



COLORADO

**Department of Health Care
Policy & Financing**

Fiscal Year 2019–2020 PIP Validation Report *for* **Denver Health Medicaid Choice**

April 2020

*This report was produced by Health Services Advisory Group, Inc. for the
Colorado Department of Health Care Policy & Financing.*



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1. Executive Summary

The Code of Federal Regulations at 42 CFR Part 438—managed care regulations for Medicaid programs, with revisions released May 6, 2016, and effective July 1, 2017, for Medicaid managed care require states that contract with managed care health plans (health plans) to conduct an external quality review (EQR) of each contracting health plan. Health plans include managed care organizations (MCOs), prepaid inpatient health plans (PIHPs), primary care case management entities (PCCM entities), and prepaid ambulatory health plans (PAHPs). The regulations at 42 CFR §438.350 require that the EQR include, conducted by an external quality review organization (EQRO), analysis and evaluation of aggregated information on healthcare quality, timeliness, and access. Health Services Advisory Group, Inc. (HSAG) serves as the EQRO for the State of Colorado, Department of Health Care Policy and Financing (the Department)—the agency responsible for the overall administration and monitoring of Colorado’s Medicaid managed care program.

Pursuant to 42 CFR §438.350, which requires states’ Medicaid managed care programs to participate in EQR, the Department required its Medicaid health plans to conduct and submit performance improvement projects (PIPs) annually for validation by the state’s EQRO.

For fiscal year (FY) 2019–2020, the Department required MCOs to conduct performance improvement projects (PIPs) in accordance with 42 CFR §438.330(b)(1) and §438.330(d)(2)(i-iv), and each PIP must include:

- Measurement of performance using objective quality indicators.
- Implementation of systematic interventions to achieve improvement in quality.
- Evaluation of the effectiveness of the interventions.
- Planning and initiation of activities for increasing or sustaining improvement.

As one of the mandatory EQR activities required by 42 CFR §438.358(b)(1)(i), HSAG, as the State’s EQRO, validated the PIPs through an independent review process. In its PIP evaluation and validation, HSAG used the Department of Health and Human Services, Centers for Medicare & Medicaid Services (CMS) publication, *EQR Protocol 3: Validating Performance Improvement Projects (PIPs): A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 2012.¹⁻¹

¹⁻¹ Department of Health and Human Services, Centers for Medicare & Medicaid Services. *EQR Protocol 3: Validating Performance Improvement Projects (PIPs): A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 2012. Available at: <https://www.medicare.gov/medicaid/quality-of-care/medicaid-managed-care/external-quality-review/index.html>. Accessed on: January 27, 2020.

Over time, HSAG and some of its contracted states identified that while the MCOs had designed methodologically valid projects and received *Met* validation scores by complying with documentation requirements, few MCOs had achieved real and sustained improvement. In July 2014, HSAG developed a new PIP framework based on a modified version of the Model for Improvement developed by Associates in Process Improvement and modified by the Institute for Healthcare Improvement.¹⁻² The redesigned PIP methodology is intended to improve processes and outcomes of healthcare by way of continuous quality improvement. The redesigned framework redirects MCOs to focus on small tests of change to determine which interventions have the greatest impact and can bring about real improvement. PIPs must meet CMS requirements; therefore, HSAG completed a crosswalk of this new framework against the Department of Health and Human Services CMS publication, *EQR Protocol 3: Validating Performance Improvement Projects (PIPs): A Mandatory Protocol for External Quality Review (EQR)*, Version 2.0, September 2012.

HSAG presented the crosswalk and new PIP framework components to CMS to demonstrate how the new PIP framework aligned with the CMS validation protocols. CMS agreed that given the pace of quality improvement science development and the prolific use of Plan-Do-Study-Act (PDSA) cycles in modern improvement projects within healthcare settings, a new approach was needed.

PIP Components and Process

The key concepts of the new PIP framework include forming a PIP team, setting aims, establishing a measure, determining interventions, testing interventions, and spreading successful changes. The core component of the new approach involves testing changes on a small scale—using a series of PDSA cycles and applying rapid-cycle learning principles over the course of the improvement project to adjust intervention strategies—so that improvement can occur more efficiently and lead to long-term sustainability. The duration of rapid-cycle PIPs is 18 months.

PIP Terms

SMART (Specific, Measurable, Attainable, Relevant, Time-bound) Aim directly measures the PIP's outcome by answering the following: *How much improvement, to what, for whom, and by when?*

Key Driver Diagram is a tool used to conceptualize a shared vision of the theory of change in the system. It enables the MCO's team to focus on the influences in cause-and-effect relationships in complex systems.

