

Appendix D
Technical Appendix
March 2026

From Farm to FIM

Methodological Guidelines

This analysis is intentionally designed to estimate only the **gross economic effects** that can be clearly and credibly attributed to Food is Medicine (FIM) programs. Specifically, it focuses on the first-order impacts associated with expanded FIM demand and the sourcing of food to meet that demand, including food procurement, farm revenue, and related economic activity. By design, the methodology does not attempt to quantify long-run or spillover effects where attribution to FIM is uncertain or evidence remains limited. This scoped approach ensures that all modeled outcomes have a transparent link to FIM implementation.

The methodology builds on **existing literature, datasets, and established economic modeling approaches**, including prior work on Food is Medicine, agricultural markets, and total addressable market analyses.ⁱ Where possible, it leverages nationally consistent data and peer-reviewed estimates. It draws insights from qualitative interviews with stakeholders in the health and agriculture sectors, but does not include substantial new primary data collection. This approach allows the analysis to remain comparable, replicable, and policy-relevant, while avoiding the introduction of speculative or novel assumptions where evidence is thin.

Results from this analysis depend on **several external conditions that shape both feasibility and scale**. Most critically, outcomes are sensitive to Medicaid policy decisions, including waiver approvals, benefit design, and reimbursement levels, as well as the availability of local food system infrastructure such as aggregation, processing, and distribution. Broader macroeconomic and political factors, including labor markets, input costs, and shifts in health or agricultural policy, could further influence adoption and sourcing patterns, and therefore the realized economic impact.

The analysis adopts a **total addressable market (TAM) perspective** to explore the potential economic implications of serving the upper bound of patients who could plausibly benefit from FIM interventions. This approach is used to illustrate scale and magnitude, not to forecast near-term adoption. To balance this ambition, the model applies conservative assumptions about states' ability to locally source food, reflecting current agricultural capacity, infrastructure constraints, and observed program designs. As a result, the estimates should be interpreted as directional benchmarks.

Finally, the estimates were intentionally designed to **include state-specific data on patient population and local agricultural capacity, while also keeping the logic straightforward enough to understand**. This balance allows results to be transparently calculated, replicated, and stress-tested using publicly available data and clearly defined assumptions. Prioritizing simplicity also reduces the risk of compounding uncertainty, ensuring the findings remain credible and usable for policy and decision-making.

The following pages describe the methodology used in our analysis. A complete, detailed model is also available for download.

1 Distribution of patients across FIM interventions

FIM intervention	Proportion of patients
Medically Tailored Meal (MTM)	10%
Medically Tailored Groceries (MTG)	15%
Produce Prescription (PRx) – Voucher	40%
Produce Prescription (PRx) – Produce Box	35%

This analysis assumes a defined distribution of eligible patients across major Food is Medicine intervention types, including Medically Tailored Meals (MTMs), Medically Tailored Groceries (MTGs), and Produce Prescription models (vouchers or debit card and produce boxes). There are currently no statewide FIM programs that offer all intervention types at scale, and evidence on the relative effectiveness of different interventions by clinical condition and patient circumstance continues to evolve. As a result, the assumed mix is not intended to represent an optimal or prescriptive program design.

Instead, the assumed distribution reflects three implementation realities. First, it accounts for differences in delivery intensity, with MTMs requiring the most preparation and coordination, followed by MTGs, produce boxes, and vouchers. Second, it reflects ease of implementation, with voucher-based models assumed to scale most readily because they rely on existing retail and payment infrastructure. Third, it incorporates likely eligibility constraints, with MTMs providing the highest level of individual tailoring, and produce prescriptions serving a broader population.

2 Distribution of costs for FIM expenditures (i.e., food vs. non-food)

FIM intervention	Proportion of food cost	Proportion of non-food cost
MTM	18%	82%
MTG	30%	70%
PRx – Voucher	15%	85%
PRx – Produce Box	30%	70%

Total FIM spending is allocated across food procurement and non-food components, such as meal preparation, aggregation, distribution, clinical integration, and program administration. This breakdown reflects the reality that FIM programs are not solely food purchases but bundled service models that require infrastructure and labor to deliver clinically appropriate nutrition.

