



ONTARIO
CLRI
Centres for Learning,
Research & Innovation
in Long-Term Care



NID
NUTRITION IN DISGUISE

Sept 10, 2020

Nutrition in Disguise

Menu planning to enhance resident well-being



RIA
RESEARCH INSTITUTE
for AGING
and AGEMENT



SCHLEGEL VILLAGES

Presented by
Heather Keller RD PhD
Schlegel Research Chair, Nutrition & Aging

Nancy Ma NM Food & Nutrition Specialist
Schlegel Villages

WHAT WE DO



2 | CLRI-UTCCA



ONTARIO
CLRI
Centres for Learning,
Research & Innovation
in Long-Term Care

Acknowledgement



This work is supported in part with funding from the Government of Ontario through the Ontario Centres for Learning, Research and Innovation in Long-Term Care. The views expressed herein do not necessarily reflect the views of the Province.

CLRI-UTCCA



ONTARIO
CLRI
Centres for Learning,
Research & Innovation
in Long-Term Care

Acknowledgement

The **Nutrition in Disguise** resources made available through the Ontario CLRI are based on research completed by the Schlegel-UW Research Institute for Aging, the University of Waterloo and the University of Guelph in partnership with Schlegel Villages. This research was made possible with the generosity of George Weston Limited and Loblaw Companies Limited.

M3 Research Team (University of Waterloo,
University of Guelph)

- Vanessa Vuicea, Ivy Lam
- Wes Newton, Ashley Maaker, Chantal Lin
- Olivia Romaniw, Flavia Lucio Pereira de Paula
- Ritika Rajpal, Christina Kovacs, Anna De Lange
- Cindy Wei
- Trevor Rees, Kevin Hughes, Rachel Hopkins

RIA
RESEARCH
INSTITUTE
for AGING
Enhancing Life

**UNIVERSITY OF
WATERLOO**

**UNIVERSITY
OF GUELPH**

Matthews Hall

WESTON

GEORGE
WESTON
LIMITED

**Loblaw
Companies
Limited**

SCHLEGEL VILLAGES

CLRI
Ontario Centre for Learning
Research & Innovation
in Long-Term Care

4 | CLRI-LTC.CA

Outline

- Why do we need to work at improving the nutrient quality of menus?
- Nutrition in Disguise (NiD) as the solution
- Our first recipes
- Determining preferences and sensory testing
- Determining cost and planning menus
- NiD resources
- Next steps with NiD and Ontario CLRI

CLRI
Ontario Centre for Learning
Research & Innovation
in Long-Term Care

5 | CLRI-LTC.CA

Poll Question

Do you agree that incorporating nutritionally enhanced recipes will benefit residents living in your LTC home?

CLRI
Ontario Centre for Learning
Research & Innovation
in Long-Term Care

6 | CLRI-LTC.CA

The M3 Study



7 | CLRI-LTC.CA



M3: Key Findings

(Namasivayam-MacDonald et al., 2018; Keller et al., 2018; Vucea et al., 2017 and 2018; Iuglio et al., 2018)

- **85%** do not get enough fluid (goal 1500 ml)
- **96%** do not get enough protein (goal of 1.2 g/kg bw)
- **9/22** nutrients assessed were below DRI in menus and high proportions of residents had inadequate intakes
- Nutrient pills did not replace these missing nutrients
 - Except for vitamin D and Calcium
- MTF more likely to be low in key nutrients, but higher in others due to enhancements

44% of Residents were Malnourished

8 | CLRI-LTC.CA



We Can Do Better With Menus

- Provide enough fibre 25 g/d
- Provide quality protein (1.2 g/kg body weight)
- Plan using the Dietary Reference Intake
- **Nutrient dense recipes**
- Spend time planning a quality menu: 3-4 week rotation; revise 2X/yr



9 | CLRI-LTC.CA



Poll Question

Where do you see plant based proteins incorporated into your LTC menu?

