DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
7500 Security Boulevard, Mail Stop S2-25-26
Baltimore, Maryland 21244-1850

State Demonstrations Group

December 15, 2021

Stephanie Stephens
State Medicaid Director
Texas Health and Human Services Commission
4900 Lamar Boulevard
MC:H100
P.O. Box 13247
Austin, Texas 78751

Dear Ms. Stephens:

The Centers for Medicare & Medicaid Services (CMS) completed its review of Texas's Evaluation Design, which is required by the Special Terms and Conditions (STCs) of the state's section 1115 demonstration "Healthy Texas Women" (Project Number: 11-W-00326/6), effective through December 31, 2024. CMS determined that the Evaluation Design, which was first submitted on May 19, 2020 and subsequently revised on November 4 2021, meets the requirements set forth in the STCs, and therefore, approves the state's Healthy Texas Women Evaluation Design.

CMS added the approved Healthy Texas Women Evaluation Design to the demonstration's STCs as Attachment D. A copy of the STCs, which includes the new attachment, in enclosed with this letter. In accordance with 42 CFR § 431.424, the approved Evaluation Design may now be posted to the state's Medicaid website within thirty days. CMS will also post the approved Evaluation Design as a standalone document, separate from the STCs, on Medicaid.gov.

Please note that an Interim Evaluation Report, consistent with the approved Evaluation Design, is due to CMS on December 31, 2023. Additionally, if the state is seeking to extend the demonstration, the draft of the Interim Evaluation Report is to be included in the extension application. Likewise, a Summative Evaluation Report, consistent with this approved Evaluation Design, is due to CMS within 18 months of the end of the demonstration period. In accordance with 42 CFR § 431.428 and the STCs, we look forward to receiving updates on evaluation activities in the demonstration monitoring reports.

We appreciate our continued partnership with Texas to evaluate the Healthy Texas Women section 1115 demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly -S

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Date: 2021.12.15 07:56:03 -05'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation
State Demonstration Group

cc: Ford Blunt, State Monitoring Lead, CMS Medicaid and CHIP Operations Group

Healthy Texas Women Section 1115 Demonstration Waiver Evaluation Design

As Required by Centers for Medicare and Medicaid Services

TEXAS
Health and Human Services

Texas Health and Human Services Commission

November 2021

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1. Background

Texas has the fifth highest birth rate in the United States (13.2 births per 1,000 women), with almost 380,000 births in 2018 (Texas Health and Human Services Commission, 2019). Thirty percent of pregnancies in Texas are unintended (Texas Department of State Health Services, 2019), and approximately half of the state's births are paid for by Medicaid (Texas Health and Human Services Commission, 2019). Despite promising trends in several Texas birth indicators over the last decade—including reductions in infant mortality, teen birth rates, and smoking during pregnancy—serious public health challenges remain relating to pre-pregnancy obesity, maternal diabetes, and maternal hypertension (Kormondy & Archer, 2018; National Center for Health Statistics, 2020). Moreover, Texas continues to report higher than average rates of preterm birth and low birthweight, both of which affect the Medicaid population at a disproportionate rate and carry short- and long-term consequences (Texas Health and Human Services Commission, 2019).[1] Rates of postpartum depression also exceed national averages, with 15.6 percent of Texas women reporting depressive symptoms after the birth of a child in 2017 compared to 12.5 percent nationally (Texas Department of State Health Services, 2020; Centers for Disease Control and Prevention, 2020). Collectively, these trends highlight the important role of the state and its federal partners in supporting family planning, preconception, and interconception health care services.

Overview of Women's Health Programs

Historically, Texas has delivered women's health and family planning services through numerous programs administered by both the Texas Health and Human Services Commission (HHSC) and Texas Department of State Health Services (DSHS). In 2014, the Texas Sunset Advisory Commission reviewed the State's health agencies and recommended Texas women's health care programs be consolidated to improve service and efficiency for clients and providers. In

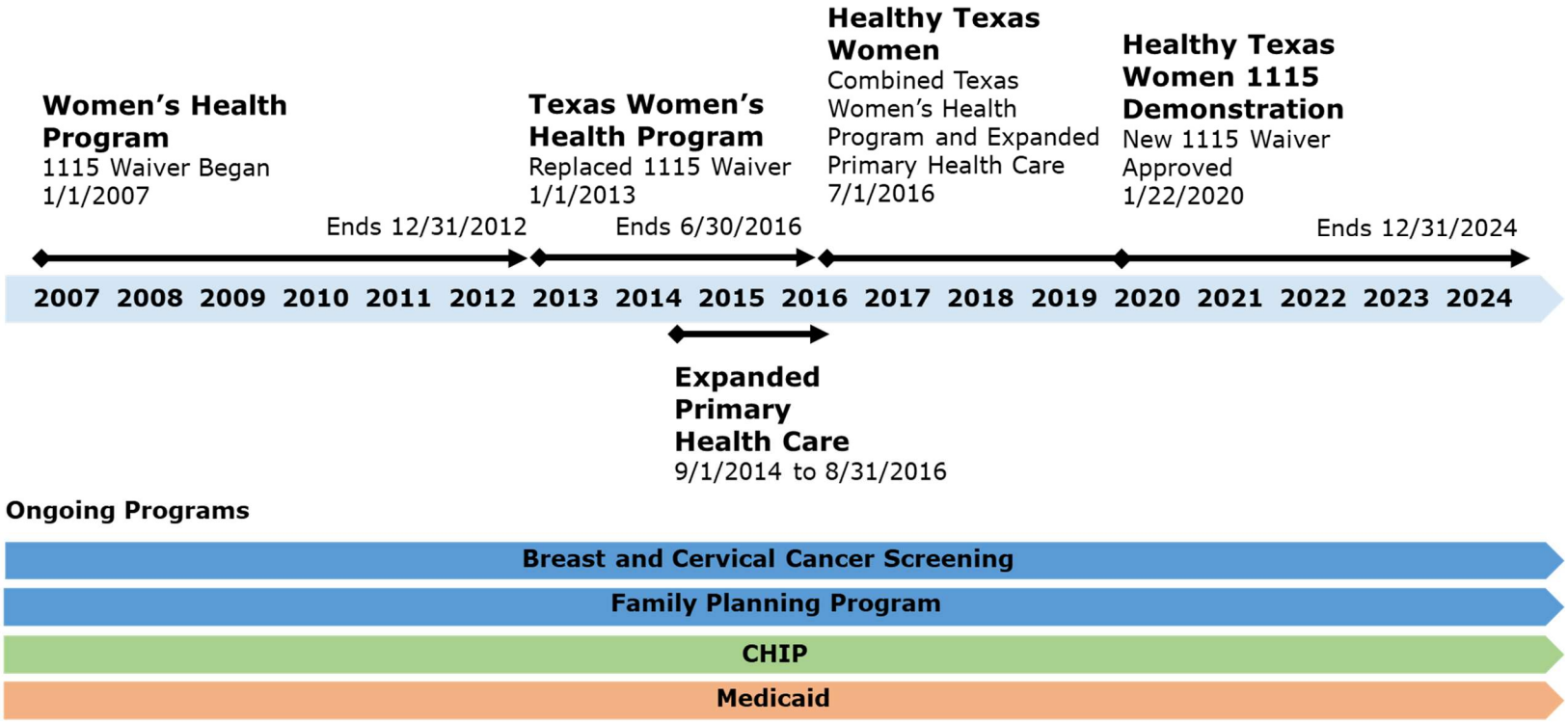
[1] In 2018, the preterm birth rate was 10.8 percent for Texas and 10.0 percent nationally. The rate of low birthweight was 8.5 percent for Texas and 8.3 percent nationally (Texas Health and Human Services Commission, 2019).

response, the Texas Legislature directed HHSC to consolidate the state's women's health services and appropriated an additional $50 million to the new programs.

On July 1, 2016, HHSC launched a state-funded program called Healthy Texas Women (HTW) to combine the services of programs providing family planning and primary care services to low-income women ages 15-44. HTW merged the Texas Women's Health Program (TWHP) administered by HHSC and the Expanded Primary Health Care (EPHC) program administered by DSHS. Two other HHSC programs—the Breast and Cervical Cancer Services (BCCS) program and Family Planning Program (FPP)—continue to provide screening and/or family planning services to low-income women [Figure 1]. The Children's Health Insurance Program (CHIP) and Medicaid also provide services to low-income women, but women enrolled in either of these programs are not eligible for HTW.

Prior to the launch of HTW, women could be enrolled in multiple family planning/women's health programs depending on need and eligibility. On July 1, 2016, eligibility guidelines were revised to automatically enroll women eligible for multiple programs into the most comprehensive program for which they qualify. For example, individuals who meet eligibility criteria for HTW, BCCS, and FPP would be enrolled in HTW as it offers services not available in the other programs, such as immunizations, and preventative and treatment services for conditions related to family planning.

Figure 1. Women's Health Programs in Texas, 2007 to present



Healthy Texas Women

The goal of HTW is to increase access to women's health and family planning services to avert unintended pregnancies, positively affect the outcome of future pregnancies, and positively impact the health and well-being of women and their families. Since its launch in 2016, HTW client enrollment has increased by 219 percent to an average monthly caseload of 279,671 unduplicated clients in state fiscal year 2019 (Texas Health and Human Services Commission, 2020).

The number of active billing providers has also expanded in recent years, with 3,057 unique providers receiving reimbursement for HTW program services in state fiscal year 2019 (Texas Health and Human Services Commission, 2020). The available provider network, however, is considerably larger since any HTW certified Medicaid provider who provides a covered service to an HTW enrolled woman may bill HTW on a fee-for-service (FFS) basis. In state fiscal year 2018, HTW clients could receive covered services from a network of approximately 33,876 HTW certified providers.[2]

Utilization of family planning services under the HTW program is associated with significant savings to state and federal budgets. In state fiscal year 2019 alone, participation in the HTW program resulted in an estimated 15,302 averted births, generating a net savings of $13.0 million to the state and $152.2 million in Medicaid federal funds (Texas Health and Human Services Commission, 2020).

[2] Provider count defined as unique full National Provider Identifier (NPI)-Texas Provider Identifier (TPI) combinations certified to provide HTW services (Unpublished statistical file).

Program Eligibility and Enrollment

The eligibility criteria for the state-funded HTW program operating prior to the Demonstration were as follows [1 Texas Administrative Code (TAC) §382.7]:

- Ages 15 through 44
  - Minors[3] ages 15 through 17 must have a parent or legal guardian apply, renew, and report changes to her case on her behalf;
- U.S. citizen or qualified immigrant;
- Reside in Texas;
- Not pregnant;[4]
- Does not receive benefits through a Medicaid program that provides full benefits, CHIP, or Medicare Part A or B, and does not have any other creditable health coverage;[5] and
- Net family income at or below 200 percent of the federal poverty level (FPL).

Clients could apply for the state-funded HTW program in any of the following ways:

- On HealthyTexasWomen.org;
- On YourTexasBenefits.com;
- From a local benefits office of HHSC, an HTW provider's office, or any other location that makes HTW applications available;
- By calling 2-1-1; or
- By any other means approved by HHSC.

To prevent gaps in coverage and improve interconception health, eligible women whose Medicaid for Pregnant Women coverage period was ending (last day of the month in which the 60-day postpartum period ends) were automatically enrolled in

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[3] "Minor" is defined as a person under 18 years of age who has never been married and never been declared an adult by a court (1 TAC §382.5). The HTW Demonstration is available to women ages 18-44, however Texas will continue to serve women ages 15-17 who meet all other HTW program requirements through non-Medicaid funded programs.

[4] Clients who became pregnant while enrolled in HTW were no longer eligible for HTW but may have been eligible for Medicaid for Pregnant Women.

[5] Applicants may not have had creditable health coverage that covered the services HTW provides, except when an applicant affirmed, in a manner satisfactory to HHSC, her belief that a party may have retaliated against her or caused physical or emotional harm if she assisted HHSC (by providing information or by any other means) in pursuing claims against that third party (1 TAC §382.7).

HTW if they were not otherwise eligible for Medicaid, CHIP, Medicare Part A or B, and did not have other creditable health coverage.

Once individuals were determined eligible or transitioned into HTW, they were able to receive HTW services for a continuous 12-month period.

Covered Services

The state-funded HTW program offered a range of services aimed at improving preconception health for women, reducing the number of unintended pregnancies, and positively affecting birth outcomes. Most clients received services by visiting a participating clinic or physician. In addition, some clients requested prescription refills through their provider without an office visit. Covered services provided at no cost to eligible women included:

- Contraceptive services;
- Pregnancy testing and counseling;
- Preconception health screenings (e.g., screening for obesity, hypertension, diabetes, cholesterol, smoking, and mental health);
- Sexually transmitted infection (STI) services;
- Pharmaceutical treatment for the following chronic conditions:
  - Hypertension;
  - Diabetes;
  - High cholesterol;
- Breast and cervical cancer screening and diagnostic services:
  - Radiological procedures including mammograms;
  - Screening and diagnosis of breast cancer;
  - Diagnosis and treatment of cervical dysplasia;
- Immunizations; and
- Screening for and pharmaceutical treatment of postpartum depression

The Demonstration

On June 30, 2017, HHSC requested approval of an 1115 Demonstration Waiver to increase access to, and participation in, the HTW program. The 1115 Demonstration Waiver for the HTW program (HTW Demonstration) is designed to further the goals of Title XIX of the Social Security Act (Medicaid) by increasing and strengthening coverage for low-income women in Texas through the provision of a unique benefit package for women who would not otherwise be eligible for family planning and preventive services under Texas Medicaid. Additionally, the HTW Demonstration is

designed to improve health outcomes for the Medicaid population by providing preconception and interconception care to women who would be eligible for Medicaid coverage if they were pregnant, with the goal of improving birth outcomes and supporting optimal birth spacing.

On January 22, 2020, the Centers for Medicare and Medicaid Services (CMS) approved Texas's HTW Demonstration for a five-year period from January 22, 2020 to December 31, 2024. The Special Terms and Conditions (STCs) that govern the HTW Demonstration authorize HHSC to waive application of the following Medicaid requirements under the approved waiver:

- **Methods of Administration: Transportation** (Section 1902(a)(4) insofar as it incorporates 42 CFR §431.53): To the extent necessary to enable the state to not assure transportation to and from providers for the demonstration population.
- **Amount, Duration, and Scope of Services (Comparability)** (Section 1902(a)(10)(B)): To the extent necessary to allow the state to offer the demonstration population a benefit package consisting only of family planning services, family planning-related services, and other preconception women's health services.
- **Retroactive Coverage** (Section 1902(a)(34)): To the extent necessary to enable the state to not provide medical assistance to the demonstration population for any time prior to when an application for the demonstration is made.
- **Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)** (Section 1902(a)(43)(A)): To the extent necessary to enable the state to not furnish or arrange for EPSDT services to the demonstration populations.
- **Freedom of Choice** (Section 1902(a)(23)): To the extent necessary to enable the state to limit freedom of choice of provider in accordance with state law. Specifically, state law requires HHSC to ensure that no money spent for the purpose of HTW is used to perform or promote elective abortions or to contract or affiliate with entities that do so (Texas Human Resources Code §32.024(c-1)).

Demonstration Population

The HTW Demonstration is available to women ages 18 through 44 who meet all other eligibility requirements of the state-funded HTW program.[6] Texas will continue to serve women ages 15 through 17 who meet all other HTW program requirements through non-Medicaid funded programs. Updates to application, verification, and redetermination processes under the HTW Demonstration include required modifications such as the implementation of a reasonable opportunity period and transition to the use of Modified Adjusted Gross Income (MAGI) for income eligibility determinations.

Beneficiaries ages 18-44 receiving services under HTW were automatically transitioned into the HTW Demonstration without a gap in coverage. Similar to the state-funded HTW program, women ages 18 through 44 years of age whose Medicaid for Pregnant Women[7] coverage period is ending are automatically enrolled in the HTW Demonstration if they are not otherwise eligible for Medicaid benefits, Medicare Part A or B, or CHIP, and they do not have other creditable health coverage.

[6] Demonstration eligibility is limited to individuals ages 18 to 44 who are U.S. citizens or qualified immigrants, reside in Texas, are not currently pregnant, and have a net family income at or below 200 percent FPL. In addition, women may not be eligible for or currently receiving benefits under Medicaid, CHIP, or Medicare Part A or B, and may not have other creditable health insurance coverage.

[7] Refers to the Medicaid eligibility group identified under Section 1902(a)(10)(A)(i)(III) of the Social Security Act.

HHSC projects the following number of individuals will be eligible for the HTW Demonstration during each year of the waiver:

Table 1. Projected Population Eligible for the HTW Demonstration

Calendar Year	Projected Population[1]
2020	689,600
2021	701,100
2022	713,000
2023	725,200
2024	737,600

Notes. [1] Reflects HHSC Center for Analytics and Decision Support projections based on U.S. Census Bureau, 2015-2018 American Community Survey Samples for Texas; population projections by Texas Demographic Center, Office of the State Demographer at the University of Texas at San Antonio; and, pregnancy statistics from the Texas DSHS Center for Health Statistics. Population projections may be affected by the COVID-19 pandemic due to temporary Medicaid eligibility changes and potential increases in the number of individuals meeting income eligibility requirements as a result of the pandemic's economic impact.

Demonstration Covered Services

The HTW Demonstration provides women's health and family planning services at no cost to eligible women in Texas. HTW Demonstration services were implemented on February 18, 2020. Covered services were initially the same as those provided through the state-funded HTW program.[8] In December 2020, HHSC submitted an amendment to the HTW 1115 Demonstration waiver to incorporate additional services in accordance with Texas Health and Safety Code, Section 32.102, which requires HHSC to develop an enhanced, cost effective, and limited postpartum care services package for women enrolled in HTW (referred to as HTW Plus).[9] HTW Demonstration covered services can be categorized into four benefit types outlined in the HTW Demonstration STCs.

[8] "Covered service" is defined in 1 TAC §382.5 as a medical procedure for which HTW will reimburse an enrolled health care provider. Covered and non-covered services for the state-funded HTW program are listed in 1 TAC §382.15.

