



Maine CDC Asthma Prevention Communications Plan 2020-2025

A Comprehensive Public Health Approach to Asthma Control
Through Evidence-Based Interventions CDC-RFAEH19-1902

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Contents

Executive Overview4

Purpose of the Plan8

The Asthma Burden in Maine.....11

Understanding the Audience 16

Strategic Partnerships..... 29

Conclusion 30

Appendix 31

Executive Overview

The Maine Asthma Prevention and Control Program, a program of the Maine Department of Health and Human Services Maine Center for Disease Control and Prevention, has partnered with Rinck Advertising, Inc. to develop an Asthma Communication Plan. The purpose of the Communication Plan is:

- To support and enhance existing statewide partnerships
- Determine the value of current communication materials
- To develop a plan to meet the needs of stakeholders associated with Maine's asthma prevention and treatment efforts.

An eight-month period of discovery uncovered a range of existing materials, protocols, connected relationships, opportunities, and challenges.

Materials

Many asthma and lung-health associated organizations have printed, online, and video resources, some of which are proprietary, while others are open to public use. These materials are widely shared between individuals and organizations. At issue isn't a lack of materials, but rather a single authoritative, neutral source for current best-practice information.

Maine CDC website analytics show strong user-traffic to PDF asthma documents for download. These resources are not particularly easy to find within the massive Maine CDC website. Site metrics indicate direct links, perhaps via bookmarks, to these PDF resources rather than linked referral traffic.

In addition, national organizations have wide resources associated with asthma mitigation and treatment.

Protocols and Connected Relationships

The Maine Asthma Coalition served as a connecting agent for a variety of stakeholder groups in a prior grant period. As the previous five-year funding cycle left the Asthma Coalition temporarily dormant, new threads connected stakeholder groups and disconnected from others. These relationships are highly valued, but create incomplete knowledge linking, putting some individuals at the front lines of asthma services in disadvantaged positions, while others enjoy advantages that come from closer, connected relationships.



Opportunities

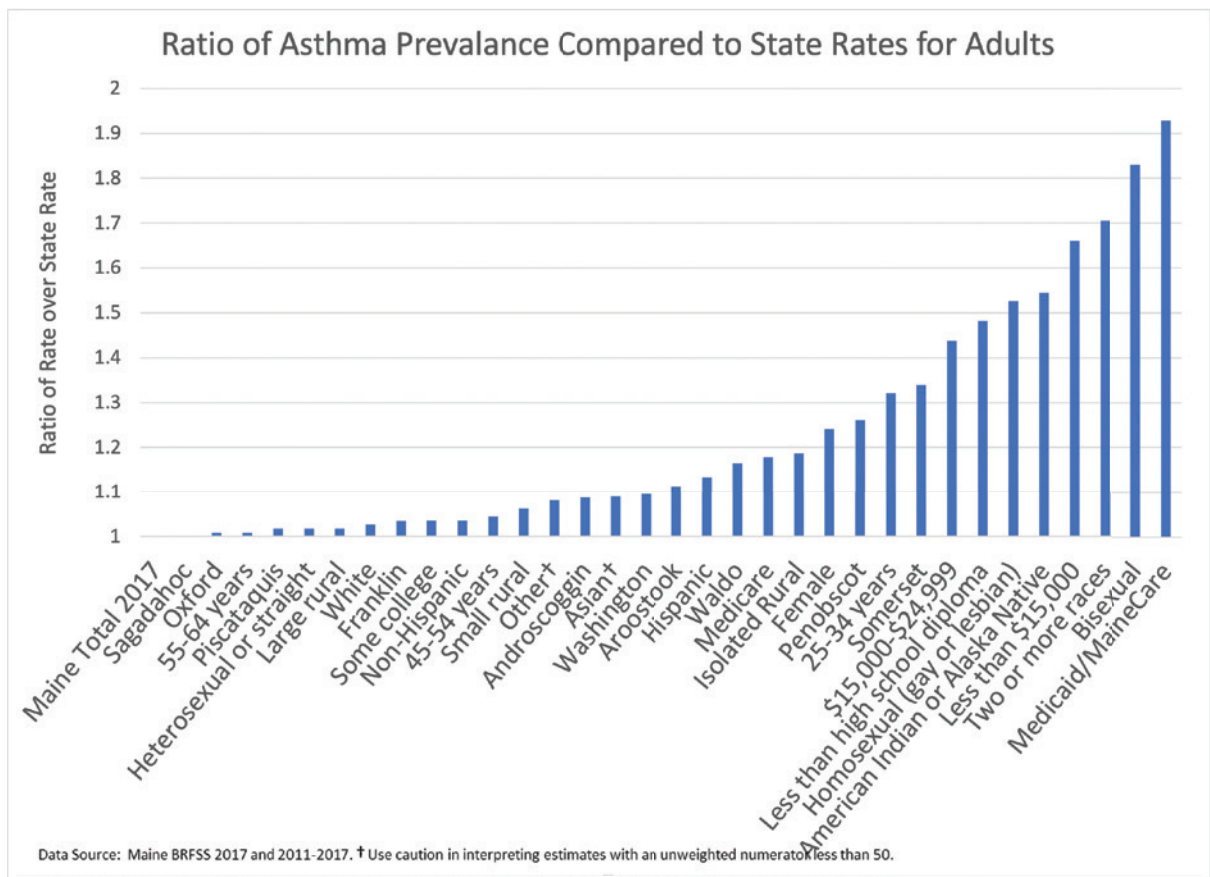
Data from a range of sources indicate potential to address Maine residents' needs for asthma information and provide guidance for a robust Maine asthma program. These include, but are not exclusively:

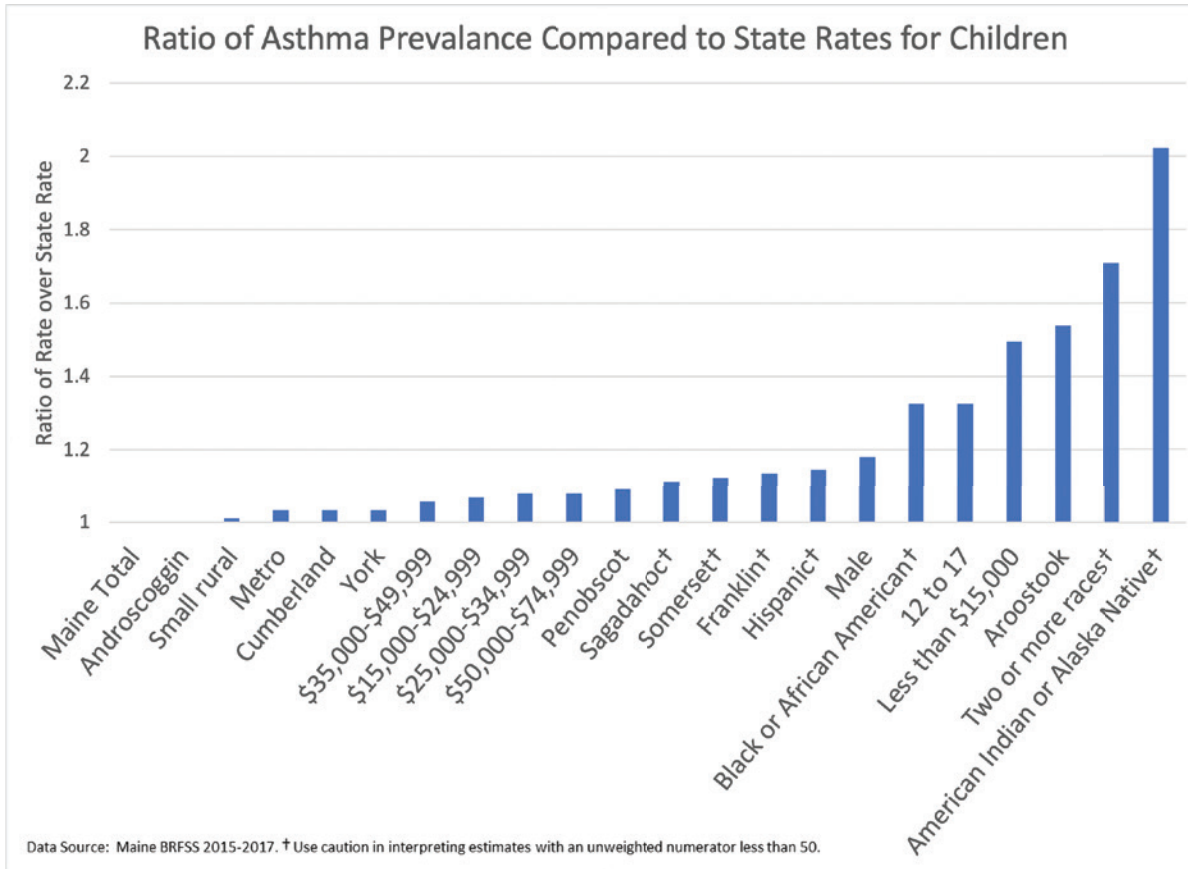
- **Asthma Action Plans:** Adults. While 74% of Maine children with asthma have an Asthma Action Plan, only 39% of Maine adults with asthma have an action plan.
- **MaineCare:** Children. The MaineCare population encompasses a wide range of prevalence indicators including income, education, and tobacco use, and secondhand smoke. Surveillance data for this population show an asthma incidence 90% higher than the Maine baseline.
- **LGBTQ+:** Adults and Children: The Maine LGBTQ+ community has an asthma incidence 70% higher than the Maine baseline. While we have no data addressing asthma prevalence for LGBTQ+ children, it would be prudent to address both adults and children in this effort.
- **Native American:** Adults and Children. Maine Native Americans have an asthma incidence 50% higher than the Maine baseline. While the data on asthma prevalence in Native American children is uncertain due to small sample size, there is no reason to assume Native American childhood risks would be significantly different than adults.
- **County Specific:** Asthma prevalence by county gives a striking look at potential message intervention. Somerset and Penobscot Counties asthma rates are higher than other Maine Counties for adults, while Aroostook County's child asthma rate is also higher.

Source: Asthma Coalition High Risk and Burden Populations in Maine.

The following charts identify the ordered ratios of Behavioral Risk Factor Surveillance System (BRFSS) risk factors as they relate to asthma. By normalizing them to the state rate, one can compare the magnitude of burden amongst different populations identified in BRFSS. A ratio of 2, for example, has an asthma rate that is 2x the state average.

Other worthy opportunities surfaced during the discovery period. These will be mentioned in the Appendix. As future funding, partnership opportunities, and resources become available, these can be considered.





Challenges

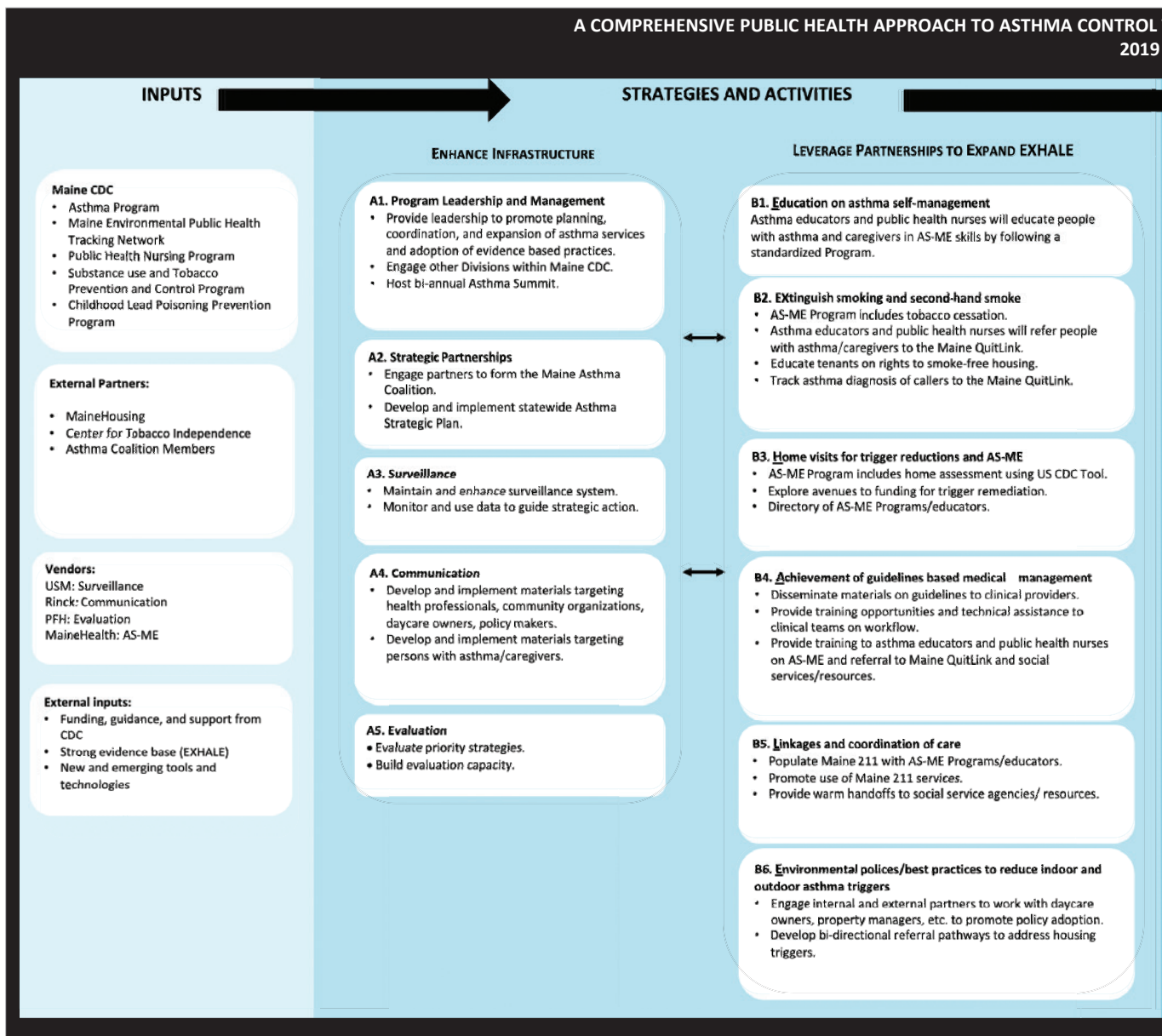
The primary challenge of addressing Maine asthma message communication is the decentralized nature of response. There are many stakeholders, each with specific goals and accountabilities, acting in specific ways to achieve collective success. Stakeholders have shown cooperation and excitement with the reinvigoration of the Program and the Asthma Coalition, but high-level coordination of the goals, actions, reporting, and outcomes will continue to be a priority. Communication between and among these entities under a Communication Plan will help serve the need of creating coordinated messaging to Maine people with asthma.