10 | CLRI-LTC.CA



Menu Planning in LTC- 2020



- Opportunity with new CFG
- Consider nutrient dense foods vs. servings
- Focus on quality food consumed by residents
- Identify Dietary Reference Intake as primary target for planning
- Food-based fortification

11 | CLRI-LTC.CA



Super Menu (Lam et al., 2014)

Dried Basil (1 tbsp)
Calcium: 8%,
Magnesium: 5%

Spinach (1 cup)
Folate: 70%,
Magnesium: 39%



Red Bell Peppers (1 each)
Vitamin C: 170% (raw),
65% (cooked)

Swiss Cheese (1 cup)
Calcium: 95%, Zinc: 49%,
Vitamin B12: 76%

Rapini (1 tbsp)
Iron: 9%

12 | CLRI-LTC.CA

(Percentages shown as % Daily Values)

12



Nutrition in Disguise

- Food products acceptable for LTC
- Increase nutrient density



Black beans + sweet potato
=> chocolate pudding

SOMATO PUBLICATIONS

Journal of Clinical Nutrition and Food Science

Research Article

Nutrition in Disguise: Development, Testing and Cost-Analysis of Nutrient-Enhanced Food for Residential Care

Heather Keller^{1*}, Flavie Lucie Perron de Paula², Cindy Wei³, Alison Duncan⁴ and Lisa Duizer⁵

¹McGill Graduate of Medicine, Research Institute for Aging, Montreal, QC, Canada

13 | CLRI-LTC.CA



NiD- Recipe Design Team



- Kevin Hughes
- Trevor Rees
- Heather Keller
- Lisa Duizer
- Alison Duncan



14 | CLRI-LTC.CA



#1 Identifying
Nutrients/Ingredients
M3, Literature review

#2 Developing Recipes
Identification of food vehicles,
recipes

#3 Testing Recipes
Taste test 3 groups; waste audit, cost analysis

#4 Knowledge Translation
Older Adults, chefs, FSM/RDs

Principles

- Preferred foods
- Sensory appeal
- Micronutrients
- Regular texture with potential for modification
- Few steps
- Usual ingredients
- Lower cost



Nutrients → Ingredients → Foods

Desired Nutrients	Nutrient Dense Ingredients	Target Foods
Folate, Vit K	Spinach, Kale	Main dishes, soup,
B vitamins	Hemp, chia, mushrooms, flax, lentils	Soups, crumbles
Calcium	SMP, cheese	Mains, soups
Vit D	Egg yolks	Baked goods
Zinc	Wheat germ, dark chocolate, hemp	Baked goods
Vit E	Wheat germ, almonds, spinach	Baked goods, desserts
Potassium	Dark chocolate, SMP	Desserts, soups
Fibre	Berries, lentils/beans, wheat bran	Soup, desserts, smoothies
Protein	SMP, tofu, lentils, yogurt	Soups, crumble, baked goods
Selenium	Chia, flax, eggs	Soups, baked goods
Omega 3	Flax, chia	
Other healthy ingredients	Tomatoes, olive oil, carrots, turmeric, cinnamon, berries, cocoa, sweet potato	

16 | CLRI-LTC.CA



Foods Tested for Sensory Appeal with Residents

- Streusel
- Smoothie
- Three soups
- Two muffins
- Quiche
- Dessert
- Pudding
- Brownie



17 | CLRI-LTC.CA



Methods: Food Acceptability Testing

Keller et al., 2019 J Clin Nutr Food Sci

- Participants
 - n=71 older adults living in the community
 - long-term care, with (n=11; CI) and without (n=18; CW) cognitive impairment
- Method- community and cognitively well
 - 9-point Hedonic Scale
 - sensory liking responses for texture, flavor, appearance, and overall liking

Texture									
Did not try food	Dislike extremely	Dislike very much	Dislike moderately	Dislike slightly	Neither like or dislike	Like slightly	Like moderately	Like very much	Like extremely
0	1	2	3	4	5	6	7	8	9

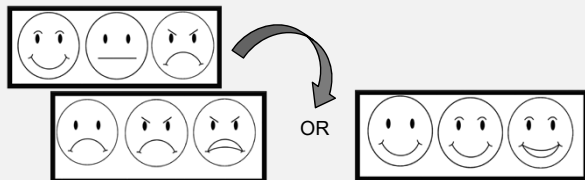
18 | CLRI-LTC.CA



Methods: Food acceptability testing

Cognitive Impairment

- 9-point faces, weighing food, unsolicited comments on food, facial expressions



19 | CLRI-LTC.CA



Challenges in testing those with Cognitive Impairment

	9 point	9 point faces	+vel-ve words	+ vel-ve expressions	% Weight consumed
Brownie	7.6	6.3	Very good dry	smile	77
Apple Cider Muffin	6.5	6.8	Good, too dry, dull	smile	74
Tomato Cream Cheese Soup	6.9	7.6	Lovely, good, mushy, thick, bland, hard	Eyes widen, lips pressed, frown	48
Mulligatawny Soup	4.5	5.8	Very nice, mushy, thick, spicy, sweet	Frowning, nose wrinkle, eyes diminished, lips pursed	36

