CECA
Coalition to Expand Contraceptive Access

Research Gaps Summary Report

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INTRODUCTION

Overview of the Research Roadmap Process

The Coalition to Expand Contraceptive Access (CECA) is leading a collaborative process to create a Priority Roadmap for Policy-Ready Contraceptive Research (Research Roadmap). Building on the existing foundation of the coalition and leveraging its unique positioning and diverse collaborative relationships, CECA's objectives are to:

- Craft a long-term, national-level research and policy agenda.
- Identify the rigorous evidence needed to influence policy, leverage federal processes, and set the stage for state-level implementation.
- Position funders, researchers, and clinical organizations to strategically invest in and carry out ongoing research to inform policies.

Developed through an iterative, collaborative process, this national contraceptive research agenda will describe the state of the field, and next steps, with an eye toward implementation. This process will ensure that the Research Roadmap is objective, rigorous, and aligned with the prioritized needs of policymakers and communities, leading to concrete, feasible recommendations for CECA's partners, including funders, researchers, clinical organization, and others in the field. Guided by the Theory of Change below, CECA is conducting activities across all phases to evaluate and support the generation of the rigorous evidence needed to guide policy.

Phases 1 and 2: Inputs		Phase 3: Outputs	Phase 4: Outcomes
Identify needs and innovations and review existing evidence	Prioritize research gaps and promising practices	Translate evidence into national research and policy priorities and actions	Identify steps needed to support widespread implementation of the agenda
Scoping	***Prioritization***	***Translation***	***Implementation Planning***

While the Research Roadmap focuses on contraceptive research, it is distinctive and uniquely designed to create a pathway for improving research and policy mechanisms, with a particular eye toward equity, consistent with a long-term vision of sexual and reproductive health and wellbeing for all. Application of scientific evidence and expertise from the field will reshape the contraceptive research and influence the policy landscape—by reconsidering the frameworks that guide us, the questions we ask, and how we design, measure, interpret, and share results.

Purpose of This Document

CECA carried out a series of targeted and strategic environmental scans and stakeholder discussions to survey existing evidence, identify potential policy levers, and identify where gaps remain to build a solid foundation of research to inform policy. The intent of this summary document is to provide the Research Roadmap Workgroup members with shared understanding of existing evidence, potential policy levers, and research gaps to prioritize areas for future exploration across three major themes:

1. Developing a Framework for Holistic, Equitable Contraceptive Access
2. Supporting Technology and Innovation in Contraceptive Service Delivery
3. Strengthening the Health Care Infrastructure to Expand Contraceptive Access

Methods

To begin the process of identifying existing needs and innovations in the field, CECA performed a series of six targeted and strategic environmental scans to survey existing evidence on key priority topics related to contraceptive access and identify where gaps rem in to build a solid foundation of research. The approach for selecting environmental scan topics involved:

- Reviewing ***input gathered in various meetings*** over the course of CECA's first year—particularly CECA's technical expert panels and workgroups, that included 89 individuals representing 50 organizations who contributed cross-sector expertise, including maternal and child health, primary care, and reproductive health providers and professional organizations; state and local health departments; Reproductive Justice organizations; health systems experts; and researchers.
- Conducting a brief ***database search*** for each topic to determine whether a sufficient body of literature exists on which to base an environmental scan.
- Hosting a series of calls with a ***small group of trusted stakeholders*** with diverse expertise, including provider organizations, researchers in a variety of disciplines, legal organizations, and reproductive justice and policy advocates, to gather feedback on the list of scans.

From these inputs, CECA prioritized six environmental scan topics based on which topics had the greatest potential to impact proactive policy to expand contraceptive access. The team included both peer-reviewed publications in the environmental scan and grey literature (e.g., commentaries, white papers, conference abstracts, blog posts, webpages) relevant to the topic. Databases searched to identify relevant articles primarily included PubMed, Google Scholar, and Google Search, along with CINAHL, PsychInfo, Web of Science, Embase, Cochrane Library, and ClinicalTrials.gov for scans where additional database searchers were warranted. The search was limited to literature published since 2010; however, the research team included some studies outside the timeframe if they were especially relevant to the topic. The team also consulted subject matter experts on the environmental scan topic throughout the process to provide guidance around the research questions, scan methodology, seminal articles to include in the review, and conclusions that could be drawn from the key findings. A summary of the research questions and key takeaways for each scan is located in Appendix A.

This document also includes brief summaries of evidence across relevant topics that were not included in the CECA environmental scans, based on a recent publication of a review on the topic or insufficient literature to prioritize the conduct of an environmental scan. The environmental scan topics (noted with an asterisk), along with the additional relevant topics, are listed below and arranged by theme.

Theme	Topics for Considerations
1. Developing a Framework for Holistic, Equitable Contraceptive Access	• Definitions and measures of reproductive and sexual health-related constructs* • Measuring health, economic and social outcomes related to contraception* • Contraceptive performance measurement for clinical care and population health
2. Supporting Technology and Innovation in Contraceptive Service Delivery	• Implementation and evaluation of pharmacist-prescribed contraception* • Over-the-counter (OTC) contraception • Telehealth in contraceptive care
3. Strengthening the Health Care Infrastructure to Expand Contraceptive Access	• The state of the contraceptive care workforce* • Implementation and evaluation of statewide contraceptive access initiatives* • Impact of major policy changes related to contraceptive access*

STATE OF EVIDENCE ON KEY TOPICS, ARRANGED BY THEME

1. Developing a Framework for Holistic, Equitable Contraceptive Access

Background

The history of reproductive coercion in the United States (U.S.) influences contemporary policies restricting sexual and reproductive health and wellbeing, including access to contraception (Roberts, 1997). Existing systems of care and contraceptive access have not prioritized informed choice and client-centered approaches, and in some cases have used harmful/coercive practices, especially within communities of color. The work to dismantle barriers to full reproductive autonomy must explicitly acknowledge and address the history and present impact of racism and reproductive coercion. A critical first step is to define the concepts that guide us and mechanisms for assessing progress. Developing a framework for holistic, equitable contraceptive access that prioritizes reproductive wellbeing, equity, and justice involves a consistent, accepted approach for defining and measuring outcomes that set the stage for this work.

The evidence summarized in this section includes:

- Measuring the Social, Health, and Economic Outcomes of Contraception.
- Definitions and Measurements of Reproductive and Sexual Health-Related Constructs.
- Contraceptive Performance Measurement for Clinical Care and Population Health.
- Public Health Measurement Related to Contraception.

Summary of Evidence: Developing a Framework for Holistic, Equitable Contraceptive Access	
Problems/ Opportunities	• Policymakers, clinicians, public health officials, and others with an interest in contraceptive access lack a consistent, accepted approach for framing contraceptive access that is holistic, equitable, just, and centers reproductive wellbeing. • The lack of a framework means existing systems of care can continue to de-prioritize informed choice and client-centered approaches and/or use harmful/coercive practices. • Research and systems of care have not named and defined the harm done to communities or undertaken efforts to understand the resulting impacts.
What We Know	• Measures matter because what systems measure is often what gets done and are used to determine allocation of resources and health system priorities. • The unintended pregnancy measure has served as a public health benchmark for measuring and improving contraceptive access and use and reproductive health, but the measure is not aligned with the experiences and needs of many people, particularly young people and people of color. • New clinical performance measures for contraceptive care, including a measure focused on patient-centeredness, are being tested and rolled out in the field. • A range of measures is needed to support both the public health imperative to increase contraceptive access and the imperative to uphold reproductive autonomy.
What We Don't Know	• A consistent approach for defining and measuring holistic constructs related to contraceptive access and reproductive health (e.g., autonomy, agency, equity, wellbeing, quality of life) is needed. • A more accurate way to screen for and measure contraceptive need (rather than demographic categories or pregnancy intention) is needed to fundamentally set the stage for the rest of the work.