[9] At the time of writing, the state's amendment seeking to incorporate HTW Plus services into the HTW 1115 Demonstration was pending CMS approval. Texas began offering HTW Plus services through general revenue funds starting September 1, 2020. Based on CMS direction, HHSC incorporated the HTW Plus services into the evaluation plan. If CMS does not approve the amendment, adjustments to this evaluation design may be necessary.

Family Planning Benefits. Beneficiaries eligible under this Demonstration will receive family planning services and supplies as described in section 1905(a)(4)(C) of the Social Security Act, including:

- FDA-approved methods of contraception;
- Contraceptive management, patient education, and counseling;
- Pelvic examinations with a family planning diagnosis;
- STI/sexually transmitted disease (STD) testing and treatment services; and
- Drugs, supplies, or devices related to women's health services described above.

Family Planning-Related Benefits. Beneficiaries eligible under this Demonstration will also receive family planning-related services and supplies, defined as those services provided as part of or as follow-up to a family planning visit. Such services are provided because a "family planning-related" problem was identified and/or diagnosed during a routine or periodic family planning visit. Examples of family planning-related services and supplies provided under this Demonstration include:

- Drugs for vaginal infections/disorders, other lower genital tract and genital skin infections/disorders, and urinary tract infections.
- Other medical diagnosis, treatment, and preventive services that are routinely provided pursuant to family planning services in a family planning setting.
- Treatment of major complications arising from a family planning procedure such as:
  - Treatment of a perforated uterus due to an intrauterine device insertion;
  - Treatment of severe menstrual bleeding caused by a Depo-Provera injection requiring a dilation and curettage; or
  - Treatment of surgical or anesthesia-related complications during a sterilization procedure.

Preconception Care Services. Individuals eligible under this Demonstration will also receive certain women's health services related to better preconception care and birth outcomes, including:

- Screening and pharmaceutical treatment for cholesterol, diabetes, and high blood pressure;
- Breast and cervical cancer screening and diagnostic services;
- Screening and treatment for postpartum depression;

- Immunizations; and
- Mosquito repellant prescribed by an authorized health professional.

Postpartum Care Services (HTW Plus). HTW clients who have been pregnant in the 12 months prior to enrollment are eligible to receive additional postpartum care services that target the major drivers of maternal mortality in Texas for the duration of their 12-month certification, including:

- Individual, family and group psychotherapy services;
- Peer specialist services;
- Cardiovascular evaluation imaging and laboratory studies;
- Blood pressure monitoring;
- Anticoagulant, antiplatelet, and antihypertensive medications;
- Screening, brief intervention, and referral for treatment for substance use disorders;
- Outpatient substance use disorder counseling;
- Smoking cessation services;
- Medication-assisted treatment for substance use disorders;
- Diabetes monitoring supplies; and
- Asthma treatment services.

Demonstration Providers

The HTW Demonstration operates through a network of independent healthcare providers across the state who offer family planning and women's health services to HTW clients, as well as refer them to secondary providers for service delivery outside their scope of practice.

Primary providers are those who can provide an annual women's health examination and prescribe family planning drugs or devices. Primary providers include, but are not limited to, clinic/group practices, family practices/general practices, physician extenders, and gynecology providers.

Some specialized services, such as psychiatry or limited surgical procedures, may be available to clients with a referral from a primary provider. Specialist providers include, but are not limited to, surgical-related services, radiology, laboratory, and psychiatry providers.

The HTW Demonstration is administered through a FFS delivery model. Under this model, qualified Medicaid providers can provide HTW Demonstration covered services to eligible clients if they meet the following provider eligibility requirements outlined under Title 1 of the Texas Administrative Code §382.17:

(1) Be enrolled as a Medicaid provider;

(2) Complete the HTW certification process affirming the HTW provider does not perform or promote elective abortions outside the scope of HTW and is not an affiliate of an entity that performs or promotes elective abortions; and

(3) Comply with Texas's requirements for all Medicaid providers relating to submission of Medicaid claims, compliance with civil rights, retention of records, and unauthorized charges.

2. Evaluation Questions and Hypotheses

Demonstration Goals

The goals of the HTW Demonstration are to:

1. increase access to women's health and family planning services to avert unintended pregnancies, positively affect the outcome of future pregnancies, and positively impact the health and well-being of women and their families;
2. increase access to preventive health care, including screening and treatment for hypertension, diabetes, and high cholesterol, to positively impact maternal health and reduce maternal mortality;
3. increase access to women's breast and cervical cancer services to promote early cancer detection;
4. reduce the overall cost of publicly funded health care (including federally funded health care) by providing low-income Texans access to safe, effective services that are consistent with these goals; and
5. implement the state policy to favor childbirth and family planning services that do not include elective abortions or the promotion of elective abortions within the continuum of care or services, and to avoid the direct or indirect use of state funds to promote or support elective abortions.[10]

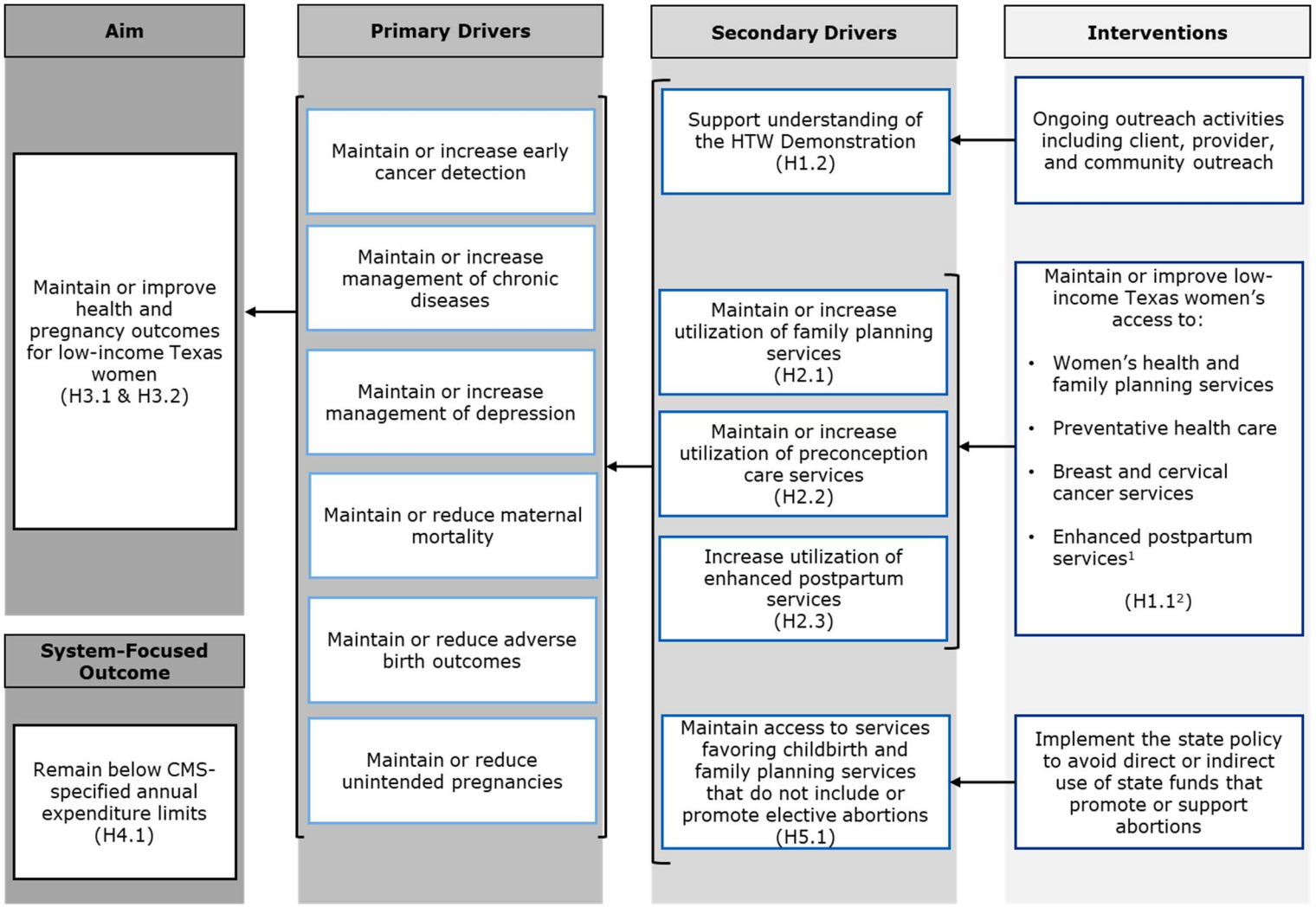
The Evaluation Design includes evaluation questions and hypotheses examining all goals of the HTW Demonstration.

[10] Texas Human Resources Code §32.024(c-1) directs HHSC to ensure no money spent for the purpose of HTW is used to perform or promote elective abortions or to contract with entities that perform or promote elective abortions or affiliate with entities that perform or promote elective abortions. All HTW providers must certify and attest annually that they do not perform or promote elective abortions or affiliate with individuals or entities that perform or promote elective abortions, as defined in Title 4 of the Texas Health and Safety Code §245.002.

Driver Diagram

The goals of the HTW Demonstration target a variety of client-focused and system-focused outcomes by providing low-income women in Texas access to women's health, family planning, preventative health care, and breast and cancer care services. Figure 2 depicts the interventions associated with the HTW Demonstration and how they are expected to impact the demonstration's overall goals. Consistent with other CMS Driver Diagrams, the projected causal pathway moves from right to left, beginning with outreach and engagement activities, the provision of services, and implementation of the state policy to avoid direct or indirect use of state funds to support or promote elective abortions. These interventions are expected to motivate utilization of family planning, preconception care, and enhanced postpartum services (secondary drivers). In the next phase, utilization of these services is projected to promote a series of positive health outcomes such as early cancer detection, medication management, and healthy birth outcomes. Positive health outcomes then support the ultimate aim of the HTW Demonstration—to improve health and pregnancy outcomes for low-income women in Texas. A system-focused outcome related to the effective use of public funds to provide women's health care is located outside of the direct causal pathway to signal its broader relationship to the overall efforts of the HTW Demonstration.

Figure 2. HTW Demonstration Driver Diagram



Notes. [1] Texas began providing enhanced postpartum services using general-revenue funds on September 1, 2019. Inclusion of these services under the HTW Demonstration is pending CMS' approval. [2] H1.1-H5.1 refer to the corresponding HTW evaluation hypotheses.

Evaluation Questions and Hypotheses

Five evaluation questions guide this study. The proposed evaluation questions are designed to assess the goals of the HTW Demonstration. Each evaluation question is addressed through a minimum of one corresponding hypothesis that aligns with the interventions, drivers, and outcomes in the HTW Demonstration Driver Diagram [Figure 2]. Subsequent sections operationalize the evaluation hypotheses through a series of measures, study populations, data sources, and analytic methods intended to translate the evaluation questions into quantifiable targets of program performance.

The evaluation questions and hypotheses also promote the objectives of Title XIX by examining how the expansion of family planning and preventative services for low-income women in Texas supports overall health and birth-related outcomes in Texas Medicaid.

Evaluation Question 1. Did the HTW Demonstration increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas?

Hypothesis 1.1. The HTW Demonstration will maintain or increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas.

Hypothesis 1.2. The state's outreach and engagement activities support understanding of the HTW Demonstration.

Evaluation Question 2. Did the HTW Demonstration increase utilization of family planning, preconception care, and postpartum services?[11]

Hypothesis 2.1. The HTW Demonstration will maintain or increase utilization of family planning services among HTW clients.

[11] Evaluation Question 2 does not include family planning-related services. Family planning-related services, while covered per the STCs, are primarily follow-ups to family planning services and are not directly related to the goals of the HTW Demonstration. Additionally, family planning-related services are diverse in scope, making it difficult to combine or interpret measures under this category. CMS approved the exclusion of this service category from Evaluation Question 2 on November 13, 2020.

Hypothesis 2.2. The HTW Demonstration will maintain or increase utilization of preconception care services among HTW clients.

Hypothesis 2.3. The HTW Demonstration will increase utilization of HTW Plus postpartum care services among HTW clients.

Evaluation Question 3. Did the HTW Demonstration improve women's health and pregnancy outcomes?

Hypothesis 3.1. The HTW Demonstration will maintain or improve women's health among HTW clients.

Hypothesis 3.2. The HTW Demonstration will maintain or improve pregnancy outcomes and maternal health among HTW clients.

Evaluation Question 4. Did the HTW Demonstration effectively use public funds to provide women's health care in Texas?

Hypothesis 4.1. The HTW Demonstration will remain at or below the CMS-specified annual expenditures limits.

Evaluation Question 5. How does implementation of the HTW provider eligibility criteria outlined in Goal 5 of the HTW Demonstration affect access to and utilization of women's health and family planning services?

Hypothesis 5.1. The implementation of HTW provider eligibility criteria does not adversely affect access to and utilization of women's health and family planning services.

3. Methodology

The evaluation of the HTW Demonstration (HTW evaluation) is guided by five evaluation questions and ten hypotheses that examine the impact of the HTW Demonstration on access, utilization, health outcomes, and cost, as well as impacts of the HTW provider eligibility criteria. This section summarizes the evaluation design, study populations, and evaluation period for the HTW evaluation as a whole. Subsequent sections provide detailed information for each evaluation question, including the study populations, data sources, analytic methods, evaluation measures, and methodological limitations. Technical specifications for the proposed measures can be found in Appendix E: Detailed Tables.

Data, analytic methods, and reporting will meet the traditional standards of scientific and academic rigor, as appropriate and feasible for each aspect of the HTW evaluation, including evaluation design, data collection, analysis, and reporting. The HTW evaluation will rely on secondary data from HHS sources and primary data collection developed by the external evaluator. The respective limitations of these sources are reported accordingly. Methods outlined here reflect the analytic strategies deemed most appropriate; however, the external evaluator may revise specific methods as they assess key data sources for completeness, relevance, and quality required for the proposed analyses. Necessary revisions to the data and analytic methods outlined in HTW Evaluation will be relayed to CMS in Quarterly Monitoring Reports for the HTW Demonstration and, if deemed necessary by CMS, submitted through a revised Evaluation Design to CMS for approval.

Evaluation Design

A general challenge to the evaluation of the HTW Demonstration is the similarity of its predecessor program. Texas has offered women's health services through a series of programs for more than a decade; while the HTW Demonstration seeks to expand access to these services, it does not substantively change them or the populations receiving them. Accordingly, the HTW Demonstration meets the description of a "long-standing, non-complex, [or] unchanged," program, as specified in Attachment A of the STCs (see "Special Methodological Considerations"). The proposed evaluation design attempts to capture changes resulting from the HTW Demonstration, but observed changes are likely to be modest given the similarity of the counterfactual condition.

In view of these challenges, the HTW evaluation relies on three quasi-experimental designs: a one-group pretest-posttest design, a one-group posttest only design, and a nonequivalent comparison group pretest-posttest design. Most measures are evaluated using a one-group pretest-posttest design due to the longstanding nature of the HTW program. A subset of measures does not have pre-Demonstration data available and will rely on a one-group posttest only design, and several measures under Hypothesis 3.2 are evaluated using a nonequivalent comparison group pretest-posttest design. No evaluation measures use all three designs.

- **One-Group Pretest-Posttest Design**: This evaluation design relies on repeated observations of HTW clients to monitor changes in the intervention group before and after the HTW Demonstration. Due to the long-standing nature of the HTW program, the pre-HTW Demonstration period is functionally similar to the post-HTW Demonstration period. As a result, advanced techniques for examining changes over time, such as interrupted time series analysis, are not appropriate because changes in the level or slope of outcome measures cannot be directly attributed to programmatic changes associated with the HTW Demonstration. Measures evaluated through a one-group pretest-post-test design will be implemented using descriptive trend analysis (DTA). To strengthen DTA, the evaluation will also leverage benchmarks and subgroup analyses where feasible to help substantiate and contextualize observed trends.

- **One-Group Posttest Only Design:** This evaluation design relies on measuring outcomes among HTW clients in the post-Demonstration period only. Of the three designs in this evaluation, the one-group posttest only design is most vulnerable to threats to validity and is used only in cases where pre-Demonstration and comparison group data are unavailable. One measure under Hypothesis 1.1 (network adequacy) and hypotheses that use primary data collection (Hypothesis 1.2 and 5.1) are evaluated using a one-group posttest only design. Primary data collection measures evaluated through a one-group posttest only design will be implemented using descriptive statistics and qualitative analysis, where applicable. Network adequacy measures will be examined in the post-Demonstration period through DTA due to the availability of quarterly or annual reports. Benchmark and subgroup analyses will be leveraged where feasible to support interpretation of findings.

- **Nonequivalent Comparison Group Pretest-Posttest Design:** For measures evaluated using a nonequivalent comparison group pretest-posttest design, differences between Medicaid deliveries to women previously enrolled in HTW and Medicaid deliveries to women not previously enrolled in HTW will be compared before and after the HTW Demonstration. The nonequivalent comparison group pretest-posttest design will be implemented using difference-in differences (DID) estimation. DID mimics an experimental study by estimating the effect of an intervention by comparing changes in outcome measures over time for an intervention and comparison group. DID mitigates threats to validity from selection bias and history by accounting for statistical biases in the post-period that could be the result of pre-existing differences between the groups or general trending due to other causes. Measures evaluated using a nonequivalent comparison group pretest-posttest design will also leverage benchmarks and subgroup analyses where feasible.

Subsequent sections provide additional information on the study populations, evaluation periods, and analytic methods for each design.

Study Populations

The target population for the HTW evaluation includes all clients enrolled in the HTW Demonstration; no additional inclusion or exclusion criteria are applied. The target population is conceptually consistent with an intent-to-treat framework in which all women transitioned to or self-enrolled in the HTW Demonstration are considered part of the intervention group, regardless of whether they actively chose to receive services. The HTW evaluation utilizes data from clients enrolled in HTW before the HTW Demonstration as a historical reference group, except for clients 15 to 17 years old, to match the age range of clients in the HTW Demonstration.[12]

The HTW evaluation includes client-, provider-, and system-level analyses. For most measures, population-level data (rather than a sample) will be used to assess processes and outcomes. These data are available at the individual level for both clients and providers, which are the primary units of analyses. Measures relating to clients and providers may be stratified into key demographic subgroups such as age, race/ethnicity, region, or provider type, where applicable.

