Maine Cancer Foundation
Challenge Cancer 2020
Outcome Evaluation Report – FY2019

FINAL

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To measure the outcomes and impact of Challenge Cancer 2020.

We would like to thank all Maine Cancer Foundation grantees who provided information and data related to the grants so that outcomes could be calculated and combined.

This report was prepared by the research team at Market Decisions Research of Portland, Maine (www.marketdecisions.com).

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Background

Starting in 2015, Maine Cancer Foundation (MCF) launched Challenge Cancer 2020, a visionary initiative aimed at reducing Maine's cancer mortality rate 20% by 2020. The Challenge Cancer 2020 initiative seeks to address this goal through targeted grant-making over the five-year period in several areas, including:

- Transportation and Lodging
- Patient Navigation
- Colorectal Cancer Screening
- Tobacco Prevention
- Lung Cancer Screening
- HPV Vaccinations
- Sun Safety
- General Operations Funding
- Cancer Research
- Genetic Screening

MCF funds projects using evidence-based approaches to cancer prevention that will directly and positively affect the rate of cancer screenings, and/or improve and expedite the treatment process for cancer patients in Maine.

The Muskie School of Public Service at the University of Southern Maine worked closely with MCF to develop an evaluation plan for Challenge Cancer 2020. This plan uses logic models to tie MCF's grant-making activities with current evidence in the literature, outlines the metrics within each core area to measure the overall value and impact of the initiative, and shows early successes of the Challenge Cancer 2020 initiative.

This outcome analysis and evaluation conducted by Market Decisions Research (MDR) examines MCF's grant-making activities related to Cancer Challenge 2020. It builds upon the evaluation plan, logic models and process metrics that have been collected and reported previously in Summary of Giving: 2017 Interim Report. The goal of the outcome evaluation is to quantify the short and longer-term outcomes and cost-effectiveness of MCF grant funding.

To accomplish this, MDR used information and data previously reported by grantees as part of their initial grant evaluation. The MDR team also collected new data from MCF grantees to fill in gaps and quantify outcomes. MDR worked closely with MCF to refine and develop outcome metrics for each grant area, to review the information already collected and to identify where gaps exist and to collect additional data needed to calculate outcomes, and to conduct an outcome and cost-effectiveness analysis (where possible). The results of this effort are presented in this report.

Please note that the data and results presented in this report represent a point in time estimate that covers the period of MCF grants from July 2015 to June 2019. Due to the ongoing nature of how MCF awards grants and the fact that many are still ongoing, more recent grant funding, activities, and outcomes may not be captured in the 2019 reporting cycle.

Executive Summary

Between July 2015 to June 2019, MCF funded 129 grants, a total of $9,475,281 dollars, to decrease cancer incidence and mortality rates in the state of Maine. MCF has funded grants in the areas of transportation and lodging, patient navigation, tobacco, colorectal cancer screening, lung cancer screening, general operations, HPV vaccination, sun safety, genetic screening, and research. Across these topics, grantees focused on improving cancer patient outcomes, improving cancer screening rates, and cancer prevention. Each grant focused on several specific areas of improvement including collaboration, awareness, infrastructure, training and capacity, and expanding access to care.

Grantees are leveraging MCF funds to increase cancer prevention efforts, increase cancer screening rates, and improve cancer patient outcomes. Their efforts have resulted in the following achievements.

- Patient screening rates for colorectal and lung cancer have increased among grantees working to address these topics.
- Patient navigators connected with a significant number of cancer patients and worked to increase referral follow through and rates for cancer screening.
- Human papillomavirus (HPV) vaccination rates rose significantly among children ages 11 to 13 at participating pediatric practices.
- Tobacco grantees reported a significant number of smokers who quit or who reduced their tobacco use after attending grant-funded programs.
- General operations funding increased organizational capacity, allowed for restructuring and greater focus on programs, and enabled grantees to generate additional funds to support their work through grants and fundraising.
- MCF funding allowed Maine's largest lung cancer network to grow into a stakeholder coalition addressing patient access, provider education, and improvements in lung cancer screening and care.
- A tobacco prevention media campaign targeting Maine youth ran statewide, strategically reaching Maine youth via digital media platforms with information about the dangers and effects of smoking as well as tobacco companies' manipulative marketing tactics.
- Several grantees worked to provide sun safety education and much-needed sunscreen to high-risk populations across the state.
- Hospice grantees expanded their services and streamlined their operations to serve more clients each year.

Overall, organizations funded by MCF's Challenge Cancer 2020 grants have dramatically changed the cancer prevention, detection, and patient support efforts in Maine. Funding distributed to date has brought novel cancer screening and care to practices across the state while expanding access to vulnerable populations including those with limited resources and those at high risk of developing cancer. Each grant category has fulfilled its aim to prevent cancer, increase screening rates, and improve cancer patient outcomes. Funding from MCF has enabled grantees to achieve a considerable amount of progress toward MCF's Challenge Cancer 2020 goals.

Key Findings

Data represented in key findings represent the percentage of grants where data are available either from the evaluation forms provided to MCF by the grantees or from follow-up requests made by the MDR team.

Please note that the data and results presented in this report represent a point in time estimate that covers the period of MCF grants from July 2015 to June 2019. Due to the ongoing nature of how MCF awards grants and the fact that many are still ongoing, more recent grant funding, activities and outcomes may not be captured in the 2019 reporting cycle.

Colorectal Cancer Screening

- MCF awarded **19 colorectal cancer screening grants totaling $1,305,431.**
- **9,829 additional colorectal cancer screenings** were conducted across the state, resulting in an estimated **1,345 life years saved and 121 fewer cancer deaths.**
- A total of **23 new staff members (across 12 organizations) were hired** to support colorectal cancer screening rates as a result of MCF funding.

Transportation

- MCF awarded **30 transportation grants totaling $840,966**.
- Transportation grant awards helped **2,082 Mainers travel to cancer care appointments**, resulting in **23,909 additional rides** and over **3.2 million miles traveled**.

Patient Navigation

- To increase Maine cancer patients' access to care, MCF awarded **15 patient navigation grants totaling $2,344,480**.
- 15 Patient Navigators have been hired and their positions were sustained within their organization after MCF grant funding ended.
- Patient navigation grant awards resulted in **1,969 additional referrals for diagnostic follow-ups** and **1,662 patients connected with cancer care resources**.

HPV Vaccination

- MCF awarded **2 HPV vaccination grants totaling $356,117**.
- This resulted in **496 additional HPV vaccinations and an increase in vaccination rates from 39% to 46%** at participating practices among children between the ages of 11 and 13.

Tobacco Prevention and Cessation

- MCF awarded **19 tobacco grants totaling $1,291,828**.
- MCF funding resulted in **5,965 tobacco users informed or referred to tobacco prevention and cessation services**.
- Grant awards also resulted **in 224 smokers who confirmed they successfully quit or reduced their tobacco use**.

Youth Tobacco Campaign

- In partnership with the Maine Centers for Disease Control and Prevention and Rinck Advertising, MCF invested **$750,000 over three years to a statewide youth tobacco prevention media campaign**.
- Maine youth were directed to the campaign using a variety of platforms and received messages that provided education about tobacco company marketing tactics, built awareness of the dangers and effects of tobacco use, and empowered youth to reject the manipulative tactics used by tobacco companies.
- Nearly half of Maine teens viewed a "You Are the Target" ad or video in the past year**. A quarter of Maine youth tobacco users quit or thought about quitting as a result of the campaign.**

Sun Safety

- MCF awarded **4 sun safety grants totaling $109,293**.
- The grant awards resulted in the distribution of **150,000 applications of sunscreen** to help individuals protect their skin against the harmful effects of UV rays.
- **119 dispensers** were distributed across the state.

General Operating Support

- MCF awarded **8 general operating support grants totaling $275,000**.
- MCF's general operating grants awards increased staff capacity, allowed for restructuring and greater focus on programs, and enabled grantees to generate additional funds through grants and fundraising.

Lung Cancer

- MCF awarded **one lung cancer grant totaling $403,674** to support the development of a statewide coalition to address lung cancer screening in Maine.
- Two learning modules on lung cancer screening were developed and a primary care pilot is underway with five practices at Maine General Medical Center.

Cancer Research

- MCF awarded **5 research grants totaling $1,050,784**.
- The grant awards funded no-cost fluid and tissue access for researchers, a successful PCRI shared decision-making program for lung screening, a telemedicine program, and ongoing EHR database consolidation and a breast cancer diagnostic trial.

Hospice General Operating Funds

- In partnership with the John T. Gorman Foundation, MCF awarded **6 hospice general operations grants totaling $50,000**.
- Hospice grantees expanded their services to more clients, increased marketing and education efforts, hired and trained more volunteers, and developed self-sustaining funding streams to support their organizations.

Genetic Screening

- MCF awarded **1 genetic screening grant totaling $199,891**.
- Approximately 750 Maine oncologists, pathologists, clinical research coordinators, nurses, administrators working in oncology, and other stakeholders have been receiving ongoing

communication and access to web-based resources developed by the Maine Cancer Genetics Initiative to increase provider knowledge and self-efficacy of genetic links to cancer and access to information that may impact treatment options.

- **Two interactive, virtual training sessions** were developed and piloted with oncology nurses and research coordinators in June 2020.

Miscellaneous

- MCF awarded an additional **$387,181 to support 14 grants to 9 organizations** for prevention, screening, and patient support programming.

1. Colorectal Cancer Screening

Background

Colorectal cancer (CRC) is one of the most commonly diagnosed cancers in Maine. The age-adjusted CRC rate of 36.3 per 100,000 population makes it the third most diagnosed cancer in Maine. It is also the third most likely cause of cancer death in the state, resulting in over 200 deaths per year. Maine's CRC rate is like that of the U.S. (38.5), and it is cancer that impacts both males and females at similar rates.

Studies show that colorectal cancer screening reduces mortality by preventing and detecting the disease early, thus increasing the likelihood of survival. Regular CRC screening can help to identify and treat colorectal polyps before they have the chance to become cancerous. Screening can also find colorectal cancer early, when it is easiest to treat.

Maine Cancer Foundation awarded **19 colorectal cancer screening grants** totaling **$1,305,431** to support 9,829 additional CRC screenings, resulting in 1,345 life years saved and 121 fewer cancer deaths.

The U.S. Preventative Services Task Force recommends screening for colorectal cancer starting at age 50 and continuing until age 75. People at increased or high risk of colorectal cancer may need to start colorectal cancer screening before turning 50 years old, be screened more often, and/or get specific tests.

For complete information about colorectal cancer screenings, please visit the U.S. Preventative Services Task Force at:
https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/colorectal-cancer-screening2.

Summary of MCF Grants 2015-2019

Since 2015, MCF made significant investments in organizations around Maine with the goal of improving colorectal cancer screening rates. These organizations have implemented evidenced-based interventions, such as Electronic Health Record (EHR) systems that track and coordinate provider and patient screening reminders, that have been shown to increase CRC screening rates[4]. Many of these projects also included components to provide education, increase awareness, and increase access for individuals who have difficulty accessing care.

From 2015-2019 as part of Challenge Cancer 2020, **MCF awarded $1,305,431 through 19 colorectal cancer screening grants to 14 organizations**, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Cary Medical Center	Screen Aroostook	2018	$98,516	CRC Screening	Caribou	ME
City of Portland, Minority Health Program	Colorectal Cancer Screening for Vulnerable Populations	2017	$100,000	CRC Screening	Portland	ME
Healthy Acadia	Downeast Colorectal Cancer Screening Initiative	2019	$100,000	CRC Screening	Machias	ME
Healthy Androscoggin	Colon Health Rx: Cancer Screening in Lewiston's Immigrant Community	2018	$93,051	CRC Screening	Lewiston	ME
Healthy Community Coalition of Greater Franklin County	One-by-One-Colorectal Cancer Screening and Navigation	2017	$99,832	CRC Screening	Farmington	ME
LincolnHealth	Strategy for Identification and Screening of Unscreened Patients at LincolnHealth	2016	$29,235	CRC Screening	Damariscotta	ME
MaineGeneral Medical Center	Expansion of the Role of Community Health Workers to Increase Colon Cancer Screening Rates	2016	$29,937	CRC Screening	Waterville	ME
MaineGeneral Medical Center	80% Colon Cancer Screening Project	2017	$99,627	CRC Screening	Waterville	ME
MaineGeneral Medical Center	Mobilizing CHWs to increase access for high-risk patients due for surveillance colonoscopy screening	2019	$96,629	CRC Screening	Augusta	ME
MaineHealth - Maine Medical Center	Building Capacity at MaineHealth to Enhance Colorectal Cancer Screening	2016	$28,863	CRC Screening	Scarborough	ME
Midcoast Hospital	Developing Systems to Increase Colorectal Screening Rates through Patient Identification	2016	$29,848	CRC Screening	Brunswick	ME
Mount Desert Island Hospital	Increase Colorectal Screenings and Ensure Compliance in a Targeted Subset of Patients	2016	$7,481	CRC Screening	Bar Harbor	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Pen Bay Medical Center	Screen to Save - Knox County	2018	$32,055	CRC Screening	Rockland	ME
Penobscot Community Health Care	Provider Reminder and Recall System for Colorectal Cancer Screening	2016	$30,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Increase Colorectal Cancer Screening through Patient Outreach and Recall	2017	$100,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Improving Colorectal Screening Rates via Use of a Medical Support Assistant	2018	$100,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Improving Colorectal Screening Rates via Community Support Workers	2019	$100,000	CRC Screening	Bangor	ME
Sebasticook Valley Health	Outreach, education, and Navigation Program to Increase Colorectal Cancer Screenings	2018	$85,791	CRC Screening	Pittsfield	ME
Waldo County General Hospital	Waldo Screen to Save	2017	$44,566	CRC Screening	Rockland	ME

Grant Results

The CRC grants provided by MCF from 2015-2019 resulted in several positive outcomes for grantees, Maine's communities and those experiencing colorectal cancer in Maine. A summary of some of these outcomes is provided below.

