Montana Asthma Control Program

Strategic Evaluation Plan 2019-2024

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AEA – American Evaluation Association

AHEAD – Asthma Hospital Patient Education, Action Plan, and Discharge protocol

ASME – Asthma Self-Management Education

CDC – Centers for Disease Control and prevention

CDPHP – Chronic Disease Prevention and Health Promotion

CIH – Community Integrated Health (paramedicine program)

DMA – Diagnose and Manage Asthma protocol

ED – Emergency Department

H MtM – Hometown Medication Therapy Management

HCBD – Health Care and Benefits Division

HEDIS – Healthcare Effectiveness Data & Information Set

EHR– Electronic Health Record

IEP – Individual Evaluation Plan

IPHARM – ImProving Health Among Rural Montanans

MAAG – Montana Asthma Advisory Group

MACP – Montana Asthma Control Program

MAP – Montana Asthma Home Visiting Program

MtM – Medication therapy Management

NACP – National Asthma Control Program

QI – Quality Improvement

SEP – Strategic Evaluation Plan

SP – Strategic Plan

UDS – Uniform Data System

1. INTRODUCTION

Program Background

The Montana Asthma Control Program (MACP), formed in 2007, was initially funded by the Montana State Legislature before receiving two subsequent five-year grants from the National Asthma Control Program (NACP) in 2009 and 2014. The MACP is committed to improving the quality of life for all Montanans with asthma and actively considers health disparities and the inclusion of vulnerable populations in its efforts.

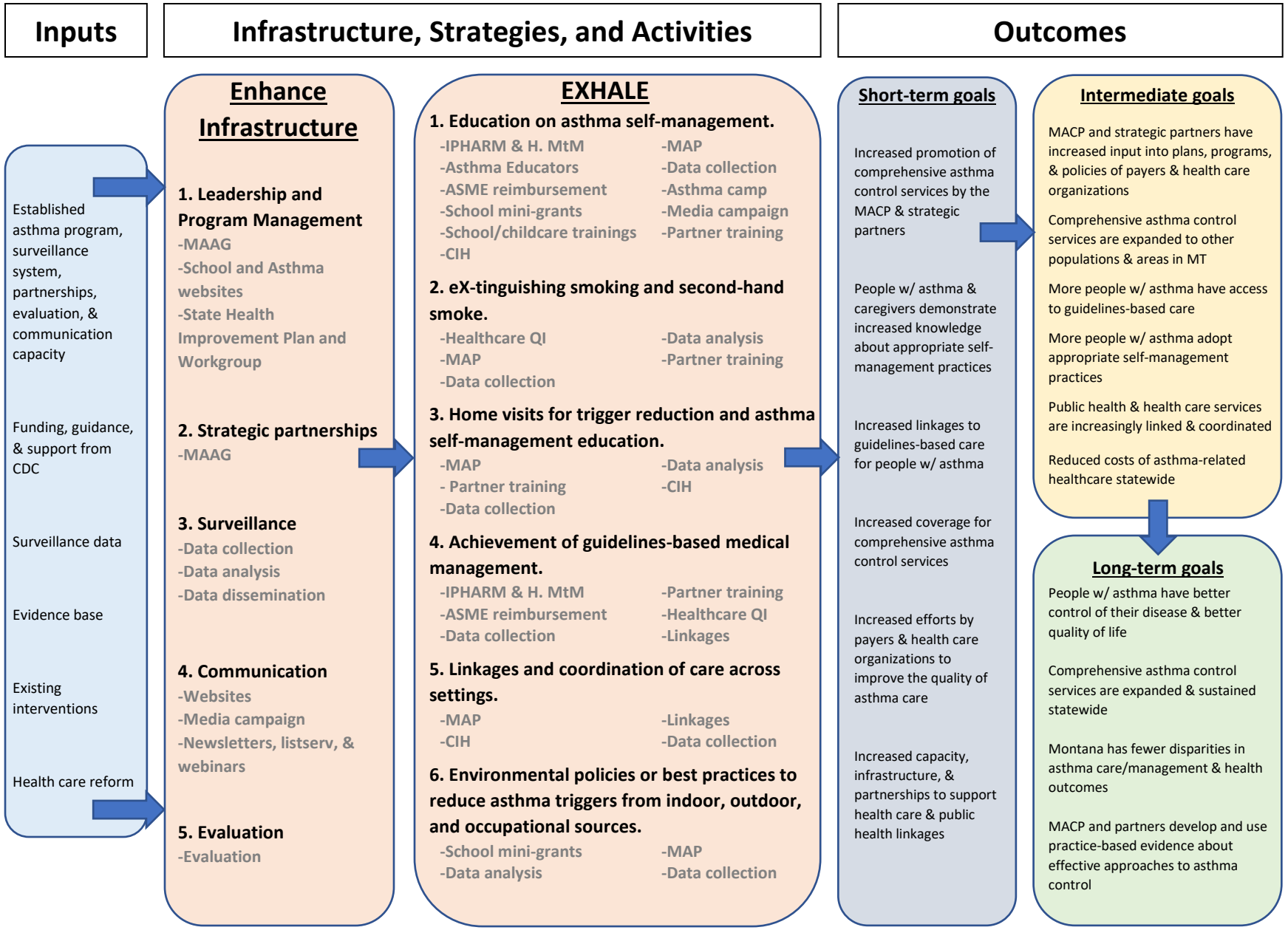
Asthma is a prevalent chronic condition among Montanans and can have serious health implications if not properly managed. In 2018, 10% of adults and 5% of children (aged 0-17 years) reported currently living with asthma.[1] There were 2,022 Emergency Department (ED) visits and 291 hospitalizations for asthma in that same year.[2] Achieving proper asthma control can be difficult and requires regular outpatient care, self-management practices, and adherence to ones' prescribed medication regimen. An estimated 46% of adults and 30% of children with asthma had uncontrolled asthma between 2012 and 2016.[3] The MACP will continue to improve asthma outcomes during its 2019-2024 grant period by implementing activities substantiated by the principles of public health.

Services such as asthma home visiting education; healthcare quality improvements to achieve guidelines-based care; a network of strategic partners; and many others contribute to the program's goal of a healthier Montana. Notably, the program seeks to improve quality of life, reduce asthma morbidity and mortality, diminish disparities, and sustain its services. To attain this vision, the MACP has integrated the EXHALE technical package, provided by the NACP, into its decision-making and planning.[4] Six strategies are proposed in the technical package:

1. Education on asthma self-management.
2. eXtinguishing smoking and secondhand smoke.
3. Home visits for trigger reduction and asthma self-management education.
4. Achievement of guidelines-based medical management.
5. Linkages and coordination of care across settings.
6. Environmental policies or best practices to reduce asthma triggers form indoor, outdoor, and occupational sources.

The EXHALE strategies are complementary and intended to work in combination to reinforce each other. They connect program resources, infrastructure, and activities to short-term, intermediate, and long-term health goals. The produced logic model, shown in Figure 1, is a stepwise depiction of what the MACP hopes to accomplish and how it will do so. The different action-steps, services, events, or infrastructure of the MACP are called activities. Because activities (grey text in Figure 1) may invoke multiple EXHALE strategies, they have been assigned to all that are applicable.

Progress towards the short-term and intermediate goals will be measured by program evaluations. As the acute objectives are met, it is believed that intermediate changes will gradually occur. Intermediate changes will subsequently drive broader long-term changes, progressing towards the vision of a healthier Montana.


