



Contraceptive Quality Measures Implementation Environmental Scan Report

Aligning Efforts to Implement Existing Contraceptive Quality Measures and Securing
Commitment for Appropriate Use

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EXECUTIVE SUMMARY

The Coalition to Expand Contraceptive Access (CECA) and the Planned Parenthood Federation of America (PPFA) have reconvened the National Contraceptive Quality Measures (NCQM) Workgroup, previously focused on developing nationally recognized contraceptive quality measures, to share information and lessons learned on implementation and policy. As part of the ongoing focus of this Workgroup and process to identify existing efforts and needs, CECA performed an environmental scan and facilitated Workgroup discussions to identify and summarize existing available evidence related to where and how contraceptive performance measures are being used. This working report is intended to be a guiding document for the field, describing the current status and ongoing opportunities for contraceptive care measurement. Many of the findings of the scan and Workgroup discussions are well understood by the field. This report serves to document and consolidate what is known and published on the subject. Updates to the report will be ongoing.

The measures of interest include the clinical measures of contraceptive provision for all women and postpartum women derived from claims or electronic health record (EHR) data and the Patient-Centered Contraceptive Counseling (PCCC) measure. Intermediary measures, including Self-Identified Need for Contraception (SINC) and screenings of pregnancy intention, were included in the context of defining the criteria for the contraceptive provision performance measures, such as for the SINC-based electronic clinical quality measures (eQMs) for contraceptive provision.

This environmental scan sought to answer the following key questions:

1. Where are contraceptive performance measures being implemented?
2. What are the facilitators and barriers to implementing these measures?
3. What implementation supports and resources are available?
4. What is the impact of using contraceptive performance measures?
5. What questions about implementation of contraceptive performance measures remain unanswered in the literature? Where are there gaps in the literature and/or adoption of the measures?

The CECA team identified 98 publications from the scan that address the research questions and met the inclusion criteria, including research studies, peer-reviewed journal articles, government publications, and organizational reports. This report summarizes both the available literature and discussions of the NCQM Workgroup on where contraceptive performance measures are implemented, what can be learned about implementation from existing efforts, the supports and resources available for implementation, and the use and result of performance measurement in contraceptive care. The findings also describe where gaps may exist in the literature and in the implementation efforts, highlighting which research questions have yet to be answered.



Where are Contraceptive Performance Measures Being Implemented?

Various national, state, and local efforts are underway to implement contraceptive performance measures, and include focus on data integration, building infrastructure, advancing policy, and creating programs to support contraceptive care advancement.


National Programs. Two of the biggest drivers of contraceptive performance measure implementation currently are the Title X Family Planning Program and the Center for Medicaid and CHIP Services. These federal programs facilitate measurement by establishing requirements of providers to report specified data and integrating data elements into national quality measure sets for optional reporting and use. Title X requires annual submission of Family Planning Annual Report (FPAR) data by all grantees. Contraceptive care provision, method, and counseling are required data elements within FPAR. Patient screenings to indicate contraceptive need are optional data elements in FPAR. As of 2018, the Centers for Medicare and Medicaid Services (CMS) included the most or moderately effective method of contraception provision measure for all women and postpartum women in the Adult and Child Core Sets for voluntary reporting by state Medicaid and CHIP agencies, used by CMS to promote health care quality and quality improvement. Beginning in fiscal year 2024, CMS will require states to report on all measures in the Child Core Set for children enrolled in Medicaid and CHIP, including contraceptive provision.

State Programs. Sites of care funded by state Medicaid agencies are main points of access of contraceptive care services for people across the country. It was reported that in 2019, 28 states voluntarily reported on contraceptive use as part of the CMS core set. According to a study conducted by The George Washington University Milken Institute School of Public Health, as of June 2021, seven states also included at least one CMS contraceptive core measures in their Medicaid managed care contracts and few states included contraceptive measures which were distinct from those in the CMS core set. In addition to managed care contracts, the literature shows that states have implemented contraceptive performance measures for various uses, including as part of coordinated care programs, financial incentive programs (e.g., physician incentive plans, physician health plans, pay for performance, pay for reporting), state quality improvement programs, and/or general CMS core set adoption. Mathematica, Upstream USA, and Illinois Contraceptive Access Now (ICAN!) were identified in the literature as playing a pivotal role in state level implementation of contraceptive performance measures.

Local Efforts. At the local level, public health entities and non-profit/community health centers (CHCs) are common implementers of not only the contraceptive provision measures but the SINC-based eQMs for contraceptive provision and PCCC, particularly if the provider is a Title X grantee site, PPFA affiliate, and/or participating in the Innovating Contraceptive Care in CHCs Project (formerly known as the Tandem Use Project), led by the University of California, San Francisco (UCSF). Limited published information was available at the local and clinic level on measure implementation. Much of what is known and published is provided by the organizations and programs that support measure development and technical assistance, including PPFA, ICAN!, Essential Access Health, UCSF, and others.

What are the Facilitators and Barriers to Implementing These Measures?

Factors that help and hinder contraceptive performance measure implementation were identified from published implementation guidance, broad analytical efforts, and NCQM Workgroup discussions. Much of the information was not specific to contraceptive performance measures or a single implementer, but to family planning and maternal and infant health performance measurement broadly that includes



contraceptive provision. The identified barriers and facilitators were categorized into two broad categories: data and data systems, and measurement capacity and infrastructure.

Data and Data Systems. The evidence suggests that there is variation across settings in how and to what extent people are documenting contraceptive provision and counseling, using appropriate codes and EHR data elements. Many resources that list specified claims codes have been created, but resources focused on EHR best practices are limited. Data extraction from claims and EHR data systems is also reportedly challenging. Studies have been performed to create and test more automated processes, but more exploration and development is needed. The facilitators of contraceptive performance measurement related to data and data systems include:

- Setting-specific guidance on coding and EHR completion.
- Training to providers and staff performing data analytics on various ways to capture patient history, decision-making, and other encounter elements related to contraceptive care.
- Developing tools to ease care provision and documentation, such as clinical reminders, patient screening surveys, clinical decision tools, and guidance on the technical constraints of EHRs that would limit accurate chart documentation.
- Conducting chart audits to monitor documentation rates and accuracy.


Measurement Capacity, Infrastructure, and Use/Interpretation. The literature acknowledges that clinical and administrative staff have existing demanding responsibilities and competing priorities. The incorporation of a new measure of contraceptive care could be burdensome. In addition to data and data system improvements, various supports are needed to assist with and ease contraceptive performance measurement. The following supports to assist the process of measure adoption were reported in the literature and by Workgroup members:

- Capacity building related to technical capabilities, including provider education around data collection, tools for data collection, use of EHR, and data entry, as well as training to administrative staff to extract, calculate, and report on the measures and identify quality improvement opportunities.
- Development of guidance around how the measures should be used and interpreted, especially in the context of tandem use and quality/performance assessment.
- Development of organizational systems and infrastructure, including building leadership support (nuanced around contraception), ensuring contraceptive care is a priority, developing organizational and administrative willingness to support measurement and system processes, and implementation of ongoing review and quality improvement processes.

What Implementation Supports and Resources are Available?

Various supports and resources are reported throughout the report, including those provided by measure developers and stewards, as well as the breadth of additional resources made available by implementers and a wide range of partners. The resources retrieved were organized into the following categories:

- **General Overviews and FAQs:** Descriptions of contraceptive performance measures and frequently asked questions, created for federal, state, and local/organizational programs, are widely available online. These overviews typically provide a background and description of the measure(s) and their importance, definitions and criteria, and distinct clarifications. Some describe how the measures should be used, reviewing data sources, listing relevant resources, and citing related clinical guidelines.

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- **Technical Resources:** Resources are available that discuss the technical specifications, implementation guidance, calculation methods, and reporting protocols, largely published by developers and measure stewards. Several describe the appropriate claims codes.
 - **Comprehensive Toolkit and Training Packages:** Comprehensive toolkits and training packages exist in the grey literature, although nearly all focused on implementing quality improvement and improving access, with some focus on performance measurement, including The Reproductive Health National Training Center's (RHNTC) Increasing Access to Contraception Toolkit and UCSF's repository of PCCC implementation resources.
 - **Intensive Learning:** Some implementers describe organizing and leading learning collaboratives focused on measure implementation and quality improvement, such as that used in the Innovating Contraceptive Care in CHCs Project, by the CMCS Maternal and Infant Health Initiative (MIHI), and the pre-endorsement Title X Performance Measurement Learning Collaborative (PMLC) supported by JSI. However, publicly available resources of current collaboratives are limited to those focused on supporting the adoption of contraceptive provision practices (e.g., LARC access, person-centered contraceptive counseling) versus direct focus on performance measurement. These collaboratives also have restricted access, so modules and other detailed information are not publicly available.


What is the Impact of Using Contraceptive Performance Measures?

To a fair extent, the use and impact of the contraceptive provision measures are described in published research studies and program evaluation efforts. Recent evidence shows that impact ranges from measurement improvements to improving access, quality, and programs and policies.

Studying and Evolving the Measures. Studying the implementation of the measures has been used to help evolve the measures themselves and identify the gaps or limitations in current measurement approaches. Improvement and evolution in performance measurement is part of continuous quality improvement and observed for the contraceptive performance measures, through implementer feedback. This level of study can help improve contraceptive performance measurement and inform development of new measures.

Studying Performance and Identifying Opportunities for Improvement. Tracking of the contraceptive provision performance measures is happening at different levels and rates are reported across these different levels in descriptive studies and via state and network reporting systems. Stratification of contraceptive provision is used to determine how use changes over time and how rates vary across populations. One important use is looking at differences by geographic area, funding source, clinical setting, and patient demographics to identify where opportunities for improvement exist. Aggregate data are commonly used by researchers and program analysts to measure contraceptive provision/use at the national, state, and network levels. It remains unclear the extent to which individual clinics, from which data elements are available through Medicaid claims, Title X data, and EHR systems and aggregated, are independently utilizing contraceptive measures to monitor performance at the clinic level.

Informing the Development of Clinical Decision Tools. The initiation of using contraceptive performance measures to improve clinical decision support through the development and evaluation of new tools is underway, provided in examples of published research and reports. However, the body of literature is very limited. These tools have the potential to improve the quality of person-centered



contraceptive care, provider satisfaction and workflow, patient experience, and patient outcomes, but further exploration and research are needed.

Measuring the Effects of Large-Scale Improvement Efforts. The scan identified examples of large-scale, multi-site quality improvement initiatives (e.g., cohorts, sponsored by the state). These initiatives have been implemented to address barriers to contraceptive access, focused on very targeted interventions, such as increasing funding for services and supplies, developing patient education and campaigns, and providing technical assistance and training focused on best practice implementation, person-centered care, measurement, and performing quality improvement. The identified studies found that, in all cases, use of contraception increased in respective patient populations after implementation of targeted interventions. Some found significant increases in LARC and most or moderately effective methods but reported that the focus was on increased access across all methods to account for patient preferences. It appears that the introduction of new measures, including the SINC-based eQMs and PCCC measure, is initiating new quality improvement efforts focused on improving person-centeredness, counseling, and clinical data collection.


Advancing Policy Reform. Separately from state-led quality improvement programs, the effects of state policy changes and clarification of existing policies have also been studied. Several states are reportedly addressing barriers to access through policy reform, including expanding eligibility and/or reimbursement, but few have published literature focused on the impact of change on contraceptive performance measures. Among states with publications on the effects of policy reform, all observed increases in contraceptive use across the range of methods impacted by eligibility and reimbursement expansion. For some states, expansion focused specifically on LARC access.

Implementing Financial Incentive Programs. While there is evidence of states implementing financial incentive programs among their managed care organizations for various care specialties, the total number of states using contraceptive care metrics to incentivize reporting and/or performance and the models of value-based payment being implemented remains unclear. Publications were identified for two states, one of which discontinued use of the metric given observed improvements in rates of contraceptive use and, retrospectively, issues of benchmarking. It is clear from the published literature that the field is sensitive to the risks associated with pay for performance and benchmarking for contraceptive provision, and opportunities exist to better capture the different models being used.

What are the Gaps and Opportunities?

This scan identified the following gaps in the literature and measure adoption:

- The literature base largely describes contraceptive provision performance measurement. While PCCC is increasingly being implemented across sites of care, more time is needed for the adoption of PCCC. There are very few publications describing the implementation of the PCCC measure and SINC questionnaire.
- The identified literature suggests that the provision measures are widely utilized, however very limited information is available on methodology to implement the measures, especially at the clinic and system level. There is also very limited literature describing how these measures are implemented at the site level for clinical performance measurement and quality monitoring.
- Evidence suggests that quality improvement efforts and policy change to address barriers to access is associated with increased contraceptive uptake. However, detailed information about financial incentive programs was limited to one state that discontinued using the contraceptive metric and benchmark in 2020.

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- While contraceptive provision is a key indicator of clinical performance, it serves as a surrogate for contraceptive use for some methods, considering the difference between documented contraceptive use and actual contraceptive use.

This scan identified the following opportunities for contraceptive care measurement and publication:

- To accurately track impact to care, access, and patient outcomes, there must be a standard, comprehensive set of clinical performance measures. If adopted in tandem across levels, the measures should drive improvement and help monitor progress.
- Further expansion, evolution, and improvement of the existing set of measures to assess performance in contraceptive care may be needed, along with the development, validation, and endorsement of new measures.
- Harmonizing existing measures and continuous capacity building will be important to sites of care.