[12] Texas serves women ages 15 through 17 who meet all other HTW program requirements through non-Medicaid funded programs.

In addition to population-level client and provider data, the evaluation will draw on survey data from the Centers for Disease Control and Prevention's Pregnancy Risk Assessment Monitoring System (PRAMS) survey, which is representative at the state level. These data are used to estimate the population of women in Texas who have recently given birth. Survey subgroup analysis will note the appropriate implications for representativeness and cite confidence intervals where applicable.

Potential Comparison Groups

Because the HTW Demonstration is available statewide and clients are placed in the most comprehensive program for which they are eligible, there are no truly comparable clients in other HHSC programs. However, in keeping with the rigor of the proposed evaluation design, HHSC assessed the viability of two non-HTW comparison groups: 1) the Family Planning Program (FPP), and 2) Medicaid managed care (MMC). FPP is a primarily state general revenue-funded program that provides family planning services to women and men below the age of 64 who live in Texas and have a family income at or below 250 percent of the FPL. MMC includes a potential comparison group of non-pregnant women in STAR or STAR+PLUS managed care plans between the ages of 18 and 44 who have received a family planning-related service. Though the HTW benefit package is largely covered in both comparison programs, differing eligibility requirements, program structures, and funding mechanisms present significant problems for comparative analysis. Due to substantial validity issues arising from these differences—as well as technical issues related to client identification and selection bias—no viable comparison group exists for the HTW evaluation as a whole. For a detailed assessment of each potential comparison group, see Appendix C.

Medicaid-Paid Deliveries

Although there is no viable comparison group for the HTW evaluation overall, information from Medicaid-paid deliveries will be used as a comparison for pregnancy-related measures in the DID study design (Hypothesis 3.2). HHSC estimates that approximately 5-7 percent of Medicaid-paid deliveries in a given year (i.e., 11,000-15,400) are to women who were enrolled in HTW during the previous year. Researchers will identify a random sample of Medicaid-paid deliveries among women not enrolled in HTW during the prior year to serve as a comparison group for pregnancy-related measures. If feasible, women in the Medicaid-paid deliveries comparison group will be matched to women in the intervention group using propensity score matching (PSM) based on observable population characteristics such as age, race/ethnicity, and/or state region. Matching

allows for a comparison between two groups of mothers that are characteristically similar, except for access to HTW services prior to pregnancy.

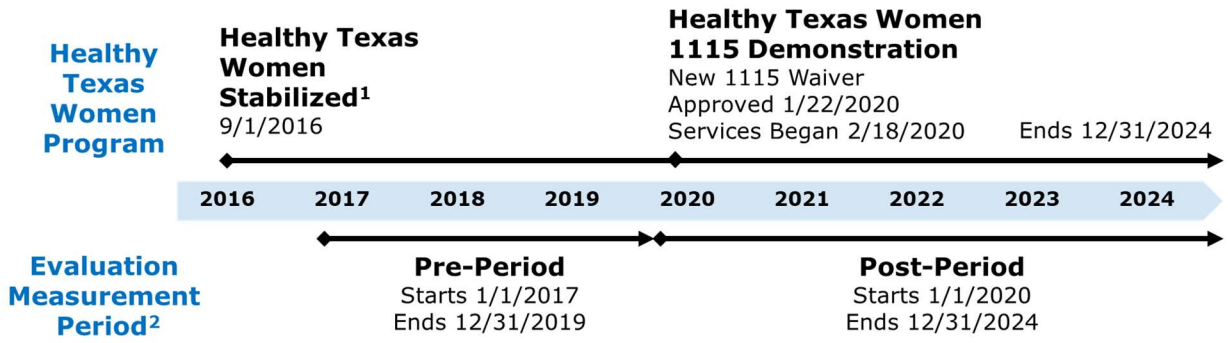
Evaluation Period

The study period for the HTW evaluation is January 1, 2017 to December 31, 2024 [Figure 3]. This timeframe corresponds to an approximate three-year period before the HTW Demonstration, and a five-year period under the HTW Demonstration. The pre-Demonstration period for the HTW evaluation refers to the period after which the state-funded HTW program consolidated services previously provided by TWHP and EPHC, and ensures the population, services, and data sources are comparable for the pre- and post-Demonstration periods. Though the HTW Demonstration was approved on January 22, 2020, to ensure consistency in metrics and analysis, the post-Demonstration measurement period begins on January 1, 2020 and continues to the end of the approval period on December 31, 2024.[13] CMS has provided guidance stating that the interim and summative evaluation reports should frame the evaluation in alignment with the HTW Demonstration approval period, but for purposes of measurement and analysis may treat the post-Demonstration period as beginning on January 1, 2020.

At this time, the post-period is expected to include the final year of the HTW Demonstration. However, HHSC may truncate the post-period to ensure all submitted claims are complete and the external evaluator has adequate time to complete data analyses for the final report due June 30, 2026.

[13] The HTW Demonstration DYs follow a calendar year schedule. The HTW Demonstration was approved on 1/22/2020 and HTW Demonstration services began on 2/18/2020. Because HTW services did not substantially change with implementation of the HTW Demonstration, and to ensure consistent calculation of pre- and post-Demonstration metrics, the post-Demonstration measurement period is adjusted to begin on 1/1/2020. Measures calculated for DY1 will include approximately three weeks of the state-funded HTW program before the HTW Demonstration was approved.

Figure 3. HTW Evaluation Period



Notes. [1] The state-funded Healthy Texas Women program began on 7/1/2016, but the EPHC program continued to operate for two additional months, ending 8/31/2016. The program environment for women's health services in Texas has been stable since 9/1/2016. [2] The HTW Demonstration period is from 1/22/2020 to 12/31/2024. However, the HTW evaluation measurement post-period begins on 1/1/2020 to ensure consistent calculation of metrics in pre- and post-periods.

Some measures under Hypothesis 3.2 use a truncated portion of the study period due to operationalization constraints or source-specific data lags. Study period time frames for individual measures can be found in Appendix E: Detailed Tables.

Access, Utilization, and Health Outcomes

This section details the methods for eight evaluation hypotheses related to access, utilization, and health outcomes. These three domains constitute the bulk of the evaluation and are addressed collectively because, while specific measures vary, the study populations, data sources, and analytic methods are similar. Cost and provider eligibility criteria domains are addressed in subsequent sections. Table 2 reviews the hypotheses for each domain in this section.

Table 2. Evaluation Hypotheses for Access, Utilization, and Health Outcomes

Domain	Hypothesis
Access	Hypothesis 1.1. The HTW Demonstration will maintain or increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas. Hypothesis 1.2. The state's outreach and engagement activities support understanding of the HTW Demonstration.
Utilization	Hypothesis 2.1. The HTW Demonstration will maintain or increase utilization of family planning services among HTW clients. Hypothesis 2.2. The HTW Demonstration will maintain or increase utilization of preconception care services among HTW clients. Hypothesis 2.3. The HTW Demonstration will increase utilization of HTW Plus postpartum care services among HTW clients.
Health Outcomes	Hypothesis 3.1. The HTW Demonstration will maintain or improve women's health among HTW clients. Hypothesis 3.2. The HTW Demonstration will maintain or improve pregnancy outcomes and maternal health among HTW clients.

Study Populations

The primary study population for measures related to access, utilization, and health outcomes is women enrolled in the HTW Demonstration. However, several other populations will also be examined to help contextualize access and health outcome measures. Table 3 presents the definitions and approximate population sizes for the various study populations under consideration.

Table 3. Study Populations

Study Population	Definition	N
HTW clients[1]	Eligible women enrolled in HTW.	244,153
HTW clients eligible for HTW Plus[2]	Eligible women enrolled in HTW who have been pregnant in previous 12 months.[3]	93,333
HTW active billing providers[4]	Texas Medicaid providers with HTW paid claims.	3,085
Medicaid-paid deliveries[5]	Women who gave birth while enrolled in or receiving Texas Medicaid.	212,235

Note. [1] Reflects average monthly unduplicated clients in state fiscal year (SFY) 2018. [2] Reflects estimated average monthly HTW Plus caseload during SFY 2021. [3] Pregnancies do not have to result in a live birth for women to be eligible for HTW Plus. [4] Reflects unique full NPI-TPI combinations with HTW paid claims in SFY18. [5] Reflects unduplicated Medicaid clients with a delivery in SFY16.

Data Sources

The HTW evaluation will leverage several administrative data sources collected by HHSC for reporting and payment purposes to assess the impact of the HTW Demonstration. In addition, external data will be used to estimate rates of unintended pregnancy. Primary data collection by the external evaluator will also be used to explore client and provider perspectives related to the HTW Demonstration.

HHSC Data Sources

- **Client-level enrollment files.** The client-level enrollment files contain information about clients' age, race/ethnicity, county, and the number of months the client has been enrolled in HTW. Enrollment data for the HTW evaluation will come primarily from an HHSC Structured Query Language (SQL) database that is refreshed every April with an eight-month lag, such that on April 1 the data would include cumulative enrollment data through August 31 of the previous year.
- **Delivery Supplemental Payment (DSP) data.** DSP data contain supplemental delivery encounter information for clients enrolled in MMC programs. The DSP system is maintained by HHSC with a one-month lag, and may serve as an additional source in the identification of Medicaid-paid deliveries.
- **Medicaid FFS claims data.** FFS claims data contain information on client diagnoses and procedures provided under the FFS delivery model, including Current Procedural Terminology (CPT) codes; International Classification of

Diseases, 10th Revision, Clinical Modification (ICD-10-CM) codes; provider identification numbers (National Provider Identifier (NPI), Texas Provider Identifier (TPI)); and other information necessary to calculate individual-level measures. Medicaid claims data have been processed by Texas Medicaid & Healthcare Partnership (TMHP) since January 1, 2004. TMHP is the claims administrator and data warehouse for Texas Medicaid data, and performs internal edits for data quality and completeness as part of the claims adjudication process. FFS claims data for the HTW evaluation will come primarily from an HHSC SQL database that is sourced from TMHP and refreshed every April with an 8-month lag, such that on April 1 the data would include cumulative claims through August 31 of the previous year.

- **Medicaid Managed Care (MMC) encounter data**. MMC encounter data contain information on client diagnoses and procedures provided under the MMC delivery model, including the relevant CPT codes, ICD-10-CM codes, NPIs, TPIs, and other information needed to calculate individual-level measures. Like FFS claims, MMC encounters are housed by TMHP and subject to an approximate eight-month lag.
- **Network adequacy reports.** HHSC developed a methodology for assessing network adequacy annually for the HTW Demonstration based on standards used in the Texas STAR MMC program. The initial methodology for Demonstration Year (DY) 1 relies on distance standards for active HTW Primary Care Providers (PCPs) and all HTW-enrolled pharmacies. The standards vary across MMC service areas[14] and county type (metro, micro, or rural). At the time of writing, HHSC was working to establish performance standards for DYs 2-5. Performance standards will set a minimum percentage of HTW beneficiaries who live within the specified distance standards for active HTW PCPs and all HTW-enrolled pharmacies. Reports will be shared with the external evaluator as they become available. Specific information in network adequacy reports include the number HTW clients, the distance standards for active HTW PCPs and all HTW-enrolled pharmacies, the percentage of HTW clients meeting prescribed distance standards, and performance standards (starting in DY2). Network adequacy reports include findings for the state as a whole and for each of the MMC services areas broken down by county type.

[14] A map of MMC service areas in Texas is available via: https://www.hhs.texas.gov/sites/default/files/documents/services/health/medicaid-chip/programs/managed-care-service-areas-map.pdf

- **Pharmacy claims data.** Client-level pharmacy claims contain information about filled prescriptions, including the drug name, dose, date filled, number of days prescribed, and refill information. Pharmacy data for the HTW evaluation will be drawn from an HHSC SQL database that is refreshed every April with an eight-month lag, such that on April 1 the data would include cumulative pharmacy claims through August 31 of the previous year.
- **Provider-level enrollment files.** Provider-level enrollment files contain information on NPI, TPI, provider location, provider type, provider specialty, and other information relevant to assessing network adequacy. Provider data will be sourced from TMHP and an HHSC SQL database, and are subject to an approximate one-month lag.
- **Vital statistics.** Vital statistics are maintained by DSHS and include a variety of vital records for the state of Texas, including birth records. A birth record is a vital document that records a person's birth and includes information related to the birth, the mother and her pregnancy history, the father, and the newborn. Birth records may serve as an additional source in the identification of Medicaid-paid deliveries.

External Data Sources

- **Pregnancy Risk Assessment Monitoring System.** PRAMS is an annual survey developed by the Centers for Disease Control and Prevention and conducted in 47 states, including Texas. The Texas PRAMS is administered by DSHS to a systematic stratified sample of Texas residents who gave birth to a live infant (n≈3,300 annually). Source data are derived from state birth certificates. The PRAMS survey and associated birth certificate data include measures related to pregnancy intention and insurance coverage (e.g., Medicaid-paid deliveries). PRAMS data include a two-year time lag from the birth year and are representative at the state and regional levels.
- **Benchmark data.** The evaluation leverages ongoing reporting of state and national benchmarks. Importantly, benchmarks at the state or national level may not be representative of HTW clients and may not be available at the subgroup level (e.g. by race/ethnicity or age) or at the same time intervals as the HTW Demonstration. The sources below may be used to develop evaluation-specific benchmarks, where applicable.
  - Behavioral Risk Factor Surveillance System (BRFSS) Public Use Data Files
  - National Health Interview Survey (NHIS) Public Use Data Files
  - Texas Hospital Inpatient Discharge (THID) Public Use Data Files

Primary Data Collection

The perspectives of HTW clients and providers offer valuable insight about the HTW Demonstration not otherwise available through administrative or publicly-available data sets. Primary data collection will assess client and provider perspectives on the HTW Demonstration, including eligibility requirements, covered services, how to access services, and communication channels.[15] The external evaluator will determine the most appropriate primary data collection approach and develop corresponding instruments and/or guides. To the extent possible, the external evaluator will model questions after existing and previously-validated tools, such as the Consumer Assessment of Health Care Providers and Systems (CAHPS), the Biennial Health Insurance Survey, or the National Electronic Health Records Survey, as applicable. The external evaluator should also incorporate Mathematica's best practices for designing and administering beneficiary surveys specific to 1115 demonstration evaluations (Matulewicz, Bradley, & Wagner, 2019). If feasible, the external evaluator should make efforts to assure primary data collection activities target women of different race/ethnicities and geographic regions to ensure different perspectives are represented in the evaluation. Additional details on the requirements for primary data collection, including possible methods, sampling strategy, data analysis, and timing of primary data collection activities, can be found in Appendix D: Primary Data Collection Protocol.

Evaluation Measures

A series of measures has been identified to operationalize hypotheses related to access, utilization, and health outcomes. Table 4 provides an overview of the proposed measures, study populations, data sources, and analytic methods by evaluation hypothesis. Specific details regarding each of the proposed measures can be found in Appendix E: Detailed Tables.

[15] Primary data collection is also the primary data source for Evaluation Question 5 related to HTW provider eligibility criteria. The external evaluator may combine primary data collection efforts into a comprehensive approach, if feasible.

Table 4. HTW Evaluation Measures – Hypotheses 1-3

Evaluation Hypothesis	Measures	Study Population	Data Sources or Data Collection Methods	Analytic Methods
Evaluation Question 1: Did the HTW Demonstration increase <u>access</u> to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas?				
1.1 The HTW Demonstration will maintain or increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas.	1.1.1 HTW clients 1.1.2 HTW clients who received an HTW service	• HTW clients	• Client-level enrollment files • FFS claims data • Network adequacy reports • Pharmacy claims data	• Descriptive statistics • Descriptive trend analysis • Subgroup analysis, where applicable
	1.1.3 HTW active billing providers	• HTW active billing providers		
	1.1.4 Network adequacy	• HTW active billing providers • HTW clients		
1.2 The state's outreach and engagement activities support understanding of the HTW Demonstration.	1.2.1 Motivating factors for HTW enrollment and renewal 1.2.2 Understanding of eligibility requirements 1.2.3 Understanding of HTW benefits 1.2.4 Awareness of how to obtain services 1.2.5 Effectiveness of outreach channels 1.2.6 Effectiveness of HTW Demonstration resources	• HTW clients • HTW active billing providers	• Primary data collection	• Descriptive statistics • Thematic content analysis, where applicable • Subgroup analysis, where applicable

Evaluation Hypothesis	Measures	Study Population	Data Sources or Data Collection Methods	Analytic Methods
Evaluation Question 2: Did the HTW Demonstration increase <u>utilization</u> of family planning, preconception care, and postpartum services?				
2.1 The HTW Demonstration will maintain or increase utilization of family planning services among HTW clients.	2.1.1 Provision of most effective or moderately effective contraceptive methods 2.1.2 Long-acting reversible contraceptive use 2.1.3 Tests for any sexually transmitted infection/disease	• HTW clients	• Client-level enrollment files • DSP data, if applicable • FFS claims data • MMC encounter data • Pharmacy claims data • Vital statistics, if applicable	• Descriptive statistics • Descriptive trend analysis • Subgroup analysis, where applicable
2.2 The HTW Demonstration will maintain or increase utilization of preconception care services among HTW clients.[16]	2.2.1 Compliance with cervical cancer screening recommendations	• HTW clients	• Client-level enrollment files • FFS claims data • MMC encounter data	• Descriptive statistics • Descriptive trend analysis • Subgroup analysis, where applicable

[16] Hypothesis 2.2 does not include a breast cancer screening measure. Though increasing access to women's breast and cervical cancer services is listed as a goal of the HTW Demonstration, the U.S. Preventative Services Task Force only recommends breast cancer screenings for women ages 50-74 unless there are prior risk factors. Similarly, most validated breast cancer screening measures, including the measure in the 2020 CMS Adult Core Measure Technical Specifications and Resource Manual, are only applicable to women ages 50-74. The HTW Demonstration is only available to women ages 18-44; as a result, most validated breast cancer screening measures are not applicable to HTW clients. CMS approved the exclusion of a breast cancer screening measure on November 13, 2020.