Summary of Evidence: Developing a Framework for Holistic, Equitable Contraceptive Access	
Relevant Policy Levers	• A National Strategy would name and define the harm, define the contraceptive access framework, and hold federal agencies accountable for implementing the strategies. • Executive branch agencies at the federal (e.g., Office of Population Affairs) and state (e.g., Medicaid) level could adopt new performance measures to assess and incentivize holistic patient-centered care. • Guidelines and measures should represent the kind of care and outcomes that we seek to achieve (e.g., NQF-endorsed measure(s) and Healthy People objective(s) related to reproductive autonomy and reproductive wellbeing). • Payment and incentive systems should be aligned with the framework, guidelines, and measures described above.

Summary of Existing Evidence and Research Gaps

Social, Health, and Economic Outcomes Related to Contraception

There is a great deal of evidence examining the social, health, and economic outcomes related to contraception for women and society more generally. The CECA environmental scan demonstrates that contraception's benefits have been well established and its effects are clear; however, more research remains to be done in various contraceptive methods, populations, and policies. For example, further research is needed to understand more holistic, non-fertility outcomes related to contraceptive access and use, particularly regarding how contraceptive access impacts economic and social outcomes when made accessible through person-centered approaches.

Social outcomes related to contraceptive use are infrequently studied in the literature, particularly definitions and measurements of reproductive and sexual agency, autonomy, empowerment, equity, quality of life, and wellbeing. Many of the construct definitions identified in the CECA environmental scan focused exclusively on women, and several of the measures (e.g., Reproductive Autonomy Scale; Women's and Girls' Empowerment in Sexual and Reproductive Health Index) were only developed and tested among women partnered in heterosexual relationships. There is a need for future efforts in this area to center definitions and measurements that are inclusive of people across gender and sexual identities, while acknowledging the intersectional and systemic oppressions that constrain some people's abilities to exercise their sexual and reproductive agency or autonomy or fully realize their sexual or reproductive wellbeing or quality of life.

The CECA environmental scan demonstrates that while terminology related to social outcomes is referenced frequently in the literature—often to contextualize the objectives or findings of a study and its potential impact on reproductive and sexual equity, quality of life, or wellbeing—explicit definitions and strategies for measuring constructs related to reproductive and sexual health are still needed.

Validated measures exist to measure both reproductive autonomy and sexual and reproductive empowerment; however, gaps in measurement around both constructs still exist. For example, the Reproductive Autonomy Scale is a well-established, multidimensional, validated scale of a "woman's ability to achieve her reproductive intentions" and explores the interpersonal factors and power that might support or hinder her autonomy (Upadhyay et al., 2014). However, the scale is not intended to assess how system factors might also support or hinder reproductive autonomy for individuals, highlighting a question that remains unanswered in the literature: What is the influence of system-level factors on reproductive autonomy? How can systems (e.g., health care systems, SRH programs) effectively determine, implement, and evaluate strategies to promote reproductive autonomy?

For health outcomes related to contraception in the literature, public health outcomes examined are generally related to fertility, including unintended pregnancy and birth and abortion rates. Evidence also highlighted the non-contraceptive health benefits of contraception, including management of menstrual pain or menstrual regulation, acne, and endometriosis (Jones, 2011; Bahamondes et al., 2015; Schrager et al., 2020). As demonstrated in the CECA environmental scan, a growing body of research examines the fertility and related health outcomes of long-acting methods. Most studies examining the impact of Long-Acting Reversible Contraception (LARC) methods use data from programs and initiatives that employ a tiered-effectiveness model of counseling. However, the field is shifting to favor more patient-centered approaches to care, research, and policy (Gomez et al., 2014). This shift is guided by a recognition of the U.S.' longstanding, insidious, and ongoing history of reproductive oppression of people of color, people living in poverty, people with disabilities, and others with (often intersecting) marginalized identities (Roberts, 1997; Stern, 2005). It is also guided by evidence of continued overt and subtle contraceptive coercion in clinical settings and evidence from other fields of coercion resulting from performance measure implementation (Brandi et al., 2018; Gomez & Wapman, 2017). As this approach to contraceptive counseling becomes more widely accepted, future research should explore short- and long-term outcomes from interventions using patient-centered designs (Gomez et al., 2014).

In terms of economic outcomes related to contraception, the evidence demonstrates that contraception has led to the improvement of women's economic outcomes related to workforce participation, income, education, and poverty—although this body of work rarely included analyses by key demographic variables, like race/ethnicity, and variation in outcomes for different groups was often obscured. Limited self-report data from family planning clinic clients show that women commonly name economic reasons as motivation for using contraception, including financially supporting themselves or their families, pursuing education, and staying in the workforce (Frost & Lindberg, 2013). There is also strong evidence on cost-saving benefits in terms of public expenditures and third-party payers' costs (Canestaro et al., 2017; Kelly et al., 2020; Lindo & Packham, 2017; Madden et al., 2018).

Contraceptive Performance Measurement for Clinical Care and Population Health

Contraceptive measurement is important at two levels: clinical care delivery and population health. In health care, guidelines-based performance measures are widely used for quality improvement, quality assurance, and pay for performance in health care (Brownson et al., 2017). At the population health level, measures such as Healthy People objectives are used to set a national goal and to direct public funding toward meeting that goal. Performance measures universally are blunt tools that, in some cases, can incentivize or adversely impact outcomes, both on other aspects of quality and on what they are directly measuring (Baker & Qaseem, 2011; Casalino, 1999). For contraceptive care, the stakes are even higher when considering the potential for performance measures to negatively impact care and exacerbate reproductive injustices. They must be specifically designed and implemented with an eye toward equity, which includes prioritizing each individual's values and preferences.

Critical work has been completed, or is in process, to develop validated clinical performance measures for contraceptive care. For example, two types of clinical performance measures have been endorsed by the National Quality Forum (NQF)—a measure to assess the provision of most and moderately effective contraceptive methods and access to LARC among all women ages 15-44 years old and among postpartum women, and a measure of patient experience of contraceptive care aimed at improving the patient-centeredness of contraceptive care and guarding against directive counseling, which the provision measures might incentivize (Dehlendorf et al., 2015).

Tandem use of the two NQF-endorsed measures is being explored as a way to measure the multidimensional nature of quality as it relates to contraceptive care. One rationale for using the provision measures and patient-reported outcome measures in tandem is to create a "balancing measure" to counteract the potential inappropriate consequences of the provision measures. This can address two types of "coercion": 1) indirect/structural coercion through lack of access and 2) direct coercion through provider bias. Both types of coercion disproportionately affect the most vulnerable communities. As patient experience is an important outcome in its own right, tandem use can track and incentivize whether people are receiving care that focuses on their own values and preferences.

At a population health level, there is a need for new measures that assess the degree to which people have achieved reproductive wellbeing and the extent to which lack of access to contraception is a barrier to that achievement. Moving forward, the combination of different types of measures, especially clinical (tandem use) and population health measures (e.g., that could be used in Healthy People), will help maximize the potential of performance measures.

Public Health Measurement Related to Contraception

The reduction of unintended pregnancy has served as a public health benchmark for measuring and improving women's health, is reflected in pregnancy planning paradigms in clinical practice, and historically has been regarded as a proxy for women achieving their desired reproductive outcomes (Gavin et al., 2017). The population-level measure has also been used widely traditionally as a rationale for funding the expansion and improvement of family planning services (Kost & Zolna, 2019). A growing body of literature has questioned the validity of the unintended pregnancy framework and suggested alternative ways of conceptualizing reproductive health and wellbeing that reflects the nuances of intention and wantedness or acceptability of pregnancy (Aiken et al., 2016; Gomez et al., 2018). Alternative approaches to conceptualizing a public health measurement around contraception that are more responsive to individuals' needs, such as measuring agency and empowerment in reproductive decision making and access to contraceptive and abortion care, have also been suggested (Aiken et al., 2016; Gomez et al., 2018; Morse et al., 2017; Potter et al., 2019).

