State of Georgia
Department of Community Health
Georgia Families Program

CY 2015 Performance Improvement Projects Report

for

Peach State Health Plan

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HSAG HEALTH SERVICES ADVISORY GROUP

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1. Background

The Georgia Department of Community Health (DCH) is responsible for administering the Medicaid program and the Children's Health Insurance Program (CHIP) in the State of Georgia. The State refers to its CHIP program as PeachCare for Kids®. Both programs include fee-for-service and managed care components. The DCH contracts with three privately owned managed care organizations, referred to by the State as care management organizations (CMOs), to deliver services to members who are enrolled in the State's Medicaid and CHIP programs. Children in state custody, children receiving adoption assistance, and certain children in the juvenile justice system are enrolled in the Georgia Families 360° (GF 360°) managed care program. The Georgia Families (GF) program serves all other Medicaid and CHIP managed care members not enrolled in the GF 360° program. Approximately 1.3 million beneficiaries are enrolled in the GF program.[1-1]

The DCH requires its contracted CMOs to conduct performance improvement projects (PIPs). As set forth in 42 CFR §438.240, the PIPs must be designed to achieve, through ongoing measurements and interventions, significant improvement, sustained over time, in clinical and nonclinical care areas. The PIPs are expected to have a favorable effect on health outcomes and member satisfaction. The DCH requires the CMOs to report the status and results of each PIP annually. Peach State Health Plan (Peach State) is one of the Georgia Families CMOs.

The validation of PIPs is one of three federally mandated activities for state Medicaid managed care programs. The evaluation of CMO compliance with State and federal regulations and the validation of CMO performance measures are the other two mandated activities.

These three mandatory activities work together to assess the CMOs' performance with providing appropriate access to high-quality care for their members. While a CMO's compliance with managed care regulations provides the organizational foundation for the delivery of quality healthcare, the calculation and reporting of performance measure rates provide a barometer of the quality and effectiveness of the care. The DCH requires the CMOs to initiate PIPs to improve the quality of healthcare in targeted areas of low performance, or in areas identified as State priorities or healthcare issues of greatest concern. During calendar year (CY) 2015, DCH required its CMOs to conduct eight PIPs and submit the final PIP modules for annual validation in 2016. PIPs are key tools in helping DCH achieve goals and objectives outlined in its quality strategy; they provide the framework for monitoring, measuring, and improving the delivery of healthcare.

The purpose of a PIP is to assess and improve processes, and thereby outcomes of care. For such projects to achieve real and meaningful improvements in care, and for interested parties to have confidence in the reported improvements, PIPs must be designed, conducted, and reported in a

[1-1] Georgia Department of Community Health. "Georgia Families Monthly Adjustment Summary Report, Report Period: 8/2015."

methodologically sound manner. The primary objective of PIP validation is to determine each CMO's compliance with requirements set forth in 42 CFR §438.240(b)(1), including:

- Measurement of performance using objective quality indicators.
- Implementation of system interventions to achieve improvement in quality.
- Evaluation of the effectiveness of the interventions.
- Planning and initiation of activities to increase or sustain improvement.

To meet the federal requirement for the validation of PIPs, DCH contracted with Health Services Advisory Group, Inc. (HSAG), the State's external quality review organization (EQRO), to conduct the validation of Peach State's PIPs.

In 2014, DCH and HSAG agreed that a comprehensive overhaul of the PIP implementation and validation process was needed in order to embrace a rapid-cycle improvement process and facilitate more effective improvement efforts by the CMOs in Georgia. Consequently, HSAG developed a new PIP framework based on a modified version of the Model for Improvement developed by Associates in Process Improvement and applied to healthcare quality activities by the Institute for Healthcare Improvement.[1-2] The rapid-cycle PIP methodology is intended to improve processes and outcomes of healthcare by way of continuous improvement focused on small tests of change. The methodology focuses on evaluating and refining small process changes to determine the most effective strategies for achieving real improvement. The DCH instructed the CMOs to conduct their rapid-cycle improvement projects over a 12-month period.

To support DCH and the CMOs' efforts, HSAG developed new guidance documents for the rapid-cycle improvement projects including:

- A detailed Companion Guide describing the new PIP framework and the requirements for each module submission.
- Forms for the CMOs to document their progress through the different stages of the new PIP process for each of the five modules.
- Corresponding validation feedback forms for communicating validation findings on each module back to the CMOs and DCH.

At the start of the new rapid-cycle improvement projects, HSAG conducted introductory webinar training sessions for DCH and the CMOs and, on an ongoing basis, provided extensive technical assistance via conference calls with the CMOs throughout the 12-month project period.

To ensure methodological soundness while meeting all state and federal requirements, HSAG follows guidelines established in the Department of Health and Human Services, Centers for Medicare &

[1-2] Institute for Healthcare Improvement. How to Improve. Available at: http://www.ihi.org/resources/Pages/HowtoImprove/default.aspx. Accessed on: Sept 24, 2015.

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.[1-3] HSAG provided CMS with a crosswalk of the rapid-cycle PIP framework to the CMS PIP protocols in order to illustrate how the rapid-cycle PIP framework met the CMS requirements.[1-4] Following HSAG's presentation of the crosswalk and new PIP framework components to CMS, CMS agreed that with the pace of quality improvement science development and the prolific use of Plan-Do-Study-Act (PDSA) cycles in modern PIPs within healthcare settings, a new approach was reasonable. CMS approved HSAG's rapid-cycle PIP framework for validation of the CMOs' PIPs for the State of Georgia.

HSAG's validation of rapid-cycle PIPs includes the following key components of the quality improvement process:

1. Evaluation of the technical structure to determine whether a PIP's initiation (e.g., topic rationale, PIP team, aim, key driver diagram, and SMART Aim data collection methodology) was based on sound methods and could demonstrate reliably positive outcomes. Successful execution of this component ensures accurately reported PIP results that are capable of measuring sustained improvement.
2. Evaluation of the quality improvement activities conducted. Once designed, a PIP's effectiveness in improving outcomes depends on thoughtful and relevant intervention determination, intervention testing and evaluation using iterative PDSA cycles, and sustainability and spreading of successful change. This component evaluates how well the CMO executed its quality improvement activities and whether the desired aim was achieved.

The goal of HSAG's PIP validation is to ensure that DCH and key stakeholders can have confidence that any reported improvement in outcomes is related and can be directly linked to the quality improvement strategies and activities conducted by the CMO during the life of the PIP.

PIP Components and Process

The key concepts of the rapid-cycle PIP framework include forming a PIP team, setting aims, establishing measures, determining interventions, testing interventions, and spreading successful changes. The core component of the rapid-cycle 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 following outlines the rapid-cycle PIP framework.

[1-3] 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: http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Quality-of-Care-External-Quality-Review.html. Accessed on: Feb 19, 2013.
[1-4] Ibid.

