

**Rural Health Care Services Outreach Program  
Healthy Rural Hometown Initiative**

## **Cost Savings Estimation Plan - Phase 2**

**Title:** Cost Savings Estimate Plan – Phase 2 | Grant D04RH 40229-01-00 | Bi-State Primary Care Association (Bi-State) | Vermont Food Access and Health Care Consortium

**Purpose:** The Bi-State Healthy Rural Hometown Initiative (HRHI) project uses food and diet-based interventions to reduce the risk of cardiovascular disease (CVD) for patients who screen positive for food insecurity at three participating FQHCs: Lamoille Health Partners (LHRP), Little Rivers Health Care (LRHC), and Northern Tier Center for Health (NOTCH). It is taking place as part of Bi-State's work convening the Vermont Food Access and Health Care consortium (VT FAHC) and Appendix A shows how the full portfolio of VT FAHC work fits together. The HRHI grant-funded pilots build from FQHCs' existing food access work, which includes screening, referral to community services, and offering food access through clinics' own programs. Our pilots add a clinical integration element, tying food and diet to treatment of specific conditions / clinically indicated pre-conditions. For our cost savings estimation model, we are evaluating the marginal impact of adding this targeted element, accounting for costs and potential savings beyond the status quo.

Current evidence-based models for programs that fully integrate food and diet into medical treatment require time and resources to bring to maturity. As previous background documents have described, our literature review suggests four categories of program implementation supporting significant health improvement through food-based interventions:

Data Collection & Information Flows that track patients from screening through referral and participation in food-related services, which encompass both social care and medical care workflows, and that are analyzed at the community health level as well as against individual patients' health goals.

Patient Engagement in Nutrition Services, including clinical services from Registered Dietitians when appropriate.

Medication Management / Integration in Treatment, accommodating a combination of lifestyle change and medications to manage conditions as best meets patient needs, not separating the two approaches.

Availability of Multiple Food Programs to Match with Dietary Needs. This goal returns us to the first bullet point of tracking patient pathways to identify gaps and missing resources.

Our FQHC pilot projects are exploring early phases of this integration. However, through the planning work completed in Project Year One, we can build a basic model for measuring progress towards the elements common across successful programs from other regions (see Appendix A). This structure will allow us to anticipate whether we might achieve similar savings in future years and build business case models to project the potential impact of investing in additional program development.

In our Phase One Cost savings estimate we identified several potential mechanisms for food access and health care integration to achieve cost savings along with improved health quality. Note that the savings in this context reflect a reduction in total cost of care over time, not immediate operational savings for an individual health care practice:

Early intervention in CVD risk using dietary change can eliminate the need for more expensive treatment at a more advanced stage of a disease.

Effective use of diet change alongside medication to manage chronic conditions can minimize the need for (and cost of) pharmaceuticals. In some conditions where patients do not respond well to medication alone, such as diabetic nephropathy, diet change can become a necessary part of any successful treatment.

Some food program types facilitate patients' transition in care setting (e.g. hospital to home) or help older patients remain at home, leading to reduction in costs for inpatient treatment. The majority of Medicare Advantage plans nationally now recognize this type of food benefit with home delivered meals. Given Vermont's significantly older demographic profile this is an area of interest for cost management.

Building a targeted food intervention pilot for CVD can also improve the overall systems of addressing food insecurity at a health care practice, and studies have shown that strong screening and referral systems for food insecurity as a social determinant of health (SDOH) leads to overall cost savings across a patient population.

Using a diet-based intervention for CVD has benefits for a patient's overall health, as it addresses not only the targeted CVD risk indicators but also risk for *all* diet-related chronic conditions. Additionally, diet-based treatment can have an impact across a household if meals and eating patterns are shared, so the positive health changes reach beyond the original patient.

Lifestyle-based interventions can support an improved sense of wellbeing for patients as they gain skills and connect with food resources that allow them to be proactive in managing their own health. Diet-based interventions also foster positive social and community connections, for example through local foods, shared meals, cooking classes, and events.