FMEA (Failure Modes and Effects Analysis) is a systematic, proactive method for evaluating processes that helps to identify where and how a process is failing or might fail in the future. FMEA is useful to pinpoint specific steps most likely to affect the overall process, so that interventions may have the desired impact on PIP outcomes.

PDSA (Plan-Do-Study-Act) cycle follows a systematic series of steps for gaining knowledge about how to improve a process or an outcome.

¹⁻² Langley GL, Moen R, Nolan KM, Nolan TW, Norman CL, Provost LP. *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance* (2nd edition). San Francisco: Jossey-Bass Publishers; 2009. Available at: <http://www.ihl.org/resources/Pages/HowtoImprove/default.aspx>. Accessed on: February 6, 2020.

For this PIP framework, HSAG developed five modules with an accompanying reference guide. Prior to issuing each module, HSAG held technical assistance sessions with the MCOs to educate about application of the modules. The five modules are defined as:

- **Module 1—PIP Initiation:** Module 1 outlines the framework for the project. The framework includes the topic rationale and supporting data, building a PIP team, setting aims (Global and SMART), and completing a key driver diagram.
- **Module 2—SMART Aim Data Collection:** In Module 2, the SMART Aim measure is operationalized, and the data collection methodology is described. SMART Aim data are displayed using a run chart.
- **Module 3—Intervention Determination:** In Module 3, there is increased focus into the quality improvement activities reasonably thought to impact the SMART Aim. Interventions in addition to those in the original key driver diagram are identified using tools such as process mapping, failure modes and effects analysis (FMEA), and failure mode priority ranking, for testing via PDSA cycles in Module 4.
- **Module 4—Plan-Do-Study-Act:** The interventions selected in Module 3 are tested and evaluated through a thoughtful and incremental series of PDSA cycles.
- **Module 5—PIP Conclusions:** In Module 5, the MCO summarizes key findings and outcomes, presents comparisons of successful and unsuccessful interventions, lessons learned, and the plan to spread and sustain successful changes for improvement achieved.

Approach to Validation

HSAG obtained the data needed to conduct the PIP validation from **Denver Health Medicaid Choice (DHMC)**'s module submission forms. In FY 2019–2020, these forms provided detailed information about **DHMC**'s PIP and the activities completed in Module 3. (See Appendix A. Module Submission Form.)

Following HSAG's rapid-cycle PIP process, the health plan submits each module according to the approved timeline. Following the initial validation of each module, HSAG provides feedback in the validation tools. If validation criteria are not achieved, the health plan has the opportunity to seek technical assistance from HSAG. The health plan resubmits the modules until all validation criteria are met. This process ensures that the PIP methodology is sound prior to the health plan progressing to intervention testing.

The goal of HSAG's PIP validation is to ensure that the Department and key stakeholders can have confidence that any reported improvement is related to and can be directly linked to the quality improvement strategies and activities conducted by the health plan during the PIP. HSAG's scoring methodology evaluates whether the health plan executed a methodologically sound improvement project and confirms that any improvement achieved could be clearly linked to the quality improvement strategies implemented by the health plan.

Validation Scoring

During validation, HSAG determines if criteria for each module are *Achieved*. Any validation criteria not applicable (N/A) were not scored. As the PIP progresses, and at the completion of Module 5, HSAG will use the validation findings from modules 1 through 5 for each PIP to determine a level of confidence representing the validity and reliability of the PIP. Using a standardized scoring methodology, HSAG will assign a level of confidence and report the overall validity and reliability of the findings as one of the following:

- **High confidence** = The PIP was methodologically sound, the SMART Aim was achieved, the demonstrated improvement was clearly linked to the quality improvement processes conducted and intervention(s) tested, and the MCO accurately summarized the key findings.
- **Confidence** = The PIP was methodologically sound, the SMART Aim was achieved, and the MCO accurately summarized the key findings. However, some, but not all, quality improvement processes conducted and/or intervention(s) tested were clearly linked to the demonstrated improvement.
- **Low confidence** = (A) the PIP was methodologically sound; however, the SMART Aim goal was not achieved; or (B) the SMART Aim goal was achieved; however, the quality improvement processes conducted and/or intervention(s) tested were poorly executed and could not be linked to the improvement.
- **Reported PIP results were not credible** = The PIP methodology was not executed as approved.

PIP Topic Selection

In FY 2019–2020, **DHMC** submitted the following PIP topic for validation: *Improving Adolescent Well-Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age*.