- Module 1—PIP Initiation: Module 1 outlines the framework for the project. The framework follows the Associates in Process Improvement's (API's) Model, which was popularized by the Institute for Healthcare Improvement, by:
  - Precisely stating a project-specific SMART Aim (specific, measureable, attainable, relevant and time-bound) including the topic rationale and supporting data so that alignment with larger initiatives and feasibility are clear.
  - Building a PIP team consisting of internal and external stakeholders.
  - Completing a key driver diagram which summarizes the changes that are agreed upon by the team as having sufficient evidence to lead to improvement.
- 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 in run charts.
- Module 3—Intervention Determination: In Module 3, there is a deeper dive 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 for PDSA cycles (Module 4) using tools such as process mapping, failure modes and effects analysis (FMEA), Pareto charts, and failure mode priority ranking.
- 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: Module 5 summarizes key findings and presents comparisons of successful and unsuccessful interventions, outcomes achieved, plans for evaluating sustained improvement and expansion of successful interventions, and lessons learned.

Summary

For CY 2015, Peach State submitted eight PIPs for validation. All of the PIPs were validated using HSAG's rapid-cycle PIP validation process. The PIP topics included:

- *Annual Dental Visits*
- *Appropriate Use of ADHD [Attention Deficit Hyperactivity Disorder] Medications*
- *Avoidable Emergency Room Visits*
- *Bright Futures*
- *Comprehensive Diabetes Care*
- *Member Satisfaction*
- *Postpartum Care*
- *Provider Satisfaction*

For each of the eight PIPs conducted in CY 2015, Peach State defined a SMART Aim statement that identified the narrowed population and process to be evaluated, set a goal for improvement, and defined

the indicator used to measure progress toward the goal. The SMART Aim statement sets the framework for the PIP and identifies the goal against which the PIP will be evaluated for the annual validation. HSAG provided the following parameters to Peach State for establishing the SMART Aim for each PIP:

- **S**pecific: The goal of the project: What is to be accomplished? Who will be involved or affected? Where will it take place?
- **M**easurable: 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?
- **A**ttainable: 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)?
- **R**elevant: The goal addresses the problem to be improved.
- **T**ime-bound: The timeline for achieving the goal.

Table 1-1 outlines the PIP topics and final CMO-reported SMART Aim statements for the eight PIPs. The CMO was to specify the outcome being measured, the baseline value for the outcome measure, a quantifiable goal for the outcome measure, and the target date for attaining the goal. Peach State developed a SMART Aim statement that quantified the improvement sought for each PIP.

Table 1-1—PIP Titles and SMART Aim Statements

PIP Title	SMART Aim Statement
Annual Dental Visits	By September 30, 2015, increase the percentage of adolescents between ages 15–18 years old in Muscogee County who are eligible for and receive a preventive dental visit from 61.64% to 64.64%
Appropriate Use of ADHD Medications	By December 31, 2015, Peach State Health Plan aims to increase the 30-day follow-up rate from 42.94% to 45.50% among children 6-12 years old with a fill for newly prescribed ADHD medication in the Atlanta region
Avoidable Emergency Room Visits	Decrease the avoidable emergency department utilization rate among members ages 0–20 at Hughes Spalding Hospital from 39.1% to 34.5% by December 31, 2015
Bright Futures	Increase the percentage of adolescents 14–18 years old assigned to Dr. Dennis-Smith in Fulton County who are eligible for and receive a preventive health visit from 20.83% to 23.83% by December 31, 2015
Comprehensive Diabetes Care	By December 31, 2015, PSHP aims to increase the percent of completed annual dilated eye exams from 42% to 56% for adult noncompliant diabetic members, ages 18 to 75 residing in DeKalb and Fulton counties who are continuously enrolled for 12 months
Member Satisfaction	By December 31, 2015, PSHP aims to increase the percentage of members in the Atlanta Region who complete the survey from 73% to 80%
Postpartum Care	By December 31, 2015, increase the PPCV [postpartum care visit] rate occurring between 21–56 days following a birth event for women under the care of Dourron OB/GYN Associates delivering at DeKalb Medical Center, from 60.0% to 65.0%
Provider Satisfaction	Peach State aims to reduce the prior-authorization turnaround time for ENT of Georgia from 8.4 days to 6.3 days by December 31, 2015

Validation Overview

HSAG obtained the data needed to conduct the PIP validation from Peach State's module submission forms. These forms provided detailed information about each of Peach State's PIPs and the activities completed in Modules 1 through 5.

Peach State submitted Modules 1 through 3 for each PIP throughout calendar year 2015. The CMO initially submitted Modules 1 and 2, received feedback and technical assistance from HSAG, and resubmitted these modules until all validation criteria were met. Peach State followed the same process for Module 3. Once Module 3 was approved, the CMO initiated intervention testing in Module 4, which continued through the end of 2015. Peach State submitted Modules 4 and 5 to HSAG on February 29, 2016, for annual validation.

The scoring methodology evaluates whether the CMO executed a methodologically sound improvement project, whether the PIP's SMART Aim goal was achieved, and whether improvement was clearly linked to the quality improvement processes applied in the project. HSAG assigned a score of *Achieved* or *Failed* for each of the criteria in Modules 1 through 5. Any validation criteria that were not applicable were not scored. HSAG used the findings for the Modules 1 through 5 criteria for each PIP to determine a confidence level representing the validity and reliability of the PIP. Using a standardized scoring methodology, HSAG assigned a level of confidence and reported the overall validity and reliability of the findings as one of the following:

- *High confidence* = the PIP was methodologically sound, achieved the SMART Aim goal, and the demonstrated improvement was clearly linked to the quality improvement processes implemented.
- *Confidence* = the PIP was methodologically sound, achieved the SMART Aim goal, and some of the quality improvement processes were clearly linked to the demonstrated improvement; however, there was not a clear link between all quality improvement processes and 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 and interventions 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.

Validation Findings

HSAG organized and analyzed Peach State's PIP data to draw conclusions about the CMO's quality improvement efforts. Based on its review, HSAG determined the overall methodological validity of the PIPs, as well as the overall success in achieving the SMART Aim goal. The validation findings for Peach State's PIPs are presented in Table 2-1 through Table 2-16. The tables display HSAG's key validation findings for each of the PIPs including the interventions tested, the key drivers and failure modes addressed by the interventions, and the impact of the interventions on the desired SMART Aim goal.

For each PIP, HSAG evaluated the appropriateness and validity of the SMART Aim measure, as well as trends in the SMART Aim measurements, in comparison with the reported baseline rate and goal. The data displayed in the SMART Aim run charts were used to determine whether the SMART Aim goal was achieved.

Annual Dental Visits

Peach State's goal for the *Annual Dental Visits* PIP was to identify and test interventions to improve the preventive dental visit rate among members 15 to 18 years old living in Muscogee County. The CMO did not use the approved Module 2 methodology for the SMART Aim measure and instead reported in the Module 4 Submission Forms that a cumulative rate was plotted on the SMART Aim run chart; therefore, the reported PIP results were not credible.

The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting Muscogee County as the targeted geographic area for the PIP and the initial key driver diagram illustrating the content theory behind the PIP were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-1 provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure.

Table 2-1—SMART Aim Measure Results for *Annual Dental Visits*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of members 15 to 18 years of age in Muscogee County that completed a preventive dental visit	61.6%	64.6%	70.3%	*Reported PIP results were not credible*

The CMO established a goal of improving the preventive dental visit rate for members 15 to 18 years of age living in Muscogee County by 3 percentage points, from 61.6 percent to 64.6 percent. Although, the SMART Aim measure exceeded the goal of 64.6 percent, the CMO's use of an unapproved cumulative rate for the SMART Aim measurement methodology invalidated the SMART Aim measurement results; therefore, meaningful evidence of achieving the goal was not submitted in Module 5. The details of the improvement processes used and the interventions tested are presented in Table 2-2 and in the narrative description below.