Purpose of the Plan

The US CDC Grant requires the Communication Plan to address the following four segmented audiences:

1. Persons with asthma and/or their caregivers
2. Childcare providers
3. Health care professionals such as school nurses, primary care practitioners
4. Public health professionals and policy makers.

Each profile will include the core asthma-related messaging, the desired call-to-action, barriers that prevent the target population from understanding and receiving the



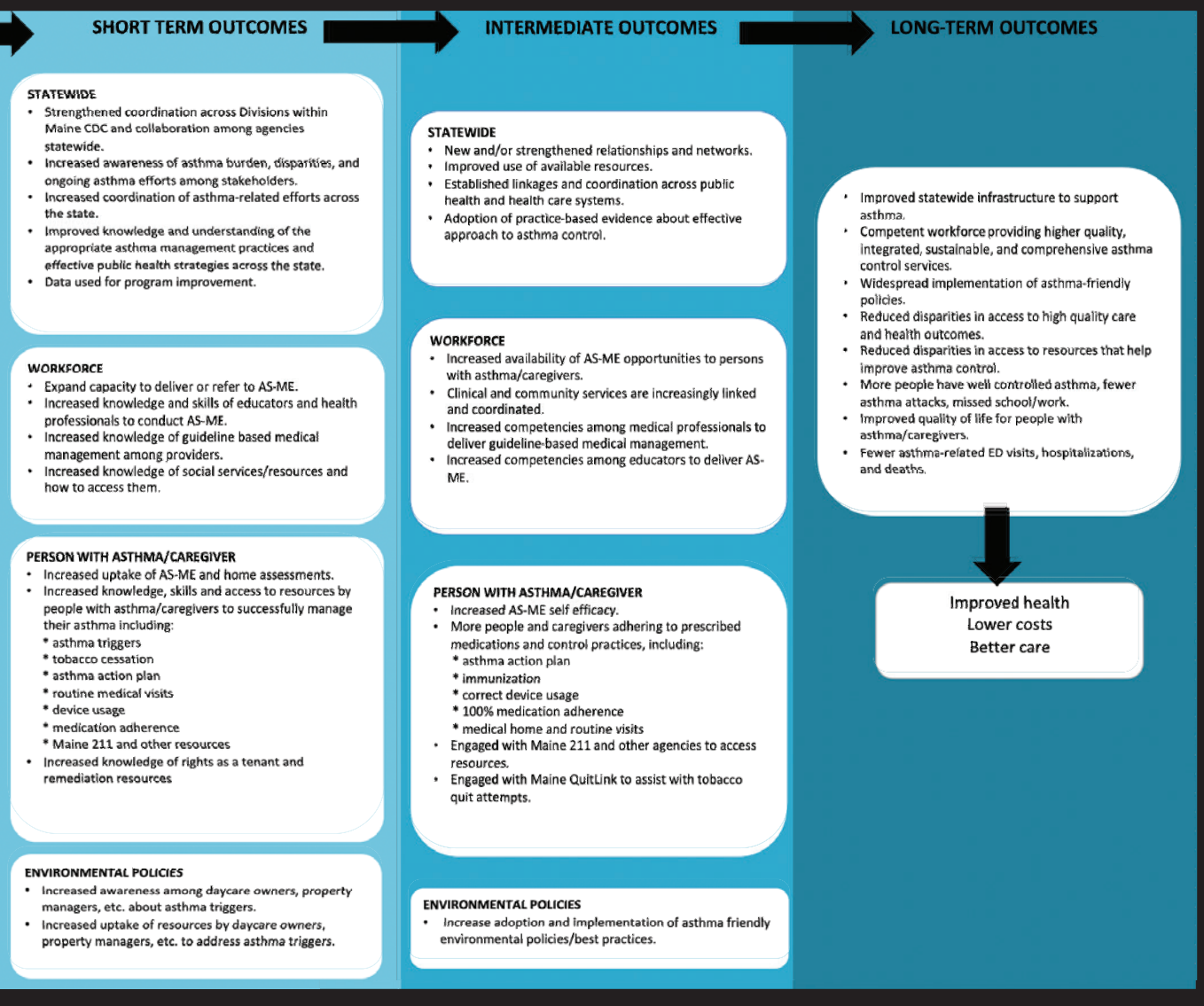
messaging, strategies for navigating the barriers, and appropriate communication avenues and channels.

Examining the Maine Asthma Logic Model

The Maine Asthma Logic Model consists of five critical phases:

1. Inputs
2. Strategies and Activities
3. Short Term Outcomes
4. Intermediate Outcomes
5. Long-Term Outcomes

THROUGH EVIDENCE-BASED INTERVENTIONS: MAINE CDC LOGIC MODEL - 2024



The Communication Plan clearly intersects with **Strategy A.4 Communication:**

- Develop and implement materials targeting health professionals, community organizations, daycare owners, policy makers.
- Develop and implement materials targeting persons with asthma/caregivers.

However, there are other areas where a robust communications plan can play a role by providing data and support to other activities.

A.2 Strategic Partnerships

Engage partners to form the Maine Asthma Coalition. Partners can be an encompassing term that could also include media partners. Media partners (Television, Radio, Print) can choose specific areas of public interest, providing airtime or print space to promote the goals in partnership. These are typically a combination of paid and in-kind support.

A.3 Surveillance

Modern digital marketing deployment provides feedback data, both simple and complex.

The data can take the form of location data, demographics, rising or falling interest. In addition, message testing can show general or localized concerns based on response rates (clicks/engagement) that can feed surveillance reporting and insights.

A.5 Evaluation

Message reporting Key Performance Indicators (KPI) provide metrics supporting Evaluations and flow toward desired outcomes outlined in Strategies and Activities B.1, B.2, B.3, B.4, B.5, and potentially B.6.