According to the Centers for Disease Control and Prevention, heart disease costs the U.S. about \$229 billion per year (based on 2018 data). The primary outcomes focus for our HRHI pilot is reducing CVD risk and subsequent poor health outcomes in rural areas. A secondary set of outcomes will be long term health improvements for participating patients across *all* diet-related conditions and improved population health across generations through better management of Health-Related Social Needs (HRSN) in our communities. These secondary impacts are one of the key advantages of integrating food- and diet-based interventions alongside medication-focused treatments – they are investments in both immediate treatment and sustained wellbeing.

Our Phase 1 Cost Savings Estimate plan outlined the models we could use to understand whether our programs were on track for reducing cardiovascular disease in the future, which could then link to research that estimates health system savings from both CVD reduction (primary focus) and food insecurity reduction (secondary focus). Appendix A outlines this background information. The national research sources used in this process, alongside participation in national learning groups, [are highlighted on our resources site](#). We have also created an online resource for community health data, which we can use to compare what we see in our pilot program cohort with broader trends ([linked here at VTFoodInHealth.net](#)).

In this Phase 2 plan, we recognize the theoretical structure for long term reduction in total cost of case created in Phase 1 and build from it to focus on one crucial phase of program development – the business case for maturing a program from a pilot to a fully integrated part of health care delivery. Grants, such as this one, can fund early phases of a new project. Research allows us to outline a theoretical future scenario where lifestyle and HRSN-based interventions in primary care reduce overall health care costs, and those savings are returned to primary care practices through a value-based alternative payment model. However, that future goal will never be reached if there is no funding mechanism to build from pilot projects to fully mature food access and health care integration, or to sustain existing programs as we wait for alternative payment models. For this reason, our proposed cost-savings estimate will focus on the period of time immediately following the programs' startup phase and review financial incentives available at the health care practice level.

**Method/Design Approach – Phase 1 Summary:** Our overall hypothesis is that because we will integrate food access into health care practice workflows, including clinical staff, practices will be able to more effectively use lifestyle change as part of targeting cardiovascular disease risk factors. This intervention will in turn

reduce the future costs of cardiovascular disease through prevention or through less resource-intensive management of chronic conditions, and indirectly reduce future costs of other diet-related health conditions through improving overall household diet quality.

Our first phase cost savings estimate divided the costs associated with achieving these future savings into four basic categories:

- One-time investments for startup – health care core
- One-time investments for startup – health care complement
- Ongoing costs – health care core
- Ongoing costs – health care complement

‘Health care complement’ categories include costs that facilitate health care connections but are not required for that connection. For example, many Vermont ‘food and health’ programs have a dual purpose of supporting local farmers, farmers’ markets, and CSAs. This type of investment fosters a healthy food environment in our communities but is not required for an individual patient who may be able to access (and perhaps prefer to access) nutritious foods through other outlets. In this scenario, the “core” element would be that a patient has access to the foods recommended for a diet to reduce CVD risk, the “complement” is engaging farmers’ markets as providers of those foods.

We use “core” and “complement” to reflect funding strategy from a health care practice perspective, not the overall importance of an activity. There may be core health care reimbursement for food services at a price point below what is needed to integrate goals like local food support, and so *complementary* funding would be required to add those elements. Where the goals of health care practices and other community partners are well aligned, these “complement” services can help complete fundraising as partners from multiple sectors pool resources for the same project through braided funding.

As the following sections explain, within this preliminary framework our Phase 2 approach proposes a focus on “Ongoing costs – health care core”. To simplify our analysis, we assume that the startup costs are all addressed during the current grant period. We assume that costs in the complement categories are managed through external sources. For example, grant funding that currently supports SNAP benefit enhancement at farmers’ markets and farmstands is supporting a premium price for local foods, but is not a cost carried by the health care practice – the practice incurs the cost of connecting patients with SNAP benefits and community food access resources, and for the purposes of this estimate we assume those costs are the same regardless of whether the resource is local food or a conventional supermarket. Validating these assumptions is outside the scope of this cost savings estimate phase but may be a project that the broader VT FAHC undertakes at a future date.