Perspectives on alternative approaches to the unintended pregnancy measure include calls to replace the measure with other measures better aligned with reproductive autonomy (Potter et al., 2019), as well as calls to contextualize the meaning of the population health outcome, incorporate nuance into the measurement and interpretation of the measure, and balance the measure with more holistic measures related to contraceptive access and use, including contextual factors about patient experience and social outcomes, such as wellbeing and quality of life (Dehlendorf et al., 2018; Kost & Zolna, 2019).

Research in Progress and Promising Practices to Study

The following table describes research in progress and promising practices to study around developing a framework for holistic, equitable contraceptive access.

Topic	Research in Progress and Promising Practices to Study
Social/Health/Economic Outcomes	• Implementation grant to conduct a place-based, shared learning collaborative to implement evidence-informed interventions that support reproductive wellbeing and to foster innovation. (Power to Decide)
Contraceptive Performance Measurement	• Implementation study to evaluate the integrated measurement and use of electronic Clinical Quality Measures (eCQMs) and Patient-Reported Outcome Performance Measures (PRO-PMs) in Quality Improvement (QI) efforts in community health centers. (UCSF/NACHC)

Public Health Measurement	• NIH R01 grant to develop comprehensive conceptual framework and quantitative measure of post-contraception pregnancy acceptability (Post-CAP) for use in epidemiologic surveillance. (University of Pittsburgh)

2. Supporting Technology and Innovations in Contraceptive Service Delivery

Background

Technology and innovation in contraceptive service delivery have the potential to expand access to contraceptive services and improve quality of care, especially in communities that face barriers to accessing contraceptive care. For innovative care delivery models—such as telehealth and pharmacist-prescribed contraception—to promote holistic, equitable access to contraceptive care, it is critical to understand the extent to which these models increase access for communities most impacted by barriers to accessing care. It is also critical to understand the extent to which these innovations meet, and are responsive to, the needs of diverse groups of users, including youth and young adults, gender and sexual minorities, people of color, and LGBTQ+ people. Although the implementation of innovative care delivery models has historically been slow-moving despite the available evidence, the Covid-19 pandemic has increased interest and accelerated the uptake of some of these technologies while also surfacing how poorly equipped clinical care delivery systems are to meet the needs of those who experience barriers to care.

The evidence summarized in this section includes:

- Pharmacist-Prescribed Hormonal Contraception
- Over-the-Counter (OTC) Contraception
- Telehealth in Contraceptive Care

Summary of Evidence: Supporting Technology and Innovations in Contraceptive Service Delivery	
Problems/ Opportunities	• Technology and innovations in contraceptive care delivery present an opportunity to expand access and improve quality of care, but uptake of innovation has been slow. • Innovations in contraceptive service delivery are not widely accepted as the standard of care or consistently reimbursed by state Medicaid programs, private payers, and federal programs.
What We Know	• There is support for innovative care delivery models (e.g., telehealth, OTC contraception, pharmacist-prescribed contraception) among providers and service users. • Adequate infrastructure (e.g., reimbursement mechanisms) is needed to support successful implementation for innovative care delivery models. • Some telehealth models demonstrate positive outcomes for contraceptive continuation.
What We Don't Know	• The extent to which innovative care delivery models promote safety, efficacy, patient-centeredness, acceptability, and other aspects of quality is unknown. • The extent to which patients are satisfied with care delivery via innovative approaches. • Relationship between patient experience with innovative care delivery models and clinical outcomes is unknown. • The extent to which innovative care delivery models promote sexual and reproductive health equity (SRHE) and expand services into communities that experience barriers to care is unknown. • Effective strategies for promoting uptake of innovative care delivery models among providers and service users are needed. • Effectiveness of various legislative and regulatory approaches for implementation, as well as barriers and facilitators for these approaches and impacts of variation in state, local, organizational policy is unknown. • Impacts of service provision via innovative care delivery models on individual and public health outcomes of interest is unknown.

Summary of Evidence: Supporting Technology and Innovations in Contraceptive Service Delivery	
Relevant Policy Levers	• Expansion of coverage and reimbursement would support services delivered via innovative care delivery models. • Payment parity would support services delivered via innovative care delivery models. • Expansion of scope of practice for a range of providers to participate in contraceptive care delivery (e.g., pharmacists to prescribe contraception via standing orders, practice protocols, and collaborative practice agreement; advanced practice clinicians to provide services via telehealth) would expand care delivery. • Funding to support infrastructure for innovative care delivery, particularly telehealth, would expand care delivery. • Food and Drug Administration (FDA) approval for OTC contraception would create a pathway for access.

Summary of Existing Evidence and Research Gaps

Pharmacist-Prescribed Hormonal Contraception (HC)

Currently, 13 states and the District of Columbia have expanded pharmacists' scope of practice to include Hormonal Contraceptive (HC) prescribing—and more states are working on passing legislation (Guttmacher Institute, 2021). States vary with regards to minimum age requirements for receipt of pharmacist-prescribed HC, method availability, and insurance reimbursement. States have advanced pharmacist-prescribed HC through legislation or regulations that utilize statewide protocols, collaborative practice agreements, and standing orders (Orris et al., 2021).

Pharmacist-Prescribed HC Policy Lever		State Actions
Statewide Protocol	This approach includes legislation or prescriptive authority to include HC in pharmacists' scope of practice. This expanded scope might include different therapeutics, and HC might be included alone in these protocols or bundled with other services or medications.	Pharmacists can prescribe HC through a statewide protocol in six states: California, Colorado, Hawaii, Maryland, and New Mexico (Rafie & Landau, 2019).
Collaborative Practice Agreement	This approach allows pharmacists to prescribe and dispense HC through an arrangement with an authorized prescriber to offer this service. Often these authorized prescribers are physicians and other health care providers.	Two states authorize pharmacists to prescribe and dispense HC through collaborative practice agreements: Tennessee and Washington.
Standing Orders	This approach is a type of protocol that authorizes pharmacists to prescribe and dispense HC without an agreement with an authorized prescriber, such as physician or other clinician. Those who are able to prescribe HC under this implementation strategy must fulfill any state-mandated training requirements.	Three states offer the service through standing orders for contraceptives: New Hampshire, Utah, and West Virginia.

Further research is needed to understand the multi-level models used to implement and advance pharmacist-prescribed HC through legislation or regulation. Future research around the implementation of multi-level models for pharmacy-prescribed HC should assess outcomes related to contraceptive access and use (including continuation), pregnancy, and sexual and reproductive health within and across states, as well as describe best practices and lessons learned for implementation, to address this gap in the literature.

Studies identified in the environmental scan did not effectively address the rationale for applying a specific implementation model within a state, whether one implementation model demonstrates more positive outcomes than others, or barriers and facilitators to implementing these implementation models successfully.

Existing research shows support for pharmacists' expanded scope of practice and recognition of the extent to which pharmacist-prescribed HC could benefit patients across several key stakeholder groups, including potential service users and patients, pharmacists, pharmacy students, health care providers, and community members. In the studies identified in the CECA environmental scan, most pharmacists expressed an interest in prescribing HC (Herman et al., 2020; Rafie, Cieri-Hutcherson, et al., 2019; Rafie, Richards, et al., 2019; Richards et al., 2015; Stone et al., 2020; Vu et al., 2019; Wollum, Zuniga, Katcher, et al., 2020). Commonly cited perceived benefits of pharmacist-prescribed HC included added convenience and increased HC access (Meredith et al., 2020; Wilkinson et al., 2018, 2019; Zuniga et al., 2019). However, barriers to pharmacist-prescribed HC exist, chiefly time and financial constraints. In studies that were conducted post-implementation, pharmacists were often unaware of the change in their scope of practice. Therefore, work is needed to devise effective strategies for informing pharmacists and providers of the new service and expanding privileges and HC access. Potential service users also had numerous concerns about pharmacist-prescribed HC, primarily around privacy and confidentiality, such as consequent parental involvement (Miller et al., 2016; Wilkinson et al., 2019; Zuniga et al., 2019).