Inputs
Infrastructure, Strategies, and Activities
Outcomes
Established asthma program, surveillance system, partnerships, evaluation, & communication capacity
Funding, guidance, & support from CDC
Surveillance data
Evidence base
Existing interventions
Health care reform
Enhance Infrastructure
1. Leadership and Program Management
-MAAG
-School and Asthma websites
-State Health Improvement Plan and Workgroup
2. Strategic partnerships
-MAAG
3. Surveillance
-Data collection
-Data analysis
-Data dissemination
4. Communication
-Websites
-Media campaign
-Newsletters, listserv, & webinars
5. Evaluation
-Evaluation
EXHALE
1. Education on asthma self-management.
-IPHARM & H. MtM
-Asthma Educators
-ASME reimbursement
-School mini-grants
-School/childcare trainings
-CIH
-MAP
-Data collection
-Asthma camp
-Media campaign
-Partner training
2. eX-tinguishing smoking and second-hand smoke.
-Healthcare QI
-MAP
-Data collection
-Data analysis
-Partner training
3. Home visits for trigger reduction and asthma self-management education.
-MAP
- Partner training
-Data collection
-Data analysis
-CIH
4. Achievement of guidelines-based medical management.
-IPHARM & H. MtM
-ASME reimbursement
-Data collection
-Partner training
-Healthcare QI
-Linkages
5. Linkages and coordination of care across settings.
-MAP
-CIH
-Linkages
-Data collection
6. Environmental policies or best practices to reduce asthma triggers from indoor, outdoor, and occupational sources.
-School mini-grants
-Data analysis
-MAP
-Data collection
Short-term goals
Increased promotion of comprehensive asthma control services by the MACP & strategic partners
People w/ asthma & caregivers demonstrate increased knowledge about appropriate self-management practices
Increased linkages to guidelines-based care for people w/ asthma
Increased coverage for comprehensive asthma control services
Increased efforts by payers & health care organizations to improve the quality of asthma care
Increased capacity, infrastructure, & partnerships to support health care & public health linkages
Intermediate goals
MACP and strategic partners have increased input into plans, programs, & policies of payers & health care organizations
Comprehensive asthma control services are expanded to other populations & areas in MT
More people w/ asthma have access to guidelines-based care
More people w/ asthma adopt appropriate self-management practices
Public health & health care services are increasingly linked & coordinated
Reduced costs of asthma-related healthcare statewide
Long-term goals
People w/ asthma have better control of their disease & better quality of life
Comprehensive asthma control services are expanded & sustained statewide
Montana has fewer disparities in asthma care/management & health outcomes
MACP and partners develop and use practice-based evidence about effective approaches to asthma control

Purpose of Strategic Evaluation Plan

Evaluation involves making judgements about the merit, value, credibility, or utility of a subject: potentially a program, policy, product, or piece of infrastructure.[5] The MACP has a history of implementing purposeful evaluations during the last two grant cycles, and these evaluations have significantly contributed to development and enhancement of quality programming. MACP activities are consistently changing over time to meet the needs of their constituents and the healthcare landscape. As programs change, evaluations are needed to examine and ask questions of varying scale and impact. Who is being served? What is working? What isn't? and what are the health outcomes? are simplified examples.

The Strategic Evaluation Plan (SEP) outlines what evaluations will take place over the next five years. By employing a systematic process, the MACP has identified the most pertinent questions and the most appropriate time and means to answer them. The SEP is a consensus and reflects thoughts derived from several stakeholders and members of the asthma coalition. When the time for evaluation comes, MACP staff can refer to this document, knowing it is representative of strategic decision-making and group thought. But it is a living document; a resource meant to inform but ultimately a five-year projection, subject to contextual change. The SEP will be annually reviewed and updated. More specific Individual Evaluation Plans (IEPs) will be drafted to guide each of the evaluations outlined in this plan, and the people involved in planning now are expected to remain engaged in the future. Other partners will be brought in as the evaluations are implemented to maximize fidelity and effectiveness.

Program staff are expected to use the information collected from the evaluations to guide program development and detail ongoing activities. The proper assessment of activities will help identify the most effective uses of program funding. Like previous plans, the SEP and future IEPs will be publicly available on the MACP website and shared with asthma partners at coalition meetings. "Action plan" documents will transform the evaluation findings into actionable next steps. These too will be distributed to partners and publicly available.

2. METHODS FOR DEVELOPING THE STRATEGIC EVALUATION PLAN

Involving Stakeholders

Several members of the asthma coalition were engaged in drafting the SEP. The planning process was led by the program evaluator, who also serves as the epidemiologist for the MACP. The internal evaluation planning group was comprised of 5 individuals: the evaluator, the MACP Program Manager, the MACP Quality Improvement (QI) coordinator, Epidemiologist Supervisor, and the Section Supervisor. The team met regularly during the planning process. Evaluators from other Chronic Disease Prevention and Health Promotion (CDPHP) programs (Diabetes and Cardiovascular) were also consulted for input and synchronized evaluation planning. Members of the Montana Asthma Advisory Group (MAAG) were encouraged to participate, and feedback was collected from several partners about aspects of the SEP. An exhaustive list of the involved individuals is provided in Table 1. The MACP will strive to maintain robust partner engagement for annual updates of the SEP, drafting of IEPs, and ensuing action steps. Additional input will be sought from MAAG members affiliated with programs that are subjected to evaluation.

MAAG members represent a variety of MACP stakeholders, and they are well-equipped to participate in the individual evaluations concerning their fields of expertise. Various healthcare professions are embodied in the MAAG: physicians, nurses, epidemiologists, physician assistants, respiratory therapists, pharmacists, and program leaders. Montanans living with asthma also participate. Because some members represent organizations, the network, conceptually, expands beyond members attending MAAG meetings.

Table 1. Evaluation planning team members, roles, and future involvement

Stakeholder Name	Title and Affiliation	Contribution to Evaluation Planning	Role in Implementing Evaluations
Charlie Reed	Epidemiologist / Evaluator	Evaluation lead, internal evaluation planning group	Program planning & implementation, evaluation design, data collection, data analysis
BJ Biskupiak	MACP Program Manager	Internal evaluation planning group	Program planning & implementation, evaluation design, data collection
Jennifer Van Syckle	Quality Improvement Coordinator	Internal evaluation planning group	Program planning & implementation, data collection
Jessie Fernandes	CDPHP Bureau Health Improvement Section Supervisor	PI, Internal evaluation planning group	Program planning & implementation
Dorota Carpenedo	Epidemiologist Supervisor	Internal evaluation planning group	Evaluation design, data collection, data analysis
Stacy Campbell	CDPHP Bureau Chief		
Trina Filan	Evaluator, Diabetes Program	Strategic planning	Evaluation design, data collection
Carrie Oser	Epidemiologist, Cardiovascular Health Program	Strategic planning	Evaluation design, data collection
Marcy Ballman	Division Director, American Lung Association	External reviewer	Evaluation design, advisory group member
Curtis Noonan	Professor & Director, University of Montana	External reviewer	Evaluation design, advisory group member

Methods used to Develop the Strategic Evaluation Plan

The formation of the SEP was guided by the Centers for Disease Control and Prevention's (CDC) *Framework for Program Evaluation in Public Health* and the *Learning and Growing through Evaluation: State Asthma Program Evaluation Guide*, provided by the NACP. [6,7]

First the internal evaluation planning group listed and described all the activities performed by the MACP. Profiles were created for each activity to document this information. A logic model was simultaneously drafted, and the MACP activities were integrated into the model.

The initial eighteen activities represented all the potential candidates for evaluation. The planning group decided eight to nine evaluations during the grant period was the most feasible plan. They then outlined how they would select their evaluation subjects. A list of eight prioritization criteria was established; their definitions and application are shown in Table 2.

Table 2. Description and application of the prioritization criteria.

