

TOTAL HEALTH EXPENDITURE ANALYSIS: AGENCY OF AGRICULTURE RESULTS



SUMMARY

Vermont is transforming the way we evaluate investments in health and wellbeing across all state sectors. One action is to conduct a cross-agency appraisal of state spending on factors that impact population health beyond the traditional health care system. The Total Health Expenditure Analysis (THEA) serves as a core tool for assessing cross-sector investments for health in non-health sectors. The Vermont Agency of Agriculture & Food Markets (VAAFAM), a traditional non-health related agency, recognizes how its work influences population health in the following domains: Food Availability and Access, Food Safety, and Occupational Health Hazards. VAAFAM took part in the Total Health Expenditure Analysis during Spring 2017. Below are the results from the Expenditure Analysis, along with a detailed analysis and utility of this project to the Agency of Agriculture and beyond. This is one approach used by the Health in all Policies Task Force which seeks to integrate health in the programming, policy, and budgeting activities of state government.

WHY ASSESS CURRENT INVESTMENTS?

In order to spend more effectively and promote population health, we must first understand what and how we are investing in health and wellbeing beyond the traditional medical care system. Information on how we spend and budget across sectors can help us understand 3 guiding questions:

- 1. WHAT ARE WE SPENDING NOW?**
- 2. WHAT IS OUR SPENDING GETTING US?**
- 3. WHAT HAPPENS WHEN WE CHANGE THE WAY WE SPEND?**

Knowing how and what we spend as a state gives us the opportunity to evaluate how we spend on investments made on population health and prevention. By working synergistically with other health reform efforts already in place in Vermont, this project will highlight how a shared commitment of resources, both financial and programmatic, can lead to greater gains in population health outcomes. This shared accountability for health emphasizes the importance of prevention and how investments in the social determinants of health can lead to greater health and financial gains.

WHY AGRICULTURE AND HEALTH?

Agriculture is fundamental for good health. Agricultural production provides the world's food, fiber and materials for shelter, and medicinal plants. It contributes to livelihoods and food security, and provides income which can be spent on health care and other resources that influence health and wellbeing. Agricultural policy and production, and the outputs they generate, can contribute to both good and poor health, among individuals and food producers. Agricultural activities influence and interact with public health through multiple pathways, such as food access and safety. Many of these interactions are also bidirectional, whereby agriculture affects health and health affects agriculture⁴.

VAAFAM facilitates, supports and encourages the growth and viability of agriculture in Vermont while protecting the working landscape, human health, animal health, plant health, consumers and the environment.²

-VAAFAM Mission

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METHODOLOGY

The methodology of this project was dependent on extracting reliable information that was able to both quantify and describe VAAFM' health-related spending across key determinants of health during the 2015 State Fiscal Year (July 1, 2014-June 30, 2015). Spending includes all money that went out the door, regardless of its funding stream. This includes all direct (personnel, travel, subgrantees) and indirect expenditures. This process relied heavily on the knowledge of financial managers and program managers who are familiar with program accounting codes. Consistent and understandable terminology was necessary for all stages of implementation, data collection, and results sharing. To accommodate this, tailored trainings were held that outlined universal language, definitions, and methodologies to ensure reliable data collection.

The first step in the analysis was parsing out health-related spending from their total expenditures for this time period. These health-related agricultural links, steeped in evidence-based research, provided a tool for agency staff to use to determine which programs to include in the Total Health Expenditure Analysis and in their inventory of best practices.³ Health-related spending by the Agency of Agriculture refers to money spent on the three major pathways that represent the most significant intersections between agriculture and health:

- **FOOD AVAILABILITY AND ACCESS⁴**
- **FOOD SAFETY⁵**
- **OCCUPATIONAL HEALTH HAZARDS⁶**

This health-related spending amount was then categorized based on expense function to describe how the money was spent, and then cross-categorized by determinant area. Determinants of health are conditions in the environment in which people live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Resources that enhance quality of life can have a considerable influence on population health outcomes. Examples of these resources include safe and affordable housing, access to education, public safety, availability of healthy foods, local emergency/health services, and environments free of life-threatening toxins⁷. Although genetics play an important role in health, they are not included in this analysis.

EXPENSE FUNCTIONS

Based on the 10 Essential Public Health Services⁸, these describe how the money was spent

MONITOR/INVESTIGATION:

Any activity related to the systematic collection, analysis, and dissemination of data.

POLICY ENFORCEMENT/REGULATION:

Related to the regulation and promotion of policies (local, state, or national guidelines, evidence-based tools).

MOBILIZE COMMUNITY PARTNERSHIPS:

Any activity related to the creation and sustainment of community-based strategic partnerships, including coalition groups and stakeholder engagement.