INTRODUCTION

Environmental Scan Overview


The Coalition to Expand Contraceptive Access (CECA) and the Planned Parenthood Federation of America (PPFA) have reconvened the National Contraceptive Quality Measures (NCQM) Workgroup, previously focused on developing nationally recognized contraceptive quality measures, to share information and lessons learned on implementation and policy. The vision for the Workgroup is a future state where patient-centered contraceptive care is embedded and valued at all levels of the U.S. health care system and is accessible to all. In such an environment, contraceptive services and supplies are adequately reimbursed, and provider practices reflect evidence-based guidelines and best practices that uphold patient preferences and autonomy. The goal of the Workgroup is to ensure that meaningful, patient-centered quality measures and sexual and reproductive health performance measures are endorsed, maintained, disseminated, and implemented appropriately.

As part of the ongoing focus of this Workgroup and process to identify existing efforts and needs, CECA performed an environmental scan to identify and summarize existing available evidence related to where and how contraceptive performance measures are being used. The scan serves as a subsequent effort to CECA's [Issue Brief on Expanding Contraceptive Access through Performance Measures](#), which describes federal government performance measures for contraception, with particular attention toward the processes for developing and using measures and the potential pathway for widespread implementation. This next iteration of contraceptive performance measure scanning **explored the implementation efforts currently underway, with focus on the different implementers, resources, considerations, uses and results across varying contexts, programs, and clinical settings**. Integrated in the findings of the environmental scan are insights derived from Workgroup discussions. This document serves as a resource for ongoing Workgroup discussions and strategy exploration during scheduled quarterly meetings. The results will help the Workgroup identify and align efforts to continue to implement and improve existing contraceptive performance measures, including identifying strategies and innovations for adoption, impact, and policy and programmatic use, as well as lessons learned for new measure development.

This document is a working report which will be updated ongoingly. Many of the described findings are well understood by the field. This report serves to document and consolidate information on the current state of contraceptive measurement and highlight present opportunities.

Background

Measures are used to set goals, monitor status and progress, identify opportunities to improve care, and ultimately improve patient outcomes. Measures are reported at different levels and for different purposes, including for population-level tracking, research, and clinical performance measurement. Population-level measures track population outcomes over time overall and by subgroups and help inform policy-level priorities. Measures used in research enable evaluation of the effect of interventions on measured outcomes. Clinical measures assess the delivery of care and can allow for quality improvement, consumer education, and resource alignment. Across each type, measures can be reported by the patient as patient-reported outcome measures (PROMs) or by the provider/site of care. The addition of PROMs provides insights to care quality, patient experience, and outcomes that afford more completeness and comprehensiveness to performance measurement. Standardized measurement of contraceptive care quality and performance using different types/levels of measures can strengthen



the ability of the field to provide contraceptive services and use data to improve quality, access, and equity.

Sexual and reproductive health stakeholders, including the Office of Population Affairs (OPA), collaboratively developed the [first set of measures that were endorsed by the National Quality Forums \(NQF\) in 2016](#) to measure contraceptive provision. Additional measures of provision and patient experience were subsequently developed. These include the electronic clinical quality measures of contraceptive provision that rely on electronic health record (EHR) data and have more specified, precise denominator criteria, as well as a PROM of the person-centeredness of contraceptive counseling. The contraceptive care measures included in this environmental scan are described in more detail in the Methods section below.

Quality measurement in contraceptive care is unique relative to other performance measures because it assesses preference-sensitive decisions – the choice to avoid pregnancy, as well as the choice of which method to use. While other measures assess medical outcomes that have specified benchmarks, contraceptive care performance measures must respect patients’ autonomy to use contraceptives or not, and decide their preferred method(s). In this case, higher rates of contraceptive use do not necessarily mean improvement. This is why it has been difficult to determine the need for and meaning of a benchmark related to contraceptive provision. When using contraceptive provision measures to assess access and promote uptake, especially when measures are used to infer performance, it is critical to ensure patient preferences are being respected.¹ This means accounting for preference-based decision making among patients and preventing coercive practices. There is risk of ignoring patient preferences for methods other than those that are most or moderately effective, given their heightened focus and studied effectiveness.¹ A combination of different types of measures is required to address the unique multidimensional nature of contraceptive care quality. Tandem use of the provision measures and PROMs is meant to balance method uptake promotion and patient preferences. This reasoning is further described in the 2015 Contraception journal article titled, [‘Performance measures for contraceptive care: what are we actually trying to measure?’](#)¹

Based on the findings of this scan, the NCQM Workgroup may consider where gaps still exist across contraceptive care measurement, and where lessons can be translated to ongoing efforts to reach the optimal ecosystem of contraceptive care quality performance measures.

Research Questions

This environmental scan sought to answer the following key questions:

1. Where are contraceptive performance measures being implemented?
2. What are the barriers and facilitators to implementing these measures?
3. What implementation supports and resources are available?
4. What is the impact of using contraceptive performance measures?
5. What questions about implementation of contraceptive performance measures remain unanswered in the literature? Where are there gaps in the literature and/or adoption of the measures?

METHODS

Scope and Criteria

The scope of the environmental scan focused on the implementation and use of contraceptive performance measures in the U.S. published in peer-reviewed journal articles and grey literature, including governmental and organizational documents. Contraceptive performance measures included clinical measures of contraceptive provision for all women and postpartum women derived from claims or electronic health record (EHR) data, and the Patient-Centered Contraceptive Counseling (PCCC) measure. Intermediary measures, including Self-Identified Need for Contraception (SINC) and the Pregnancy Intention Screening Question (PISQ), were included in the context of defining the criteria for the contraceptive provision performance measures, including the SINC-based electronic clinical quality measures (eQMs) for contraceptive provision. Other instrument-based patient-reported outcomes, such as surveys of patient satisfaction, were not included in the scan due to wide variation in use and lack of standardization and tool validation. Otherwise, inclusion and exclusion criteria were purposefully broad to identify and retrieve as much potentially relevant information as possible and to ensure search results provided the full scope of contraceptive performance measures used in diverse contexts and settings.

Measure	Description
Claims-Based Contraceptive Provision Measures	The claims measures assess the provision of contraception to all women and postpartum women in need of contraceptive services using claims data. The measures include: <ol style="list-style-type: none"> (1) The percentage of eligible women provided a most effective or moderately effective contraceptive method; and (2) The percentage of eligible women provided a long-acting reversible contraceptive (LARC) method
Electronic Clinical Quality Measures (eQMs) of Contraceptive Provision	The eQMs of contraceptive provision are performance measures derived from standardized data elements in EHRs to calculate the percentage of women in need of contraceptive services or who are using contraception. The two measures derived from this process align with how the claims measures are defined for all women, with the exception of the denominator if implemented in tandem with SINC.
Person-Centered Contraceptive Counseling Measure (PCCC)	PCCC is a person-reported outcome performance measure (PRO-PM) that assesses the person-centeredness and patient experience of contraceptive counseling. PCCC serves as an outcome measure, as well as a counterbalance for the claims measures to ensure patient preferences are respected. When using contraceptive provision measure, it is important to use PCCC in tandem in order to monitor and prevent tendencies towards directive counseling.
Self-Identified Need for Contraception (SINC)	The SINC screening question is a clinical care tool designed to assess reproductive health care needs in a patient-centered manner that minimizes the potential for harm: <p style="text-align: center;"><i>We ask everyone about their reproductive health needs. Do you want to talk about contraception or pregnancy prevention during your visit today?</i></p> People who answer ‘no’ to this question should be excluded from the denominator in the eQMs algorithm.

Measure	Description
Pregnancy Intention	Additional screening tools and approaches are developed to assess family planning goals and need for contraception, including PISQ, One Key Question®, the PATH Framework, and the Reproductive Life Plan.

The scan is limited to U.S. populations and literature published within the past ten years, as all of the contraceptive performance measures of interest were largely developed during this time. This timeframe allowed the search to include formative research conducted during measure development and validation, prior to NQF endorsement of the contraceptive provision measures in 2016. Searches were conducted on Google, Google Scholar, and PubMed between March to May 2022. Snowball searching was used. The team reviewed bibliographies of the selected literature to identify other sources for the environmental scan and considered recommendations from research databases with similar topics and themes.

Limitations

This environmental scan report is limited to the contraceptive provision measures and PCCC. It does not include measures derived from patient surveys that are not streamlined or widely used. Although patient-reported surveys with contraception-related questions exist through the Centers for Disease Control and Prevention (CDC), there is not currently a standardized, robust system for reporting these outcomes at the clinic-level. It is also important to acknowledge that the findings reported here are not the result of a complete systematic review.

SUMMARY OF FINDINGS


The team identified 98 publications from the scan that address the research questions and met the inclusion criteria, including research studies, peer-reviewed journal articles, government publications, and organizational reports:

- 30 publications describe the current state of contraceptive performance measurement implementation, including which entities are implementing or supporting implementation of the measures.
- 15 publications describe the barriers and facilitators to implementation of clinical performance measurement, 10 of which are specific to contraceptive performance measurement.
- 32 publications describe the supports and resources available to assist sites of care with contraceptive performance measurement implementation.
- 31 publications describe how the measures have been used, including for research, tracking, quality and performance improvement, tool development, and reform.

This report describes where contraceptive performance measures are implemented, what can be learned about implementation from existing efforts, the supports and resources available for implementation, and the use and result of performance measurement in contraceptive care. The findings also describe where gaps may exist in the literature and in the implementation efforts, highlighting which research questions have yet to be answered.

Where are Contraceptive Performance Measures Being Implemented?

This section begins by reviewing the various national, state, and local efforts to implement contraceptive performance measures – the contraceptive care provision measures and PCCC measure – including what



is known and available about data integration, infrastructure, policy, and programs to support contraceptive care advancement.

1. Implementation among Federal Programs

Based on available literature and what is known about sexual and reproductive health care access in the U.S., two of the biggest drivers of contraceptive performance measure implementation currently are the Title X Family Planning Program and the Center for Medicaid and CHIP Services. These federal programs facilitate measurement by establishing requirements of providers to report specified data and integrating data elements into national quality measure sets for optional reporting and use.

The Health Resources and Services Administration (HRSA) Health Center Program collects data on contraceptive management in the Uniform Data System (UDS). However, data elements to calculate the contraceptive provision, PCCC, and patient screening measures are not yet included.


OPA Title X Family Planning Program (Title X)

Title X requires annual submission of Family Planning Annual Report (FPAR) data by all grantees. Contraceptive care provision, method, and counseling are required data elements within FPAR used to calculate and analyze the required contraceptive care performance measures for most and moderately effective contraceptive use and LARC use, derived from claims data.² The rollout of FPAR 2.0 in 2022 will include the SINC screening question as an optional data element and capabilities to calculate contraceptive provision eQMs using EHR data – for which OPA will support the provision of technical assistance to grantees.^{3,4} OPA does not currently have a designated EHR vendor and will work to gather data from some of the largest vendors in the country to inform implementation and technical assistance provision.⁴

Currently, OPA has dedicated websites for both NQF-endorsed measures for all women and postpartum women that describe the measures and how to calculate, interpret, and use the measures for improvement. Publicly available OPA tools listed on the site include current and past years measure specifications, SAS files, detailed instructions, and brief guidance on how to address the limitations of claims data.^{5,6} Specifications include definitions, inclusion and exclusion criteria (i.e., eligible population, numerator, denominator), data collection methods, calculation instructions, and FPAR variables used to analyze the measures. Additional information about FPAR forms and instructions to support reporting of site summary data in various tables is available through the OPA FPAR site.⁷ Several of these materials are also compiled and made available through the OPA-supported Reproductive Health National Training Center (RHNTC) and cited across other organizational websites and resources.⁸

CMS Center for Medicaid and CHIP Services (CMCS)

As of 2018, CMS included the most or moderately effective method of contraception provision measure, including LARC, for all women and postpartum women in the Adult and Child Core Sets for voluntary reporting by state Medicaid and CHIP agencies, used by CMS to promote health care quality and quality improvement.^{9,10} Beginning in fiscal year 2024, CMS will require states to report on all measures in the Child Core Set for children enrolled in Medicaid and CHIP, including contraceptive provision.^{11,12} The contraceptive provision measures are used to support CMS' focused efforts to improve maternal and perinatal health in Medicaid and CHIP. Several state level partners have adopted them, many of whom initially adopted them as part of the CMCS Maternal and Infant Health Initiative (MIHI) to support the development and testing of the contraceptive provision measures in Medicaid and CHIP.¹³ Partners



include state departments of public health, Medicaid agencies, managed care organizations, and local providers.

CMS provides the online Measures Inventory Tool that serves as a repository of information about the various measures included in the Adult and Child Core Sets.¹⁴ CMS also provides online reporting resources for both the Adult and Child Core Set which include a measure list, resource manual and technical specifications, HEDIS and non-HEDIS value set directories, data quality checklist, and guidance for calculating state-level rates using data from multiple reporting units.^{15,16} While the Medicaid and CHIP Program (MACPro) System exists to improve state core set reporting and federal review, it is reportedly “challenging to use” due in part to manual entry, and implementation of the quality measures depends on the quality of claims data.¹⁷ There is not another federally-provided robust, user-friendly data system through which to collect measures that exists today. Several state programs and public-private networks, however, have ongoing efforts to integrate CMS quality measures collection and reporting into unique state data systems.¹⁸ More information is provided in the section below on how state level partners are implementing the Core Set measures for contraceptive care.

