FHH Working Document:

Intent
The intent of this document is to capture the work and goals, catalog evidence-base for the work of the FHH team. The work collected in this document will/can be used for presentations, grant applications/proposals and for guiding the work of our institution in this area. This is an internal document and the material and proposals therein have not been reviewed by or accepted by MaineHealth administration.

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Background:
20% of health care costs in the United States are related to poor nutrition, amounting to billions of dollars annually (1). Health Care Organizations have a moral and financial obligation to create new strategies to address this challenge in ways that support, but go beyond conventional office visit provider conversations. The societal and individual relationships with food that have created these widespread nutrition challenges are complex, and are imbedded in our culture, financial and political structures. The association between poor diet and chronic disease is strongly linked to individuals with food insecurity, but individuals with ample access to healthful foods also suffer from diet related diseases. The Food for Health and Healing team at Maine Medical Center has gathered to create a plan for a strategic system-wide change. With the use of evidence based and hands on nutrition programming, education for staff, learners and patients with consistent messaging, coordinating improved healthy food access opportunities into our system, contributing to the research on effective dietary interventions to treat and prevent disease, Maine Medical Center will be viewed as a leader in this arena. Our recommended approach will require gathering information to coalesce likeminded local partnerships, understanding gaps and determining strategy to address unmet needs, and learning from other states who have already begun this work in a strategic way. Ultimately, addressing poor nutrition will require strong leadership, communication, willingness to support and encourage change to align food culture and messaging to support health and prevent disease.

Methodology (how paper was designed/process)
- Background research
- Contributions from tests of change in collaboration with GSFB/Cooking matters
- Food insecurity screening/resource connection efforts across the system
- Collaboration with SMCC
- Connection with Health Meets Food courseware/Conference
- Individual meeting with interested stakeholders (Ken Lombard, Odette Perriel, Dora Mills, etc.)
4 Strategic Domains: ACCESS, EDUCATION, RESEARCH, ENVIRONMENT/POLICY

1) ACCESS

*Individuals in our communities will have consistent access to food that will support health.*

Access to fresh and healthy food can be influenced by many factors, including, but not limited to income, race, mobility, climate and rurality. Almost 14% of Maine households are considered food insecure, as are 1 in 5 Maine children. Even though it is important to connect qualified individuals to SNAP benefits, and many who qualify don’t apply, 36% of those with food insecurity do not qualify for public assistance for food access. Despite the fact that the cost of access to consistently healthy food can be prohibitive to individual families, studies where food has been provided as part of the health care continuum, have shown the efforts to be cost effective, by decreasing the overall cost of healthcare, even when taking into account the cost of food. This finding is not surprising, considering that the average inpatient hospitalization costs are 24% higher and readmission within 15 days almost twice as likely for malnourished patients as compared to properly nourished patients and that food insecurity is associated with increased use of health services in primary care networks among diabetic patients (resources in Mass State Plan document, reference/appendix). It will be insufficient for us to train providers to talk to their patients about how changes in diet could improve their health, in food in an environment where access to the food that patients need to be healthy is not consistent. When patients are found to be food insecure by their health care team through formal screening and/or direct conversations about food resources, one option would be to direct patients to existing local pantries. This continues to present challenges to some patients, given that the health quality of the food offered at local pantries can be variable with limited self-efficacy and choice (reference added-SSM Popula), the pantry may not be open when the patient is able to go, the family may not use their local pantry secondary to concern of stigma and bias. We will develop a multi-tiered approach similar to the Massachusetts state plan, where connecting individuals to food based on their level of need (medical and economic), can be facilitated more directly through their healthcare team.

In the Massachusetts state plan the approach is scaled, based on need. Some families need help with ingredients, while others, that may be very sick and have limited mobility, may need delivered, medically tailored meals delivered to their homes.