Evaluation Hypothesis	Measures	Study Population	Data Sources or Data Collection Methods	Analytic Methods
2.3 The HTW Demonstration will increase utilization of HTW Plus postpartum care services among HTW clients.	2.3.1 HTW clients eligible for HTW Plus 2.3.2 HTW clients utilizing any HTW Plus postpartum services 2.3.3 Frequency of utilization of HTW Plus postpartum services		• Client-level enrollment files • FFS claims data • Pharmacy claims	
Evaluation Question 3: Did the HTW Demonstration improve women's health and pregnancy outcomes?				
3.1 The HTW Demonstration will maintain or improve women's health among HTW clients.	3.1.1 Hypertension medication adherence 3.1.2 Diabetes medication adherence 3.1.3 Cholesterol medication adherence 3.1.4 Antidepressant medication management	• HTW clients	• Client-level enrollment files • FFS claims data • MMC encounter data • Pharmacy claims data	• Descriptive statistics • Descriptive trend analysis • Subgroup analysis, where applicable
3.2 The HTW Demonstration will maintain or improve maternal health and pregnancy outcomes among HTW clients.	3.2.1 Unintended pregnancies	• Texas residents with a recent live birth	• PRAMS	• Descriptive statistics • Descriptive trend analysis • Subgroup analysis, where applicable
	3.2.1 Birth spacing 3.2.2 Pregnancy complications (Gestational diabetes, preeclampsia) 3.2.3 Adverse birth outcomes (Low birth weight, preterm birth) 3.2.4 Severe maternal morbidity	• HTW clients • Medicaid-paid deliveries	• Client-level enrollment files • DSP data, if applicable • FFS claims data • MMC encounter data • Vital statistics, if applicable	• Descriptive statistics • Difference-in-differences estimation • Subgroup analysis, where applicable

Analytic Methods

Access, utilization, and health outcomes will be evaluated using a series of quantitative and qualitative methods. This section describes the proposed analytic strategies for examining the measures presented in Table 4. All analytic methods will incorporate subgroup analyses and benchmarks, as applicable, to strengthen the validity of observed outcomes.

Descriptive Statistics

All evaluation measures except open-ended primary data collection questions may be examined through a variety of descriptive and inferential statistics. Descriptive statistics include estimates of central tendency and dispersion. Potential inferential analyses include bivariate statistics, parametric tests (e.g., paired or unpaired t-tests), and non-parametric tests (e.g., McNemar's test, Wilcoxon signed-rank test). The external evaluator will select the appropriate statistical test depending on whether the measure is categorical or continuous, and whether the data meet the assumptions of parametric tests (e.g., normality, independence).

Descriptive Trend Analysis

HTW is a long-standing program within the state of Texas, which precludes the availability of a pre-Demonstration period free of the relevant intervention, a necessary assumption for conducting preferred time-series designs such as interrupted time series. DTA is an alternative approach to time-series analysis for programs that do not have substantial programmatic changes or appropriate comparison groups. DTA plots and analyzes time-series data calculated at equally spaced intervals to explain patterns in selected measures over time. DTA typically focuses on identification and quantification of a trend through the use of correlation coefficients and ordinary least squares regression. The primary intervention point for DTA will be the evaluation post-period (January 1, 2020), however the external evaluator should attempt to account for or provide context for confounding environmental and historical factors, as necessary. DTA will be used for all measures with pre- and post-Demonstration data available, except several measures under Hypothesis 3.2 which will leverage DID due to availability of a comparison group. DTA will also be used for one measure under Hypothesis 1.1 (network adequacy) with post-Demonstration data only.

Unintended Pregnancies

Hypothesis 3.2 includes a measure of unintended pregnancies (3.2.1) derived from the PRAMS survey. The PRAMS survey is administered to a statewide sample of Texas women with a recent live birth and is not specific to HTW clients. Approximately half of the births in the PRAMS sample are paid by Medicaid. Like most evaluation measures, DTA will be used to examine changes in the unintended pregnancy rate among women with Medicaid-paid births. Given the availability of longitudinal data, the external evaluator may also generate a comparative time series to help determine whether movement in rate of unintended pregnancies is specific to the Medicaid population or the result of broader trends, if feasible. Potential comparison groups include private insurance deliveries (Texas PRAMS), all non-Medicaid deliveries (Texas PRAMS), or Medicaid deliveries in other states (Comparison State PRAMS).

Difference-in-Differences Estimation

All measures under Hypothesis 3.2, except 3.2.1, will rely on DID analysis. DID mimics an experimental study by examining the average change in individual-level outcomes for intervention and comparison group clients over time, and helps to mitigate selection concerns that might exist with a single cross-sectional comparison between groups.[17] The regression equation for a simple DID model is:

$$Y_{ist} = \beta_0 + \beta_1(\text{HTW group}_s) + \beta_2(\text{time}_t) + \beta_3(\text{HTW group}_s * \text{time}_t) + \varepsilon_{ist}$$

Where Y is the outcome measure; β_0 reflects the level of the measure when treatment group and time specifications are set to zero; β_1 estimates main effect of the dummy-coded treatment group; β_2 estimates the main effect of the dummy-coded time variable; β_3 estimates the interaction effect between the treatment group and time (i.e., the treatment effect); and ε is an error term. Additional covariates may be added to determine the effect of certain provider or client characteristics.

[17] If selection bias between the intervention and comparison groups is not consistent over time, bias may be introduced into the DID model. To help account for potential selection threats, the evaluator may choose to employ balancing techniques such as PSM prior to conducting DID analyses. Implementing PSM during the sample identification phase may help reduce potential bias originating from differences in observed characteristics between the intervention and comparison groups.

The traditional DID model relies on linear regression, which assumes a linear relationship between normally distributed independent and dependent variables. Several measures under Hypothesis 3.2 are based on dichotomous variables, which may require adjustments or corrections to the model. For example, because of known challenges involved in the application and interpretation of non-linear DID models, especially regarding interaction terms (Athey and Imbens, 2006; Ai and Norton, 2003), linear models are often used to preserve interpretability of the treatment effect coefficient. Bootstrapping adjustments can be made to correct for heteroscedasticity and autocorrelation that arise from linear modeling under these circumstances (Bertrand, Duflo, and Mullainathan, 2004). However, other corrections or alternative models may be necessary.

Qualitative Analysis

The appropriate methods for qualitative analysis will depend on the external evaluator's primary data collection instrument. If the external evaluator develops a survey with a limited number of open-ended questions, the external evaluator may review open-ended responses to supplement or expand upon quantitative survey results analyzed using descriptive statistics. If the external evaluator adopts a less prescriptive approach, such as focus groups or interviews, more advanced qualitative techniques will be required, such as thematic content analysis. Thematic content analysis is a qualitative analytic approach that identifies and codes patterns or themes in the data using inductive or deducting reasoning (Vaismoradi, Turunen, & Bondas, 2013). A strength of thematic content analysis is its ability to examine similarities and differences in the perspectives of study participants (Nowell, Norris, White, & Moules, 2017). As with quantitative approaches to data analysis, the external evaluator should incorporate subgroup analyses, where applicable.

Methodological Limitations

Considerations for Statistical Testing

Most measures in this evaluation draw on the entire HTW population.[18] As a result, observed changes in the evaluation measures reflect the population parameter rather than a sampling estimate. Parametric tests of hypotheses rely on sampling theory to produce estimates of sampling error, which make statistical testing, coefficient estimators, and standard errors meaningful. With population-level data, the application of sampling theory that undergirds inferential statistics (e.g., t-tests) is not meaningful in the traditional sense because there is no sample from which to make inferences about the population. Nevertheless, the external evaluator may apply statistical testing to observed population differences to better understand the magnitude of observed changes.

Threats to Internal and External Validity

Results from the analyses above should be interpreted alongside several limitations. The most salient threat to internal validity for most evaluation measures is history—the possibility that other external factors affected the selected measure rather than activities carried out under the HTW Demonstration. For example, economic shocks such as a recession could increase the population eligible for the HTW Demonstration without producing a concomitant rise in HTW providers, affecting network adequacy measures. The external evaluator will attempt to identify and control for simultaneous influences on selected measures over the study period. For example, measures with a comparison group may be able strengthen causal inference by comparing to trends among individuals exposed to the same external factors. Ultimately, however, sufficiently accounting for all external factors, particularly for measures without a viable comparison group to net out their influence, may not be possible.

An additional threat to internal validity is selection, or systematic differences in client characteristics that confound the observed effect. For example, minor changes to the HTW eligibility criteria from the pre- to post-Demonstration periods

[18] Only measures under Hypothesis 1.2, Hypothesis 3.2, and Hypothesis 5.1 rely on samples rather than full population data. Samples under these hypotheses come from primary data collection, PRAMS survey data, and the random sample of comparison group births used for pregnancy-related measures.

may introduce subtle changes to the volume and makeup of the caseload over time. The most substantial change in eligibility criteria from pre- to post-Demonstration is the revised minimum age criterion, which can be replicated in the historical reference group. However, more modest changes to the eligibility criteria, such as the implementation of a reasonable opportunity period or the use of MAGI for income eligibility determinations, may impact HTW caseloads in subtle ways. Because the transition to MAGI eligibility criteria did not happen immediately upon implementation, fade-in effects from this change may not be separable from broader effects of the HTW Demonstration. Another example of selection is the systematic difference between Medicaid deliveries to women previously enrolled in HTW and those to women not previously enrolled in HTW (Measures 3.2.2-3.2.5). Despite inherent differences between these groups, results from the DID model are not subject to bias if selection effects are consistent over time; nevertheless, the external evaluator should consider the use of matching techniques to further reduce selection threats, if feasible.

To help counter threats to internal validity, the HTW evaluation examines access, utilization, and health outcomes through multiple measures, study populations, and evaluation designs to better understand observed changes under the HTW Demonstration. The use of multiple methods acts as a robustness check on any single measure or technique and helps to strengthen evaluation conclusions.

Given the statewide nature of the HTW Demonstration, external validity concerns are negligible since observed results will necessarily apply to eligible populations in the state. However, subgroup analysis will provide insight into how selected measures vary by demographic and geographic characteristics, and whether the HTW Demonstration has differential effects across these groups.

Data Source Limitations

The HTW evaluation relies primarily on secondary data from HHS sources given the availability of this information for the entire HTW population. However, the central purpose of administrative claims and encounters data is to collect information for billing purposes, not to conduct research. Claims and encounters, for example, do not include specific health information such as a newborn's birthweight or a patient's A1c levels, only a broad birthweight category or that an A1c test was performed. This limitation is widely recognized in health services research. Nevertheless, many of the evaluation measures are validated and commonly used for research purposes.

Another limitation associated with the use of administration data is data lags, which pose a challenge to measuring and reporting changes in a timely manner (Schoenberg, Heider, Rosenthal, Schwartz, & Kaye, 2015). Measures using FFS claims or MMC encounters require an approximate 8-month data lag for claims adjudication. Measures related to deliveries and pregnancy outcomes are subject to longer data lags of approximately one year due to the time required to combine information from FFS claims, MMC encounters, and DSP data. To the extent that newborn claims are also needed to identify adverse birth outcomes, a mother-baby crosswalk must be constructed using an established methodology of conditional probabilistic matching, which is subject to additional lag. In addition to data lags, birth spacing measures require additional time to allow for the identification of subsequent births.[19]

Unintended pregnancy measures based on the PRAMS survey are also limited by the source data. PRAMS data are based on a sample of all Texas births, approximately half of which are paid by Medicaid. These data have the ability to report unintended pregnancies for Medicaid births as a group but are not able to specifically identify those to former HTW clients, making the measure crudely targeted to the HTW program. At the Medicaid subgroup level, confidence intervals associated with the rate of unintended pregnancy are fairly wide (e.g., 5-6 percentage points), hampering the ability to detect meaningful changes in the point estimates over time. In addition, PRAMS data are collected annually, but published on a two-year time lag due to federally required timelines. Together, these data limitations create problems examining changes over time and reduce the likelihood of detecting statistically significant differences.

Conclusions derived from qualitative data analysis will be susceptible to common threats to validity, such as selection or sampling bias, recall bias, and social desirability bias. Primary data collection is also limited to post-Demonstration perspectives due to the timeline of primary data collection activities. Primary data collection cannot begin until after the external evaluation contract is finalized (by October 1, 2021). Given the groundwork involved in instrument development, sampling, and logistics, the external evaluator will likely initiate primary data collection in DY3. Asking respondents to recall events two or three years in the past and compare those past events to the current Demonstration environment may

[19] HHSC has identified Demonstration year 2 (Calendar year 2021) as the latest available post-period year for birth spacing measures due to the observation time needed to identify subsequent births.

introduce inaccuracies and bias due to mood or emotional state, inaccurate memories, or priming by the data collection process (Polkinghorne, 2005). As a result, using primary data collection to estimate client and provider perspectives prior to the HTW Demonstration presents problems for study validity. Lastly, the number of survey waves will be limited due to study timelines, survey logistics, and the level of effort required to conduct and analyze primary data collection.

Finally, measures 1.1.1, 1.1.2, 2.1.1, 2.1.2, 2.2.1, 3.1.4, 3.2.1, 3.2.4, and 3.2.5 make use of state data sources to identify or develop suitable benchmarks or contextual references. Benchmarks may represent different populations than the clients served by HTW in terms of age, race/ethnicity, income, supplemental insurance, region, or other relevant characteristics. Benchmarks are provided to contextualize measures, and changes in measures over time, but should not be used for direct comparison to the HTW Demonstration due to these differences.

Cost

This section details the methods for Hypothesis 4.1, which assesses cost in the HTW evaluation. One goal of the HTW Demonstration is to ensure the effective use of public funds in the delivery of women's health care in Texas. The state uses the CMS-specified annual expenditures limits to operationalize the effective use of public funds and hypothesizes that the HTW Demonstration will remain below these limits.

Evaluation Measure

Table 5 presents the evaluation measure, study population, data sources, and analytic methods for Hypothesis 4.1. Additional details regarding the proposed measures can be found in Appendix E: Detailed Tables.

Table 5. HTW Evaluation Measure – Hypothesis 4.1

Evaluation Hypothesis	Measures	Study Population	Data Sources or Data Collection Methods	Analytic Methods
Evaluation Question 4: Did the HTW Demonstration effectively use public funds to provide women's health care in Texas?				
4.1 The HTW Demonstration will remain at or below the CMS-specified annual expenditures limits.	4.1.1 Per member per month costs	• HTW clients	• Demonstration Budget Neutrality Worksheet • HHSC calculated per member per month costs in pre-period	• Descriptive statistics • Time series analysis

For each year of the HTW Demonstration, CMS assigned a budget neutrality expenditure target that acts as an annual ceiling on per capita costs. The annual per member per month (PMPM) expenditure limits specified in STC 50 are presented in Table 6.

Table 6. Budget Neutrality Annual PMPM Expenditure Limits[20]

Trend	DY1	DY2	DY3	DY4	DY5
4.6%	$27.13	$30.87	$33.44	$34.63	$36.09

As part of the budget neutrality test, HHSC will calculate the actual PMPM cost for each Demonstration year and compare those costs to the CMS-specified annual expenditure limits. PMPM cost measures will also be calculated for the pre-period years 2017-2019.

Study Population

The study population for PMPM costs will be all clients enrolled in HTW.

Data Sources

- **Budget Neutrality Worksheet.** PMPM cost measures for complete Demonstration years will be sourced from the HTW Demonstration Budget Neutrality Worksheet that is calculated and reported annually by HHSC System Forecasting. In addition, the HTW evaluation will use pre-period PMPM costs generated by HHSC Forecasting using the same methodology.

Analytic Methods

Descriptive Statistics and Descriptive Trend Analysis

PMPM costs will be analyzed for the pre- and post-Demonstration study periods through descriptive statistics and DTA. Descriptive statistics will be used to test for statistical changes between individual time points, or between the pre- and post-periods in aggregate. DTA will be used to assess changes in the annual PMPM measure over time. DTA examines time series data collected at equally spaced intervals to explain patterns in longitudinal data. Trend analyses typically focus on identification and quantification of a trend through the use of correlation coefficients and ordinary least squares regression.

[20] Annual PMPM expenditure limits include costs associated with HTW Plus. If CMS does not approval the HTW Plus amendment, annual expenditures should reflect amounts specified in STCs.

Methodological Limitations

As with other measures, PMPM cost measures rely on the entire HTW population. As a result, observed changes reflect the population parameter rather than a sampling estimate. Therefore, the application of sampling theory that undergirds statistical testing (e.g., t-tests) is not meaningful in the traditional sense because there is no sample from which to make inferences about the population. Nevertheless, the external evaluator may apply statistical testing to observed population differences to better understand the magnitude of observed changes.

Cost measures are also limited by threats to internal validity from history—the possibility that other external factors affected the selected measures rather than activities carried out under the HTW Demonstration. For example, an economic recession might increase the number of eligible applicants, some of whom would be automatically enrolled in HTW when applying for Medicaid benefits; these clients may not utilize HTW services at the same rate as existing clients, driving PMPM costs down. To the extent possible, the external evaluator will attempt to identify and account for external influences on cost over the study period.

Provider Eligibility Criteria

The fifth goal of the HTW Demonstration is to implement the state policy to avoid direct or indirect use of state funds that promote or support elective abortions. This section details the methods for Hypothesis 5.1, which assesses the impact of provider eligibility criteria associated with the state policy on access to and utilization of services provided through the HTW Demonstration.

Background

Texas Human Resource Code §32.024(c-1), as added by Senate Bill 7, 82nd Legislature, First Called Session, 2011, requires HHSC to ensure that any funds spent for the purposes of the Medicaid Women's Health Program, or a successor program, are not used to: 1) perform or promote elective abortions; 2) contract with any entity that performs or promotes elective abortions; or 3) contract with any entity that affiliates with entities that perform or promote elective abortions. Senate Bill 7 established September 28, 2011 as the effective date for §32.024(c-1) and HHSC implemented §32.024(c-1) through rules that were effective on March 14, 2012. The current HTW Demonstration began January 22, 2020, almost eight years after the state's provider eligibility criteria went into effect.