Table 2-2—Intervention Testing for *Annual Dental Visits*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Teen Smart webpage	Member awareness/education	Member and parent/guardian may not think preventive visits are important	The CMO chose to abandon the Teen Smart webpage intervention due to the low number of visits to the webpage and the lack of response to the member survey about the webpage.
Teen Smart member incentive	Members schedule/keep appointment for preventive dental visits	Inconvenience of appointment	The CMO chose to abandon the Teen Smart member incentive intervention based on the low enrollment rate and the low preventive dental visit rate.

Peach State used a process map and FMEA to identify gaps and failures in the current process and select interventions to test for the PIP. Based on the process map and FMEA results, the CMO identified two interventions to test: the Teen Smart webpage and the Teen Smart member incentive. The purpose of the Teen Smart webpage was to educate teen members and increase awareness about the importance of preventive dental visits. The CMO designed the webpage to attract teenage members and included health and dental information and educational links on the importance of preventive dental visits. The purpose of the Teen Smart member incentive was to motivate teen members to schedule and complete a

preventive dental visit. The incentive program offered eligible members who joined the Teen Smart program a $20 gift card for completing a preventive dental visit.

Peach State did not use a methodologically sound process for evaluating the effectiveness of the Teen Smart webpage. The CMO used a telephone survey of members to evaluate member response to the Teen Smart webpage. Survey responses were not linked to whether the member scheduled or attended a preventive dental visit. The CMO did not describe a data collection process for monitoring how many members who viewed the webpage subsequently scheduled or attended a preventive dental visit; therefore, the measurement methodology could not be used to demonstrate the impact of the intervention on the rate of preventive dental visits. Although the CMO could track the number of times the webpage was viewed, there was no way to determine who was viewing the webpage or whether viewing the webpage resulted in a completed preventive dental visit. Ultimately, Peach State chose to abandon the intervention because of the low number of webpage visits and the lack of response to the member survey.

Peach State used a methodologically sound process for evaluating the effectiveness of the Teen Smart member incentive. The CMO's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) coordinators collected data via telephone from members who enrolled in the Teen Smart Program and used a manual tracking tool to record which members were sent the $20 gift card incentive for completing a preventive dental visit. By tracking individual members who were eligible for the incentive to determine whether they completed a preventive dental visit, Peach State was able to determine the true impact of the incentive on the PIP results. The member incentive evaluation results showed that only 7 (0.9 percent) of 764 eligible teenage members in Muscogee County joined the Teen Smart program, completed a preventive dental visit, and submitted documentation to receive the gift card incentive. Based on the low enrollment rate and the low preventive dental visit rate among eligible members, Peach State chose to abandon the intervention, concluding that the Teen Smart program did not motivate adolescent members to complete a preventive dental visit.

Peach State reported a number of lessons learned from testing the Teen Smart webpage and member incentive in an effort to increase the preventive dental visit rate in Muscogee County:

- Live telephonic outreach was more effective in getting a member response than mailings.
- A smaller sample size is more conducive to testing rapid-cycle interventions.
- Interventions should be tested on a subset of members.

Given the lack of meaningful improvement demonstrated for the *Annual Dental Visits* PIP, the CMO should review the techniques used to identify and prioritize failure modes in the process for members to complete a preventive dental visit. The CMO's approach to prioritizing process failures and developing interventions to address high-priority failures should include the use of data and organizational experience to validate the assumed relationship between key drivers, failure modes, and interventions. By using data to validate these relationships, the CMO will be more likely to address the root causes impeding improvement and develop more impactful interventions to test.

Appropriate Use of ADHD Medications

Peach State's goal for the *Appropriate Use of ADHD Medications* PIP was to identify and test interventions to improve the 30-day follow-up appointment compliance rate among members 6–12 years of age in the Atlanta region who received an initial ADHD medication prescription. The SMART Aim goal was not achieved during the life of the PIP; therefore, the PIP was assigned a level of *Low Confidence*. The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting the Atlanta region as the targeted geographic area and the initial key driver diagram illustrating the content theory behind the PIP were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-3 below provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure.

Table 2-3—SMART Aim Measure Results for *Appropriate Use of ADHD Medications*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of children 6 to 12 years of age in the Atlanta region with a newly prescribed ADHD medication during the measurement month that had a follow-up care visit within 30 days of the ADHD medication being dispensed	42.9%	45.5%	44.1%	*Low Confidence*

The CMO established a goal of improving the ADHD medication follow-up visit rate among members 6 to 12 years old in the Atlanta region, from 42.9 percent to 45.5 percent. None of the PIP's monthly SMART Aim measurements met the goal rate of 45.5 percent. The details of the improvement processes used and the interventions tested are presented in Table 2-4 and in the subsequent narrative description.

Table 2-4—Intervention Testing for *Appropriate Use of ADHD Medications*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Reminder outreach calls to members	Member education	Member forgets to attend the scheduled medication follow-up appointment	The CMO provided a data-driven rationale for the decision to abandon the intervention.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO identified one intervention to test for the PIP: reminder outreach calls to members. To carry out the intervention, the CMO identified eligible members through pharmacy claims data. Automated proactive outreach manager (POM) calls were placed to eligible members, offering a recorded message about the importance of attending follow-up appointments and providing an opportunity to speak with a clinical staff member for additional information and assistance with such issues as scheduling an appointment or arranging transportation for the appointment.

Peach State's data collection process for evaluating intervention effectiveness relied on medical claims data to determine the numerator (number of eligible members who completed a follow-up visit within 30 days) for each monthly measurement. The CMO clearly documented intervention-specific evaluation data in table format and provided an accurate interpretation of the data provided; however, the monthly rates relied on claims data, and the CMO did not provide a thorough discussion of how claims lag impacted the monthly measurements during intervention testing. In general, medical claims data are not a methodologically sound data source for monthly PDSA measurements because of the lag-time associated with claims completeness.

In addition to plotting monthly rates on a run chart, the CMO also analyzed the follow-up visit rate among members who received the intervention and those who did not. The CMO chose to abandon the intervention because the members who received the reminder outreach calls did not have a higher follow-up visit rate. Based on the analysis of intervention evaluation results, the CMO concluded that the intervention was not effective at improving the ADHD medication follow-up visit rate. Peach State documented the following lessons learned at the conclusion of the PIP:

- It is critical to validate the assumptions of the key driver diagram with data to ensure that the true drivers and failures are identified prior to selecting an intervention.
- Analyzing member data in addition to using institutional knowledge and experience will result in more robust processes for developing the key driver diagram, process map, FMEA, and intervention selection.
- It is important to consider the effects of seasonality and timing on the PIP topic when selecting intervention(s) and developing the plan for testing.
- The intervention testing plan should allow for sufficient data to be collected in as short an interval as possible to support rapid learning and intervention refinement. For example, evaluating an intervention in a few weeks rather than a few months is preferable.