Current access efforts underway at MaineHealth:

- food security:
  - Screenings in many primary care settings
  - Screenings in some hospital settings (including MMC Pediatric admissions)
Learning meals
Recipes
Epic food
Consideration
Improving meals
Gather
Widespread
Mobile
Food
Produce
families
Understanding
Food
Hospital Gardens
Steps

- Food pantry information lists in EPIC smartphrases
- Emergency food bags in primary care and some hospital settings
- SNAP/WIC resources through Patient assistance line or in house social worker
- Fresh produce given at 2 MaineHealth sites
- 2 hospital pantries developed at MaineHealth
- Food As Medicine food security and chronic disease management program being developed at food pantry site in Farmington
- Partnership with Wayside/GSFB to have free meals available to parents with children admitted to MMC who have food insecurity

- Gardens
  - 6 MaineHealth hospitals set up raised veggie beds
    - Expansion of MMC garden beds in 2022
  - MaineHealth clinic raised beds
- Hospital food service
  - Western Maine food rescue
- Food prescriptions/delivery-known Current Maine resources (online search):
  - Community Cafes (Lunches for age 60+)-eat in the cafe, not delivered,
  - As You Like It (meals 60+ many locations in southern Maine-includes hospital (MMC Portland, Scarborough and Brighton campus and York hospital), community centers, restaurants),
  - Simply Delivered for ME - pay for the meals (Maine sourced foods, heart healthy, low sodium, options for kidney disease, gluten free, vegetarian),
  - Silver Cuisine (BistroMD)-pay for the meals, targeted to 50+, described as “doctor designed, chef prepared meals)
  - Feel Better Food (all ages-home meal delivery, no age limits or income limits, must be referred by provider. Meals are expected to be reheated in the microwave
  - Meals on Wheels (60+)
  - Friends of Aroostook county

Next Steps for Access at MaineHealth:
- Understanding of food resources that are available and improving access to fresh produce for families in need
- Produce vouchers/“prescriptions”
- Food pantry partnerships with more information about health of food
- Mobile pantry that will consistently have fresh produce available
- Widespread FI screening in all clinics and education about resources
- Gather data on programs currently offering healthy cooked meals (for pick up and/delivery) meals and consideration of organized home delivery system with MMC dietitian approved meals for specific health conditions and general healthy nutrition (\(?\) intern project)
- Improving the SNAP participation rate of our patients who qualify
- Consideration of expansion of our cafeteria meals for food insecure (not just seniors) and food rescue
- Epic referrals for resources and closed loops
- Recipes and cooking classes (see education) to help families prepare healthy, cost-conscious meals and bridge off of meal delivery programs when able
- Learning lessons from successful programs (Community Servings)
• Expansion of MMC/MMP garden space with access for patients
• Feedback from food recipients, process to assure quality/modifications with new nutritional information as it comes out
• Offering health screenings/flu shot clinics at Food Pantries (and directing patients to healthy foods related to blood pressure screening, A1C, lipid panel results)
• Provide mobile units. Try to find local providers to participate at pantries that are interested (set them up for success with normals guidelines/handouts)

2) EDUCATION

Providers, staff, and medical learners understand the connection between food and health, have the basic culinary skills to facilitate their own healthy habits and are consistently communicating with and connecting patients to available nutrition resources.

When health care staff effectively communicate with their patients about lifestyle behaviors, it can facilitate healthy change. We leverage this influence with many important efforts, including immunizations and smoking cessation, as well as the importance of healthy eating and activity. At MMC we have dietitians available for consultation with our patients, we have connected with the DPP in our communities, but have not routinely utilized other resources like cooking class series.

Just as we have realized that assistance and additional support can be helpful with smoking cessation, for individuals without basic culinary skills, translation of how to use dietary advice can be a barrier to follow through. For this reason, many hospitals and community organizations interested in improving nutrition and health, are currently adapting cooking lessons as part of their programming. In addition to building basic cooking skills, such group sessions also facilitate community building and can improve social isolation (both for learners and for support volunteers). When such programming exists in a system, for optimal utilization, education trainings and EMR referral resources need to be created, as well as participant feedback loops and effectiveness studies.

When organizations partner with outside programs to run cooking programs, it is difficult to control the content of the sessions, given that many are volunteer run by individuals with different backgrounds and belief systems about food. A system-wide effort, led by individuals trained in nutrition, with a standardized curriculum and messaging would be an ideal way to deliver culinary content. This standardization allows for research and quality studies based on the efforts. In an ideal system, we could connect patient to programming in a streamlined way through our EMR, allowing providers to place referral in an efficient manner to educational opportunities with approved/consistent messaging.
Providing culinary education for medical students has been shown to increase confidence discussing food and nutrition with patients as well as improving their own dietary habits. In an effort to advance healthy food culture at MMC, optimize referral numbers to patient culinary classes and to improve the health of our employees, culinary learning opportunities should be offered to employees of the medical center. Such courses could be used for team building exercise, part of WOW programming and would create networking opportunities among employees.