Criteria	Question(s)	Application
Cost	What is the estimated cost of this activity in dollars, resources, and time?	Higher cost activities are higher priority.
Utility	Would evaluating this activity likely result in recommendations for programmatic improvement?	Greater chance for improvement is higher priority.
Impact	How many people are affected by this activity? Does the activity impact those most burdened by asthma? Is the impact direct or indirect?	Activities with direct and greater impacts are higher priority.
Information need	Are there upcoming decisions that would require evaluation information? Is the evaluation information needed for measuring performance indicators?	Activities for which the information need is greater are higher priority.
Disparities	Does the program directly address disparities in asthma burden?	Activities addressing disparities are higher priority.
Change since prior evaluation	Have we ever or recently evaluated the activity? Were process and outcome questions answered? Were improvements identified?	Activities that have never, or not recently been evaluated or have unanswered questions are higher priority.
Sustainability	Do we plan to expand this activity? How much does this activity contribute to the sustainability of the state program?	Activities that are planned to be expanded/scaled up are of higher priority. Greater contribution to sustainability is higher priority.
Centrality	How involved and/or interested are our stakeholders and partners in this activity?	Activities with greater stakeholder involvement/interest are higher priority.

The eighteen activities were scored and ranked; for each criterion, an activity was given a score of +1, 0, or -1. Higher scores indicate higher priority. All five members independently scored the activities against the criteria using an online survey (Qualtrics^{xm}); individual scores were then summed into a total ranking. Table 3 summarizes the survey findings. The ranking offered a quantitative structure to the decision making but did not solely determine what activities were selected for evaluation. Appeals for special considerations were also collected in the survey and during discussions. Two external reviewers

were consulted for their perspectives on the activity ranking and its reflection of the MACP's goals. During a subsequent meeting, the planning group weighed these components and selected the priority evaluations.

Table 3. Combined results from the prioritization scoring survey (5 participants total).

	ASME reimbursement	Asthma educator	Asthma camp	CIH	Communication	Data analysis	Data collection	Data dissemination	Evaluation	Healthcare QI	IPHARM	MAAG	MAP	Media Campaign	Partner training	School & childcare	School mini grants	Websites
Cost	1	0	1	4	0	-2	0	-2	2	3	3	-1	5	5	5	0	2	-1
Utility	2	-1	0	3	1	-1	4	-2	3	3	4	-2	5	0	-1	2	3	1
Impact	5	2	1	4	2	0	1	2	-1	5	4	1	4	4	3	4	2	3
Info need	0	0	0	5	3	1	1	0	1	4	4	0	4	4	-1	2	2	1
Disparities	3	1	1	4	0	0	0	0	1	3	2	-1	5	3	-1	0	0	-2
Prior-eval.	0	-3	1	5	2	-1	0	0	0	1	3	-2	2	2	-1	0	0	3
Sustain.	3	1	-3	4	0	1	3	1	2	1	3	0	4	0	-2	-1	-2	1
Centrality	3	0	1	2	0	3	2	-1	3	3	2	3	5	-2	3	2	1	0
Score	**17**	**0**	**2**	**31**	**8**	**1**	**11**	**-2**	**11**	**23**	**25**	**-2**	**34**	**16**	**5**	**9**	**8**	**6**

3. PROPOSED PRIORITY EVALUATIONS

Priority Evaluation Candidates

The internal evaluation planning group prioritized eight evaluations (later to become nine) for the next five years (2019-2024). Similar activities were combined for efficiency: data collection and analysis were combined into one; websites, media campaign, and data dissemination were all relegated under communication. Because of its high score, centrality to the program, and recent expansion, two evaluations were proposed for the Montana Asthma Home Visiting Program (MAP).

Evaluation questions were methodically developed for each prioritized evaluation. A running list, accessible to all planning members, captured all the proposed questions and was narrowed down during multiple group discussions. A new priority evaluation emerged from these discussions. Referral networks were a consistent theme among the evaluation questions: Are asthma home visiting and community paramedicine clients being referred to social and health services? A new "linkages" priority evaluation was added to encapsulate these questions. The total list of nine priority evaluations included: MAP – Telehealth, MAP – Adult Clients, CIH (community paramedicine), IPHARM, Healthcare QI, ASME Reimbursement Initiative, Data Collection and Analysis, Communication, and Linkages (Table 4).

Table 4. Top priority evaluations and their corresponding components.

Priority Evaluation	Infrastructure or EXHALE component
1. MAP – Adults	1. Education on ASME 2. eXtinguishing Smoking 3. Home visiting 4. Linkages to care
2. MAP – Telehealth	
3. CIH	1. Education on ASME 2. Home visiting 3. Linkages to care
4. IPHARM	1. Education on ASME 2. Achieve guidelines-based care 3. Linkages to care
5. Healthcare QI	1. eXtinguishing Smoking 2. Achieve guidelines-based care 3. Linkages to care
6. ASME reimbursement	1. Education on ASME 2. Achieve guidelines-based care
7. Data collection & analysis	Enhance Infrastructure
8. Communication	Enhance Infrastructure
9. Linkages	1. Achieve guidelines-based care 2. Linkages to care

Overarching Timeline

The evaluation planning group created an evaluation timeline based on several factors (Table 5):

1. Date of last evaluation
2. Stage of implementation
3. Length of implementation
4. Overlap between evaluation needs
5. Evaluation intensity

The timeline includes significant events and MACP actions that may influence the planned scope of evaluation. The allotted year for each evaluation represents when the bulk of actions will be completed. However, most evaluations will utilize interviews or other data collection methods that will be active for multiple years. For example, Healthcare QI data will be gathered as site visits occur, leading up to Year 4. At the conclusion of each individual evaluation, the findings will be articulated in a report and shared with the public and directly to relevant stakeholders. More information on this can be found in the communication plan section.

Table 5. MACP and evaluation timeline.

Time	2019-2020 Year 1	2020-2021 Year 2	2021-2022 Year 3	2022-2023 Year 4	2023-2024 Year 5
Program Milestones		MT legislative session		MT legislative session	
	Set up ASME reimbursement with MT Medicaid				
	School administrative rules implementation				
Evaluations	Data collection & analysis	Communication	CIH	MAP – Adults	ASME reimbursement
		MAP – Telehealth	IPHARM	Healthcare QI	Linkages
MACP events and capacity-building	Asher agency media campaign				
	Write SEP	Expand MAP			SEP Reflection
	Write SP	Webinar series	Attend AEA conference		
	Hire new evaluator	Present SEP to MAAG			
	Review evaluation literature				

Summary of Each Prioritized Activity and Proposed Evaluations

Summaries of each prioritized activity can be found in Appendix A.

Data Collection and Analysis

Collecting data is essential to public health program implementation, evaluation, and decision-making. Data must be accurate, relevant, and timely to inform public health actions. The MACP curates a variety of data collection tools to handle the vast array of incoming data, and significant resources are dedicated to ensuring the mechanisms of collection are competent, up-to-date, and systematic.[8] Doing so improves the quality and future usefulness of the data. The MACP is omnipresent in its employment of data to support its evidence-based programming and policies. Proper analysis maximizes the potential of data and ensures the abstraction of accurate conclusions.

A previous evaluation was performed in 2015. The data infrastructure has since changed significantly and warrants a new evaluation.

This evaluation will scrutinize the methods of data collection, storage, analysis, and attribution. Insight into this process will be leveraged from program documents, electronic systems, and discussions with staff. By detailing this process, the MACP will be able to identify best practices that promote efficiency. All collected data should have a use; collection of vacant data may waste resources or strain relationships, and special consideration should be given to its purpose. If data quality is lacking, this evaluation will identify where and what improvements can be made. If important data are missing, a corresponding method of collection should be developed. All the MACP data-driven activities will

benefit from this thorough assessment, and each EXHALE strategy will be remotely represented. Because this evaluation is taking place in year one, it will lend additional service to planning the ensuing evaluations.

MAP – Telehealth

Rural living is a barrier to accessing healthcare and is commonly experienced by Montanans living with asthma. In some capacity, programs like the MAP were reflexively designed to deliver more accessible care to rurally disparaged people with asthma; about 36% of MAP clients live in rural counties.[10] Improving the MAP by incorporating telehealth measures may make it more efficient and expand the reach of geographically limited sites.