Data post-implementation showed increasing availability of pharmacist-prescribed HC soon after the legislative change, despite pharmacists facing barriers to service provision (e.g., lack of awareness of the new scope of practice, additional training requirements, no statewide protocol established, and a lack of insurance reimbursement for service provision) (Anderson et al., 2019; Rodriguez et al., 2018, 2019, 2020; Walsh et al., 2019). Evidence suggests that states proposing and implementing policies should include reimbursement mechanisms as early as possible, as this particular limitation seemed to be associated with a lag in operations to offer the service once pharmacists' scope of practice expanded.

Overall, more research is needed to evaluate the quality of service provision and the degree to which this new service expands access to those experiencing the greatest barriers to contraceptive access.

While there were a fair number of studies collecting data from potential service users, pharmacists, and other providers pre-implementation, there were few that included their perspectives and experiences after implementation. There was a paucity of literature about patients' perspectives and willingness to use the service, particularly those who would identify as people of color, residents of rural communities, and people over the age of 29 years. No research considered the quality of care provided by pharmacists, and only one study measured impacts of pharmacist-prescribed HC on public health outcomes. Significantly more research is needed on the impacts of service provision on public health outcomes and which implementation features influence successful implementation and outcomes.

Over-The-Counter Contraception

Oral contraceptives are not available Over-the-Counter (OTC) in the U.S., presenting a potential obstacle for people who face barriers to accessing contraceptive care services delivered via a clinician. Medical groups, such as the American Academy of Family Physicians and the American College of Obstetricians Gynecologists, have declared their support of OTC contraceptive access (AAFP, n.d.; ACOG, 2019). Research on OTC contraception demonstrates potential interest among potential users, including women and adolescents, as well as providers (Baum et al., 2016; Grindlay & Grossman, 2018). Potential benefits of OTC access for contraception reported among women and adolescents in these studies included convenience and privacy; study participants also discussed concerns about the cost of OTC oral contraceptives if insurance did not cover the service (Baum et al., 2016; Grindlay & Grossman, 2018). One randomized study demonstrated that the provision of evidence-based information on progestin-only pills and OTC oral contraceptives had the potential to change clinicians' attitudes toward OTC oral contraceptives more favorably, and address misconceptions about progestin-only pills and OTC

contraceptive access (Wollum, Zuniga, Lezama, et al., 2020). Research also demonstrates that OTC contraception might increase contraceptive uptake and improve contraceptive continuation; however, uptake of OTC oral contraceptives will likely be closely linked to insurance coverage and potential out-of-pocket costs for service users (Foster et al., 2015; Grossman, 2015; Potter et al., 2011; Wollum, Trussell, Grossman, et al., 2020).

Ibis Reproductive Health convenes the Oral Contraceptives OTC Working Group, which brings together health care providers, researchers, and advocates who work together to support the availability of a low-cost OTC oral contraceptive product in the U.S. Ibis is also partnering with HRA Pharma on the research needed to submit an application to the FDA to make an oral contraceptive available over the counter. If approved, additional research will be needed to understand the quality of care, including accessibility, safety, patient-centeredness, and equitable provision, of OTC contraception.

Telehealth in Contraceptive Care

Telehealth services, which were already available in some areas, have become an integral component of contraceptive care delivery during the Covid-19 pandemic. In April 2020, Thompson and colleagues published a scoping review to identify and synthesize evidence on the use of telemedicine for family planning services (T.-A. Thompson et al., 2020). For the purposes of the review, telemedicine was defined as an intervention where technology was used to provide a clinical service and included "peer-to-peer specialty consultations through virtual visits, direct-to-patient virtual visits, remote patient monitoring, mobile health and apps, and health care delivery apps/platforms." The scoping review identified 43 relevant studies published between 2008 and 2019 and assessed telemedicine service in countries that were very high, high, or medium on the Human Development Index; 14 studies on contraception; 20 studies on medication abortion; and nine studies on medication abortion follow-up. Most of the included studies described the use of text message reminders and sexual and reproductive health (SRH) mobile apps, for which evidence demonstrated increases in knowledge but limited effects on contraceptive uptake and use. Two randomized studies included in the review found that text messaging interventions improved contraceptive continuation, for both oral contraceptives and injectables. No evidence existed on whether the sexual and reproductive health apps translated to improved contraceptive counseling practices among providers, and the review authors noted that the positive effects of one study included in the review might suggest benefits for contraceptive uptake when an informational app is paired with a provider visit.

The review also emphasized concerns regarding the accuracy and reliability of contraceptive information in reproductive and sexual health apps, noting that few apps contained comprehensive information, were developed by experts or cited information from a credible source. Only one study that explored quality of contraceptive care provided through a web-based platform was identified. Thompson and colleagues ultimately concluded that more research is needed on telemedicine provision of contraception (2020).

In October 2020, the National Family Planning and Reproductive Health Association (NFPRHA) published on their website a literature review on patient experience with telehealth services and health education broadly (NFPRHA, 2020). For the purposes of the review, NFPRHA defined telehealth as encompassing "all platforms used to connect a patient and a health service and/or health education provider for a remote visit (e.g., live audio-video conferencing, telephone-only consultation, asynchronous video, remote patient monitoring)." The literature review findings emphasized that patients favored telehealth visits, primarily for reasons related to convenience, such as time savings and not needing to travel for a health visit. Studies showed that patient experience and satisfaction were influenced by both access to providers and quality of care provided. Telehealth visits allowed patients who might typically face difficulties accessing care, such as in rural and remote areas, to access high-quality providers. Patients often perceived lower levels of quality when their experience included

equipment issues and/or audio quality issues. However, the review notes, ***limited research exists demonstrating the relationship between patient experience with telehealth and clinical outcomes.*** Also, in October 2020, CECA convened a series of strategic discussions with researchers, clinicians, community leaders, and advocates to share learnings from the Covid-19 pandemic related to contraceptive care delivery and research. At this meeting, experts discussed research in progress and promising practices to study in light of Covid-19, especially related to telehealth in contraceptive care. Participants emphasized that due to the pandemic, care delivery has been focused on a shift to telehealth, but fundamental questions remain, including adequacy of reimbursement and coverage; impact of "digital divide" on access; safety for people with privacy concerns; patient and provider experience of telehealth; and availability of technology. Experts participating in the strategic discussion also expressed a need for future efforts to prioritize telehealth as a fundamental shift in contraceptive access requiring new investment and ongoing innovation, and not be treated as a temporary shift in care delivery due to the pandemic. This includes monitoring emerging research on the impact of payment parity and patients' and providers' experiences of telehealth, with findings integrated into future models. Future work must also center the patient experience by conducting research that addresses patient preferences to inform provider practices, reimbursement, coverage, and waivers related to telehealth.

Research in Progress and Promising Practices to Study

The following table describes research in progress and promising practices to study around supporting technology and innovation in contraceptive service delivery.

Topic	Research in Progress and Promising Practices to Study
Pharmacist-Prescribed Contraception	• Prospective cohort study of women presenting to initiate HC, prescribed by a clinician or pharmacist, to assess contraceptive continuation and unintended pregnancy rates, as well as measures of safety and acceptability between women receiving care from a pharmacist compared to another prescriber. (Oregon Health and Science University)
OTC Contraception	• Pharmaceutical research to support an application to the FDA to make a birth control pill available OTC. (Ibis Reproductive Health, in partnership with HRA Pharma) • Study to assess the contraceptive needs, desires, preferences, and experiences of Indigenous peoples and people of color, related to OTC contraception. (Ibis Reproductive Health, in partnership with Black Women for Wellness, Bold Futures, California Latinas for Reproductive Justice, National Asian Pacific American Women's Forum, and the Native American Community Board) • Building support to engage young people and build support for OTC access to birth control pills without an age restriction. (Ibis Reproductive Health, in partnership with Advocates for Youth)
Telehealth in Contraceptive Care	• Qualitative study on impacts of Covid-19 on immigrant women in New York and experiences of seeking reproductive health care, including discrimination in the health care system. (Columbia University) • Descriptive data collection on changes in service delivery and uptake of clinical innovations in response to Covid-19 by the Society for Family Planning's Abortion Clinical Research Network. A de-identified dataset is available to researchers, upon request. (SFP) • Secondary data analysis evaluating the impact of telehealth reimbursement parity laws on outcomes such as differences in telehealth use and contraceptive use. (Ibis Reproductive Health) • Mixed-methods, multi-level (i.e., organization, provider, and patient) study on rapid expansion of telehealth in Planned Parenthood health centers during Covid-19. (PPFA)

3. Strengthening the Health Care Infrastructure to Expand Contraceptive Access

Background

For the purposes of this report, the activities that fall under "health care infrastructure" focus on building the capacity of the health care system to meet the needs of individuals and ensure access to high-quality care. The health care infrastructure operates across a multi-level system that includes considerations at the provider-level, organizational/institutional-level, and public policy-level that are key to expanding access to contraception. For example, health care infrastructure in the context of contraceptive access includes workforce supports—such as training, credentialing, and workforce development—to ensure that contraceptive care providers are equipped to provide high-quality care, serve communities most impacted by reproductive coercion and barriers to holistic, equitable contraceptive access and respond to the needs of the communities they serve.