Based on the validation findings for the *Appropriate Use of ADHD Medications* PIP, HSAG recommends that Peach State revisit the intervention determination processes used in Module 3 and the *Plan* step of the PDSA process used in Module 4 for this PIP. In Module 3, the CMO should ensure that the process mapping and FMEA activities undertaken by the PIP team are including the appropriate team members and utilizing the appropriate data sources. In Module 4, the CMO should consider seeking technical assistance from HSAG to ensure that the evaluation plan for chosen interventions is methodologically sound and that data sources and measures of effectiveness are clearly defined.

Avoidable Emergency Room Visits

Peach State's goal for the *Avoidable Emergency Room Visits* PIP was to identify and test interventions to reduce the avoidable ER visit rate at Hughes Spalding Hospital. Although the SMART Aim goal was achieved, the improvement could not be linked to the quality improvement processes; therefore, the PIP was assigned a level of *Low Confidence*. The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting Hughes Spalding Hospital as the targeted facility and the initial key driver diagram illustrating the content theory behind the PIP were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-5 below provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence assigned to the PIP by HSAG. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the lowest rate achieved for the SMART Aim measure and the PIP's confidence level.

Table 2-5—SMART Aim Measure Results for *Avoidable Emergency Room Visits*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Lowest Rate Achieved*	Confidence Level
The percentage of avoidable emergency room visits at Hughes Spalding Hospital during the measurement month for members 20 years of age and younger	39.1%	34.5%	26.9%	*Low Confidence*

*The Lowest Rate Achieved is reported for the *Avoidable Emergency Room Visits* SMART Aim measure because the measure is an inverse indicator, where a lower rate is better.

The CMO established a goal of reducing the avoidable ER rate for Hughes Spalding Hospital from 39.1 percent to 34.5 percent. Three of the PIP's monthly SMART Aim measurements were at or below the goal rate of 34.5 percent, with the lowest avoidable ER rate achieved being 26.9 percent. The details of the improvement processes used and the intervention tested for the *Avoidable Emergency Room Visits* PIP are presented in Table 2-6 and in the narrative description below.

Table 2-6—Intervention Testing for *Avoidable Emergency Room Visits*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Member awareness/ education outreach by live phone	Member awareness/education	Member does not know alternative sources of care	The CMO reported that it could not determine whether the intervention successfully impacted the SMART Aim measure; therefore, the CMO chose to abandon the intervention.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO identified one intervention for the PIP: live telephone member outreach following an avoidable ER visit at the targeted hospital. The intervention was targeted toward members who had a nonurgent visit at the targeted hospital and lived within close proximity to the hospital and the targeted urgent care facility.

To evaluate the intervention, Peach State tracked the number of members contacted for the intervention, the number of members who participated in the intervention, and the number of members who participated in the intervention and subsequently returned to the ER with an avoidable diagnosis. The CMO used a data collection process and data sources that relied on medical claims data to determine the numerator (number of members who received the intervention and had a subsequent avoidable ER visit) for each monthly measurement. In general, medical claims data are not a methodologically sound data source for monthly PDSA measurements because of the lag-time associated with claims completeness. The CMO also identified the timing of intervention initiation and seasonal variation in avoidable ER use as confounding factors that likely impacted the SMART Aim measure results.

Based on the analysis of intervention results, Peach State reported that it could not determine whether the member outreach intervention successfully impacted the SMART Aim measure. The CMO chose to abandon the intervention because it was resource-intensive and because its impact could not be fully determined. At the conclusion of the PIP, the CMO reported the following lessons learned:

- Assess resource constraints of external partners prior to implementation of an intervention.
- Thoroughly communicate with external partners to ensure buy-in and commitment to the project.
- The importance of planning the timing of intervention initiation—especially when seasonal variation is a known issue.

Given the validation findings for the *Avoidable Emergency Room Visits* PIP, HSAG recommends that Peach State apply lessons learned about engaging external partners and timing of intervention testing to future improvement efforts. Additionally, when planning the evaluation design for intervention testing, the CMO should avoid the use of claims data in most circumstances. Unless the CMO can verify that

claims lag will not be an issue, measures of intervention effectiveness should rely on alternative data sources that provide more real-time feedback for rapid improvement.

Bright Futures

Peach State's goal for the *Bright Futures* PIP was to identify and test interventions to improve the rate of members 14–18 years of age, assigned to Dr. Rachelle Dennis-Smith, who received an adolescent well visit. Although the SMART Aim goal was achieved, the improvement could not be clearly linked to the documented quality improvement processes; therefore, the PIP was assigned a level of *Low Confidence*. The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting Dr. Dennis-Smith as the targeted provider and the initial key driver diagram illustrating the content theory behind the PIP were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-7 provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure.

Table 2-7—SMART Aim Measure Results for *Bright Futures*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of adolescents 14 to 18 years of age assigned to Dr. Rachelle Dennis-Smith that had a preventive health visit during the measurement period	20.8%	23.8%	40.2%	*Low Confidence*

The CMO established a goal of improving the well-child visit rate for members 14–18 years of age, assigned to Dr. Rachelle Dennis-Smith, from 20.8 percent to 23.8 percent. The PIP's SMART Aim measurements met or exceeded the goal rate of 23.8 percent for three consecutive months during intervention testing. The details of the improvement processes used and the interventions tested are presented in Table 2-8 and in the subsequent narrative description.

Table 2-8—Intervention Testing for *Bright Futures*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Teen Smart webpage	Members complete preventive visits	Member and parent/guardian may not consider preventive health visits important	The CMO chose to abandon the Teen Smart webpage intervention due to the low number of visits to the webpage and the lack of response to the member survey about the webpage.
Teen Smart incentive program	Members complete preventive visits	Member or parent/guardian did not schedule annual preventive visit	The CMO chose to abandon the Teen Smart member incentive intervention based on the low enrollment rate and the decline in the well-visit rate among eligible members.

Peach State used a process map and FMEA in Module 3 to identify and select interventions to test for the PIP. Based on the process map and FMEA results, the CMO identified two interventions for the PIP: the Teen Smart webpage and the Teen Smart member incentive. The purpose of the Teen Smart webpage was to educate teen members and increase awareness about the importance of adolescent well visits. The CMO designed the webpage to attract teenage members and included health information and educational links on the importance of preventive healthcare. The purpose of the Teen Smart member incentive was to motivate teen members to schedule and complete an adolescent well visit. The incentive program offered eligible members who joined the Teen Smart program a $20 gift card for completing an adolescent well visit.

To test the Teen Smart webpage, Peach State collected survey data on adolescent members' perceptions of the webpage to evaluate effectiveness. The CMO used a telephone survey of members to evaluate member response to the Teen Smart webpage. Survey responses were not linked to whether the member scheduled or attended a preventive well-child visit. The CMO did monitor how many members who viewed the webpage subsequently scheduled or attended a well-child visit. Very few members visited the webpage, and there was a low response to the member survey. The CMO chose to abandon the Teen Smart webpage intervention due to the lack of member response.