20 | CLRI-LTC.CA



Cost and Nutrient Density: 1 or 2 options/d in a 7d menu

	Original	1 NiD	2 NiD
Cost	\$6.08	\$6.40	\$6.59
Energy (kcal)	2125	2202	2270
Vit C (mg)	93	100	105
Vit K (mcg)	84	101	127
Folate (DFE)	259	261	273
Zinc (mg)	8.8	9.6	10.3

21 | CLRI-LTC.CA



In Summary

- Nutrient enhanced foods for LTC is a feasible and recommended method to improve nutrient density of the menu
 - Whole menu approach vs. focus only on enhanced foods
- Development of recipes takes time and needs to consider:
 - Nutrient focus
 - micronutrients that are poorly consumed are challenging to increase
 - Ingredients that are acceptable
 - Recipes that are economical, with few steps
 - Availability of key nutrient dense ingredients
- Taste testing is important, but challenging
 - Waste audits are a likely strategy for most homes
 - Readiness of residents for novel ingredients
- Learning from the NiD project on this process has led to efficiencies for the next phase
 - Start with hypothetical recipes → adapt → conduct nutrient and cost analysis → trial recipe → check cost/nutrient analysis → taste test
 - Continue to work with trained chefs to innovate

22 | CLRI-LTC.CA



NiD: Recipe Building

NiD Recipe build and analysis were completed using Synergy on Demand (MealSuite).

Key Learnings:

Some key nutrient dense items were unavailable from the ingredient deck (ie. Kale Powder, Oat Flour & Hemp Hearts).

Result: incomplete recipes



23 | CLRI-LTC.CA



NiD: Product Linking

Linking NiD recipe ingredients to Sysco products

- This determines the cost and nutritional of the recipes

Cost						
Link Products By						
Description						
Qty	Stock Item	Vendor	Product Id	Label	Description	Unit Price
1	Ass Cooking Spray	Sysco Foodservice Ontario	000001	CANOLA	OL CANOLA FINE SPRAY	6.16 02
1	Beans, Lentils, Cooked	Sysco Foodservice Ontario	500700	SPS LLS	BEANS LENTILS, GREEN	6.16 02
1	NID STOCK	Sysco			No Cost	0.00
1	Oil, Olive Extra Virgin	Sysco Foodservice Ontario	000001	CANOLA	OL CANOLA FINE SPRAY	6.16 02
1	Ground Peas, Green	Sysco Foodservice Ontario	000001	SPS LLS	GROUND PEAS, GREEN	6.16 02
1	Salt	Sysco Foodservice Ontario	000001	SPS LLS	SALT FINE GRIND	6.16 02
1	Sugar, Granulated	Sysco Foodservice Ontario	000001	SPS LLS	SUGAR GRANULATED FINE	6.16 02
1	Egg, White Large	Sysco Foodservice Ontario	000001	SPS LLS	EGG WHITE LARGE	6.16 02
1	Extract, Vanilla	Sysco Foodservice Ontario	000001	SPS LLS	EXTRACT VANILLA IMITATION	6.16 02
1	Flour, All Purpose	Sysco Foodservice Ontario	000001	SPS LLS	FLOUR ALL PURPOSE	6.16 02
1	Chocolate, Semi Sweet	Sysco Foodservice Ontario	000001	SPS LLS	CHOCOLATE CHIP SEMI SWEET	6.16 02

24 | CLRI-LTC.CA



NiD: Product Linking (Continued)

Product ID	Description	Label	Vendor	Pack Size	S/Pack	S/Unit	Stock
8007751	8000 BULK 1000T CANADA 80-A	8000BULK	100	1.00.00	94.27	0	0.00
8007751	8000 BULK 1000T CANADA 80-A	8000BULK	100	1.00.00	94.27	0	0.00
8007751	8000 BULK 1000T CANADA 80-A	8000BULK	100	1.00.00	94.27	0	0.00

Considerations for product selected:

- Aligned with Schlegel Villages contracts/preferred products
- Cost & quality
- Availability and status of products (ie. Special order)

25 | CLRI-LTC.A



NiD: Product Linking (Continued)

Linked product reports are used as the basis of order guides for Food Service Managers.

Key Learnings:

A number of nutrient dense ingredients were either unavailable or listed as a Special Order.

(ie. Wheat Germ, Chia Seeds and Flax Seeds).

