Improving the Assessment of Patient Dietary Choices

Jiayi Luo
University of Vermont

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Improving the Assessment of Patient Dietary Choices

An Objective Questionnaire for Assessing Dietary Health

Jiayi Luo
Family Medicine Rotation
Newtown Primary Care
Project Mentor: Dr. Eurica Chang
November 2023
Problem Identification

• Patient recall of their own dietary habits is subjective and inaccurate. They are also often unaware of harmful foods and healthy alternatives.
  • Certain diets, like the Mediterranean diet, are shown to decrease cardiovascular risk factors. [5]
  • 1.8 million cases of diabetes in the US over the next ten years can be attributable to consumption of sugar sweetened beverages. [4]

• Providers often spend an extensive amount of time discussing diet that could be better spent on patient education.
  • Many physicians feel unprepared to provide dietary counseling and an even greater number feel they are unable to make meaningful changes to patients’ diets. [1]

• Patients may not feel comfortable verbally addressing their diet to their provider. It may be better to have an objective, nonjudgmental form to share instead.
Poor diet contributes to the economic costs of obesity and metabolic disorders. However, one must also consider the cost of comorbid conditions: hypertension, GERD, diabetes, etc.

• The United States is the leading country in obesity-related spending.

• In 2014, nearly 30% of the global population was overweight or obese. [3]

• Obesity puts patients at risk for comorbid conditions. In fact, much of the direct cost of obesity is attributable to treating high-cost comorbidities
  • Comorbid cardiovascular disease ($193–$315 billion)
  • Type 2 diabetes ($105–$245).
Interviewed providers working at Newtown Primary Care:

- What kind of resources do you use when speaking to patients about their diet?
  - “We often do not have enough time to discuss everything we want to. It would be very helpful for patients to be able to access nutritionists or dieticians.”
  - “I generally only discuss diet with my patients verbally.”
  - “There are pamphlets. They just are not very personalized.”
  - “We refer to metabolic clinic nearby.”

- Do patients generally have a sense of good diets / dietary habits?
  - “No, definitely not.”
  - “Rarely. Sometimes they do their own research but will still ask you for advice.”

“Having access to resources, and personalized resources, is the biggest obstacle for patients at the metabolic clinic.”
– Dr. Stephanie Page, DO (Metabolic Weight Loss Clinic)
Intervention and Methodology

- Short, standardized, objective screening survey to be completed by patients during rooming. Patients were asked to think about how many times a week they consumed certain food products.

- This survey was offered to patients coming in with a chief complaint of diabetes, hypertension, or obesity/weight loss. Patients were aware that the survey was completely optional.

- This survey included an assessment to assess for patient interest in sharing more about their diet.

### Dietary Health Assessment

*This form is completely voluntary and informational. Information below will only be used for purposes of this project. No identifying information is collected or retained.*

<table>
<thead>
<tr>
<th>How many times per week do you consume the following?</th>
<th>Times per week (please circle)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Red Meats</strong></td>
<td>beef, chicken, lamb, sausages, pork</td>
</tr>
<tr>
<td><strong>Refined Grains</strong></td>
<td>white bread, white rice, pasta, noodles, cereal</td>
</tr>
<tr>
<td><strong>Desserts</strong></td>
<td>cookies, pastries, croissants, ice cream, chocolate</td>
</tr>
<tr>
<td><strong>Salty Snacks</strong></td>
<td>chips, pretzels, crackers, popcorn</td>
</tr>
<tr>
<td><strong>Fried Snacks</strong></td>
<td>fries, onion rings, chicken nuggets, chicken wings</td>
</tr>
<tr>
<td><strong>Dairy Products</strong></td>
<td>milk, cheese, yogurt, butter, cream</td>
</tr>
<tr>
<td><strong>Sugary Beverages</strong></td>
<td>soda, fruit juice, sports drinks, energy drinks</td>
</tr>
<tr>
<td><strong>Alcohol</strong></td>
<td>beer, wine, cider, sake</td>
</tr>
</tbody>
</table>

### Survey Assessment

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>This form helps me reflect on different foods in my diet.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to share more about my diet with my provider.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Filling out this form helps me share more about my diet with my provider.</td>
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Additional Comments:
The Dietary Health Survey was completed by 20 patients at Newtown Primary Care Clinic. Of the categories listed on the survey, the most frequently consumed categories were “Refined Grains” and “Dairy Products.” “Dairy Products” scored the highest with 55% of patients marking 5+ times a week of consumption. “Alcohol” had the greatest range of responses, with patients generally drinking none at all or 5+ times a week. All surveys were able to be completed in the time frame after rooming the patient and before the physician entered the room. Patients generally had a positive response to filling out the survey (see next slide, effectiveness).

### Dietary Health Assessment

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<table>
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<tr>
<th>Category</th>
<th>Examples</th>
<th>Times per week (please circle)</th>
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<td>Red Meats</td>
<td>beef, chicken, lamb, pork</td>
<td></td>
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<td>Refined Grains</td>
<td>wheat, rice, pasta, macaroni, spaghetti</td>
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Additional Comments:
Evaluation of Effectiveness and Limitations

Effectiveness

• 80% of patients agreed or strongly agreed that “This form helps me reflect on different foods in my diet.”
• 50% of patients wanted to share more about their diet with their provider.
• 85% of patients agreed or strongly agreed that “Filling out the form helps me share more about my diet with my provider.”

Limitations

• Need larger sample size over a longer period of time.
• No demographic information was collected for the purposes of this survey.
  • Unable to assess whether there are demographic differences affecting survey results.
  • Unable to assess whether chief complaint is relevant to patient receptiveness.
• Completing the survey itself takes time.
Future Directions

• Creation of additional portion of questionnaire to include positive eating habits such as fruits and veggies, hydration, and lean proteins.

• **QR Code** allowing for access to dietary survey without a physical copy.

• Creation of **dot phrase** or form in Cerner to allow physicians to track patient responses to questionnaire.

• **Provide patients with copies** of questionnaire to encourage dietary compliance at home.
References