To test the Teen Smart incentive program, Peach State tracked the number of members who enrolled in the Teen Smart program and the number of enrolled members who completed a well-child visit. The CMO's EPSDT coordinators collected data via telephone from members who enrolled in the Teen Smart Program and used a manual tracking tool to record which members were sent the $20 gift card incentive for completing a well-child visit. Only 31 adolescent members enrolled in the program, and only six of the 157 adolescent members assigned to the targeted provider who were invited to participate completed

a well-child visit. Peach State's decision to abandon the Teen Smart member incentive intervention was supported by the CMO's summary of intervention evaluation results. Based on the low enrollment rate and the decline in the well-visit rate among eligible members during intervention testing, the CMO concluded that the Teen Smart program did not motivate adolescent members to complete a well-child visit.

As a result of Peach State's inability to link the Teen Smart interventions to the demonstrated improvement in the adolescent well-visit rate, the CMO documented the following lessons learned at the conclusion of the PIP:

- It was difficult to distinguish the true impact of each intervention because two interventions were tested simultaneously for the PIP.
- Planning for future intervention testing should incorporate the consideration of seasonality on the outcome of interest and the ability to evaluate intervention success.
- Enhanced tracking methods are needed to better evaluate intervention effectiveness.

Peach State's performance on the *Bright Futures* PIP illustrates the importance of the intervention determination and PDSA cycle planning steps in the rapid-cycle process. HSAG recommends that Peach State revisit its approach to both Module 3 (Intervention Determination) and Module 4 (Plan-Do-Study-Act) and seek technical assistance from HSAG as the CMO refines its approaches to these steps for current and future improvement projects.

Comprehensive Diabetes Care

Peach State's goal for the *Comprehensive Diabetes Care* PIP was to identify and test interventions to improve the percentage of noncompliant diabetic members residing in DeKalb and Fulton Counties who received a diabetic retinal exam (DRE). Although the SMART Aim goal was achieved, the CMO could not clearly link the demonstrated improvement to the interventions tested; therefore, the PIP was assigned a level of *Low Confidence*. The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting DeKalb and Fulton counties as the targeted geographic area, and the initial key driver diagram illustrating the content theory behind the PIP, were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-9 provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure.

Table 2-9—SMART Aim Measure Results for *Comprehensive Diabetes Care*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of noncompliant diabetic members 18 to 75 years of age residing in DeKalb and Fulton counties that had a diabetic retinal exam during the measurement period	42.0%	56.0%	61.0%	*Low Confidence*

The CMO established a goal of improving the percentage of noncompliant diabetic members in DeKalb and Fulton counties who received a diabetic retinal exam by 14 percentage points, from 42.0 percent to 56.0 percent. Six of the PIP's monthly SMART Aim measurements met or exceeded the SMART Aim measure goal of 56.0 percent. The details of the improvement processes used and the interventions tested are presented in Table 2-10 and in the subsequent narrative description.

Table 2-10—Intervention Testing for *Comprehensive Diabetes Care*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Telephonic member outreach	Member's lack of knowledge	Member does not receive education on the need for obtaining an eye exam.	The CMO chose to abandon the live telephone outreach because of the low number of member DREs that could be directly attributed to the intervention.
Mail-based intervention	Member's lack of knowledge	• Member does not receive education on the need for obtaining an eye exam. • Member cannot be reached for telephone outreach and education because of incorrect contact information, no phone service, or no answer.	The CMO chose to abandon the intervention based on the analysis of findings and the conclusion that very few completed DREs could be attributed to the one-time mailer.
Educational home visits	Member's lack of knowledge	• Member does not receive education on the need for obtaining an eye exam. • Member cannot be reached for telephone outreach and education because of incorrect contact information, no phone service, or no answer.	The CMO chose to abandon the intervention based on the analysis of findings and the resource-intensive nature of the educational home visits intervention.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO identified three interventions for the PIP: live telephonic outreach to eligible members due for a diabetic eye exam, a one-time educational mailer to members who were not reached by telephone, and in-person home visits to members who were not reached by telephone or mail.

For the telephonic member outreach intervention, Peach State identified eligible diabetic members in DeKalb and Fulton counties who were due for a diabetic retinal exam (DRE) and provided a monthly list of members to the care support representative (CSR) team. The CSR team made live outbound calls to members to provide education and facilitate scheduling/attendance of the DRE appointment. To evaluate effectiveness of the intervention, the CMO used a manual tracking tool to track how many members were successfully reached for telephonic outreach and how many members completed their DRE. While claims were used to verify completion of the DRE, the CMO supplemented claims data with physician verification of the exam. The data collection process was methodologically sound; however, the CMO chose to abandon the telephonic outreach intervention after 90 days of testing due to the low rate of completed DREs attributed to telephonic outreach.

For the mail-based intervention, Peach State selected a "preapproved DCH eye exam mailer" and specifically targeted the intervention toward members in DeKalb and Fulton counties who were not reached by the prior telephone outreach intervention and those members who were reached by telephone but did not complete a DRE. The CMO reported in Module 4 that intervention effectiveness (occurrence of a DRE as a result of the one-time mailer) would be tracked by identifying completed DREs through medical claims. For this intervention, the CMO did not describe a supplemental data source (e.g., provider verification of DRE), as described for the telephone outreach intervention; therefore, HSAG concluded that the CMO relied on claims data to track the impact of the mailer on the DRE rate. In general, medical claims data are not a methodologically sound data source for monthly PDSA measurements because of the lag-time associated with claims completeness. The CMO reported that insufficient tracking processes prevented confirming that the three members who completed a DRE completed the appointment as a result of the mailer. Peach State chose to abandon the intervention based on the analysis of findings and the conclusion that very few completed DREs could be attributed to the one-time mailer.

For the education home visits intervention, Peach State identified high-risk diabetic members in DeKalb and Fulton counties who had not been successfully reached by the previous telephonic outreach and one-time mailer interventions. The CMO's member outreach field representatives attempted to contact and visit the identified high-risk members at home. The goal of the home visits was to provide education on health plan benefits and gaps in care related to the DRE. To evaluate intervention effectiveness, Peach State used a methodologically sound manual tracking tool to track how many members were successfully reached for an educational home visit and how many members completed their DRE. The CMO reported that it used member follow-up and provider verification as additional data sources of completed DREs, in addition to claims data. The CMO chose to abandon the intervention based on the analysis of findings and the resource-intensive nature of the educational home visits.

While Peach State concluded that the three interventions tested were not successful individually, the CMO reported that it plans to combine the three interventions and test the combined efforts as a single, multi-tiered intervention in the future. Peach State reported the following lessons learned as a result of the PIP:

- The CMO needs more accurate member phone number information in order for telephonic outreach to be a more successful intervention.
- The CMO needs to develop more meaningful measures of effectiveness and should stagger the timing of multiple interventions so that the individual impact of each intervention can be adequately assessed.
- The one-time mailer intervention, although passive, may be useful as the first step in a multi-tiered member outreach effort to improve eye exam rates, to prepare the member for subsequent, more interactive outreach.
- Telephonic and in-home outreach efforts should include identifying an ophthalmologist for the member and assistance with scheduling an appointment.
- When selecting an intervention to test, the CMO should consider cost and staffing needs in relation to the ability to sustain and spread the intervention.

If Peach State pursues testing the three combined interventions in a single, multi-tiered intervention strategy, HSAG recommends that the CMO seek technical assistance to ensure that the *Plan* step of the PDSA process to test the multi-tiered intervention includes the necessary components and incorporates a methodologically sound evaluation design. The evaluation plan should be designed to account for the multiple components and ensure that the CMO can gain meaningful information about the intervention and its individual components to drive further improvement of health outcomes for its diabetic members.