2. Implementation among State Programs and Partners

Sites of care funded by state Medicaid agencies are main points of access of contraceptive care services for people across the country. Through the MIHI grant program, thirteen states and one territory adopted the claims-based contraceptive care provision measures during measure development. Since initiation of the MIHI grant program and inclusion of these measures in the CMS core measures set, 28 states voluntarily tracked contraceptive use, according to a National Academy of State Health Policy (NASHP) interactive map, updated October 2019.¹⁹ According to a study conducted by The George Washington University Milken Institute School of Public Health, as of June 2021, seven states included at least one CMS contraceptive core measures in their Medicaid managed care contracts and few states included contraceptive measures which were distinct from those in the CMS core set.^{20,21}

In addition to managed care contracts, the literature shows that states have implemented contraceptive performance measures for various uses, including as part of coordinated care programs, financial incentive programs (e.g., physician incentive plans, physician health plans, pay for performance, pay for reporting), state quality improvement programs, and/or general CMS core set adoption. An analytic brief on the MIHI grant program reports how states used the contraceptive care data during measure development.²² Iowa created a dashboard to examine the measures across the state and overlaid the data with hospital-level LARC provision data. Officials monitored where barriers exist and where additional training may be needed. Missouri used the contraceptive care measures to assess policy clarification, and California used the data to identify barriers to provision and monitored changes to state policy and payment regulations. How these states and others use the measures today are described further in this report.

Oregon is an example of one state that does not currently use the OPA-specified measures, but has a fairly long-standing comprehensive contraceptive care improvement initiative, implemented across their state coordinated care program. The program uses a measure of effective contraceptive use (ECU) developed prior to NQF endorsement of the OPA measures and is very similar to the most or moderately effective method of contraceptive use measure.²³ The Oregon Health Authority (OHA) implemented the All Payers All Claims (APAC) database to house administrative health care data for Oregon’s insured populations (excluding Tricare, Veterans Affairs, and self-insured plans), as well as the Medicaid

Management and Information System (MMIS) that collects, aggregates, and reports claims data across Medicaid providers in the state.

Several organizations were identified in the literature as playing a pivotal role in state level implementation of contraceptive performance measures, including Mathematica and Upstream USA.

Mathematica
Between 2014 to 2022, Mathematica led the technical assistance and analytic support program for the CMS Core Set measures. Support was provided to CMCS, states, and their quality partners to collect and use the measures, make informed decisions, and disseminate and track findings. Mathematica helped prepare several of the technical assistance resources available through CMS. Mathematica collaborates with CMCS to develop and conduct webinars, convene collaborative learning series, and build capacity among states for quality and performance improvement. ²⁴

Upstream USA
Upstream partners with multiple states to provide training and technical assistance to health centers that is patient-centered, evidence-based, and can eliminate barriers to offering the full range of contraceptive methods. Upstream ensures that clinicians and support staff are provided the needed training and tools to increase capacity. Examples of their work include teaching health center providers how to offer same-day access to contraception, training staff on insertions and implants, and implementing PISQ at every appointment. ^{25,26} Upstream also supports collection and aggregation of the contraceptive provision performance measures in partnership with two vendors and is currently exploring other collaborative opportunities for data collection. One example is Upstream's partnership with Azara to develop a user-friendly way to access essential data points related to the contraceptive measures related to pregnancy intention, contraceptive counseling, and contraceptive provision through a centralized data reporting and analytics platform, DRVS. ²⁷ The platform currently includes rates of pregnancy intention screening and rates of the most or moderately effective contraceptive method provided.

3. Implementation among Local Programs and Clinical Partners

At the local level, public health departments, non-profit/community health centers (CHCs), and some hospital systems are common implementers of not only the NQF-endorsed contraceptive provision measures but the SINC-based eQMs for contraceptive provision and PCCC, particularly if the provider is a Title X grantee site or collaborating with partners like UCSF and ICAN!. Limited published information on measure implementation was available at the local and clinic level, including organizational grey literature. Much of the context below was informed through discussion and review of internal documentation.

Planned Parenthood
Planned Parenthood health centers are vital providers of contraceptive care across the country with many receiving Title X funding and having supported testing and implementation of contraceptive performance measures. PPFA has supported capacity building among Planned Parenthood affiliates to implement and utilize quality measure reports in diverse EHR systems and has led quality improvement initiatives. Planned Parenthood has also helped develop resources to utilize quality scores in interactions with payers and policymakers. At the state level, PPFA supports advocacy for evidence-based policy and payment programs that help improve access to a broad range of contraceptive methods.

UCSF's Innovating Contraceptive Care in CHCs Project

UCSF is working toward endorsement of the SINC-based eQMs and PCCC measure and launched the Innovating Contraceptive Care in CHCs Project (formerly known as the Tandem Use Project) to test the implementation of both measures simultaneously. In collaboration with OCHIN, HealthEfficient, ICAN!/Alliance Chicago, Far Harbor, and the National Association of Community Health Centers (NACHCs), UCSF began partner engagement with CHCs, arranging technical assistance calls, and developing a learning community. The application for trial use was submitted. The team will guide and work with Primary Care Associations (PCAs) and Health Center Controlled Networks (HCCNs) to co-design the work to identify new models of contraception services for scale and spread that meet the needs of patients and care teams including recruitment of health centers, technical assistance and training, data and intervention coaching. CHCs will capture eQm baseline data, implement SINC screening within EHRs, focus on quality improvement, and participate in a learning collaborative. UCSF offers [PCCC](#), [eQm and SINC](#) resources publicly on their respective websites, including implementation materials for how to use the measures, conduct initial preparation, plan workflows, determine patient eligibility, and administer the surveys. Recordings of past webinars and presentations conducted by UCSF were also identified in the scan.²⁸⁻³⁰ The team provides training materials and sessions, support with progress towards survey distribution goals, assessing performance measure results, and technical assistance to adapt workflows and optimize the measurement implementation process.³¹ Far Harbor supports data extraction to calculate validity and reliability of the SINC-based eQMs.²⁸

ICAN!

In 2021, ICAN! launched a 5-year statewide initiative to build contraceptive care Quality Hubs. ICAN! primarily partners with Federally Qualified Health Centers (FQHCs) and supports them to collect and monitor key performance measures. ICAN! is working to incorporate PCCC in a digital platform that participating CHCs can use to obtain patient experience data and will track changes over time in the percentage of patients answering “excellent” on all four items.¹ Additionally, ICAN! will work with state Medicaid programs to incorporate contraceptive performance measures into MCOs metrics for financial incentive programs.

Essential Access Health

Essential Access Health leads the Title X program in California and Hawaii. Essential Access Health funds a network of subrecipient organizations to deliver contraceptive care services. It also supports clinical quality improvement initiatives and the implementation of contraceptive care measures, including PCCC; offers workforce trainings; and conducts advanced clinical research. Essential Access Health has established an annual cycle of guided self-assessments and action planning to improve the quality of contraceptive care.

What are the Barriers and Facilitators to Implementation?

This section summarizes what may help and hinder contraceptive performance measure implementation from published implementation guidance and broad analytical efforts. Much of this information is not specific to contraceptive performance measures, but to family planning and maternal and infant health performance measurement broadly that includes contraceptive provision.

While respective implementers likely track the barriers, facilitators, and lessons learned from implementation, the publicly available literature on this subject is generated from cross-cutting research

efforts and expert analyses, and is not limited to a single implementer nor specific to implementation research. Publications that highlight implementation factors focus on more than just implementation (e.g., studying the outcomes of contraceptive care quality improvement initiatives, studying changes in contraceptive use state-wide, and studying the barriers and facilitators to implementing patient-centered contraceptive care). Findings on this subject are also generated from implementation guidance provided by measure developers, such as UCSF, and partners that describe various considerations for implementation. These considerations should be identified and addressed by clinics to increase their likelihood of yielding meaningful data and improved outcomes, but the extent to which they achieve successful implementation of contraceptive performance measurement has not been studied. Aspects that particularly impact a single measure or program are highlighted. Potential solutions to challenges suggested in the literature are described where available.

Measure developers, including UCSF, continue to drive and study measure implementation and develop new implementation guidance accordingly. Part of the guidance being developed by UCSF includes measure (and tandem measure) use and interpretation.

1. *Data and Data Systems*


Key Highlights

- Evidence suggests that there is variation across settings in how and to what extent people are documenting contraceptive provision and counseling, using appropriate codes and EHR data capture elements. Many resources were created that list specified codes. Resources focused on EHR best practices are limited.
- Data extraction from claims and EHR data systems is reportedly challenging. Studies have been done to create and test more automated processes, but more exploration and development is needed.
- As reported by several partners, there is a need for additional guidance on how implementers should interpret the measures, including how to interpret them in tandem.
- Facilitators of contraceptive performance measurement related to data and data systems include
 - Setting-specific guidance on coding and EHR completion
 - Training to providers and staff performing data analytics on various ways to capture patient history, decision-making, and other encounter elements related to contraceptive care
 - Developing tools to ease care provision and documentation, such as clinical reminders, patient screening surveys, clinical decision tools, and guidance on the technical constraints of EHRs that would limit accurate chart documentation
 - Conducting chart audits to monitor documentation rates and accuracy

As described by measure developers and across a number of articles, the ability to implement and use contraceptive performance measures is impacted by data and data systems related to collection, extraction, and reporting. Reported barriers include issues with documentation and accuracy of data elements from which performance measures are calculated, challenges with data extraction and measure reporting, and lack of integrated data systems and timely linkages to support measure interpretation and system interoperability. The section describes which barriers were identified in the literature and what strategies may facilitate improvement from 11 publications.

Documentation


As UCSF describes on their eCQM website, standardized data elements are needed in EHRs to calculate the numerator and denominator of the contraceptive provision measures derived from EHR data.²⁸



Assurance of correct and complete data from claims, patient charts, and patient surveys is needed to calculate performance measures that accurately reflect contraceptive care provision and experience. A study conducted by UCSF using 2013 data from five Medicaid managed care plans with provider networks in California identified large gaps in the documentation of contraceptive use, pregnancy intention, and patient histories.³² The study found that documentation of contraception decreased with patient age and was not impacted by EHR systems. Additional analysis is required on contraception documentation in subspecialty settings, outside primary care, and by race/ethnicity, parity, or gravidity. Similarly, a 2016 study assessing the documentation of contraception and counseling in women undergoing bariatric surgery found that, of 1,012 women ages 18-45 years, charts of 26.9% of them had documentation of a contraceptive method.³³ This study concluded that in this clinical practice setting documentation of contraceptive use in this setting is suboptimal, and documentation of contraceptive counseling is lacking. Measures to enhance provider and patient awareness is needed to improve patient care. UCSF advises implementers to ensure clinical care providers are accurately and consistently documenting contraceptive use using standardized codes and provision of contraception counseling in patient notes. UCSF's described approaches to improving chart completeness that also encourage patient-centered contraceptive counseling include using notes templates during patient visits and including a clinical reminder for contraception provision or counseling in EHR systems that can prompt discussion and remind providers to complete chart documentation.³²

The effect of a quality improvement initiative on contraceptive use documentation among women receiving teratogenic medications in a rheumatology clinic was studied.³⁴ The 10-month quality improvement initiative was conducted between 2015 to 2016 to ensure proper documentation of contraception, offer the appropriate counseling, and conduct necessary follow up action (e.g., referral or prescription) for women at risk of becoming pregnant while taking teratogenic medications. The quality improvement initiative and its evaluation, occurring before NQF endorsement of the contraceptive provision measures, did not use the OPA or eCQM technical specifications for contraceptive use. However, using a measure of contraceptive use documentation and contraception counseling documentation, overall increases in documentation of contraceptive method use and counseling were demonstrated following the initiative. Researchers used electronic medical record data of the patient's medication list, social history, review of systems, provider assessment, medical/surgical history and statement in the provider note regarding discussion of contraception. The interventions included quality improvement presentations and training, adding a contraception question to the review of systems in EMR note templates, implementing patient screening questionnaires during clinic check-in, and targeted meetings with clinical staff. Key components of the approach were gaining and maintaining key stakeholder buy-in and desire to create sustainable systems-based EMR changes. The major EMR limitation described was provider note cloning and copy functionalities preventing the function of the contraceptive clinical reminder. The addition of a contraceptive reminder was found to be an effective strategy, but was impacted by the practice of note cloning in the local EMR.

An evaluation published in 2020 of clinician prescribing practices for contraceptive care reported that 76% of the Vermont-based providers surveyed said that a prompt reminding staff to ask about contraceptive use at the beginning of the visit was not in place in their EHR.³⁵ Due to the small sample size and generalizability limitations, further analysis is needed across various EHR systems to determine the use of prompts and identify implementation facilitators. The implementation of a family planning services screening question was assessed at nonobstetric visits within a primary care FQHC network.³⁶ The screening was implemented for support staff to ask women about their desire for family planning at check-in. Their response was displayed in the EMR for the provider to see during the appointment, and linked to the documentation tool to retrieve full responses. The study observed increases in support



staff comfort in asking the question over the study period, as well as increases in the response rate and family planning documentation rate, which suggests that implementing a contraceptive care prompt or screening support tool in EHR systems could be feasible within and potentially beyond FQHC networks.³⁶ However, further development of EHR systems and workflow improvements are needed to promote tool implementation and corresponding measures, such as implementation of the SINC questionnaire and SINC-based eQMs.