Interviews with FIM implementers revealed that food costs make up a minority of the total cost of FIM programs, with the cost of last-mile delivery often making up nearly 50% of total cost. While this assumption reflects the current reality of FIM programs, ongoing work to reduce delivery costs and potential to take advantage of economies of scale when FIM expands more broadly could easily shift this balance, such that a larger proportion of FIM spending reaches food producers.

3 States' ability to source food locally

The analysis assumes varying levels of state capacity to source food locally, due to differences in states' agricultural products and availability of local and regional food supply chains. Interviews with food producers, aggregators, and FIM implementers revealed that the breadth of available food products produced in state and the existing food infrastructure were the two largest constraints for local sourcing at scale.

To measure each state's ability to locally source food, we created a framework grounded in two primary indices: **Production Agriculture Diversification** and the **Availability of Locally Produced Food**. The **Production Agriculture Diversification** index counts how many unique agricultural products a state produces, indicating the breadth of available products for FIM programs. The **Availability of Locally Produced Food**ⁱⁱ index considers USDA-reported data on the availability of local food resources (e.g., CSAs, farmers markets, on-farm markets, food hubs, agritourism) and U.S. Census Bureau-reported data on food resource availability.

Based on these two indices, states were scored high or low on the two dimensions of food diversity and local food availability. Using this high-low rating system, four archetypes were created, and each archetype was assigned one of four levels of ability to locally source under policies that preference local sourcing.

Availability of Locally Produced Food	Production Agriculture Diversification	Local sourcing potential
High	High	50%
High	Low	40%
Low	High	30%
Low	Low	20%

These percentages were assigned based on benchmarks, including existing policy thresholds for local procurement in school nutrition programs and other state-level incentive programs for local food procurement.

4 States' ability to provide FIM services through local providers

Similar to the previous assumption, this analysis considers the proportion of FIM demand that can be delivered by "in-state" FIM providers if local FIM is preferred, and the corresponding level of value chain economic activity that would remain in-state. However, unlike the previous assumption, this analysis does not assume levels that vary by individual state, and instead estimates what percentage of MTMs, MTGs, and PRx nationally can be fulfilled by in-state providers. We assumed this percentage would be roughly similar across states, as local FIM providers can be scaled and new providers can enter the market to meet need with limited friction (as opposed to local farms, which cannot easily expand).

We estimated that MTMs—with explicit local preferencing by states—could have the highest incidence of local fulfillment and local value chain activity given the kitchen infrastructure needs to prepare and deliver meals, while MTGs and produce prescription boxes would have moderate levels of local fulfillment, given the relative simplicity of packing and distributing produce boxes. PRx vouchers may be managed by local providers, but the value chain economic activity is unlikely to be local as this type of PRx benefit is primarily used to purchase produce from traditional retailers and flow through traditional retail supply chains.

FIM intervention type	Local sourcing potential
MTM	75%
MTG	50%
PRx – Voucher	5%
PRx – Produce Box	50%

These percentages were assigned based on analogs (e.g., Meals on Wheels, national food banking systems, school meal systems) and data on the existing FIM provider landscape (e.g. Massachusetts FIM State Planⁱⁱⁱ). These assumed percentages will primarily be driven by policy and regulation, with states that preference local and community-based organizations for FIM service provision likely to increase the total proportion of dollars retained in state.

Methodology

The following calculations are meant to provide clarity and transparency about how the figures in the report were reached. These figures should be seen as directional estimates, rather than precision predictions for any of the provided metrics. For all data, calculations, and sources, please refer to the associated Excel file that contains the modeling for this report.

