

# Improving food and nutrition in long term care/retirement homes:

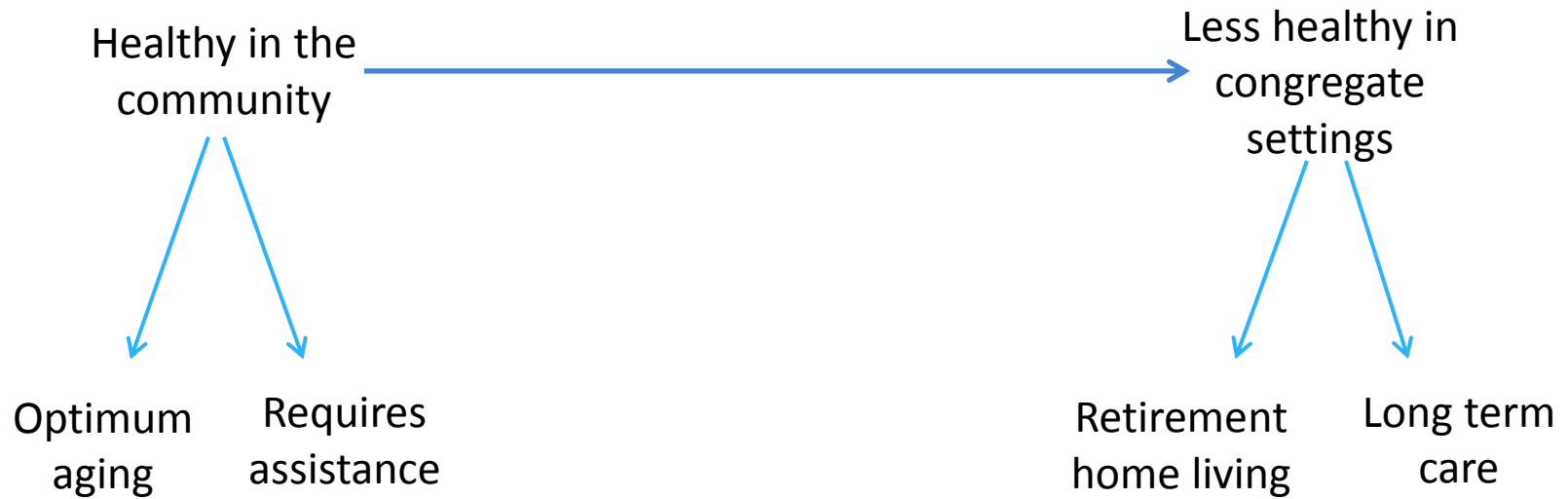
## Opportunities for product development

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# Our aging population



# Food.....



# Poor food intake is common

- Food apathy
- Reduced physical capabilities
- Physiological changes
- Medication use
- Illness
- Restricted income
- Depression
- Cognitive impairment
- Decreased energy needs
- Increased need for repair of tissues
- Decreased efficiency of the body
- Decreased absorption of food
- Decreased efficient utilization of food

*Keller 2012*

# Micronutrient intakes

**Below 50% Recommended Dietary Allowance:**

Vitamin D

Folate

Calcium

Vitamin E

Vitamin B6

*(Lam, 2014)*

How do we design healthy foods  
for the older adult population?

# Food industry solutions

- “Anti-aging” products for:
  - Bone/joint health
    - Calcium and vitamin D
  - Cognitive function
    - Omega-3 fatty acids
  - Eye health
    - Lutein
- 2013 Market categories
  - Juice and juice drinks
  - Yoghurt
  - Tea
  - Milk/dairy
  - Drink concentrates/mixes