Member Satisfaction

Peach State's goal for the *Member Satisfaction* PIP, as reported in Module 5 (PIP Conclusions) was to identify and test interventions to improve the member satisfaction survey response rate. The CMO reported in the Module 4 submission for Intervention 1 that it chose to modify the SMART Aim statement, including the SMART Aim measure, and SMART Aim goal. The focus of the PIP was changed from improving member satisfaction survey results (percentage of overall satisfaction survey question responses with a score of "Always") to improving the member satisfaction survey response rate (percentage of member surveys completed). The CMO's SMART Aim measure reported in Module 5 (member satisfaction survey response rate) was changed from the approved measure (percentage of member surveys completed at the end of an in-bound call with a response to the overall satisfaction question of "4–Always") in Module 2. The PIP did not demonstrate evidence of achieving the approved SMART Aim goal in Modules 1 and 2. The CMO's modified SMART Aim statement changed the focus of the PIP from the approved methodology aimed at improving the overall member satisfaction survey results to improving the member satisfaction survey response rate. Because the PIP methodology was not executed as approved in Modules 1 and 2, the reported PIP results were not credible. A description

of the PIP's performance leading to the assignment of "Reported PIP results were not credible" is provided below.

The CMO's originally approved key driver diagram, SMART Aim statement, SMART Aim measure definition, and data collection methodology were documented in Modules 1 and 2. The CMO's rationale for focusing on improving the member survey response rate was provided in Module 4. Table 2-11 provides a summary of the SMART Aim measure results reported by the CMO in Module 5, at the conclusion of the PIP, and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure.

Table 2-11—SMART Aim Measure Results for *Member Satisfaction*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of members in the Atlanta region who completed the satisfaction survey	73.0%	80.0%	98.0%	*Reported PIP results were not credible*

Peach State's documentation in the Module 5 Submission Form established a goal of improving the member satisfaction response rate among members in the Atlanta region by 7.0 percentage points, from 73.0 percent to 80.0 percent. The CMO's final SMART Aim run chart included five monthly measurements surpassing the goal rate of 80.0 percent; however, the results were not credible because the CMO changed the SMART Aim measure definition from the methodology approved in Module 2.

Table 2-12—Intervention Testing for *Member Satisfaction*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Incentivize call center representatives to survey Atlanta region members after an inbound call	Member Engagement	Not enough members willing to participate in the survey	The CMO chose to abandon the intervention based on the analysis of findings, feedback from the CSR staff, and conclusions about lack of intervention effectiveness.
Outbound calls for members' surveys	Member Engagement	Not enough members willing to participate in the survey	The CMO chose to abandon the intervention and reported that the intervention required further testing to assess effectiveness and determine if sustained improvement in the survey response rate could be achieved.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO identified two interventions for the PIP: a customer service representative (CSR) incentive for completing member phone surveys during inbound member calls and after-hours outbound calls to members to collect member survey responses.

For the CSR incentive intervention, Peach State informed CSR staff of the incentive program, which offered a tiered reward system (extended lunch period, $10, $20, or $30 gift card) for the number of completed member surveys. Survey responses were tabulated and incentives were distributed monthly. To evaluate intervention effectiveness, the CMO tracked three measures monthly: the number of CSR staff members who received an incentive, the number of completed member surveys, and the member survey response rate for the targeted geographic region. The CMO reported that the number of CSR staff eligible for the incentive was low, ranging from two to five staff members, during four months of testing. Peach State chose to abandon the intervention based on the analysis of findings, feedback from the CSR staff, and conclusions regarding lack of intervention effectiveness.

For the outbound calls intervention, Peach State generated a weekly list of members who had called the customer service center for assistance. The CMO's member advocates called members on the list after normal business hours (3:00 p.m. to 7:00 p.m.) to request that the member complete a four-question telephone survey on satisfaction. To evaluate the intervention, Peach State tracked the number of outbound calls attempted and the number of members who completed the survey during the after-hours outbound call. The survey response rate was plotted monthly on the run chart. The CMO reported that, over the four months of intervention testing, 493 members were contacted by the member advocates to solicit a member survey and 464 members completed a survey during the outbound call. Peach State chose to abandon the outbound calls intervention and reported that the intervention required further testing to assess effectiveness and to determine if sustained improvement in the survey response rate could be achieved.

Peach State reported the following lessons learned as a result of the PIP:

- Incentive programs are not always successful at achieving the desired improvement.
- When developing incentives, it is critical to incorporate feedback from the targeted population.
- Members are less likely to complete a survey at the end of a member-initiated (inbound) call than during a CMO-initiated (outbound) call.
- Offering members a convenient time (after normal business hours) to complete a telephone survey increases the survey response rate and results in more positive survey responses.

While HSAG's rapid-cycle PIP methodology allows the CMOs a certain amount of flexibility to revise the SMART Aim statement as they progress through each module and learn additional information about the problem being addressed, the CMO must notify HSAG when the SMART Aim statement and/or SMART Aim measure need revisions and provide a written rationale for the desired changes. For substantial SMART Aim statement revisions, as seen in the *Member Satisfaction* PIP, the CMO should also arrange a technical assistance session with HSAG to ensure that the desired changes will not threaten the methodological integrity of the PIP.

Postpartum Care

Peach State's goal for the *Postpartum Care* PIP was to identify and test interventions to improve the postpartum visit rate among members who delivered a live birth with a Dourron Obstetrics/Gynecology (OB/GYN) Associates provider. The PIP's SMART Aim goal was achieved; however, some but not all of the quality improvement processes could be clearly linked to the demonstrated improvement. As a result, HSAG assigned the PIP a level of *Confidence*. A description of the PIP's performance leading to the assigned confidence level is provided below.

The CMO's initial key driver diagram illustrating the content theory for the PIP was documented in Module 1. The rationale for selecting Dourron OB/GYN Associates as the targeted facility for the PIP was reported in Module 4. The CMO reported that Dourron OB/GYN Associates was selected as a replacement for the original targeted provider, which was no longer available to participate in the PIP. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-13 provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence assigned to the PIP by HSAG. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the highest rate achieved for the SMART Aim measure and the PIP's confidence level.

Table 2-13—SMART Aim Measure Results for *Postpartum Care*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
The percentage of women under the care of Dourron OB/GYN Associates that had a postpartum visit 21 to 56 days following a live birth delivered at DeKalb Medical Center.	60.0%	65.0%	79.0%	*Confidence*

The CMO established a goal of improving the percentage of women who completed a postpartum visit with a Dourron OB/GYN Associates provider within 21–56 days post-delivery by 5 percentage points, from 60.0 percent to 65.0 percent. Four of the PIP's monthly SMART Aim measurements exceeded the goal of 65.0 percent. The details of the improvement processes used and the intervention tested are presented in Table 2-14 and in the subsequent narrative description.

