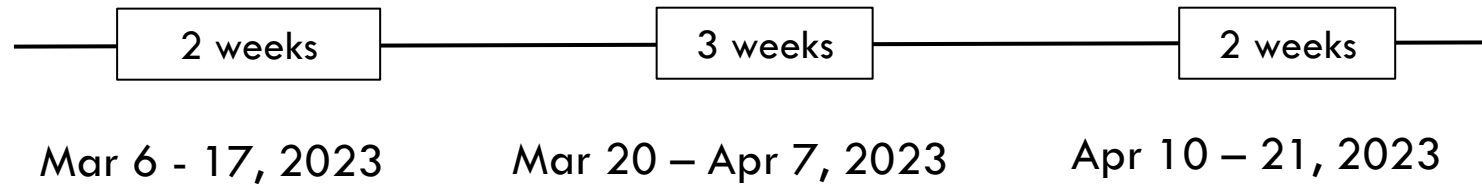
Treatment:

Vancouver General
Hospital (VGH)



Control:

Lions Gate
Hospital (LGH)

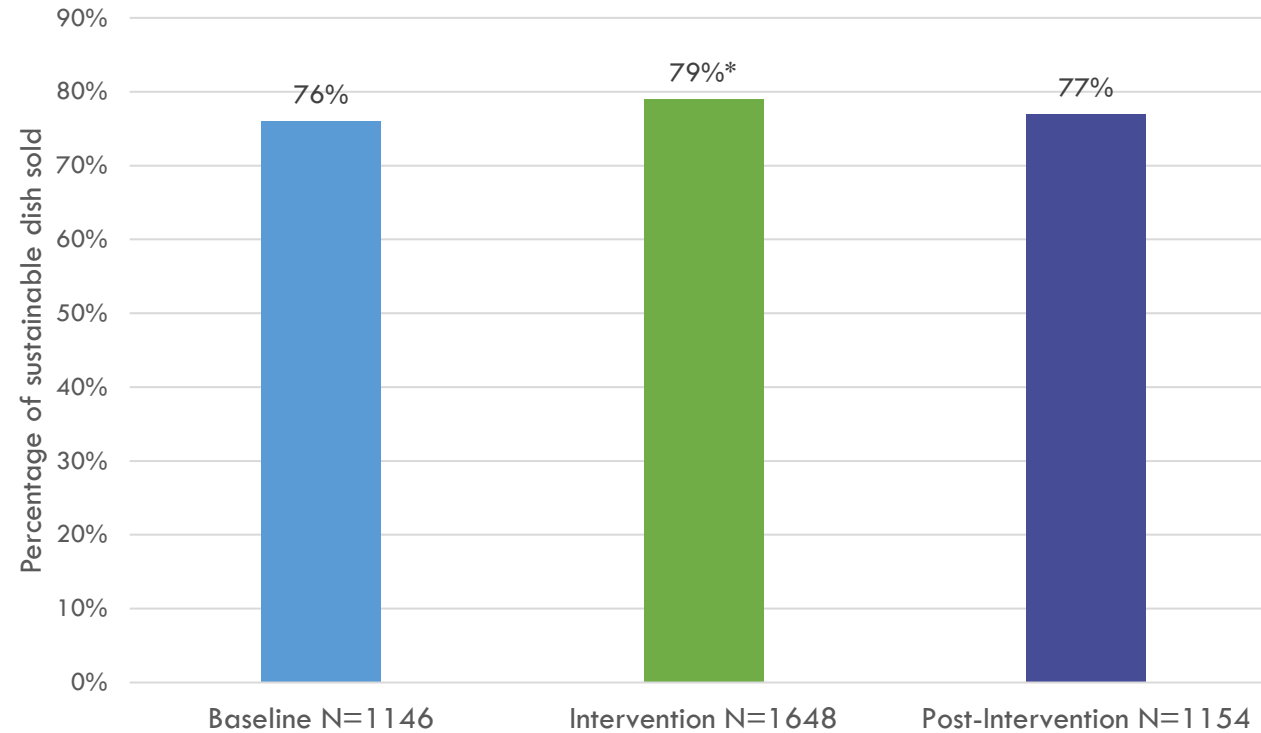


Display at LGH throughout experiment



Results – Sustainable sales at VGH (treatment)