National conferences in Culinary Medicine have gained popularity with both local and national health care providers, including the Healthy Kitchen, Healthy Lives Conference in California. With gained experience in delivery of healthy culinary courseware and our partnership with SMCC, MMC could provide (yearly) national conferences and build our reputation as having expertise in this developing content area.

**Current efforts in Education at MaineHealth:**
- NDPP
- Partnership with SMCC Culinary and Hospitality Program
  - Trial run of HMF curriculum with interested providers
  - Healthy teaching classes now happening for SMCC culinary students
- Cooking Matters
  - Residents/learners- one-off class in pediatrics, family practice, integrative and preventive medicine as part of their lecture series
  - Employee Cooking Matters classes (virtual, coordinated through WOW program)
  - Patients-Pediatric and adult Weight and Wellness, general pediatrics, FP/Integrative Medicine wellness groups, Multiple Sclerosis clinic, Cardiac Rehabilitation
- Health meets food medi education opportunity (2nd year), several virtual classes delivered (pediatrics, internal medicine (optional), medical student (optional), preventive medicine and family medicine)
- Faculty teaching residents-Kristen Sciacca-one-off opportunities with primary care tract IM residents

**Next steps in Education for MaineHealth:**
- Cooking Matter expansion:
  - One session for residents in all residencies at MMC
  - Patients (expanded, standardized offerings with EPIC referral)
  - If using “prescription” food/home meal delivery for prescription food, if patient improves, consider transitioning off with cooking class offerings
- Health meets food
  - Medical student class at SMCC as part of curriculum starting in 2022
  - Residents/learners ELECTIVE-create yearly 2 week rotation including training in multiple areas ?? add project to advance program and create 4 week opportunity
  - CME for providers
- Gardening interventions
  - Connect to community programs that can support individuals building their own garden
• Teaching kitchen
  o Need a site for culinary teaching (unlike prior demonstration kitchen in Falmouth)

3) Research and Evaluation

Maine Medical Center will study our food for health and healing interventions with the goals of maximizing effective initiatives and contributing to the evidence in this field.

Research will help us direct the process of growth in programs in food for health and healing. The challenge of improving the system’s relationship with food can seem overwhelming, but there are many researchable questions along the way to help us focus our programming and policy making for maximum benefit for our patients, employees and learners. We will develop descriptive material of the current state of patient medical needs and opportunities as needs assessments, and as quantitative markers of impact and effect.

We need to have an understanding of the current state of nutrition resources utilized in patient care to determine gaps in what is needed. We will ascertain baseline status of the health conditions that can be positively impacted by our work, in order to assess effectiveness. For this work, we would utilize resources data scientists at CORE, and through resident/fellow projects. By doing so, we would collect patient data, including a baseline epidemiology of diagnosis, clinical findings and associations with programs implemented (number reached; content received; findings of note). This would allow us to evaluate the patient experience and the educational offerings we provide our patients. In addition, the research we conduct will include evaluating Maine-Health employees own health, thereby evaluating outcomes related to self-reported health knowledge, choices, preferences and outcomes pre and post interventions (i.e., changes in cafeteria offerings, changes in policy related to celebrations, NDPP classes, etc.).

Once we fulfill the needs assessment to conduct necessary research we would be able to assess the information where there is “equipoise” in outcomes of treatments, clinical outcomes and educational efforts. By doing this, we can begin to implement the science behind the research.

Continual research shows that we need to provide educational and training opportunities for not only our current practice physicians, but for our future physicians by delivering relevant education and hands on teaching to increase their knowledge, skills and confidence. That is why we need to increase learning opportunities for all medical learners, including students, residents, fellows and interdisciplinary students of nursing, pharmacology and social work.