Table 2-14—Intervention Testing for *Postpartum Care*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Proactive Automated Outreach Calls	Member awareness/participation	Member does not schedule the PPCV because the member does not understand the importance of the PPCV	The CMO chose to abandon the intervention in favor of a more interactive intervention that could be more clearly assessed for impact on the timely postpartum visit rate.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO planned two interventions for the PIP but tested only one: proactive automated outreach (POM) calls to members. For this intervention, each week, Peach State identified members who delivered at the targeted hospital and who were cared for by a provider from the targeted practice. The list of identified members was used to generate weekly automated outbound calls to those members within 7–10 days after delivery. The automated calls provided education on the importance of scheduling the postpartum visit within 21–56 days after delivery.

Peach State used a methodologically sound data collection process and data sources to evaluate the effectiveness of the POM calls intervention. The CMO tracked how many members received the automated outreach calls, and of those, how many members completed a timely postpartum visit. Peach State reported the number of targeted members who were reached with an automated outreach call and completed a timely postpartum visit. The percentage increased from 50 percent (six out of 12) in August, to 76 percent (22 out of 29) in September, to 79 percent in October (15 out of 19), and to 79 percent in November (11 out of 14). Despite the improvement in the SMART Aim measure, Peach State chose to abandon the intervention stating that the results were inconclusive because the CMO did not have direct, member-reported data confirming that the automated call was the reason that the member completed the timely postpartum visit. While the CMO's interpretation of results held the PIP to a higher standard (establishing causality between the intervention and demonstrated improvement) than required for HSAG's rapid-cycle PIP validation process, the documentation suggested that the demonstrated improvement could not be solely attributed to the intervention.

The CMO documented the following lessons learned as a result of the PIP:

- The importance of communicating all requirements of external partners prior to selecting a provider practice for the PIP.
- Ensuring that the outcome (timely postpartum visit) can be linked to the intervention (automated outreach calls) is critical to the success of the PIP.

Based on the validation findings for the *Postpartum Care* PIP, HSAG recommends that Peach State select appropriate and methodologically sound measures to evaluate intervention effectiveness for the

PDSA process in Module 4. The CMO should identify the data sources and data collection processes for the PDSA measures prior to the initiation of intervention testing and confirm that the selected measures will provide meaningful data that will give the CMO and other stakeholders confidence that the results can be used to support conclusions about the impact of the intervention on the desired improvement. If the PDSA measures are not thoughtfully identified and defined in a way that will provide needed results, substantial improvement efforts will be expended without obtaining the necessary information to achieve the CMO's improvement goals.

Provider Satisfaction

Peach State's goal for the *Provider Satisfaction* PIP was to identify and test interventions to reduce the time required to complete the prior authorization (PA) process for providers at Ear, Nose, & Throat (ENT) of Georgia. The SMART Aim goal was achieved; however, some but not all of the quality improvement processes could be clearly linked to the demonstrated improvement. As a result, HSAG assigned the PIP a level of *Confidence*. The details of the PIP's performance leading to the assigned confidence level are described below.

The CMO's rationale for selecting the prior authorization process for ENT of Georgia providers as an area for improvement and the PIP's initial key driver diagram illustrating the content theory behind the PIP were documented in Module 1. The CMO defined the SMART Aim measure and data collection methodology in Module 2. Table 2-15 below provides a summary of the SMART Aim measure results reported by the CMO and the level of confidence HSAG assigned to the PIP. The table presents the baseline rate and goal rate for the SMART Aim measure, as well as the lowest rate achieved (lower is better) for the SMART Aim measure.

Table 2-15—SMART Aim Measure Results for *Provider Satisfaction*

SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Lowest Rate Achieved*	Confidence Level
The average number of days to complete a prior authorization requested by ENT of Georgia	8.4 days	6.3 days	2 days	*Confidence*

* The Lowest Rate Achieved is reported for the *Provider Satisfaction* SMART Aim measure because the measure is an inverse indicator, where a lower rate is better.

The CMO established a goal of reducing the average number of days required to complete a prior authorization request for ENT of Georgia providers from 8.4 days to 6.3 days. Following initiation of the intervention, the SMART Aim measure performed better than the goal of 6.3 days for 10 consecutive biweekly measurements. The details of the improvement processes used and the intervention tested for the *Provider Satisfaction* PIP are presented in Table 2-16 and in the narrative description below.

Table 2-16—Intervention Testing for *Provider Satisfaction*

Intervention	Key Driver Addressed	Failure Mode Addressed	Conclusions
Provider education on the prior authorization process	Provider awareness	Potential delay identified as incomplete clinical documentation submitted by requesting provider	The CMO chose to continue testing the intervention with additional provider groups and plans to adopt and spread the intervention if additional testing with other providers demonstrates similar success in reducing prior authorization turnaround time.

Peach State used a process map and FMEA to identify and select interventions to test. Based on the process map and FMEA results, the CMO identified one intervention for the PIP: provider education and follow-up support for the PA process, to reduce errors in PA requests by the targeted provider and ultimately reduce average PA turnaround time for the targeted provider practice. For the provider education intervention, Peach State compiled an educational packet with information about the PA process, including critical elements of documentation to support medical necessity, authorization submission channels, how to accurately complete the PA form, and tips on avoiding a lengthy PA turnaround time. The CMO met with office staff at ENT of Georgia, reviewed the educational packet, and shared contact information for telephonic support during the PA process.

To evaluate the effectiveness of the provider education intervention, Peach State manually tracked the biweekly average PA turnaround time for the targeted provider practice. The CMO also tracked the number of errors in each PA request received from the targeted provider and the targeted provider's satisfaction with the training session. The CMO reported the following summary of findings.

> The (run) chart demonstrated that the SMART Aim was reached and sustained. It was not possible to determine that the intervention caused this effect; a correlation analysis was performed and showed that there was no correlation between the number of errors and the amount of TAT (turnaround time) in each PA request. The team became aware of other factors that occurred after the intervention was implemented such as the internal PA process was updated and additional staff were hired, each having the potential to have a positive effect on TAT.

Based on the analysis of findings, Peach State concluded, "Attaining the SMART Aim was likely attributed to a combination of several factors—provider education, increase in staff, and an improved internal process." The CMO chose to continue testing the intervention with additional provider groups and plans to adopt and spread the intervention if additional testing with other providers demonstrates

similar success in reducing PA turnaround time. Peach State reported the following lessons learned as a result of the PIP:

- For future PIPs, the CMO will anticipate delays when working with provider groups and identify alternative provider groups as part of a contingency plan.
- The importance of keeping a routine schedule of PIP team meetings to ensure all team members are updated on the project's progress.
- The importance of assessing confounding factors when interpreting the impact of the intervention on the SMART Aim measure.
- Conducting a pre-intervention and post-intervention survey of the targeted provider gives additional insight into the provider satisfaction level.

Based on the validation findings of the *Provider Satisfaction* PIP, and as recommended above for other PIPs, HSAG recommends that Peach State closely examine its approach to selecting interventions for testing and identifying measures to evaluate intervention effectiveness. These key steps that occur in Modules 3 and 4 of the rapid-cycle PIP process are pivotal in achieving the desired outcomes for each PIP.

3. Conclusions and Recommendations

Conclusions

A summary table of Peach State's performance across all eight PIPs, including reported SMART Aim measure rates and the level of confidence HSAG assigned for each PIP, is provided in Appendix A. HSAG determined *Confidence* in the results of two of the eight PIPs, *Postpartum Care* and *Provider Satisfaction*. The level of *Confidence* was assigned to the two PIPs because the SMART Aim goal was achieved and some but not all of the CMO's quality improvement processes could be linked to the demonstrated improvement.