Stock Items with [All] Linked Products

Product ID	Name	Product ID	Vendor	Label	Product Name	Pack Size	Pack Price
8007751	8000 BULK 1000T CANADA 80-A	8007751	100	8000BULK	8000 BULK 1000T CANADA 80-A	1.00.00	94.27
8007751	8000 BULK 1000T CANADA 80-A	8007751	100	8000BULK	8000 BULK 1000T CANADA 80-A	1.00.00	94.27
8007751	8000 BULK 1000T CANADA 80-A	8007751	100	8000BULK	8000 BULK 1000T CANADA 80-A	1.00.00	94.27

Result: incomplete recipe costing and nutrient analysis. Not operational viable – difficult for FSM to procure ingredients.

26 | CLRI-LTC.A



NiD: Recipe Costing & Nutrient Analysis

Costing for NiD recipes was accomplished in 2 ways:

Recipes with complete ingredient deck:

- 2 out of 8 NiD recipes
- Able to generate cost and nutrient analysis through Synergy on Demand
 - Lentil Brownie
 - Quiche

Nutrient Analysis	
Recipe: Lentil Brownie	
Serving Size: 1.00.00 (1.00.00)	
Servings: 1	
Macros	Values
Calories	207 kcal
Protein	4.00 g
Carbohydrate	4.00 g
Total Fat	1.00 g
Saturated Fat	0.50 g
Trans Fat	0.00 g
Cholesterol	0.00 g
Sodium	0.00 g
Fiber	0.00 g
Total Sugar	0.00 g
Total Vitamin	0.00 g
Total Mineral	0.00 g
Total Fat	1.00 g
Total Protein	4.00 g
Total Carbohydrate	4.00 g
Total Saturated Fat	0.50 g
Total Trans Fat	0.00 g
Total Cholesterol	0.00 g
Total Sodium	0.00 g
Total Fiber	0.00 g
Total Sugar	0.00 g
Total Vitamin	0.00 g
Total Mineral	0.00 g

27 | CLRI-LTC.A



NiD: Recipe & Cost (Complete)

NiD Lentil Brownie Recipe with complete costing

Recipe - NiD Lentil Brownie (Lentil Brownie)			
Cook Time: 12 minutes	Method: Bake	Serving Size: 1.2" Square	YIELD: 16
Cook Temp: 350F/178C	Serve Utensil:	Cost \$ 6.38	\$0.38
AMOUNT	INGREDIENT NAME	PREPARATION STEP	
18 mL	Pan Coating Spray	1. Preheat NiDCC oven beginning preparation & SANITIZE surfaces & equipment.	
250 mL	Beans, Lentils Chd (Drained)	Preheat oven and grease baking pans.	
15 mL	Water	In blender, pulse lentils with water until smooth consistency is achieved.	
128 mL	Oil, Olive Extra Virgin	2. In a large mixing bowl,	
177 mL	Cocoa Powder, Unsweet	Combine oil, lentil puree, cocoa powder, sugar and salt.	
18 tsp	Salt, Table	Mix evenly.	
375 mL	Sugar, Granulated	3. Add eggs one at a time, whisking after each addition until evenly mixed into lentil mixture.	
3 Each	Egg, Shell Large	4. Add remaining ingredients to the bowl. Mix evenly.	
5 mL	Extract, Vanilla	Pour prepared brownie mixture to greased baking pans. Bake for 27 minutes or until brownie is cooked through.	
250 mL	Flour, All Purpose	Cool and serve.	
250 mL	Chocolate Chips, Semi-Sweet	CCP - Maintain +HSPAC after service for storing.	

28 | CLRI-LTC.CA



NiD: Incomplete Recipe Costing

Recipes with missing ingredients in the recipe build portion or unavailable linked products during costing:

- An incomplete cost and nutrient summary was generated using Synergy on Demand.
- The missing ingredients were identified.
- Obtained cost and nutritional for the missing ingredients (purchased from Bulk Barn).