DHMC defined a Global Aim and SMART Aim for the PIP. The SMART Aim statement includes the narrowed population, the baseline rate, a set goal for the project, and the end date. HSAG provided the following parameters to the health plan for establishing the SMART Aim for the PIP:

- **Specific**: The goal of the project: What is to be accomplished? Who will be involved or affected? Where will it take place?
- **Measurable**: The indicator to measure the goal: What is the measure that will be used? What is the current data figure (i.e., count, percent, or rate) for that measure? What do you want to increase/decrease that number to?
- **Attainable**: Rationale for setting the goal: Is the achievement you want to attain based on a particular best practice/average score/benchmark? Is the goal attainable (not too low or too high)?
- **Relevant**: The goal addresses the problem to be improved.
- **Time-bound**: The timeline for achieving the goal.

Table 1-1 includes the PIP topic and SMART Aim statement selected by **DHMC**.

Table 1-1—PIP Title and SMART Aim Statement

PIP Title	SMART Aim Statement
<i>Improving Adolescent Well-Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age</i>	By June 30, 2020, increase the percentage of Denver Health Medicaid Choice members aged 15–18 assigned to the Webb Pediatrics PCMH who attend at least one comprehensive well-care visit with a PCP or an OB/GYN practitioner per year from 47.18% to 53.38%.

The focus of the PIP is to increase the rate of comprehensive well-care visits among members 15 through 18 years of age who receive care from the narrowed focus provider group.

Table 1-2 summarizes the progress **DHMC** has made in completing the five PIP modules.

Table 1-2—PIP Title and Module Status

PIP Title	Module	Status
<i>Improving Adolescent Well-Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age</i>	1. PIP Initiation	Completed and achieved all validation criteria.
	2. SMART Aim Data Collection	Completed and achieved all validation criteria.
	3. Intervention Determination	Completed and achieved all validation criteria.
	4. Plan-Do-Study-Act (PDSA)	Initiated in July 2019, with PDSA cycles continuing through SMART Aim end date of June 30, 2020.
	5. PIP Conclusions	Targeted submission for October 2020.

At the time of the FY 2019–2020 PIP validation report, **DHMC** had passed Module 1, Module 2, and Module 3, achieving all validation criteria for the PIP. **DHMC** has progressed to intervention testing in Module 4—Plan-Do-Study-Act. The final Module 4 and Module 5 submissions are targeted for October 2020; the Module 4 and Module 5 validation findings and the level of confidence assigned to the PIP will be reported in the FY 2020–2021 PIP validation report.

2. Findings

Validation Findings

In FY 2019–2020, **DHMC** completed and submitted Module 3 for validation. Detailed module documentation submitted by the health plan is provided in Appendix A. Module Submission Form.

The objective of Module 3 is for the MCO to determine potential interventions for the project. In this module, the MCO asks and answers the question, “What changes can we make that will result in improvement?”

The following section outlines the validation findings for the module. Detailed validation criteria, scores, and feedback from HSAG are provided in Appendix B. Module Validation Tool.

Module 3: Intervention Determination

DHMC completed a process map and an FMEA to determine the areas within its process that demonstrated the greatest need for improvement, have the most impact on the desired outcomes, and can be addressed by potential interventions. Table 2-1 summarizes the potential interventions **DHMC** identified to address high-priority subprocesses and failure modes determined in Module 3.

Table 2-1—Module 3 Intervention Determination Summary for the *Improving Adolescent Well-Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age* PIP

Failure Modes	Potential Interventions
Member does not show up for the scheduled appointment	<ul style="list-style-type: none"> • Education and communication to members about the importance of an adolescent well-care (AWC) visit • Communication regarding free transportation to appointment options <ul style="list-style-type: none"> – Potential intervention methods to be tested include: <ul style="list-style-type: none"> ○ Enlisting Webb Pediatrics patient navigators or the plan’s Ambulatory Care Services (ACS) central patient navigators to call the parents/guardians of members with birthdays in the next calendar month who have not had a well-child visit in over a year to remind them of the importance of an AWC visit and inform them of available free transportation services and tracking resulting appointments through the plan’s Epic system and/or claims database ○ Sending mobile text messages to parents/guardians of members who are not current on their AWC to educate them on the importance of an AWC visit, how to schedule, and how to receive free transportation and track resulting appointments through Epic and/or the claims database ○ Creating a script for Webb Pediatrics Clinic staff members to follow when making reminder calls for scheduled appointments that will

Failure Modes	Potential Interventions
	<p>include information regarding the importance of attending an AWC appointment and questions and answers regarding free transportation options to the appointment with clinic staff members documenting both calls and results</p> <ul style="list-style-type: none"> Decisions regarding interventions will be made in consultation with Webb Pediatrics Clinic staff members, ACS analytics staff members, and through small feasibility tests
Clinic is not offering convenient appointment times (after school/work or weekends)	<ul style="list-style-type: none"> When parent/guardian of member calls the appointment center, educate them about the option of scheduling an AWC visit at a school-based health center (SBHC); at Webb Pediatrics clinic and through DHMC, provide outreach and education about SBHCs including sharing with the parent/guardian the consent form for member to be seen at an SBHC Allow for scheduling of AWC appointments via the Appointment Center 60 days out instead of the current 30-day scheduling limit
Clinic staff members are unable to reach parent/guardian via phone call to confirm appointment	Send e-notifications through Denver Health's Epic MyChart—a software application connected to the member's Denver Health electronic medical record that allows the member to access medical information, schedule appointments, and communicate with providers—or mobile SMS text messages to parents/guardians of members with upcoming appointments