HSAG assigned a level of *Low Confidence* for four of the CMO's eight PIPs: *Appropriate Use of ADHD Medications*, *Avoidable Emergency Room Visits*, *Bright Futures*, and *Comprehensive Diabetes Care*. The SMART Aim goal was not achieved for the *Appropriate Use of ADHD Medications* PIP but was achieved for the remaining three PIPs that were assigned a level of *Low Confidence*; however, the quality improvement processes in those three PIPs were not clearly linked to the demonstrated improvement.

HSAG determined that for two of Peach State's PIPs, *Annual Dental Visits* and *Member Satisfaction*, the CMO's reported PIP results were not credible. In the *Annual Dental Visits* PIP, the CMO did not use the approved Module 2 methodology for the SMART Aim measure and instead reported in the Module 4 Submission Forms that a cumulative rate was plotted on the SMART Aim run chart. In the *Member Satisfaction* PIP, the CMO reported in the Module 4 Submission Form that it chose to modify the SMART Aim statement, including the SMART Aim measure, and SMART Aim goal. The focus of the PIP was changed from improving member satisfaction survey results (percentage of overall satisfaction survey question responses with a score of "Always") to improving the member satisfaction survey response rate (percentage of member surveys completed).

Peach State's performance across the eight PIPs suggests that the CMO continues to have opportunities for improvement in executing the rapid-cycle PIP process. The CMO's greatest opportunities for improvement are in Module 3 (Intervention Determination) and Module 4 (Plan-Do-Study-Act). As evidenced by the PIP-specific validation findings, many of Peach State's PIPs achieved the SMART Aim goal but the demonstrated improvement could not be linked to the interventions tested. For some PIPs, the CMO reported learning that its process maps and FMEAs in Module 3 did not adequately identify the root causes that needed to be addressed in the PIP; therefore, the interventions selected for testing were unlikely to address the most critical barriers to improvement. Additionally, Peach State reported for many PIPs that the PDSA cycles conducted in Module 4 did not enable the CMO to make firm conclusions about the individual impact of an intervention on the SMART Aim measure. Peach State had challenges identifying appropriate measures of intervention effectiveness for the PDSA process. HSAG encourages the CMO to seek technical assistance from HSAG to address these critical areas of the rapid-cycle process for ongoing and future PIPs to support more efficient and fruitful intervention testing.

Recommendations

HSAG recommends the following for Peach State:

- Ensure detailed and accurate documentation of the SMART Aim statement, SMART Aim measure definition, baseline rate, and goal rate across all modules.
- If the CMO determines that the SMART Aim statement and/or SMART Aim measure need to be revised after Modules 1 and 2 have been approved by HSAG, the CMO must contact HSAG to discuss planned revisions and any methodological implications. Revisions to an approved SMART Aim statement and/or SMART Aim measure methodology must be clearly documented, including the rationale for the revisions, and submitted to HSAG. All subsequent module submissions should clearly explain any changes that were made to an approved SMART Aim statement and/or measure methodology, including the rationale for the changes.
- Institute centralized oversight of the data analysis and results reporting for all PIPs so that all rates are reported accurately and consistently. SMART Aim measure baseline and goal rates, and rate results should be reported to the same number of decimal places for all PIPs. HSAG recommends reporting all PIP rates to one decimal place.
- Conduct multiple sessions to develop and update the key driver diagram, process map, and FMEA, ensuring appropriate use of data and input from all relevant team members, for each PIP. The accuracy and completeness of the process and FMEA will serve as the foundation for identifying and developing impactful improvement strategies. Revisit and update the key driver diagram and FMEA throughout the improvement process. Each version of the key driver diagram and FMEA should be dated to document when it was last revised.
- As Peach State moves through the quality improvement process and conducts additional PDSA cycles, the CMO's PIP team should ensure that it is communicating Peach State's theory about changes that will lead to improvement. Without a common understanding of the theory, the CMO's PIP team may be working on changes for various perceived reasons.
- As Peach State tests new interventions, the CMO should ensure that it is making a prediction in each *Plan* step of the PDSA cycle and discussing the basis for the prediction. This will help keep everyone involved in the project focused on the theory for improvement.
- Avoid relying on medical claims as a data source when defining measures to be used in PDSA cycles, unless the CMO has strong evidence that the claims lag will be minimal. Seek technical assistance when considering the use of medical claims data for PDSA cycles so that methodological implications and potential alternative measures can be discussed.
- Incorporate detailed, process-level data into the intervention evaluation plan to further the CMO's understanding of intervention effects.
- Conduct a series of thoughtful and incremental PDSA cycles to accelerate the rate of improvement.
- When planning to test an intervention with multiple steps or components, consider staggering the initiation of the individual steps or components so that the impact of each step or component can be distinguished. A staggered approach to intervention testing may require shorter data collection

intervals so that the multiple intervention components can be introduced and tested within the life of the PIP.

- When planning a test of change, Peach State should think proactively (future tests and implementation).
- Determine the best method to identify the intended effect of an intervention prior to testing. The intended effect of the intervention should be known upfront to help determine which data need to be collected.

Appendix A. PIP Performance Summary Table

Table A-1—CY 2015 PIP Performance Summary

PIP Title	SMART Aim Measure	Baseline Rate	SMART Aim Goal Rate	Highest Rate Achieved	Confidence Level
Annual Dental Visits	The percentage of members 15 to 18 years of age in Muscogee County that completed a preventive dental visit	61.6%	64.6%	70.3%	*Reported PIP results were not credible*
Appropriate Use of ADHD Medications	The percentage of children 6 to 12 years of age in the Atlanta region with a newly prescribed ADHD medication during the measurement month that had a follow-up care visit within 30 days of the ADHD medication being dispensed	42.9%	45.5%	44.1%	*Low Confidence*
Avoidable Emergency Room Visits	The percentage of avoidable emergency room visits at Hughes Spalding Hospital during the measurement month for members 20 years of age and younger	39.1%	34.5%	26.9% (inverse measure)	*Low Confidence*
Bright Futures	The percentage of adolescents 14 to 18 years of age assigned to Dr. Rachelle Dennis-Smith that had a preventive health visit during the measurement period	20.8%	23.8%	40.2%	*Low Confidence*
Comprehensive Diabetes Care	The percentage of noncompliant diabetic members 18 to 75 years of age residing in DeKalb and Fulton counties that had a diabetic retinal exam during the measurement period	42.0%	56.0%	61.0%	*Low Confidence*
Member Satisfaction	The percentage of members in the Atlanta region who completed the satisfaction survey	73.0%	80.0%	98.0%	*Reported PIP results were not credible*
Postpartum Care	The percentage of women under the care of Dourron OB/GYN Associates that had a postpartum visit 21 to 56 days following a live birth delivered at DeKalb Medical Center	60.0%	65.0%	79.0%	*Confidence*
Provider Satisfaction	The average number of days to complete a prior authorization requested by ENT of Georgia	8.4 days	6.3 days	2 days (inverse measure)	*Confidence*