The most direct method for examining the impact of the provider eligibility criteria is to examine the period before and after the policy first went into effect. This method would compare the Women's Health Program that operated under a previous 1115 Demonstration from January 1, 2007 to December 31, 2012 to the general-revenue funded Texas Women's Health Program that was implemented on January 1, 2013, soon after the provider eligibility criteria were implemented. HHSC analyzed outcomes associated with the women's health programs over this period in a previously published report in accordance with House Bill 1, 84th Legislature, Regular Session, 2015 (Article II, Health and Human Services Commission, Rider 41; Texas Health and Human Services Commission, 2017). Recreating this analysis would not yield additional information and is outside the scope of the current evaluation, which examines the degree to which the current HTW Demonstration maintains or improves upon the performance of its predecessor program.

Current options for assessing the impact of the of the provider eligibility criteria on the HTW Demonstration are limited to estimates of a hypothetical counterfactual in which the provider eligibility criteria do not exist, or descriptive analyses of the current program environment under HTW provider eligibility criteria.

Estimating A Counterfactual Case through Comparison Groups

As with other demonstration hypotheses, the longstanding nature of the HTW program is problematic for identifying a counterfactual condition that would allow the external evaluator to isolate changes in access and utilization due to the HTW provider eligibility criteria. To do so, the external evaluator would need to compare clients in the HTW Demonstration to a comparison group of similar clients in which the provider eligibility criteria do not exist. HHSC considered several potential comparison groups, each of which raises significant methodological challenges.

1115 Women's Health Program: 2007-2012

One counterfactual for examining the impact of the provider eligibility criteria is the historical women's health care program that existed prior to the implementation of those criteria. While such an analysis is technically feasible, it is methodologically fraught for a number of reasons. Women's health care programs have undergone significant changes since the state policy first went into effect, including changes to program eligibility, covered services, and the surrounding program environment. The program most like the current HTW Demonstration began July 1, 2016, when HHSC consolidated two women's health programs (TWHP and EPHC) into Healthy Texas Women. Texas modeled the HTW Demonstration after the existing Healthy

Texas Women program. It is not possible to determine whether differences between the 2007-2012 Women's Health Program and the current HTW Demonstration are due to the provider eligibility criteria or other factors inherent to the different programs, such as covered services, client characteristics, and historical events (e.g., the 2007-2012 Women's Health Program coincided with the Great Recession and the HTW Demonstration coincides with the COVID-19 pandemic). Ultimately, using a historical cohort from the 2007-2012 Women's Health Program to assess the impact of provider eligibility criteria under the HTW Demonstration would be severely impaired by threats to validity from history, maturation, and other confounds identified above.

Current Medicaid Clients

Another approach to estimating the impact of the provider eligibility criteria is to compare HTW Demonstration clients to current Medicaid clients receiving HTW-like services who are not subject to the provider eligibility criteria. This approach would avoid problems related to confounding factors from historical changes in women's health programming. However, as discussed in the Methodology section, there is no suitable comparison group for the HTW Demonstration in other state programs. Because the HTW Demonstration is available statewide and clients are placed in the most comprehensive program for which they are eligible, individuals receiving full Medicaid benefits have different selection characteristics known to impact health-related outcomes relevant to the evaluation. HHSC considered the viability of two non-HTW comparison groups (FPP and MMC clients), but differing eligibility requirements, program structures, and funding mechanisms present significant problems for comparative analysis.

The use of Medicaid clients to estimate a counterfactual condition in which provider eligibility criteria do not exist would be impaired by numerous validity issues. Even with the use PSM or other balancing techniques designed to correct for selection between groups, it is not possible to sufficiently isolate the impact of provider eligibility criteria from confounding factors. In comparison to HTW clients, Medicaid clients are subject to substantially different eligibility requirements, service packages, delivery systems, and provider networks. As a result, there is no quasi-experimental design that would produce unbiased estimates of the interaction between provider eligibility criteria and evaluation measures using current or historical agency programs.

Focus of Current Evaluation

Given the inability to estimate the impact of the provider eligibility criteria through comparison groups, the evaluation will use primary data collection to solicit client and provider perspectives related to accessing and delivering services under the HTW Demonstration. Primary data collection is the most direct and valid approach to understanding current impacts of the provider eligibility criteria in the absence of claims-based comparative analyses. In addition to primary data collection, the evaluation will estimate the proportion of active family planning providers in Medicaid who deliver services under HTW. Family planning providers in Medicaid include providers delivering services through HTW and other FFS or MMC programs. This measure will provide insight into the scale of the Medicaid provider network operating under the HTW provider eligibility criteria.

Evaluation Measures

All evaluation measures included in this report reflect the state of access, utilization, and health outcomes under the provider eligibility criteria. However, this section presents a subset of measures focused specifically on exploring the implications of those criteria. Table 9 presents the evaluation measures, study population, data sources, and analytic methods related to Hypothesis 5.1. Additional details regarding the proposed measures can be found in Appendix E: Detailed Tables.

Table 7. HTW Evaluation Measures – Hypothesis 5.1

Evaluation Hypothesis	Measures	Study Population	Data Sources or Data Collection Methods	Analytic Methods
Evaluation Question 5: How does implementation of the HTW provider eligibility criteria outlined in Goal 5 of the HTW Demonstration affect access to and utilization of women's health and family planning services?				
5.1 The implementation of HTW provider eligibility criteria does not adversely affect access to and utilization of women's health and family planning services.	5.1.1 Proportion of active family planning providers in Medicaid delivering services through HTW	• HTW certified providers • HTW active billing providers • Medicaid active billing providers	• FFS claims data • MMC encounter data • Provider-level enrollment files	• Descriptive statistics • Descriptive trend analysis
	5.1.2 Appointment wait times 5.1.3 Barriers to receiving care	• HTW clients	• Primary data collection	• Descriptive statistics • Thematic content analysis, where applicable • Subgroup analysis, where applicable
	5.1.4 Providers accepting new clients 5.1.5 Barriers to providing care	• HTW active billing providers		

Study Population

Evaluation Question 5 will rely on four distinct populations. To help contextualize access to family planning services in the HTW provider network, Measure 5.1.1 will use HTW certified providers, HTW active billing providers, and Medicaid active billing providers to estimate the proportion of active family planning providers in Medicaid delivering services through HTW. The universe of active family planning billing providers for this measure is limited to providers delivering HTW-defined family planning services in either HTW, traditional FFS Medicaid, or MMC, as these benefits are most directly related to women's reproductive health services. Importantly, it is unknown why Medicaid providers offering similar services in Medicaid do not participate in HTW; while some providers may decline to participate due to various program criteria, others may be unaware of the program, unable to accept additional clients, or only offer HTW-like services to specialized populations.

Measures 5.1.2 to 5.1.4 will use random samples of HTW active billing providers and HTW clients. HHSC and the external evaluator will review random samples along key client and provider characteristics and adjust as necessary to ensure samples are representative of their respective populations. Table 8 presents the definitions and approximate population sizes for the various study populations under consideration.

Table 8. Study Populations

Study Population	Definition	Total Population Size[1]
HTW clients[2]	Women ages 18 to 44 who are U.S. citizens or qualified immigrants and reside in Texas; are not pregnant; have a net family income at or below 200 percent of the FPL; are not eligible for or receiving benefits under Medicaid, CHIP, Medicare Part A or B; do not have other creditable health insurance coverage; and are enrolled in HTW.	244,153
HTW certified providers[3]	Texas Medicaid providers who have completed the HTW certification process.	33,876
HTW active billing providers[4]	Texas Medicaid providers with HTW paid claims.	3,085

Study Population	Definition	Total Population Size[1]
Non-HTW certified Medicaid active billing providers delivering HTW-like services[5]	Medicaid active billing providers who: are delivering HTW family planning services to women ages 18 to 44 who are not pregnant; did not complete the HTW certification; and do not have an HTW paid claim.	TBD

Note. [1] Total population sizes do not reflect sample sizes to be used for Measures 5.1.2 to 5.1.4. [2] Reflects average monthly unduplicated clients in state fiscal year (SFY) 2018. [3] Reflects unique full NPI-TPI combinations certified to provide HTW services in SFY18. [4] Reflects unique full NPI-TPI combinations with HTW paid claims in SFY18. [5] HHSC does not track this population as part of Medicaid oversight or monitoring activities. The total population size will be determined by the external evaluator.

Data Sources

The HTW evaluation will leverage administrative data sources and primary data collection to examine effects of the HTW provider eligibility criteria.

- **FFS Claims and MMC Encounter Data.** FFS claims and MMC encounter data have been processed by TMHP since January 1, 2004. TMHP performs internal edits for data quality and completeness. The client-level claims/encounter data contain CPT codes, ICD-10-CM codes, place of service codes, and other information necessary to identify HTW active billing providers and Medicaid active billing providers. An approximate eight-month time lag is needed for claims and encounter data adjudication.
- **Provider-level enrollment files.** Provider-level enrollment files contain information on HTW provider certification, NPI, TPI, provider location, provider type, provider specialty, and other information relevant to assessing network adequacy. Provider data will be sourced from TMHP and an HHSC SQL database and are subject to an approximate one-month lag.

- **Primary data collection.** A sample of HTW clients and HTW providers will be surveyed regarding their experience obtaining or providing HTW-related services under the HTW Demonstration. The external evaluator will identify the method of primary data collection best suited to the evaluation and develop corresponding data collection tools. The external evaluator may include questions related to Evaluation Question 5 in other planned primary data collection activities. Additional details on the requirements for primary data collection, including possible methods, sampling strategy, data analysis, and timing of primary data collection activities, can be found in Appendix D: Primary Data Collection Protocol.

Analytic Methods

Descriptive Statistics and Descriptive Trend Analysis

Descriptive statistics will be used to examine measure 5.1.1 over the pre- and post-Demonstration study periods, and to summarize responses within or across waves of primary data collection under the HTW Demonstration (measures 5.1.2 to 5.1.5).[21] Descriptive statistics include estimates of central tendency and dispersion. Potential inferential analyses include bivariate statistics, parametric tests (e.g., paired or unpaired t-tests), and non-parametric tests (e.g., McNemar's test, Wilcoxon signed-rank test). The external evaluator will select the appropriate statistical test depending on whether the measure is categorical or continuous, and whether the data meet the assumptions of parametric tests (e.g., normality, independence).

DTA will be used to assess and describe changes in measure 5.1.1 before and after the HTW Demonstration. DTA examines time-series data collected at equally spaced intervals to explain patterns in longitudinal data. Trend analyses typically focus on identification and quantification of a trend through the use of correlation coefficients and ordinary least squares regression. The primary intervention point for DTA will be the evaluation post-period (January 1, 2020), however the external evaluator should attempt to account for or provide context for confounding environmental and historical factors, as necessary.

[21] The external evaluator will conduct one or a few waves of primary data collection, depending on study timelines and logistical feasibility.

Thematic Content Analysis

Thematic content analysis will be used to evaluate responses to any open-ended primary data collection questions related to access to and utilization of women's health and family planning services. Through this method, the external evaluator will code responses, and then group codes together using inductive or deductive reasoning as themes emerge (Vaismoradi, Turunen, & Bondas, 2013). Thematic content analysis is well-suited to analyzing diverse and nuanced information collected from study participants.

Methodological Limitations

The most pronounced methodological limitation to examining Hypothesis 5.1 is the lack of a suitable counterfactual to directly assess the effects of the provider eligibility criteria on client-level outcomes. The evaluation estimates the proportion of active family planning providers in Medicaid delivering services through HTW. However, it is unknown why Medicaid providers offering similar services in Medicaid are not also HTW providers; existing data do not provide information on whether providers delivering family planning services outside of HTW meet HTW provider eligibility criteria or whether they would participate in HTW under a different set of criteria. The evaluation also summarizes client and provider perspectives under the provider eligibility policy, but whether their perspectives would differ in the absence of this policy is unknown.

Primary data collection is also limited to post-Demonstration perspectives only due to the anticipated timeline of primary data collection activities. Primary data collection will likely begin in DY3 after the external evaluation contract is finalized (by October 1, 2021). Asking respondents to recall events two or three years in the past and compare those past events to the current Demonstration environment presents problems for study validity. Moreover, the provider eligibility criteria were in effect during both the pre- and post-Demonstration periods; even if client and provider perspectives on the pre-Demonstration period could be collected without bias, differences in perspectives over time would be unrelated to the provider eligibility criteria.

Additionally, due to the reliance on primary data collection, Evaluation Question 5.1 may be susceptible to common threats to validity for survey data, such as selection or sampling bias, recall bias, and social desirability bias. The number of survey waves will also be limited due to study timelines, survey logistics, and the level of effort required to conduct and analyze primary data collection.

Finally, measures 5.1.2, 5.1.3, and 5.1.4 make use of state data sources for benchmarks. Benchmarks may represent different populations than the clients served by HTW in terms of age, race/ethnicity, income, supplemental insurance, region, or other relevant characteristics. Benchmarks are provided to contextualize measures, and changes in measures over time, but should not be used for direct comparison to the HTW Demonstration due to these differences.

Special Methodological Considerations

As noted throughout this evaluation design, the primary challenge to a robust evaluation of the HTW Demonstration is the similarity of its predecessor program. Since 2007, Texas has offered an evolving procession of women's health programs. While the HTW Demonstration seeks to enhance access to these services, it does not substantively change them or the populations receiving them. The proposed evaluation design attempts to capture changes resulting from the HTW Demonstration, but observed changes are likely to be modest given the similarity of the counterfactual condition.

The HTW evaluation will also coincide with program changes associated with the state's other 1115 waiver, known as the Texas Healthcare Transformation and Quality Improvement Program Demonstration Waiver (1115 Transformation Waiver). One component of the 1115 Transformation waiver is the Delivery System Reform Incentive Payment (DSRIP) program, which incentivizes hospitals and providers to meet access-and outcome-related goals. Some providers participating in DSRIP may also provide HTW services. The DSRIP program is scheduled to phase out during the HTW Demonstration. HHSC has developed a DSRIP transition plan that aims to build on delivery system reform through alternate financing models and supporting infrastructure for improving access to care. These efforts are intended to identify strategies, programs, and policies to sustain successful DSRIP activities, however it is possible that the phase-out of DSRIP funding could lead to changes in clinics or providers available to serve HTW clients. HHSC will monitor network adequacy as part of the HTW Demonstration and communicate with CMS regarding any necessary adjustments to the HTW evaluation.

HHSC began providing a set of enhanced, cost effective, and limited postpartum care services (HTW Plus) to a subset of HTW clients in September 2020, approximately eight months after the HTW Demonstration began. Given the overlap between the goals of the HTW Demonstration and HTW Plus, the addition of HTW Plus will likely impact a variety of measures included in the HTW evaluation. Not all

women enrolled in HTW are eligible for HTW Plus; only HTW clients who were pregnant in the year prior to HTW enrollment are eligible for HTW Plus. As a result, the introduction of HTW Plus creates variation in the HTW Demonstration benefit packages available to enrolled clients. The HTW evaluation directs the external evaluator to identify and account for differences resulting from the introduction of HTW Plus, where applicable and feasible.[22] However, because clients eligible for HTW Plus are also postpartum, it may be unclear whether differences in subgroup analyses are the result of HTW Plus services or inherent differences between postpartum and non-postpartum HTW clients. Findings of the evaluation should be interpreted with appropriate context due to these programmatic changes that occurred for a subset of the HTW population after the HTW Demonstration began.

Finally, it should be noted that the HTW Demonstration is being implemented amidst environmental and historical factors which may alter women's health services across the state of Texas. These factors, such as the COVID-19 pandemic and emerging state policies, present significant confounding factors to evaluating the HTW Demonstration. The COVID-19 pandemic presents the largest challenge given its wide-ranging impacts and close proximity to the start of the HTW Demonstration. The pandemic has reordered priorities for both clients and providers in the state. One immediate consequence of the COVID-19 pandemic may be to depress HTW utilization shortly after the onset of the HTW Demonstration due to social distancing measures and shifting health care concerns. The external evaluator may use public use data files on COVID-19 confirmed cases and hospitalizations in Texas to better understand the impact of the pandemic on HTW utilization. For example, if HTW utilization decreases alongside rising COVID-19 cases in Texas (or vice versa), COVID-19 related contextual data could be used to help interpret and contextualize HTW Demonstration findings.

The evaluator should also take care to interpret evaluation findings alongside emerging state policies. For example, a bill was passed during the 87th Texas Legislature, Regular Session, that extends eligibility for Medicaid for Pregnant Women, which may impact the timing of HTW enrollment for clients who transition to HTW following the expiration of Medicaid for Pregnant Women coverage. Additionally, policy-related changes to women's health services outside of the HTW

[22] At the time of writing, the state's amendment seeking to incorporate HTW Plus services into the HTW 1115 Demonstration was pending CMS approval. Based on CMS direction, HHSC incorporated HTW Plus services into the evaluation design. If CMS does not approve the amendment, adjustments to this evaluation design may be necessary.

Demonstration may bias perceptions and feedback related to the HTW Demonstration and women's health services obtained through primary data collection.

Earlier sections of this report have discussed the validity threats associated with time series designs and alluded to the potential for confounding factors to undermine causal inference. COVID-19 and changes to the broader policy landscape in Texas may present such threats. The external evaluator will take care to interpret and present pertinent findings within the appropriate context, carefully formulate primary data collection tools, and adjust the evaluation, where applicable and feasible, such that findings reflect the effects of HTW Demonstration policies.

Communication, Dissemination, and Reporting

The Interim and Summative Evaluation reports will be produced in alignment with the Attachment B of the STCs, *Preparing the Evaluation Report,* and the schedule of deliverables listed in Table 9.

