WELLNESS EDUCATION FOR CANCER NUTRITION

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STUDY RESULTS
▪ Associate Professor of Practice
  OSU Extension Family & Community Health
▪ Masters Public Health, Nutrition
▪ Registered Dietitian Nutritionist
▪ Certified Health Education Specialist
▪ Lifestyle Medicine Diplomate
▪ Certified Health and Wellness Coach
▪ Fellow of the Academy of Nutrition & Dietetics
▪ Chair of the Coos Co Food & Nutrition Group
WE CAN
Wellness Education for Cancer Nutrition
- Cancer study funded by OHSU Knight Cancer Institute Community Partnership Program

RATIONALE
- Cancer is the #1 cause of death in Coos County
- RWJF 2018 County Health Rankings

Coos County Community Health Assessment (2018)
County Health Rankings, Coos County, outcomes/overall/snapshot
Studies demonstrate that intake of fruits and vegetables can improve outcomes for cancer patients by reducing incidence, severity and associated morbidity. High-fiber diets feed the microbiome which improves immunity, reduces toxicity of cancer treatment therapies and enhances effectiveness. Fiber is found only in plant foods.

Cruciferous vegetables and cancer prevention, National Cancer Institute
Healthy diet and lifestyle behaviors could prevent 40% of cancer cases.

- The American Institute for Cancer Research’s Third Expert Report

- 2018 World Cancer Research Fund/American Institute for Cancer Research reports
  - Alcohol and processed meat are causal factors
  - Dietary fiber protects against colorectal cancer
  - Recommend dietary patterns rich in plant foods (legumes, whole grains, pulses, vegetables and fruits)
  - Recommend modest meat, fish and dairy intake, low alcohol and salt-preserved foods

https://www.iarc.who.int/cards_page/world-cancer-report/
According to the 2018 Coos County Community Health Assessment, less than 15% of Coos County residents eat the minimum servings of 5 fruits and vegetables each day. **Optimal** intake of fruits and vegetables should exceed the minimum 5 servings/day.
WE CAN GOALS

TIER 1
- Identify gaps in current practices of healthcare professionals for including nutrition therapy in treatment care plans

TIER 2
- Identify and adapt interventions to bridge gaps identified in Tier 1 surveys
- Implement and evaluate select interventions at the pilot site, the local cancer center

To identify and implement intervention strategies that link cancer patients with plant-based nutrition resources during and post treatment
Surveyed healthcare professionals and staff from all 10 healthcare sites to determine current practices and attitudes regarding nutrition and patient care

✓ 3 hospitals
✓ 3 federally-qualified health centers
✓ 2 health clinics
✓ Public Health Department
✓ CCO

Surveyed cancer patients and their caregivers identified through the survivorship program at Bay Area Cancer Center

Held focus groups and personal follow-up sessions to identify potential strategies for bridging gaps identified in surveys
SUGGESTED INTERVENTIONS

HEALTHCARE
- Policies and procedures to guide clinic process in nutrition assessment
- More options for patient referrals
- Written nutrition guidelines that could be handed to patients
- Brochure with reputable online and community resources

SURVIVOR/CAREGIVER
- Nutrition be prioritized by providers
- Written nutrition guidelines
- List of appropriate websites
- RD referral for consultation
- On-going support from health coaches, classes in nutrition and cooking
1. Nutrition Assessment Tool (NAT) with keys and instructions for implementing
2. Written nutrition guidelines
3. Brochure with local food resources and reputable online references
SELECTED TIER 2 INTERVENTIONS

- NAT adapted from Rapid Eating Assessment for Patients – Shortened version (REAP-S); tested/validated
- 17 questions on one page
- 7 food groups plus meal pattern and food insecurity
- Adapted by converting bubble responses to numbers to indicate risk
- The higher the score = greater risk


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### Nutrition Assessment Tool (NAT)

Please respond to all 17 questions. Circle the number that represents your typical day.