Data Accuracy

In terms of data accuracy, standardized coding systems are in place for numerator calculations for the contraceptive provision measures. Several resources, described in the Supports and Resources section below, specify the appropriate codes for different states, settings, providers, and reporting systems. These lists were created by various entities and evolved over time to provide clearer and more standardized coding and instruction to implementers. A 2019 CMCS analytic brief describes the evolution of the measures and their calculation through the MIHI framework.¹³ Feedback from MIHI grantees during development of the contraceptive provision measures enhanced the completeness of codes used to calculate the numerators.¹³ The outputs were a more comprehensive list of procedure, diagnostic, drug, and supply codes, some of which are grantee- and state-specific, as well as the recommendation for annual revision of these lists. Clarity around method coding is important given potential coding errors, missing data, and the ability to report patients as having an unknown method. This can result in a high volume of missing or unknown data, threatening the validity of measure calculations. One study evaluating a Delaware initiative to expand contraceptive access using FPAR data reported the fluctuation of adult female family planning users reported as having an unknown method – 6.6% in 2011, to 50.9% in 2013, and back down to about 24% in 2015-2017.³⁷ Chart auditing and record monitoring is another element of quality improvement that can help ensure completeness and accuracy of medical record by identifying provider improvement opportunities.³⁸

Data Extraction

According to a performance measures guidance document developed by the Contraceptive Action Plan (CAP), some sites of care find data extraction to be a challenging task.³⁹ The CAP guidance document suggests that implementing leads become acquainted with how contraceptive services are documented from data analysts or others intimately involved in the data, including clinical staff, billing staff, and practice managers. Pulling sample data and conducting a pilot test of performance measurement prior to full rollout is also recommended by CAP. Resources developed by UCSF, OPA, and other partners supporting implementation suggest that several entities are invested in easing what may be a cumbersome process of data extraction and reporting on contraceptive performance measurement. According to UCSF, part of the pre-implementation process is learning how to extrapolate existing data from EHRs, claims, and billing data to derive correct numerators and denominators and reporting them into data systems. Conducting a pre-implementation assessment can help identify and address pertinent operational considerations as implementers prepare to administer performance measures.⁴⁰

The team identified two studies that discuss data extraction efforts. The ability to electronically extract EHR data using a data-sharing system as compared to manual abstraction was evaluated using data from a family medicine clinic, among 142 female patient records. The study showed that manual abstraction identified 62% of women as contraceptive users, while the electronic extraction identified only 27%.⁴¹ Use of LARC, however, had a 96% agreement between the electronic and manual processes. Measures derived from electronic EHR data extraction may be underestimated given these findings. Additional development of these processes is needed to improve extraction. Another study discusses the creation and evaluation of a comprehensive data extraction algorithm to measure contraception counseling and

provision rates in outpatient settings.⁴² The study compared evidence of contraception counseling or provision using prescriptions, ICD codes, manual chart review, and search-term capture using an algorithm. The algorithm was found to identify more EMRs with evidence of contraceptive provision or counseling as compared to other methods. The study concludes that algorithms can be used effectively for computer-aided chart reviews but testing and refining are crucial for accuracy. Search-term capture is a critical component of algorithm development in unstructured data.

Data Integration and Linkages

A 2020 report describing recommendations for improving maternal and infant health outcomes among CMCS beneficiaries, prepared by Mathematica and informed by an expert Workgroup, describes two challenges to accessing timely data in performance measurement: (1) the lack of integrated data systems that capture service use, quality measurement, and relevant outcomes; and (2) the lack of timely linkages between data sources, such as electronic health records, vital statistics, and claims.⁴³ According to this report, robust data systems can maximize monitoring and evaluation efforts, interpretation, and support data-driven inferences that inform quality improvement and shape policy. While not necessary to implement contraceptive performance measures, linking data can offer a wealth of information and additional stratification capabilities to better understand outcomes and assess contraceptive inequities. Success in improving data systems is seen across states, such as Iowa and Oklahoma, that have linked vital records data with CMCS eligibility and claims data and enhanced their outcome monitoring capabilities.⁴³ CMCS, in partnership with CDC, developed data linkage training materials for state vital records, Medicaid claims data and Title V data to support collection and interpretation of core set quality measures.⁴⁴ UCSF's eQIM website also suggests that standardized data elements need to be interpretable across EHR systems.²⁸ Additional programming may be required to strengthen EHR data systems and the data elements within them. Additional exploration is needed to facilitate linkages with EHR systems, as well as with survey data, like the Pregnancy Risk Assessment Monitoring System (PRAMS), Behavioral Risk Factor Surveillance System (BRFSS), and the National Survey of Family Growth (NSFG).

State Examples of Data Linkages

The Iowa Department of Human Services linked 2014 birth certificates with Medicaid paid claims and data from the Women's Health Information System (WHIS) to study the characteristics and birth outcomes of women with Medicaid reimbursed births who also received Medicaid prenatal care coordination.⁴⁵

The Oklahoma Medicaid – Birth Certificate Linkage Project linked Medicaid and Birth Certificate data to study live births and maternal characteristics of women covered by Medicaid.⁴⁶ These linkages also allow Medicaid to perform additional statistical analysis, compare outcomes among Medicaid and non-Medicaid populations, and offer linkages to other data sources, such as PRAMS and WIC, that provide an increased variety of information not provided by Medicaid or birth certificate data alone.

2. Measurement Capacity and Infrastructure

Key Highlights

- The literature acknowledges that clinical and administrative staff have existing demanding responsibilities and competing priorities. The incorporation of a new measure of contraceptive care could be burdensome. In addition to data and data system improvements, various supports are needed to assist with and ease contraceptive performance measurement.
- The following supports to ease the process of measure adoption were reported in the literature:
 - Capacity building related to technical capabilities, including provider education around data collection, tools for data collection, use of EHR, and data entry, as well as training to administrative staff to extract, calculate, and report on the measures and identify quality improvement opportunities.
 - Development of organizational systems and infrastructure, including building leadership support (nuanced around contraception), ensuring contraceptive care is a priority, developing organizational and administrative willingness to support measurement and system processes, and implementation of ongoing review and quality improvement processes.

In addition to improving data and data systems, six publications suggest that other barriers to implementation include limited capacity of sites and available supports to adopt measurement efforts. Technical assistance to increase the capabilities of staff to implement and use the measures, as well as opportunities to strengthen the supports and infrastructure around adoption and use of measures are described.

Capacity Building

A number of websites and published reports developed by measure developers and stewards, federal program offices, and organizational partners describe the need for technical assistance to support the implementation of measures generally. As described in the implementation section above, Title X, CMS, and several partners in the field offer substantial technical assistance and training around the contraceptive performance measures to strengthening measurement capabilities. The MIHI evaluation report details that assistance with technical specifications and specific questions that require consultation with developers were often requested by sites of care when unforeseen variance or unique features of a delivery and data system existed, which was especially relevant to U.S. territories.¹³ Forms of described technical assistance approaches included a dedicated mailbox for questions, webinars, and a learning collaborative. The 2020 Mathematica report, discussing the recommendations of an expert Workgroup to improve maternal and infant health outcomes, recommends providing technical assistance to implementers on basic quality improvement, data and system enhancement opportunities, assessing success of quality improvement efforts and executing implementation strategies.⁴³ The provision of technical assistance and a focused learning collaborative are also features of the UCSF Innovating Contraceptive Care in CHCs Project.

Infrastructure

The 2020 Mathematica report also describes that sites require robust infrastructure for data collection, performance measurement, and performance improvement, that includes buy-in and support from leadership and staff (clinical and administrative), technical capabilities, quality improvement framework, and collaboration with partners.⁴³ UCSF's pre-implementation assessment for the PCCC measures describes similar policy and practice considerations across organizational, health center, and staffing factors, such as leadership support, standard workflows and processes, staff proficiencies, and dedicated systems.⁴⁰ One approach to building infrastructure around performance measurement

generally, suggested in the Mathematica report, is performance measurement integration into existing clinical quality improvement efforts and data collection tools.⁴³ An example of this is PPFA’s integration of PCCC into Press Ganey, making it widely available for use by PPFA affiliates.

The team identified one publication, a report produced by the National Family Planning & Reproductive Health Association (NFPRHA) in 2014, that identifies challenges to patient experience data collection and use within safety-net programs.⁴⁷ The challenges reported include barriers to prioritizing patient experience among competing priorities, limited capacity to develop or use reliable instruments, lack of staff skilled in measuring experience and interpreting statistical data collected, limited resources for training, development, and implementation, and limited technological skill, language proficiency, and/or literacy levels among patients.

More studies are needed to identify strategies to assure data quality, build capacity, strengthen infrastructure, and minimize burden – such as using EHR patient portals to collect PRO-PMs. The body of literature on this topic will likely form during and post implementation of the Innovating Contraceptive Care in CHCs Project, led by UCSF. Generally, instrument-based performance measures can be costly and time-consuming to implement and reap low response rates.¹ Obtaining robust measurements of patient experience requires great investments in data collection and other resources.¹

What Implementation Supports and Resources are Available?

Various supports and resources are reported in the sections above, namely in the descriptions of respective implementers. This section expands on additional resources available in the grey literature beyond what was created by developers and implementers and describes several of the tools created to address implementation challenges.

Resources	Description
Measure Overviews and FAQs	<p>Descriptions of contraceptive performance measures and frequently asked questions, created for federal, state, and local/organizational programs, are widely available online. These overviews typically provide a background and description of the measure(s) and their importance, definitions and criteria, and distinct clarifications. Some, such as those created by the Alliance for Innovation on Maternal Health (AIM)⁴⁸ and the National Family Planning & Reproductive Health Association⁴⁹, go as far as describing how the measures should be used, reviewing data sources, listing relevant resources, and citing related clinical guidelines. FAQs and other resources, available from OPA^{4(p0)}, UCSF²⁸, and CMS⁵⁰, offer additional clarification related to general inquiries and technical processes.</p>
Technical Resources	<p>Several publications describe the appropriate codes using Current Procedural Terminology (CPT), Healthcare Common Procedure Coding System (HCPCS), and International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10), including:</p> <ul style="list-style-type: none"> • The New Jersey Reproductive Health Access Project (NJ-RHAP) billing and coding guide for contraceptive services.⁵¹ • CAP Performance Measures Guidance Document³⁹ • Los Angeles Department of Public Health LARC Quality Improvement Toolkit⁵²

Resources	Description
	<ul style="list-style-type: none"> • Aetna Better Health of Pennsylvania Quality Measure Toolkit for Contraceptive Care for Postpartum Women Ages 15-44⁵³ <p>Resources that discuss the technical specifications, calculation methods, and reporting protocols are largely published by developers and measure stewards, including:</p> <ul style="list-style-type: none"> • OPA’s Measure Specifications and Instructions^{5,6} • OPA’s FPAR 2.0 Implementation Guide, Reporting Pathways⁵⁴ • OPA’s Contraceptive Care Performance Measure Calculator⁵⁵ • UCSF’s Implementation Resources for PCCC and eQMs^{28,56} • CMCS’s Core Set Technical Specifications and Resource Manual⁵⁰
Comprehensive Toolkits/Packages	<p>Comprehensive toolkits and training packages exist in the grey literature, although nearly all focused on implementing quality improvement and improving access, with some mention of performance measurement. Two examples of this are Oregon Health Authority’s Teaching and Counseling Tools that offer educational resources to sites of care and providers on contraception provision, and Every Body Texas’ Person-Centered Reproductive Counseling Toolkit.⁵⁷ The few toolkits identified more specific to measurement implementation include:</p> <ul style="list-style-type: none"> • The Reproductive Health National Training Center’s (RHNTC) Increasing Access to Contraception Toolkit⁵⁸ that offers templates for measure calculations and guidance on implementing quality improvement: <ul style="list-style-type: none"> ○ Contraceptive Access Change Package ○ Contraceptive Care Performance Measures Site Comparison Tool ○ Patient Experience Improvement Toolkit ○ Webinar recordings from developers offering measure overviews, such as the <i>Contraceptive Performance Measures: Striving for Patient-Centered Contraceptive Access Webinar</i> • National Clinical Training Center for Family Planning Resources <ul style="list-style-type: none"> ○ Coding with Ann: ICD-10 Codes for Each Birth Control Method^{59,60} • UCSF’s repository of PCCC implementation resources:⁵⁶ <ul style="list-style-type: none"> ○ Key Considerations Checklist ○ Workflow Template ○ Patient Eligibility One-Pager ○ Pre-Implementation Assessment ○ Sample Agenda for Initial Planning Meeting ○ Sample Delivery Script for Staff ○ Sample Key Staff ○ Sample Patient FAQs ○ Survey Case Scenarios
Intensive Learning	<p>Some implementers describe organizing and leading learning collaboratives focused on measure implementation and quality improvement, such as that used in the Innovating Contraceptive Care in CHCs Project, by the MIHI grant program, and the pre-endorsement Title X Performance Measurement Learning Collaborative (PMLC) supported</p>

Resources	Description
	<p>by JSI.⁶¹ However, publicly available resources of current collaboratives are limited to those focused on supporting the adoption of contraceptive provision practices (e.g., LARC access, person-centered contraceptive counseling) versus direct focus on performance measurement. These collaboratives also have restricted access, so modules and other detailed information are not publicly available. Examples include:</p> <ul style="list-style-type: none"> • Essential Access Health’s The Learning Exchange Contraceptive Series on Best Practices in Contraceptive Care⁶² • ASTHO’s Long-Acting Reversible Contraception (LARC) Learning Community, supported by CDC, CMMS, and OPA^{63,64} • Public Health Solutions’ Sexual and Reproductive Health Capacity Building Program that led state-based learning collaboratives, including the Quality Improvement Network for Contraceptive Access (QINCA) and the New York State Contraceptive Care Collaborative, for which resources were created such as the QINCA Contraceptive Access Change Package.⁶⁵

What is the Impact of Using Contraceptive Performance Measures?