The Asthma Burden in Maine

The February 2020 report *Asthma Self-Management Education Evaluation* from Partnerships For Health details the asthma burden in Maine:

Asthma Prevalence

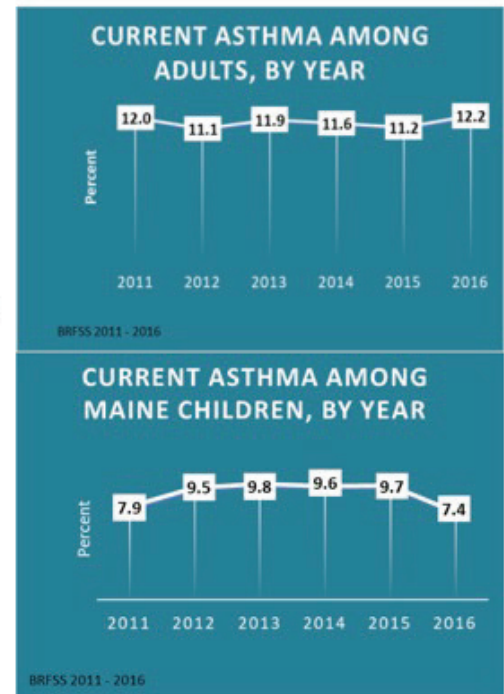
Disease or condition prevalence: the proportion of the population that has a disease or condition at a specific point in time.

The prevalence of current asthma is significantly higher among Maine adults than U.S. adults [Maine: 12.2%; US: 9.3% (2016)], while the prevalence among Maine children is similar to that of U.S. children [Maine: 7.4%; US: 8.5% (2016)].

An estimated 131,000 Maine adults were living with asthma in 2016. Counties with the highest adult asthma rates are Somerset (15.4%), Androscoggin (14.9%) and Penobscot (14.4%).

One-in-fourteen Maine children are reported to have current asthma. This is approximately 18,009 children. Aroostook has the highest child asthma rates at 15.3%.

Figure 1: Asthma Prevalence in Maine

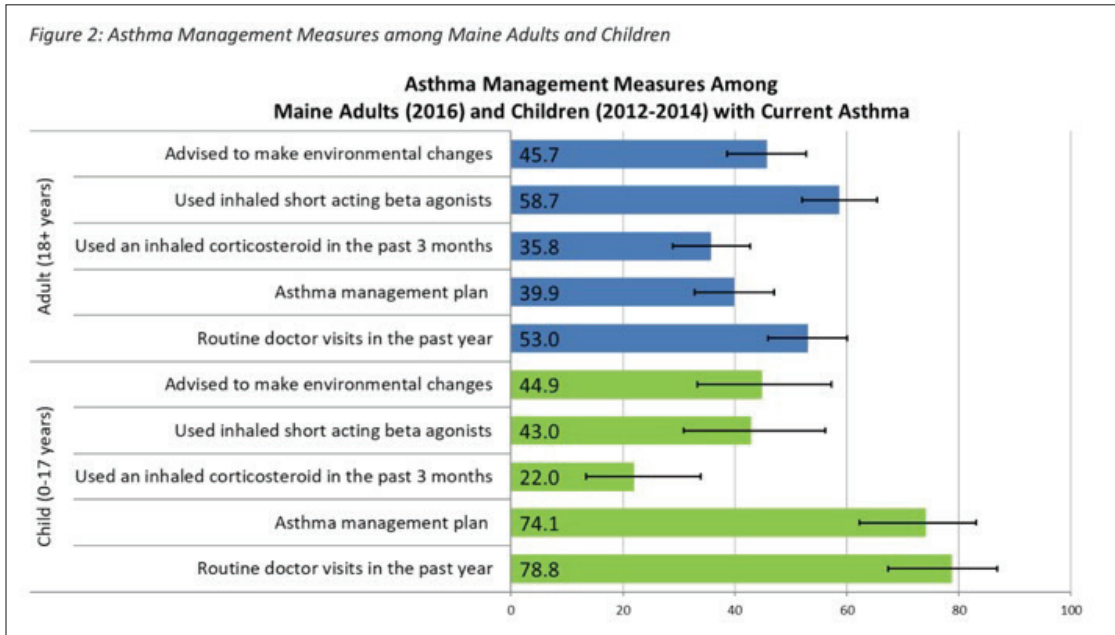


An estimated 131,000 Maine adults were living with asthma in 2016.



The data indicate that Maine’s asthma prevalence has persisted at a steady rate over time, challenging provider resources. The total numbers of the Maine population with asthma are significant, and the cost burden is high.

The Asthma Self-Management Education Evaluation report highlights issues with self-management. Although based on more dated reporting, it is presumed these numbers have not moved significantly:



The bottom-line costs to uncontrolled asthma are substantial. Records for 2016 indicate 5,297 emergency room visits in Maine with a principle diagnosis of asthma and 421 individuals were hospitalized. There were 14 deaths.

The *Asthma Self-Management Education Evaluation* from Partnerships for Health report estimates the cost:

Direct Costs. The calculator estimates that asthma results in approximately \$160,000,000² in direct medical costs per year in Maine. Forty percent of this cost is paid by MaineCare and Medicare. By 2020, the annual all-payer costs due to asthma in Maine are projected to increase by 60% to approximately \$287 million.

Indirect Costs. It is estimated that asthma causes approximately 2.1 missed workdays per employed person with asthma. This results in an estimated 99,000 lost workdays and \$19 million² in absenteeism costs in Maine annually.

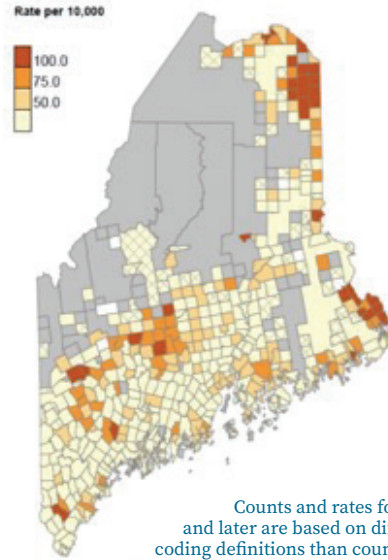
Health Disparities

Health disparities play a role in asthma management. Looking at geo-coded data of the rates of Emergency Department visits, one might expect alignment with population centers, but this is not born out.

Clustering is seen in more rural, lower income areas of the state. Additional data supports these findings.

The presentation, *Advancing Asthma Self-Management in Maine*, covers a wide range of topics. Contained within the presentation is the Maine In-Home Asthma Education Program report, a Maine Center for Disease Control and Prevention Initiative by Denise Yob, Epidemiologist, University of Southern Maine. This indicated disparities associated with the Maine population as highlighted in the following graphics.

Rate of Asthma ED Visits by Town, Maine 2010-2014
Based on: Admission Date



Counts and rates for 2016 and later are based on different coding definitions than counts and rates for 2014 and earlier. Significant caution is advised when comparing rates or counts between time periods.

Cross hatched areas show where data were suppressed.
White indicates value zero (0).
Gray indicates that data are not releasable.