Nutrition Facts	
WHEAT GERM	
dark toasted	
279	.62
lb	100 g
Nutrition Facts	
OAT FLOUR	
195	.43
lb	100 g

29 | CLRI-LTC.CA



NiD: Incomplete Recipe Costing (Continued)

NUTRITION ANALYSIS									
Serving Size	200g	100g	100g	100g	100g	100g	100g	100g	100g
MACRO NUTRIENTS	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
Carbohydrate	42.0	g	35.0	g	45.0	g	40.0	g	40.0
Protein	10.0	g	10.0	g	10.0	g	10.0	g	10.0
Fat	10.0	g	10.0	g	10.0	g	10.0	g	10.0
Fiber	10.0	g	10.0	g	10.0	g	10.0	g	10.0
Sugar	10.0	g	10.0	g	10.0	g	10.0	g	10.0
Sodium	10.0	mg	10.0	mg	10.0	mg	10.0	mg	10.0
Calcium	10.0	mg	10.0	mg	10.0	mg	10.0	mg	10.0
Iron	10.0	mg	10.0	mg	10.0	mg	10.0	mg	10.0
VITAMINS	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
Vitamin A	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin B1	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin B2	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin B3	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin B6	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin B12	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin C	10.0	mg	10.0	mg	10.0	mg	10.0	mg	10.0
Vitamin D	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin E	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin K	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin P	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin Q	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin R	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin S	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin T	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin U	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin V	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin W	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin X	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin Y	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin Z	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AA	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AB	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AC	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AD	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AE	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AF	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AG	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AH	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AI	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AJ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AK	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AL	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AM	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AN	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AO	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AP	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AQ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AR	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AS	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AT	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AU	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AV	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AW	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AX	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AY	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin AZ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BA	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BB	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BC	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BD	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BE	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BF	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BG	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BH	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BI	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BJ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BK	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BL	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BM	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BN	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BO	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BP	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BQ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BR	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BS	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BT	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BU	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BV	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BW	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BX	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BY	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin BZ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CA	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CB	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CC	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CD	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CE	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CF	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CG	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CH	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CI	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CJ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CK	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CL	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CM	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CN	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CO	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CP	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CQ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CR	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CS	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CT	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CU	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CV	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CW	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CX	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CY	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin CZ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DA	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DB	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DC	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DD	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DE	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DF	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DG	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DH	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DI	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DJ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DK	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DL	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DM	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DN	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DO	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DP	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DQ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DR	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DS	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DT	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DU	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DV	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DW	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DX	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DY	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin DZ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EA	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EB	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EC	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin ED	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EE	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EF	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EG	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EH	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EI	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EJ	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EK	10.0	µg	10.0	µg	10.0	µg	10.0	µg	10.0
Vitamin EL	10.0	µg	10.0	µg	10.0	µg			

Implementation: Lentil Brownie

- Lentil Brownie recipe was retested by our Culinary Specialist (chef)
- Recipe Tasting:
 - **Schlegel Chef Days (September 2019)**
 - Education/Ideation day where chefs across villages were gathered to review and provide feedback on previously launched menu and bring forward any new menu/recipe ideas.
 - **Schlegel Director of Hospitality and Food Services Meeting (October 2019)**
 - 8 new menu items that were going to be launched with the new Fall/Winter 2019 menu was prepared by the village chef and served for lunch.

Overall feedback on the lentil brownie:

- Consensus was that it was tasty.
- Could not tell that black beans were an ingredient in the dessert.

34 | CLRI-LTC.CA



Fall & Winter 2019 Menu Feedback

- Launched October 2019
 - Lentil Brownie – Week 1, Thursday Supper
- **Feedback from Villages:**
 - The name of the item was a point of contention
 - Majority of residents who were willing to look past the “lentil” and tried the dessert liked it
 - Many were unwilling to taste the dessert due to the name
 - Quote: “lentils do not belong in my dessert”.
- We ended up changing the display name of the Lentil Brownie to:
Homemade Decadent Brownie



35 | CLRI-LTC.CA



Schlegel Villages Menu Development

Corporate Menu Team consists of:

- Director of Nutrition & Food Services (RD), Director of Hospitality & Dining, Food and Nutrition Specialist and Culinary Specialist (Chef)

Partners:

- Sysco
- Purchasing GPO - Silver Group Purchasing (SGP)

Menu development take place year round

- Schlegel Villages puts out 2 seasonal menus per year:
 - Spring & Summer – launches in May
 - Fall & Winter – launches in October
- 4 week menu cycle



36 | CLRI-LTC.CA



Schlegel Villages Menu Development: Process

- Collaborative process between the Corporate Menu Team, Village Directors, production team and occasionally village Registered Dietitians.
- Menu development meeting takes place at the start of a new seasonal menu to review the concluding menu. This involves:
 - Director of Hospitality and Director of Food Services
 - Village Cooks and Chefs
 - Reviews concluding menu in respect to the following:
 - Production: work load, equipment needs and recipe feedback
 - Feedback on new products.
 - Cost of menu
 - Resident uptake/popularity
 - Bring forward new recipes and menu ideas



37 | CLRI-LTC.CA



Schlegel Villages Menu Development: Process

Other considerations:

- New products from vendors and suppliers
- Ideas from Sysco Food Shows
- Seasonal products
- Food trends and cultural foods
- Recommendations from Canada's Food Guide: plant based proteins



38 | CLRI-LTC.CA



Poll Question

Have you incorporated recipes with plant based proteins into your LTC menus?