Infrastructure considerations also include clinic- or institutional-level operations related to billing and coding, revenue cycle management, and contraceptive supply management and availability, as well as the mechanisms in-place to support capacity building within clinics and institutions around these operations. State and federal policy also play a significant role in regulating aspects of the health care infrastructure that can significantly expand or reduce access to contraceptive services. For example, federal and state policy impacts public payment and funding through coverage as well as through cost regulation and reimbursement, defines which clinical organizations are eligible for funding, and affects quality of care through the development and dissemination of clinical and programmatic guidelines.

The evidence summarized in this section includes:

- The State of the Contraceptive Care Workforce.
- Statewide Contraceptive Access Initiatives.
- Impact of Major Federal and State Policy Changes Related to Contraceptive Access.

Summary of Evidence: Strengthening the Health Care Infrastructure to Support Expanded Contraceptive Access	
Problems/ Opportunities	• Existing health care infrastructure components were not designed, and are not presently equipped, to meaningfully expand contraceptive access in communities that face barriers to care. • Millions of women who receive care through public programs (e.g., Title X, Medicaid, VA, IHS) are not offered a full range of contraceptive methods/care and at no cost. • Multi-level systems approaches to expanding contraceptive access haven't been fully realized across provider, organizational, and public policy levels. • Contraceptive access interventions and policy changes are being implemented across multiple contexts, but lessons learned and impacts (e.g., on sexual and reproductive health equity) are not well understood.
What We Know	• Professionals who deliver and support the delivery of contraceptive care—including clinicians and allied health professionals—are essential to the provision of quality care. • Team-based care involving an interprofessional workforce might support expanded access to contraception, particularly in communities that face barriers to access. • Statewide Contraceptive Access Initiatives (SCAIs) bring together a coalition of organizations to implement multiple approaches to expanding contraceptive access. • State and federal policy play a key role in regulating health care systems to expand or reduce access to contraceptive services.

Summary of Evidence: Strengthening the Health Care Infrastructure to Support Expanded Contraceptive Access	
What We Don't Know	• Strategies to effectively support an interprofessional team of contraceptive care providers to provide care are needed, as well as evidence on the extent to which an expanded contraceptive care workforce promotes safety, efficacy, patient-centeredness, acceptability, and other aspects of quality. • Strategies to effectively address gaps in contraceptive care provision among providers due to limited preparation and training and low comfort with contraceptive counseling and care delivery are needed. • Medium- and long-term outcomes related to service delivery and use following provider training are unknown. • Impact of SCAIs on expanding access to contraceptive care, particularly on projects that evolved to include a broader focus on contraceptive choice and access to all contraceptive methods, is unknown. • Evidence on the medium- and long-term impacts of state and federal policy change that expand, or reduce, access to contraception is needed.
Relevant Policy Levers	• Professional standards and core competencies, and related training and certification programs, should promote, support, and require provision of patient-centered contraceptive care. • Equitable payment mechanisms should be available for patients and a broad range of providers. • A CDC Community Guide Recommendation on SCAIs would increase sharing and use of best practices for implementing SCAIs, including evaluating changes in important outcomes (e.g., whether the care was client-centered and non-coercive). • Language in the annual appropriations bills could require federal agencies to provide a full range of methods/care, preferably on a same day basis (and subsequent agency modifications). • Consistent federal definitions of contraception and contraceptive coverage (e.g., that go beyond the minimum required by the ACA). • Contraceptive equity legislation and policy (e.g., to ensure access to the full range of FDA-approved contraceptives without cost-sharing, allow for 12-month dispensing, and do away with medical management techniques) are both needed.

Summary of Existing Evidence and Research Gaps

The State of the Contraceptive Care Workforce

The contraceptive care workforce is made up of a variety of professionals who deliver, or support the delivery of, reproductive health and contraceptive care services in a variety of settings, including outpatient public (e.g., Federally Qualified Health Centers, Title X family planning sites) and private (e.g., OB/GYN and family practice) settings and the inpatient setting. These professionals include clinicians, such as obstetricians/gynecologists; family physicians; women's health nurse practitioners; certified nurse midwives; women's health physician assistants; registered nurses; and clinical pharmacists. The contraceptive care workforce also includes allied health professionals, also known as paraprofessionals, such as community health workers, health educators, home visitors, and other lay health workers, who provide a range of support services, such as contraceptive counseling and education.

The existing evidence emphasizes the importance of collaborative practice among an interdisciplinary team of professionals to ensure the delivery of quality sexual and reproductive health services, given the projected shortages in the physician workforce, increased demand for services, and limited access to services in rural communities and other communities that face

Studies identified in the CECA environmental scan identified barriers to fully engaging an interprofessional workforce in contraceptive care delivery, including inadequate education and training on SRH; limited opportunities for hands-on clinical training; a decrease in clinicians specializing in women's health; scope of practice and supervision requirements; and financial and administrative constraints.

barriers to access services (Auerbach et al., 2020; Martin & Reneau, 2020). Further research is needed to understand how to effectively support an interprofessional team of contraceptive care providers to provide care and expand access to care in communities with limited access, such as rural communities and communities of color where barriers to care, such as cost and implicit biases among health care providers are exacerbated (Sutton et al., 2021). Research is also necessary to understand and address gaps in preparation to provide contraceptive care, particularly among primary care providers who play a key role in delivering services in community health settings, but are demonstrated to have inconsistent practices, low levels of prescribing and comfort related to contraceptive care.

As the contraceptive care workforce expands, research is necessary to determine the outcomes associated with, and acceptability and feasibility of, care delivered by this expanded workforce, including contraceptive care delivered by primary care physicians, advanced practice providers, and paraprofessionals. There is a need to better understand the quality of care delivered by the expanded contraceptive care workforce, as well as perceptions of care and patient satisfaction with care delivered by an interprofessional team of providers. Information regarding the potential cost-savings and expanded reach of these programs could also be beneficial to inform policy supporting the expansion of paraprofessional contraceptive care services throughout the country.

Provision of contraceptive care that is patient-centered, appropriate, and relevant requires effective provider training at the pre-licensure and pre-certification levels and continued education throughout the professional's career. Training is essential to workforce preparation and is frequently documented in the evidence as a barrier to the provision of patient-centered quality care. Although many opportunities for provider training on contraceptive care exist, few trainings have been evaluated and published in the literature. This might be due to a primary focus among training centers on training development and implementation (rather than dissemination outside of traditional training structures) and limited capacity for rigorous evaluation based on staffing and funding. In most cases, training centers primarily document immediate process and implementation outcomes, rather than evaluating longer-term outcomes, including how training impacted care delivery. Published evidence around provider training primarily focuses on testing interventions related to LARC provision and patient-centered contraceptive counseling. The available evidence demonstrates positive outcomes following provider training related to provision of contraceptive counseling, contraceptive use, and patient satisfaction with care (Comfort et al., 2021; Harper et al., 2020; Simons et al., 2020; K. M. Thompson et al., 2016). While many training opportunities around the provision of contraceptive care exist, published outcomes supporting this training would strengthen the evidence base and illuminate best practices for scaling provider trainings on contraceptive care across the workforce and various care delivery settings. Further research might also support the implementation and scaling up of trainings that incorporate various adult learning methods, including learning collaboratives.