Performance measures are created with the intention to provide meaningful and accurate information about the quality of care to patients, promote clinic performance that aligns with evidence and values, and highlight opportunities to identify and address barriers to access, quality, and equity. This includes determining the extent to which patients across different programs are using each method and how they perceive their care, as well as assessing the impact of improvement initiatives. This section discusses the use and impact of the contraceptive performance measures from research studies and program evaluation efforts. Recent evidence shows that impact ranges from measurement improvements to improving access, quality, and programs and policies.

1. Studying and Evolving the Measures

Key Highlights
<ul style="list-style-type: none"> • Improvement and evolution in performance measurement is part of continuous quality improvement and observed for the contraceptive performance measures, through implementer feedback. • The study of existing contraceptive measures and identification of gaps or limitations can help improve contraceptive performance measurement and inform development of new measures.

Through widespread implementation, developers and stewards are better able to assess how well the measures themselves are working in clinical settings to provide valid and reliable information on the concepts they measure. Assessments, informed by data analytics and provider feedback, can result in measure refinement, identification of measurement gaps or limitations, and the need for additional implementation supports. Two publications were identified that address contraceptive performance measurement evolution.

An assessment of the CMS core set contraceptive provision measures during development among MIHI grantees resulted in language modification to clarify the steps for calculating the numerator and

denominator, removal of unnecessary adjustments, step-by-step instructions for reporting, and refinements to SAS codes.¹³ Feedback informed developers and stewards to make the measures more feasible, useful, and understandable to states. Additionally, UCSF's eCQM website discusses the creation of the SINC-based eCQMs to calculate a more precise denominator for who is in need of contraceptive services.²⁸ eCQMs use EHR data and the SINC screening question to exclude patients who do not desire contraception.²⁸ This was a limitation identified in the claims-based provision measures that researchers at UCSF sought to address using EHR and patient-reported data.

2. Studying Performance and Identifying Opportunities for Improvement


Key Highlights

- Tracking of the contraceptive provision performance measures is happening at different levels. Rates are reported across these different levels in descriptive studies and state and network information systems.
- Stratification of contraceptive provision is used to determine how use changes over time and how rates vary across populations. One important use is looking at differences by geographic area, funding source, clinical setting, and patient demographics to identify where opportunities for improvement exist.
- Aggregate data are commonly used by researchers and program analysts to measure contraceptive provision, as defined by OPA, at the national, state, and network levels. It remains unclear the extent to which individual clinics, from which data elements are available through Medicaid claims, Title X data, and EHR systems and aggregated, are independently utilizing contraceptive measures to monitor performance at the clinic level.
- Descriptive data on the PCCC measure and SINC-based eCQMs are very limited in the current body of literature.

The team identified 11 publications focused on conveying descriptive statistics of contraceptive use, defined by OPA, and identifying improvement recommendations. These descriptive studies reported rates of contraceptive provision, with some comparison of different programs and geographic areas, and suggested factors associated with use. The studies offer insights about the state of contraceptive use at specific points in time, across varying levels of care, and use stratification variables to assess access and equity. These studies stratify contraceptive provision data by clinic funding source, patient eligibility, rurality, sociodemographic variables, and patient characteristics. One report describing the potential use of PCCC for descriptive analyses was identified, although the team did not retrieve any published articles using the measure in descriptive studies.

National- and State-Level Studies

At the national level, the team identified two journal articles discussing rates of contraceptive use using the provision performance measures. A study was conducted to determine the trends and regional variations in contraceptive provision among commercially insured women using commercial claims data from 2005 to 2014.⁶⁶ The researchers calculated contraceptive use according to the, then proposed, OPA measures of provision. The assessment showed the trend of most or moderately effective contraceptive method increasing overall in the commercial sector during the 10-year period. It was concluded that the measures could impact health plan contraceptive access policy. Another journal article describes the provision of contraception among 384 CHCs across 20 states in 2016 to 2018 by Title X status using OPA specifications. The study found that Title X sites of care are found to play an essential role in providing contraceptive care access as compared to non-Title X sites of care.



At the state level, the team identified five relevant publications. The New Jersey Health Care Quality Institute's Medicaid Policy Center launched the New Jersey Reproductive Health Access Project (NJ-RHAP), supported by Arnold Ventures, and released a document in 2020 summarizing the trends of contraceptive use in New Jersey across several factors and patient groups.²⁶ The report broadly describes contraceptive access in the state, related to policy, funding and payment strategies, and data. While not a study of impact, state-level descriptive data using the Medicaid contraceptive care core measures set are provided, in addition to a summary of disparities and barriers to access.

A 2018 cohort study, published in the grey literature by the University of Pittsburgh Graduate School of Public Health, assessed the rates of LARC use in Title X clinics in Pennsylvania using 2017 FPAR data. The study describes the rates of LARC use in Pennsylvania counties, comparing rurality, and suggests that high disparities in LARC access exist between rural and urban communities.⁶⁷

Additionally, the Kentucky Department for Medicaid Services Office of Health Data & Analytics published a data brief in September 2019 on contraceptive use among Medicaid beneficiaries in Kentucky in 2015 to 2017, per the OPA contraceptive performance measure, as part of MIHI.⁶⁸ Similarly, the New Mexico Department of Health Family Planning Program also published state-wide contraceptive performance measure data through their Indicator-Based Information System, focused on Title X statistics.⁶⁹ New Mexico tracks longitudinal contraceptive use data and made an interactive dashboard accessible online with context offered around state trends.⁷⁰ And lastly, a retrospective study assessed the rates of contraceptive use in Iowa in 2013, prior to NQF-endorsement.

Setting- and Population-Specific Studies

In terms of setting- and population-specific descriptive studies, the team identified two studies measuring contraceptive provision in the postpartum context and one study assessing contraceptive provision among individuals who are deaf or hard of hearing. The postpartum context is an area of care in which contraceptive use measures aim to impact maternal and infant health outcomes. It has been studied that promotion of healthy interpregnancy intervals can help prevent risk of preterm birth and associated health complications.⁷¹ One journal article describes a cohort study using 2016 state Medicaid data to assess the rate of contraceptive use within 60 days postpartum according to OPA specifications.⁷¹ The study described postpartum contraceptive use among Medicaid recipients in 45 states and Washington, DC using CMCS Core Set data and OPA measure specifications. This cohort study found a wide variation across states in effective postpartum contraceptive use, with states ranging from 19.8% to 43.9%. Findings suggest opportunities exist to improve access to these services at the clinic level. The barriers to care suggested in this article include low Medicaid reimbursement rates for clinicians, inconsistencies across states in how postpartum contraception is covered or billed in inpatient settings, and variation in how states monitor and incentivize high-quality contraceptive services across sites of care. The study reports that use of measures can point to systematic underuse of effective postpartum contraceptive care and suggests opportunities for state and federal Medicaid policy improvement.

Another study focused on the timely provision of contraception in the postpartum context, assessing social determinants of health and OPA contraceptive provision measures using 2014 Medicaid claims data.⁷² The study described that variation in rates across 17 states, stratified by demographic characteristics and concluded that rates in the US remained low, as of 2014. Researchers suggest that additional targeted interventions and policies are needed to improve access considering the significant variation across sociodemographic, social determinants of health, and geographic variables.

The OPA measures were used in a study to evaluate the contraceptive provision measures among individuals in Massachusetts who are deaf or hard of hearing compared to individuals who are not. 2014 claims data were used to calculate the contraceptive provision measures. Individuals who were deaf or hard of hearing were less likely to receive prescription contraception as well as a most or moderately effective method than individuals who were not deaf or hard of hearing. There were no differences in LARC or permanent contraception. The findings of this study suggest opportunities to do additional analyses exist, for comparative analyses and to determine the underlying factors for this pattern.⁷³

Lastly, the team identified one report, produced by Families USA, specific to PCCC. Families USA recommends PCCC integration into Medicaid and health plan quality measurement to incentivize and encourage sites of care to utilize PCCC and other contraceptive measures, such as provision. The report describes the potential such a metric has on improving the quality of care by the ability to identify improvement areas at varying levels of service delivery – health system, network, provider. No descriptive studies or reports describing trends in PCCC data were identified.⁷⁴

3. *Informing the Development of Clinical Decision Tools*

Key Highlights

- Although the body of literature is very limited, the initiation of using contraceptive performance measures to improve clinical decision support through the development and evaluation of new tools is underway.
- These tools have the potential to improve the quality of person-centered contraceptive care, provider satisfaction and workflow, patient experience, and patient outcomes.

Clinical decision support helps inform decisions about patients' care, including their decision to use contraceptives and selecting which method(s).⁷⁵ Tools can be used to collect timely information to support decision-making. Two publications were identified describing the use of contraceptive performance measures to develop and evaluate clinical decision support tools. One describes the effect of using a clinical tool on changes to the PCCC measure and the other, a project brief, describes a potential new project to expand clinical decision support for contraceptive practice guidelines.

The study identified in the grey literature was conducted by a student at the Lenoir-Rhyne University Department of Nursing to evaluate the effect of the My Birth Control tool on patient satisfaction using PCCC. The 3-month prospective study was implemented in a rural women's health clinic in western North Carolina. The study found that differences in patient satisfaction with contraceptive counseling upon implementing the My Birth Control tool were not significant, although providers expressed increased satisfaction with use of the tool.⁷⁶

The project brief, from NACHC, describes the overview of a new CDC-funded project to develop clinical decision support tools to increase adoption of clinical contraception guidelines.⁷⁷ According to the document, the project period of performance was January 2019 to July 2019. The document emphasizes the use of existing value sets and eQMs for contraceptive provision to develop and enhance the tools. The team did not identify any related reports with the outcomes of the project.

4. Measuring the Effects of Large-Scale Improvement Efforts

Key Highlights

- While clinic-level monitoring and improvement likely occurs, the scan identified large-scale, multi-site quality improvement initiatives (e.g., cohorts, sponsored by the state), some occurring before and after the OPA provision measures were endorsed.
- Multi-site quality improvement initiatives have been implemented to address barriers to contraceptive access, focused on very targeted interventions, such as increasing funding for services and supplies, developing patient education and campaigns, and providing technical assistance and training focused on best practice implementation, person-centered care, measurement, and performing quality improvement.
- The identified studies found that, in all cases, use of contraception increased in respective patient populations after implementation of targeted interventions. Some found significant increases in LARC and most or moderately effective methods, but reported that the focus was on increased access across all methods to account for patient preferences.
- It appears that the introduction of new measures, including the SINC-based eQMs and PCCC measure, is initiating new quality improvement efforts focused on improving person-centeredness, counseling, and clinical data collection.

Much of the grey literature discusses the use of contraceptive performance measures in the context of quality improvement initiatives established to address identified barriers to access.⁷⁸ OPA and CDC extensively document quality in family planning service delivery and recommendations for achieving high quality care.⁷⁹ A wide evidence base demonstrates the impact of implementing quality improvement practices on increasing the outcome of performance measures, in effort to improve access, quality, and equity.⁸⁰

The scan identified four contraceptive care quality improvement initiatives, including a learning collaborative, led by the state or multi-site program. These large-scale efforts, targeting participating clinics, assessed the impact of specific interventions on contraception use and access. Each showed improvements over time following their implementation. Part of each initiative was the integration of performance measurement in quality improvement and reliance on the measures to evaluate and improve intervention implementation. As the 2020 Mathematica report²² and a 2019 PPFA-Manatt report⁸¹ describe, significant variation in provision (e.g., comparatively lower rates) can be identified using standardized contraceptive performance measures, prompting the need to further evaluate potential barriers impeding access and uptake, potentially not addressed by interventions. Further evaluation includes performing community needs assessments and engaging sites to assess underlying impediments, such as inadequate training, challenges to stocking supplies, and inadequate or untimely reimbursement.

One study mentioned previously in this scan is the Title X PMLC designed to assess changes in the contraceptive provision performance measures based on the implementation of selected improvement practices.⁸² A mix of practices were implemented across twelve Title X grantee service sites and after eight months, ten sites calculated an increase in the number of patients using a most or moderately effective method of contraception. The median percent increase among sites was 6% from November 2015 to June 2016. The practices studied in this learning collaborative included:

- Ensuring access to a broad range of methods;
- Supporting patients through person-centered counseling and reproductive life planning;

- Developing systems to improve timeliness and on-site delivery of contraception, including same-day provision of all methods; and
- Utilizing diverse payment options to reduce cost as a barrier.

The results of the New York City-based Quality Improvement Network for Contraceptive Access (QINCA) conducted from 2015 to 2018 were published in April 2022.⁸³ QINCA was a learning collaborative of 17 teams from hospitals and health centers, supported by JSI, with the aim of implementing evidence-based improvement strategies to improve contraceptive access. The researchers measured contraceptive use, as defined by OPA, with an added focus on single-visit contraceptive access. The teams successfully implemented four evidence-based recommendations⁸⁴ and observed increases in use of most or moderately effective contraceptive methods and LARC among women in primary care, postabortion, and immediate postpartum settings. Practices related to documenting and reporting on contraceptive care included configuring EHRs to prompt best practices (e.g., documenting contraceptive need assessment, provision of counseling and method selection, monitoring referrals for contraceptive methods provided off-site), routinely generating standardized reports, and developing policies, procedures, and workflows that capture patient data to address inequities in care. Factors that reportedly drove quality improvement and could potentially improve measured outcomes included interdisciplinary stakeholder involvement, care cost considerations, demonstrating change among peers, and identifying champions to drive change.