**Method/Design Approach – Phase 2 Summary:** As described in the previous sections, there is a strong evidence base for anticipating future total cost of care savings following a food-based intervention that reduces cardiovascular disease risk. However, there are several limiting factors in this framework. The cost savings are in the future and diffuse across the population – they do not accrue to a single entity, cannot be traced directly to a single intervention, and the original program participants may not even be living in the same health service area when the benefits of prevention become apparent.

Fortunately, research over the last generation suggests process elements for food-based clinical interventions that support these future positive health outcomes. For example, as part of our planning work, we profiled the research behind connecting food insecurity and long-term health impacts in our [Hunger Vital Sign explainer series](#) and [collected research](#) around positive clinical outcomes on a shorter (6 – 18 month) timeframe achieved through Medically Tailored Meals. We also participated in national presentations of evidence-based programs and studied surveys of the current literature that review a range of potential interventions ([see our National Resource libraries page](#)). Appendix A summarizes this information into program evaluation models.

Four types of funding mechanisms are necessary for practices to sustain effective programs using food-based interventions to reduce cardiovascular risk. The first phase is planning, which we have completed. The early program phase requires support for startup costs to build systems and launch pilot projects, while long term sustainability relies on a payment model that rewards individual practices for their contributions to reducing the total cost of care within a health system. Bridging between these two phases, FQHCs require a payment model that incentivizes iterations of quality improvement on their initial pilot programs and then continuing these programs until long-term savings can be reflected in their reimbursement structures. We are proposing an analysis structure focused on this middle period.

In this model our data collection will be focused on:

- **Marginal Costs of Food Interventions Following Pilot Phase – Accruing to Individual Health Care Practices (FQHCs)**
- **Savings, Revenue, and Other Incentives for Maintaining Evidence-Based Food Interventions – Accruing to Individual Health Care Practices (FQHCs)**

We will use process measures to track pilot programs’ progress towards matching the elements of similar interventions that have demonstrated long term health care cost savings. Appendix A shows examples of what we see as key elements in evidence-based intervention models, while Appendix B shows our specific data collection plans for participating FQHCs. The following diagram illustrates the implementation phases and potential funding sources. Note that the final total cost of care savings assume that a future value-based payment model structure returns a portion of those savings to participating health care practices.



**Data Collection Model - Costs:** We can identify primary cost areas that will be incurred by our three pilot project FQHCs to sustain new food-based interventions beyond an initial start-up phase:

Marginal Costs of Patient Care Coordination - beyond what was in place prior to the pilot programs:

- Greater volume of patients participating, as screening and referral systems improve (over time this impact will hopefully stabilize as more patients have their food access needs addressed).
- Greater intensity of services per patient, as care coordinators do more work on collecting patient information, data entry (including closed loop referral systems), aligning community resources to cover identified gaps, and coordinating with elements of patients’ medical care plans.
- Greater engagement of clinical staff in care coordination, as Primary Care Providers (PCPs) integrate SDOH considerations, alongside input from specialists such as Registered Dietitians, into their time with patients.

#### Increased Per-Patient Utilization of Certain Health Services:

- Some research suggests that addressing SDOH concerns increases patient primary care engagement.
- Greater use of registered dietitians for Medical Nutrition Therapy and related clinical nutrition services. Greater use of medication management services as medications are adjusted to complement changes achieved through lifestyle modification.