- MCF grant funding resulted in 36 new or expanded partnerships between oncology providers, community organizations, hospitals, health systems, and others.
- 18 grantees saw an improvement in their CRC screening rates when comparing the start of the grant period to the end. Screening rates improved from a baseline of 59% to 69% over the short 1-2-year grant periods.
- 88% of grantees included components to increase patient access (such as provide transportation, increased hours, etc.).
- 27,343 new patients who had never received CRC screening were identified for screening
- 82% of grants developed materials that were distributed to raise awareness of colorectal cancer.
- 65% utilized patient outreach and media advertising events.
- 94% of grants resulted in staff receiving additional training related to colorectal cancer screening, with 309 staff members receiving training.

- A total of 23 new staff members (across 12 organizations) were hired as a result of the grants.
- Nearly all projects involved modification of CRC screening policies or protocols, and 71% organizations updated their Electronic Health Record systems.

It is estimated that as a result of increased CRC screening rates, an additional 9,829 individuals received CRC screening. This includes specific high-risk populations, including those without health insurance, and those lacking transportation to reach their provider.

Impact of MCF Grants

The effectiveness of CRC screening on reductions in mortality and the cost-effectiveness of screening have been well documented in clinical studies, starting in 1993 when the efficacy of CRC screening with guaiac FOBT was demonstrated.[5] From 1993 to 2009, a total of 55 studies were published examining 32 unique cost-effectiveness models. All studies found that colorectal cancer screening was cost-effective or even cost-saving compared with no screening.[6]

However, studies disagree as to which screening method is most effective or had the best incremental cost-effectiveness ratio for a given willingness to pay per life-year gained. Results show no significant differences in life-years gained with annual screening with a highly sensitivity FOBT, 10-yearly colonoscopy, or with a combination of annual FOBT and 5-yearly sigmoidoscopy. As specified by the U.S. Preventive Services Task Force, the best CRC screening test is the one that gets done.[7]

Using estimates derived from modeling conducted by the Cancer Intervention and Surveillance Modeling Network (CISNET), the U.S. Preventive Services Task Force provides estimated number of life-years gained, colorectal cancer deaths averted, lifetime colonoscopies required, and resulting complications per 1,000 screened adults aged 50 to 75 years for each of the screening strategies. According to these estimates:

- The number of life-years gained per 1,000 individuals screened ranges from a low of 181 to a high of 275, depending on the type of screening tests performed.
- The number of colorectal cancer deaths averted per 1,000 individuals screened ranges from a low of 17 to a high of 24.

Methods for calculating life-years saved and cost-effectiveness

This analysis focused primarily on life-years saved and deaths averted as a result of the interventions and the cost per life-year. The basis for the analysis is the number of additional screenings that occurred because of the intervention. This was calculated using the reported increase in CRC screening rates and projecting each reported rate increase on the reported patient populations eligible for screening for each grantee. This yielded a subset of the total screenings conducted by each grantee which can be attributed to the increase in screening rates achieved using grant funding.

The additional screenings were adjusted to a 60% compliance rate to match the national average for screening compliance as not all individuals will maintain a screening regimen during the recommended ages of 50-75[3]. Estimates in Table 1 are averaged across the grantees who provided data for this evaluation. High and low estimates are provided to illustrate the range of potential benefits and are based

on estimates of life-years saved per 1,000 individuals screened provided by the U.S. Preventive Services Task Force.

Table 1: Outcomes for MCF Colorectal Cancer Screening Grants

Adjusted Screenings with Compliance Rate*	Number of Life-Years Saved*			Number of Cancer Deaths Averted*		
	Low	Mid	High	Low	Mid	High
5,897	1,067	1,345	1,622	100	121	142

** Based on CISNET estimates and a 60% compliance rate for screenings*

Table 2: Cost-Effectiveness of MCF Colorectal Cancer Screening Grants

Adjusted Screenings with Compliance Rate*	Grant $ Per Life-Year Saved*			Grant $ Per Cancer Death Averted*		
	Low	Mid	High	Low	Mid	High
5,897	$768	$610	$506	$8,179	$6,783	$5,794

** Based on CISNET estimates and a 60% compliance rate for screenings*

Results

Assuming an estimated 60% compliance rate, an additional 5,897 individuals are expected to continue on a recommended CRC screening protocol as a result of MCF CRC grants. In terms of life years saved, this translates to between 1,067 and 1,622. The cost in dollars per life year saved ranges from $506 to $768.

Discussion

MCF colorectal cancer grants have shown to be highly effective at increasing CRC screening rates, which will, in turn, save the lives of many Mainers. In addition to the many operational and procedural improvements that were made as a result of the grants, grantees reported identifying 27,343 new patients for screening and providing 9,829 additional CRC screenings to these patients.

A considerable number of lives are being saved compared to the number of screenings being performed and the relatively low cost of a CRC screening. At a cost of $506 to $768 grant dollars per life-year saved, the intervention is extremely cost-effective. At the adjusted rate, 9,829 additional screenings per year are significant. This equates to approximately 100 to 142 colorectal cancer deaths averted by grantee efforts.

Based on the results of the analysis and the estimates it produced, the colorectal cancer grantees are making significant progress towards reducing the rates of colorectal mortality in Maine. However, the results of this analysis do have some limitations. While MDR has taken many efforts to ensure the validity of the data and results, the calculations are based on data provided by grantees, which may be inconsistently reported or not reported at all. Life-years saved and cancer deaths averted are calculated based on estimates for the U.S. developed by the U.S. Preventive Services Task Force. There may be confounders specific to the state that might make the estimates less accurate for Maine specifically and less representative of what will happen over time.

Also, note that the cost and number of life-years saved is an estimate of the impact the entire pool of CRC grant money had on the reported population of eligible patients. Individual grants may have overperformed or underperformed compared to this estimate. To illustrate this, the estimated low cost per life-year ranged from $131 to $13,233 by the grantee. Despite the variability, the data strongly suggest that CRC grants are having a significant positive impact both individually and overall.

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2. Transportation

Background

Among the common barriers to health care, transportation stands out as both a geographically and economically challenging hurdle for Maine cancer patients. Without personal transportation, patients face unfavorable odds in their efforts to access care. Even if a patient has access to their own vehicle, approximately 61% of Maine's population lives in rural areas far from the cancer care centers located in the metropolitan areas and neighboring states.[1] Previous research conducted by MCF and Market Decisions found that patients living in rural areas of the state can travel well over 100 miles one way to receive cancer care within the state (not including out of state travel).

Maine Cancer Foundation has awarded **30 transportation grants** totaling **$840,966**.

This has helped **2,082** Mainers travel to cancer care appointments, resulting in **23,909** additional rides and over **3.2 million** miles traveled.

Coordinating long distance travel or access to transportation, treatment schedule, and lodging can be significant obstacles to patients whose health is in decline or those with limited resources. Compounding the stress of coordinating travel is the financial burden of traveling long distances for care multiple times per month or week as well as overnight stays close to treatment facilities. These trips can quickly become costly in terms of fuel, highway tolls, vehicle maintenance, and lodging, and these additional costs disproportionately impact low-income and rural residents in Maine[2]. Overall, transportation barriers are associated with greater rates of missed appointments, postponed prescriptions, and poorer care outcomes[3].

Summary of MCF Grants 2015-2018

Since 2015, MCF, in partnership with the John T. Gorman Foundation, has made significant investments in organizations around Maine with the goal of improving transportation for cancer patients. Grant-funded organizations implemented interventions such as utilizing volunteer and employee drivers, distributing gift cards for gas, or reimbursements for non-mileage expenses, providing free flights and ground transportation, and participating in patient navigation programs at the cancer care centers. Some of the projects implemented awareness building components but most served pre-established populations of need.

As part of Challenge Cancer 2020, MCF has awarded $840,966 through 30 transportation grants to 18 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Angel Flight Northeast	Changing Lives One Flight at a Time	2018	$30,000	Transportation (Flights)	North Andover	MA

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2015	$7,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2016	$15,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access To Cancer Treatment	2017	$57,500	Transportation	Ellsworth	ME
Brian's Ride Cancer Fund	Transportation and Lodging Assistance for Cancer Patients	2018	$40,000	Transportation	Caribou	ME
Cancer Resource Center of Western Maine	Access to Cancer Care through Transportation	2018	$10,000	Transportation	Norway	ME
Community Concepts	Transportation	2015	$10,000	Transportation	Lewiston	ME
Community Concepts	Transportation	2016	$15,000	Transportation	Lewiston	ME
Community Concepts	The Cancer Patient Transportation Project	2017	$50,000	Transportation	Lewiston	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2015	$10,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2016	$15,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Program	2017	$52,500	Transportation	Brunswick	ME
Dempsey Center	The Maine Fund for Cancer Patients	2015	$4,000	Transportation	Lewiston	ME
Dempsey Center	The Maine Fund for Cancer Patients	2016	$4,000	Transportation	Lewiston	ME
Downeast Community Partners	Rides for a Cure	2017	$50,000	Transportation	Ellsworth	ME
Friends in Action	Friends in Action Transportation	2018	$30,000	Transportation	Ellsworth	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Hospitality Homes	Maine Boston Network	2017	$38,000	Transportation (Lodging)	Boston	MA
Kennebec Valley Community Action Program	Cancer Transportation Project	2017	$50,000	Transportation	Waterville	ME
Lake Region Senior Service	Healthcare Access Program	2015	$10,000	Transportation	Bridgton	ME
Lake Region Senior Service	Healthcare Access Program	2016	$15,000	Transportation	Bridgton	ME
Lake Region Senior Service	Cancer Patient Transportation	2017	$43,500	Transportation	Bridgton	ME
Patient Airlift Services	Eliminating Transportation Barriers for Patients in Maine	2018	$30,000	Transportation (Flights)	Farmingdale	NY
Penquis CAP	Access to Cancer Care	2015	$10,000	Transportation	Bangor	ME
Penquis CAP	Access to Cancer Care	2016	$15,000	Transportation	Bangor	ME
Penquis CAP	Accessing Cancer Care	2017	$57,500	Transportation	Bangor	ME
The Leukemia & Lymphoma Society	Other Medical Expenses	2018	$50,000	Transportation	Wellesley	MA
Waldo Community Action Partners	Collaboration for Cancer Care Transportation	2017	$49,966	Transportation	Belfast	ME
Washington Hancock Community Action	Washington Hancock Community Agency	2016	$12,000	Transportation	Ellsworth	ME
York County Community Action Corporation	Connecting to Cancer Care	2015	$10,000	Transportation	Sanford	ME
York County Community Action Corporation	Connecting to Cancer Care	2017	$50,000	Transportation	Sanford	ME

Grant Results

The transportation grants provided by MCF from 2015-2018 resulted in several positive outcomes for grantees, Maine's communities and those receiving cancer care in Maine. A summary of some of these outcomes is provided below.

- 11 grants provided reimbursements for non-mileage expenditures totaling $1,682 for housing costs and $960.30 for other costs.

- A total of 3,251,549 miles were traveled as a result of the grants. This includes 2,408,549 on the ground and 843,000 by plane.
- A total of 1,243 volunteers and 214 employees provided one or more rides for cancer patients.
- 23,909 trips were made with an average of 133 miles per trip.
- A total of 7,652 repeat rides averaging 116 miles were provided.
- 25 grantees provided repeat rides for 1,173 clients.
- Grantees provided a total of 532 gas cards averaging $130 per card.
- 30 grants resulted in 126 additional partnerships between transportation providers, community organizations, cancer resource centers, and hospitals.
- 75% had some form of developed materials that were distributed to raise awareness.
- 61% utilized outreach and media advertising events.
- A total of 2,878 individuals in the target population were educated about transportation options through outreach sessions.
- Across 19 grantees, the self-reported average cost per mile of driving is between $0.04 and $2.00 (and $5.50 for flying).

As a result of transportation efforts, 2,082 individuals in Maine were provided transportation services to help them attend cancer care appointments; this includes populations from both rural and urban settings.

Impact of MCF Grants

Published literature studying transportation initiatives is limited. More common are studies that have highlighted the extreme need for transportation services for cancer patients. As previously discussed, poorer populations are more likely to report transportation barriers when accessing health care in general. A systematic review of transportation and health needs literature suggests that between 10-51% impoverished patients experience transportation barriers that prevent care and may worsen health outcomes[3]. Another review found strong correlations between travel burden and patient quality of life and prognosis[4]. Some research suggests that telemedicine may be a viable intervention for the most rural of cancer patients when routine care is what's needed, but this fails to relieve the travel burden when treatments such as radiation, chemotherapy, or surgery and diagnostics are needed[5]. Telemedicine may alleviate a portion of the travel burden, but it will never eliminate it for patients requiring ongoing treatment.

Methods for calculating cost-effectiveness

The cost-effectiveness metrics selected for the transportation grants are the average cost per mile, ride, and person. Total rides, rides per grant, total miles, and miles per grant are included to demonstrate the scale of impact the transportation grants have had. The cost measures are derived from simple summations and averages across the data reported by the grantees. Data from 18 grants were used in calculating these values. Average cost per person an average of the total spent on transportation across all 30 grants.

The results of the cost-effectiveness calculations are listed below:

Cost-Effectiveness of MCF Transportation Grants	
Total rides provided	23,909
Average rides per grant	1,258
Total miles traveled	3,251,549
Average miles driven per grant	171,134
Average cost per mild	$0.33
Average cost per ride	$35.23
Average cost per person	$446.20

Results

Among the grantees who reported data, the estimated average cost per mile is about $0.33, and the average cost per ride is roughly $35.23. Per person, the grants spent about $446.20 in transportation, lodging, and fuel costs. **A total of 23,909 rides covered 3,251,549 miles in roughly three years of grant-making activity**. Each grantee provided approximately 1,258 rides which spanned a total of 171,134 miles.