Table 9. Schedule of Evaluation Deliverables

Deliverable	Date
STCs approved for the Healthy Texas Women 1115 waiver	January 22, 2020
HHSC submits draft Evaluation Design Plan to CMS for comments and posts to the state's Demonstration website (within 120 calendar days after approval of Demonstration)	May 21, 2020
HHSC receives comments from CMS	September 3, 2020
HHSC submits draft Evaluation Design (within 97 calendar days of receipt of CMS comments)[1]	December 9, 2020
HHSC receives comments from CMS	September 8, 2021
HHSC submits final Evaluation Design (within 60 calendar days of receipt of CMS comments) and posts to the state's Demonstration website	November 5, 2021
HHSC procures an independent evaluator	February 1, 2022[2]
HHSC submits draft Interim Evaluation Report to CMS for comment	December 31, 2023
HHSC receives comments from CMS (estimated within 60 calendar days)[3]	*February 29, 2024*
HHSC submits final Interim Evaluation Report to CMS (within 60 calendar days of receipt of comments)	April 29, 2024
HHSC submits draft Final Evaluation Report to CMS for comment	June 30, 2026
HHSC receives comments from CMS (estimated within 60 calendar days [3]	*August 29, 2026*
HHSC submits Final Evaluation Report to CMS (within 60 calendar days of receipt of comments)	October 28, 2026

Note. [1] The Evaluation Design was originally due to CMS within 60 calendar days of receipt of CMS feedback (11/2/2020). CMS approved a 30-calendar day extension on 9/18/2020 and an additional 7-calendar day extension on 12/3/2020, extending the deadline to 12/9/2020. [2] The procurement of the external evaluator was originally slated to be completed by 10/1/2021. However, due to delays in receiving CMS feedback on the Evaluation Design Plan, HHSC postponed this date to 2/1/2022. [3] Timeline assumes CMS will provide comments on evaluation deliverable to HHSC within 60 calendar days of initial submission. Should CMS require additional time to provide comments, submission date of final evaluation deliverables will be adjusted accordingly. STC = Special Terms and Conditions. HHSC = Health and Human Services Commission. CMS = Centers for Medicare and Medicaid Services.

State Presentations for CMS

As specified in STC 63, if requested by CMS, Texas will participate in discussions with and/or present to CMS the Evaluation Design plan and/or evaluation findings.

Public Access

Texas will post final versions of the Evaluation Design Plan, Interim Evaluation Report, and Summative Evaluation Report on the state website within 30 days of approval by CMS (STC 64).

Additional Publications and Presentations

The state will comply with CMS requirements relating to review of publications and presentations involving findings from the final evaluation reports (STC 65). In some cases, HHSC may not be aware of publication or presentation activities undertaken by its external evaluator—especially after the external evaluation contract has expired. However, HHSC will keep CMS apprised of any known publication or presentation activities by HHSC or its external evaluator and provide CMS 10 business days to review and comment on such materials where applicable.

Appendix A. Document History Log

Table A1. Document History Log

Status[1]	Document Revision[2]	Effective Date	Description[3]
Baseline	n/a	May 21, 2020	Original Draft Evaluation Design (STC 56)
Revision	2.1	December 9, 2020	Updated based on CMS feedback received September 3, 2020
Revision	3.1	November 5, 2021	Updated based on CMS feedback received September 8, 2021

Note. [1] Status should be represented as "Baseline" for initial issuances, "Revision" for changes to the Baseline version, and "Cancellation" for withdrawn versions.
[2] Revisions should be numbered according to the version of the issuance and sequential number of the revision - e.g., "1.2" refers to the first version of the document and the second revision.
[3] Brief description of the changes to the document made in the revision.
STC=Special Terms and Conditions. CMS=Centers for Medicare and Medicaid Services.

Appendix B. Independent Evaluator and Budget

The STCs state the HTW Demonstration evaluation must be conducted by an independent evaluator. To meet this requirement, HHSC will identify and contract with an independent external evaluator.

External Independent Evaluator

Required Qualifications

HHSC will select an independent evaluator with the expertise, experience, and impartiality to conduct a scientifically rigorous program evaluation in an independent manner in accordance with the CMS-approved Evaluation Design. The independent evaluator will be required to comply with evaluation reporting requirements and standards outlined in the STCs and summarized in Table 9 above.

Potential evaluation entities will be assessed on their relevant work experience, staff expertise, data management and analytic capacity, experience working with state agency program and research staff, proposed resource levels and availability of key staff, track record of related publications in peer-reviewed journals, and the overall quality of their proposal. In the process of identifying, selecting, and contracting with an independent external evaluator, Texas will act appropriately to prevent a conflict of interest with the independent external evaluator, including the requirement to sign a declaration of "No Conflict of Interest."

HHSC will pursue an interagency contract to secure independent evaluation services from a state university. The contracting process includes development of a project proposal and quote request specifying the Scope of Work, vendor qualifications, vendor requirements, timelines, milestones, and cost estimate template. The cost estimate template will include a breakdown of costs for staffing, fringe benefit, travel, equipment and supplies, data collection, other administrative, and indirect costs. The project proposal and quote request will be sent to a list of Texas state universities, allowing 30 calendar days for response. A team of reviewers at HHSC will be identified prior to the submission deadline of proposals. Each proposal submitted in response to the request will be reviewed by the HHSC review team, which will identify respondents with the best proposal and value. HHSC will make a final decision for contract award based on the strength of the overall proposal and the abilities of the external entity to satisfy the requirements of the project proposal

and quote request and conduct the independent evaluation in the timeframe required. The contracting process begins once an evaluator is selected.

The timeframe for soliciting and contracting for an independent evaluator is 6-12 months from the date an Evaluation Design Plan is approved by CMS. [23]

Evaluation Budget

As required by CMS under STC 59, the evaluation budget must include the total estimated cost, as well as a breakdown of estimated staff, administrative, and other costs for all aspects of the evaluation. The total budget for the external independent evaluator is estimated to be approximately $5 million[24] for the period from February 1, 2022 to October 31, 2026;[25] however, the final budget will not be available until the external evaluation contract is executed. The estimated budget amount will cover all evaluation expenses, including salary, fringe, administrative costs, other direct costs such as software or travel expenses related to primary data collection, as well as indirect costs related to data collection, analysis, and report development.

As part of the contracting process, potential contractors will populate the budget shell [Table B1].

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[23] In September 2021, HHSC determined that waiting to begin the contracting process until the Evaluation Design Plan is approved by CMS would result in serious risks to the evaluator's ability to carry out components of the Evaluation Design Plan, and may jeopardize delivery of the Interim Evaluation Report as required by the STCs. As a result, HHSC began the contracting process without an approved Evaluation Design or final scope of work.

[24] The estimated evaluation budget may require revisions to account for expanding federal research interests, especially with regard to resource-intensive components such as primary data collection.

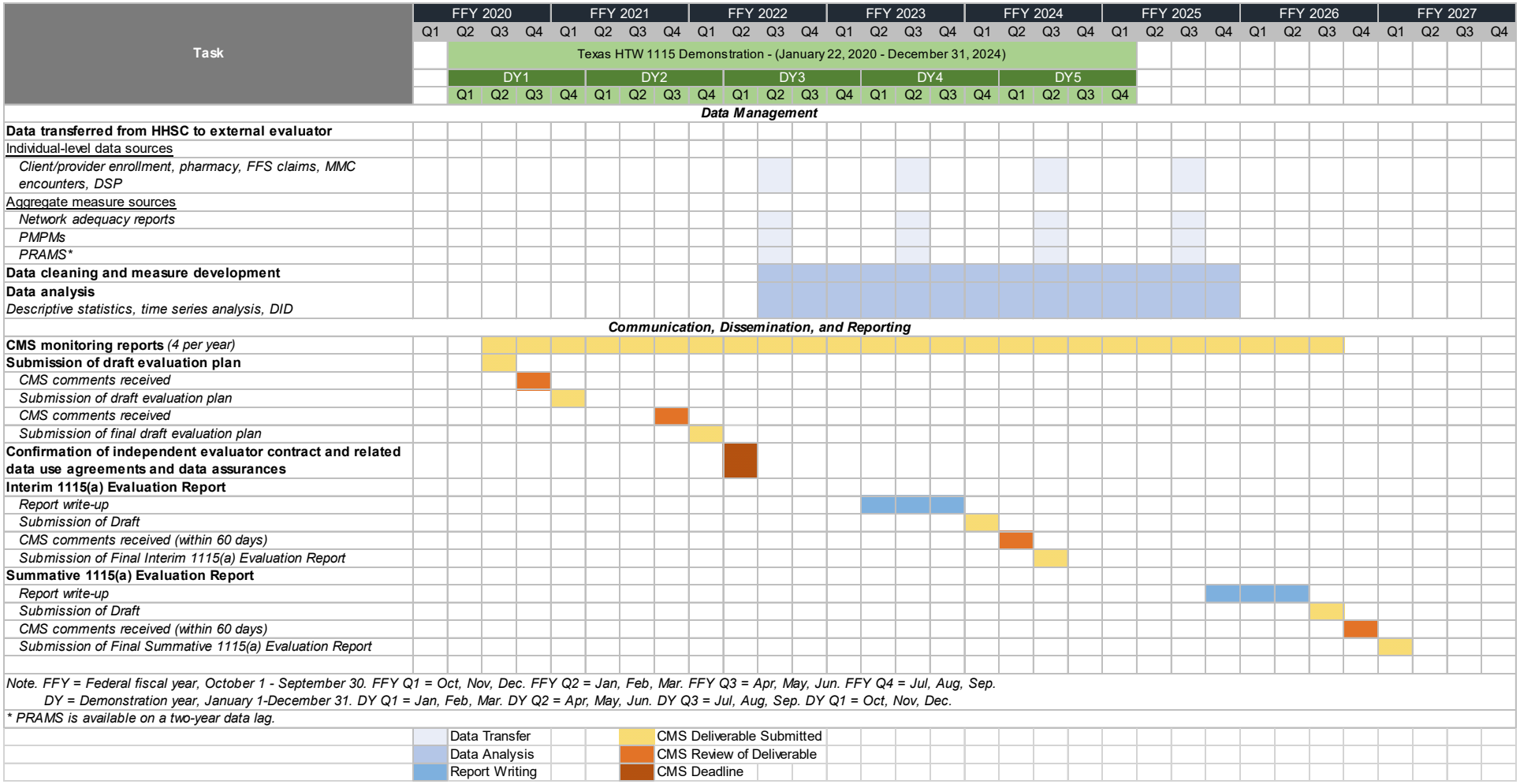
[25] The external evaluator timeframe, February 1, 2022 to October 31, 2026, is based on estimated date the contract with the External Evaluator will be executed. The contract timeframe extends through CMS approval of the final Summative Evaluation Report, allowing time for the external evaluator to address any CMS comments/questions.

Table B1. Proposed Evaluation Budget

Category	Total Cost
Personnel	
Fringe	
Travel	
Indirect Costs	
Data Collection	
Equipment/Supplies	
Other Administrative Costs	
TOTAL EVALUATION COST	

Evaluation Milestones

Table B2. Estimated Evaluation Timeline and Major Milestones



Appendix C. Potential Comparison Groups

Table C1. Potential Comparison Group Assessment

	Family Planning Program	Medicaid Managed Care
Population	Clients receiving FPP services	STAR or STAR+PLUS non-pregnant females ages 18-44 with procedure code related to family planning
Advantages	• Eligibility criteria include a similar FPL (<250% FPL) • Covered services are similar to HTW	• May receive full HTW service array • Ability to track Medicaid IDs over time
Disadvantages	• Eligibility determined at FPP clinics. Program does not have "enrolled" clients, only utilizers. While uncommon, some utilizers may also be HTW clients. • Program relies on program-specific IDs that cannot be crosswalked to Medicaid IDs. Clients cannot be "followed" into Medicaid claims or birth records. • Program has annual funding cap that results in seasonal variation in paid claims utilization. • No pharmaceutical treatment for diabetes, high blood pressure, or high cholesterol. • Program primarily serves non-citizens up to 250% FPL, or citizens between 200 and 250% FPL, due to enrollment hierarchy that would otherwise place clients in Medicaid or HTW.	• Potential comparison clients have very low-income (14%-16% FPL) or are recipients of SSI for the Aged and Disabled. HTW does not include similar clients, as they would be enrolled in Medicaid instead. • Potential comparison clients receive more comprehensive services under the Medicaid state plan; positive outcomes observed in the HTW population would likely be due to population characteristics (selection bias) rather than the HTW benefit package.

Appendix D. Primary Data Collection Protocol

Primary data collection is a critical component of the HTW evaluation. The evaluation design relies on primary data collection to address 2 evaluation questions, 2 hypotheses, and 11 corresponding measures, outlined in Table D1 below. While the external evaluator is ultimately responsible for developing and executing the primary data collection protocol, this appendix outlines the expectations of HHSC and CMS related to primary data collection for the HTW evaluation. The external evaluator's ability to execute the primary data collection protocol outlined in this appendix is dependent on completion of prerequisite preparations for primary data collection (e.g., execution of the external evaluation contract, development and CMS approval of primary data collection tools, and IRB approval). Delays in these processes may alter this primary data collection protocol. Necessary adjustments or refinements to the plans outlined in this Appendix will be relayed to CMS in Quarterly Monitoring Reports for the HTW Demonstration. CMS may provide feedback on proposed adjustments or refinements to the primary data collection protocol, when necessary.

Methods of Primary Data Collection

Primary data collection activities for the HTW evaluation will rely primarily on a beneficiary survey and a provider survey. If feasible given available resources and timelines, the evaluator may also conduct focus groups with HTW clients to gather more in-depth or specific information about beneficiaries' perceptions of the HTW Demonstration. The evaluator should use focus groups only when there is an appropriate need, such as measures which would benefit from greater exploration (e.g., impacts of various Demonstration policies on access to care, or perceptions on barriers to care). Table D1 outlines possible primary data collection methods by evaluation question.

Table D1. Proposed Methods of Primary Data Collection

Evaluation Hypothesis	Purpose of Primary Data Collection	Corresponding Measures	Targeted Populations	Method(s) of Primary Data Collection
Evaluation Question 1: Did the HTW Demonstration increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas?	Gather perceptions on the extent to which outreach and engagement activities support understanding of the HTW Demonstration.	1.2.1 Motivating factors for HTW enrollment and renewal 1.2.2 Understanding of eligibility requirements 1.2.3 Understanding of HTW benefits 1.2.4 Awareness of how to obtain services 1.2.5 Effectiveness of outreach channels 1.2.6 Effectiveness of HTW Demonstration resources	• HTW beneficiaries • HTW providers	• Print and/or online beneficiary survey • Print and/or online provider survey • Focus groups with beneficiary survey respondents, if feasible
Evaluation Question 5. How does implementation of the HTW provider eligibility criteria outlined in Goal 5 of the HTW Demonstration affect access to and utilization of women's health and family planning services?	Gather perceptions on access and barriers to receiving and delivering care under the HTW provider eligibility criteria.	5.1.2 Appointment wait times 5.1.3 Barriers to receiving care 5.1.4 Providers accepting new clients 5.1.5 Barriers to providing care	• HTW beneficiaries • HTW providers	• Print and/or online beneficiary survey • Print and/or online provider survey • Focus groups with beneficiary survey respondents, if feasible

Development of Primary Data Collection Tools

The external evaluator will develop corresponding surveys and/or guides to fully address evaluation questions, hypotheses, and measures relying on primary data collection. Appendix D: Detailed Tables provides required topics and example questions for measures relying on primary data collection to support development of primary data collection tools. To the extent possible, the external evaluator will model questions after existing and previously validated tools. The external evaluator should also incorporate Mathematica's best practices for designing and administering beneficiary surveys specific to 1115 demonstration evaluations (Matulewicz, Bradley, & Wagner, 2019). Additionally, the external evaluator should assess relevant external factors at the time of administration, in order to develop and frame corresponding surveys and/or guides carefully, and add contextual background, where necessary, to ensure feedback reflects the HTW Demonstration, rather than external factors such as other state policies or the COVID-19 pandemic, which may confound evaluation results. Draft survey instruments will be shared with CMS prior to implementation.

Sampling Strategy

The external evaluator will develop and execute a sampling strategy for each method of primary data collection (i.e., beneficiary survey, provider survey, and beneficiary focus groups, if feasible). Table outlines expectations for the sampling plan, including the sampling technique, minimum sample requirements, and targeted response rate for each method of primary data collection. The external evaluator may adjust the proposed sampling strategy outlined in Table where necessary based on final client and provider demographics, however care should be taken to ensure the sample is representative at the statewide level (e.g., survey weights may be used to ensure demographic subgroups are appropriately represented in the statewide samples). The evaluator should detail the executed sampling strategy, including any modifications to Table , in Semi-Annual Monitoring Reports submitted to HHSC,[26] and subsequently through the Interim and Summative Evaluation Reports submitted to CMS.

[26] HHSC will document details on the executed sampling strategy to CMS via Quarterly Monitoring Reports for the HTW Demonstration.

Table D2. Proposed Sampling Strategy for Primary Data Collection

Method of Primary Data Collection	Study Population (N)	Sampling Technique	Target Analytic Sample[1,2]
Print and/or online beneficiary survey	HTW clients (244,153)[3]	Stratified random sample of all HTW clients based on key demographic subgroups (e.g., region, age, race/ethnicity)	1,500
Print and/or online provider survey	HTW active billing providers (3,085)[4]	Stratified random sample of all HTW providers based on key demographic subgroups (e.g., region, provider type) or convenience sample[5]	300
Focus groups with beneficiary survey respondents, if feasible	Beneficiary survey respondents (1,500)	Purposive sample of beneficiary survey respondents with varying perspectives on the HTW Demonstration (e.g., Maximum Variation Sampling; Etikan, Musa, & Alkassim, 2015)	100

Notes. [1] Target analytic samples for the beneficiary and provider surveys meet conventional criteria for statistical power (0.80) at $\alpha = 0.05$. [2] The external evaluator will apply survey weights to ensure survey samples are representative of all HTW clients and providers. [3] Reflects average monthly unduplicated clients in state fiscal year (SFY) 2018. [4] Reflects unique full NPI-TPI combinations with HTW paid claims in SFY18. [5] HHSC is exploring the viability of using provider emails for survey distribution. If valid emails are available for a sufficient sample of HTW active billing providers that is representative of all HTW active billing providers, the external evaluator may choose to send the survey to all HTW active billing providers with a valid email address on record with HHSC.