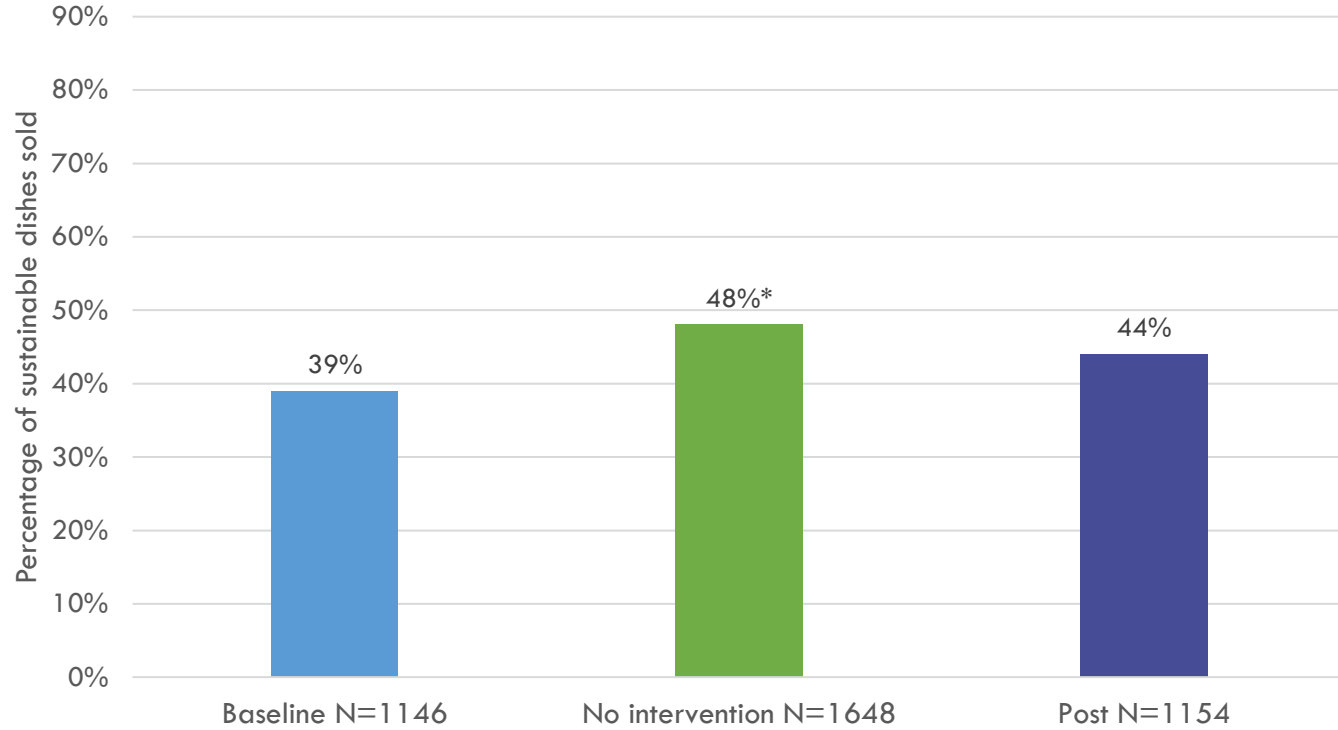
N= 3963



	Chi-Squared Statistic	p-value	Cramer's V
All 3 Periods	6.46	0.04*	0.04
Baseline vs. Intervention	5.65	0.02*	
Intervention vs. Post-Intervention	3.43	0.06	
Baseline vs. Post-Intervention	0.24	0.6	

Results – Sustainable sales at LGH (control)