At the time of this FY 2019–2020 PIP validation report, **DHMC** had completed its PIP through Module 3 and had initiated the intervention planning phase in Module 4. **DHMC** submitted one intervention plan in July 2019. Table 2-2 summarizes the intervention **DHMC** selected for testing through PDSA cycles.

Table 2-2—Planned Intervention for the *Improving Adolescent Well-Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age* PIP

Intervention Description	Key Drivers	Failure Mode
Education and communication to members about the importance of AWC visits and free transportation to appointment options	<ul style="list-style-type: none"> Member compliance with well-care visits Transportation to visits 	Member does not show up for the scheduled appointment

DHMC selected one intervention to test using PDSA cycles in Module 4. The member-focused intervention included outreach to members to provide education on the importance of well-care visits, information on free transportation options, and assistance with scheduling an AWC visit. This intervention is meant to address the failure mode regarding members not showing up for their scheduled appointments. HSAG reviewed the intervention plan and provided written feedback and technical assistance to **DHMC**. The health plan is currently in the “Do” stage of the PDSA cycles for this intervention, carrying out the tested intervention and evaluating for impact. HSAG will report the intervention testing results and final Module 4 and Module 5 validation outcomes in the next annual PIP validation report.

3. Conclusions and Recommendations

Conclusions

The validation findings suggest that **DHMC** successfully completed Module 3 and identified opportunities for improving the process related to increasing the rate of comprehensive well-care visits among members 15 through 18 years of age. **DHMC** further analyzed opportunities for improvement in Module 3 and considered potential interventions to address the identified process flaws or gaps and increase the percentage of members who receive a well-care visit. The health plan also successfully initiated Module 4 by selecting an intervention to test and documenting a plan for evaluating the impact of the intervention through PDSA cycles. **DHMC** will continue testing interventions for the PIP through June 30, 2020. The health plan will submit complete intervention testing results and PIP conclusions for validation in FY 2020–2021. HSAG will report the final validation findings for the PIP in the FY 2020–2021 PIP validation report.

Recommendations

- When planning a test of change, **DHMC** should clearly identify and communicate the necessary steps that will be taken to carry out an intervention including details that define who, what, where, and how the intervention will be carried out.
- To ensure a methodologically sound intervention testing methodology, **DHMC** should determine the best method for identifying the intended effect of an intervention prior to testing. Intervention testing measures and data collection methodologies should allow the health plan to rapidly determine the direct impact of the intervention. The testing methodology should allow the health plan to quickly gather data and make data-driven revisions to facilitate achievement of the SMART Aim goal.
- **DHMC** should consistently use the approved Module 2 SMART Aim measure data collection and calculation methods for the duration of the PIP so that the final SMART Aim measure run chart provides data for a valid comparison of results to the goal.
- The key driver diagram for the PIP should be updated regularly to incorporate knowledge gained and lessons learned as **DHMC** progresses through determining and testing interventions. **DHMC** should also update the key driver diagram to include the key driver(s) addressed by intervention(s) selected for testing in Module 4.
- When reporting the final PIP conclusions, **DHMC** should accurately and clearly report intervention testing results and SMART Aim measure results, communicating any evidence of improvement and demonstrating the link between intervention testing and demonstrated improvement.
- If improvement is achieved through the PIP, **DHMC** should develop a plan for continuing and spreading effective interventions and sustaining improvement in the long term.

Appendix A. Module Submission Form

Appendix A contains the Module Submission Form provided by the health plan.



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Performance Improvement Project (PIP)
Module 3 — Intervention Determination Submission Form
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Medicaid Choice Members 15–18 Years of Age
for Denver Health Medicaid Choice



Managed Care Organization (MCO) Information	
MCO Name:	Denver Health Medicaid Choice
PIP Title:	Improving Adolescent Well–Care Access for Denver Health Medicaid Choice Members 15–18 Years of Age
Contact Name:	Gregg Kamas
Contact Title:	Quality Improvement and Accreditation Director
E-mail Address:	Gregg.kamas@dhha.org
Telephone Number:	303-602-2051
Submission Date:	May 14, 2019



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Process Mapping

Indicate when the process map(s) was completed and list all team members involved. Describe the role and responsibilities for each individual team member. The team should include a data analyst. The analyst can assist with determining data needed for prioritization of subprocesses and failure modes and proposed interventions.