<table>
<thead>
<tr>
<th>In an average day how often do you:</th>
<th>Usually</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eat less than 3 servings of whole fruit? Serving = 1/2 cup cut or 1 medium whole fruit.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Eat less than 5 servings of fresh or frozen vegetables like broccoli, green beans, cabbage, cauliflower, asparagus, sweet potato, squash, zucchini, carrot, cucumber, raw lettuce (spinach, kale, romaine). Serving = 1/2 cup cooked or 1 cup raw</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Eat less than 5 servings of beans (black, pinto, fava, garbanzo, etc.) or lentils, split peas or soy beans? Serving = 1/2 cup cooked</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Eat more than 3 servings of bread, pasta, rice, pizza dough or other foods made from refined (white) grain products? Serving = 1 slice bread, 1/2 bagel, 1/2 cup rice or pasta, 1 9” slice pizza.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Eat more than 3 ounces of meat (beef, chicken, fish, game meat)? Serving = approximately size of a deck of cards.</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Eat more than 3 eggs per week?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Eat lunchmeats (lava, salami, roast beef, corned beef, turkey, liverwurst), hot dogs, sausage, pepperoni or bacon?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Consume milk, cream, yogurt, ice cream or cheese?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Add butter, margarine or oil to bread, potatoes, vegetables or rice before serving?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Eat fried foods such as hamburgers, pan or deep fried chicken, fried fish, pan fried noodles, French fries or tater tots?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Eat sweets like cake, cookies, pastries, donuts, muffins, chocolate or other candy?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Eat snack foods like chips, crackers, popcorn, or nuts?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>13. Drink juice, soda, fruit drink, sweet tea, punch, Kool-Aid, energy drinks or sports drinks (regular or sugar-free)?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Purchase food from restaurants, take-out, fast foods or convenience stores?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>15. Follow a special diet, eat or limit certain foods for health or other reasons?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Have trouble shopping for, or preparing food?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Worry if your food will run out before you have money to buy more?</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Score
SELECTED TIER 2 INTERVENTIONS

**NAT Patient Education KEY**

**Questions**

1. Fruits and vegetables come in many colors and textures that offer protection from heart disease, right vision, and disease, among other health benefits.
2. Processed meats may be higher in saturated and trans fats and lower in fiber and antioxidants than red meats.
3. Wild-caught fish is often lower in contaminants like mercury and PCBs than farmed fish.

**Risks**

1. Too much sodium and sugar can contribute to high blood pressure and heart disease.
2. Excess alcohol consumption can lead to liver damage, cancer, and other health problems.
3. Fast food and processed foods are high in calories and low in nutrients, which can lead to weight gain and health problems.

**Solutions**

1. Choose a variety of fruits and vegetables every day to ensure a balanced diet.
2. Use a variety of cooking methods, such as baking, roasting, steaming, and grilling, to enhance the flavors and textures of fruits and vegetables.
3. Choose lean cuts of meat and trim fat before cooking to reduce the amount of saturated fat and cholesterol.

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SELECTED TIER 2 INTERVENTIONS

- Written nutrition guidelines
  - HEAL Well book from the American Institute of Cancer Research (AICR) was chosen for the cancer study
  - For other sites using the tools, the Kaiser Permanente Plant-Based Diet booklet is more appropriate

Nutrition Resource Guide

- Food resources
- Agricultural resources
- Nutrition education
- Books & cookbooks
- Trainings
- Websites
- Health Coaches
- Getting started in plant-based dietary pattern
Healthcare staff and patients rated tools easy to use and helpful for making nutrition decisions or communicating with patients (92-100% agreement).

Patients showed less confidence (77%) that the tools would open conversations with their providers.

**HC Comments**
- Patient key tells you what you need to do next
- Helps me to refer them to appropriate staff
- Lots of examples and follow-up questions in counseling patients
- Very easy to follow and understand

**Pt Comments**
- Nice to see resource guide available
- I haven’t had any discussion with my provider at this point
BACC requested RD FTE at the center be increased from 0.4 FTE to 0.8 FTE

Cancer center’s annual required CME presentation was focused on nutrition

Health Coach Certification Training was held in Coos County in 2020

Coast Community Health Center is implementing NAT and using the Kaiser Permanente Plant Based Diet booklet
Additional funding was secured to print over 1000 Nutrition Resources Guides which were distributed to government and healthcare sites across Coos/Curry counties.

- Digital Booklets distributed to >70 Coos and Curry partners
- The advantage to digital distribution is that resources include hot links for direct access online
- More than half of this booklet includes links to national resources
As the result of participating in this cancer study, Jenny Pinard, BS, applied for and was hired as a clinical research coordinator with Knight Cancer Institute.

- She began Jul 1, 2021
Mikayla Pivec’s Master’s thesis was centered on the WE CAN study and Plant-Based nutrition.

Entitled *WE CAN Study Encourages Plant-Based Dietary Pattern*, this comprehensive paper highlights the benefits of PB diets to prevent, arrest and reverse chronic disease.

Mikayla’s paper is posted here:

https://extension.oregonstate.edu/coos/healthy-families-communities
This study may at first seem clinical, but it is a community study from which we created community nutrition resources. For prevention or treatment of any diet-related disease state NAT, key and guides can be used at any site by anyone with or without training/expertise, with any adult/young adult population teens through seniors.

For example:
- Hospitals, clinics, private practice
- Government agencies (WIC, DHS, SNAP)
- Church groups, TOPS, WW, students
- Families or friends
- Individuals
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"Let food be thy medicine and medicine be thy food."
~Hippocrates