QINCO 2.0 was launched in 2019 with support from PHS. Three publications were identified in the grey literature describing QINCA 2.0, including a virtual conference poster accepted to the 2021 Community Health Institute (CHI) & Expo and a New York State (NYS) Health Foundation report, and a New York City Department of Health and Mental Hygiene concept paper. The NYS Health Foundation report summarizes an initial assessment of NY clinics conducted by PHS. The assessment revealed that barriers to offering contraceptive care included a lack of provider knowledge and inadequate data reporting systems. QINCA 2.0 aimed to implement evidence-based practices to improve contraceptive care offering, including practices related to data collection and reporting. Since implementation it is reported that, among women seeking to prevent pregnancy, the percentage starting or continuing an effective method of contraceptive increased from 2% to 61% - which potentially suggests improved access, as well as improved data collection and reporting. The virtual poster describes some high-level findings from QINCA 2.0, including improvements in EHR configuration and standardized measure reports.⁸⁵ In May 2021, the New York City Department of Health and Mental Hygiene produced a concept paper describing the use of PCCC in QINCA 2.0 quality improvement efforts.⁸⁶ The previously referenced NYS Health Foundation report revealed that the results of measuring PCCC are inconclusive given the impact of COVID-19 on service provision and challenges related to data collection from increased telehealth visits.⁸⁵

A study conducted on the Delaware Contraceptive Access Now (DelCAN) initiative, a public-private initiative in Delaware that aims to increase access to contraceptives, analyzed changes in contraceptive use among Title X clients.³⁷ The study used 2008-2017 FPAR administrative data to compare changes in contraceptive method use among adult females in Delaware compared to other states. A 3.2% increase in LARC use was observed in Delaware, relative to changes in other states. The DelCAN initiative, a partnership between the state of Delaware and Upstream USA, sought to improve access to all methods, underscoring the central role that patient preference and autonomy plays in family planning. The initiative aimed to improve access by implementing specified interventions. Researchers were unable to untangle these interventions to determine which had more or less impact on changes in method use. The interventions included:

- Stocking LARC devices for clinics – the Delaware Division of Public Health repurposed funding to purchase LARC devices for health centers and help clinics provide free methods to clients;
- Offering training and technical assistance of clinical and support staff, provided by Upstream USA, to increase clinical, counseling, and administrative capacity to provide all methods of contraception; and
- Launching a public awareness campaign, targeting women aged 18 to 29 years, to promote free same-day contraceptive services.

5. Advancing Policy Reform

Key Highlights

- Separately from state-led quality improvement programs, as reported above, the effects of state policy changes and clarification of existing policies have also been studied. Several states are reportedly addressing barriers to access through policy reform, including expanding eligibility and/or reimbursement, but few have published literature focused on the impact of change on contraceptive performance measures.
- Among states with publications on the effects of policy reform, all observed increases in contraceptive use across the range of methods impacted by eligibility and reimbursement expansion. For some states, expansion focused specifically on LARC access.

Managed care contractual requirements, payment strategies, and policy guidance are examples of the methods through which policies, and sustainable funding and payment strategies can be advanced to improve contraceptive care access. Federal programs, states, and health care networks all play a role in reform and implementation of new approaches. Manatt produced a comprehensive state toolkit in 2019 describing the various policy options and data inventory needed to enhance access to family planning services in Medicaid. The toolkit provides a detailed summary of the various options states have to improve family planning services.⁸⁷ Another report published in 2016 by CMCS describes that various approaches states use to improve accessing to LARCs.⁸⁸ The report revealed that comparative analysis using contraceptive performance measures can reveal low utilization and therefore, spur further evaluation of barriers to access.

States and managed care organizations have significant contraception provision flexibilities under the Medicaid program which allows them to identify innovations to expand access to contraception, including through policy reform and clarification, alternate billing and reimbursement approaches, and outreach, education, collaboration.⁸⁹ This scan served to identify the literature published describing the relationship between contraceptive performance measures and policy and program changes that impact funding, payment, and coverage. Five studies assessed the extent to which state-level contraception utilization was impacted by federal and state policy changes related to reimbursement and coverage eligibility.

A retrospective cross-sectional study was conducted to evaluate the association of Medicaid expansion under the Affordable Care Act with changes in contraceptive use quality metrics from the CMCS Core Set.⁹⁰ The researchers analyzed 2013, 2014, and 2016 EHR data from a clinical research network of CHCs across 24 expansion and non-expansion states. Medicaid expansion was associated with an increase in use of LARC methods among women seeking care across safety-net clinics.

In 2021, researchers studied the impact of Emergency Medicaid coverage expansion on contraceptive use among immigrant women in Oregon.⁹¹ In 2017, Oregon passed new legislation to include 60 days of postpartum care coverage, including contraception, under Emergency Medicaid. The cohort study examined how this policy change impacted postpartum care and contraceptive use using 2010 to 2019 data linked from Medicaid claims and birth certificates. Use of any contraceptive method was defined using procedure and drug codes, and according to Oregon’s ECU measure. Comparing Oregon to South Carolina, a state that did not cover postpartum care, findings showed that both postpartum visits and postpartum contraceptive use significantly increased among low-income immigrant women following the policy change. Increases were observed across different methods of contraception.

Another retrospective study compared Medicaid eligibility changes in Massachusetts, which expanded Medicaid, and Maine, which restricted eligibility, on changes in LARC use.⁹² The study used 2013 to 2015 Medicaid claims data and found that Medicaid eligibility changes were associated with immediate changes in LARC uptake, with LARC insertions in Massachusetts increasing immediately following the change and a drop in LARC insertions evident in Maine.⁹²

The state of Louisiana implemented a Medicaid policy change that increased the LARC reimbursement rate to the wholesale acquisition cost. A retrospective study was conducted to assess changes in contraceptive provision measures using 2013 to 2015 Louisiana Medicaid claims data.⁹³ The study found that the increase in reimbursement rate is associated with a 2-fold likelihood increase in voluntary LARC use in 2015 compared to 2013. This trend in LARC uptake was seen across all patient and provider subgroups, but notably among patients receiving contraceptive care from family planning clinics.

Utah launched a statewide initiative to improve contraceptive access, the Utah Family Planning Elevated Contraceptive Access Program (FPE CAP), using various methods of improvement for enrolled health clinics. The program will evaluate the level of contraceptive care delivery and changes in trends to evaluate the program. The results of which have not been published because the program is still underway.⁹⁴


Other Examples of Contraceptive Policy Reform and Quality Improvement Initiatives

The team acknowledges the several other examples of state actions to advance contraceptive policy are described in the grey literature, including: New Jersey’s Reproductive Health Access Project and Plan First Program²⁶, Ohio’s FQHC Infant Vitality Initiative^{95,96}, Colorado’s Family Planning Initiative⁹⁷, California’s Medi-Cal and the Family PACT program⁹⁸, Illinois’ Family Planning Action Plan⁹⁹, St. Louis, Missouri’s Contraceptive CHOICE project¹⁰⁰, South Carolina’s Birth Outcome Initiative¹⁰¹, Michigan’s Contraceptive Access Project¹⁰², and more. The scan did not identify published studies on the impact of these state policy changes, with tracking and use of the current contraceptive performance measures.

6. Implementing Financial Incentive Programs

Key Highlights

- While there is evidence of states implementing financial incentive programs among their managed care organizations for various care specialties, the number of states using contraceptive care metrics to incentivize reporting and performance remains unclear. Publications were identified for two states, one of which discontinued use of the metric given observed improvements in rates of contraceptive use.
- It is clear from the published literature that the field is sensitive to the risks associated with pay for performance and benchmarking for contraceptive provision.



In addition to policy reform, financial incentive programs can be used to incentivize and optimize contraception access. Examples include a number of value-based payment models and purchasing arrangement among states, such as pay-for-reporting, pay-for-performance, shared-savings models, and population-based payment models. The 2019 PPFA-Manatt report suggests some states are implementing financial incentive programs for family planning outcomes that include contraceptive provision. The scan identified three publications that discuss value-based payment programs using measures of contraceptive use in California and Oregon.


In 2020, the California Department of Health Care Services (DHCS) implemented a new set of quality performance incentives for Medi-Cal managed care plans.¹⁰³ Many state Medicaid programs operate quality incentive programs for contracted managed care plans. These programs link some portion of plan revenue and/or nonrevenue consequences to quality performance. The DHCS Public Hospital Quality Improvement Program (DHCS QIP) is one program that uses the most or moderately effective contraceptive method measure in their value-based payment program. The team did not identify publications on the approach or result of the program.

Two publications were identified describing Oregon's financial incentive program for the provision of effective contraception.¹⁰⁴ Oregon implemented the quality incentive measures and incentive payments made to its coordinated care organizations (CCOs) to improve uptake of effective contraceptive use.¹⁰⁵ The ECU measure was created by OHA in 2014 and OHA decided to continue using this measure after CMS formally adopted the OPA provision measures. OHA relied on administrative claims data to determine if CCOs qualified for incentive payments and in order to qualify for the incentive payment, CCOs had to meet benchmarks or pre-established improvement targets. OHA recommended the implementation of specific strategies among CCOs to improve reproductive health care in tandem with setting performance standards.¹⁰⁵ OHA established a 53.9% benchmark in 2019, which was in the 90th percentile for CCOs in 2017. Statewide performance on the ECU measure increased from 35.4% in 2015 to 46.8% in 2018. Improvements among various racial and ethnic groups were also documented. In a published study of the association of implementing an incentive metric with ECU, researchers found a significant increase in contraceptive use every year among Medicaid beneficiaries.¹⁰⁴ As of 2020, the OHA no longer used the ECU metric as a result of the improvements made in contraceptive use. More information about Oregon's CCO ECU incentive metrics is described in the [ECU brief](#) and in an [Oregon cohort study published in 2020](#).

GAPS AND OPPORTUNITIES

Measures of contraceptive provision are being used in the field, with OPA, eCQM, or other similar specifications, for performance tracking, quality improvement, and reform. This scan highlighted the following gaps:

- **The literature base largely describes contraceptive provision performance measurement, likely given the longevity of the contraceptive provision measures as compared to PCCC.** While PCCC is increasingly being implemented across sites of care, more time is needed for the adoption of the measure and tandem use with the provision measures, in addition to implementation and impact studies.
- **The identified literature suggests that the provision measures are widely utilized, however very limited information is available on methodology to implement the measures, especially**




at the clinic and system level. Gaps in the literature include the results of pre-implementation assessments and reports on adoption strategies, implementation improvement efforts, and solutions to measurement barriers. An identified gap is the lack of published articles focused specifically on the barriers and facilitators to instrument-based performance measure implementation, such as PCCC. While implementation guides exist describing considerations for patient identification, survey distribution, data management, and project management, diverse implementation accounts/analyses and streamlined lessons learned are missing.¹⁰⁶ More analysis of and published lessons learned are needed about implementers' experiences, how experiences differ across settings, and the extent to which provision measures are compared by source (claims vs. EHR) or whether a hybrid approach is ever used.

- **There is very limited literature describing how these measures are implemented at the site level for clinical performance measurement and quality monitoring.** Most published literature describes how researchers and program analysts have used aggregate data to assess contraceptive use nationally and across states and large networks of health care centers.
- **Evidence suggests that quality improvement efforts and policy change to address barriers to access is associated with increased contraceptive uptake.** Detailed information about financial incentive programs was limited to one state that discontinued using the contraceptive metric and benchmark in 2020. However, the program was associated with increased effective contraceptive use among eligible sites of care.
- **There are very few publications describing the implementation of the SINC questionnaire and PCCC measure.** Several studies report on patient experience using study survey tools and population-based surveys. Similarly, the team identified clinic assessment tools to assess quality of contraceptive care, that includes evaluation of patient experience using a clinic-specific tools. These are key process- and outcome-related measure of quality, important for understanding the range of patient related factors including their decision-making and the experience of minority populations.
- **While contraceptive provision is a key indicator of clinical performance, it serves as a surrogate for contraceptive use for some methods, considering the difference between documented contraceptive use and actual contraceptive use.**³⁴ In this case and given the clinician-focused methodology of reporting the provision quality measures, collecting patient-reported outcome measures is an important component of assessing care quality and performance. Patient experience information collected can reveal barriers to care, including systemic problems, that provision measures may otherwise not identify within clinics.

The scan also highlighted a range of opportunities:

- **To accurately track impact to care, access, and patient outcomes, there must be a standard, comprehensive set of clinical performance measures.** If adopted in tandem across levels, the measures should drive improvement and help monitor progress.
- **Further expansion on the existing set of measures to assess performance in contraceptive care may be needed.** Such expansion would help better assess the range of factors uniquely related to contraceptive care and histories of injustices and inequality. Additionally, the need to assess process outcomes or intermediate measures, such as 1) whether or not the full range of methods was discussed/offered, and 2) provider delivery of resources on contraception options, should be further explored.


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- **Harmonizing existing measures and continuous capacity building will be important to sites of care.** This includes identifying approaches to improve and streamline electronic data collection, extraction and measure calculation. Strengthening the robustness, automation, and linking of reporting systems could impact the likelihood of measurement success.