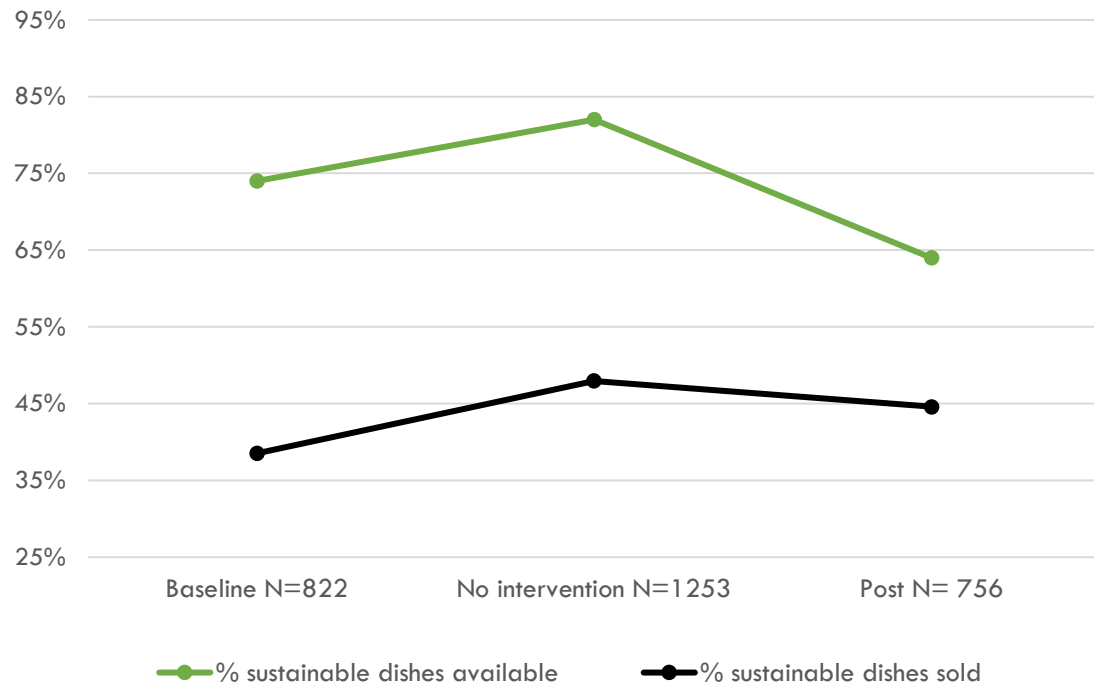
N= 2831



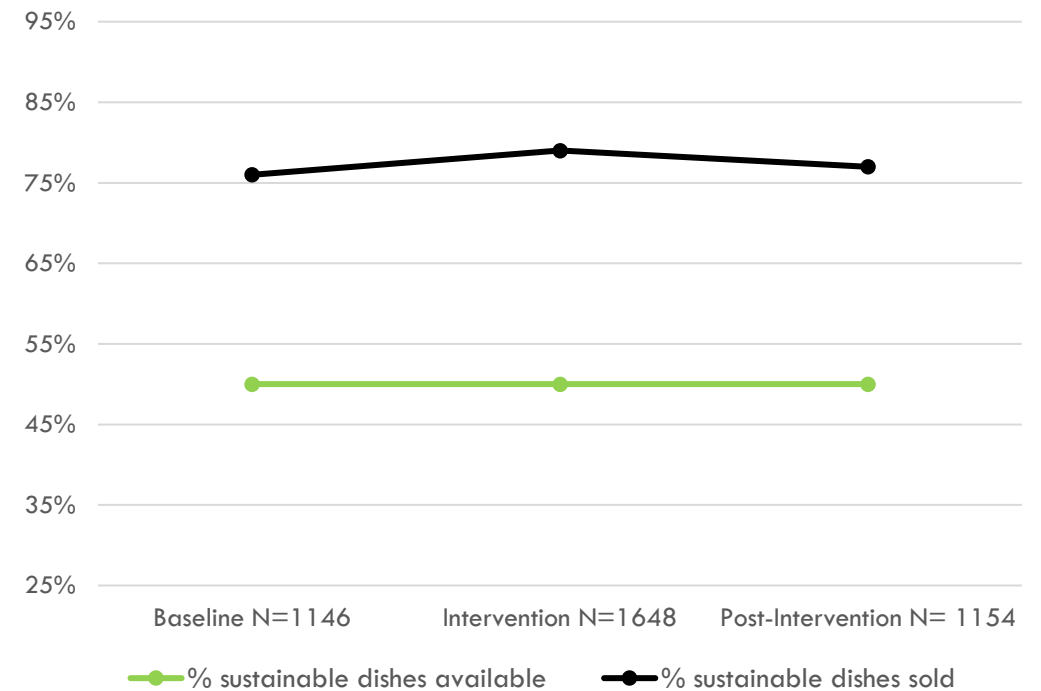
	Chi-Squared Statistic	p-value	Cramer's V
All 3 Periods	16.45	0.0003*	0.08
Baseline vs. No - Intervention	16.45	0.0005*	
No - Intervention vs. Post	2.56	0.11	
Baseline vs. Post	4.67	0.03*	

