Improving food and nutrition in long term care/retirement homes:
Opportunities for product development

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Our aging population

Healthy in the community

Optimum aging
Requires assistance

Less healthy in congregate settings

Retirement home living
Long term care

Requires assistance
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

(Lam 2014)
Does fortification change sensory properties?

Tomato Soup sensory evaluation results

Biplot (axes F1 and F2: 74.04 %)
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%

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%

(Percentages shown as % Daily Values)

(Lam, 2014)
Nutrient dense menus

• Match current menus for food volume and caloric level (2046 kcal/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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