Table 1—Process Mapping Team	
Development Period	
03/05/2019 to 03/25/2019	
Team Members Involved	Role/Responsibilities
Gregg Kamas	Project operational oversight and direction
Brian Cichon	Provide data analysis and support
Beth Flood	Project organization, communication and write up
Jennifer Hudson, RN	Nursing Manager, Webb Pediatrics Clinic, consult on clinic process
Mark Anderson, MD	Team Lead, Webb Pediatrics Clinic, consult on clinic process
Perla Butanda	Administration Operations Supervisor, Webb Pediatrics Clinic, consult on clinic process
Kristine Gaw	Operations Manager, Appointment Center, consult on appointment center process



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Failure Modes and Effects Analysis (FMEA)

Indicate when the FMEA was completed and list all team members involved. Describe the role and responsibilities for each individual team member. The team should include a data analyst. The analyst can assist with determining data needed for prioritization of subprocesses and failure modes and proposed interventions.

Table 2—Failure Modes and Effects Analysis Team	
Development Period	
03/25/2019 to 04/05/2019	
Team Members Involved	Role/Responsibilities
Gregg Kamas	Project operational oversight and direction
Brian Cichon	Provide data analysis and support
Beth Flood	Project organization, communication and write up
Claire Ulrickson	Intervention analysis and support
Paula Diaz	Marketing and Public Relations, provide mailing/member outreach data
Kristine Gaw	Operations Manager, Appointment Center, provide appointment center data
Mark Anderson, MD	Team Lead, Webb Pediatrics Clinic, provide Webb clinic data



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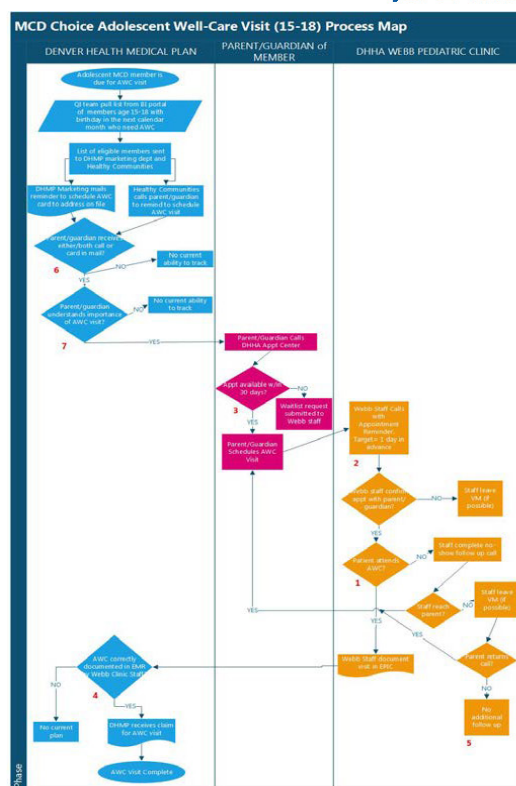
Process Mapping

Develop a process map that aligns with the SMART Aim measure from the perspective of the person most impacted by the overall process (typically the member). The MCO may need to complete and submit more than one process map (i.e., member-level, provider-level, MCO-level, new members, existing members, etc.).

Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

(Insert Process Map Here—Use attachments or additional pages if more space is required)

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Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

See attachment: MCD AWC Visit Process Map

Description of process and rationale for selection of subprocesses:

The PIP team first created a process map that reflected the current procedures for providing access to adolescent well care visits for DHMP MCD members ages 15-18 from the perspective of the health plan. The team then met with the Team Lead, Nurse Manager and the Administration Operations Supervisor at the Denver Health Webb Pediatric Clinic, the clinic that will serve as the target site for the intervention and created a process map that details this process as it occurs at the clinic. Additionally, the team worked through how the process might look from the vantage point of a parent or guardian of a member and created a swim lane diagram that would clearly illustrate the functions and responsibilities of each party from beginning to end of the process.

