Promoting Sustainability in Food Service:
a Qualitative Exploration of Barriers, Facilitators, and Best Practices in Veterans Affairs Hospitals

Prepared by the NOPREN Food Service Guidelines Work Group

NOPREN
Nutrition & Obesity
POLICY RESEARCH & EVALUATION NETWORK

Why sustainability practices?

"Sustainability": avoidance of the depletion of ***natural resources*** to maintain an ecological balance.

Food waste	Energy usage	Greenhouse gases

Sustainable *diets* are healthy, have a low environmental impact, are affordable, and culturally acceptable [1].

In 2013, *healthcare alone* created

of all US greenhouse gas emissions [2].

What did we do?

Our purpose was to explore barriers, facilitators, and best practices for "Sustainable food service strategies" among food service personnel in Veterans Affairs (VA) hospitals.

"Sustainable food service strategies":

(1) Increase plant-forward and plant-based dishes

(2) Procure and serve sustainable foods that meet organic, fair trade, and/or other ecological or ethical certifications

(3) Procure and serve locally/regionally produced items

(4) Reduce food waste

(5) Reduce energy consumption and/or reduce non-food waste

How did we do it?

Participants were food service directors recruited via email by the national VA Food and Nutrition Service leader.

14 directors completed a survey
10 60-minute interviews were analyzed

Survey	• participants' title • length of time in role • motivations for sustainability practices • self-rating of progress on each of the five sustainability practices
Interview	• barriers, facilitators, and best practices for sustainable food service strategies

Qualitative analysis of interviews.

- 2 researchers created codebooks and decided on major themes
- All interviews were independently double coded by both researchers

Survey Results

86% (n=12) were implementing sustainability practices in food service

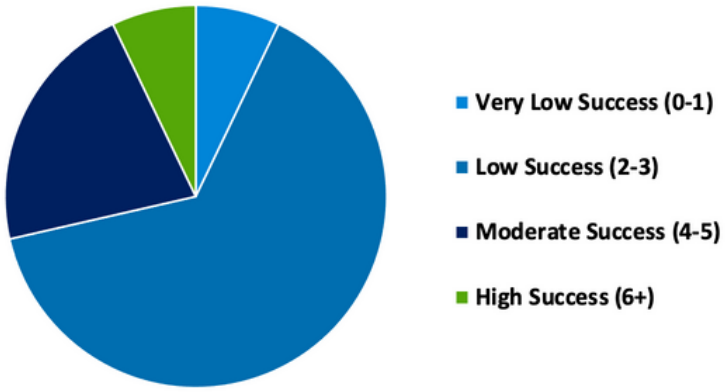
71% (n=10) used vendors other than their prime vendor (US foods)

Served in their current role for **~6.5 years** (range 6 months - 21 years)

Facility has been implementing practices for **~5 years** (range 0 - 12 years)

#1 Priority/Motivator for Sustainability Practices:
REDUCING FOOD WASTE

Self-rating of **progress** on sustainability practices from 1 (lowest) to 10 (highest)



Barriers, Facilitators & Best Practices

(1) Increasing plant-forward and plant-based dishes

BEST PRACTICES...

1. Take familiar dishes and make them plant-based (n=8)
2. Accommodate your demographics (i.e., marketing strategies, taste tests) (n=6)
3. Increase offerings of vegetarian options (n=6)
4. Blend plant and meat proteins, offering seafood, altering portion sizes of proteins vs. veggies (n=5)

Barriers	Facilitators
Patient preference for meat dishes, non-meat dishes not ordered enough, patient demographic (n=10) Time needed to plan menus, staffing issues (n=4) Supply chain issues, cannot find meatless products (n=2) Does not work with current meal prep operations (i.e., not a room service menu, cook chill) (n=2)	Testing recipes in the cafeteria first, taste testing (n=5) Working with chef/cooks to develop recipes (n=4) Newer/younger patients have more preference for vegetarian dishes (n=4) Staff-perceived importance, goal-setting (n=3)
"I think, our biggest challenge is [...] acceptance by the patients, because even on those days where we serve the meat-free items, they're like, you know, 'Where's the meat?' So [...] they're interested in eating healthier, but the percentage that still wants meat is very high."	**"Just having the cafeteria where we can trial different things more [...], because we can pretty much go to the cafeteria after we serve something and [...] it's just easier."**

(2) Procuring and serving sustainable foods that meet organic, ecological, and/or other ethical certifications

Barriers	Facilitators
Limitations with prime vendor, i.e., US foods (not available, have to purchase product on contract, not clear which products meet certifications) (n=9) Practice is not a priority to justify resources (time, cost) (n=5) Lack of patient/staff buy in (n=4) Organic foods are more expensive (n=3)	Products are easily available and/or reasonably priced (fair trade coffee, chicken Raised Without Antibiotics (RWA)) (n=6) Offered through or advertised by prime vendor (US foods) (n=5) Leadership priorities (n=2) Patient support (fair trade coffee) (n=1)
"I'd love to say [it] is simple, but it's, it's finding the substitute. It's changing it in computrition. It's creating a new item. It's building a new recipe. [...] There's so much work to make just something very simple happen."	**"Scoop is US foods like, advertisement. There's like new Scoop products and they advertise very well what are sustainable products. Um, they give all the information really well."**

BEST PRACTICES...