Patient Population

Key metric

Number of people who could benefit from FIM interventions

(i.e., have diet-relevant chronic conditions and are at or below 185% FPL)

Note: This metric was calculated by state

$$N_{FIM} = P_{state} \times r_{FPL} \times r_{chronic} \times r_{diet-related}$$

- N_{FIM} is the number of people who could benefit from FIM interventions, economically and clinically
- P_{state} is the total state population
- r_{FPL} is the proportion of the state population with a household income at or below 185% of the Federal Poverty Level
- $r_{chronic}$ is the share of people, conditioned on being at or below 185% FPL, who have one or more chronic condition
- $r_{diet-related}$ is the share of people with one or more chronic condition, conditioned on all previous variables, who have a diet-related chronic condition

Total FIM Expenditures

Key metric

Total expenditures on medically tailored meals

Note: This metric was calculated by state

$$E_{MTM} = N_{FIM} \times r_{MTM} \times m \times w \times c$$

- E_{MTM} is the expenditures (\$) on medically tailored meals (i.e., the total dollars spent on medically tailored meals)
- N_{FIM} is the number of people who could benefit from FIM interventions, economically and clinically
- r_{MTM} is the share of FIM-relevant patients who are assigned medically tailored meals, as opposed to other FIM interventions
- m is the average number of medically tailored meals provided to an MTM patient per week
- w is the average duration of MTM programs, expressed as the number of weeks meals are provided per patient
- c is the average total reimbursement per meal, inclusive of food ingredients, preparation, packaging, distribution, and administration costs

Key metric

Total expenditures on medically tailored groceries

Note: This metric was calculated by state

$$E_{MTG} = N_{FIM} \times r_{MTG} \times g \times w \times c$$

- E_{MTG} is the expenditures (\$) on medically tailored groceries (i.e., the total dollars spent on medically tailored groceries)
- N_{FIM} is the number of people who could benefit from FIM interventions, economically and clinically
- r_{MTG} is the share of FIM-relevant patients who are assigned medically tailored groceries, as opposed to other FIM interventions
- m is the average number of grocery allotments or deliveries provided to an MTG patient per week
- w is the average duration of MTG programs, expressed as the number of weeks groceries are provided per patient
- c is the average total reimbursement per grocery allotment, inclusive of food ingredients, sourcing, packing, distribution, and administration costs

Key metric

Total expenditures on medically tailored meals

Note: This metric was calculated by state

$$E_{PRx-v} = N_{FIM} \times r_{PRx-v} \times v \times w \times c$$

- E_{PRx-v} is the expenditures (\$) on produce prescription vouchers (i.e., the total dollars spent on produce prescription voucher programs)
- N_{FIM} is the number of people who could benefit from FIM interventions, economically and clinically
- r_{PRx-v} is the share of FIM-relevant patients who are assigned medically tailored groceries, as opposed to other FIM interventions
- v is the average number of vouchers provided to a PRx patient per week
- w is the average duration of PRx programs, expressed as the number of weeks vouchers are provided per patient
- c is the average total reimbursement per voucher

Key metric

Total expenditures on produce prescriptions—produce boxes

Note: This metric was calculated by state

$$E_{PRx-pb} = N_{FIM} \times r_{PRx-pb} \times b \times w \times c$$

- E_{PRx-pb} is the expenditures (\$) on produce prescription boxes (i.e., the total dollars spent on produce prescription box programs)
- N_{FIM} is the number of people who could benefit from FIM interventions, economically and clinically
- r_{PRx-pb} is the share of FIM-relevant patients who are assigned produce prescription boxes, as opposed to other FIM interventions
- b is the average number of prescription boxes provided to a PRx patient per week
- w is the average duration of PRx programs, expressed as the number of weeks produce boxes are provided per patient
- c is the average total reimbursement per produce box, inclusive of food ingredients, sourcing, packing, distribution, and administration costs

Value of Retained Spending in State

Key metric

Total value of locally sourced food

Note: This metric was calculated by state and by FIM intervention type (i.e., MTMs, MTGs, PRx vouchers, and PRx boxes)

$$V_{local\ food} = N_{FIM-type} \times s_{food} \times r_{local}$$

- $V_{local\ food}$ is the total value of locally sourced food, for a given FIM intervention type
- $N_{FIM-type}$ is the total expenditures on a given FIM intervention type, inclusive of all costs
- s_{food} is the share of expenditures for a given FIM intervention type spent on food ingredients, as opposed to other non-food costs
- r_{local} is the proportion of food that can be sourced locally (i.e., in-state), based on local production capacity and sourcing assumptions