#### Food Program Costs:

- Startup costs of developing new systems and programs – for example information sharing, HIPAA-compliant participant communications, nutritional tailoring capacity. These are not fully covered in the pilot project time period as our funding focused on the health care partner. As noted in the model summary and again below, we exclude these costs from this analysis. However, the lack of some systems on the food partner side may result in additional work for health care partners as they use temporary solutions such as hand entering data into the EHR and routinely updating referral options, and so we note this element here as related to additional marginal costs that may accrue to the FQHC.
- Increased costs in food – changes in volume, quality of the food provided (including RD-reviewed menus), and range of options that include prepared foods to match clinical needs.
- Addition of complementary services for patient access – expanding service area, adding delivery, adding access to non-clinical nutrition services.

#### Maintenance of New Systems:

- Training for new staff, continuing education and monitoring best practices, licenses for data collection and analysis platforms, legal review of new contracts, grant administration, etc.

As discussed in the model introduction, not all of these costs will accrue to individual FQHCs and so we can eliminate them from this part of project evaluation. We have made the following assumptions to simplify our final models:

- Specialist clinical services (e.g. RDs) are provided through referral to other health care practices, and so are not attributable to the FQHCs.
- Maintenance of new systems is rolled into regular budgeting for needs such as onboarding new employees or IT, and do not represent a significant cost attributable *only* to the food program.
- System upgrade and expansion costs for food programs are covered by those programs. While our pilot locations have a mix of internal food programs and partnerships with community organizations, for the purpose of analysis we consider providing the food itself to be a separate enterprise.

This evaluation leads to the following priorities for collecting cost data:

- Trends in volume of food-related referrals to care coordination.
- Changes in intensity of care coordination services.
- Changes in intensity of PCP services related to food access complications.
- Trends in patient enrollment in food access services and per-unit costs of different services.
- Costs of community resource alignment activities to address identified gaps in services.

The final section reviews our sources for this data.

**Data Collection Model – Savings:** This analysis focuses on payment mechanisms to provide evidence-based programs with support for the interim years between initial grant funding and realizing revenue from total cost of care savings. We considered the following attributes for potential sources:

- Available to Federally Qualified Health Centers.

- Available in rural health systems in Vermont.
- Payment occurs on an annual basis (supports annual budgeting and matches the timeline for quality & performance reporting) and we anticipate it will be available in 2025
  - For example, both time limited options available today and potential options without a clear timeline attached were excluded.
- Payment incentivizes process improvement.
  - For example, an incentive to establish food insecurity screening systems would be excluded because our FQHCs already have these systems and are now at the stage of improving their performance.
- Payment supports lifestyle change to achieve health goals.
  - For example, any quality measure that could be more easily achieved through medication prescriptions than through improving dietary quality was excluded, even if the targeted condition is diet-related. This criterion could be revisited in the future with an evidence review of whether diet-change *plus* medication returns better results on an annual timeframe (either overall or for a particular subset of patients that can be easily identified by the health care practice).

Our research identified several potential funding sources that, on further review, do not exactly match our criteria:

- Recent changes to office visit coding systems allow providers to reflect greater medical complexity associated with SDOH, however the affected codes are outside the PPS / Encounter codes used by FQHCs.
- Recent CMS rulemaking adds a financial incentive for hospitals to screen for food insecurity, as part of the inpatient prospective payment system, but this does not include FQHCs and is currently focused on implementing screening vs. Improving screening systems.
- The Health Resources and Services Administration added SDOH screening- and referral-related criteria to two of its quality badges – however, they do not offer financial incentives directly related to these badges.
- Vermont’s Accountable Care Organization (ACO) offers 6 population health quality goals, with connected reimbursement, and two of the goals reflect diet-related health conditions. One of them, based on reducing the number of patients with A1c levels above 9.0, we did not consider relevant as these patients are by definition beyond the prevention stage for diabetes and the measure does not explicitly incentivize improving food access as part of treatment.
- Previously available Health IT and Data funding and health care innovation funding through the ACO might have incentivized improving on some of the systems established initially in these pilots, however interviews with ACO leadership suggest this funding will not be renewed.