Maine Center for Disease Control and Prevention

ADULT ASTHMA PREVALENCE IN MAINE

149,001 Maine adults with current asthma

1 in 8 adults

Populations with highest rates of asthma:
(2014-2016 = 11.7%)

- Less than a high school education (20.9%)
- Adult MaineCare beneficiaries (21.6%)
- Less than \$15,000 household income (22.9%)
- Non-white adults*
More than one race (18.9%)
American Indian or Alaskan Native (16.5%)
- Adult females (14.9%) vs. Adult males (9.4%)

*2011-2016 data

Counties with higher adult rates:

- Somerset (15.4%)
- Androscoggin (14.9%)
- Penobscot (14.4%)

CURRENT ASTHMA AMONG ADULTS, BY YEAR

Year	Percent
2011	12.0
2012	11.1
2013	11.9
2014	11.6
2015	11.2
2016	12.2

CHILD ASTHMA PREVALENCE IN MAINE

18,009 Maine children with current asthma (7.4%)



1 in 14 children

Populations with highest rates of asthma: (2014-2016 = 9.0%)



Less than \$15,000 household income (16.2%)



Age 12-17 (12.4%)



Non-white children*

More than one race (14.1%)

Black or African American (12.9%)



Boys (10.5%) vs. Girls (7.2%)

Counties with higher child rates:

Aroostook (15.3%)

CURRENT ASTHMA AMONG MAINE CHILDREN, BY YEAR



• Maine's childhood prevalence is on par with most other states •

*2011-2016 data

These findings overlay the BRFSS findings shown on page 6.

The clear health disparities in Maine present opportunity to reduce the gap through message targeting and coordinated intervention to stakeholders, policy makers, and to support collaborative efforts with partners.

Existing Outreach Strategies and Evaluation

Existing materials are primarily available on the Maine CDC Asthma Program website or available in hardcopy by request. Materials and the website were not well advertised or promoted as resources during the previous grant period.

Materials currently available include:

Asthma Info Cards (or rack cards): Developed in 2007, these address multiple topics including exercise induced asthma, smoking, flu shots, and home triggers. The Asthma and Pregnancy rack card is the only card available in Spanish. All other rack cards are only available in English.

These rack cards were developed at the request of school nurses and intended to be used and distributed by school nurses in their offices and at events and fairs. The development was supported by survey and focus group testing among school nurses. The messaging was developed using the National Heart, Lung, and Blood Institute (NHBLI) guidelines in collaboration with the American Lung Association, Maine's public health infrastructure at the time (Healthy Maine Partnerships), and the Maine Tobacco Prevention and Control Program. Literacy levels were tested.

These materials have not been formally evaluated for effectiveness, nor are paper copies routinely requested. These materials were also not visited consistently on the website (roughly 100 visits per year per info card). The lack of demand is not surprising given the lack of promotion.

Asthma Action Plans are available on the website and are the most heavily used portion of the website with approximately 2,500 unique page views over the past year. Hardcopies of Asthma Action Plans are requested by one pediatric practice in the state and several schools at the beginning of each school year.

Understanding the Audience

Audience segmentation practice is a method of reducing cost of communication while targeting key audiences with specific, relevant information.

The primary audience stakeholders are:

1. Persons with asthma and/or their caregivers
2. Childcare providers
3. Health care professionals such as school nurses, primary care practitioners
4. Public health professionals and policy makers

Targeting these stakeholders means gaining understanding and potentially targeting subgroups within the larger stakeholders, to create efficiencies and higher return on investment. Language, imagery, tone, and context can be created to deliver highly relevant content that leads to engagement and retention.

This process of audience segmentation, identifying stakeholders, targeting subgroups, and developing relevant, culturally-sensitive, and actionable messaging is an ongoing process and will evolve during the course of the grant activities. Data sources from surveillance, evaluation, direct intervention with clients, and feedback about communication efforts will all feed into communication strategies and development. That said, conducting formative research or focus group testing is always very valuable if resources are available, and in particular as it relates to high-risk populations.

Literacy level is also an extremely important component of any written material. While intuitive when discussing outreach to individuals with lower education attainment or recent immigrants, research supports that individuals with a high literacy level are more likely to read, understand, and act on messaging provided at a lower literacy level.

Persons with Asthma and Caregivers

Fundamentally, this group encompasses all of Maine geography. From a practical standpoint, a decision could be considered to first address key stakeholders from the BRFSS study.

These sub-targets would overlap across several targeting categories but be distinct by geography. Specific targeting conditions would allow highly efficient placements across digital platforms and potential retargeting from a primary website.

Language issues require translation of existing materials, identification of culturally appropriate messaging, and highly targeted information.



Several subsegments are of particular interest:

New American/Immigrant Community

Although this category does not show up in the BRFSS data, existing relationships with Maine CDC Asthma Programming has shown important success. While there is no current data available, many of the determinants apply to this population, including specifics associated with housing stock and cultural norms. This population segment shows high asthma risk levels while being open to mitigation when provided through trusted resources, such as Community Health Workers, as documented in the previous grant period evaluation report.

One current effort is focused on the New American population around the Augusta, Maine area. Immigrants in this region are primarily from the Middle East and South Asia. While the effort is primarily targeted to youth and vaping, the information gathered and the relationships built between the programs and the community provide a promising direction for future efforts.

A second effort targets the New American population in the Lewiston/Auburn area of Maine. This region is home primarily to Somali and Somali-Bantu immigrants. As such they have different tobacco exposure as well as different potential asthma triggers (such as exposure to uunsi – a resin-based incense that is of cultural significance). This effort is focused on formative research around tobacco usage and the results will be shared with the Maine CDC Asthma Program.

A third effort focuses on the Portland, Maine area and will include home visits by Certified Health Workers as part of a second-hand smoke evaluation effort led by the Center for Tobacco Independence with Partnerships For Health. The immigrant communities included in this work would include Angolans, Iraqi, Congolese, and immigrants from Djibouti. Again, while focusing on tobacco, the effort will include documentation of housing status and can be used to potentially identify and target asthma outreach efforts within this community.

Language issues require translation of existing materials, identification of culturally appropriate messaging, and highly targeted information.

Tribal Communities

The Aroostook Band of Micmac Indians, Houlton Band of Maliseet Indians, Passamaquoddy Tribe at Indian Township and Pleasant Point, and the Penobscot Indian Nation coordinated to perform the 2010-2011 Waponahki Tribal Health Assessment. The Assessment was based on the Behavioral Risk Factors Surveillance Survey but is not directly comparable as some of the questions were modified to make it appropriate for the tribal population. The data is owned by the tribes, which have their own governmental structure and public health infrastructure. This data has valuable information around asthma and asthma trigger prevalence (such as tobacco usage) within the tribes. There were plans to repeat this effort every 10 years as well as develop a youth version of the survey.