The PIP team used the swim lane diagram as an aid to identify the subprocesses within the overall process that might serve as an opportunity for improvement. The DHMP Quality Improvement team including the QI director, Sr. Data Analyst and Intervention Manager met to discuss the identified subprocesses and assign a numerical value to each (see below and attached DHMP MCD AWC Process Map). The team ranked the subprocess in order of greatest potential impact from 1-7:

1. Member attends scheduled AWC: Data provided to the PIP team from Webb pediatric clinic shows that the no-show rate for a scheduled appointment at Webb is approximately 20%. No shows result in wasted time, additional work and scheduling



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Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

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- issues as well as eliminating an opportunity for a member to receive needed care indicating that this is a very significant opportunity for improvement.
2. Webb pediatric staff confirms member appointment. Target= 1 day in advance: Webb clinic staff attempt to contact via phone call the parent/guardian of member to confirm AWC prior to appointment. The goal for this outreach is at least 24 hours prior to the appointment although this target is not always met. According to data provided to the PIP team by the staff at Webb pediatrics, approximately 50% of the time staff are not able to reach parent/guardian to confirm the upcoming appointment, indicating a lack of correct contact information for many members. Given how commonly this occurs as well as competing staff priorities that make timely completion of confirmation phone calls a challenge, the PIP team has identified this subprocess as a significant opportunity for improvement.
 3. AWC appointment is available at Webb pediatrics w/ in 30 days of call to DHHA Appointment center: The PIP team reached out to the DHHA centralized appointment call center to assist in mapping this subprocess. According to the appointment center, if an AWC appointment is not available with the member's PCP or a partner PCP at the same clinic within 30 days, the member is put on a clinic specific wait list to be contacted if/when an appointment slot becomes available. This access issue has the potential to heavily affect our SMART aim, however, data from the administrative team at the Webb clinic indicates that this issue occurs very infrequently, suggesting it may be an opportunity for more moderate improvement.



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Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

4. The AWC is correctly documented as a well-child visit in member's EMR by Webb staff. The PIP team identified this subprocess as a potential area to investigate in our early discussions of the AWC appointment process at the Webb clinic. Determining when it is feasible and appropriate to convert a visit for episodic or acute care, or a sports physical is an evidence-based approach to increasing compliance with well-child visits. Correct documentation in EMR of this conversion allows the visit to be "counted" as an AWC. When the PIP team spoke to the Team Lead at Webb pediatrics, however, it was determined that Webb staff had current ongoing initiatives to ensure that visits were converted when appropriate and were accurately documented in the EMR indicating that intervening in this subprocess would have limited return on investment
5. Adequate follow up is made to parent/guardian of member who misses AWC. The PIP team spoke with the at the Webb clinic in order to illuminate this subprocess. According to clinic staff, if there is a "no show" for an AWC visit staff attempt a follow up phone call to the parent/guardian number on file to reschedule the appointment or leave a voicemail. Clinic staff often fail to reach the parent/guardian to reschedule due to lack of correct phone number on file (as described above). If a parent/guardian is not reached (either answers call or calls clinic after receiving voicemail) after a missed AWC, no additional follow up is conducted as clinic staff do not have an additional method of contacting parent/guardian to reschedule. This process has the potential for improvement and as it is closely linked to subprocess #2 above, the PIP team believes that addressing the appointment confirmation process may result in subsequent improvement for this process as well.



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Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

6. Parent/guardian of member receives reminder postcard and/or phone call to schedule AWC: DHMP mails out monthly reminders to the address on file of parents/guardians of members with a birthday in the upcoming month as a method of reminding the parent/guardian to schedule an annual well-child visit. The DHMP marketing department was unable to provide the PIP team with specific rates of “bad addresses” or undeliverable mail in order for the PIP team to assess the percentage of members not currently receiving these messages. As a proxy measure, the PIP team reached out to SPH Analytics, the current DHMP healthcare survey vendor, who indicated that ~20% of mailings to this population are returned/not delivered indicating that many of the member addresses on file may be incorrect. Although this rate is significant, the PIP team determined our ability to intervene in this process is highly limited given the challenges in maintaining up-to-date addresses for this population.
7. Parent/guardian understands importance of member receiving an AWC: DHMP mails out monthly reminder postcards to the address on file of parents/guardians of members with a birthday in the upcoming month as a method of reminding the parent/guardian to schedule an annual well-child visit. These postcards also include information regarding why the AWC exam is so important. In addition, DHMP sends out monthly newsletters to members which include information about the importance of regular exams and screenings. The goal of this messaging is to ensure that the parent/guardian of adolescent members understands the importance of an AWC and is motivated to schedule this visit. Although, DHMP strives to make member engagement successful and meaningful, there isn't current data that reflects how well parents/guardians of



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Process Mapping

Develop a process map that aligns with the SMART Aim measure from the perspective of the person most impacted by the overall process (typically the member). The MCO may need to complete and submit more than one process map (i.e., member-level, provider-level, MCO-level, new members, existing members, etc.).

Clearly identify subprocesses (opportunities for improvement) within the process map. These subprocesses will be used in the FMEA table. Assign a numerical value to each identified subprocess based on having the greatest potential of impacting the SMART Aim. In addition to providing the process map(s), provide a narrative description of the PIP team's process and rationale for the selection of subprocesses with the greatest impact on the SMART Aim.

adolescent members understand the importance of an AWC, so the PIP team has not identified this as a strong opportunity for improvement.