Our research also identified some funding sources that *could* meet our criteria, but where we lack enough information to predict what will be available at the end of this grant period. Our VT FAHC program is not advocacy focused, and so we will not assume an ability to shape the outcomes. We will integrate these into a final assessment if applicable:

- Vermont 1115 Waiver – The recent (July 2022) 1115 Waiver contains options for the state to make one-time investments in support of food integration in health care, along with outlining options for adding food and nutrition services into reimbursement. Our understanding from state officials is that food and health care integration related to FQHCs are not part of CY2023 funding plans.

- Other Coverage of Food as a Health Service – An 1115 waiver is not the only avenue towards coverage, Vermont is exploring options in Medicare Advantage plans and Qualified Health Plans, self-funded large employer plans are expanding their food- and diet-related benefits, and national policymakers are considering new expansion in traditional Medicare. We will track these developments for potential FQHC impacts.
- Community Health Worker Funding – FQHCs participating in our pilot use care coordinators who are funded through either fixed per-member per-month payments or grants. This funding structure supports current levels of care coordination but will not support greater intensity of services or engagement of a high percentage of patients identified as at-risk for food insecurity. Vermont is currently reviewing our Community Health Worker (CHW) system. Many of the care coordinators’ responsibilities could also be classified within the CHW scope of practice, and so changes to this system may lead to new pathways to support additional care coordination.
- Utilization of Medical Nutrition Therapy (MNT) – The VT FAHC is involved in a separate, complementary project to understand referral to, and use of, Medical Nutrition Therapy across Vermont. Although our model does not directly attribute MNT costs to participating FQHCs, this work may reduce the cost and time burden for FQHC staff through offering improved nutritionist support for their activities.
- Quality Improvement Projects for Patient-Centered Medical Homes – All FQHCs participating in this pilot are also designated as Patient-Centered Medical Homes. While adding food access, social risk screening, and care coordination could help a practice gain PCMH recognition, it is unclear whether the program improvements outlined in this project necessarily enhance the status of practices post-enrollment.
- Hospital – FQHC Partnerships – New regulations and incentives that encourage hospitals to better address food access needs in their communities do not directly change the cost-benefit balance for FQHCs but might indirectly affect this structure if hospitals respond through investing in stronger FQHC partnerships and in programs that support the entire community. Our current partnership with Vermont’s ACO on appropriate waivers and legal structures for this cross-practice collaboration increases the likelihood of this outcome.

Our review suggested that the primary savings or funding currently available for a health care practice during our priority phase for analysis are:

- Grants
- Donations, including in-kind donations and volunteer time
- ACO quality incentives for managing hypertension, which focus on a patient engagement measure.
- Reimbursement for covered services – MNT, chronic condition management, diabetes self-management and education, diabetes prevention program, Medication Therapy Management.
  - Through interviews with participating FQHCs, we do not believe that any of these are currently applicable to their pilot programs, however they are noted here for future assessment as the structure of those programs evolve over the grant years.

**Data Collection Details:** Appendix B provides dashboards of information we are drawing from the Electronic Health Records of participating FQHCs, along with their quarterly reporting forms.

### Measuring Costs:

1. Trends in volume of food-related referrals to care coordination: Appendix B shows our system for tracking a patient’s pathway through food insecurity screening to care coordinator services. We will observe improvements in the percentage of referrals completed. This data will allow us to estimate future volumes based on a practice’s currently active patients. Because care coordinators’ payments are currently tied to the

size of a practice or as line items in grant budgets, there is not visible additional cost – practices are simply less able to serve patients as the volume of referrals exceeds established capacity. We can track this overflow through tracking wait times for services. We can also build a cost model for increased referral volume through using a comparable pay scale / structure from a place that uses a time- or fee-for-service based methodology for compensating care coordination services. This information is available through Community Health Worker associations.