1. Choose products that are easily available and/or reasonably priced (n=4)
2. Work with prime vendor (ServeGood report or US foods representative) (n=4)
3. Work with other local VAs (coordinate what products you choose to ensure they're prioritized and stocked) (n=1)

Barriers	Facilitators
Burden setting up contracts with local farmers (time, contract language, finding examples) (n=8) Lack of consistency or standardization of the product (n=6) Finding farmers whose production meets the needs of the facility (n=5) Difficulty working with US foods for local products (n=5)	Having someone with time/passion to champion the effort (n=4) Local options are better compared to the prime vendor (less expensive, easy to work with, better quality, lasts longer) (n=4) Local options offered through US foods (n=4) Inherited a long-established contract (n=2)
"Going through the process of becoming a vendor and, just complying with the way invoices need to be submitted. It's not something that was of perceived as something of value to [the farmers] and more of an investment. So, we can try, but we didn't get very far."	**"I've renewed the [contract] a couple of times because [local vendors] are cheaper than our prime vendor. And the service is fantastic [...]. The product is better, the milk is fresher. The expiration dates are way further out."**

(3) Procuring & serving locally/regionally produced foods

BEST PRACTICES...

1. Begin with the most used or preferred product to purchase locally (i.e., milk, chicken) (n=4)
2. Communicate importance of local food purchasing to staff and/or leadership (n=2)
3. Provide community outreach and assistance with contracting (n=1)
4. Work with vendors and VA contracting to help set up the contracts (n=1)

(4) Reducing food waste

BEST PRACTICES...

1. Implement food tracking/plate waste studies to prevent overproduction (n=6)
2. Monitor/rotate product to use leftovers and/or use products before they expire as per safety guidelines (n=5)
3. Engage food donation programs (n=5)
4. Use equipment to reduce carbon footprint of waste (pulper, biodigester, oil recycle, and/or compost) (n=3)

Barriers	Facilitators
Time commitment too large (n=4) Food waste and usage is difficult to assess (staff decisions, tracking) (n=3) Cost (n=2) Issues with biodigester (smell, sanitation, frequent breakdowns) (n=2)	Staff support (motivation, time/effort) (n=4) Switching to selective menu. (n=3) Leadership support and/or passion (n=2) Practice is cost/time efficient (n=2)
"I don't think anything has been necessary difficult once we do it, it's more finding the time to, take on a project. [...] Definitely the food pantry has been the bigger project that took a lot more time, and a lot more effort from other people."	**"We are actually working on a project that allows us to, serve our leftover food to patients that are food insecure. I have a supervisor that, this is kind of his passion. So, he's worked really hard on this project."**

(5) Reducing energy consumption and/or reducing non-food waste

BEST PRACTICES…

1. Apply practices to use less plastic/Styrofoam (reducing use of straws, biodegradable disposables, etc.) (n=6)
2. Replace old equipment with energy saving options (automatic lights, etc.) (n=6)
3. Research studies to support practices (i.e., infection control, plate waste) (n=2)
4. Communicate to leadership budget justification of energy-saving (n=2)

Barriers	Facilitators
Feeling that they are unable to influence energy usage or is out of their control (food service uses a lot of energy, not sure how, building is old, would be up to facilities, not a priority) (n=7) Investment of time/effort/money (for technical upgrades, staffing problems) (n=7) COVID-19 (disposables to prevent spread, labor shortage) (n=3)	Leadership support (n=3) Prioritization & goal setting, personal investment (n=2) Practice doesn't impact the customer (n=2) Work with prime vendor to identify compostable products (i.e., US foods representative) (n=1)
"Yeah, we're limited on what we can purchase. Covid, is exactly you know. Yeah, we were Styrofoam free until that's all you could buy."	**"Yeah, a lot of facilities have a capital planning committee, and you kind of go there and, like, pitch an idea. […] I think every year that I pitched something for equipment or electrical upgrade, they did it and it may not have happened the next year, but they approved it."**

In summary…

Important barriers exist that are specific to implementing each of a broad variety of sustainable food service practices.

For practices that impact the patient, it is pertinent to consider patient demographics, preferences, and involvement in decision-making.

This study was able to identify and summarize the "low-hanging fruit" for implementing sustainability practices with time and resource limitations.

Next steps…

Action can be taken by interested organizations, Workgroups, & advocacy groups to inform resources and policy promoting hospital's sustainability practices.

Future research is warranted to determine implementation of sustainable food service practices in a larger, representative sample including VA and non-VA healthcare facilities.

References: [1] Food and Agriculture Organisation, editor Sustainable diets and biodiversity: direction and solution for policy, research and action. Proceedings of the International Scientific Symposium: Biodiversity and Sustainable Diets United Against Hunger; 2010; Rome: FA. [2] Eckelman MJ, Sherman J. Environmental impacts of the US health care system and effects on public health. PloS one. 2016 Jun 9;11(6):e0157014.

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