Telehealth technologies offer direct solutions to overcome barriers to accessing healthcare.[9] Scientific evidence, supporting the incorporation of telehealth in asthma care, specifically home visiting, is steadily growing. [9,11] The opportunities are innumerable. Two examples are Video Based Telehealth and Asthma Apps; both address asthma management and each could be used differently in the MAP.

A formative evaluation "ensures that a program or program activity is feasible, appropriate, and acceptable before it is fully implemented." [12] The MACP will evaluate the potential of telehealth before offering it into the MAP curriculum. Research on the best possible forms of telehealth will be performed. Perceptions of stakeholders involved in the MAP will be obtained: clients, home visitors, and potentially the providers of clients. If aspects of telehealth are deemed feasible, appropriate, and acceptable, the MACP can plan their execution in the future.

Communication

Through years of programming, conferences, trainings, and networking, the MACP has built a large base to communicate with. But who are these contacts? And what organizations, professions, and communities do they represent? This novel, mixed-methods evaluation will attempt to answer these questions and identify how recipients of MACP communication interact with their media. Triangulating survey data and web analytics will help characterize the constituents of the MACP communication network. Future media can be tailored to the preferences of the constituency: topics, modes, and messaging will all be considered.

The scope of the evaluation will also extend to the public sphere and assess how people with asthma interact with MACP messaging. Beginning in May 2020, the MACP will work with the Asher Agency on a media campaign to raise awareness about guidelines-based asthma care and the Asthma Home Visiting Program. The Asher Agency will produce their own data and share it with the MACP. In areas served by the MAP, the MACP will monitor enrollment to determine if it is impacted by public messaging.

Community Integrated Health (CIH)

In 2020, the CIH paramedicine program was initiated in six Montana communities. Paramedicine leverages trained emergency medical personnel as part of an innovative model of healthcare delivery to treat chronic conditions.[13] Each Montana CIH site serves a community-identified, high-risk, vulnerable population, by providing routine home care, environmental assessments, medication management, and referral services. Because of its novelty and unique scope, the CIH program may be serving people who would not have been reached by other MACP programs.

The CIH program is expected to directly provide asthma education and link patients to any other necessary sources of care. Further downstream, CIH patients will hopefully achieve asthma control; receive regular guidelines-based care from a provider; and avoid asthma exacerbations. Research shows, a significant portion of asthma ED visits are avoidable; optimal treatment can often be performed at home or in a primary clinic.[14] If proper asthma control is maintained, patients will likely avoid ED visits for asthma exacerbations. This mixed-methods evaluation will serve as an initial assessment of those short-term and intermediate goals. Data collection has been planned with the EMS, Diabetes, and Cardiovascular Programs. CIH is part of the EMS and Trauma Systems Bureau and will utilize their existing infrastructure; chronic disease programs will tap in to collect logistic and outcome data. Additional discussions with CIH staff will facilitate more data collection and simultaneously assist the "linkages evaluation" case study. The evaluation findings will assess the impacts on asthma management and edify future steps for the CIH program. Retrospectively, the findings will help outline the initiation process for new sites: what works and what doesn't. As more communities buy-in, CIH will expand its reach and sustainability.

ImProving the Health of all Rural Montanans (IPHARM)

It was mentioned before that rural living is a significant barrier to accessing care. People living in rural areas also experience high prevalence and morbidity of chronic disease. [15] The IPHARM program was started in 2002 by the University of Montana School of Pharmacy (SOP) to make clinical screenings more accessible to rural Montanans. Health care professionals, faculty, and students work with community members to provide IPHARM services at a nominal fee to participants.[16] The program has expanded in reach and capacity; since the beginning, over 150,000 miles have been logged traveling to events; in 2019, screening for uncontrolled asthma was incorporated as a provided service. [16] Patients with asthma may also receive ASME, a spacer, and medication therapy management. Individuals with poorly controlled asthma will be encouraged to seek additional care with the MAP or a healthcare provider. By serving as a new interface into the health system, IPHARM will contribute to the goals of the MACP.

This will be the MACP's first evaluation of IPHARM. Much like the CIH evaluation, it will serve as an initial assessment of IPHARM's short-term and intermediate impacts on asthma control and linkages to care. The MACP wants to know if IPHARM is serving its intended population, and what services are most needed by rural Montanans. A mixed-methods evaluation will best answer these questions. Staff who perform the screenings are equipped with data collection tools to track patient health data and needs. Interviews with key IPHARM personnel will lend their perceptions and experiences to support the patient data. The evaluation results will portray the initial impact of IPHARM on asthma control and help identify how the MACP can assist future IPHARM endeavors.

MAP – Adults

The Montana Asthma Home Visiting Program (MAP) has been actively enrolling children with doctor diagnosed, uncontrolled asthma since June of 2010. In 2018, the program was expanded to include similarly afflicted adults. Home visiting staff operate out of 11 independent sites that serve a collective total of 26 out 56 counties. The program involves 6 points of contact over a 12-month period with a nurse or respiratory therapist trained in asthma education and trigger removal. A client receives ASME, an environmental assessment, allergen-proof pillowcases, mattress covers, and a HEPA filter if there is risk of tobacco smoke exposure or pets in the home. During each visit, the home visiting staff collect health outcome data.

The MACP wants to know if there are any process and outcome differences between adult MAP clients and children. To answer these questions, this evaluation will employ a quasi-experimental design. Adult clients, enrolled since 2018, will be compared to a sample of child clients enrolled during the same timeframe. Health outcome data are systematically collected in a web-based system. Descriptive statistics will characterize the population and comparative analytics will test for any significant differences between the two groups. Surveys will give the MAP staff the opportunity to express their perceptions about serving adult clients and their needs. The findings will make the MAP more effective among adults with asthma and strengthen the programs sustainability.

Given the opportunity, the MACP may expand the evaluation to project the economic impact of asthma home visiting services among adults who avoided costly healthcare visits.

Healthcare Quality Improvement (QI)

"Healthcare QI" is an umbrella term for several asthma control projects based in healthcare settings: [1] the Asthma Hospital Patient Education, Action Plan, and Discharge (AHEAD) protocol for Emergency Departments (EDs); [2] the Diagnose and Manage Asthma (DMA) protocol for primary care facilities; and [3] the Emergency Department Asthma Recognition program for hospitals that have already completed the AHEAD protocol, but would like to continue working on quality improvement initiatives. The deliverables are usually site-specific, based on needs identified by an internal assessment. Participating sites receive asthma-specific trainings. The QI coordinator also works with the healthcare facility to integrate missing pieces of guidelines-based asthma care into the facility's workflow, because a cohesive workflow encourages sustainability. Any procured data can support various QI programs and assist the collection of Uniform Data System (UDS) and Healthcare Effectiveness Data & Information Set (HEDIS) measures.

Healthcare QI is a central part of the MACP and has substantial impact on asthma control in Montana. In year four, the MACP will assess the effectiveness of its QI projects and describe any contextual facilitators or inhibitors. A multiple case study evaluation is most appropriate to ascertain this information. Due to the variance of program engagement, workflows, and Electronic Health Records (EHRs), equivalent comparisons across sites may be difficult. This evaluation will reflect a valuable evaluation performed in the previous grant cycle. Data collection will be dynamic; as sites participate their perceptions and impacts will be detailed in interviews and surveys. Much of the data will be

qualitative. In the past evaluation, the MACP found qualitative data to be the most compelling. Chart abstractions will be performed when possible. It will be important to engage sites in evaluation as they perform their QI activities, when their partnership with the MACP is greatest, to guarantee more comprehensive and accurate data.