Primary Data Collection Analytic Methods

Descriptive Statistics

Closed-ended survey questions may be examined through a variety of descriptive statistics. The external evaluator will apply survey weights to close-ended survey items to ensure aggregate results are representative of the HTW client population. Descriptive statistics include estimates of central tendency and dispersion. For survey questions modeled from existing and previously validated tools, the external evaluator should use publicly available state or national benchmarks, where feasible, to support interpretation of findings.

Qualitative Analysis

The appropriate methods for qualitative analysis will depend on the method of primary data collection and type of information gathered. The external evaluator may review open-ended beneficiary and provider survey responses using deductive content analysis. Deductive content analysis is used when the coding structure is based on previous theory and findings and/or a predefined set of hypotheses (Elo & Kyngas, 2008) which may be appropriate for some survey questions (e.g., focused or narrowly defined open-ended items). However, more advanced qualitative techniques will be required for stand-alone open-ended survey questions and HTW client focus groups, if conducted, such as thematic content analysis. Thematic content analysis is a qualitative analytic approach that identifies and codes patterns or themes in the data using inductive or deducting reasoning (Vaismoradi, Turunen, & Bondas, 2013). A strength of thematic content analysis is its ability to examine similarities and differences in the perspectives of study participants (Nowell, Norris, White, & Moules, 2017). As with quantitative approaches to data analysis, the external evaluator should incorporate subgroup analyses, where applicable.

Timing of Primary Data Collection Activities

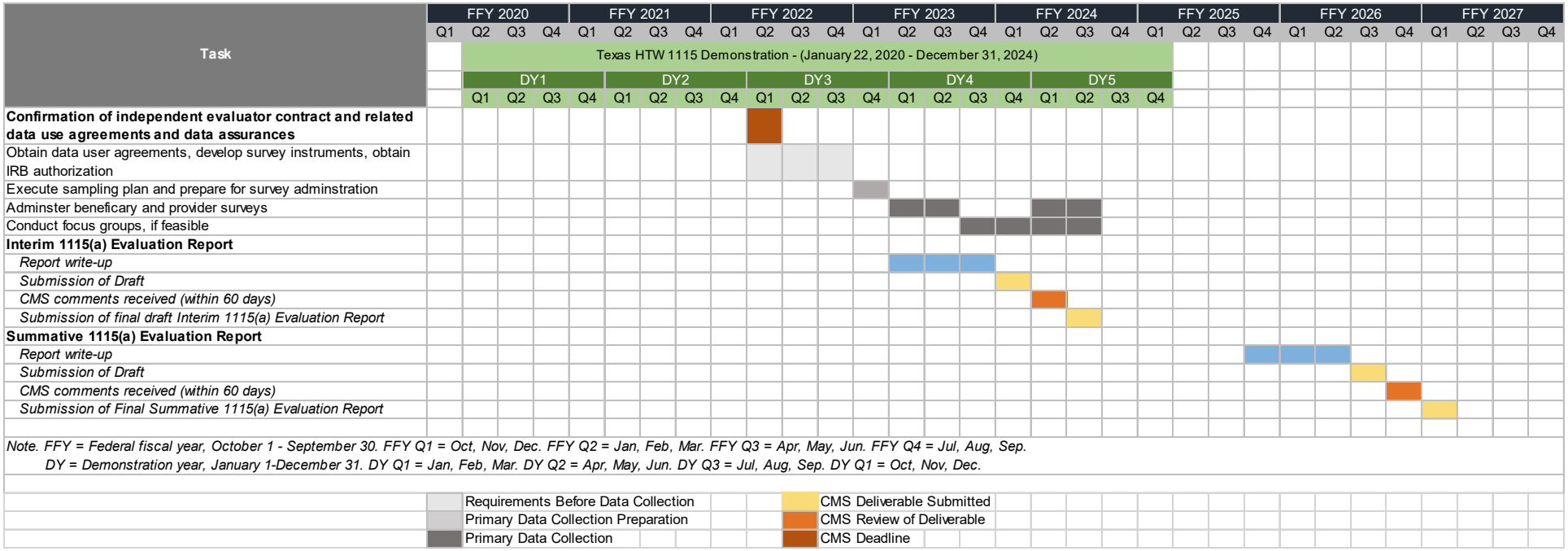
After the external evaluation contract is executed, the external evaluator will begin obtaining data use agreements, developing survey instruments, and applying for IRB approval within their institution and with HHS, after which the external evaluator will execute the sampling plan, and prepare for primary data collection administration through survey printing and/or online survey development. HHSC estimates the beneficiary and provider surveys will be deployed approximately one year after the external evaluation contract is executed (February 2023, at the beginning of DY4), with a possible second wave of both surveys 12 months after initial implementation (February 2024).[27] Focus groups would take place after the first wave of the beneficiary survey, if deemed feasible and necessary by the external evaluator. All primary data collection will end by the middle of DY 5 (July

[27] The timeline presented assumes the external evaluator will obtain IRB approval by August 2022. Delays in approval of primary data collection tools and subsequent IRB approval may substantially limit the external evaluator's ability to execute primary data collection activities, including the ability to conduct a second wave of beneficiary and provider surveys.

2024) to ensure the external evaluator has sufficient time for data analysis.[28] Given that primary data collection may not begin until February 2023, limited findings will be available for the Interim Evaluation Report due to CMS on December 31, 2023. The external evaluator will include preliminary primary data collection findings, if any, in the Interim Evaluation Report, but comprehensive findings will not be available until the Summative Evaluation Report due to CMS on July 30, 2026. Figure depicts the estimated timeline for primary data collection activities alongside major HTW Demonstration deliverables.

[28] HHSC estimates the evaluator will require nine to twelve months to complete data analysis given the multi-method and multi-modal approach proposed, and the large labor investment required for qualitative data analysis.

Figure D1. Estimated Primary Data Collection Timeline



Appendix E. Detailed Tables

Evaluation Question 1. *Did the HTW Demonstration increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas?*

Hypothesis 1.1: The HTW Demonstration will maintain or increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas.

Measure 1.1.1	**HTW clients**
Definition	The unique count of women enrolled in HTW
Study Population	HTW clients
Measure Steward or Source	N/A
Technical Specifications	HTW enrollment files summarize eligibility segments each month. Clients are enrolled in HTW for 12 continuous months
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 Client characteristics (age, race/ethnicity, region, etc.), where applicable The population eligible for the HTW Demonstration[1]
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in women enrolled in HTW would suggest access to the HTW Demonstration was maintained or improved
Benchmark	None; Trends in Texas Medicaid caseloads and uninsured women may be used as contextual references[2]

Note. [1] Estimates of the population eligible for the HTW Demonstration are provided in the HTW Demonstration Population section of the evaluation design; updated estimates are available upon request. [2] Texas Medicaid caseloads are available via Texas HHSC Healthcare Statistics: https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics. HHSC estimates the number of uninsured women in Texas ages 15-44 using on the American Community Survey Samples for Texas. HHSC will produce annual estimates of uninsured women in Texas upon request. Contextual references should be interpreted with caution due to differences between these populations and HTW clients. HTW = Healthy Texas Women.

Measure 1.1.2	HTW clients who received any HTW service
Definition	Proportion of HTW clients who received any HTW service
Study Population	HTW clients
Measure Steward or Source	N/A
Technical Specifications	HTW clients with paid FFS claim for HTW service or prescription filled for HTW-covered medication Present as unduplicated number of clients served, and as proportion of all HTW clients: **Numerator**: Total number of unduplicated HTW clients with paid FFS claims for HTW service or prescription filled for HTW-covered medication **Denominator**: Total number of unduplicated HTW clients **Rate**: (numerator / denominator) * 100
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	FFS claims data Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Separated by HTW service categories, if feasible[1] Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in HTW clients receiving any HTW service would suggest access to HTW Demonstration services was maintained or improved
Benchmark	None; Trends in Texas Medicaid caseloads and uninsured women may be used as contextual references[2]

Note. [1] Service categories may reflect HTW service groupings provided in the Demonstration Covered Services section of the evaluation design or alternative service groupings determined by the evaluator. [2] Texas Medicaid caseloads are available via Texas HHSC Healthcare Statistics: https://hhs.texas.gov/about-hhs/records-statistics/data-statistics/healthcare-statistics. HHSC estimates the number of uninsured women in Texas ages 15-44 using on the American Community Survey Samples for Texas. HHSC will produce annual estimates of uninsured women in Texas upon request. Contextual references should be interpreted with caution due to differences between these populations and HTW clients. *Note for Measure 1.1.2 continued on the next page.*

HTW = Healthy Texas Women. FFS = Fee-for-service. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 1.1.3	**HTW active billing providers**
Definition	The unique count of providers billing any HTW services
Study Population	HTW active billing providers
Measure Steward or Source	N/A
Technical Specifications	Unique count of providers listed as: • Billing provider on paid claims for HTW service, or • Prescribing provider for filled HTW-covered prescription.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	FFS claims data Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Provider characteristics (region, type of provider etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in HTW active billing providers would suggest access to providers under the HTW Demonstration was maintained or improved
Benchmarks	None

Note. HTW = Healthy Texas Women. FFS = Fee-for-service. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 1.1.4	**Network adequacy**
Definition	The percentage of HTW clients meeting prescribed network distance standards
Study Population	HTW active billing providers HTW clients

Measure 1.1.4	Network adequacy
Measure Steward or Source	N/A
Technical Specifications	Network adequacy measures are modeled after existing distance standards Texas uses for the STAR MMC program. HHSC creates robust and meaningful distance standards between enrolled HTW clients' residence and service delivery addresses of active HTW PCPs and pharmacies. Network adequacy reports include: • Number of enrolled HTW clients for whom distance was calculated (99.1% of all HTW clients in DY1) • Distance standards for active HTW PCPs and pharmacies • Percentage of HTW clients within the specified distance from at least two active PCPs and one enrolled pharmacy • Performance standards (starting DY2) HHSC reviews and/or updates distances standards annually for different MMC services areas and county types (metro, micro, rural).
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Network adequacy reports
Comparison Group(s)/ Subgroup(s)	Explore changes following HTW Plus implementation (9/1/2020) HTW clients' MMC service area
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	A high percentage of clients meeting distance standards would suggest network adequacy standards are being met under the HTW Demonstration.
Benchmark	Baseline established DY1 and performance standards established DY2[1,2]

Note. [1] Network adequacy standards and reports will be finalized in DY2 based on DY1 baseline data. [2] No comparable data exists for benchmarking given the unique benefit package offered under the HTW Demonstration and the wide variation in network adequacy methodologies across programs and states. HTW = Healthy Texas Women. MMC = Medicaid Managed Care. HHSC = Health and Human Services Commission. PCP = Primary care providers. DY = Demonstration year. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period. MMC = Medicaid managed care.

Hypothesis 1.2: The state's outreach and engagement activities support understanding of the HTW Demonstration.

Measure 1.2.1	**Motivating factors for HTW enrollment and renewal**
Definition	HTW clients' motivating factors for enrolling in and renewing HTW coverage, including unpaid medical bills in the three months prior to enrollment
Study Population	HTW clients
Measure Steward or Source	N/A – External evaluator will develop survey. Survey questions may be adapted from examples provided by Mathematica[1]
Technical Specifications	HTW clients' motivations for enrolling in and renewing HTW coverage, including transition from Medicaid, and health care needs related to family planning, preventive women's health services, and treatment of chronic conditions. This measure should also assess the impact of HTW's retroactive eligibility waiver on motivations for enrolling/recertifying in HTW, including: • Whether clients had unpaid medical bills in the three months prior to initial HTW enrollment • Type of care which resulted in unpaid medical bills and amount • Outstanding medical debt after HTW enrollment
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	Feedback from respondents on motivating factors for enrolling/recertifying in HTW will demonstrate which outreach and engagement messages are resonating with clients, opportunities for improvement, and potential unmet needs related to retroactive eligibility.
Benchmark	None

Note. [1] Mathematica White Paper, Beneficiary Survey Design and Administration for Eligibility and Coverage Demonstration Evaluations. HTW = Healthy Texas Women.

Measure 1.2.2	Understanding of eligibility requirements
Definition	HTW clients' and providers' understanding of and experiences with applying for the HTW Demonstration
Study Population	HTW clients HTW active billing providers
Measure Steward or Source	N/A – External evaluator will develop survey. Survey questions may be adapted from examples provided by Mathematica[1]
Technical Specifications	HTW clients' and providers' knowledge of HTW eligibility requirements: • Client eligibility requirements - age, citizenship, residency, health coverage, pregnancy status, and income • Provider eligibility requirements - Medicaid enrollment, HTW certification process affirming compliance with Texas Human Resources Code §32.024(c-1)[2], and compliance with Texas' requirements for all Medicaid providers (e.g., submission of claims, compliance with civil rights, etc.) Experiences applying to receive/provide HTW services
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), and provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	The proportion of respondents reporting familiarity with HTW eligibility requirements will demonstrate the extent to which outreach and engagement activities support understanding of HTW eligibility The proportion of respondents reporting satisfactory experiences applying for HTW will demonstrate the extent to which outreach and engagement activities support understanding of the HTW application process
Benchmark	None

Note. [1] Mathematica White Paper, Beneficiary Survey Design and Administration for Eligibility and Coverage Demonstration Evaluations. [2] Texas Human Resources Code §32.024(c-1) directs HHSC to ensure no money spent for the purpose of HTW is used to perform or promote elective abortions or to contract with entities that perform or promote elective abortions or affiliate with entities that perform or promote elective abortions. HTW = Healthy Texas Women.

Measure 1.2.3	Understanding of HTW benefits
Definition	HTW clients' and providers' understanding of services available through the HTW Demonstration
Study Population	HTW clients HTW active billing providers
Measure Steward or Source	N/A – External evaluator will develop survey
Technical Specifications	HTW clients' and providers' understanding of which services are available under the HTW Demonstration. Services may be summarized according to the HTW Demonstration Covered Services presented on page 9**Error! Bookmark not defined.**
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), and provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	The proportion of respondents reporting familiarity with HTW benefits will demonstrate the extent to which outreach and engagement activities support understanding of HTW benefits
Benchmark	None

Note. HTW = Healthy Texas Women.

Measure 1.2.4	Awareness of how to obtain services
Definition	HTW clients' understanding of how to access HTW Demonstration services
Study Population	HTW clients
Measure Steward or Source	N/A – External evaluator will develop survey
Technical Specifications	HTW clients' understanding of how to find HTW certified providers and pharmacies, including: provider specialties, languages spoken, and location/directions to office/clinic
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)

Measure 1.2.4	Awareness of how to obtain services
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	The proportion of respondents reporting an understanding of how to find HTW certified providers and pharmacies will demonstrate the extent to which outreach and engagement activities support awareness of obtaining HTW services
Benchmark	None

Note. HTW = Healthy Texas Women.

Measure 1.2.5	Effectiveness of outreach channels
Definition	HTW clients' and providers' familiarity with and perceptions about communication channels used to distribute information related to the HTW Demonstration
Study Population	HTW clients HTW active billing providers
Measure Steward or Source	N/A – External evaluator will develop survey
Technical Specifications	HTW clients' and providers' recollection of and perceptions about the utility and influence of different communication channels in providing information about the HTW Demonstration, including: • Letters or email correspondence • Program flyers or handouts • Digital/social media posts • Outreach and educational events (if applicable)
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), and provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable

Measure 1.2.5	Effectiveness of outreach channels
Interpretation	The proportion of respondents who recall various outreach channels, as well as respondent feedback on the utility and influence of those channels, will demonstrate the extent to which outreach and engagement activities are effective in providing information about the HTW Demonstration
Benchmark	None

Note. HTW = Healthy Texas Women.

Measure 1.2.6	Effectiveness of HTW Demonstration resources
Definition	HTW clients' and providers' familiarity with and perceptions about resources that provide information related to the HTW Demonstration
Study Population	HTW clients HTW active billing providers
Measure Steward or Source	N/A – External evaluator will develop survey
Technical Specifications	HTW clients' awareness of and perceptions about the accessibility and utility of HTW Demonstration resources, including: • Direct communication from HTW representatives • Community-based organizations • The 2-1-1 call line • YourTexasBenefits.com • The TMHP call line • The HTW website HTW providers' perceptions about the accessibility and utility of HTW Demonstration resources, including: • Direct communication from HTW representatives • Community-based organizations • The TMHP call line or website
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)[1]
Comparison Group(s)/ Subgroup(s)	Client characteristics (age, race/ethnicity, region, etc.), and provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	The proportion of respondents reporting awareness of HTW resources, and respondent feedback on the accessibility and utility of those resources, will

Measure 1.2.6	Effectiveness of HTW Demonstration resources
	demonstrate the extent to which resources support understanding of the HTW Demonstration
Benchmark	None

Note. [1] If feasible, the external evaluator may use website analytics, such as website hits, to supplement primary data collection on the effectiveness of HTW resources. HTW = Healthy Texas Women. TMHP = Texas Medicaid & Healthcare Partnership.

Evaluation Question 2. *Did the HTW Demonstration increase utilization of family planning, preconception care, and postpartum services?*

Hypothesis 2.1: The HTW Demonstration will maintain or increase utilization of family planning services among HTW clients.