*(Prepared Foods, March 2014)*

# Food service strategies

Micronutrient enhancement

Nutrient dense menus





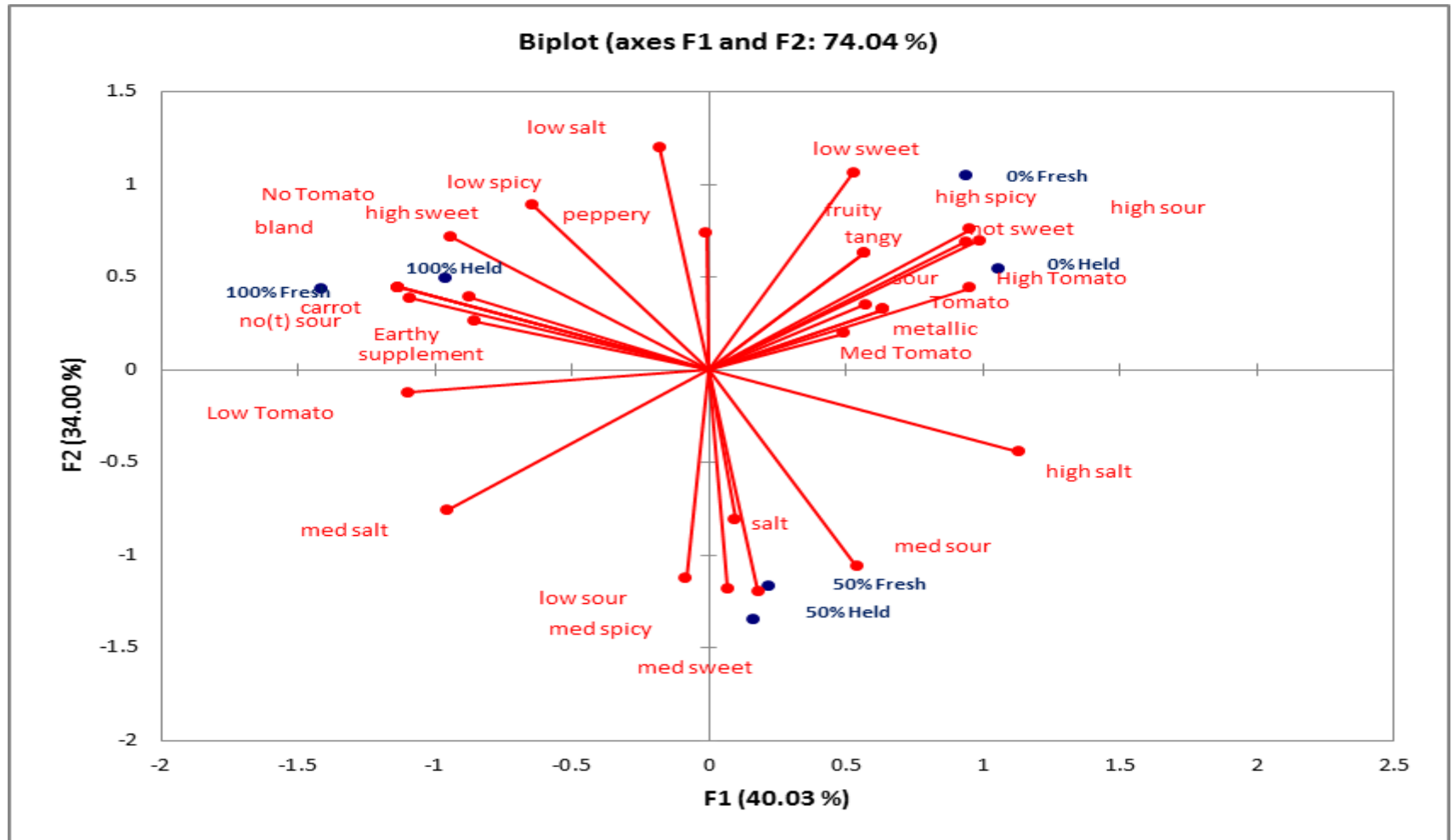
# 1) Micronutrient enhancement

## Is it feasible?

- **Key informant interviews:**
  - Products should be easy to access
  - Outsourced/pre-made is preferable
  - Clear protocols for use must be developed
  - Individuals must be able to “opt out”
  - Safety and efficacy are imperative

# Does fortification change sensory properties?

Tomato Soup sensory evaluation results



## 2) Nutrient dense menus

Development of a “supermenu”  
based on 7-day regular textured meal  
menus

# SUPER TURKEY QUINOA CHILI

## Quinoa, cooked (1 cup)

Folate: 19%,  
Magnesium: 30%,  
Zinc: 13%,  
Selenium: 7%

## Chili powder (1 tbsp)

Vitamin A: 44%,  
Vitamin E: 11%,  
Iron: 6%

## Cilantro, dried (1 tbsp)

Vitamin C: 17%,  
Vitamin K: 30%



## Black beans (1 cup)

Calcium: 5%,  
Potassium: 17%,  
Zinc: 13%

## White beans (1 cup)

Calcium: 16%,  
Potassium: 29%,  
Zinc: 16%

*(Lam, 2014)*

# Nutrient dense menus

- Match current menus for food volume and caloric level (2046kcal/day)
- Meets RDA's for all micronutrients except
  - Vitamin D (56% RDA)
  - Vitamin E (84% RDA)
  - Potassium (85% RDA)

*(Lam, 2014)*

# Designing foods: What we know

- Older adult intakes of specific nutrients are low
- This can be improved through:
  - Addition of micronutrients of increased need
  - Nutrient dense menus
- Safety is of paramount importance

# Designing foods: What we need

- Partnerships with food companies interested in producing foods with added vitamins and minerals
- Trials investigating the efficacy of eating foods with added vitamins and minerals

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