Asthma Self-Management and Education (ASME) reimbursement

Despite the importance of asthma self-management education many people do not receive adequate education. Between 2012-2014, an estimated 5% of children had received all five pieces of self-management education in Montana and 40% had received at least three of the five pieces. [3] Lack of coverage and provider reimbursement for these services continue to be barriers for many patients. [17] Payer-funded reimbursement to providers for ASME and in-home services is essential to expanding guidelines-based care to all people with asthma in Montana. The MACP is involved in two ASME reimbursement projects. First, working with Montana Medicaid to build infrastructure that would allow home visitors to bill Medicaid for home visiting services with their insurance members. Secondly, supporting pharmacists participating in the Hometown MtM program, who are reimbursed by the State Health Care and Benefits Division (HCBD) for any AMSE they provide to people with asthma who are covered by HCBD. Because the two projects are respectively unique, the MACP will treat each as separate cases in this case study evaluation. The evaluation will look at the contextual factors that made reimbursement possible as well as the significant impacts on provision of ASME and asthma health outcomes. Performing it in year five will provide ample time for the MACP to acquire the appropriate data. If claims data are available, the MACP will also perform an economic evaluation of the respective cases. Other process-oriented data will be collected from interviews with Hometown MtM staff and people involved in the Medicaid reimbursement project. Elaborating on what made ASME reimbursement possible will have significant use for similar pursuits. Any economic findings may strengthen the argument for reimbursement from other payers, for other programs, and for other preventive health services.

Linkages

Integrating health systems across clinical and community-based settings improves efficiency and provides greater access to services for people with asthma. The MACP facilitates asthma control services across multiple systems, including services internal and external to clinical healthcare. Comprehensive asthma care means that these health systems can effectively refer people to their needed services and provide sufficient data to assure optimal care management. [18]

In year five of this grant, the MACP will evaluate the processes and impact of its referral networks. The evaluation will be performed at two scales: determining how each individual health system connects resources and integrates new resources into their networks; and mapping how these individual systems come together to address patients needs. The individual health systems will be analyzed as cases. The MAP-, IPHARM-, and CIH-engaged systems will be respective cases. Throughout the grant period, data will be obtained from program staff, key informants, and program records. Collectively, the data will reconstruct the process of network building: What resources are being used? How are resources identified and contacted for referrals? And how are new resources integrated into an established

referral network? Answering these questions will be applicable to program planning and implementation.

CONNECT, a bi-directional web-based referral system launched statewide in 2019, will be used to assess the total impact of MACP referral networks. It is important to note that adoption of CONNECT will not be mandatory. However, the merits of the system will likely drive gradual adoption by health facilities and other community service organizations. Quantitative data will be used to assess the impact of referral networks. The number and types (from what-to-what) of referrals will be captured. Patients with suboptimal asthma care or health-related social needs will be tracked to see if they are receiving referrals in conjunction with their needs. This will summarize how the multiple referral systems have improved care and health among people with asthma in Montana.

4. EVALUATION CAPACITY-BUILDING ACTIVITIES

A summary of the capacity-building activities can be found in Table 6.

1. The MACP regularly shares its evaluation plans and findings during MAAG meetings. During these presentations, MAAG members are exposed to the major elements of evaluation and asked to engage with them whenever possible.
2. The MACP and its partners will annually review its SEP. Those attending will discuss updates to the SEP, future IEPs, and how they correspond to the MACP's Strategic Plan (SP).
3. During the grant period the evaluator will continuously review relevant and novel evaluation literature. The CDPHP bureau maintains a subscription to the AEA journal, published quarterly. Staff also have access to literature through online portals and the State of Montana library.
4. The MACP systematically evaluates its sponsored events: including conferences, camps, trainings, and webinars. Through these evaluations, MACP staff are familiarized with collecting evaluation data.
5. The evaluator will connect with other evaluators within the CDPHP bureau, specifically the Cardiovascular Health (CVH) and Diabetes evaluators. Being familiar with their evaluations, methods, and tools will reflexively build the MACP's capacity to evaluate its own programs.
6. MACP staff will participate in the National Asthma Control Program quarterly evaluation presentations. The presentation topics may be directly applicable to asthma and MACP evaluations. The MACP will be exposed to how other states are evaluating programs that often mirror asthma control programs in Montana.
7. At the submission of this plan, February 28th, 2020, the Evaluator with the MACP will be leaving. In subsequent months, the MACP will look to fill this position.
8. In year 2, the evaluator and any interested MACP staff will attend in a webinar series structured around evaluation or evaluative thinking.
9. In year 3, the evaluator will attend the AEA or another evaluation conference.

Table 6. Summary of capacity-building plan.

Capacity-building activity	Audience	Resources	Timeline
Share evaluation material at MAAG meetings	MAAG members		Year 1-5 (continuous)
Review strategic plan strategies	MACP staff and MAAG members	SEP, IEPs, and SP	Year 1-5 (Yearly)
Review evaluation literature	Lead Evaluator	AEA journal Online journal portals State of Montana Library	Year 1-5 (continuous)
Self-evaluation of MACP conferences, webinars, etc.	Asthma program staff	Previous MACP evaluations	Year 1-5 (continuous)
Collaborate with other CDPHP evaluators	Asthma, DM, and CVH program lead evaluators		Year 1-5 (continuous)
CDC Evaluation presentations	Asthma Program staff nationwide		Year 1-5 (quarterly)
Hire new Evaluator			Second half of year 1 (March 2020 – complete)
Attend AEA conference	Lead Evaluator	American Evaluation Association (AEA)	Year 3
Attend Evaluative Thinking webinar series	Lead Evaluator and interested MACP staff	1. MEASURE Evaluation 2. Johnson Center 3. AEA	Year 2

5. COMMUNICATION PLAN

Communicating

The MACP is committed to making all elements of the program as transparent as possible. All programmatic information is available and frequently updated on the website; the MACP regularly communicates with strategic partners and stakeholders regarding programmatic details. To keep the public and partners abreast of activities and planning, the SEP will be made available to any interested parties. A summary factsheet will be produced by the evaluation lead for each respective IEP and uploaded to the website. Evaluation information will be shared with strategic partners when it becomes available through MAAG meetings and newsletters (the MACP maintains an up-to-date listserv). Other forms of communication may include emails, phone calls, in-person meetings, presentations, and summary factsheets. Evaluation information pertaining to a specific activity will be shared directly with activity participants.

Table 7. Summary of communication plan.

Information and Purpose	Audience(s)	Possible Formats	Possible Messengers	Timing	Person Responsible
Complete and Present the SEP	MAAG	Meeting	Evaluator	August 2020	Lead evaluator
	CDC	Email			
	General public	Website			
Planning IEPs	Partners and staff affiliated with subject of evaluation	Email, phone calls, meetings		Year 1-5 (continuous)	Lead evaluator and MACP staff responsible for activity
Solicit feedback for updates of SEP	MAAG	Meeting	Evaluator	Every spring	Lead evaluator
In-depth review of evaluation findings	MAAG	Meeting	Evaluator	Year 1-5 (continuous)	Lead evaluator
	Program participants	Email	Key informant		
Summary of evaluation findings	Program participants	Website		Year 1-5 (continuous)	Lead evaluator
	General public				
Update program activity factsheets	Legislators	Website		Year 1-5 (continuous)	Lead evaluator
	General public				
	Other states				
Lessons learned grant summation	MACP staff	Email	Evaluator	August 2024	Lead evaluator
	MAAG	Meeting			

6. PROPOSED METHODS TO UPDATE THE STRATEGIC EVALUATION PLAN

The SEP will be updated annually. As with the prior SEPs, the internal evaluation planning group and other participating stakeholders will convene every spring to review the plan and make any necessary updates or improvements. The evaluation lead will be responsible for making any changes to the plan. The updated plan will be reviewed by other CDPHP evaluators internally. It will also be sent to MAAG members, and the CDC evaluation team will be consulted as necessary. Plans for the development of IEPs will be discussed at the time when updates are made.