Our system will have access to:

1. Strategies to evaluate any projects and programs implemented from the initiation of the Food for Health and Healing will need to be planned to include data collection in the broad areas that are delineated above.
2. Tool kits for developing research questions in this content area.
3. Sharing of the key content areas with researchers across the institution, and with the program directors to enable learners to select Food for Health and Healing content areas as focus for their scholarly projects.
4. Inclusion of funding for evaluation in all program development to monitor impact, success.
5. Encourage more clinical research in this content area by developing mentors, programs of inquiry and practice based feedback loops.

Current Research Strategies being done at MaineHealth:
- Patient Related Care
  - MMP population health is tracking the patients with documented Pre-Diabetes to target opportunities to enroll them in the National Diabetes Prevention Programs.
  - Food as Medicine intervention of individuals with FI and chronic disease will be tracking outcomes
- Implementation Science – assessment of information
  - Dr. Cohen’s Cardiology group is studying the impact of providing food for patients hospitalized and discharged with a diagnosis of heart failure (second study underway)
- Employee Health
  - High levels of uptake with the online app for MaineHealth employees for the Virgin Pulse platform
- Medical Learners
  - Learner assessment of knowledge base and changes in attitudes, knowledge and behavior and choices made experience (at all levels)
  - Baseline curriculum assessment of what is taught; pre- and post-knowledge attitude and behavior assessments; six months post – education assessment of same knowledge through Health Meets Food platform

Next Steps for Research Strategies being done at MaineHealth:
- Patient Related Care
  - System wide diagnosis and epidemiological assessment – how many people with “diet/exercise/lifestyle impacted” dx (Diabetes, CHF, renal disease/dialysis, celiac) – and Pre-diabetes, HTN, Irritable Bowel, etc.
  - Using Epic data to determine the volume of care that is provided related to “food/nutrition/diet related services” – nutritionists, NDPP, CHF care team
  - Can develop patient information entered by MyChart via EPIC forms about their dietary preferences, choices – a part of self-report/MyChart forms to be filled out
- Implementation Science – assessment of information
  - Pragmatic trials of nutrition related outcomes among groups of patients (clinical data) or employees (subjects of interventions) or learners (medical students or residents, or ancillary health workers).
- Patient Experience
  - What impact does provision of food packages to patients with specific diagnosis have on outcomes of particular illnesses (CHF hospitalization; dialysis; diabetic ketoacidosis, etc.)
  - Do patients have or need kitchen skills? What does a basic cooking and food preparation course do for individual’s confidence and choices?
o How do we evaluate programs that distribute food?
o Are there clinical effects of a restricted palate?
o What are the impacts of rurality on food choices and knowledge? Access? Language barriers?
o Are there any notable changes in medical conditions with new immigration status?

● Employee Health
  o Linking with Virgin Pulse to get fitness data, consider linking with the app and tracking function to see if employees would be willing to record their dietary choices, readings on cholesterol, blood pressure, glucose, BMI, etc. (not clinical records, but things they are self-reporting). Overall employee wellness/absenteeism, offering nutrition education/support, monitoring engagement
  o WOW rewards – step counting, tips, nutrition information,
  o NDPP
  o Employee engagement and satisfaction with care provision – environment of work, role modeling impact of Food for health and Healing with work place support, educational tools for use with self and patients

● Medical Learners
  o Learners of all levels to be studied for longer term behavior and practice change; for implications of the inclusion of education on food and its role in health and healing to the further practice choices they make.

4. ENVIRONMENT AND POLICIES

MMC will foster a healthy food environment allowing patients, visitors and employees easy access to healthy food while limiting unhealthy food.

Food plays a critical role in health and our environments impact the foods we consume. Changing these environments to have more healthy foods options and less unhealthy food will help to ensure all employees can make good choices whenever possible. It’s important to not only increase healthy foods, but it is necessary to phase out unhealthy foods such as sugar-added beverages, candy, and unhealthy snack options. There will be fewer food offering with added sugar, salt and saturated fats. (Intermountain Healthcare ref)