Statewide Contraceptive Access Initiatives

Statewide Contraceptive Access Initiatives (SCAIs) expand access to contraception and strengthen the health care infrastructure within a state by bringing together key stakeholders and partner organizations who undertake coordinated efforts to increase access to contraception, such as mobilizing interest in expanding access to contraception; providing contraceptive products at no or low cost; providing training and capacity building across clinical facilities (e.g., hospital outpatient facilities, Title X clinics, Federally Qualified Health Centers (FQHCs), college/university health centers, etc.) and other community partners throughout a geography; and removing structural barriers that inhibit contraceptive choice, such as cost. Since 2007, 29 states and/or territories have implemented contraceptive access initiatives that are documented in the literature, and there is growing evidence that these types of initiatives can have a substantial impact on access to and utilization of

contraceptive services and supplies. These initiatives typically have common implementation strategies, including clinician and staff training and technical assistance; funding for the provision of low/no-cost contraceptive services, equipment and supplies; public awareness campaigns; public policy analysis and championing; strategic partnerships; and data management and quality assurance.

Many of the early contraceptive access programs were modeled after the Contraceptive CHOICE study (CHOICE), a regional contraceptive access initiative implemented in 2006 that demonstrated the impacts of removing knowledge and cost barriers on LARC use, LARC continuation, and reduced teen pregnancy, birth, and abortion. As such, most initial contraceptive access initiatives focused on increasing access to LARC as the most effective reversible form of contraception. The SCAI have since evolved to implement approaches that expand access to the full range of contraceptive options using a shared decision-making approach, given concerns that LARC promotion efforts were actually or potentially coercive, undermined reproductive autonomy, were not patient-centered, and were in conflict with Reproductive Justice principles (Gomez et al., 2014; Gubrium et al., 2016).

Limited data on the impact of SCAIs on expanding access to contraceptive care exists in the published literature. The available evidence, which documents findings across a limited number of initiatives, describes impacts on contraceptive use, service utilization, and pregnancy-related outcomes. Some evidence exists demonstrating that SCAIs are successful at increasing access to contraceptives, including LARC; and one state has shown an impact to costs associated with federal/state entitlement programs (Colorado Department of Public Health and Environment, 2017). However, there is a paucity of research examining overall contraceptive use as a result of these programs. The available research demonstrates the priority of LARC in SCAIs, despite the evolution of more recent initiatives to offering all methods and expressed commitment to contraceptive choice. The available evidence also suggests that SCAIs might contribute to pregnancy outcomes. Some evidence exists to support the ability of SCAIs to impact/reduce unplanned pregnancy, teen pregnancy rates, fertility rates, and abortion rates (ASTHO, 2017; Colorado Department of Public Health and Environment, 2017; Jones et al., 2019; Kelly et al., 2020). While some research exists surrounding the ability of SCAIs to impact maternal health and adverse birth outcomes, additional research is needed to validate these effects.

Research gaps remain around documenting the implementation and impact of SCAIs. There is a paucity of published research on the outcomes of any of the SCAIs. The existing evidence on outcomes of the SCAIs represent very few of the projects that have been undertaken. Published evidence on the outcomes of the SCAI also represent early projects and often do not reflect the evolution of the SCAI to broader focuses on contraceptive choice and access to all contraceptive methods. Noticeably absent from the research is the lack of published findings of comparisons between states. There is no research evaluating how these programs compare or whether the variances between programs might result in differences in outcomes. There was no research identified in the scan on the sustained impacts of the SCAIs after program conclusion. Finally, the CECA environmental scan also did not identify research that explicitly examined racial inequities in contraceptive access, the influence of coercion on contraceptive choice, the impact of shared decision making on contraceptive use in communities of color, improvements to racial and ethnic gaps in contraceptive access, improvements to the use of contraceptives in marginalized communities or communities of color, or pregnancy or maternal health outcomes of diverse communities. Given that program evolution was partly attributed to an increase in awareness of racial inequities and reproductive justice, it would be useful to evaluate whether these changes led to increased access, utilization, improvements to reproductive autonomy, or impacts on the effects of shared decision making within SCAIs.

Impact of Major Federal and State Policy Changes Related to Contraceptive Access

Federal and state policy can significantly expand or reduce access to contraceptive services through the regulation of various aspects of the health care infrastructure. Major federal and state policy changes in the evidence included the: 2010 Enactment of the ACA, release of federal clinical guidelines related to contraceptive service provision in 2010 and 2014, 2011 Texas reproductive health legislation that resulted in state-funded family planning budget cuts, and Trump Administration's changes to federal family planning regulations.

Evidence on how policy changes affected contraceptive access and other outcomes varied based on the policy change. For the ACA, evidence demonstrated that reduced out-of-pocket spending for contraception among women was associated with increased contraceptive use and continuation (Lee et al., 2020). While studies showed that Medicaid expansion under the ACA increased insurance coverage overall, result were mixed on its impact on prescription contraception rates (Darney et al., 2020; Lee et al., 2020; Sumarsono et al., 2021). Studies examining changes in births and unintended pregnancy found decreases in both outcomes following ACA implementation (Dalton et al., 2020; MacCallum-Bridges & Margerison, 2020).

The CECA environmental scan found that policy evaluations related to contraceptive access assess similar outcomes, including changes in program service delivery outputs, contextual outcomes (e.g., impact of changes in insurance coverage on access and use of contraceptive services), behavioral outcomes (e.g., contraceptive use and continuation), fiscal outcomes (e.g., out-of-pocket spending), and health

With the 2011 Texas reproductive health legislation and the Trump Administration's changes to federal family planning regulations, evidence demonstrated that the number of clinics in the public family planning network decreased and fewer clients were served in the network. For the 2011 Texas family planning budgets cuts—where long-term evidence for the policy is available—evidence demonstrated reductions in contraceptive use and continuation, access to confidential family planning services for adolescents, and access to in-state abortions while also finding increases in the overall birth rate, teen birth rate, and out-of-state abortions (Fischer et al., 2018; Packham, 2017; Stevenson et al., 2016; White et al., 2015). The limited evidence exploring the uptake and implementation of federal guidelines related to contraceptive service provision demonstrated positive health care provider attitudes toward the guidelines and highlighted implementation barriers influenced by whether the recommendations aligned with providers' professional values and experiences (Pujol et al., 2019; Simmons et al., 2016; Zapata et al., 2019).

While the impacts of certain policy changes appear to be well studied (e.g., ACA, 2011 Texas family planning budget cuts), gaps in the evidence still remain for other policy changes, such as the release of federal clinical guidelines (e.g., Women's Preventive Services Guidelines) and more recent changes to federal regulations for public family planning services under the Trump Administration. For more recent policy change where long-term impact is not yet available, the evidence shows that analyses tend to highlight potential short-term changes in service delivery and quality of care or draw on evidence from similar past policy changes as a proxy, such as in the example of leveraging evidence from Texas to draw inferences about the potential implications of the 2019 Title X regulation changes.

Little evidence on the impact of policy changes related to contraceptive access on SRHE emerged in the environmental scan. Additional research on policy changes might consider including race, insurance status, and other important demographic variables in analyses and highlight how policy and systems change can reduce or further exacerbate inequities in access in historically underserved communities. Further research is needed to understand how evidence can be effectively leveraged to impact policy change.

Research in Progress and Promising Practices to Study

The following table describes research in progress and promising practices to study around understanding the impacts and lessons learned from strengthening the health care infrastructure to expand contraceptive access.