Discussion

Results show that MCF transportation grants are achieving their short and mid-term outcomes of 1) increasing the number of people in Maine utilizing transportation services to get to cancer treatments services, 2) increasing the ability of health care providers and patients to utilize transportation services made available by grantees; 3) increasing the number of patients receiving services for cancer care; and 4) decreasing the financial burden on patients with cancer or in recovery.

A total of 23,909 rides were provided to patients to receive cancer treatment, covering over three million miles of distance. **It's likely that some of the patients who received transportation through these grants would not have been able to get to treatment without these services, resulting in missed appointments, lower compliance rates for screening or follow-ups, or possibly even a lack of treatment altogether.** In addition, those who may have found alternative transportation may have had to pay for it themselves, potentially creating a financial burden for those unable to afford it.

Note that only 19 of the 30 grantees tracked and provided information on number of trips and mileage (typically grantees that provided gas cards or other types of non-mileage reimbursement such as car repairs were less likely to track information about how many trips those funds provided). Therefore, the number of trips and miles traveled as a result of MCF transportation grants is likely underrepresented in these results.

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3. Patient Navigation

Background

Patient navigation focuses heavily on reducing barriers to cancer care. The barriers addressed by patient navigators vary widely but commonly include timeliness of care, finances and insurance, transportation, and general support during the patient's experience with cancer care. Benefits from patient navigation are largely expressed during the early stages of intervention which include prevention, screening, and diagnostics[1].

Studies demonstrate that patient navigation can significantly reduce the time to resolution for abnormal screening results[2]. Improvements to the diagnostic resolution timeframe are most pronounced among socioeconomically disadvantaged populations[2,3]. They benefit the most from navigation assistance particularly when they have low levels of health literacy or limited financial resources and are uninsured.

Maine Cancer Foundation awarded **15 patient navigation grants** totaling **$2,344,480**.

This resulted in **1,969** additional referrals for diagnostic follow-up and connected **1,662** patients with cancer health care resources.

A study of patient navigator programs in Pennsylvania hospitals found that most navigator time was spent on issues related to financial problems, transportation, and end-of-life issues such as arrangements for dependent care[4]. On average, 169 minutes were spent on financial navigation, 74 minutes on transportation, and between 60 to 65 minutes for end-of-life issues[4]. The navigators play an important role helping patients coordinate the various and often overwhelming aspects of their care and personal lives following abnormal screening and positive diagnostic results.

Summary of MCF Grants 2015-2018

Since 2015, MCF made significant investments in organizations around Maine with the goal of providing patient navigation services for cancer patients through funding patient navigators. These organizations implemented evidenced-based interventions, such as providing patient navigation for topics like insurance and financial strategies, transportation, and the coordination of cancer care. These strategies have been demonstrated to reduce the time to diagnostic resolution which, in cases of cancer positive diagnoses, can result in more expedient intervention and better health outcomes. Many of these projects involved systems changes, but also include components to provide education, increase awareness, and increase access to individuals who have problems getting preventative treatment and screening.

As part of the Challenge Cancer 2020 campaign, MCF awarded $2,344,480 through 15 patient navigation grants to 15 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Caring Connections/ Bangor YMCA	Patient Navigator Position	2017	$110,386	Patient Navigator	Bangor	ME
Cary Medical Center	Navigating the Journey	2018	$161,557	Patient Navigator	Caribou	ME
Central Maine Medical Center	Lung Screening Navigator with Tracking and Reporting Software System	2017	$164,000	Patient Navigator	Lewiston	ME
Greater Portland Health	Patient navigator to reduce cancer incidence and mortality rates among minority populations	2018	$164,000	Patient Navigator	Portland	ME
Healthy Acadia	Downeast Cancer Patient Navigation	2016	$164,000	Patient Navigator	Ellsworth	ME
Healthy Community Coalition of Greater Franklin County	Franklin's Navigator Program for Colorectal Cancer Screening	2015	$164,000	Patient Navigator	Farmington	ME
Katahdin Valley Health Center	Patient Navigator Project	2018	$164,000	Patient Navigator	Patten	ME
Maine Mobile Health Program	Maine Immigrant Patient Navigation Project	2016	$138,725	Patient Navigator	Augusta	ME
MaineGeneral Medical Center	Reducing Barriers to Cancer Care for Low Income, Rural Residents	2017	$161,562	Patient Navigator	Augusta	ME
Mount Desert Island Hospital	Establishing a Patient Navigator Program at Mount Desert Island Hospital	2017	$161,614	Patient Navigator	Bar Harbor	ME
Pen Bay Medical Center	Patient Navigator Program	2017	$161,388	Patient Navigator	Rockland	ME
Penobscot Community Health Care	Eliminating Barriers to Cancer Screening through Use of Navigator Medical Assistants	2015	$164,000	Patient Navigator	Bangor	ME
Sebasticook Valley Health	Patient Navigation Outreach Program	2015	$137,248	Patient Navigator	Pittsfield	ME
Southern Maine Health Care	Ambulatory Nurse Navigator with emphasis on Lung Cancer	2016	$164,000	Patient Navigator	Biddeford	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
The Aroostook Medical Center	Early Access Patient Navigator	2015	$164,000	Patient Navigator	Presque Isle	ME

Grant Results

The patient navigation grants provided by MCF from 2015-2018 resulted in several positive outcomes for grantees, Maine's communities, and those receiving cancer care in Maine. A summary of some of these outcomes is provided below.

- More than 28,000 individuals were targeted/eligible for services as a part of the patient navigation grants.
- At least 16,831 patients were identified for cancer screening.
- 1,969 referrals for screening or diagnostic follow-ups were provided.
- 67% of grantees reduced the time between referral and follow-up screening or diagnostics.
- 83% of grantees reported improved screening rates for one or more of the following – breast, lung, cervical, colorectal, and skin cancer.
- 491 individuals were provided with financial resources.
- 298 individuals were assisted with insurance navigation.
- 206 individuals were provided with social services.
- 587 individuals were assisted with other services.
- 193 individuals were provided with health care literacy.
- Grants resulted in 75 additional partnerships with 77% of grantees reporting efforts to build new partnerships.
- 86% of the grants developed materials that were distributed to raise awareness of available resources.
- 69% of the grants utilized outreach and media advertising events.
- A total of 16,629 individuals were educated about patient navigation resources available to them.
- 7,684 materials were distributed to increase awareness about patient navigation programs.
- 86% of grants resulted in staff receiving additional training related to patient navigation services, with 105 current staff members receiving training.
- 87% of the grants allowed grantees to hire additional staff. A total of 22 new staff members were hired as a result of the grants.
- 58% of the grants included components to increase patient access to care.

It is estimated that due to patient navigator efforts, an additional 1,662 individuals were connected with cancer care resources. This includes specific high-risk populations, including those without health insurance, and those lacking transportation to reach their provider. Several projects, such as Greater Portland Health's Effort to Reduce Cancer Incidence and Mortality Rates among Minority Populations and Maine Mobile Health Program's Maine Immigrant Patient Navigation Project, focused specifically on connecting underserved and minority populations with resources or increasing screening rates.

Impact of MCF Grants

The primary focus of patient navigation is increasing the expediency of diagnostic resolution and providing reliable guidance to patients as they navigate the cancer care pathway. Most patient navigation relates to issues with insurance, transportation, and coordinating care. Successful programs have been shown to reduce the diagnostic resolution time and speed up care. Additionally, navigators assisting patients with accessing resources can increase the quality of the experience and patient satisfaction.

MDR Methods for calculating outcomes

The metrics for patient navigation were chosen based on the most complete data supplied by the grantees. Only one grantee provided data on diagnostic resolution time, so this analysis focused on how many individuals were reportedly connected with resources during their care.

Table 3: Patient Navigation Outcomes – Connection to Referrals/Screening

The number of patients newly identified for screening	The number of referrals for diagnostic follow-up	% of Grantees who Improved Screening Rates
16,831	1,969	83%*

Table 4: Patient Navigation – Connection to Resources

Total population targeted/eligible for services	Number participating in education/events	Patients connected with resources
28,083	16,629	1,662

**Among grantees who provided data pre/post screening rates*

Results

Among the population of newly identified patients that needed screening, 1,969 received referrals for follow-up diagnostics. Patient navigators connected 1,958 patients with some type of resource or services, including financial, insurance, transportation, social, and other services. Based on grantees that provided data, **it is estimated that 31% of cancer patients in areas receiving patient navigation grants are connected with needed resources**. These 1,958 patients received final assistance, health insurance navigation, connections with transportation and social services, as well as other help.

Discussion

Given the variety of activities and work being conducted by patient navigation grantees, it is difficult to summarize the overall impact or cost effectiveness MCF's grants. However, among the data provided by grantees, **the results suggest that MCF funding is used in an effective way to hire and train navigators and other staff, educate patients, provide referrals for screening and treatment, and provide various**

types of resources that includes financial help, education, transportation and help navigating insurance or coordinating care.

One important area where the data are inconclusive for patient navigation is in reducing the time for diagnostic follow-up or resolution. This is a primary function of patient navigators according to the body of literature documenting their role. Navigators can help reduce the amount of time between abnormal cancer screening tests and follow-up diagnostics by communicating and helping patients with appointments, insurance issues, and other barriers. This is especially true among low-income, uninsured, and minority populations.

However, only 10 grantees responded to this question with 67% reporting a reduction in wait times. Of those, only two provided data regarding the reduction in wait times (although both reported a significant reduction in wait times from baseline to post). This could be due to a lack of tracking on the part of grantees, but in the future, MCF should look to quantify the impact of patient navigation grants on reducing the window for diagnostic follow-up or resolution.

Another potential issue with patient navigation is limited capacity and staffing. This limits how many identified patients can be followed up with to provide referrals and appointments with providers. While grantees noted almost 17,000 individuals were identified for screening, only a small percentage of these individuals were provided with an actual referral. As was noted by some grantees there can be significant capacity constraints that prevent grantees from reaching out to everyone. Limited staffing, coupled with the personalized service required from patient navigation, means there simply are not enough hours in the day to contact everyone. In addition, reluctance or refusal from individuals to receive cancer screening and a lack of providers or availability of providers can also make it limit the ability of navigators to provide referrals to those in need of screening.

There are significant gaps in the data within and between grants. In the future, complete data from grantees will help quantify the impact of patient navigators and allow for a more accurate summary of overall grant-making effectiveness. As it stands, the summary statistics and estimated metrics in Table 3 and 4 and the bulleted list above may not represent the average across all grants due to missing grantee data from 2015-18.

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4. Human Papilloma Virus (HPV) Vaccination

Background

HPV is causally associated with cervical, vaginal, vulvar, penile, anal, and oropharyngeal cancers, and is estimated to be the second leading cause of cervical cancer among women worldwide[1]. In Maine, the rate of HPV-related cancer is estimated to be around 135 per 100,000[1]. Among females in Maine, the rate of HPV-related cancers is 15 per 100,000, while among males, the rate is 11.9[1]. HPV-related cancers are associated most frequently with two strains of the virus, types 16 and 18, but there are over 200 variants of HPV found in the human body. Vaccines in the U.S. protect against these two types 16 and 18 in addition to about ten others depending on the vaccine variant. Both boys and girls ages 9 to 26 are encouraged to get a two-dose vaccine per the CDC's recommendations[2]. In Maine, 53.4% of adolescents age 13-17 have received the complete two-dose HPV vaccination series.[3]

Maine Cancer Foundation awarded **2 HPV vaccination grants** totaling **$356,117**.

This resulted in 496 additional HPV vaccinations, and increased vaccination rates **from 39% to 46%**.

The efficacy of HPV vaccines has been demonstrated in clinical trials evaluating HPV-associated conditions and persistent infection. In addition, modeling studies have consistently shown that the routine vaccination is a cost-effective use of public health resources, as long as vaccine duration of protection is sufficient[4]. However, there are no studies that confirm a measurable reduction of HPV associated cancers due to the increasing vaccination of the U.S. population. The federal CDC's Advisory Committee on Immunization Practices (ACIP) estimates that it will take decades before the population-level efficacy of HPV vaccination can be observed with respect to HPV-related cancers[5]. Despite the lack of evidence regarding cancer prevention, the HPV vaccine achieves between 60-99% efficacy for various HPV strains up to nine years post-vaccination[6].

Summary of MCF Grants 2015-2018

MCF has made a significant investment to improve HPV vaccination rates in Maine. As part of the Challenge Cancer 2020 campaign, MCF has awarded two HPV grants totaling $356,117 to the following organization:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Qualidigm (formerly Maine Quality Counts)**	HPV Vaccination Learning Collaborative	2017	$264,201	HPV Vaccination	Manchester	ME
Qualidigm (formerly Maine Quality Counts)	Maine HPV Project ECHO	2019	$91,916	HPV Vaccination	Manchester	ME

**Grantee implemented funding across eight separate practices.

The primary focus of the HPV grants is increasing vaccination rates with the goal of preventing HPV-associated cancers. Grant projects were implemented across eight different practices with low HPV vaccination rates compared to the state average. Grant activities included evidence-based interventions, provider reminder systems linked to patient EHRs, and virtual statewide provider education, all of which has been shown to increase HPV vaccination rates. Projects involved extensive health care provider education, capacity assessments of participating practices, and significant updates to EHR systems used to track vaccination status and HPV data.

Grant Results

The HPV grants provided by MCF between 2017 and 2019 resulted in several positive outcomes for the targeted pediatric practices and their patients. A summary of some of these outcomes is below.

- 7,236 individuals were included in the target population between the two grants, 3,986 were identified for vaccination.
- Both grants increased vaccination rates across the participating practices, from a baseline of 39.3% to 46.1%, a 6.8 percentage point increase.
- An estimated 496 additional vaccinations occurred due to the grants.
- The grant resulted in 22 additional partnerships with participating pediatric practices.
- Both grants included the development and distribution of educational materials to the participating practices.
- Both grants provided training to practice staff; a total of 161 individuals were trained.
- One of the grants included components to expand patient access to services including establishing vaccine-only clinics and setting up nurse administered vaccine appointments.