EVALUATION:

Related to the collection, ongoing assessment, and dissemination of program-specific evaluation efforts.

CAPITAL INVESTMENT:

Acquisition of fixed assets, such as land, machinery, buildings, or IT systems.

TREAT/LINK TO CARE:

Activities that either directly treat a patient or connects people to services.

DETERMINANTS

This analysis highlights six key determinant that are known to affect health outcomes

INDIVIDUAL HEALTH BEHAVIORS:

Any activity related to health attainment at an individual level such health promotion, diet, exercise, disease management, mental health promotion, tobacco cessation, nutrition counseling, etc.

ECONOMIC STABILITY:

Any activity related to income redistribution such as food security, housing stability, unemployment, etc.

EDUCATIONAL ATTAINMENT:

Related to formal educational attainment such as high school graduation, job skills development, and early childhood education programs.

NATURAL AND BUILT ENVIRONMENT:

Related to the physical and built environment including safety, complete streets, emergency preparedness, environmental conditions, etc.

SOCIOCULTURAL:

Combining the many sociocultural facets such as social cohesion and connectedness, civic participation, perceptions of discrimination and social and racial justice, inclusivity, etc.

CLINICAL CARE:

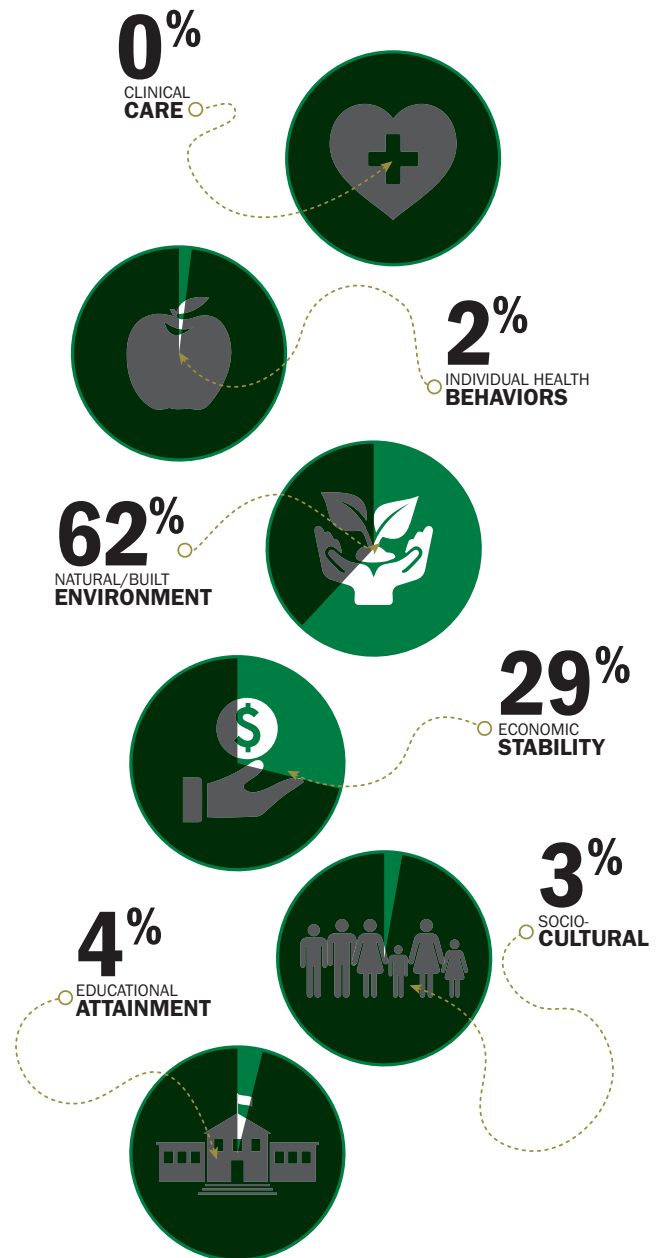
Access to and quality of health care utilization.

RESULTS

In the Total Health Expenditure Analysis spending is classified by Expense Function (how the money was spent) and by Determinant. Only spending from health-related programs was counted towards this. VAAFM attributed 74% of their State Fiscal Year 2015 spending as health-related, which amounted to approximately \$13,114,000.