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Failure Modes and Effects Analysis

From the completed process map(s), enter up to three subprocesses that have the potential to make the greatest impact on the SMART Aim. The assigned priority number in the process map should align with the subprocess number in the FMEA table. This will help clearly link each opportunity for improvement to an identified subprocess.

Complete the table with the corresponding failure modes, failure causes, and failure effects.

Note: The MCO should ensure that the same language is used consistently to describe the failure modes throughout Modules 3, 4, and 5.

Table 3—Failure Modes and Effects Analysis Table			
Subprocesses	Failure Modes (What could go wrong?)	Failure Causes (Why would the failure happen?)	Failure Effects (What are the consequences?)
1. DHMP Member attends scheduled AWC at Webb Pediatric Clinic	Member “no show”	Lack of transportation to clinic	Member does not receive recommended care
	Member arrives more than 20 min late	Scheduling error	Provider and staff time is wasted
		Work/school/family schedule conflict or competing priorities	Other members are not able to take advantage of that apt slot
		Parent/guardian forgets about scheduled appointment	
		Parent/guardian does not understand perceived risks of not receiving care	



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2. Webb clinic staff confirm member appointment via phone call 1 day in advance	Clinic staff are unable to reach parent/guardian via phone call	Phone number on file is not correct current parent/guardian contact number	Parent/guardian is not reminded that member has impending apt.
		Phone number on file is out of service or VM is full (unable to leave message)	Clinic staff cannot confirm apt/reschedule (if necessary) with parent/guardian
3. An AWC appointment is available at Webb clinic w/ in 30 days of call to DHHA Appointment Center	No apt is available with members PCP or with a partner provider (at same clinic) within 30 days	Clinic only able to accept appointments Monday-Friday from 7:30AM-5:00PM and Saturdays 8AM-12PM	Member needs to be placed on clinic waitlist and called when apt becomes available
	Clinic is not offering convenient apt times (after school/work or weekends) for parent/guardian to schedule	Back to school appointments, provider vacation limit available appointments	Preventative care and screenings may not be received in a timely manner



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Failure Mode Priority Ranking

Based on the results of the priority ranking process, list the numerically ranked failure modes from highest to lowest priority. In the space below the table, please describe the process used to assign the priority ranking.

Table 4—Failure Mode Priority Ranking	
Priority Ranking	Failure Modes
1	Member does not show up for the scheduled appointment
1	Clinic is not offering convenient apt times (after school/work or weekends)
2	Clinic staff are unable to reach parent/guardian via phone call to confirm appointment
3	No apt is available with members PCP (within 30 days)
3	Member arrives more than 20 minutes late for scheduled appointment
3	No apt with a partner provider (at same clinic) is available (within 30 days)

Description of priority ranking process (i.e., Risk Priority Number (RPN) method). If the RPN method was used, please provide the numeric values from the calculations:

In order to determine the critical failure modes associated with the process of completing an AWC visit, the PIP team used a risk priority method to assign an ordinal value to the relative seriousness and priority associated with each of the above subprocesses. The PIP team calculated a Risk Priority Number (RPN) to more accurately rank the failure modes using the following methodology: assigning a number from 1-5 with 1 being “least likely” and 5 being “most likely” to three basic components: (1) likelihood of occurrence, (2) likelihood of detection (likelihood that failure would NOT be detected), and (3) the amount of harm or damage the failure mode may cause and multiplying the number assigned to each component. The higher the RPN, the more critical the failure mode is determined to be in the overall process. The results are as follows:



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- Member does not show up for the scheduled appointment:
 - Likelihood of occurrence: 2
 - Likelihood of detection: 1
 - Amount of harm or damage: 4
 - **Total/Rank: 8/1**
- Clinic staff are unable to reach parent/guardian via phone call to confirm appointment
 - Likelihood of occurrence: 3
 - Likelihood of detection: 1
 - Amount of harm or damage: 2
 - **Total/Rank: 6/2**
- No apt is available with members PCP (within 30 days)
 - Likelihood of occurrence: 1
 - Likelihood of detection: 1
 - Amount of harm or damage: 4
 - **Total/Rank: 4/3**
- Member arrives more than 20 minutes late for scheduled appointment
 - Likelihood of occurrence: 2
 - Likelihood of detection: 1
 - Amount of harm or damage: 2
 - **Total/Rank: 4/3**
- No apt with a partner provider (at same clinic) is available (within 30 days)
 - Likelihood of occurrence: 1
 - Likelihood of detection: 1
 - Amount of harm or damage: 4
 - **Total/Rank: 4/3**



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- Clinic is not offering convenient apt times (after school/work or weekends)
 - Likelihood of occurrence: 2
 - Likelihood of detection: 2
 - Amount of harm or damage: 2
 - **Total/Rank: 8/1**



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Intervention Determination

In the Intervention Determine table, enter at a minimum, the top three ranked failure modes and the identified intervention to address the failure mode.