It is estimated that because of HPV grantee efforts, an additional 497 individuals were vaccinated against HPV.

Impact of MCF Grants

Description of the literature on HPV vaccination

While HPV vaccination is effective at preventing infections from common cancer-causing strains, there is no evidence to date that suggests the rate of HPV-related cancer is declining. This is due, in part, to the recent adoption of HPV vaccination practices in 2006. According to the CDC and ACIP, it will take decades to determine the impact of vaccination on HPV-related cancers in the U.S.

MDR Methods for calculating cost-effectiveness

Table 5: HPV Vaccination Outcomes

Total number of patients	Number of patients identified for HPV vaccination	Additional Vaccinations Provided	Baseline Vaccination Rate	Post Vaccination Rate	% Change
7,236	3,986	496	39.3%	46.1%	6.8%

Results

Across practices targeted by these grants, a total of 496 additional HPV vaccinations were provided. The overall HPV vaccination rate increased from a baseline of 39.3% to 46.1%, an increase of 6.8 percentage points. This work has helped participating practices get closer to the Maine average vaccination rate of 53.4% among adolescents age 13-17.

Discussion

HPV vaccination rates significantly increased among adolescents in the participating grant funded practices. Increased vaccination rates are likely to have long-term reductive effects on the rates of HPV-related cancer among both men and women. The procedure and infrastructure changes generated by this initiative have proven to be successful models for increasing vaccination rates. It is likely that these methods would be highly successful in other areas as well. It appears that this was a productive, well-organized, and impactful effort to address insufficient HPV immunization among Maine children.

Most of the work has focused on building infrastructure and facilitating provider education to help increase vaccination rates. New EHRs, provider trainings, and revisions of processes and protocols were necessary to boost the rates at each practice. It is important to note that these interventions improve overall systems within each practice and their implementation will likely continue to improve vaccination rates over time. The quality of the data provided for this grant is relatively high, particularly with respect to the vaccination rates. All the practices involved provided target population estimates, pre-/post-intervention vaccination rates, and data was reported consistently across the practices. Therefore, the results of the analysis are accurate for this grant category and represent the true impact of the grantee's activity.

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5. Tobacco Prevention and Cessation

Background

Tobacco use is one of the most well-studied causes of cancer and a leading preventable cause of cancer in the US. Using tobacco is associated with higher rates of cancer incidence and mortality for lung cancer and many other types of cancer[1]. Maine is among the worst states in terms of tobacco-related cancer incidences with a rate of 136.7 per 100,000 each year, compared to the US rate of 127.7[4]. Tobacco-related cancers are the leading cancer in Maine both by incidence and mortality (2,550 per 100,000)[4].

Maine Cancer Foundation awarded **19 tobacco grants** totaling **$1,291,828**.

This resulted in **5,965** tobacco users who were informed about tobacco cessation services and **224** confirmed quits **or** reductions in tobacco use.

Reducing tobacco use requires a multipronged approach involving "educational, clinical, regulatory, economic, and social strategies" aimed at increasing quitting, reducing use and secondhand smoke exposure, preventing youth from becoming new smokers, and addressing tobacco disparities between socioeconomic groups[3]. The CDC has funded tobacco interventions from the federal to local levels, and their research has found that the longest running programs are the most effective at reducing both tobacco use and tobacco-related cancer incidence[3]. Reductions in tobacco use among youth in Florida were 50% and 35% among middle and high school students following a youth-focused media campaign[3]. California, the state maintaining the longest-running tobacco control program, reduced the adult smoking prevalence from 22.7% to 11.9% in a 22-year period while its lung cancer incidence rate declined four times faster than the rest of the country[3]. Effective and long-term programs are crucial to reducing tobacco use and decreasing the incidence of tobacco-related cancers.

Summary of MCF Grants 2015-2018

Since 2015, MCF has made significant investments to reduce tobacco use and tobacco-related cancers in Maine. The organizations receiving MCF grants have implemented several evidenced-based interventions, which have included increasing outreach to youth, implementing cessation programming, referring smokers to existing programs and quit resources, and implementation of media campaigns that have been shown to reduce tobacco use. Many of these projects involved outreach and awareness aimed at connecting smokers or those considering smoking with cessation and prevention services. Referrals to cessation classes, counseling, programs, and the Maine Tobacco Quit Line comprise the bulk of grantee activities outside of awareness building.

As part of Challenge Cancer 2020, MCF has awarded $1,291,828 through 19 tobacco grants to 15 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Access Health	Midcoast Youth Tobacco Intervention	2015	$16,099	Tobacco	Brunswick	ME
Breathe Easy Coalition of Maine, City of Portland	Addressing Disparities in Tobacco Use and Exposure through Policy and Environmental Change	2015	$74,101	Tobacco	Portland	ME
Down East AIDS Network and the Health Equity Alliance	LGBTQ Tobacco Equity Project	2015	$57,669	Tobacco	Ellsworth	ME
Healthy Acadia	Reducing Tobacco Use in Downeast Maine	2017	$75,477	Tobacco	Ellsworth	ME
Healthy Androscoggin	Preventing Youth Smoking Through Community Education: The Tobacco 21 Law	2018	$94,816	Tobacco	Lewiston	ME
Healthy Androscoggin	Tobacco Support Group	2019	$9,123	Tobacco	Lewiston	ME
Healthy Communities of the Capital Area	Reaching More Moms, their Friends and Family	2017	$25,000	Tobacco	Gardiner	ME
Healthy Community Coalition of Greater Franklin County	Tobacco Free Franklin	2015	$199,976	Tobacco	Farmington	ME
Maine Public Health Association	MPHA Tobacco Coalition Cancer Prevention	2017	$10,000	Tobacco	Augusta	ME
Maine Public Health Association	Maine Tobacco Coalition for Cancer Prevention	2017	$99,264	Tobacco	Augusta	ME
Maine Public Health Association	Tobacco Prevention and Control Communications Project	2018	$94,275	Tobacco	Augusta	ME
MaineGeneral Medical Center	Engaging Rural, Low-Income Populations in Tobacco Cessation: A Community-Based Approach	2018	$91,959	Tobacco	Waterville	ME
MaineHealth - Center for Tobacco Independence	Building Capacity in Primary Care to Address Tobacco Dependence	2016	$50,000	Tobacco	Portland	ME
Mid Coast Hospital	Increasing Capacity to Provide Group Tobacco	2018	$28,987	Tobacco	Brunswick	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
	Treatment at Mid Coast Hospital					
Penobscot Bay YMCA/Knox County Community Health Coalition	Fresh Quit Knox County	2018	$90,307	Tobacco	Rockport	ME
Public Health Research Institute	Wetamawe (Tobacco)	2017	$100,000	Tobacco	Deer Isle	ME
Waldo County General Hospital	Reducing Smoking Rates among Patients with COPD	2018	$96,240	Tobacco	Rockland	ME
Healthy Androscoggin	Tobacco Education and Cessation Support for Adults in Androscoggin Country	2017	$52,419	Tobacco Cessation	Lewiston	ME
Penobscot Community Health Care	Peer-Led Tobacco Cessation Training at Unlimited Solutions Clubhouse	2017	$26,116	Tobacco Cessation	Bangor	ME

Grant Results

The tobacco grants provided by MCF from 2015-2019 resulted in several positive outcomes for grantees, Maine's communities, and Mainers who smoke. A summary of some of these outcomes is below.

- 162,791 individuals were included in the target population for the grantees.
- A total of 224 tobacco users reported successfully quitting or reducing their tobacco use.
- The quit/reduce tobacco use rate among program participants was 29%.
- 5,965 individuals were educated about or directed to cessation programs.
- 1,981 referrals were made to cessation services.
    - 177 to classes
    - 249 to one-on-one or group counseling
    - 1,258 to the Maine Tobacco HelpLine
    - 297 to other tobacco programs
- 64% of grants included components to increase patient access to care.
- Grants resulted in 109 additional partnerships between cessation programs, healthcare facilities, community organizations, and others.
- 93% of grants developed educational materials that were distributed to raise awareness. Over 27,000 educational materials were distributed around the state.
- 76% of grants utilized outreach and media advertising events.

- 75% of grants resulted in staff receiving additional training related to tobacco cessation and prevention, with 44 staff members receiving training.
- 33% of the grants hired additional staff. A total of 4 new staff members were hired with the grants.

As a result of tobacco grantee efforts, a confirmed 224 individuals quit or reduced their tobacco use. This includes both youth (school-based) and adult smokers of varying socioeconomic statuses from across the state.

Impact of MCF Grants

The Surgeon General's report, Health Consequences of Smoking—50 Years of Progress, concludes that, "The burden of death and disease from tobacco use in the United States is overwhelmingly caused by cigarettes and other combusted tobacco products;" and "comprehensive tobacco control programs and policies have been proven effective for controlling tobacco use."[5]

Numerous studies have validated the efficacy of tobacco control and cessation programs. This includes the Maine Tobacco HelpLine, which supports 6-month quit rates of between 12% and 23% among current smokers.[6] Studies have also attempted to quantify the medical costs and quality-adjusted life years associated with smoking. These results have proven more varied, given the complex methods and assumptions required to produce the estimates. However, results from the Cancer Prevention Study II found:

> *Life expectancy among smokers who quit at age 35 exceeded that of continuing smokers by 6.9 to 8.5 years for men and 6.1 to 7.7 years for women. Smokers who quit at younger ages realized greater life extensions. However, even those who quit much later in life gained some benefits: among smokers who quit at age 65 years, men gained 1.4 to 2.0 years of life, and women gained 2.7 to 3.7 years.*[7]

Additional studies have produced similar results, showing that while quitting earlier in life produces a larger benefit, even older adults who quit smoking add years to their lives.

The outcomes for the tobacco grants focused on the number of individuals seeking or directed to cessation services and how many identified smokers reported themselves as successful quits or reduced use. The total number of individuals quitting or reducing their use was estimated using the average quit rate and the number of tobacco users who were provided referrals to cessation services.

The results of the grant effectiveness analysis are below:

Table 6: Tobacco Cessation Outcomes

# Receiving Tobacco Education or Referral Info	# Referred to Cessation Services	Confirmed number of quits / reduce use*	% Decreasing Tobacco Use or Quitting*	Estimated # of Quits or Reduced Use**
5,965	1,981	224	29%	572

** Data from grantees that worked on, tracked, and provided information on quits and/or reduction in use*
*** Calculated by multiplying the # referred to cessation services (1,981) by the 29% quit or reduction in tobacco use rate seen among other MCF grantees (as not all grantees who provided referrals tracked their quit rates).*

Results

As a result of the grantees work, approximately 5,965 tobacco users were provided education about tobacco prevention or information about available tobacco cessation services, while 1,981 were specifically referred to tobacco cessation services. Only six of the 19 grantees tracked the number of quits/reductions in use as a result of their projects. Among these grantees, a total of 224 tobacco users reported either quitting or reducing their tobacco use, resulting in a quit/reduced use rate of 29%. When this rate is applied to the 1,981 tobacco users who received referrals to cessation services across all grantees, **nearly 600 smokers may have quit or reduced their tobacco use after participating in grantee programs**.

Discussion

Grantees addressing tobacco prevention and cessation are engaged in a wide variety of activities making it difficult to collect and aggregate data to summarize the impact and cost-effectiveness of MCF grant funding. However, the data available for MCF Tobacco grantees show that they are reaching a large target population (162,791), building important partnerships with collaborators (109 new partnerships), and providing much needed training to public health workers (44 staff members trained). Given that grant programs are focused on a variety of tobacco interventions, including prevention, outreach, education, policy change, treatment, and cessation, there are many unique outcomes that result from the grant activities.

Results show that MCF funding is effectively reducing tobacco use and getting smokers to quit. Grantees focused on tobacco cessation programming and were able to report outcome data on quits and reductions in use. These grantees achieved a successful 224 quits/reductions for a 29% success rate among tobacco users. This suggests that the education and assistance provided to smokers and referral services have been effective. From this analysis, grantees who reported quantitative data about their referrals, number of people interacted with, and post-program outcomes are making a positive impact on the rates of smoking and ultimately cancer incidence. **It is reasonable to extrapolate based on life expectancy studies that MCF grant funding for tobacco prevention and cessation has saved thousands of years of life combined for those who have quit due to the programs.**

Additional outcome tracking and data reporting will be necessary to provide a full impact of MCF grant funding on tobacco use in Maine. Less than half of grantees were able to provide quantifiable tobacco cessation data at the time of data collection. The results are based on this subset of grantees.

Several of the grantee programs were focused on prevention, outreach, or education rather than cessation, so it is expected that cessation metrics would not be available for these grantees. Additionally, many of the programs that are cessation-based are in the early stages of development and do not yet have this data. As these programs develop and additional data becomes available the estimated numbers of quits and reduced use should increase accordingly.

With additional, future data from grantees, MCF will have a better understanding of how their tobacco grant awards have impacted Maine. Additional data on the number of smokers being referred and going to various tobacco programs, how many are quitting or reducing their use, and how many begin smoking again in the long-term will help MCF evaluate the impact of these grants. These data will help support a more thorough assessment of how these interventions are performing and the per dollar impact the grants have had on smoking and tobacco-related cancer in Maine.

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6. Youth Tobacco Campaign

Background

Smoking is the leading cause of preventable death in the United States. Big Tobacco spends $43 million in Maine to market their products in ways that appeal to youth[1]. Tobacco companies deny targeting youth directly. However, tobacco companies know 90% of smokers start before they are 18 years old. Through innovation and using duplicitous tactics, they continually look to gain replacement smokers for their products. Youth are highly influenced through digital engagement, and one in four Maine high school students report experimenting with smoking[2].