Key metric

Total value of FIM expenditures retained in-state

Note: This metric was calculated by state and by FIM intervention type (i.e., MTMs, MTGs, PRx vouchers, and PRx boxes)

$$V_{local} = E_{FIM-type} \times s_{non-food} \times r_{local} \times V_{local-food}$$

- V_{local} is the total value of locally sourced food, for a given FIM intervention type
- $E_{FIM-type}$ is the total expenditures on a given FIM intervention type, inclusive of all costs
- $s_{non-food}$ is the share of expenditures for a given FIM intervention type spent on non-food costs, including preparation, distribution, logistics, and other administrative costs
- r_{local} is the proportion of non-food services fulfilled by in-state providers
- $V_{local-food}$ is the total value of locally sourced food, for a given FIM intervention type

Economic Impact

Key metric

Income to small and mid-sized farms

Note: This metric was calculated by state

$$I_{farms} = V_{local} \times (p_{small} \times p_{mid-sized})$$

- I_{farms} is the total income accruing to small and mid-sized farms from FIM-related local food procurement
- V_{local} is the total value of locally sourced food
- p_{small} is the share of food production attributable to small farms, based on state-specific specialty agricultural production data
- $p_{mid-sized}$ is the share of food production attributable to mid-sized farms, based on state-specific specialty agricultural production data

Key metric

Number of farms supported

Note: This metric was calculated by state and farm size (i.e., small vs. mid-sized)

$$N_{farms} = \frac{I_{farms}}{R_{farm} \times S_{FIM}}$$

- N_{farms} is the total number of farms supported by FIM-related local food procurement, for a given farm size
- I_{farms} is the total income accruing to farms from FIM-related local food procurement, for a given farm size
- R_{farms} is the average annual revenue of a farm, for a given farm size
- S_{FIM} is the average share of a farm's total revenue that could come from FIM and other institutional purchasers, such as healthcare systems, food hubs, schools, or government programs

Key metric

Number of jobs created

Note: This metric was calculated by state

$$N_{jobs} = V_{FIM-local} \times k_{jobs}$$

- N_{jobs} is the total number of jobs created through FIM expenditures retained within the state
- $V_{FIM-local}$ is the total value of FIM-related expenditures that remain in-state, including local food procurement and associated in-state services
- k_{jobs} is jobs multiplier, defined as the number of jobs created per dollar of investment in local agriculture and related food system activities

Key metric

Number of acres impacted by FIM

Note: This metric was calculated by state

$$A_{FIM} = (N_{small} \times a_{small}) + (N_{mid-sized} \times a_{mid-sized})$$

- A_{FIM} is the total number of agricultural acres impacted by FIM-related demand
- N_{small} is the number of small farms supported by FIM-related procurement
- a_{small} is the average number of acres operated by a small farm in a given state
- $N_{mid-sized}$ is the number of mid-sized farms supported by FIM-related procurement
- $a_{mid-sized}$ is the average number of acres operated by a mid-sized farm in a given state

Key metric

**Total economic impact on GDP
(local multiplier effect)**

Note: This metric was calculated by state

$$\Delta GDP_{FIM} = V_{FIM-local} \times \lambda_{FIM}$$

- ΔGDP_{FIM} is the incremental contribution to state gross domestic product (GDP) attributable to FIM expenditures and related economic effects in a given state
- $V_{FIM-local}$ is the total value of FIM-related expenditures that remain in-state, including local food procurement and associated in-state services
- λ_{FIM} is the estimated local economic impact multiplier, capturing direct, indirect, and induced economic effects on in-state FIM spending

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- iii **Center for Health Law and Policy Innovation & Community Servings.** (2019). *Massachusetts Food is Medicine State Plan – Appendix A: Spatial Analysis Technical Brief.*
- ii Multiple sources, listed below
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