2. Changes in intensity of care coordination services: As noted above, care coordinator compensation is not tied to time spent with patients or specific services provided, which in turn means care coordinators do not consistently code for services provided and we do not have a convenient record of increasing intensity of services. However, in the EHRs we can track patient follow-ups through how frequently patients enrolled in the HRHI food intervention program receive *any* care coordination services compared to other patients with an initial referral for any cause and no subsequent enrollment in food assistance. In quarterly reporting we can track any new tasks added to the care coordinators' jobs, for example assistance with applications for SNAP. Although not exact, we can use changing intensity to signal more time spent with patients and apply an inflationary percentage to the trends in volume outlined in the previous bullet point.
3. Changes in intensity of PCP services related to food access complications: Our data dashboards tracking patients' pathway from food security screening to food intervention participation will allow us to know if food insecurity concerns were available for review by the primary care provider at the time of a medical visit. We will also know if these concerns are appearing in patients with clinical indicators of cardiovascular disease, for which food insecurity is a known risk factor. Our planning stage reviews determined that providers at our pilot practices do not code for HRSNs in a structured way in the medical records. Additional review of what would be required to establish this practice led to the conclusion that it was beyond the scope of this grant. Therefore, we lack a way to determine whether food security screening information available to PCPs was then incorporated into the medical visit. If we assume that it *did* affect the care provided, we can use the American Medical Association's calculation for adding complexity to medical decision making. This information is found in their updates to office visit coding guidance for 2020.
4. Trends in patient enrollment in food access services and per-unit costs of different services: As shown in Appendix B, this data is captured in quarterly reporting.
5. Costs of community resource alignment activities: We will use strategic planning in the final year of the grant to determine whether focused efforts on community resource alignment are necessary. We know from our 2020-2022 Vermont Food Access and Health Care consortium strategic planning that this work is needed in general in rural Vermont, the question for the HRHI grant participants will be whether their FQHCs should invest resources in that effort or participate in a less-intensive way in support of other lead entities. If the FQHCs agree that it is appropriate for them to bear the costs of alignment work, we will use information from the CMS Innovation Center's Accountable Health Communities model "Alignment" track to identify health care practices similar to our own who have undertaken this type of initiative. We can then interview those practices to develop a cost estimate for alignment activities.
  - a. Under costs of community resource alignment, we will also consider costs of volunteer recruitment and coordination.

## Measuring Savings:

1. Grants – Matching funds are recorded in quarterly performance reports, which will show interest from local funders for grants. Bi-State is also tracking opportunities for larger grant support from national organizations. We anticipate future grant-based income, however calculating exact dollar amounts will not be possible.



- a. One challenge in grant funding is the potential to add costs to the program for purposes of securing the grant. For example, if a grant covers some of our identified strategic activities but has additional performance requirements, we will need to add costs to access the funding. We have also heard from our pilot locations that the administrative burden of grants, especially reporting, will quickly overwhelm the amount of staff time allocated to food intervention programs. Previous work on food interventions has run into this constraint. We have categorized the administrative burden of grants under systems maintenance as an expensive absorbed into the larger health care practice budget – however, it may represent a critical capacity threshold for grant-based revenues. Appendix A provides more details on both this challenge and a recommended strategy to reduce its impact.
2. Donations, Goods – Value of donated goods is tracked in quarterly reporting, from these numbers we can determine types of foods available via donation and also degree to which demand does / does not exceed the donation capacity.
3. Donations, Time – Volunteer hours are tracked in quarterly reporting.
4. Hypertension quality incentive - ACO – The clinical data available on our patient cohort can be reviewed through the published criteria for the quality measure; the presence of comparison patient groups can suggest if the pilot intervention was an improvement over business as usual (but it will not show causality).
  - a. This option applies to NOTCH and LHP, but not LRHC as they are not part of the ACO network.
5. Reimbursement for covered services – As noted above, our understanding is that the impact will be minimal at this time. If reimbursement streams become relevant to our project, we have access to Medicaid Claims data but not claims from other payers.
  - a. Some of the structures for reimbursing food as a covered health services requires participating in a risk-bearing payment structure such as an ACO. This may mean that LRHC is not eligible for future payments as they are not part of Vermont’s ACO network.