In an effort to prevent Maine youth from using tobacco products, a collaboration between MCF, Maine Center for Disease Control and Prevention and Rinck Advertising formed to develop a youth tobacco prevention campaign. Utilizing qualitative data from Maine youth focus groups, "**You Are the Target**" is a counter-marketing campaign that strategically intercepts youth via digital media platforms.

Maine Cancer Foundation invested **$750,000** over three years in a statewide youth tobacco media prevention campaign.

Nearly half of teens in the state saw a "You Are the Target" ad or video in the past year. A quarter of tobacco users quit or thought about quitting as a result of the campaign.

Target Audience

- Primary: Youth 10-17
- Secondary: Parents and Influencers

Campaign Objectives

- Educate youth about Big Tobacco.
- Build awareness among youth about the dangers and effects of tobacco use and educate about emerging tobacco products.
- Empower youth to reject the manipulative tactics of the tobacco companies.
- Drive youth to engage with the campaign website: youarethetarget.com

Impact of MCF Grants

Maine youth were exposed to the campaign on a variety of digital platforms and received messages that provided education about tobacco company marketing tactics, built awareness of the dangers and effects of tobacco use, and empowered youth to reject the manipulative tactics used by the tobacco companies.

MCF conducted a survey of Maine youth age 13 to 18, representative of the population targeted with the media campaign. The survey contained a series of questions regarding awareness and perception of the "You Are the Target" campaign. Results of the survey showed that:

- Nearly half of teens (46%) said they saw a "You Are the Target" ad or video in the past year.

- Among those who saw a video, two-thirds were able to accurately describe the message of the campaign (*tobacco companies target youth with their marketing*).
- Overall, 19% of youth talked to one of their friends about tobacco or quitting after seeing the ads, while 7% said they quit using tobacco or thought about quitting.
- Among current tobacco users, 24% said they thought about quitting or reducing their use after seeing the ads.
- Based on the results of the survey, it is estimated that 41,170 teens saw an ad/video in the past year and because of exposure to the campaign, nearly 8,000 Maine teens talked to one of their friends about tobacco or quitting and 3,000 quit using tobacco or thought about quitting.

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7. Sun Safety

Background

Skin conditions are exceedingly common in the U.S. and worldwide and are estimated to cost nearly $75 billion per year in the US alone.[1] Skin cancer including melanoma, non-melanoma, and cutaneous lymphoma accounted for over 60% of the 22,953 deaths in 2013.[1] In Maine, the melanoma incidence rate is estimated to be 25.1 per 100,000, slightly but not significantly higher than the US rate of 24.0 per 100,000.[2] Maine's incidence is approximately 444 new cases of melanoma per year[2]. The mortality rate for melanoma is estimated to be 2.7 per 100,000, but most melanomas are curable if diagnosed early[3].

Maine Cancer Foundation awarded **4 sun safety grants** totaling **$109,293**.

This resulted in **150,000** applications of sunscreen being distributed for free to individuals around the state.

Both malignant and non-malignant skin cancers are caused by chronic and acute exposure to solar UV radiation[4]. Exposure can be reduced by using physical barriers such as clothing or staying indoors during the most intense periods of sun during the day. Protection of exposed skin is best achieved using sunscreens and sun block which reduces the incidence of cancerous skin lesions in fair-skinned persons[5]. An intervention in Australia demonstrated that long-term daily use of sunscreen dramatically reduced the incidence of skin cancers. After a four-year intervention period, a subsequent analysis projected that daily lifetime sunscreen use in the intervention group (approximately 812 persons) would prevent 33 melanomas, 168 cutaneous carcinomas, and 4 melanoma deaths[6]. The authors concluded that daily sunscreen use is a cost-effective intervention that can meaningfully reduce the incidence of skin cancer among fair-skinned people[6].

Summary of MCF Grants 2015-2018

Since 2016, MCF has made significant investments in organizations around Maine with the goal of increasing sun safety practices. Most of these projects involved building infrastructure, training employees at intervention sites, and educating the population to increase sun safety awareness.

As part of the Challenge Cancer 2020 campaign, MCF has awarded $109,293 through 4 sun safety grants to 3 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
City of Portland - Public Health Department	Sun Safety at Casco Bay	2016	$5,000	Sun Safety	Portland	ME
Dempsey Center	Sun Safe on the Slopes	2016	$5,750	Sun Safety	Lewiston	ME
City of Portland - Public Health Department	Sun Safety at the Portland Sea Dogs	2017	$20,000	Sun Safety	Portland	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Impact Melanoma	Practice Safe Skin – Maine	2018	$78,543	Sun Safety	Concord	MA

Grant Results

The sun safety grants provided by MCF from 2016-2018 resulted in several positive outcomes for grantees, Maine's communities and those at risk of developing skin cancer. A summary of some of these outcomes is below.

- 1,599,080 individuals were included in the target population of these grants.
- Grants resulted in 26 additional partnerships.
- 2 of the 4 projects developed materials that were distributed to raise awareness.
- 2 of the 4 projects utilized outreach and media advertising events.
- 9,574 educational materials have been distributed to the target population.
- 4,774 individuals in the target population participated in at least one educational session.
- 119 sunscreen dispensers have been installed.
- 150 cases of sunscreen were used.

It is estimated that because of sun safety grantee efforts, an additional 150,000 individuals were able to apply at least one application of sunscreen over the course of these grants. The per application cost is estimated to be $0.17.

Impact of MCF Grants

Skin cancer results primarily from exposure to ultraviolet radiation from the sun. Both acute and long-term exposure can induce the mechanisms that cause cancer to develop. Exposure is reduced by limiting time outdoors or by wearing clothing and sunscreen. Daily use of sunscreen reduces the incidence of skin cancers in fair-skinned population. However, long-term medical follow-up is critical to assessing the effectiveness of a sunscreen-based intervention.

To the best of our knowledge, no peer-reviewed studies have examined the benefit of sunscreen dispensers or the measured the impact of dispensers on increasing long-term sunscreen use. A research letter published in JAMA Dermatology in 2016 suggests that a decline in skin cancer incidence and mortality in New England may be connected to the region's strong cancer prevention programs, including Practice Safe Skin initiative, which involved funded sunscreen dispensers in public and recreational areas.[7] However, there is no research available to confirm this statement.

The lack of research studies makes it difficult to quantify the impact of MCF grants in this area beyond the short-term increase in sunscreen usage. This analysis estimates the number of people who benefited from the sun safety grant activities. It focuses on the number of sunscreen applications provided by the installed dispensers and seeks to estimate the cost per application and what percentage of the population is protected from sun exposure.

The results of the grant effectiveness analysis are tabulated below:

Table 8: Sun Safety Outcomes*

Number of sunscreen dispensers installed	Cases of sunscreen used	# of 1ml applications of sunscreen	$ per 1ml application
119	150	150,000	$0.17

Results

Four grants have provided sunscreen 119 sunscreen dispensers to the public, consuming 150 bags of sunscreen for an estimated 150,000 1ml applications of sunscreen. The per application cost is estimated to be $0.17, and assuming the entire target population had access to these dispensers, approximately 9% or 143,917 individuals could have used a single 1ml application. If the assumption is that each person used two 1ml applications, 5% or 79,954 people would have received an application of sunscreen.

In addition to the sunscreen dispensers, 4,774 individuals participated in an educational activity, and 9,574 informational materials were distributed to the target population.

Discussion

Results from the analysis of MCF sun safety grants are difficult to quantify at this time. The grant activities were implemented successfully by grantees – installing public sunscreen dispensers, as well as providing education and outreach to employees who work in outdoor settings. However, the connection between these activities and mid to long-term sun safety outcomes is not currently supported by peer-reviewed research. Experts have suggested that strong cancer prevention programs may help to increase public awareness about skin cancer and help decrease cases of melanoma.

Publicly available sunscreen dispensers may increase awareness of sunscreen and possibly create an environment where sunscreen use is the accepted norm. However, these outcomes are moderated by compliance with best-practice application of sunscreen, primarily applying it regularly and consistently when exposure to sun is occurring. At this point it is difficult to difficult to determine if individuals are aware and compliant with best-practices and if this translates to grantees effectively addressing the risks of sun exposure and skin cancer in Maine.

The cost of the sunscreen dispensers is higher than can be purchased by individuals when analyzed against the total cost of the grants. The average grant-funded cost of each 1ml of sunscreen is $0.17. For reference, a 29 ml bottle of generic sunscreen can be purchased for as little as a dollar for a unit cost of $0.03 per ml. It is important to note that the cost of the grantee supplied sunscreen is coupled with educational efforts which raises the cost slightly.

To assess the grantee's impact on skin cancer in Maine, better data and long-term follow-up are necessary. Since evidence shows long-term sunscreen use results in a reduction in skin cancer incidence, a longitudinal study or a pre/post study of the population that interacts with the dispensers would be needed to provide evidence of the longer-term efficacy of the sunscreen dispensers to reduce cancer incidence in Maine. Given the limited data about who is using the dispensers and the long-term outcomes of this population, it is too early to say if sunscreen dispensers are reducing skin cancer incidence or

mortality, however it can be assumed that the regular use of sunscreen is working to reduce cancer rates and these results will be seen when long-term incidence and mortality data become available.

Moving forward, MCF should assess sun safety grant proposals on their ability to educate the target population, increase awareness of sun safety/impact of skin cancer (and its impact on increasing likelihood to use sunscreen), and consistently supply and/or monitor sunscreen use over a longer-term period.

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8. General Operating Support

Background

General operating support funding is a category of grant funding that is critical for many non-profit organizations. General operations are those functions, which keep organizations running and able to fulfill their missions. Among the common general operations activities are asset building and development, institutional services, provision of assets and services, research, networking, community building, and individual economic assistance.[1] Internally, these are activities like payroll, financial management, human resources, and in many cases, hiring grant writers to secure additional funds for mission-oriented operations. Externally, general operations can include fundraising, advocacy work, and civic engagement.[1]

Maine Cancer Foundation awarded **8 general operations grants** totaling **$275,000**.

General operations funding has increased organization capacity, allowed for restructuring and greater focus on programs, and has enabled grantees to generate additional funds through grants and fundraising.

General operations funding covers these types of activities that are vital to many organizations' daily function. Funding for topic-specific outcomes such as increasing cancer screening rates or reducing tobacco use often does not finance the general operations activities. For grant-funded organizations to achieve their institutional missions and those of their funders, they must be able to keep the bedrock of their operations in working order. General funding allows organizations to keep their doors open and continue their important work.

Summary of MCF Grants 2017-2018

Since 2017, MCF made investments to support the general operations of organizations in Maine whose missions align with MCF's goal to reduce cancer. Many of these organizations work to address multiple areas of cancer care and support for Maine residents. Several have additional grants in areas such as colorectal cancer screening, transportation, and patient navigation. The general operating funds allow these organizations to keep their administrative, financial, and other routine operations running smoothly as they focus on cancer care from multiple angles.

As part of the Challenge Cancer 2020 campaign, MCF awarded 8 general operations grants totaling $275,000 to 5 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Beth C. Wright Cancer Resource Center	General Operating Support	2017	$15,000	General Operating	Ellsworth	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Beth C. Wright Cancer Resource Center	General Operating Support	2018	$25,000	General Operating	Ellsworth	ME
Healthy Acadia	General Operating Support	2017	$50,000	General Operating	Ellsworth	ME
Healthy Acadia	General Operating Support	2018	$50,000	General Operating	Ellsworth	ME
Healthy Communities of the Capital Area	General Operating Support	2017	$50,000	General Operating	Gardiner	ME
Healthy Community Coalition of Greater Franklin County	General Operating Support	2017	$50,000	General Operating	Farmington	ME
Sarah's House of Maine	General Operating Support	2017	$10,000	General Operating	Holden	ME
Sarah's House of Maine	General Operating Support	2018	$25,000	General Operating	Holden	ME

The primary focus of general operations funding is to support the various cancer care and support activities of grantees.

Grant Results

The general operations grants provided by MCF from 2017-2018 resulted in several positive outcomes for grantees and the communities they serve. Because the general operations activities differ for each grantee, they are evaluated individually below. Proposed goals from the grant applications are used as the progress metric for each grantee, and the year-end progress reports are treated as the supplied data.

Achieved Outcomes

- Increased fundraising capacity including diversification of organizational funding structures, securing additional funding for programming, and developing fundraising campaigns improved organization's Information Technology, through hardware and software purchases.
- Hired staff to improve infrastructure, including bookkeeper and development staff.
- Invested in staff and board development.
- Improved organizational outreach through development of marketing plans and increased awareness of services.
- Expanded programming related to chronic disease management, health and wellbeing for cancer patients, support groups for cancer patients, and cancer prevention.
- Improved and increased collaboration with other organizations.

- Underwent strategic planning efforts.
- Established a critical reserve of funds for public health programming.

Impact of MCF Grants

Discussion

All organizations that received general operations funding continue to achieve their organizational goals, due in part to the funds obtained from MCF. Grant funds support a wide array of activities and processes that are separate from the program-specific activities. Administrative, financial, and technological improvements are among the more common applications of the general operating funds. Improving these aspects of organizational operation is an integral component to sustaining the long-term viability of programs the grantees oversee.

Recipients of general operation funding reported many and varied outcomes. One grantee said that general operating funds allowed them to secure an additional $163,000 from other funding sources that was then utilized to support additional programs. Another grantee funded expansion of programs for diabetes management, chronic disease management, and Tai-chi classes, serving more than 600 people in one year across the three programs. A grantee that provides housing and transportation services to cancer patients has served 369 guests in a few short years and has continually expanded support for their guests thanks to MCF funding.

The impact of these general operations efforts is intertwined with the programmatic work grantees are doing to address cancer in Maine. It is difficult to parse out the effect on cancer incidence and mortality, **but it is reasonable to conclude that keeping these organizations open, providing support to improve and expand operations, and providing grantees with capacity to secure additional funding sources will positively impact the cancer outcomes.** However, there is no presently available framework for assessing the per dollar contribution to incidence and mortality. Going forward, the assessment should focus on operational efficiency, performance and additional funding or resources generated. If the general funding ultimately improves both, the conclusion is that general funding has a net positive benefit.