The performance measures required by the CDC are intricately woven into the MACP work plan for the next five years. As activities progress, staff will be able to directly report performance measures. The SEP will be updated to reflect the performance measures as they become clearer. Data from the regular reporting of these performance measures will be taken into consideration during the annual updating of the SEP.

When revisions are made to the plan, they will be highlighted in yellow so they are clear to reviewers, and previous language will be struck through (~~example~~).

Changes to the SEP will be documented in a table. It will include what update has been made, the rationale for the update, and when it occurred. An example of the table is shown below (Figure 2).

Figure 2. Example of table to document updates to SEP.

Major SEP Updates	Rationale	Date
Modified evaluation questions	Added cost questions in response to stakeholders' voiced concerns about need for program cost data	December 2018
Updated proposed priority evaluations	Removed evaluation about the effects of a policy evaluation because the policy was never implemented	May 2019

7. ACTION PLANNING

With each of its evaluations, the MACP hopes to identify action steps to expand, focus, rectify, or continue supporting its activities in the future. MACP staff and stakeholders will revisit the purpose and findings of the evaluation to determine what actions can carry the results forward. These actions, their intentions, and the progress by which the MACP has executed them, will be documented in the SEP in the Action Planning Matrix (Table 8). Those involved will continually update the progress and describe any corresponding information.

Table 8. Action Planning Matrix

Strategies/Actions (How will we achieve this? Note all significant steps needed.)	**Person(s) Responsible** (Who is accountable for this task?)	**By When** (When do we want to do this by?)	**Resources Required** (What non-staff resources do we need?)	**Indicators of Success** (How will we measure our progress?)	**Progress Update** (How far along have we gotten by X date of review?)	**Comments** (Challenges, unintended consequences, decisions?)

8. REFLECTION

To inform future evaluations and planning, the MACP will reflect on its experiences executing the SEP and individual evaluations. In the final year of the grant period, MACP staff and stakeholders will convene to ruminate on the evaluation process. The group will try to derive lessons to carry forward to the next evaluation cycle. Specifically, they will consider the following:

- Are there ways you could improve your overall SEP planning process? Was it truly "strategic?" Were all the key players at the table when appropriate? Were you successful at balancing the various priorities? Did you effectively adapt to the evolving local context and priorities?
- How has your program benefitted from engaging in evaluation -- both going through the planning and implementation processes and learning of the findings? Were there any surprises or unanticipated consequences? Did the engagement process strengthen partnerships and build evaluation capacity?

The group will also consider the different phases of evaluation (planning, implementation, and wrap up):

- **Planning**: Review the process your team used, including stakeholder engagement and prioritization processes; are there areas to improve? Did you accurately estimate resources? Was your timeline realistic? Did you take time to brainstorm anticipated challenges or roadblocks and develop measures to address these roadblocks?
- **Implementation**: Did you encounter any challenges collecting and analyzing the data? Did you make timely and appropriate adjustments as necessary? What circumstances facilitated implementation that might facilitate future evaluations? Did you seek appropriate input when interpreting the data and making conclusions and recommendations?
- **Wrap up**: Do you see any **patterns** in your evaluation experiences overall? Consider things that worked well and challenges that were encountered. How did the outcomes compare with the plans and expectations you initially had? Document any surprises or unanticipated consequences. Did your sharing of the findings elicit any unexpected responses? Were stakeholders motivated to take next steps; if not, why not?

All reflections and the transferrable insights gained from these reflections will be documented in the Reflection Summary Matrix (Table 9). A summary will also be detailed in a section "Reflection Summary." Each IEP will also have a reflection section that will inform the action planning.

Table 9. Reflections Summary Matrix

Observations/Lessons Learned	Plans for modifying the future process

9. CONCLUSION

The MACP is committed to improving asthma control and quality of life among Montanans with asthma. Over the next five years, the program will execute many activities to strategically work towards this goal. A selection of these activities will be evaluated as outlined in this document. The evaluations will describe how the activities are contributing to the short, intermediate, and long-term goals of the MACP. As a "living document," details in this plan may change or be updated.

10. CITATIONS

1. Montana Behavioral Risk Factor Surveillance System, 2018. MT DPHHS.
2. Montana Emergency Department Discharge Data, 2018. MT DPHHS.
3. Montana Asthma Call Back Survey, Behavioral Risk Factor Surveillance System, 2012-2016. MT DPHHS.
4. Centers for Disease Control and Prevention (2018). *EXHALE A Technical Package to Control Asthma (Resource Document).* Atlanta, Georgia. Asthma and Community Health Branch Division of Environmental Health Science and Practice. National Center for Environmental Health.
5. Patton M. Q. (2018) Evaluation Science. *American Journal of Evaluation* 2018, Vol. 39(2) 183-200. DOI: 10.1177/1098214018763121.
6. Centers for Disease Control and Prevention (1999). *Framework for Program Evaluation in Public Health*. MMWR 1999;48(No. RR-11)[1-10].
7. Centers for Disease Control and Prevention. *Learning and Growing through Evaluation: State Asthma Program Evaluation Guide*. Atlanta, Georgia: Centers for Disease Control and Prevention, National Center for Environmental Health, division of Environmental Hazards and Health effects, Air Pollution and Respiratory Health Branch, April 2010.
8. Office of Disease Prevention and Health Promotion. (2020) Public Health Infrastructure. https://wayback.archive-it.org/5774/20220413203725/https://www.healthypeople.gov/2020/topics-objectives/topic/public-health-infrastructure
9. Lin N. Y., Ramsey R. R., Miller J. L., McDowell K. M., Zhang N., Hommel K., Guilbert T. W. (2020) Telehealth delivery of adherence and medication management system improves outcomes in inner-city children with asthma. *Journal of Pediatric Pulmonology* 2020; 1-8. DOI: 10.1002/ppul.24623.
10. Montana Asthma Control Program (2020). *Effectiveness of an asthma home visiting program in metropolitan, micropolitan, and rural MT counties* [PDF]. Obtained on February 7, 2020 form MACP website: https://dphhs.mt.gov/publichealth/Asthma/data

11. Marcin J. P., Shaikh U., Steinhorn R. H. (2016) Addressing health disparities in rural communities using telehealth. *Journal of Pediatric Research* 2016. Vol 79; 1. DOI: 10.1038/pr.2015.192

12. Centers for Disease Control and Prevention. *Types of Evaluation*. Atlanta, Georgia: National Center for HIV/AIDS, Viral Hepatitis, STD, and TB prevention. Division of STD Prevention.

13. Pang P. Litzau M., Lia M., Herron J., Weinstein E., Weaver C., Daniel D., Miramonti C. (2019) Limited data to support improved outcomes after community paramedicine intervention: A systematic review. *American Journal of Emergency Medicine* 2019. 37; 960-964. DOI: 10.1016/ j.ajem.2019.02.036.

14. Preventable Emergency Department Visits. Content last reviewed June 2018. Agency for Healthcare Research and Quality, Rockville, MD. Obtained from AHRQ website: https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/carecoordination/measure2.html

15. Lawson J. Rennie D., Cockcroft D. W., Dyck R., Afanasieva A., Oluwole O., Afsana J. (2017) Childhood asthma, asthma severity indicators, and related conditions along an urban-rural gradient: a cross-sectional study. *BMC Pulmonary Medicine* 2017. 17:4. DOI: 10.1186/s12890-16-0355-5.

16. Gardner A., Kaplan B., Brown W., Krier-Morrow D., Rappaport S., Marcus L., … & Aaronson D. (2015) National standards for asthma self-management education. *Annals of Allergy, Asthma, & Immunology,* 114(3), 178-186.