39 | CLRI-LTC.CA



Schlegel Villages Menu Development: Process

First draft of the new menu (regular and snack) are built in Synergy on Demand

- New recipes are built with their appropriate extensions (minced, pureed, etc)
- Review and link any new ingredients
- Reviews cost and nutrient analysis
 - Menu is costed for Regular diet/Regular texture only
- Reviews and spreads therapeutics

40 | CLRI-LTC.CA



Schlegel Villages Menu Implementation: Process

- Corporate RD reviews new menu and make any necessary recommendations/changes.

- Average Sodium Content: 2300mg/day
- Average Fibre: 25g/day
- Regular and Snack menus are costed to \$9.00/day
 - Regular Menu: ~\$6.30
 - Snack Menu: ~\$1.20
 - Allow \$1.00 for supplement use
 - Wiggle room for the team:
 - G-Tubes
 - Rising supplement usage
 - Therapeutic Diets



41 | CLRI-LTC.CA



Schlegel Villages Menu Implementation: Process

Working with Sysco to ensure listing of new products/product availability for new menu

- Supplier updates
- Product discontinuations
- Production changes/Substitution recommendations

Liaise with Purchasing GPO for any product recommendation/cost saving strategies

- Recommendation for product on the purchasing bid
- Reviewing rebates

42 | CLRI-LTC.CA



Schlegel Villages: Menu Launch

- Corporate menu and snack menu are scheduled in Synergy on Demand – available for villages to access.
- Resources provided for the Village team related to menu launch:
 - Menu target implementation date
 - Linked product codes for order guide
 - Master Order Guides built in SyscoSource
- Typically allow 4 – 5 weeks from menu release date to implementation date.

43 | CLRI-LTC.CA



Schlegel Villages: Menu Launch

- **At the Village:**
 - The Food Service Directors reviews the corporate menu.
 - A Food Committee Meeting is scheduled with the resident's council to review the new menu and gather their input
 - Our recommendation is to keep menu changes to a minimum, so the residents have a chance to try any new menu items.
 - A copy of the nutritionals are given to the village RD for review and approval
 - Getting the menu launch package ready – its printing time!
 - Standardized Recipe Binders
 - Production Reports
 - Therapeutic Binders
 - Snack Reports
 - Menu displays

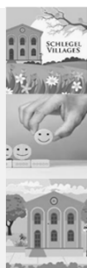


44 | CLRI-LTC.CA



Schlegel Villages Menu Process - Conclusion

- We take a lot of care and pride into the food that serve of our residents.
 - Nutritious
 - Look, taste and smell
 - Atmosphere
 - Standard: foods that we would personally enjoy
- Our goal at Schlegel Village is to ensure our residents have an enjoyable dining experience.
- We are always looking to improve our menus and practices. We welcome any feedback or input, the good, bad or ugly.



45 | CLRI-LTC.CA



In Summary: Putting NiD Recipes into ACTION

- **Nutrition in Disguise Recipes** are available on the CLRI website.
- **Implementing NiD recipes into your menus:**
 - Identify NiD recipes of interest for your resident population
 - Favourite type of dishes: soups, entrees, desserts
 - Review ingredient deck and availability of products
 - Review cost and nutritionals
 - Conduct NiD Taste Tests to gather resident feedback

46 | CLRI-LTC.CA



Finding NiD Recipes

- Ontario CLRI website
- Recipes
 - Taste testing event resources

Synergy Tech Suite Sysco's all-in-one foodservice management software and hardware solution for healthcare & senior living industries

- Look for recipe box



47 | CLRI-LTC.CA



Next steps with NiD and the Ontario CLRI...

- Project addresses a knowledge gap that can improve food quality → improved health, such as reduced falls and ED visits
- Develop/test new recipes, based on model created
 - Focus on plant-based proteins
 - Side dishes and desserts
 - Universal texture or minced and pureed variations
- Develop further knowledge translation materials

48 | CLRI-LTC.CA





clri-ltc.ca



@CLRI_LTC



Ontario CLRI



info@clri-ltc.ca



1-877-789-0614

Thank you! Questions?

49 | CLRI-LTC.CA