References

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9. Cancer Research

Background

Investments in scientific research are crucial to the forward progress of cancer care. Research helps to drive bodies of knowledge and understanding regarding cancer that is integral to successfully treating existing cancer and preventing future cases. The primary focus of the research grants is advancing the edge of scientific and academic knowledge about cancer and the best medical practices for its treatment.

Maine Cancer Foundation awarded **5 research grants** totaling **$1,050,784**.

This funded no-cost fluid and tissue access for researchers, a successful PCRI shared decision-making program for lung screening, a telemedicine program, and ongoing EHR database consolidation and a breast cancer diagnostic trial.

Summary of MCF Grants 2015-2018

Since 2015, MCF made investments in organizations around Maine with the goal of advancing research efforts related to cancer care.

MCF awarded $1,050,784 through 5 research grants to 4 organizations, including:

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Eastern Maine Medical Center Cancer Care	Creating a statewide tissue banking network to promote cancer research	2015	$199,940	Research	Bangor	ME
Maine Medical Center Research Institute	Creating a Centralized Biospecimen Resource for Cancer Research	2015	$199,830	Research	Scarborough	ME
Maine Medical Center Research Institute	Tumor Registry Electronic Medical Record Linked Data Resource: TREMR	2015	$191,230	Research	Scarborough	ME
Maine Dartmouth Family Medicine Residency	Structured care for individuals at risk for familial cancer syndromes	2015	$84,784	Research	Augusta	ME
University of New England	Methods and Diagnostics for Cancer Detection and Treatment Monitoring	2017	$375,000	Breast Cancer Screening	Portland	ME

Impact of MCF Cancer Research Grants

Each of the grantees that concluded their research has successfully met their stated objectives and outcomes. The grant exploring breast cancer screening and treatment is currently in the clinical trial phase, but the investigators expect promising results upon the study's conclusion.

Due to the long-term nature of these types of grants - all required extensive research and development time or clinical trials - data on the impact of these grants on cancer screening, treatment, and incidence/mortality is not available currently. Therefore, is difficult to measure the effectiveness of research grant-making on the primary MCF Challenge Cancer 2020 goals at this time. However, **scientific advances in how we research, diagnose, and treat cancer has a huge and significant potential long-term impact on cancer incidence and mortality in Maine**. In the future, more data will become available that will allow deeper quantitative analysis of the impact of the research grants.

Qualitatively, the investments in the research grants likely have significant long-term benefits for the field of cancer and prevention in Maine. For example:

- The provision of no-cost fluid and tissue samples for cancer research is anticipated to reduce the cost barrier of carrying out future cancer related research efforts.
- The successfully piloted Prostate Cancer Research Institute (PCRI) method for LDCT screening shows promise for improving the shared decision-making process among patients at risk for lung cancer.
- UNE's breast cancer screening grant is focused on developing a less-invasive early detection test for breast tumors, which is expected to improve early prognosis, screening and pre-operative tumor management of breast cancer.

Similarly, the remaining grantees contributed positive knowledge and outcomes to their fields of study. The net benefit of these efforts may be difficult to assess in the short-term, but over many years after they are implemented across the state anticipated benefits include improved screening and early diagnosis, cost savings and reductions in cancer incidence and mortality.

10. Lung Cancer

Background

Lung cancer is the number one leading cause of cancer death in Maine for both men and women. Lung cancer is causally linked to several environmental factors including smoking, secondhand smoke, and radon exposure.[2] These causes are very common in Maine, particularly tobacco use and radon. According to the Maine Lung Cancer Coalition, radon exposure is the second-leading cause of lung cancer after smoking.[3]

Maine Cancer Foundation awarded **1 lung cancer grant** totaling **$403,674**.

Two learning modules on lung cancer screening were developed and a primary care pilot is underway with five practices at Maine General Medical Center.

Summary of MCF Grants 2016-2018

As part of Challenge Cancer 2020, MCF made a significant investment in Maine with the goal of reducing lung cancer incidence and mortality. Specifically, MCF awarded a lung cancer grant to Maine Lung Cancer Coalition (formerly The Maine LungCAPS Initiative). This grant totaled $403,674. The MLCC is implementing a multi-pronged set of interventions with two goals:

- Engaging and educating the general public, patients, health care providers, health care payers, and policymakers about evidence-based lung cancer prevention and screening practices and;
- Developing, implementing, and disseminating innovative strategies to increase access to evidence-based lung cancer prevention and screening services for all Mainers with a specific focus on high-risk individuals in rural, underserved areas of the state.

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Maine Medical Center	Maine Lung Cancer Coalition (formerly The Maine LungCAPS Initiative)	2016	$403,674	Lung Cancer Screening	Scarborough	ME

Results of MCF Grant-making 2016-2019

In their year two report, the Maine Lung Cancer Coalition detailed several significant accomplishments. Among their successful outcomes are the following:

- The Early Detection Core and The Stakeholder Engagement and Education Core (SEEC) are coordinating to bring provider education through webinars and learning communities. The Early Detection Core also continues to convene hospitals engaged in implementing or considering LDCT (low-dose computed tomography) screening programs.

- A quarterly newsletter was developed in conjunction with Rinck Advertising, which has been distributed to 144 recipients, representing a broad range of coalition partners, key stakeholders, and advisors.
- A social media campaign was implemented to target specific messaging to different demographics. Currently the MLCC Facebook page has 945 'likes' and 948 followers and their Twitter account has 74 followers and 952 post engagements.
- Designed two learning modules about integrating tobacco treatment along the continuum of lung cancer screening.
- Members of the MLCC delivered 12 presentations, in both community and academic settings.
- The Prevention Core primary care pilot is underway with five practices at Maine General Medical Center fully engaged and data collection systems working as designed.

The MLCC is meeting or exceeding the expectations they outlined in year one, while identifying some areas that are in need of improvement. Their first year was spent building relationships and infrastructure and the focus of year two has been on these partnerships working together to execute the MLCC's goals and deliverables. MLCC has been successful in forming relationships, building new partnerships, disseminating findings, and growing its membership and capacity.

The development and growth of the Lung Cancer Screening Learning Community exceeded expectations. The Learning Community allowed MLCC to engage a wide range of providers who are leading or interested in establishing LDCT programs. The Administration and Evaluation Core (AEC) has been successful in building data sets, preparing publications, and presenting findings nationally over a short period of time.

Partnerships with two primary care practices were established to pilot telemedicine and nurse navigation programs during year one. The two pilot sites have not started due to two major external barriers, including MaineHealth adding an additional layer of required consent, which has made it difficult to recruit patients. The proposed patient navigation pilot was tabled because the model has become standard practice among screening programs across the state. Instead, MLCC will survey primary care physicians to gather input and data about their knowledge, practice and attitudes about LDCT.

Impact of MCF Grants

The Maine Lung Cancer Coalition achieved many significant milestones in its first year of activity and continues to build on these achievements. The impact of MLCC's activities on lung cancer incidence and mortality in the state will likely require several years of action before a measurable change can be detected. The impact of MLCC's efforts are broad and address system changes, which can be difficult to evaluate using traditional methods. MLCC's attention is spread across numerous stakeholders and provider practices. Parsing out the impact on each partner or at the cumulative level will be a challenge given the confounding effects of other lung cancer initiatives taking place across the state at the same time.

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11. Hospice General Operations

Background

Cancer requires multiple types of medical care to manage symptoms, treat the disease, and ease suffering toward the end of a person's life. Hospice fulfills the latter and focuses on palliative care for patients no longer receiving curative treatment or who have less than 6 months to live. Hospice care draws on multiple care disciplines to ease suffering and alleviate symptoms related to the cancer or previous treatments. Common types of care include nursing, home health, various types of mental health therapy, and assistance with equipment. Hospice also addresses social needs including counseling, spiritual support, and social work assistance with end-of-life decisions.

Maine Cancer Foundation awarded **6 hospice general operations grants** totaling **$50,000**.

Hospice grantees expanded their services to more clients, increase marketing and education efforts, hire and train more volunteers, and develop self-sustaining funding streams.

Collectively, hospice care aims to help people transition from treatment to a stage where they can live as fully as possible until their death. This often means spending less time at the doctor's office and more time meeting personal goals and being with friends or family. In some cases, hospice care can even help an individual live longer by making them more comfortable. Given the importance of hospice in the spectrum of cancer care, MCF has invested in hospice volunteer organizations across Maine to increase access to this critical service.

Summary

As part of the Challenge Cancer 2020 effort, and in partnership with the John T. Gorman Foundation, MCF made significant investments in hospice volunteer organizations during 2018. A total of $50,000 was award through six grants to six organizations, including:

Organization	Project Title	Year Issued	Grant Amount	Grant Category	Grantee Location	
Down East Hospice Volunteers	General Operating Support	2018	$8,300	Hospice	Calais	ME
Hospice Volunteers of Hancock County	General Operating Support	2018	$5,000	Hospice	Ellsworth	ME
Hospice Volunteers of Somerset County	General Operating Support	2018	$6,700	Hospice	Skowhegan	ME

Organization	Project Title	Year Issued	Grant Amount	Grant Category	Grantee Location	
Hospice Volunteers of Waldo County	General Operating Support	2018	$10,000	Hospice	Belfast	ME
Hospice Volunteers of Waterville Area	General Operating Support	2018	$10,000	Hospice	Waterville	ME
Pine Tree Hospice	General Operating Support	2018	$10,000	Hospice	Dover-Foxcroft	ME

Results

The hospice general operations grants provided by MCF in 2018 resulted in several positive outcomes for grantees and the communities they serve. Proposed goals from the grant applications are used as the progress metric for each grantee, and the progress reports are treated as the supplied data.

Achieved Outcomes

- Enhanced staff capacity through the increase of staff hours and a focus on professional development for existing staff.
- Recruited and trained additional volunteers to support administrative and programmatic functions.
- Increased availability of hospice programming and provided direct care to clients and their families, and enhanced programming to best fit the needs of their community.
- Improved and increased frequency of educational programming, including presentations explaining the necessity for early end of life care discussions with family and loved ones, and bereavement programs.
- Improved fundraising efforts to increase revenue.
- Enhanced organizational visibility through presentations and outreach.
- Increased collaboration efforts that resulted in more joint services delivered with partnering agencies and more comprehensive awareness among shared clientele.

Impact

Relative to investments in other grant sectors, MCF's total spending in hospice is smaller, but the impact is profound. Hospice programs that received funding are located in more rural places in Maine, places where both median and average income are lower, residents are more likely to be on public assistance, and access to critical medical care is reduced by financial and other logistical barriers.

MCF grant funds enabled the six grantees to continue serving their current number of clients and, in several cases, expand their client base. Using MCF funding, most grantees were able to recruit additional volunteers, hire more staff, and pay for needed training. This kind of capacity building is critical for smaller organizations in rural areas. Several grantees leveraged MCF funding to expand their marketing, education, and outreach efforts to increase their presence in the community. As a result of reaching more people, grantees successfully provided services to more clients. Overall, hospice grantee efforts have built new capacity and used it to improve client quality of life.

12. Genetic Screening

Background

Genomic sequencing can be used effectively to better understand cancer as a disease and develop targeted treatments for individual patients. Exploring the ways cancer develops and grows can provide important information about the genomic changes that underly the disease.

A key hurdle to harnessing genomic sequencing and bioinformatics in the treatment of cancer is clinician training. Developing training standards and application guidelines is a key step toward increasing clinician confidence with interpreting genomic testing results. Increasing clinician confidence will lead to more frequent use of testing, better communication of results, and ultimately, better patient outcomes.

Maine Cancer Foundation awarded **1 genetic screening grant** totaling **$199,891**.

90% of Maine medical oncologists have enrolled in the Initiative from all Maine cancer practices.

MCF grant funding in this area will support oncology clinicians by enhancing their skills, knowledge, and confidence using genomic information to inform cancer care. This information will help clinicians identify and choose treatments that are likely to be more effective for a specific patient, improving quality of life and survival. Additionally, genomic testing can help clinicians identify when a patient may have an underlying hereditary cancer syndrome.

Summary

As part of the Challenge Cancer 2020 initiative, MCF made an investment in genetic screening efforts in 2019. MCF awarded one grant totaling $199,891 to the following organization:

Organization	Project Title	Year Issued	Grant Amount	Grant Category	Grantee Location	
The Jackson Laboratory	Developing an educational curriculum to support community oncology clinicians use of genomics in patient care	2019	$199,891	Genetic Screening	Bar Harbor	ME

Results

The Maine Cancer Genomics Initiative (MCGI) is focused on increasing the capacity of community-based oncology clinicians to deliver genomically-informed cancer care to their patients. They are doing this by providing access to genomic tumor testing and supporting the appropriate use of testing through provider education. They want to ensure that the educational tools they develop meet the needs of MCGI clinicians, including building knowledge, skills, and confidence to incorporate genomic information into their practices. They are in the process of developing and delivering resources throughout the project

(approximately 6 web-based resources and 24 resources total) that are designed to support providers' confidence, skills, and knowledge associated with genomic tumor testing.

By doing this, the MCGI hopes to improve patient care by 1) supporting good communication between clinicians and patients about the benefits, limitations, and risks of genomic tumor testing and 2) increasing access to information that may impact treatment choices.

Short-term outcomes will include provider engagement with education materials and reported provider satisfaction. Long-term outcomes of MCGI include provider knowledge, confidence, and self-efficacy regarding genomic tumor testing, and the clinical use of genomic tumor testing; as well as patient uptake of MCGI research participation and reported satisfaction with tumor testing.