Results - Availability

Lions Gate Hospital

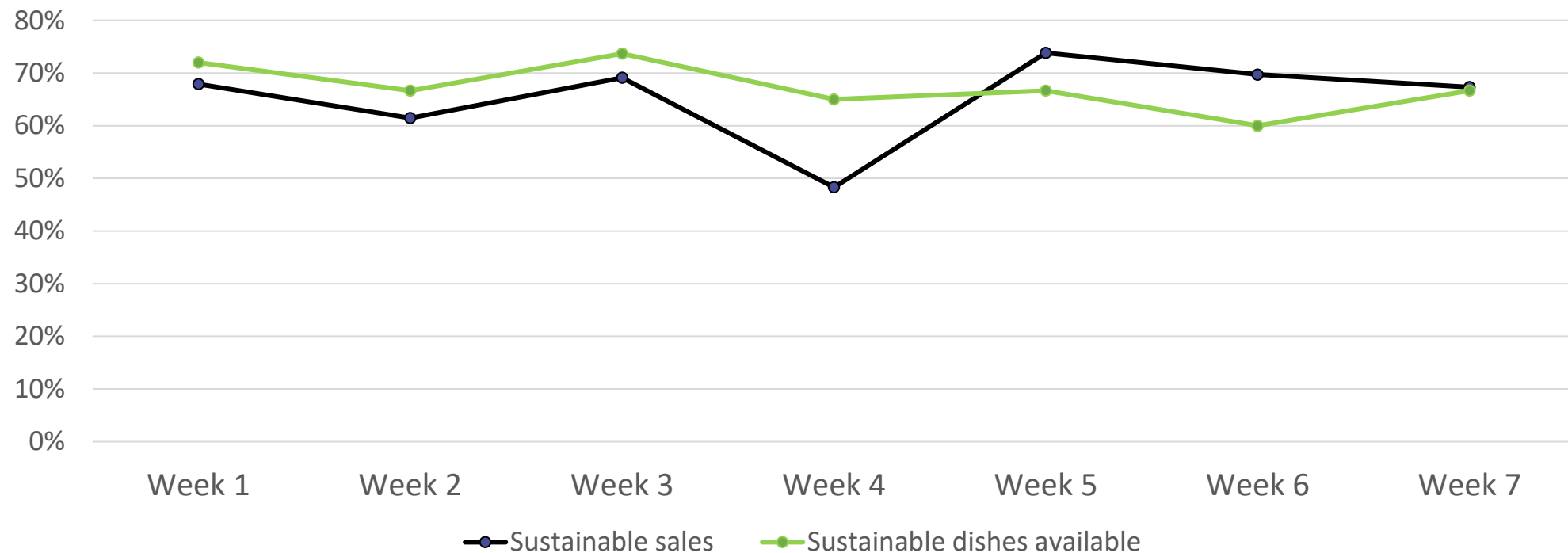


Vancouver General Hospital



Further analysis

- St. Paul's Hospital
- Availability and sales data collected retrospectively over same study periods



Summary & Recommendations

- Although a weak effect size, salience was effective at increasing sales of sustainable dishes at a hospital cafeteria
- Two natural experiments showing that **there is a larger effect of availability on sales**

RECOMMENDATIONS:

1. IMPLEMENT AT TRIAL SITE

- Significant effect on sales
- Intervention is relatively easy and low cost to implement.

2. INCREASE AVAILABILITY OF SUSTAINABLE DISHES

- Significant effect on sales
- Correlated with increase and decrease in availability

Thank you!

BEHAVIOURAL INSIGHTS CAPSTONE PROJECT TEAM #2

UBC Sauder School of Business

Advanced Professional Certificate in Behavioural Insights (2023)

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