Where we work can play a vital role in increasing access to healthy foods and setting up policies to ensure that healthy foods are prioritized can help to sustain a healthy eating environment. It has been clear that employees want healthier food at MMC, with more than 50% survey respondents in a recent Maine Medical Center cafeteria survey stating that eating more fruits and vegetables with their meals, eating less added sugar, drinking less sugary beverages and drinking healthier options, choosing good fat instead of low fat, choosing foods with whole grains instead of processed grains and choosing healthier oils are important to employees. Creating a healthy food environment will not only help the employees reach their eating habits goals, but it will also help achieve the MaineHealth vision: Working together so our communities are the healthiest in
America. In addition, a healthy food environment will highlight Maine Medical Center’s commitment to caring for our community, educating tomorrow’s caregivers and researching new ways to provide care (health hospital reference)

Increasing access to healthier food at our hospital sites, it will improve the health of patients, staff and communities while decreasing the billions of dollars being spent at a national level on treating diet-related, chronic illnesses. MaineHealth hospitals can leverage their purchasing power to increase the availability of local, sustainable foods as well as model healthier eating behavior to achieve their mission of healing.

It’s important for Maine Medical Center to take on this challenge as an opportunity to use their purchasing power and mission of healing to model healthy food procurement and consumption by serving fresher, healthier, more nutritionally dense food to patients, staff and communities. Health care organizations nationwide are writing healthier menus, working with local farmers to purchase local sustainably-grown products, reducing the amount of meat they purchase and serve, and purchasing more fair trade and certified organic products.

Current Environment and Policy Efforts at MaineHealth:
- Healthy foods initiative in the cafeteria.
  - MMC hired chef Nicholas Verdisco to improve quality of food in cafeteria and patient menu
  - Raised beds created on site at some MaineHealth sites, with expansion plans
  - Pop-up pantry at MMC started in February for care team members which served 311 employees in February 2022 and 430 employees in March 2022
    - Of note the pantry at Western Maine has a high utilization rate of care team members
- WOW program using Virgin Pulse, and also partnering with cooking matters offerings and local produce pick-up on site at MMC.
- Let’s Go! has developed a Healthy Worksite toolkit which has resources for healthy workplaces and healthy meetings (Let’s Go! ref).

Next steps for Environment and Policy at MaineHealth:
- Develop recommendations for healthy food environment – use intermountain healthcare work as a template
- Develop metrics that will be tracked
- Develop spoke people for initiative
Physicians, nurses, support staff

- Go slowly – need to bring folks along.
- Develop talking points
  - Need to develop a strong why?
    - Make sure folks don’t think this is about weight – it is about health
- Vet the why and what (the above recommendations) with key leaders and staff
- Develop community partners to help with access
  - Farmers
- Develop multiyear phase-in
  - Start with easy wins
- Begin somewhere and be flexible

Conclusion

Maine Medical Center believes in the power of food in health and healing and is advancing nutrition equity through nutritious food access, education, policies and impact studies.

Creating a Food for Health and Healing Program at MMC will allow us to leverage food as a tool to improve the health of our workplaces and communities. Efforts thus far have been limited and have had incomplete coordination. The strategy described in this working paper would support consistent messaging throughout the system and would broaden the scope of work of effective programming. This work will require institutional commitment, leadership and coordination (see attached pro forma). Benefits of such an investment would strengthen connections between employee wellness, resident and staff education, hospital food service, community programming, quality improvement and patient care and could result in improved employee health, patient outcomes and hospital reputation.
References:


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http://www.healthierhospitals.org/hhi-challenges/healthier-food

https://intermountainhealthcare.org/services/wellness-preventive-medicine/live-well/eat-well/healthy-eating-environments/

https://mainehealth.org/lets-go/adult-program/employers/tools
Appendix:

**FOOD IS MEDICINE PYRAMID**

- SNAP, WIC, and Emergency Food Programs
- Population-Level Healthy Food Programs
- Produce Prescription/Voucher Programs
- Medically Tailored Food Programs
- Medically Tailored Meal Programs

**Food Insecurity Screening in Primary Care Practices**

October 1, 2018 - September 30, 2019

**Screening Data Ages 0-11**

- **298** Providers Screening
- **35,333** Patients Screened
- **72%** Average Screening Rate
- **5%** Average Positive Rate

**Food Access Resources Distributed**

- **9,905** Pounds of nutritious food
- **409** Food Pantry Lists
- **407** Emergency Food Bags
- **265** SNAP Guides
- **256** WIC Guides