The Maine Asthma Coalition includes representatives from the Penobscot Nation Health Department and the Houlton Band of Maliseet Indians. Any communication efforts around asthma targeting tribal members should be developed and come from within the various tribal governments. The ability to pursue those efforts would depend on funding. Relationships between the Maine CDC Asthma Program and the various tribes to share or develop relevant and culturally appropriate resources for tribal populations will need to be developed over time.

LGBTQ+ Community

The high prevalence of asthma within the LGBTQ+ community indicated by the BRFSS data suggests direct messaging to this targeted audience. Development of relationships between key LGBTQ+ organizations within the state and the Maine CDC Asthma Program need to be developed. Appropriate message development and distribution will need significant effort and relationship building.

There is an assessment of tobacco usage among LGBTQ+ youth, young adults, and adults funded by the Maine CDC Tobacco and Substance Use Prevention and Control. This is a community-driven effort with the three recruited LGBTQ+ agencies. The final report is expected by end of April 2021 and may provide useful information for developing messaging for this population.

In addition, collaborate with key LGBTQ+ organizations in Maine to create educational opportunities and provide mitigation resources.

MaineCare Recipients

MaineCare insurance recipients are the highest risk group identified through BRFSS for asthma prevalence. While MaineCare as a program obviously does not increase risk of asthma, MaineCare membership represents a surrogate for many of the social determinants of health which increase one's asthma risk. Most importantly, however, the MaineCare insurance program structure offers the potential to reach members of populations that have high risk social determinants of health which may be difficult to reach in other contexts.



Key Messaging

Critical messaging targeted to persons with asthma and their caregivers include:

1. Value of an Asthma Action Plan (especially for adults)
2. Triggers and Mitigation Education, especially tobacco use and the benefit of quitting
3. Proper Use of Asthma Medication and Adherence
4. Value of Home Visit from an Asthma Educator

A critical examination of key audiences surfaced through discovery suggests the need for culturally appropriate messaging, translations, and easy action mechanisms that support appropriate responses.

Key messaging will be updated as greater understanding of the target audience grows.

Calls to Action

The range of potential target audiences suggest that one call to action may not be appropriate to each segment for each message.

The current scenario impedes a simple access to materials. The wide range of available resources for persons with asthma and caregivers means these resources are competing for attention rather than coordinating, thereby raising costs, and potentially confusing the public.

Calls to action that direct to a single point of contact for material distribution for multiple stakeholders suggest a more efficient process, easier to navigate, that can reduce costs of marketing for collaborative partners.

Barriers That Prevent the Target Population from Understanding and Receiving the Messaging

Broad Barriers

Currently, the Maine CDC website contains a wide range of material associated with asthma care. However, the website is large and not particularly easy to navigate and the availability of the existing materials has not been clearly or widely communicated.

How to Navigate the Barriers

It is our recommendation that a consumer/caregiver facing website be created to serve as a single point for information, education, and materials.

Marketing this single point reference can reduce consumer confusion/distraction, eliminating friction and adding a level of message control for the Maine CDC, and heightening collaboration statewide to reduce the burden of asthma in Maine.

The Asthma Coalition can be used as a resource to review and develop consistent messaging (or modify existing messaging) which can be used by member organizations as well as Maine people affected by asthma.

Specific Barriers

Research and cooperative alliances are needed to better understand key barriers in high-risk target populations. New Americans, Tribal, and LGBTQ+ communities require greater insight into actual rather than perceived barriers, as well as strategies for reaching individuals and caretakers dealing with asthma.

Current Methods Utilized to Reach the Target Population

The many asthma stakeholders each have a methodology to deliver their key messages to people with asthma and caregivers. These include, but are not limited to:

- Websites
- Advertising
- Personal intervention in various settings (hospital, school, etc.)
- Events
- Medical Center Intranet Marketing (often around World Asthma Day in May)
- Emergency Intervention (via EMS)
- Tribal Health Council

Utilizing the knowledge and resources of the Maine Asthma Coalition membership to provide a coordinated review and examination of existing materials and make recommendations to provide new materials can provide a sound basis for ongoing, effective execution.

Information Gaps

The issue is not the type of number of methods, but the lack of message clarity or a coordinated message over time.

Maine CDC, as a coordinating entity, can perform the role of an overarching messenger with distinct calls to action that can make the collaborator messages more effective at a lower cost to those organizations.

Research could highlight more precise and best-received communication channels, as well as identify non-traditional marketing channels where message delivery by key community influencers would be valuable.

Appropriate Communication Channels

The Maine CDC should consider a message plan that creates a theme and umbrella, driving to a single point of reference (website/call center).

It would be appropriate to consider the following message platforms as appropriate to a budget allocation:

- Traditional Media: Television, Radio, Special Interest/Targeted Print Publications
- Digital Media: Search Engine Marketing, Digital Display, Digital Retargeting
- Paid Social Media Targeting
- Public Relations: Media Relations
- Sponsorships: Media Sponsorships, Hybrid Public Service Announcements
- Sports Marketing Sponsorships

Additional Strategies and Notes

Existing print materials require examination for any updates to current standards, translations as needed, and to ensure they are public-facing and culturally appropriate.

One proven method to ensure understanding and comprehension of materials involves market research among the target populations. Typically, this results in insights leading to greater clarity for photography, illustration, and written materials. Additional qualitative research can be conducted during these sessions as well.

Other public health programs already have existing methods to communicate with target populations that may overlap with the priorities of the Maine CDC Asthma Program. Further discovery needs to occur as materials are conceptualized to determine if these existing delivery platforms are appropriate for channel collaboration, the cost-effectiveness of the channel, and message priority.

The Maine Prevention Store offers an obvious and existing distribution channel to providers.

In the case of specific target groups, technical assistance and/or funding may be highly valuable to LGBTQ+, New Mainers, and/or Tribal Communities to develop their own materials as appropriate for their population.

Child Care Providers

Child Care providers are licensed by the Maine Department of Health and Human Services Office of Child and Family Services (OCFS). Currently, Child Care Providers and staff have no required asthma-specific training, are not monitored or inspected for potential asthma triggers, and receive no accreditation for asthma knowledge or mitigation.

The Maine Center for Disease Control is pursuing a potential relationship with Maine Roads to Quality, the professional development organization that provides required training to Child Care Providers necessary to achieve licensing.

Additional collaborations show potential, including organizations already within Maine Roads to Quality network. These potentially encompass:

- Child Care Aware
- Maine Department of Education
- Maine Association for the Education of Young Children
- Family Care Association of Maine
- Maine Afterschool Network
- National Center on Early Childhood Health and Wellness

The primary deliverable associated with Child Care Providers would be a self-guided training tool kit



Maine Child Care Providers could benefit from a “Tool Kit” designed to help staff identify and manage children with asthma in their care. Additionally, aspects of the tool kit could help educate staff and children to the realities of asthma and work to reduce stigma associated with asthma, an asthma attack, and reducing the triggers that can cause an asthma incident.