Of this health-related amount (including direct and indirect expenditures), it was found that the Natural/ Built Environment determinant accounted for the majority of spending at 62% of the total health-related amount. Remaining spending was split between:

TOP SPENDING OF VAAFM'S PROGRAMS BY DETERMINANT	
	INDIVIDUAL HEALTH BEHAVIORS: Consumer Protection, Consumer Education and Access, Meat Inspection
	ECONOMIC STABILITY: Farm to School, Agriculture Economic Development Program
	EDUCATIONAL ATTAINMENT: Vet Loan Repayment Program
	NATURAL/BUILT ENVIRONMENT: Land Use Planning, Produce Program, Work Lands Enterprise Initiative, Agrichemical
	SOCIOCULTURAL: Farm to School
	CLINICAL CARE: No Spending

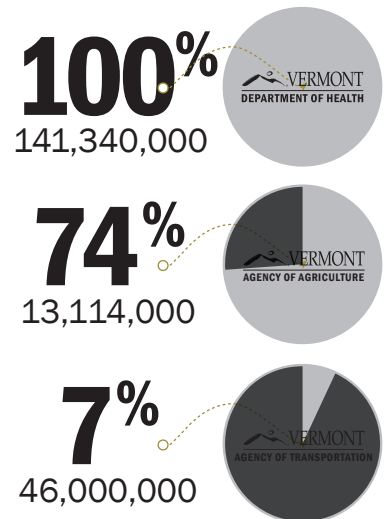


DEEPER ANALYSIS INTO VAAFM RESULTS

The most notable finding from this analysis was that VAAFM attributed 74% of their total expenditures for this time period (approximately \$13,114,000) as being health-related. This is significant, given that The Vermont Agency of Agriculture and Food Markets is not a traditional health-related agency yet the agency recognizes how their work influences population health in many ways. The significant percentage (62%) spent on the Natural/Built Environment determinant is not surprising as this is the primary activity within the Agency of Agriculture to fulfill its mission. Most notable of these results is the large amount spent on promoting economic stability. At 28% of their total expenditures (approximately \$3,770,000), this represents a strong commitment to providing low-cost, accessible healthy food for all Vermonters, especially vulnerable populations. VAAFM stands out as they had no spending (0%) in the Clinical determinant bucket, a distinction that makes the agency stand out as one approaching population health through a holistic, environmentally-focused lens.

In comparison to other state agencies that have completed the Total Health Expenditure Analysis, the Agency of Agriculture attributed the exact same percentage of spending to the Natural/Built Environment as did the Agency of Transportation (at 62%). However, in contrast with the Agency of Transportation, VAAFM had almost no capital investment purchases (whereas Agency of Transportation spent mostly through this expense function). The Agency of Transportation attributed 7% of their spending as being health-related (\$46,000,000), and the Department of Health attributed 100% (\$141,340,000) of their expenditures as being health related during this same time.

Percent of Budget spent on Health Related Expenditures



HOW WILL THIS DATA BE USEFUL FOR VAAFM?

VAAFM leadership expressed utility of the Total Health Expenditure Analysis in the following ways:

- A strategic lever to show programmatic value and impact: Through federal grant funding, VAAFM must continuously demonstrate impact. Using a Health in all Policies approach, the Total Health Expenditure Analysis is the first of its kind to measure spending on impacts such as the social determinants of health. The diverse results from the THEA highlights their reach to the Economic Stability and Natural/Built Environment determinant buckets. Findings such as this will make VAAFM stand out as a grantee.
- An innovative tool to demonstrate responsibility for population health through the Senate Appropriations Committee: Each year, state sectors report on the status of their agency's overall budget and demonstrate how and where their spending is being allocated. The unique feature of the THEA is that it measures actual spending across determinants of health, making evident the social context of investments in health. By using a Health in all Policies lens for fiscal analyses, state agencies will work towards achieving Act 48 together⁹.
- Reorganization of departmental priorities to better reflect population health efforts: The process of measuring and describing health-related spending gave VAAFM leadership an opportunity to examine cross-departmental priorities and overlaps of spending. For instance, spending on water quality was spread across the four departments within VAAFM and recognizing these similar efforts presented an opportunity for agency-wide integration.

1 Hawkes, Corinna, and Marie T. Ruel, eds. Understanding the links between agriculture and health. 2006.
 2 Vermont Agency of Agriculture, Food and Markets. 2015 Annual Report. 2015.
 3 See Best Practices on VDH website for more information.
 4 American Public Health Association. Toward A Healthy Sustainable Food System. <http://www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/29/12/34/toward-a-healthy-sustainable-food-system>
 5 Prevention Institute. Cultivating Common Ground: Linking Health and Sustainable Agriculture. September 2004.

6 UK Government's Foresight Project on Global Food and Farming Futures. Understanding and improving the relationship between agriculture and health. http://www.lcirah.ac.uk/_assets/Foresight%20Report%20Agriculture%20and%20Health%20review.PDF.
 7 U.S. Department of Health and Human Services. HealthyPeople 2020. Social Determinants of Health. <http://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health>. 2015.
 8 <https://www.cdc.gov/nphsp/essentialservices.html>
 9 <http://www.leg.state.vt.us/docs/2012/Acts/ACT048.pdf>