Topic	Research in Progress and Promising Practices to Study
Contraceptive Care Workforce	• Implementation and testing of a training program developed for promotoras focused on a variety of reproductive health topics to expand contraceptive access in Latinx communities in Utah (Comunidades Unidas, Family Planning Elevated, Utah Department of Public Health). • Training community health aides, who are certified by the Community Health Aide Certification Board and have active national provider identifier numbers, to provide contraceptive counseling and implant insertion and removal. Qualitative interviews with health aides on their experiences providing care (Alaska Native Tribal Health Consortium).
Statewide Contraceptive Access Initiatives	• CECA/Association of State and Territorial Health Officials (ASTHO) collaboration to explore feasibility of a Community Guide Recommendation on SCAI. • "Second generation" statewide initiatives seeking to integrate a Reproductive Justice lens and promote access to all methods, rather than focusing on LARC (e.g., New Mexico, Illinois).
Impact of Major Federal and State Policy Related to Contraception	• Contraceptive Equity Laws have been implemented in many states but their impact on contraceptive access has not been evaluated. • Researchers and advocates have proposed expanding postpartum Medicaid coverage (Ranji et al., 2019). Researchers could produce models of how this might impact contraceptive access and patient outcomes, as well as study the effect of changes made at the federal or state levels.

METHODOLOGICAL CONCERNS AND CONSIDERATIONS

The summary of existing evidence related to contraceptive access highlights methodological concerns and considerations for Workgroup Members to reflect on while interpreting these findings in order to develop and prioritize research areas for the Roadmap. First, the quality and level of evidence among the existing studies should be taken under consideration. While Randomized Controlled Trials (RCTs) are considered the gold standard for scientific evidence, RCTs might not always be practical, feasible, or ethical for generating evidence around contraceptive access and use, and limited evidence on contraceptive access in based on the conduct of RCTs. In these cases, various study designs, including qualitative research methods, might strengthen the evidence around how individuals consider contraceptive access within their own lives and supplement the evidence where RCTs are not feasible.

Other methodological considerations related to quality of the evidence, such as sufficiently powered samples sizes and consistent description and measurement of exposure variables across studies, must be considered when interpreting the existing evidence. For example, variability exists in how contraceptive access is defined and measured in the literature. The CECA environmental scans highlighted that some studies consider contraceptive access to refer to legislation granting early access to contraception in the 1960s, while other studies examine the effects of contraceptive insurance mandates or proximity to a family planning clinic as markers of contraceptive access. The evidence also underscores gaps in the definition and measurement of unmet need for contraceptive care—evidence that is necessary to assess gaps in the health care infrastructure.

Much of the focus of the CECA environmental scans included how aspects of contraceptive care delivery, supports, and policy promoted or failed to promote SRHE. In many studies assessing data from large, nationally-representative datasets, differing—and even opposing—trends among demographic groups might be obscured. There is often a lack of data in the existing evidence on contraceptive access and use for individuals across diverse identities, including Latino/Hispanic women, Indigenous women, immigrant women, or women living with disabilities. Additionally, while much of the relevant literature identified across the CECA environmental scans focused on generating evidence related to heterosexual women, a commitment to promoting SRHE must extend to all people, across the range of age, gender, sexuality, race, and other intersectional identities.

KEY QUESTIONS FOR WORKGROUP CONSIDERATION

The following discussion questions are for Workgroup consideration at the March meeting, and in our ongoing efforts to develop the Priority Roadmap for Policy-Ready Contraceptive Research.

Questions for Workgroup Consideration
• Where are there intersections across the research gaps within the three key themes presented in the report? • What policy-relevant topics relevant to the three key themes are missing from the report? What evidence is available, and is not available, related to those topics? • What are the pros and cons of further developing and refining established constructs like unintended pregnancy, autonomy, and empowerment vs. investing in the study of less established constructs like SRHE, reproductive quality of life, sexual and reproductive wellbeing? • What policy-relevant barriers slow the uptake of technology and innovation in contraceptive care delivery, given the volume of supportive literature? • How should “contraceptive access” be defined? What should be measured to determine the success of an intervention or policy?

APPENDIX A: ENVIRONMENTAL SCAN RESEARCH QUESTIONS AND KEY TAKEAWAYS

Topic	Research Questions	Key Takeaways
Definitions and Measures of Reproductive and Sexual Health-Related Constructs: Agency, Autonomy, Empowerment, Equity, Quality of Life, and Wellbeing	1. How are the constructs of reproductive and sexual agency, autonomy, empowerment, equity, quality of life, and wellbeing defined in the literature? a. How are these constructs (i.e., agency, autonomy, empowerment, equity, quality of life and wellbeing) defined in the health care and public health literature in general? b. For constructs where the health care and public health literature are limited, how are these constructs defined in other sectors (e.g., education, environment, economy, community)? c. What are the common elements in how the various constructs are defined? What distinguishes them? 2. How are the constructs of reproductive and sexual agency, autonomy, empowerment, equity, quality of life, and wellbeing measured? a. Are there validated measures? How were they developed? Who has been involved in devising these measures? What do they measure? b. For constructs where the health care and public health literature are limited, how are these constructs measured in other sectors (e.g., education, environment, economy, community)? 3. What questions about definition and measurement of the constructs of reproductive and sexual agency, autonomy, empowerment, equity, quality of life, and wellbeing remain unanswered in the current literature?	• Accepted definitions and measures exist for reproductive autonomy and reproductive empowerment. • Definitions exist in the literature for the reproductive and sexual agency, sexual and contraceptive autonomy, sexual empowerment, and sexual quality of life. However, definitions of these constructs are not often used consistently across the field. Validated measures, or proposed frameworks for measures, exist for each of these constructs. • Limitations of existing measures include a primary focus on women-only (especially, women in heterosexual relationships) in measurement development and testing, a primary focus on international contexts, and a lack of attention to system-level factors that impact health and wellbeing. • The following constructs lack consistency of definitions and do not have validated measures: reproductive and sexual equity, reproductive quality of life, and reproductive and sexual wellbeing. • The lack of clear, consistent definitions of these constructs hinders the ability to operationalize and measure these constructs and leaves a gap in the evidence for research, measurement, and implementation.

Topic	Research Questions	Key Takeaways
Measuring the Health, Economic, and Social Outcomes Related to Contraception	1. What methodologies do researchers use to measure the effects of contraception/contraceptive access on health, economic and social outcomes? a. What methods are used to control for the effects of contraception? b. Depending on study type, what policy levers or natural experiments are examined? c. How is "contraceptive access" defined and measured in these studies? Is analysis limited to certain contraceptive methods? d. What are potential strengths/weaknesses to study design that might bolster or limit interpretation of findings? 2. How have researchers measured the effects of contraception/ contraceptive access on: a. Public health outcomes (e.g., unintended pregnancy, birth/abortion rates, birth outcomes)? b. Individual health outcomes (e.g., women's/maternal health, neonatal/pediatric health)? c. Public economic outcomes? d. Individual economic outcomes (e.g., education, labor force outcomes, income)? e. Social outcomes? 3. What have studies found about the impact of contraception on various types of outcomes? 4. What are promising directions for future research? a. What questions remain unanswered? b. What are gaps in terms of methods/policies/populations that are understudied? c. What research should be updated?	• Beyond preventing pregnancy, contraception has a range of health, economic, and social benefits for women and society more generally. • Researchers use a range of study designs and methodologies to measure the effects of contraceptive access and use on health, economic, and social outcomes, including Randomized Controlled Trials (RCTs), quasi-experimental study designs, and observational studies. Contraceptive access is often defined in these studies in terms of availability of services based on early legal access to contraception, accessibility of services, affordability of services, and acceptability of services. • Future research is needed to understand the impacts of contraceptive access in communities most impacted by limited access, the short- and long-term effects of contemporary policy and funding changes as proxies for contraceptive access, and understudied holistic outcomes of contraception, such as quality of life.
Pharmacist-Prescribed Hormonal Contraception (HC)	1. For studies describing pharmacist-prescribed contraception, what are the outcomes under study? a. How are these outcomes being measured? b. How do these studies describe quality (using IOM 6-pronged definition)? c. What, if any, comparison groups/controls are used in these studies?	• Pharmacists, potential service users, and other health care providers are supportive of pharmacist-prescribed HC. • Pharmacists, potential service users, and other health care providers perceive limited time and a lack of reimbursement as some of the greatest barriers to service provision. • One of the most significant motivators for pharmacists to prescribe (or continue prescribing) HC is to help people access methods and address public health issues in their community.