To date, the MCGI has provided ongoing dissemination of web-based resources to approximately 250 Maine oncologists, pathologists, clinical research coordinators, nurses, and administrators working in oncology, as well as an additional 500 stakeholders that includes clinicians, clinical experts, and researchers. Three of the planned web-based resources have been finalized for dissemination:

- Frequently Asked Questions: PARP Inhibition Therapy
- Genomic Testing Nomenclature
- Anatomy of a Genomic Test Report

The topics of the other resources in this initial group that are in the process of being finalized:

- PARP Inhibition Therapy (for oncologists)
- PD-L1 (immunotherapy agent)
- Assessing Genomic Variants
- Genomic tumor board case discussion: STK11

In addition to the web-based resources, MCGI developed and piloted two interactive, virtual training sessions with oncology nurses and research coordinators in June 2020. Based on the positive feedback received from the sessions, additional MCGI virtual/in-person training sessions will be developed along with supporting resources that can be disseminated broadly.

Impact

Given that this project is in early stages of development and implementation, data on longer-term outcomes and impact are not available at this time. However, by supporting clinicians' appropriate use of genomic information, the MCGI will contribute to MCF's mission of reducing cancer incidence and mortality. Genomic data will enable patient care teams to identify treatments and/or clinical trials that can prolong their patients' lives. And, for patients with an underlying hereditary syndrome, unaffected family members can be tested, closely screened, and monitored in order prevent cancer or identify it in its earliest stage.

Appendix A

Methodology

Outcome Metrics

The outcome metrics for MCF's grant-making activities were previously defined in the Challenge Cancer 2020 evaluation plan. MDR worked closely with MCF to review and refine the metrics at the start of the project based on the current circumstances of Challenge Cancer 2020 grantees and additional data that were available on grant activities. It is important to note that metrics that are not feasible to collect data on or measure due to the cost/level of effort required were retained in the final outcome list, despite the fact that they are not reported on.

In addition to the outcomes previously identified in the evaluation plan, MDR conducted a cost-effectiveness analysis (where possible) to quantify the effectiveness of MCF grant funding across the multiple areas of focus. This return on investment for MCF funding was calculated as the number of life years saved, costs saved, etc. per MCF grant dollar awarded.

Challenge Cancer 2020 Outcome Metrics

Transportation and Lodging

- Reduced barriers to care
- Expanded treatment options for patients
- # of life-years saved as a result of intervention
- What is the cost-effectiveness of MCF transportation funding?

Patient Navigation

- Financial/ economic assistance, health insurance navigation, transportation, social services, lodging
- Increased rate of recommended cancer screenings for patient panel
- Increased rate of patients screened that have never been screened before
- Increased rate of high-risk patients screened
- Increased rate of early detection
- Reduced barriers to screening and care
- Improved quality of life and wellbeing of patients
- More early diagnoses/decreased % of late-stage diagnoses
- Increased workflow effectiveness
- # of life-years saved as a result of intervention
- What is the cost-effectiveness of MCF patient navigation funding?

Tobacco

- Increased number of tobacco users who successfully quit
- Decreased tobacco and other nicotine delivery systems use

- Reduced number of youth who initiate tobacco and other nicotine delivery systems use
- Decreased exposure to secondhand smoke
- Increased access to smoke-free housing options for low-income renters
- Reduction in tobacco-related cancers
- # of life-years saved as a result of intervention
- What is the cost-effectiveness of MCF tobacco funding?

Colorectal Cancer Screening

- Increased rate of recommended cancer screenings for patient panel
- Increased rate of patients screened that have never been screened before
- Increased rate of high-risk patients screened
- Incrased rate of early detection
- Decreased % of late-stage diagnoses
- Increased adoption of genetic counseling
- Reduce barriers to screening and care
- Expand treatment options for patients after early detection
- Reduction in CRC rates
- What is the cost-effectiveness of MCF CRC funding?
- # of life-years saved as a result of intervention

Lung Cancer Screening

- Increased rate of patients screened that have never been screened before
- Increased rate of high-risk patients screened
- Incrased rate of early detection
- Decreased % of Late-Stage Diagnoses
- Increased Use of Low-Dose CT Scans
- Increased rate of smoking cessation program utilization cooccurring with screening
- Reduced barriers to screening and care
- Expanded access to and utilization of specialty care services for patients after early detection
- Reduction in lung cancer rates
- # of life-years saved as a result of intervention
- Increased provider knowledge and use of LDCT
- What is the cost-effectiveness of MCF lung cancer screening funding?

General Operating

- What is the cost-effectiveness of MCF general operations funding?
- How has general operations funding improved Maine's cancer system?

Human Papilloma Virus (HPV) Vaccinations

- Increased rate of patients receiving HPV vaccinations
- Reduction in HPV-related cancers
- # of life-years saved as a result of HPV vaccination interventions
- What is the cost-effectiveness of MCF HPV vaccinations funding?

Sun Safety

- Increased rate of patients receiving skin cancer screenings
- Increased rate of early detection
- Decreased % of Late-Stage Diagnoses
- Reduction in skin cancer rates
- # of life-years saved as a result of sun safety interventions
- What is the cost-effectiveness of MCF sun safety funding?

Note that actual grant activities do not necessarily cover all outcomes listed above. Grantees may have only worked on some of the outcomes. In addition, it may not be possible to collect data or estimate some outcomes, such as reduction in cancer incidence rates.

Data Collection

MCF provided MDR with all previously collected evaluation data and documentation. In order to fill in gaps in the data needed for the outcome metrics or to conduct the cost analysis, MDR conducted additional follow-up primary data collection among the 88 Challenge Cancer 2020 grantees. The data that grantees provide related to their activities (such as the number of patients that received colorectal cancer screening as a result of the intervention) was used in the analysis to estimate or model impact and cost-effectiveness.

To facilitate the follow-up data collection, MDR developed a data collection tool in Excel that was shared with grantees. The tool was customized specifically for each grant area and was based on the activities and outcomes specific to that topic area's logic model. In cases where a grantee had previously provided data on an activity or outcome, MDR staff preloaded the data into the sheet for that grantee so they did not have to fill it in twice.

The goal was to collect information from grantees about their activities and outcomes, using the logic model to estimate longer-term outcomes based on the established evidence-based literature that each set of programs was based on.

MDR followed up with grantees by email with the forms and instructions about how to complete them. After two email follow-up attempts to reach organizations that had not responded to the request, MDR followed up with telephone calls. A maximum of three telephone calls were made to complete the follow-up data request. Data collection took place from August through December, 2019.

Summary of Data Collection Results Among Grantees

Area	Total Grants	Responding Grants
Transportation and Lodging	30	30
Patient Navigation	15	10
Tobacco	20	15
Colorectal Cancer Screening	19	17
Lung Cancer Screening	1	1
General Operating Support	8	N/A
HPV Vaccinations	2	2
Sun Safety	4	4

Research	5	N/A
Genetic Screening	1	1
Hospice General Operating Support	6	6
Miscellaneous	14	14

Analysis

The analysis combined program information that had been collected from grantees, the primary data collected, and information from published literature about the outcomes and cost effectiveness of MCF's evidence-based activities. By combining expected outcomes with data on program activities and outcomes, MDR calculated the impact and effectiveness of each grant as well as combining all grants to measure the overall impact of MCF funding.

Cost-effectiveness analysis provides a tool to weigh and synthesize benefits, harms, and costs of interventions and thus can inform the decision process for adopting population screening. Cost-effectiveness analysis cannot determine what the optimal intervention is, but rather which intervention will provide the greatest health benefits, given the decision maker's willingness to pay for a unit of benefit.

Two types of cost-effectiveness ratios are often reported in the literature: 1) a cost-effectiveness ratio comparing each intervention strategy with the standard of care, often a "no intervention" scenario; and 2) an incremental cost-effectiveness ratio comparing each strategy with the next most effective alternative, which may or may not be a "no intervention" scenario.

Since the grants funded by MCF increase access, screening, etc. among those who would otherwise not have access to high-quality cancer care, or get screened, the cost-effectiveness analysis conducted by MDR compared grant activities against a "no intervention" scenario. That is, we are comparing the results of the grant-funded interventions to a scenario where the grants were not provided (i.e., no intervention).

Where possible, MDR looked at a basic cost-effectiveness model that examines the number of life years saved compared to the amount of grant funding received. In cases where life years cannot be estimated, other cost-effectiveness metrics were developed and reported to assess the impact and relative cost-benefit of the grant funding.

Limitations

The data and results presented in this report are subject to limitations. Note that many of these MCF grants have been recently awarded and are ongoing, meaning that outcomes for many grantees are not yet available. Additional data will need to be collected from these grantees in the future to create a more comprehensive and complete picture of MCF grant funding. Given the long-term nature of healthcare interventions, it will likely be many years before all the benefits of MCF funding will be seen.

Also note that there are gaps in the data presented in this report where grantees chose not to follow-up with our additional requests. Missing data are minimal in some areas (colorectal cancer screening) but significantly in others (tobacco prevention and cessation) Therefore, the results of MCFs grant-making activities presented here are likely underrepresented due to this non-response. It also limits our ability to extrapolate the results – meaning that MCF's grants likely had more impact than what the data suggest here.

Appendix B: List of MCF Grants (2015-2019)