When the right measures are in place to drive health care improvement, patient care and outcomes can and do improve. The continued development and testing of the contraceptive care performance measures – followed by integration into reporting systems at federal, state, regional, and local levels – has the potential to greatly expand contraceptive access and keep contraceptive care current with new innovations in health care delivery.

REFERENCES

1. Dehlendorf C, Bellanca H, Policar M. Performance measures for contraceptive care: what are we actually trying to measure? *Contraception*. 2015;91(6):433-437. doi:10.1016/j.contraception.2015.02.002
2. Contraceptive Care Measures | HHS Office of Population Affairs. Accessed April 26, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/contraceptive-care-measures>
3. Family Planning Annual Report (FPAR) 2.0 | HHS Office of Population Affairs. Accessed April 26, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/family-planning-annual-report/fpar2>
4. FPAR 2.0 Frequently Asked Questions | HHS Office of Population Affairs. Accessed April 26, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/family-planning-annual-report/faq>
5. Most or Moderately Effective Contraceptive Methods | HHS Office of Population Affairs. Accessed April 19, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/contraceptive-care-measures/most-or-moderately>
6. Long-Acting Reversible Contraceptive (LARC) Methods | HHS Office of Population Affairs. Accessed April 19, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/contraceptive-care-measures/long-acting-reversible>
7. Family Planning Annual Report Forms and Instructions | HHS Office of Population Affairs. Accessed April 26, 2022. <https://opa.hhs.gov/research-evaluation/title-x-services-research/family-planning-annual-report/family-planning-annual>
8. Search Resources | Reproductive Health National Training Center. Accessed May 4, 2022. https://rhntc.org/resources/search/family-planning?resources=contraceptive+care+measures&field_training_category=All&field_resource_type=All&opa_program=All&field_purpose=All&field_intended_audience=All&field_language=All&field_ce_credits_offered=All
9. 2022 Core Set of Maternal and Perinatal Health Measures for Medicaid and CHIP (Maternity Core Set). :1.
10. Centers for Medicare and Medicaid Services Measures Inventory Tool. Accessed May 4, 2022. <https://cmit.cms.gov/cmit/#/MeasureView?variantId=4901§ionNumber=10>
11. State Readiness to Report Mandatory Core Set Measures. MACPAC. Accessed May 4, 2022. <https://www.macpac.gov/publication/state-readiness-to-report-mandatory-core-set-measures/>
12. State Readiness for Mandatory Core Set Reporting. MACPAC. Accessed April 26, 2022. <https://www.macpac.gov/publication/state-readiness-for-mandatory-core-set-reporting/>
13. CMMS. *The Maternal and Infant Health Initiative Grant to Support Development and Testing of Medicaid Contraceptive Care Measures.*; 2019. <https://www.medicaid.gov/medicaid/quality-of-care/downloads/mihi-contraceptive-measures.pdf>
14. Centers for Medicare and Medicaid Services Measures Inventory Tool. Accessed April 26, 2022. <https://cmit.cms.gov/cmit/#/MeasureView?variantId=4901§ionNumber=1>
15. Adult Core Set Reporting Resources | Medicaid. Accessed April 26, 2022. <https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/adult-core-set-reporting-resources/index.html>
16. Child Core Set Reporting Resources | Medicaid. Accessed April 26, 2022. <https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/child-core-set-reporting-resources/index.html>
17. MACPro Quality Measures Introductory Reference Document for State Users. :79.


18. Quality Measure Core Set Implementation Plan. Policy & Medicine. Accessed April 26, 2022. <https://www.policymed.com/2016/04/quality-measure-core-set-implementation-plan.html>
19. State Medicaid Quality Measurement Activities for Women's Health. The National Academy for State Health Policy. Published September 18, 2019. Accessed April 26, 2022. <https://www.nashp.org/state-medicaid-quality-measurement-activities-for-womens-health/>
20. Sara Rosenbaum, Peter Shin, Maria Casoni, et al. *Family Planning and Medicaid Managed Care: Improving Access and Quality Through Integration: Phase One Report*. The George Washington University, Milken Institute School of Public Health. Arnold Ventures.; 2021. <https://publichealth.gwu.edu/sites/default/files/GW-AV%20Family%20Planning%20and%20Medicaid%20Managed%20Care%20Phase%20One%20Report%20Final%20June%202021.pdf>
21. Sara Rosenbaum, Peter Shin, Maria Casoni, et al. *Family Planning and Medicaid Managed Care: Improving Access and Quality Through Integration. Appendix 1: Medicaid Managed Care Contract Review Tables*. The George Washington University, Milken Institute School of Public Health. Arnold Ventures.; 2021. <https://publichealth.gwu.edu/sites/default/files/Appendix%201.pdf>
22. Bigby J, Anthony J, Hsu R, Fiorentini C, Rosenbach M. Recommendations for Maternal Health and Infant Health Quality Improvement in Medicaid and the Children's Health Insurance Program. :51.
23. Oregon Health Authority. Effective Contraceptive Use: Measure Basic Information. Published online December 30, 2020. [https://www.oregon.gov/oha/HPA/ANALYTICS/CCOMetrics/2020-2021-specs-\(Effective-Contraceptive-Use\)-20201230.pdf](https://www.oregon.gov/oha/HPA/ANALYTICS/CCOMetrics/2020-2021-specs-(Effective-Contraceptive-Use)-20201230.pdf)
24. Technical Assistance and Analytic Support for the Medicaid and CHIP Core Set Measures. Mathematica. Accessed April 26, 2022. <https://www.mathematica.org/projects/technical-assistance-and-analytic-support-for-the-medicaid-and-chip-core-set-measures>
25. Mark Edwards. Do you want to become pregnant in the next year? Upstream USA Patient Choice. Published July 24, 2020. Accessed May 4, 2022. <https://upstream.org/blog/2020/07/24/do-you-want-to-become-pregnant-in-the-next-year/>
26. New Jersey Health Care Quality Institute. *New Jersey Health Care Quality Institute Contraceptive Access Project: A Report to The Nicholson Foundation to Evaluate Current Access to Long Acting Reversible Contraceptives, Identify Barriers and Find Best Practices for All Women for Their Choices of Care.*; 2019. https://www.njhqci.org/wp-content/uploads/2020/10/New-Jersey-Health-Care-Quality-Institute-Contraceptive-Access-Findings-Document-and-Exec-Summary_Final.pdf
27. Building Tools in DRVS for Family Planning Programs. Accessed May 9, 2022. <https://www.azarahealthcare.com/blog/building-tools-in-drvs-for-family-planning-programs>
28. The Electronic Clinical Quality Measure of Contraceptive Provision. UCSF. Accessed May 4, 2022. <https://pcrhp.ucsf.edu/sinbasedeCQMs>
29. University of California San Francisco. Person-Centered Contraceptive Counseling Measure, Homepage. Person-Centered Contraceptive Counseling Measure. Accessed May 4, 2022. <https://pcccmeasure.ucsf.edu/home>
30. University of California San Francisco. Person-Centered Contraceptive Counseling Measure Implementation Resources. Person-Centered Contraceptive Counseling Measure. Accessed May 4, 2022. <https://pcccmeasure.ucsf.edu/implementation>
31. Reiley Reed. Patient-Reported Outcome Performance Measure (PROM-PM) for Contraceptive Counseling. Presented at: Cascade Pacific Action Alliance ACEs Work Group Meeting, Reproductive, Maternal and Child Health, Part 2; October 30, 2018. https://www.cpaawa.org/wp-content/uploads/2018/11/3B_PresentationPart2_20181030.pdf
32. Thiel de Bocanegra H, McKean A, Darney P, Saleeby E, Hulett D. Documentation of Contraception and Pregnancy Intention In Medicaid Managed Care. *Health Serv Res Manag Epidemiol*. 2018;5:2333392817748870. doi:10.1177/2333392817748870

- 
33. Mengesha B, Griffin L, Nagle A, Kiley J. Assessment of contraceptive needs in women undergoing bariatric surgery. *Contraception*. 2016;94(1):74-77. doi:10.1016/j.contraception.2016.02.027
 34. Sadun RE, Wells MA, Balevic SJ, et al. Increasing contraception use among women receiving teratogenic medications in a rheumatology clinic. *BMJ Open Qual*. 2018;7(3):e000269. doi:10.1136/bmj-2017-000269
 35. Julie Desrochers. Evaluation of Clinician Prescribing Practices for Contraceptive Care: A Quality Improvement Collaboration. Presented at: College of Nursing and Health Sciences Doctor of Nursing Practice (DNP) Project Publications; 2020. <https://scholarworks.uvm.edu/cgi/viewcontent.cgi?article=1068&context=cnhsdnp>
 36. Shah SD, Prine L, Waltermaurer E, Rubin SE. Feasibility study of family planning services screening as clinical decision support at an urban Federally Qualified Health Center network. *Contraception*. 2019;99(1):27-31. doi:10.1016/j.contraception.2018.10.004
 37. Boudreaux M, Xie L, Choi YS, Roby DH, Rendall MS. Changes to Contraceptive Method Use at Title X Clinics Following Delaware Contraceptive Access Now, 2008-2017. *Am J Public Health*. 2020;110(8):1214-1220. doi:10.2105/AJPH.2020.305666
 38. Mike DeWine, Jon Husted, Stephanie McCloud. *Reproductive Health & Wellness Program (RHWP) Title X Clinical Services & Protocols 2021*. Ohio Department of Health; 2021:278. https://odh.ohio.gov/wps/wcm/connect/gov/5f3d1d55-4e0f-4470-9c59-d9bb65eaaacb/2020+RHWP+Clinical+Protocols.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_M1HGGIK0N0JO00QO9DDDDM3000-5f3d1d55-4e0f-4470-9c59-d9bb65eaaacb-n8JYsO3
 39. Contraceptive Action Plan. CAP Performance Measures Guidance Document. <https://contraceptiveactionplan.org/index.php/tools-and-resources-menu-item/performance-measures-guidance>
 40. University of California San Francisco. PCCC Measure Pre-Implementation Assessment. <https://pcccmeasure.ucsf.edu/sites/g/files/tkssra3691/f/PCCC%20Pre-Implementation%20Assessment.pdf>
 41. Godfrey EM, West II, Holmes J, Keppel GA, Baldwin LM. Use of an electronic health record data sharing system for identifying current contraceptive use within the WWAMI region Practice and Research Network. *Contraception*. 2018;98(6):476-481. doi:10.1016/j.contraception.2018.06.005
 42. Roser BJ, Rubin SE, Nagarajan N, Wieland DL, Benfield NC. A data extraction algorithm for assessment of contraceptive counseling and provision. *Am J Obstet Gynecol*. 2018;218(3):333.e1-333.e5. doi:10.1016/j.ajog.2017.11.578
 43. Bigby J, Anthony J, Hsu R, Fiorentini C, Rosenbach M. Recommendations for Maternal Health and Infant Health Quality Improvement in Medicaid and the Children's Health Insurance Program. :51.
 44. Data and Measurement | Medicaid. Accessed May 5, 2022. <https://www.medicaid.gov/medicaid/quality-of-care/improvement-initiatives/maternal-infant-health/data-and-measurement/index.html>
 45. Iowa Department of Public Health. *2014 Iowa Medicaid Birth Certificate Match Report: Medicaid Prenatal Care Coordination*.; 2014. <https://idph.iowa.gov/Portals/1/userfiles/68/Medicaid/2014%20-%20Medicaid%20prenatal%20care%20coordination.pdf>
 46. Medicaid-Birth Certificate Linkage Project. Health Department. Accessed May 5, 2022. <https://oklahoma.gov/health/family-health/maternal-and-child-health-service/data-and-evaluation/medicaid-birth-certificate-linkage-project.html>
 47. Yasser Aman, Lily Davidson, Melissa Kleider, JoAnn Lamphere, Robin Summers. *Improving Sustainability through a Positive Patient Experience*. National Family Planning & Reproductive Health Association https://www.nationalfamilyplanning.org/file/la40resources.org/patient-experience/PX_FullSnapshot_FINAL-TO-POST.pdf
 48. Alliance for Innovation on Maternal Health. Clinical Performance Measures of Contraceptive Care. <https://safehealthcareforeverywoman.org/wp-content/uploads/clinical-performance-measures.pdf>