17. Centers for Disease Control and Prevention. (2017) *Tool for Assessing Asthma Referral Systems (TAARS)*. Atlanta, GA: CDC, National Center for Environmental Health, Division of Environmental Health and Health Effects, Air Pollution and Respiratory Health Branch.

Appendix A: Individual Evaluation Profiles

Activity Name	**Data analysis and collection**
Program Component	Infrastructure
Evaluation Justification	Data analysis and collection is central to achieving the goals of the MACP. It is intrinsic to all programs and contributes to all aspects of EXHALE.
Evaluation Purpose and Use	This evaluation will assist the MACP in documenting and standardizing its data collection and analyses processes. It will identify what data processes could be improved and how data can be used.
Possible Evaluation Questions	1. Are we regularly collecting all useful data from available sources? 2. Are data standardized (within asthma & other programs) when possible? 3. Do all data have an intended purpose or use? 4. How are data being analyzed or used? 5. Are there any potential improvements in data collection or analysis? 6. Are all of CDC's core measures being included in analyses?
Relevant Performance Measures	A, B, C, D, E, F, G
Relevant EXHALE Component	B1. Education on asthma self-management. B2. Extinguish smoking and exposure second-hand smoke. B3. Home visits for trigger reduction and ASME. B4. Achievement of guidelines-based medical management. B5. Linkages and coordination of care across settings. B6. Adopt environmental policies or best practices to reduce triggers.
Relevant Overarching Evaluation Question	The evaluation will identify all data available to the MACP and link to their past usage. Data sources without a use will be known.
Timing of Evaluation	March 1, 2020 – August 31, 2020 (grant year 1)
Suggested Evaluation Design	Non-experimental
Potential Data Sources	Program documents MACP program staff
Potential Data Collection Methods	Reviewing program documents and data usage Internal discussions with program staff
Cultural or Contextual Factors	Looking at planned future sources of data for MACP and how they will be collected, analyzed, and used.
Potential Audiences	Montana DPHHS staff
Possible Uses of Information	Developing ideas for future program reports and research. Ensuring that other planned evaluations will have proper data sources to answer questions.
Estimated Evaluation Cost	Minimal, staff time

Activity Name	**MAP – Telehealth**
Program Component	Infrastructure
Evaluation Justification	Telehealth technologies offer solutions to overcome healthcare access barriers and deliver optimal care. Rurality, transportation, and income barriers to care are common among people with asthma living in Montana.
Evaluation Purpose and Use	This evaluation will be formative; its purpose is to determine if the incorporation of telehealth into the MAP is feasible, appropriate, and acceptable.
Possible Evaluation Questions	1. What forms of telehealth are currently being used in MT? 2. Based on logistics and delivery, what opportunities are there to incorporate telehealth into the MAP? 2. What perceptions do clients, home visitors, and providers have of using telehealth? 3. Would Medicaid provide reimbursement for asthma-related telehealth?
Relevant EXHALE Component	B1. Education on asthma self-management. B4. Home visits for trigger reduction and asthma self-management education. B5. Linkages and coordination of care across settings.
Relevant Overarching Evaluation Question	The adoption of telehealth into the MAP could potential expand the reach and optimize delivery.
Timing of Evaluation	September 1, 2020 – August 31, 2021 (year 2)
Suggested Evaluation Design	Formative evaluation
Potential Data Sources	Literature Key informants of Telehealth in Montana MAP home visitors, clients, and providers.
Potential Data Collection Methods	Literature reviews Interviews and discussions with key informants Surveys
Cultural or Contextual Factors	Reviewing up-to-date literature to make sure that the studied modes of Telehealth are relevant.
Potential Audiences	MAAG members; MAP home visitors; Montana providers; people with asthma living in Montana
Possible Uses of Information	To develop a plan to implement telehealth into the MAP.
Estimated Evaluation Cost	~$1000

Activity Name	**Communication**
Program Component	Infrastructure
Evaluation Justification	MACP communication has never been evaluated. It is integral to many other activities. Effective communication can empower partners and improve transparency.
Evaluation Purpose and Use	This evaluation will characterize the recipients of MACP communication and their needs.
Possible Evaluation Questions	1. With what populations does the MACP communicate with? 2. What are the channels of communication? 3. What type of information (analyses, program updates, asthma info, etc.) is communicated? 4. How are people receiving/interacting with MACP communication? 5. Are some forms of communication better received than others? 6. How has MACP communication affected MAP enrollment?
Relevant Performance Measures	C, D
Relevant Overarching Evaluation Question	Utilizing the most effective methods and forms of communication for the MACP's audience, will strengthen partnerships and engagement.
Timing of Evaluation	September 1, 2020 – August 31, 2021 (year 2)
Suggested Evaluation Design	Mixed methods (expansion or triangulation)
Potential Data Sources	MACP listserv mailing list Communication analytics Asher Agency MAP clients MACP website
Potential Data Collection Methods	Electronic surveys GovDelivery analytics and tracking Asher Agency tracking MAP home visiting SiteImprove informatics
Cultural or Contextual Factors	The MACP will monitor for other media campaigns that may have similar impact to its own.
Potential Audiences	MAAG members; MAP home visiting staff; MACP staff
Possible Uses of Information	Plan future media campaigns and communication.
Estimated Evaluation Cost	~ $700

Activity Name	**CIH**
Program Component	Services and Health System
Evaluation Justification	The CIH program is new to Montana. Paramedicine provides a new interface to deliver ASME and perform home visits.
Evaluation Purpose and Use	The evaluation will look at the process of CIH, who they are serving and how, and provide an initial scope of the impacts of paramedicine on asthma.
Possible Evaluation Questions	1. What population is being served by CIH? 2. How many people are achieving management of asthma? 3. What are facilitators and barriers to the implementation of CIH? 4. What are future steps?
Relevant Performance Measures	B, C
Relevant EXHALE Component	B3. Home visits for trigger reduction and ASME. B5. Linkages and coordination of care across settings.
Relevant Overarching Evaluation Question	The CIH program will contribute to the long-term goals of the MACP by reaching new audiences and providing guidelines-based care.
Timing of Evaluation	September 1, 2021 – August 31, 2022 (year 3)
Suggested Evaluation Design	Mixed methods
Potential Data Sources	CIH patients CIH staff Montana Hospital Discharge data Program documents
Potential Data Collection Methods	Reviewing program documents ImageTrend (web-based data system) Interviews and/or surveys with CIH staff MHDD data system
Cultural or Contextual Factors	The CIH grant is to be renewed in year 2.
Potential Audiences	CIH staff; MAAG members; partner providers; MACP staff; other CDPHP programs
Possible Uses of Information	To plan future paramedicine programming. Inform partner providers about CIH and people with asthma.
Estimated Evaluation Cost	~$2000

Activity Name	**IPHARM**
Program Component	Services and Health System
Evaluation Justification	IPHARM is a new activity and has not been evaluated. It directly addresses health disparities
Evaluation Purpose and Use	IPHARM has recently expanded its scope to screen for asthma outcomes. This evaluation will provide an initial idea of the impact of IPHARM on screening for uncontrolled asthma and linking people with asthma to sources of care.
Possible Evaluation Questions	1. Who is IPHARM screening and how many have uncontrolled asthma? 2. Is IPHARM reaching the rural and underserved population they intended to? 3. What resources, knowledge, or medications are most needed by rural Montanans with asthma? 4. What are the facilitators and barriers to delivering asthma control screening in rural areas?
Relevant Performance Measures	B, C, D
Relevant EXHALE Component	B1. Education on asthma self-management B4. Achievement of guidelines-based medical management. B5. Linkages and coordination of care across settings.
Relevant Overarching Evaluation Question	The CIH program will contribute to the long-term goals of the MACP by reaching new audiences and linking patients to proper care resources.
Timing of Evaluation	September 1, 2021 – August 31, 2022 (year 3)
Suggested Evaluation Design	Mixed methods
Potential Data Sources	IPHARM patients PHARM key informants
Potential Data Collection Methods	IPHARM program spreadsheets Key informant interviews
Cultural or Contextual Factors	People living in rural areas may have different health needs than those in more urbanized areas.
Potential Audiences	MAAG members; providers; other Chronic disease programs; Skaggs School of Pharmacy
Possible Uses of Information	The information will be used to assess impact, replicability, and sustainability of the program,
Estimated Evaluation Cost	~$1500