Key Messaging

Critical messaging targeted to Child Care Providers include:

1. Proper Use of Asthma Medication
2. Value and Use of an Asthma Action Plan
3. Understanding Triggers and Mitigation in a Child Care Environment
4. Stigma Education and Reduction Exercises for Children with Asthma, their Peers, and Child Care Workforce

Key messaging will be updated as greater understanding of the target audience grows.

Calls to Action

The primary deliverable associated with Child Care Providers would be a self-guided training tool kit with materials, distributed on request to locations. Calls to action would be in the form of a request response device for the training materials.

Barriers That Prevent the Target Population from Understanding and Receiving the Messaging

Child Care Providers watch over Maine’s children for many hours each day, hundreds of hours each year. A lack of basic asthma health knowledge puts Maine children with asthma at great risk... and Child Care Providers at a different type of risk. Moreover, an asthma attack can appear frightening to other young children, creating stigma that can persist.

An additional barrier is cost for any training program, especially if training becomes part of Maine Roads to Quality elective options, and not required as a mandate for licensing.

How to Navigate the Barriers

A comprehensive, easy to use tool kit with self-guided lessons can assist Child Care Providers and staff with asthma understanding and management of the children in their care.

The tool kit would be developed with professional healthcare guidance and targeted to the needs of Child Care Providers. A survey of Child Care Providers would be a part of the initial development plan, to assess their current knowledge and gaps in understanding of asthma triggers, management, and interventions.

There are a range of existing tool kit models to examine for appropriate application to Child care Providers. These include completely online versions with downloads, such as the Asthma Friendly Schools Initiative Toolkit created by the American Lung Association (<https://www.lung.org/lung-health-diseases/lung-disease-lookup/asthma/asthma-education-advocacy/asthma-friendly-schools-initiative/toolkit>), the Pennsylvania Asthma Partnership (<https://www.paasthma.org/asthma-toolkit/>), the Asthma and Allergy Foundation of America Covid-19 and Asthma Toolkit (<https://www.aafa.org/managing-asthma-and-covid19-in-school>).

It would be important to provide the tool kit and any training free-of-charge.

Current Methods Utilized to Reach the Target Population

OCFS licenses Child Care Providers and is a means of reaching this audience via license review, inspections, and the internal email list. Maine Roads to Quality provides a newsletter (Short Cuts).

An early childhood education conference is being planned for 2021 depending on COVID-19. This conference could serve as a launching point to address Child Care Providers through a featured speaking engagement, panel, or show display to supported by the Asthma Coalition or Maine Asthma Prevention and Control Program.

Information Gaps

Research could uncover motivations that drive Child Care Providers to adopt a proactive approach to asthma mitigation. Research could reveal additional opportunities to form alliances with Child Care Providers to influence and educate within the community.

Appropriate Communication Channels

The direct delivery of the tool kit, either upon request or as part of the child care licensing process, could be a major step forward in asthma education for Child Care Providers and risk reduction for Maine children who have asthma.

Additional Strategies and Notes

Maine Roads to Quality provides educational credits to Maine Child Care Providers. Adding an asthma education module directly into the licensing program could provide significant velocity to achieving this objective.

Health Professionals such as School Nurses, Primary Care Practitioners, etc.

The discovery period surfaced three, clear and related needs from the Communication Plan:

- Adult Asthma Action Plans. Just 39.9% of adults have an Asthma Action Plan (compared to 74.1% of Maine children.) Educating Maine adults to the need and use of an Asthma Action Plan is seen by health professionals as a critical need.
- Tools. The material contained on the Maine CDC website is accessed frequently. Although there is no data indicating who accesses the material, it is a working hypothesis that it includes health care professionals due to the difficulty in finding the material and the frequent accessing of the specific pages.
- Promotion of the Maine Asthma Self-Management Education Program (MASMEP). This asthma education process includes in-person visits to assess asthma triggers in the home environment. It has proven to be successful in Maine. The COVID-19 pandemic has seen a shift in resources away from home visits by organizations that traditionally provide these services. As the pandemic mitigates, support in creating demand for home visits may increase. A future goal of communications will be a technological solution that manages intake and processing for home visit requests, referrals, and scheduling.

Key Messaging

Critical messaging targeted to Health Professionals includes:

1. Value of an Asthma Action Plan
2. Available Tools and Library of Materials on Maine CDC Website
3. Value and Need for MASMEP enrollment
4. Future: Referral to MASMEP

Key messaging will be updated as greater understanding of the target audience grows.

Calls to Action

The range of messages to this critical target group creates the need for a variety of Calls to Action (CTAs).

The percentage of adults with no Asthma Action Plan in place is a measurable metric that can and should be improved. Messaging to Primary Care Physicians (PCPs) and other health care professionals can improve this metric.

Health care professionals are time-famished. Knowing there is a resource where a library of materials, including sample Asthma Action Plans, can be accessed for free, with no login required, can be a timesaver. The existing website metrics indicate that many health professionals are likely already accessing the materials. However, metrics also suggest many more may not know they exist.

Asthma self-management education with in-home visits to identify asthma triggers are a proven method of improving the health outcomes for people with asthma. Health

There is little time available to health care professionals to spend in asthma education



professionals are on the front lines of providing health care to Maine residents and families. Understanding what the MASMEP offers to patients, reducing anxiety in the affected as well as caregivers, and promoting this tool as an active asthma mitigation technique can help provide an important resource to increase uptake of this valuable program.

Currently, there is no mechanism in place for the referral of a person with uncontrolled asthma to a public health nurse for in-home asthma self-management education. Developing and testing this mechanism could pay dividends if MASMEP is expanded to other stakeholders, such as EMS organizations, etc.

Barriers That Prevent the Target Population from Understanding and Receiving the Messaging

Data and discussion suggest “time” as the primary barrier. There is little time available to public health professionals to spend in asthma education, even with the best intentions. School nurses, committed to the health of the community they serve, often serve two or more schools in disparate geographic areas. Public health nurses cover statewide needs, tending to cluster around population centers, leaving Northern and Western parts of the state with little coverage. COVID-19 has negatively impacted the “time equation” even further.

How to Navigate the Barriers

Providing health professionals with an easy-to-access, easy-to-understand library of culturally-appropriate materials in a variety of languages, including flat and video assets, could help increase the velocity of education.

The referral mechanism suggested above could potentially speed enrollment into the MASMEP and increase interventions for people with asthma and their caregivers.

Information Gaps

Communication gaps in reaching this audience are associated with time and geography.

The focus of the Communications Plan is to provide useful, easy-to-access materials to supplement the needs of health professionals and the needs of their patients, increasing the velocity of asthma intervention and leading to home visit referrals.

Appropriate Communication Channels

Current Avenues Utilized to Reach the Target Population

- Reaching school nurses occurs via Maine Association of School Nurses
- Reaching primary care physicians can be far more challenging. One method that has shown success is via health system intranets. MaineHealth could potentially pilot a program that could be modeled by the other major health systems statewide (Central Maine Healthcare, Northern Light Health, Covenant Health, etc.)