49. National Family Planning & Reproductive Health Association. Performance Measures for Contraceptive Care. Published online June 2018. https://www.nationalfamilyplanning.org/file/Onepager_Contraceptive-Measures_-_Messages-for-Health-Care-Settings.pdf
50. Adult and Child Health Care Quality Measures | Medicaid. Accessed May 12, 2022. <https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/index.html>
51. New Jersey Health Care Quality Institute. NJ-RHAP PACT Resource: Billing and Coding Guide for Contraceptive Services. Published online May 2020. <https://www.njhqci.org/wp-content/uploads/2020/05/NJRHAP-Tool-1-Billing-and-Coding.pdf>
52. Los Angeles Department of Public Health. Quality Improvement. Published online 2019. <http://publichealth.lacounty.gov/owh/LARC/LARCToolkit2019.QualityImprovement.pdf>
53. Aetna Better Health of Pennsylvania. Quality Measure Toolkit: Contraceptive Care for Postpartum Women Ages 15-44 (CCP). Published online 2020. https://www.aetnabetterhealth.com/pennsylvania/assets/pdf/provider/quality/2020_2021%20Contraceptive%20Care%20for%20Postpartum%20Women%20Ages%2015-44%20CCP%20-02.pdf
54. Office of Population Affairs. Family Planning Annual Report 2.0 Implementation Guide. Published online October 2021. <https://opa.hhs.gov/sites/default/files/2021-10/fpar-2.0-implementation-guide-oct-2021.pdf>
55. Reproductive Health National Training Center. Contraceptive Care Performance Measure Calculator. Accessed May 12, 2022. <https://rhntc.org/resources/contraceptive-care-performance-measure-calculator>
56. University of California San Francisco. Implementation Resources. Person-Centered Contraceptive Counseling Measure. Accessed May 12, 2022. <https://pccmeasure.ucsf.edu/implementation>
57. Person-Centered Reproductive Counseling Toolkit. Every Body Texas. Accessed May 9, 2022. <https://www.everybodytexas.org/pcrct>
58. Reproductive Health National Training Center. Increasing Access to Contraception Toolkit | Reproductive Health National Training Center. RHNTC. Published October 2021. Accessed May 12, 2022. <https://rhntc.org/resources/increasing-access-contraception-toolkit>
59. National Clinical Training Center for Family Planning. Coding with Ann: ICD-10 Codes for Each Birth Control Method - Episode 9 | Reproductive Health National Training Center. RHNTC. Published November 2018. Accessed May 12, 2022. <https://rhntc.org/resources/coding-ann-icd-10-codes-each-birth-control-method-episode-9>
60. National Clinical Training Center for Family Planning. Coding with Ann: ICD-10 Codes for Each Birth Control Method. Accessed May 12, 2022. <https://nctcfp.podbean.com/e/coding-with-ann-icd-10-codes-for-each-birth-control-method/>
61. Using Learning Collaboratives to Increase Access to Contraception. JSI. Published June 28, 2020. Accessed May 5, 2022. <https://www.jsi.com/using-learning-collaboratives-to-increase-access-to-contraception-achieve-healthy-people-2020-goal-for-contraceptive-use/>
62. The Learning Exchange. Essential Access Health. Accessed May 5, 2022. <https://www.essentialaccess.org/learning-exchange>
63. DeSisto CL, Estrich C, Kroelinger CD, et al. Using a multi-state Learning Community as an implementation strategy for immediate postpartum long-acting reversible contraception. *Implement Sci.* 2017;12(1):1-9.
64. ASTHO. Immediate Postpartum Long-Acting Reversible Contraception (LARC). <https://www.astho.org/globalassets/brief/increasing-access-to-contraception-infographic-series-larc.pdf>
65. Sexual and Reproductive Health Capacity Building Program (SRH-CB Program). Public Health Solutions. Accessed May 9, 2022. <https://www.healthsolutions.org/community-work/sexual-reproductive-health/capacity-building-program/>

66. Law A, Yu JS, Wang W, Lin J, Lynen R. Trends and regional variations in provision of contraception methods in a commercially insured population in the United States based on nationally proposed measures. *Contraception*. 2017;96(3):175-182. doi:10.1016/j.contraception.2017.05.011
67. Olivia Stransky. *Reducing Unintended Pregnancies in Pennsylvania: Increasing Access to Long-Acting Reversible Contraceptives in Title X Clinics*. University of Pittsburgh Graduate School of Public Health; 2018. http://d-scholarship.pitt.edu/35596/1/StranskyOlivia_MPHthesis_Dec2018.pdf
68. Emily Hankosky, Kailyn Conner, Saw Lian Ng, Angela Taylor, Dana Quesinberry. *Office of Health Data and Analytics Data Brief. Maternal and Infant Health Initiative Contraceptive Measures, 2015-2017*. Kentucky Cabinet for Health and Family Services; 2019. <https://chfs.ky.gov/agencies/ohda/Documents1/MaternalInfantHealthInitiativeContraceptiveMeasures.pdf>
69. NM-IBIS - Health Indicator Report Important Facts - Contraceptive Use: Use of Most-Effective and Moderately-Effective Contraceptive Methods. Accessed May 9, 2022. https://ibis.health.state.nm.us/indicator/important_facts/ContracepMeth.html
70. P002: Percent of female clients ages 15-19 seen in NMDOH public health offices who are provided most or moderately effective contraceptives. Accessed May 9, 2022. <https://embed.clearimpact.com/Measure/Embed/386630>
71. Rodriguez MI, Meath T, Watson K, Daly A, Tracy K, McConnell KJ. Postpartum Contraceptive Use Among US Medicaid Recipients. *JAMA Netw Open*. 2022;5(1):e2145175. doi:10.1001/jamanetworkopen.2021.45175
72. Nsiah I, Mali NV, Barnard M, Goswami S, Lyle C, Ramachandran S. The Influence of Social Determinants of Health on the Provision of Postpartum Contraceptives in Medicaid. *Healthcare*. 2022;10(2):298. doi:10.3390/healthcare10020298
73. Wu JP, Zhang J, McKee M, Akobirshoev I, McKee KS, Mitra M. Contraceptive Provision and Quality Care Measures for Insured Individuals in Massachusetts Who Are Deaf or Hard of Hearing. *Obstet Gynecol*. 2021;138(3):398-408. doi:10.1097/AOG.0000000000004505
74. Families USA. *Advancing Health Equity Through Improved Access to Patient-Centered Contraceptive Care.*; 2021. https://familiesusa.org/wp-content/uploads/2021/11/HE2021-352_PatientCenteredContraceptiveCare_IssueBrief_v2.pdf
75. Clinical Decision Support. Accessed May 11, 2022. <https://www.ahrq.gov/cpi/about/otherwebsites/clinical-decision-support/index.html>
76. Madison Tallent. *Implementation of "My Birth Control" Tool*. Lenoir-Rhyne University, Department of Nursing; 2021.
77. National Association of Community Health Centers. Clinical Decision Support (CDS) for Contraceptive Practice Guidelines. Published online March 21, 2019. https://www.nachc.org/wp-content/uploads/2019/03/CDC-Factsheet_CDS-Guidelines-3.21.19.pdf
78. Moniz MH, Gavin LE, Dalton VK. Performance Measures for Contraceptive Care: A New Tool to Enhance Access to Contraception. *Obstet Gynecol*. 2017;130(5):1121-1125. doi:10.1097/AOG.0000000000002314
79. Feldesman Tucker Leifer Fidell LLP. *Advancing Quality Family Planning Practices: A Guide For Health Centers*. National Association of Community Health Centers; 2017. https://www.nachc.org/wp-content/uploads/2017/06/NACHC_FPBooklet_FINAL-WEB-06-05-17.pdf
80. Klein DA, Arnold JJ, Reese ES. Provision of Contraception: Key Recommendations from the CDC. *Am Fam Physician*. 2015;91(9):625-633.
81. Planned Parenthood Federation of America, Manatt Health. *Measuring Quality Contraceptive Care in a Value-Based Payment System.*; 2019. <https://www.manatt.com/Manatt/media/Media/Images/People/PPFA-Manatt-Measuring-Quality-Contraceptive-Care.pdf>

- 
82. Loyola Briceno AC, Kawatu J, Saul K, et al. From theory to application: using performance measures for contraceptive care in the Title X family planning program. *Contraception*. 2017;96(3):166-174. doi:10.1016/j.contraception.2017.06.009
 83. Kawatu J, Clark M, Saul K, et al. Increasing access to single-visit contraception in urban health care settings: Findings from a multi-site learning collaborative. *Contraception*. 2022;108:25-31. doi:10.1016/j.contraception.2021.12.005
 84. Four Steps to Contraceptive Access_v6 5 20 835AM.pdf. Google Docs. Accessed May 9, 2022. https://drive.google.com/file/d/17GmRd234P8b9ns2GwJsifUjKSR_ND9i-/view?usp=embed_facebook
 85. Julia Keegan, Dayana Bermudez, Hestia Rojas, et al. Poster Presentation Program. Quality Improvement Network for Contraceptive Access (QINCA) 2.0: Integrating Reproductive Justice Through a Contraceptive Access Quality Improvement Program. Presented at: 2021 Community Health Institute (CHI) & Expo. <https://www.nachc.org/wp-content/uploads/2021/08/2021-CHI-Poster-Presentation-Program.pdf>
 86. NYC Health. Concept Paper, Family Planning Services. Published online May 28, 2021. <https://www1.nyc.gov/assets/doh/downloads/pdf/acco/2021/family-planning-services-concept-paper.pdf>
 87. Allison Orris, Gayle Mauser, Deborah Bachrach, April Grady. *Enhancing Access to Family Planning Services in Medicaid: A Toolkit for States*. Manatt Health; 2019. <https://www.manatt.com/getattachment/4dfc897e-6f05-42dd-b82b-a0bbc8725c52/attachment.aspx>
 88. Vikki Wachino. *State Medicaid Payment Approaches to Improve Access to Long-Acting Reversible Contraception*. Center for Medicaid and CHIP Services; 2016. <https://www.medicaid.gov/sites/default/files/Federal-Policy-Guidance/Downloads/CIB040816.pdf>
 89. Centers for Medicare & Medicaid Services. Contraception in Medicaid: Improving Maternal and Infant Health. Accessed September 10, 2019. <https://www.medicaid.gov/medicaid/quality-of-care/improvement-initiatives/maternal-and-infant-health/contraception/index.html>
 90. Darney BG, Jacob RL, Hoopes M, et al. Evaluation of Medicaid Expansion Under the Affordable Care Act and Contraceptive Care in US Community Health Centers. *JAMA Netw Open*. 2020;3(6):e206874. doi:10.1001/jamanetworkopen.2020.6874
 91. Rodriguez MI, Skye M, Lindner S, et al. Analysis of Contraceptive Use Among Immigrant Women Following Expansion of Medicaid Coverage for Postpartum Care. *JAMA Netw Open*. 2021;4(12):e2138983. doi:10.1001/jamanetworkopen.2021.38983
 92. Pace L, Saran I, Hawkins S. Impact of Medicaid Eligibility Changes on Long-acting Reversible Contraception Use in Massachusetts and Maine. *Med Care*. 2021; Publish Ahead of Print. doi:10.1097/MLR.0000000000001666
 93. Goldin Evans M, Broyles S, Frederiksen B, et al. Long-acting reversible contraceptive utilization after policy change increasing device reimbursement to wholesale acquisition cost in Louisiana. *Am J Obstet Gynecol*. 2019;221(2):128.e1-128.e10. doi:10.1016/j.ajog.2019.04.024
 94. JMIR Research Protocols - Evaluating a Longitudinal Cohort of Clinics Engaging in the Family Planning Elevated Contraceptive Access Program: Study Protocol for a Comparative Interrupted Time Series Analysis. Accessed May 9, 2022. <https://www.researchprotocols.org/2020/10/e18308/>
 95. Ohio FQHC Infant Vitality Initiative. Client-Centered Contraceptive Care Change Package. Published online December 2017. https://grc.osu.edu/sites/default/files/inline-files/CCHMC-2302%20Ohio%20FQHC%20Infant%20Vitality%20Initiative-FINAL-_12-29-17_0.pdf
 96. Ohio FQHC Infant Vitality Initiative. OPQC. Accessed May 12, 2022. <https://www.opqc.net/ohio-fqhc-infant-vitality-initiative>
 97. Colorado's success with long-acting reversible contraception (LARC) | Department of Public Health & Environment. Accessed May 12, 2022. <https://cdphe.colorado.gov/fpp/about-us/colorados-success-long-acting-reversible-contraception-larc>

- 
98. California Family PACT | Planning Access Care Treatment. Accessed May 12, 2022. <https://familypact.org/>
 99. Illinois Family Planning Action Plan | HFS. Accessed May 12, 2022. <https://www2.illinois.gov/hfs/MedicalClients/FamilyPlanning/Pages/IllinoisFamilyPlanningActionPlan.aspx>
 100. McNicholas C, Tessa M, Secura G, Peipert JF. The Contraceptive CHOICE Project Round Up: what we did and what we learned. *Clin Obstet Gynecol*. 2014;57(4):635-643. doi:10.1097/GRF.0000000000000070
 101. South Carolina | Birth Outcomes Initiative. Accessed May 12, 2022. <https://vip.scdhhs.gov/boi/>
 102. Michigan Contraceptive Access Project. Michigan Contraceptive Access Project. Accessed May 12, 2022. <https://www.contraceptiveaccess.org>
 103. Quality Incentive Program Design Decisions: An Overview of Programs in California and Selected Other States. :46.
 104. Rodriguez MI, Meath T, Huang J, Darney BG, McConnell KJ. Association of Implementing an Incentive Metric in the Oregon Medicaid Program With Effective Contraceptive Use. *JAMA Netw Open*. 2020;3(8):e2012540. doi:10.1001/jamanetworkopen.2020.12540
 105. Fernandez E. How Oregon Uses Medicaid Incentive Payments and Quality Measures to Improve Contraceptive Use and Timely Postpartum Care. The National Academy for State Health Policy. Published October 12, 2020. Accessed May 9, 2022. <https://www.nashp.org/how-oregon-uses-medicaid-incentive-payments-and-quality-measures-to-improve-contraceptive-use-and-timely-postpartum-care/>
 106. University of California San Francisco, National Family Planning & Reproductive Health Association. Person-Centered Contraceptive Counseling Measure (PCCC) Key Workflow Considerations Checklist for Clinical Site. <https://pcccmeasure.ucsf.edu/sites/g/files/tkssra3691/f/PCCC%20Key%20Considerations%20Checklist.pdf>