Activity Name	**MAP – Adults**
Program Component	Services
Evaluation Justification	The MAP is central to achieving the goals of the MACP. The eligibility criteria have recently been changed to include adults.
Evaluation Purpose and Use	To assess if there are differences in the MAP implementation or health outcomes between adults and children.
Possible Evaluation Questions	1. Are there differences in the provision of MAP with an adult versus a child client? 2. Are there differences in program outcomes between adults and children? 3. Are the needs of adults with asthma different from children with asthma? 4. What is the economic impact of home visiting services among adults with asthma?
Relevant Performance Measures	A, B, C, E, F, G
Relevant EXHALE Component	B1. Education on asthma self-management. B2. Extinguish smoking and exposure to second-hand smoke. B3. Home visits for trigger reduction and ASME. B5. Linkages and coordination of care across settings B6. Adopt environmental policies or best practice to reduce indoor and outdoor asthma triggers.
Relevant Overarching Evaluation Question	The MAP is reaching a whole new population of adults with uncontrolled asthma.
Timing of Evaluation	September 1, 2022 – August 31, 2023 (year 4)
Suggested Evaluation Design	Quasi-experimental; economic
Potential Data Sources	MAP clients MAP staff
Potential Data Collection Methods	E-MAP (electronic web-based data system) Surveys and/or discussions
Cultural or Contextual Factors	MAP sites could include 5 adults with asthma in their yearly caseload, starting in 2018. ASME may differ for adult clients than child.
Potential Audiences	MAP staff; MACP staff; other Asthma Control Programs; CDC
Possible Uses of Information	To plan future MAP eligibility criteria and recruitment.
Estimated Evaluation Cost	~ $2000

Activity Name	**Healthcare QI**
Program Component	Health System
Evaluation Justification	Healthcare QI has significant impact on MACP activities. QI procedures are always in need of evaluation.
Evaluation Purpose and Use	This evaluation will assess the processes of different clinic and ED sites involved in asthma QI with the MACP. Findings will improve QI engagement, clarify site decision-making, and assess the impact asthma health in Montana.
Possible Evaluation Questions	1. What is working well with QI activities? 2. To what extent are the results of the QI activities sustainable? 3. What next steps should be taken in QI? 4. How do the QI projects affect the provision of guidelines-based care? 5. Is any site receiving merit-based payment for their asthma work? 6. Why or why not do clinics choose certain quality measures, especially those related to asthma and children, to improve upon?
Relevant Performance Measures	B, C, D, G, F
Relevant EXHALE Component	B2. Extinguish smoking and exposure to second-hand smoke. B4. Achievement of guidelines-based medical management.
Relevant Overarching Evaluation Question	This evaluation will help identify to what extent the MACP has engaged with health practices to improve quality of care and outline how that has been done.
Timing of Evaluation	September 1, 2022 – August 31, 2023 (year 4)
Suggested Evaluation Design	Multiple case study
Potential Data Sources	Patient charts Healthcare staff CONNECT web-based referral system
Potential Data Collection Methods	Chart reviews Staff interviews Pre/post surveys Data extraction from CONNECT
Cultural or Contextual Factors	Best time to collect data (interviews and surveys) will be during QI site visits and during quarterly conference calls. Findings may be site-specific.
Potential Audiences	MAAG members; other clinics and hospitals; providers; MACP staff
Possible Uses of Information	Findings will be used to plan more effective QI projects and incentives.
Estimated Evaluation Cost	$2200

Activity Name	**ASME reimbursement**
Program Component	Infrastructure
Evaluation Justification	The MACP is working with Montana Medicaid to set up reimbursement for ASME among certified MAP home visitors. This will impact ASME delivery.
Evaluation Purpose and Use	This evaluation will determine the process and initial impact of achieving ASME for home visitors in health outcomes and dollars saved.
Possible Evaluation Questions	1. What program(s) receive reimbursement for ASME in Montana? 2. What payer(s) offer reimbursement for ASME in Montana? 3. How was reimbursement achieved? 4. What specifically does the reimbursement cover and how is it being implemented? 5. How does reimbursement for ASME affect the provision of ASME? 6. How does reimbursement for ASME affect the health of people with asthma?
Relevant Performance Measures	B, C, E, D, F, G
Relevant EXHALE Component	B1. Education on asthma self-management. B4. Achievement of guidelines-based medical management.
Relevant Overarching Evaluation Question	The MACP will achieve ASME reimbursement for home visitors by leveraging their partnership with Medicaid.
Timing of Evaluation	September 1, 2023 – August 31, 2024 (year 5)
Suggested Evaluation Design	Case study; economic
Potential Data Sources	MAP home visiting data HCBD claims data Medicaid claims data Hometown MtM pharmacy data MAP home visiting staff
Potential Data Collection Methods	E-MAP web-based data system Medicaid claims data and Montana Medicaid Information System HCBD claims database Hometown MtM quarterly collection spreadsheets Surveys and/or discussions with MAP home visiting staff
Cultural or Contextual Factors	Not sure if/when MT Medicaid will adopt and disseminate ASME reimbursement. Must pursue claims data from HCBD.
Potential Audiences	MAP staff; providers; MAAG; MACP staff; MT Medicaid staff; other DPHHS programs; other states; CDC
Possible Uses of Information	Support other investments in reimbursement by private insurance agencies.
Estimated Evaluation Cost	$1500

Activity Name	**Linkages**
Program Component	Health systems
Evaluation Justification	Additional referral to health resources is a ubiquitous part of MACP services. The CDPHP bureau is implementing a bi-directional web-based referral system at the beginning of this grant cycle.
Evaluation Purpose and Use	Linkages between resources are a key part of managing asthma and people's underlying social needs. This novel evaluation will assess and map the MACP's referral network.
Possible Evaluation Questions	1. How do MACP partner communities identify and engage referral resources for their respective patients or clients? 2. How is the MACP supporting its partner communities networking? 3. What health systems are referring to MACP program activities? 4. Is the current referral network sustainable? 5. Is the current referral network expandable? 6. Are people with health-related social needs being linked to appropriate resources?
Relevant Performance Measures	B
Relevant EXHALE Component	B4. Achievement of guidelines-based medical management. B5. Linkages and coordination of care across settings.
Relevant Overarching Evaluation Question	This evaluation will support/expand the infrastructure of the asthma healthcare landscape in Montana and achieve the MACPs long term goal of having comprehensive asthma services available statewide.
Timing of Evaluation	September 1, 2023 – August 31, 2024 (year 5)
Suggested Evaluation Design	Multiple case study (using CDC's Tool for Assessing Asthma Referral Systems [TAARS])
Potential Data Sources	Program participants (MAP, IPHARM, Healthcare QI, CIH) Program staff CONNECT referral data DPHHS resources
Potential Data Collection Methods	Program data collection tools (web-based systems, spreadsheets, etc.) Staff interviews and surveys
Cultural or Contextual Factors	CONNECT was implemented in year 1. Use of CONNECT will vary by site preference.
Potential Audiences	MAAG; CDPHP staff; Program staff; providers
Possible Uses of Information	Evaluation findings will outline the extent of referral network use and how it was constructed and will be updated. It will also show the impact on addressing social needs of people engaged in the MACP programs.
Estimated Evaluation Cost	$2200