Topic	Research Questions	Key Takeaways
	2. What are implementation approaches to pharmacist-prescribed contraception? a. What is the effectiveness of these approaches? b. What are the lessons learned for implementing pharmacy access? 3. What are patients' experiences obtaining pharmacist-prescribed contraception? a. What are patients' preferences, desires, and needs related to pharmacist-prescribed contraception? b. What is known about experiences, preferences, desires, and needs by race/ethnicity, age, urbanicity, state, etc? c. What are providers' perspectives on pharmacist-prescribed contraception? Do perspectives differ by profession (pharmacist, physician, nurse, etc.)? 4. What are the barriers and facilitators to the provision of pharmacist-prescribed contraception? 5. What is the impact of pharmacy access to contraception on… contraceptive access and use (including continuation)? Pregnancy? Sexual and reproductive health equity? Other outcomes? Does the impact vary by geography (urban/rural) or other demographic factors? 6. What questions about pharmacy access remain unanswered by the current body of literature?	• Remaining gaps include eliciting the perspectives of diverse populations regarding interest in, need for, and experiences with pharmacist-prescribed HC; investigating the quality of pharmacist-prescribed HC, overall and for groups who historically are provided lower quality care; measuring impacts on public health outcomes; and identifying and assessing strategies that facilitate successful implementation and impact outcomes.
Contraceptive Care Workforce	1. What is the current state of contraceptive care workforce and service delivery? a. What types of professionals comprise the contraceptive care workforce? b. What are the settings in which contraceptive care is delivered? c. How are health care professionals trained to provide contraceptive care? i. Are there existing SRH competencies for the contraceptive care workforce? 2. What is the current capacity of the contraceptive care workforce? a. Is the existing contraceptive care workforce sufficient to meet patient needs? How is this measured?	• The contraceptive care workforce is made up of a variety of health professionals, including obstetricians/gynecologists and family physicians, advanced practice providers such as nurse practitioners and physician assistants, and paraprofessionals such as health educators and community health workers. • Recent evidence indicates the importance of collaborative practice among an interdisciplinary team of professionals to ensure the delivery of quality SRH services, particularly in light of project shortages in the workforce, increased demand for services, and the potential for reduced access in communities that already face barriers to accessing contraceptive care. • Barriers to engage the full scope of the contraceptive care workforce include inadequate, limited opportunities for hands-on

Topic	Research Questions	Key Takeaways
	b. What system-level factors affect the availability of contraceptive care providers (e.g., scope of practice regulations)? c. To what extent are health care professionals prepared to provide contraceptive care? d. How does the contraceptive care workforce impact access to care? 3. What training opportunities exist for health care professionals and trainees on the provision of contraceptive care? a. What training interventions have been studied (i.e., published outcomes)? i. Which aspects of training for the provision of contraceptive care have been studied (e.g., LARC provision, patient-centered contraceptive counseling)? ii. How do studies describe what type/content of training is needed to provide contraceptive care? iii. What evidence do these studies provide around training the workforce for the provision of contraceptive care? 4. What is the role of paraprofessionals (e.g., community health workers, health educators) in expanding access to contraception? a. What is the scope of contraceptive care provided by paraprofessionals? b. How are paraprofessionals trained and what is the effectiveness of training activities? c. What is the impact of paraprofessional provision of contraceptive care for reproductive health outcomes? 5. What questions about the contraceptive care workforce remain unanswered by the current body of literature?	clinical training in SRH, a shift towards generalist education and training in nursing and other health studies programs, and regulatory barriers related to scope of practice and reimbursement. • Although many opportunities for provider training on contraceptive care exist, few trainings have been evaluated and published in the literature. Evaluations of provider training in the published literature focus primarily on testing interventions related to provider training for LARC provision, LARC provision for adolescents specifically, and the provision of patient-centered contraceptive counseling. • Research gaps remain in understanding how to effectively support an interprofessional team of contraceptive care providers to provide contraceptive care; how to increase the capacity of primary care providers to provide contraceptive care; as well as quality of care and patient experience with contraceptive care delivered by a variety of professionals. Published evidence around provider training on the provision of contraceptive care is needed to strengthen the evidence base.

Topic	Research Questions	Key Takeaways
Statewide Contraceptive Access Initiatives	1. What SCAIs have been initiated in the past 15 years and why were these initiatives undertaken? a. How have the SCAIs evolved since their inception? 2. What are the implementation approaches for SCAIs, and what lessons have been learned? 3. At what phase of data collection/analysis are the various SCAIs? 4. What outcomes are being assessed among SCAIs? a. How are the various outcomes measured and what is the impact of SCAIs on these outcomes? b. Effectiveness of initiatives for promoting contraception access and use? c. Effectiveness of initiatives for promoting reproductive health services access and use? d. Changes to public policy? 5. When the current SCAIs conclude, what will we be positioned to understand about their impact? What questions will remain?	• Twenty-nine states and/or territories have implemented, or are currently implementing, contraceptive access initiatives that are documented in the published literature, including the 27 states and/or territories that participated in ASTHO's multi-state contraceptive access learning community. • SCAIs focus on increasing access to contraception through coordinated efforts across clinical facilities and other community partners by reducing cost and other barriers that inhibit contraceptive choice. Although many of the early SCAIs focused primarily on expanding access to LARC, they have evolved to implement approaches that expand access to the full range of contraceptive options using a shared decision-making approach. • SCAIs consist of similar implementation approaches, including clinician and staff training and technical assistance; funding for the provision of low/no-cost contraceptive services, equipment and supplies; public awareness campaigns; public policy analysis and championing; strategic partnerships; and data management and quality assurance. • Limited data on the impact of SCAIs on expanding access to contraceptive care exists in the published literature. The available evidence demonstrates that SCAIs might have positive impacts on contraceptive use, service utilization, and pregnancy-related outcomes. • Research gaps remain in understanding the impact of SCAIs in expanding access to contraception (including evidence that compare findings across states), reducing inequities in contraceptive access, and leveraging policy to foster sustainability.
Assessing the Impact of Major Policy Changes Related to Contraceptive Access	1. What major policy changes related to contraceptive access have been enacted at the state or federal level in the U.S. since 2010? 2. How is the impact of policy changes related to contraceptive access measured in the literature? 3. How have these policy changes affected contraceptive access and use? Sexual and reproductive health equity? Other outcomes of interest? 4. What questions about the impact of contraceptive policy changes remain unanswered in the current literature?	• Major federal and state policy changes that emerged in the environmental scan included: the 2010 Enactment of the ACA, the release of federal clinical guidelines related to contraceptive service provision in 2010 and 2014, the 2011 Texas family planning budget cuts, and the Trump Administration's changes to federal family planning funding. • Evidence of the impact across these policy changes often evaluated similar outcomes, including changes in program service delivery outputs, contextual outcomes, behavioral outcomes, fiscal outcomes, and health outcomes.

Topic	Research Questions	Key Takeaways
		• Evidence on the ACA demonstrated that decreased out-of-pocket spending for contraception was associated with higher contraceptive use and continuation; evidence also highlighted decreases in births and unintended pregnancies following ACA implementation. • Regarding the 2011 Texas reproductive health legislation and the Trump Administration's changes to federal family planning funding—both of which led to reduced public funding for family planning programs—evidence demonstrated that the number of clinics in the public family planning network decreased and fewer clients were served in the network following the policy changes. • Long-term evidence on the 2011 Texas family planning budget cuts demonstrated reductions in contraceptive use and continuation, access to confidential family planning services for adolescents, and access to in-state abortions as well as increases in the overall birth rate, teen birth rate, and out-of-state abortions. • Research gaps remain in understanding the impact of policy change on sexual and reproductive health equity, patient experience accessing services, and implementation and adoption of relevant policy change across care settings.

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