Table 5—Intervention Determination Table	
Failure Modes	Interventions
Member does not show up for the scheduled appointment	<ul style="list-style-type: none"> • Education and communication to members about the importance of an AWC visit • Communication regarding free transportation to appointment options <ul style="list-style-type: none"> ○ Potential intervention methods to be tested include: <ul style="list-style-type: none"> ▪ Enlisting Webb Pediatric Patient Navigators or ACS central Patient Navigators to call the parents/guardians of members with birthdays in the next calendar month who have not had a well-child visit in over a year to remind them of the importance of an AWC and inform them of available free transportation services and tracking resulting appointments through EPIC and/or claims database ▪ Sending mobile SMS text messages to parent/guardians of member's who are not current on their AWC to educate them on the importance of an AWC visit, how to schedule and how to receive free transportation and tracking resulting appointments through EPIC and/or claims database ▪ Creating a script for Webb Peds Clinic staff to follow when making reminder calls for scheduled appointments that will include information regarding the importance of attending an AWC appointment and Q&A regarding free transportation options to the appointment with clinic staff documenting both calls and results. ○ Decisions regarding interventions will be made in consultation with Webb Peds Clinic Staff, ACS analytics staff and through small feasibility tests.



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Table 5—Intervention Determination Table	
Failure Modes	Interventions
Clinic is not offering convenient apt times (after school/work or weekends)	<ul style="list-style-type: none"> When parent/guardian of member calls appointment center, educate them about the option of scheduling AWC at school-based health center (SBHC). At Webb clinic and through DHMP, provide outreach and education about SBHCs including sharing with parent/guardian consent form for member to be seen at SBHCs. Allow for scheduling of AWC appointments via Appointment Center 60-days out instead of the current 30-day scheduling limit.
Clinic staff are unable to reach parent/guardian via phone call to confirm appointment	Send e-notifications through Denver Health's Epic MyChart, which is a software application connected to the member's DH EMR which allows the member to access medical information, schedule appointments and communicate with providers) or mobile SMS text messages to parent/guardians of member's with upcoming appointments.

Appendix B. Module Validation Tool

Appendix B contains the Module Validation Tool provided by HSAG.



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Criteria	Achieved (Y/N)	HSAG Feedback and Recommendations
1. The documentation included the team members responsible for completing the process map(s) and failure mode and effects analysis (FMEA).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2. The documentation included a process map(s) illustrating the step-by-step flow of the current process. The subprocesses identified in the process map(s) as opportunities for improvement were prioritized and assigned a numerical ranking.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
3. The health plan included a description of the process and rationale used for the selection of subprocesses in the FMEA table.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4. Each subprocess in the FMEA table aligned with a numerically ranked opportunity for improvement in the process map(s), and was logically linked to the documented failure modes, causes, and effects.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	General Comment: The health plan did not include a failure mode and/or failure effect for all failure causes within the first subprocess. If the same failure mode or failure effect applies to multiple failure causes, the health plan should merge cells to clearly create the linkage for all failure modes.
5. The health plan described the failure mode priority ranking process. If the RPN method was used, the health plan provided the numeric calculations.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The health plan included a failure mode that was not included in the FMEA table, “ <i>Clinic is not offering convenient apt times (after school work or weekends.)</i> ” The health plan must include the failure modes from the FMEA table within the Failure Mode Priority ranking table.



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Criteria	Achieved (Y/N)	HSAG Feedback and Recommendations
		<p>General Comment: The health plan must use consistent language for failure modes throughout the submission, carrying over the same documentation to each table and narrative description.</p> <p>Re-review May 2019: The health plan included all failure modes from the FMEA table within the failure mode priority ranking. The criterion has been achieved.</p>
6. The interventions listed in the Intervention Determination table were appropriate based on the ranked failure modes.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>The health plan must provide additional information on the method the education will be delivered to members. HSAG recommends the health plan avoid passive interventions such as mailers and develop active interventions such as phone calls directly to members to administer this type of intervention.</p> <p>If the health plan considers implementing an e-notification intervention, a robust tracking method must be developed to track the effectiveness of the intervention.</p> <p>Re-review May 2019: The health plan provided additional information on the method of education that may be delivered to members.</p>



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Criteria	Achieved (Y/N)	HSAG Feedback and Recommendations
		General Comment: If the health plan considers implementing a text message method of delivering information, a robust tracking method must be developed to track the effectiveness of the intervention.

Intervention Determination (Module 3)☒ Pass

Date: May 28, 2019