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Cary Medical Center	Screen Aroostook	2018	$98,516	CRC Screening	Caribou	ME
City of Portland, Minority Health Program	Colorectal Cancer Screening for Vulnerable Populations	2017	$100,000	CRC Screening	Portland	ME
Healthy Acadia	Downeast Colorectal Cancer Screening Initiative	2019	$100,000	CRC Screening	Machias	ME
Healthy Androscoggin	Colon Health Rx: Cancer Screening in Lewiston's Immigrant Community	2018	$93,051	CRC Screening	Lewiston	ME
Healthy Community Coalition of Greater Franklin County	One-by-One-Colorectal Cancer Screening and Navigation	2017	$99,832	CRC Screening	Farmington	ME
LincolnHealth	Strategy for Identification and Screening of Unscreened Patients at LincolnHealth	2016	$29,235	CRC Screening	Damariscotta	ME
MaineGeneral Medical Center	Expansion of the Role of Community Health Workers to Increase Colon Cancer Screening Rates	2016	$29,937	CRC Screening	Waterville	ME
MaineGeneral Medical Center	80% Colon Cancer Screening Project	2017	$99,627	CRC Screening	Waterville	ME
MaineGeneral Medical Center	Mobilizing CHWs to increase access for high-risk patients due for surveillance colonoscopy screening	2019	$96,629	CRC Screening	Augusta	ME
MaineHealth - Maine Medical Center	Building Capacity at MaineHealth to Enhance Colorectal Cancer Screening	2016	$28,863	CRC Screening	Scarborough	ME
Midcoast Hospital	Developing Systems to Increase Colorectal Screening Rates through Patient Identification	2016	$29,848	CRC Screening	Brunswick	ME
Mount Desert Island Hospital	Increase Colorectal Screenings and Ensure Compliance in a Targeted Subset of Patients	2016	$7,481	CRC Screening	Bar Harbor	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Pen Bay Medical Center	Screen to Save - Knox County	2018	$32,055	CRC Screening	Rockland	ME
Penobscot Community Health Care	Provider Reminder and Recall System for Colorectal Cancer Screening	2016	$30,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Increase Colorectal Cancer Screening through Patient Outreach and Recall	2017	$100,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Improving Colorectal Screening Rates via Use of a Medical Support Assistant	2018	$100,000	CRC Screening	Bangor	ME
Penobscot Community Health Care	Improving Colorectal Screening Rates via Community Support Workers	2019	$100,000	CRC Screening	Bangor	ME
Sebasticook Valley Health	Outreach, education, and Navigation Program to Increase Colorectal Cancer Screenings	2018	$85,791	CRC Screening	Pittsfield	ME
Waldo County General Hospital	Waldo Screen to Save	2017	$44,566	CRC Screening	Rockland	ME
Angel Flight Northeast	Changing Lives One Flight at a Time	2018	$30,000	Transportation (Flights)	North Andover	MA
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2015	$7,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2016	$15,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access To Cancer Treatment	2017	$57,500	Transportation	Ellsworth	ME
Brian's Ride Cancer Fund	Transportation and Lodging Assistance for Cancer Patients	2018	$40,000	Transportation	Caribou	ME
Cancer Resource Center of Western Maine	Access to Cancer Care through Transportation	2018	$10,000	Transportation	Norway	ME
Community Concepts	Transportation	2015	$10,000	Transportation	Lewiston	ME
Community Concepts	Transportation	2016	$15,000	Transportation	Lewiston	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Community Concepts	The Cancer Patient Transportation Project	2017	$50,000	Transportation	Lewiston	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2015	$10,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2016	$15,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Program	2017	$52,500	Transportation	Brunswick	ME
Dempsey Center	The Maine Fund for Cancer Patients	2015	$4,000	Transportation	Lewiston	ME
Dempsey Center	The Maine Fund for Cancer Patients	2016	$4,000	Transportation	Lewiston	ME
Downeast Community Partners	Rides for a Cure	2017	$50,000	Transportation	Ellsworth	ME
Friends in Action	Friends in Action Transportation	2018	$30,000	Transportation	Ellsworth	ME
Hospitality Homes	Maine Boston Network	2017	$38,000	Transportation (Lodging)	Boston	MA
Kennebec Valley Community Action Program	Cancer Transportation Project	2017	$50,000	Transportation	Waterville	ME
Lake Region Senior Service	Healthcare Access Program	2015	$10,000	Transportation	Bridgton	ME
Lake Region Senior Service	Healthcare Access Program	2016	$15,000	Transportation	Bridgton	ME
Lake Region Senior Service	Cancer Patient Transportation	2017	$43,500	Transportation	Bridgton	ME
Patient Airlift Services	Eliminating Transportation Barriers for Patients in Maine	2018	$30,000	Transportation (Flights)	Farmingdale	NY
Penquis CAP	Access to Cancer Care	2015	$10,000	Transportation	Bangor	ME
Penquis CAP	Access to Cancer Care	2016	$15,000	Transportation	Bangor	ME
Penquis CAP	Accessing Cancer Care	2017	$57,500	Transportation	Bangor	ME
The Leukemia & Lymphoma Society	Other Medical Expenses	2018	$50,000	Transportation	Wellesley	MA
Waldo Community Action Partners	Collaboration for Cancer Care Transportation	2017	$49,966	Transportation	Belfast	ME
Washington Hancock	Washington Hancock Community Agency	2016	$12,000	Transportation	Ellsworth	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Community Action						
York County Community Action Corporation	Connecting to Cancer Care	2015	$10,000	Transportation	Sanford	ME
York County Community Action Corporation	Connecting to Cancer Care	2017	$50,000	Transportation	Sanford	ME
Angel Flight Northeast	Changing Lives One Flight at a Time	2018	$30,000	Transportation (Flights)	North Andover	MA
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2015	$7,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access to Cancer Treatment	2016	$15,000	Transportation	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Access To Cancer Treatment	2017	$57,500	Transportation	Ellsworth	ME
Brian's Ride Cancer Fund	Transportation and Lodging Assistance for Cancer Patients	2018	$40,000	Transportation	Caribou	ME
Cancer Resource Center of Western Maine	Access to Cancer Care through Transportation	2018	$10,000	Transportation	Norway	ME
Community Concepts	Transportation	2015	$10,000	Transportation	Lewiston	ME
Community Concepts	Transportation	2016	$15,000	Transportation	Lewiston	ME
Community Concepts	The Cancer Patient Transportation Project	2017	$50,000	Transportation	Lewiston	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2015	$10,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Assistance Program	2016	$15,000	Transportation	Brunswick	ME
Dean Snell Cancer Foundation	Patient Transportation Program	2017	$52,500	Transportation	Brunswick	ME
Dempsey Center	The Maine Fund for Cancer Patients	2015	$4,000	Transportation	Lewiston	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Dempsey Center	The Maine Fund for Cancer Patients	2016	$4,000	Transportation	Lewiston	ME
Downeast Community Partners	Rides for a Cure	2017	$50,000	Transportation	Ellsworth	ME
Friends in Action	Friends in Action Transportation	2018	$30,000	Transportation	Ellsworth	ME
Hospitality Homes	Maine Boston Network	2017	$38,000	Transportation (Lodging)	Boston	MA
Kennebec Valley Community Action Program	Cancer Transportation Project	2017	$50,000	Transportation	Waterville	ME
Lake Region Senior Service	Healthcare Access Program	2015	$10,000	Transportation	Bridgton	ME
Lake Region Senior Service	Healthcare Access Program	2016	$15,000	Transportation	Bridgton	ME
Lake Region Senior Service	Cancer Patient Transportation	2017	$43,500	Transportation	Bridgton	ME
Patient Airlift Services	Eliminating Transportation Barriers for Patients in Maine	2018	$30,000	Transportation (Flights)	Farmingdale	NY
Penquis CAP	Access to Cancer Care	2015	$10,000	Transportation	Bangor	ME
Penquis CAP	Access to Cancer Care	2016	$15,000	Transportation	Bangor	ME
Penquis CAP	Accessing Cancer Care	2017	$57,500	Transportation	Bangor	ME
The Leukemia & Lymphoma Society	Other Medical Expenses	2018	$50,000	Transportation	Wellesley	MA
Waldo Community Action Partners	Collaboration for Cancer Care Transportation	2017	$49,966	Transportation	Belfast	ME
Washington Hancock Community Action	Washington Hancock Community Agency	2016	$12,000	Transportation	Ellsworth	ME
York County Community Action Corporation	Connecting to Cancer Care	2015	$10,000	Transportation	Sanford	ME
York County Community Action Corporation	Connecting to Cancer Care	2017	$50,000	Transportation	Sanford	ME
Caring Connections/ Bangor YMCA	Patient Navigator Position	2017	$110,386	Patient Navigator	Bangor	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Cary Medical Center	Navigating the Journey	2018	$161,557	Patient Navigator	Caribou	ME
Central Maine Medical Center	Lung Screening Navigator with Tracking and Reporting Software System	2017	$164,000	Patient Navigator	Lewiston	ME
Greater Portland Health	Patient navigator to reduce cancer incidence and mortality rates among minority populations	2018	$164,000	Patient Navigator	Portland	ME
Healthy Acadia	Downeast Cancer Patient Navigation	2016	$164,000	Patient Navigator	Ellsworth	ME
Healthy Community Coalition of Greater Franklin County	Franklin's Navigator Program for Colorectal Cancer Screening	2015	$164,000	Patient Navigator	Farmington	ME
Katahdin Valley Health Center	Patient Navigator Project	2018	$164,000	Patient Navigator	Patten	ME
Maine Mobile Health Program	Maine Immigrant Patient Navigation Project	2016	$138,725	Patient Navigator	Augusta	ME
MaineGeneral Medical Center	Reducing Barriers to Cancer Care for Low Income, Rural Residents	2017	$161,562	Patient Navigator	Augusta	ME
Mount Desert Island Hospital	Establishing a Patient Navigator Program at Mount Desert Island Hospital	2017	$161,614	Patient Navigator	Bar Harbor	ME
Pen Bay Medical Center	Patient Navigator Program	2017	$161,388	Patient Navigator	Rockland	ME
Penobscot Community Health Care	Eliminating Barriers to Cancer Screening through Use of Navigator Medical Assistants	2015	$164,000	Patient Navigator	Bangor	ME
Sebasticook Valley Health	Patient Navigation Outreach Program	2015	$137,248	Patient Navigator	Pittsfield	ME
Southern Maine Health Care	Ambulatory Nurse Navigator with emphasis on Lung Cancer	2016	$164,000	Patient Navigator	Biddeford	ME
The Aroostook Medical Center	Early Access Patient Navigator	2015	$164,000	Patient Navigator	Presque Isle	ME
Qualidigm (formerly Maine Quality Counts)**	HPV Vaccination Learning Collaborative	2017	$264,201	HPV Vaccination	Manchester	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Qualidigm (formerly Maine Quality Counts)	Maine HPV Project ECHO	2019	$91,916	HPV Vaccination	Manchester	ME
Access Health	Midcoast Youth Tobacco Intervention	2015	$16,099	Tobacco	Brunswick	ME
Breathe Easy Coalition of Maine, City of Portland	Addressing Disparities in Tobacco Use and Exposure through Policy and Environmental Change	2015	$74,101	Tobacco	Portland	ME
Down East AIDS Network and the Health Equity Alliance	LGBTQ Tobacco Equity Project	2015	$57,669	Tobacco	Ellsworth	ME
Healthy Acadia	Reducing Tobacco Use in Downeast Maine	2017	$75,477	Tobacco	Ellsworth	ME
Healthy Androscoggin	Preventing Youth Smoking Through Community Education: The Tobacco 21 Law	2018	$94,816	Tobacco	Lewiston	ME
Healthy Androscoggin	Tobacco Support Group	2019	$9,123	Tobacco	Lewiston	ME
Healthy Communities of the Capital Area	Reaching More Moms, their Friends and Family	2017	$25,000	Tobacco	Gardiner	ME
Healthy Community Coalition of Greater Franklin County	Tobacco Free Franklin	2015	$199,976	Tobacco	Farmington	ME
Maine Public Health Association	MPHA Tobacco Coalition Cancer Prevention	2017	$10,000	Tobacco	Augusta	ME
Maine Public Health Association	Maine Tobacco Coalition for Cancer Prevention	2017	$99,264	Tobacco	Augusta	ME
Maine Public Health Association	Tobacco Prevention and Control Communications Project	2018	$94,275	Tobacco	Augusta	ME
MaineGeneral Medical Center	Engaging Rural, Low-Income Populations in Tobacco Cessation: A Community-Based Approach	2018	$91,959	Tobacco	Waterville	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
MaineHealth - Center for Tobacco Independence	Building Capacity in Primary Care to Address Tobacco Dependence	2016	$50,000	Tobacco	Portland	ME
Mid Coast Hospital	Increasing Capacity to Provide Group Tobacco Treatment at Mid Coast Hospital	2018	$28,987	Tobacco	Brunswick	ME
Penobscot Bay YMCA/Knox County Community Health Coalition	Fresh Quit Knox County	2018	$90,307	Tobacco	Rockport	ME
Public Health Research Institute	Wetamawe (Tobacco)	2017	$100,000	Tobacco	Deer Isle	ME
Waldo County General Hospital	Reducing Smoking Rates among Patients with COPD	2018	$96,240	Tobacco	Rockland	ME
Healthy Androscoggin	Tobacco Education and Cessation Support for Adults in Androscoggin Country	2017	$52,419	Tobacco Cessation	Lewiston	ME
Penobscot Community Health Care	Peer-Led Tobacco Cessation Training at Unlimited Solutions Clubhouse	2017	$26,116	Tobacco Cessation	Bangor	ME
City of Portland - Public Health Department	Sun Safety at Casco Bay	2016	$5,000	Sun Safety	Portland	ME
Dempsey Center	Sun Safe on the Slopes	2016	$5,750	Sun Safety	Lewiston	ME
City of Portland - Public Health Department	Sun Safety at the Portland Sea Dogs	2017	$20,000	Sun Safety	Portland	ME
Impact Melanoma	Practice Safe Skin – Maine	2018	$78,543	Sun Safety	Concord	MA
Beth C. Wright Cancer Resource Center	General Operating Support	2017	$15,000	General Operating	Ellsworth	ME
Beth C. Wright Cancer Resource Center	General Operating Support	2018	$25,000	General Operating	Ellsworth	ME
Healthy Acadia	General Operating Support	2017	$50,000	General Operating	Ellsworth	ME
Healthy Acadia	General Operating Support	2018	$50,000	General Operating	Ellsworth	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Healthy Communities of the Capital Area	General Operating Support	2017	$50,000	General Operating	Gardiner	ME
Healthy Community Coalition of Greater Franklin County	General Operating Support	2017	$50,000	General Operating	Farmington	ME
Sarah's House of Maine	General Operating Support	2017	$10,000	General Operating	Holden	ME
Sarah's House of Maine	General Operating Support	2018	$25,000	General Operating	Holden	ME
Eastern Maine Medical Center Cancer Care	Creating a statewide tissue banking network to promote cancer research	2015	$199,940	Research	Bangor	ME
Maine Medical Center Research Institute	Creating a Centralized Biospecimen Resource for Cancer Research	2015	$199,830	Research	Scarborough	ME
Maine Medical Center Research Institute	Tumor Registry Electronic Medical Record Linked Data Resource: TREMR	2015	$191,230	Research	Scarborough	ME
Maine Dartmouth Family Medicine Residency	Structured care for individuals at risk for familial cancer syndromes	2015	$84,784	Research	Augusta	ME
University of New England	Methods and Diagnostics for Cancer Detection and Treatment Monitoring	2017	$375,000	Breast Cancer Screening	Portland	ME
Maine Medical Center	Maine Lung Cancer Coalition (formerly The Maine LungCAPS Initiative)	2016	$403,674	Lung Cancer Screening	Scarborough	ME
Down East Hospice Volunteers	General Operating Support	2018	$8,300	Hospice	Calais	ME
Hospice Volunteers of Hancock County	General Operating Support	2018	$5,000	Hospice	Ellsworth	ME
Hospice Volunteers of Somerset County	General Operating Support	2018	$6,700	Hospice	Skowhegan	ME
Hospice Volunteers of Waldo County	General Operating Support	2018	$10,000	Hospice	Belfast	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
Hospice Volunteers of Waterville Area	General Operating Support	2018	$10,000	Hospice	Waterville	ME
Pine Tree Hospice	General Operating Support	2018	$10,000	Hospice	Dover-Foxcroft	ME
The Jackson Laboratory	Developing an educational curriculum to support community oncology clinicians use of genomics in patient care	2019	$199,891	Genetic Screening	Bar Harbor	ME
Bangor YMCA	Increased Wellness Opportunities to Those Affected by Cancer through LIVESTRONG at the Bangor YMCA	2018	$10,896	Miscellaneous	Bangor	ME
Beth C. Wright Cancer Resource Center	Charting a Course for Patient Navigation in Maine	2018	$2,308	Miscellaneous	Ellsworth	ME
Beth C. Wright Cancer Resource Center	The Healing Circle: Skills for Reclaiming Wholeness on the Cancer Journey	2019	$8,000	Miscellaneous	Ellsworth	ME
Beth C. Wright Cancer Resource Center	Virtual Support Group	2019	$9,800	Miscellaneous	Ellsworth	ME
Christine B. Foundation	Cancer Resource Center Collaborative	2019	$2,555	Miscellaneous	Brewer	ME
Dempsey Center	Sugarloaf Charity Summit	2018	$54,687	Miscellaneous	Lewiston	ME
Maine Pharmacy Association	HPV Vaccination Continuous Learning Programming	2019	$2,269	Miscellaneous	Augusta	ME
Martha B. Webber Breast Cancer Center	Sugarloaf Charity Summit	2015	$67,112	Miscellaneous	Farmington	ME
Martha B. Webber Breast Cancer Center	Sugarloaf Charity Summit	2016	$79,836	Miscellaneous	Farmington	ME
Martha B. Webber Breast Cancer Center	Sugarloaf Charity Summit	2017	$57,312	Miscellaneous	Farmington	ME
Martha B. Webber Breast Cancer Center	Sugarloaf Charity Summit	2018	$54,687	Miscellaneous	Farmington	ME
New Mainers Public Health Initiative	Community Education Workshops on Cancer for	2018	$25,000	Miscellaneous	Lewiston	ME

Organization	Project Title	Year Issued	Amount	Category	Grantee Location	
	Refugees and Asylum Seekers					
Penobscot Community Health Care	Improving Patient Outcomes via Dermatology eConsult	2018	$12,174	Miscellaneous	Bangor	ME
Penquis CAP	Maine Regional Cancer Transportation Brochure	2018	$545	Miscellaneous	Bangor	ME