Additional Strategies and Notes

None identified.

Public Health Professionals and Policy Makers

Communications directed to public health professionals and policy makers encompass a range of options to influence knowledge, beliefs, and understanding of the goals and outcomes of the Maine CDC effort and collaboration with partners.

Perhaps most critical is comprehending the asthma burden in Maine, and its attendant costs associated with direct and indirect costs.

The Partnership for Health 2019 Asthma Self-Management Report outlined these costs:

Asthma Costs

There are two main types of asthma costs: direct and indirect costs as previously discussed on Page 12.

Direct asthma costs are those associated with hospital care, physician and nursing services, and medication. By 2020, the annual all-payer costs due to asthma in Maine are projected to increase by 60% to approximately \$287 million.

Indirect asthma costs include lost productivity due to morbidity and mortality. results in an estimated 99,000 lost workdays and \$19 million² in absenteeism costs in Maine annually.

This report makes a clear case for asthma management and investment in education and interventions that reduce the burden of asthma in Maine.

Key Messaging

Key messaging to public health professionals and policy makers consists of three primary areas:

1. Knowledge

Understanding the asthma burden from a cost standpoint is critical to addressing the need for investment in reducing the burden. Avoided costs are always challenging to find consensus/agreement around as a need. However, the calculated asthma burden is high, and reduction of the burden provides a clear return on public health investment. There are a wide range of collaborators and activities occurring across the state, however the application of resources is uneven and perhaps not focused on populations or geographic areas where the burden is highest.

2. Goals

Critical to providing the knowledge surrounding the asthma burden are goals expressed to mitigate and reduce asthma in Maine. Becker's Hospital Review, quoting a study by the Kaiser Family Foundation, ranked Maine (and West Virginia) as worst in the nation for highest percentage of adults with asthma at 12.3%. The data is based on an analysis of CDC's Behavioral Risk Factor Surveillance System 2013-2018 survey results.

Developing a strategic plan with goals to address the asthma burden, and tactical approaches that drive funding plans bring Public Health Professionals and Policy Makers into the solution, allowing participation and credit for reducing the asthma burden in Maine, reducing direct and indirect costs, and saving lives.

3. Outcomes

Outcome surveillance and reporting milestones allow collaborators, Public Health Professionals and Policy Makers to express their participation and investment in positive outcomes, reporting to their stakeholders changes to the Maine asthma landscape.

Key messaging will be updated as greater understanding of the target audience grows.

Calls to Action

Calls to action for this group of stakeholders fundamentally begin with knowledge and learning more about the asthma burden in Maine, efforts to combat it, and what more can and should be done to reduce the direct and indirect costs of asthma.

The calculated direct cost (\$160MM) and indirect costs (\$19MM) are large numbers that demand attention at the policy level. They can be effectively leveraged to begin the message cycle. Similarly, as these costs are reduced, adapted messages can continue to reinforce the successes of the efforts.

Barriers That Prevent the Target Population from Understanding and Receiving the Messaging

Asthma burden statistics are not the only big number problems affecting Maine. Covid-19, unemployment, tourism losses, and many other “Big Numbers” may demand attention of Maine’s policy and governmental professionals for years to come. Investing in “avoided costs” when there is competition for direct investment will create challenges ahead.

How to Navigate the Barriers

Maine people with asthma tend not to have a “voice” and to affect public health professionals and policy makers, it often helpful to have a face or faces that directly represent people who carry and create the asthma burden. Testimony and storytelling from those affected provide “face and lived experience” to the facts.

Current Methods Utilized to Reach the Target Population

Affecting public health professionals and policy makers often takes the form of personal one-on-ones, media relations, and public relations efforts such as op-eds. Developing easy-to-understand fact sheets can help guide discussions and understanding among these stakeholders.

Information Gaps

There is no easily identifiable “list of advocates” within the public health professionals and policy makers group to identify and target as leaders in this effort. It will be important to identify potential advocates among the public health professionals and policy makers stakeholder group who can develop a passion for the mission and participate in creating successful outcomes.

Appropriate Communication Channels

As public health professionals and policy makers advocates are identified, communications channels can be expanded beyond one-on-ones to include op-ed, conferences, speaking engagements with a variety of statewide groups (such as Chambers of Commerce) and, other opportunities to engage the public and recruit additional advocates.

Additional Strategies and Notes

The communications recommendations outlined above do not include direct lobbying by groups such as the Asthma and Allergy Foundation, which has a Maine chapter. Engaging at some level with other organizations offer unknown potential to move faster to achieve results.

Strategic Partnerships

American Lung Association
Environmental Protection Agency
Maine Access Immigrant Network
Maine CDC Environmental Public Health Tracking
Maine Department of Education
Maine Department of Labor
Maine Indoor Air Quality Council
Maine Prevention Services
Maine Association of School Nurses
Maine's Impact Cancer Network
New England Asthma Regional Council
State of New Hampshire Asthma Program
United Ambulance Services



Conclusion

Asthma is a significant burden to individuals, to Maine's workforce, and has a considerable financial impact. However, asthma can be treated and managed.

The need today is immediate. Reducing the impact of asthma across Maine's population requires a coordinated effort. Communication of existing and new resources, education, prevention, and treatment options can provide relief to those who suffer from asthma, their caregivers, and Maine employers, providing a positive economic impact to our economy.

In the years to come, science will improve. Medicine will improve. Resources will change. Developing the framework for a communications plan that will adapt to new changes is imperative.



Appendix

Other Opportunities

During the Discovery Period, several interesting discussions raised opportunities outside of the initial scope.

Maine Amateur Sports Coaching

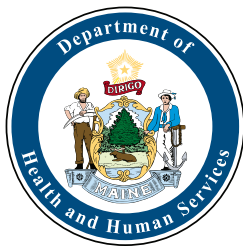
There is no coordinated asthma training for the hundreds of Maine Little League, Girls' Softball, Youth Soccer, Youth Football, Cheering, Basketball, and other sports coaches who have people with asthma on their teams...or on the opposing teams. Coaches have responsibility for player safety, but also are role models in the community. Coaches can play a role in reducing stigma. In a group setting, many members of the Asthma Coalition found this to be a highly engaging idea.

Maine Community Paramedicine

There were numerous discussions of the role Maine Community Paramedicine can, and currently does play in the treatment of people with asthma. It was brought forward that Maine Community Paramedicine offers a critical data advantage in that all branches utilize one service record shared among all statewide services via HealthInfoNet. This single database can provide accurate asthma reporting.

The Challenge of Large Coverage Areas

Identifiable, targeted risk populations can enable cost-effective message delivery based on geography, identifiable affiliations, and demographics. However, Maine people with asthma are distributed statewide. A determination will need to be made as to the correct balance of targeted and mass communications. Or potentially forming partnerships that have their own communication vehicles. One such partnership could be the Asthma and Allergy Foundation which has a New England chapter that covers the six New England states.



Maine Center for Disease Control & Prevention

maine.gov/dhhs/mecdc

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