Measure 2.1.1	Provision of most effective or moderately effective contraceptive methods
Definition	The percentage of HTW clients of childbearing age and at risk of unintended pregnancies who receive most effective or moderately effective methods of contraception annually
Study Population	HTW clients age 18 to 44 at end of DY at risk for an unintended pregnancy and continuously enrolled in HTW during DY
Measure Steward or Source	Office of Population Affairs; National Quality Forum-like measure (Contraceptive Care – All Women) The codes used to calculate this measure are publicly available on the Medicaid website: • 2020 Medicaid and CHIP Child Core Set (18-20): https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-and-chip-child-core-set-manual.pdf • 2020 Medicaid and CHIP Adult Core Set (21-44): https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf
Technical Specifications	**Numerator**: Total number of unduplicated HTW clients provided a most (sterilization, IUD/IUS, implant) or moderately (injectables, oral pills, patch, ring, or diaphragm) effective method of contraception in DY **Denominator**: Total number of unduplicated HTW clients age 18 to 44 at end of DY who were: • Not pregnant during DY, • Pregnant during DY, but whose pregnancy ended in first 10 months, or

Measure 2.1.1	Provision of most effective or moderately effective contraceptive methods
	• Pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion **Rate**: (numerator / denominator) * 100
Exclusion Criteria	HTW clients with one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment determined monthly) during DY HTW clients determined not at risk of pregnancy because they: • Are infertile due to non-contraceptive reasons such as natural menopause or oophorectomy. • Had live birth in last 2 months of DY • Were still pregnant at end of DY
Data Source(s)/Data Collection Methods	Client-level enrollment files DSP data, if applicable FFS claims data MMC encounter data Pharmacy claims data Vital statistics, if applicable
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in utilization of effective contraceptive methods would suggest utilization of family planning services was maintained or increased
Benchmark	Texas CMS Core Measure, 2018 Medicaid Adult State Rate:[1] • Most or Moderate, Ages 21-44: 29.6%

Note. [1] Texas CMS Core Measure rates available via the Texas Healthcare Learning Collaborative Portal: https://thlcportal.com/measures/cmscoremeasuredashboard; additional benchmark years should be reported as available. The benchmark should only be used to provide context and support understanding of outcomes among HTW clients. The benchmark should not be used to justify inappropriate promotion of specific types of contraceptives or contraceptive use. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. CHIP = The Children's Health Insurance Program. IUD = Intrauterine device. IUS = Intrauterine system. DSP = Delivery supplemental payment. FFS = Fee-for-service. MMC = Medicaid managed care.

Measure 2.1.2	Long-acting reversible contraceptive use
Definition	The annual percentage of HTW clients of childbearing age and at risk of unintended pregnancies who receive long-acting reversible method of contraception
Study Population	HTW clients age 18 to 44 at end of DY at risk for unintended pregnancy and continuously enrolled in HTW during DY
Measure Steward or Source	Office of Population Affairs; National Quality Forum-like measure (Contraceptive Care – All Women) The codes used to calculate this measure are publicly available on the Medicaid website: • 2020 Medicaid and CHIP Child Core Set(18-20): https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-and-chip-child-core-set-manual.pdf • 2020 Medicaid and CHIP Adult Core Set (21-44): https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf
Technical Specifications	**Numerator**: Total number of unduplicated HTW clients provided a LARC in DY **Denominator**: Total number of unduplicated HTW clients age 18 to 44 at end of DY who were: • Not pregnant during DY, • Pregnant during DY, but whose pregnancy ended in first 10 months, or • Pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion **Rate**: (numerator / denominator) * 100
Exclusion Criteria	HTW clients with one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment determined monthly) during DY HTW clients determined not at risk of pregnancy because they: • Are infertile due to non-contraceptive reasons such as natural menopause or oophorectomy • Had live birth in last 2 months of DY • Were still pregnant at end of DY
Data Source(s)/Data Collection Methods	Client-level enrollment files DSP data, if applicable FFS claims data MMC encounter data Pharmacy claims data Vital statistics, if applicable

Measure 2.1.2	Long-acting reversible contraceptive use
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in utilization of LARCs would suggest utilization of family planning services was maintained or increased
Benchmark	Texas CMS Core Measure, 2018 Medicaid Adult State Rate:[1] • LARC, Ages 21-44: 5.3%

Note. [1] Texas CMS Core Measure rates available via the Texas Healthcare Learning Collaborative Portal: https://thlcportal.com/measures/cmscoremeasuredashboard; additional benchmark years should be reported as available. The benchmark should only be used to provide context and support understanding of outcomes among HTW clients. The benchmark should not be used to justify inappropriate promotion of specific types of contraceptives or contraceptive use. LARC = Long-acting reversible contraceptive use. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. CHIP = The Children's Health Insurance Program. DSP = Delivery supplemental payment. FFS = Fee-for-service. MMC = Medicaid managed care.

Measure 2.1.3	Tests for any sexually transmitted infection/disease
Definition	The percentage of HTW clients who had at least one test for any sexually transmitted disease during DY
Study Population	HTW clients
Measure Steward or Source	N/A
Technical Specifications	**Numerator**: Total number of unduplicated HTW clients with at least one test for any sexually transmitted disease during DY **Denominator**: Total number of unduplicated HTW clients during DY **Rate**: (numerator / denominator) * 100
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 Client characteristics (age, race/ethnicity, region, etc.), where applicable

Measure 2.1.3	Tests for any sexually transmitted infection/disease
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in tests for any sexually transmitted disease would suggest utilization of family planning services was maintained or increased
Benchmark	None

Note. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. FFS = Fee-for-service.

Hypothesis 2.2: The HTW Demonstration will maintain or increase utilization of preconception care services.

Measure 2.2.1	Compliance with cervical cancer screening recommendations
Definition	The percentage of women enrolled in HTW age 21 to 64 screened for cervical cancer in past 3 (cervical cytology) or 5 years (cervical cytology/human papillomavirus co-testing)
Study Population	HTW clients age 21 or older by end of DY
Measure Steward or Source	National Committee for Quality Assurance (Healthcare Effectiveness Data and Information Set ®-like measure: Adults' Cervical Cancer Screening) The codes used to calculate this measure are publicly available on the Medicaid website: • 2020 Medicaid and CHIP Adult Core Set: https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf
Technical Specifications	**Numerator 1**: Total number of unduplicated HTW clients age 21 or older at end of DY who had cervical cytology during DY or in the previous two DYs **Numerator 2**: Among HTW clients who do not meet criteria in numerator 1, total number of unduplicated HTW clients age 30 or older at end of DY who had cervical cytology and a human papillomavirus test with service dates four or fewer days apart during DY or in the previous four DYs (and who were age 30 or older on date of both tests) **Final Numerator**: Numerator 1 + Numerator 2 **Denominator**: Total number of unduplicated HTW clients age 24 or older at end of DY **Rate**: (numerator / denominator) * 100

Measure 2.2.1	Compliance with cervical cancer screening recommendations
Exclusion Criteria	HTW clients with one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment determined monthly) during DY HTW clients receiving hospice care Optional: Hysterectomy with no residual cervix, cervical agenesis, or acquired absence of cervix (Absence of Cervix Value Set) any time during the beneficiary's history through end of DY (value sets available here: https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/adult-core-set-reporting-resources/index.html)
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data MMC encounter data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in the rate of compliance with cervical cancer screening recommendations would suggest utilization of preconception services was maintained or increased
Benchmark	Texas CMS Core Measure, 2018 Medicaid Adult State Rate:[1] • Cervical Cancer Screening (ages 21 to 64): 53.8%[2]

Note. [1] Texas CMS Core Measure rates available via the Texas Healthcare Learning Collaborative Portal: https://thlcportal.com/measures/cmscoremeasuredashboard; additional benchmark years should be reported as available. [2] The state rate is applicable to women ages 21-64 years old. The benchmark should be interpreted with caution due to differences between this population and HTW clients. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. CHIP = The Children's Health Insurance Program. FFS = Fee-for-service. MMC = Medicaid managed care.

Hypothesis 2.3: The HTW Demonstration will increase utilization of HTW Plus postpartum care services among HTW clients.

Measure 2.3.1	**HTW clients eligible for HTW Plus**
Definition	The unduplicated count of women enrolled in HTW who have been pregnant in the 12 months prior to HTW enrollment
Study Population	HTW clients
Measure Steward or Source	N/A
Technical Specifications	HTW enrollment files summarize eligibility segments each month. Clients eligible for HTW Plus are identified in the client-level enrollment file using spenddown code = H. Women in HTW are automatically enrolled for 12 months. Women who were pregnant in the 12 months prior to HTW enrollment will be eligible for HTW Plus for the duration of the HTW certification period.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files
Comparison Group(s)/ Subgroup(s)	No comparison available, HTW Plus services began 9/1/2020 Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	This measure is a direct indicator of increases in women eligible for enhanced postpartum care services
Benchmark	None

Note. HTW = Healthy Texas Women. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 2.3.2	HTW clients utilizing any HTW Plus postpartum services
Definition	The percentage of HTW clients eligible for HTW Plus with a paid claim or filled prescription for any HTW Plus service
Study Population	HTW clients eligible for HTW Plus
Measure Steward or Source	N/A
Technical Specifications	HHSC will provide evaluator a list of procedure codes and National Drug Codes to identify HTW Plus services **Numerator**: Total number of unduplicated HTW clients with at paid FFS claim or filled prescription for any HTW Plus service **Denominator**: Total number of unduplicated HTW clients eligible for HTW Plus **Rate**: (numerator / denominator) * 100
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	No comparison available, HTW Plus services began 9/1/2020 Separated by HTW Plus service types, if feasible[1] Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	This measure is a direct indicator of increases in utilization of enhanced postpartum care services
Benchmark	None

Note. [1] Service categories may reflect HTW Plus service groupings provided in Demonstration Covered Services section of the evaluation design or alternative evaluator-determined service groupings. HTW = Healthy Texas Women. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period. FFS = Fee-for-service.

Measure 2.3.3	Frequency of utilization of HTW Plus postpartum services
Definition	Average number of HTW Plus paid procedures per HTW client receiving HTW Plus services
Study Population	HTW clients receiving HTW Plus services
Measure Steward or Source	N/A
Technical Specifications	**Numerator**: Total number of paid HTW Plus procedures **Denominator**: Total number of unduplicated HTW clients with any paid FFS claim for any HTW Plus service
Exclusion Criteria	HTW Plus prescriptions filled
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data
Comparison Group(s)/ Subgroup(s)	No comparison available, HTW Plus services began 9/1/2020 Separated by HTW Plus service types, if feasible Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	This measure is a direct indicator of increases in utilization of enhanced postpartum care services
Benchmark	None

Note. HTW = Healthy Texas Women. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period. FFS = Fee-for-service.

Evaluation Question 3. ***Did the HTW Demonstration improve women's health and pregnancy outcomes?***

Hypothesis 3.1: The HTW Demonstration will maintain or improve women's health among HTW clients.

Measure 3.1.1	**Hypertension medication adherence**
Definition	The percentage of HTW clients with a prescription for a blood pressure medication who fill their prescription often enough to cover 80 percent or more days
Study Population	HTW clients
Measure Steward or Source	Pharmacy Quality Alliance-like measure: Medication Adherence for Hypertension. Evaluator will use the same Pharmacy Quality Alliance-like measure specifications for all DYs
Technical Specifications	**Numerator**: Number of HTW clients with a proportion of days covered at 80 percent or higher for blood pressure medications during the DY **Denominator**: Number of HTW clients with at least two blood pressure medication fills on unique dates of service during the DY **Rate**: (numerator / denominator) * 100 Blood pressure medication means an angiotensin converting enzyme inhibitor, an angiotensin receptor blocker, or a direct renin inhibitor drug. Percentage is not calculated if there are 30 or fewer HTW clients in denominator.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in hypertension medication adherence would suggest management of hypertension, and overall health, was maintained or improved

Measure 3.1.1	Hypertension medication adherence
Benchmark	None

Note. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 3.1.2	Diabetes medication adherence
Definition	The percentage of HTW clients with diabetes who fill their prescription often enough to cover 80 percent or more days
Study Population	HTW clients
Measure Steward or Source	Pharmacy Quality Alliance-like measure: Medication Adherence for Diabetes Medications. Evaluator will use the same Pharmacy Quality Alliance-like measure specifications for all DYs
Technical Specifications	**Numerator**: Number of HTW clients with a proportion of days covered at 80 percent or higher for diabetes medications during the DY **Denominator**: Number of HTW clients with at least two fills of diabetes medication(s) on unique dates of service during the DY **Rate**: (numerator / denominator) * 100 Diabetes medication means a biguanide drug, a sulfonylurea drug, a thiazolidinedione drug, a dipeptidyl peptidase-IV inhibitor, an incretin mimetic drug, a meglitinide drug, or a sodium-glucose transport protein 2 inhibitor. Percentage is not calculated if there are 30 or fewer HTW clients in denominator.
Exclusion Criteria	HTW clients who take insulin
Data Source(s)/Data Collection Methods	Client-level enrollment files Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis

Measure 3.1.2	Diabetes medication adherence
Interpretation	No change or an increase in diabetes medication adherence would suggest management of diabetes, and overall health, was maintained or improved
Benchmark	None

Note. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 3.1.3	Cholesterol medication adherence
Definition	The percentage of HTW clients with a prescription for a cholesterol medication (a statin drug) who fill their prescription often enough to cover 80 percent or more days
Study Population	HTW clients
Measure Steward or Source	Pharmacy Quality Alliance-like measure: Medication Adherence for Cholesterol (Statins). Evaluator will use the same Pharmacy Quality Alliance-like measure specifications for all DYs
Technical Specifications	**Numerator**: Number of HTW clients with a proportion of days covered at 80 percent or higher for statin cholesterol medication(s) during the DY **Denominator**: Number of HTW clients with at least two statin cholesterol medication fills on unique dates of service during the DY **Rate**: (numerator / denominator) * 100 Percentage is not calculated if there are 30 or fewer HTW clients in denominator.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Client-level enrollment files Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis

Measure 3.1.3	Cholesterol medication adherence
Interpretation	No change or an increase in cholesterol medication adherence would suggest management of cholesterol, and overall health, was maintained or improved
Benchmark	None

Note. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 3.1.4	Antidepressant medication management
Definition	The percentage of HTW clients who were treated with antidepressant medication, had a diagnosis of major depression, and who remained on antidepressant medication treatment
Study Population	HTW clients with continuous enrollment 105 days prior to Index Prescription Start Date (IPSD; earliest prescription dispensing date for antidepressant medication where the date is in the Intake Period and there is a Negative Medication History)
Measure Steward or Source	National Committee for Quality Assurance (Healthcare Effectiveness Data and Information Set ®-like measure: Antidepressant Medication Management) The codes used to calculate this measure are publicly available on the Medicaid website: • 2020 Medicaid and CHIP Adult Core Set: https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf
Technical Specifications	**Numerator 1**: Total number of unduplicated HTW clients with at least 84 days (12 weeks) of treatment with antidepressant medication beginning on the IPSD through 114 days after the IPSD (115 total days). This allows gaps in medication treatment up to a total of 31 days during the 115-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication. **Numerator 2**: Total number of unduplicated HTW clients with at least 180 days (6 months) of treatment with antidepressant medication beginning on the IPSD through 231 days after the IPSD (232 total days). This allows gaps in medication treatment up to a total of 52 days during the 232-day period. Gaps can include either washout period gaps to change medication or treatment gaps to refill the same medication.

Measure 3.1.4	Antidepressant medication management
	Denominator: Total number of unduplicated HTW clients with any of the following (Note: Many of the following services are not covered by or relevant to HTW but are used to identify eligible population for measure): • An acute or nonacute inpatient stay with any diagnosis of major depression • An outpatient visit with any diagnosis of major depression • An intensive outpatient encounter or partial hospitalization with any diagnosis of major depression • A community mental health center visit with any diagnosis of major depression • Electroconvulsive therapy with any diagnosis of major depression • Transcranial magnetic stimulation visit with any diagnosis of major depression • A telehealth visit with any diagnosis of major depression • An observation visit with any diagnosis of major depression • An ED visit with any diagnosis of major depression • A telephone visit with any diagnosis of major depression **Rate 1 (Effective Acute Phase Treatment)**: (numerator 1 / denominator) * 100 **Rate 2 (Effective Continuation Phase Treatment)**: (numerator 2 / denominator) * 100
Exclusion Criteria	HTW clients with one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment determined monthly) 105 days prior to IPSD through 231 days after IPSD HTW clients in hospice HTW clients who did not have an encounter with a diagnosis of major depression during the 121-day period from 60 days prior to the IPSD, through the IPSD and the 60 days after the IPSD HTW clients who filled a prescription for an antidepressant medication 105 days prior to the IPSD

Measure 3.1.4	Antidepressant medication management
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data MMC encounter data Pharmacy claims data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in antidepressant medication adherence would suggest management of depression, and overall health, was maintained or improved
Benchmark	Texas CMS Core Measure, 2018 Medicaid Adult State Rate:[1] • Effective Acute Phase Treatment: 51.3% • Effective Continuation Phase Treatment: 35.6%

Note. [1] Texas CMS Core Measure rates available via the Texas Healthcare Learning Collaborative Portal: https://thlcportal.com/measures/cmscoremeasuredashboard; additional benchmark years should be reported as available. HTW = Healthy Texas Women. DY=Demonstration year, January 1-December 31. IPSD = Index prescription start date. CHIP = The Children's Health Insurance Program. FFS = Fee-for-service. MMC = Medicaid managed care. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Hypothesis 3.2: The HTW Demonstration will maintain or improve pregnancy outcomes and maternal health among HTW clients.

Measure 3.2.1	**Unintended pregnancies**
Definition	The percentage of mothers sampled who reported their pregnancy was unintended
Study Population	Texas residents with a recent live birth
Measure Steward or Source	N/A
Technical Specifications	Responses to Q12: Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant? (response re-code) a) I wanted to be pregnant later (unintended) b) I wanted to be pregnant sooner (intended) c) I wanted to be pregnant then (intended) d) I didn't want to be pregnant then or any other time in the future (unintended) e) I wasn't sure what I wanted (unsure) Payer of delivery (listed on the birth certificate) a) Medicaid b) Private insurance c) Self pay, other, unknown Responses to Q12 categorized by payer of delivery. Rates include a confidence interval.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	PRAMS Data Books
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2018 – 12/31/2020 • Post: 1/1/2021 – 12/31/2022[1] Women with Medicaid as the delivery payer vs. women with an alternate delivery payer
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or a decrease in unintended pregnancies would suggest pregnancy outcomes were maintained or improved
Benchmark	PRAMS, 2017 Texas State Rate:[2] • Pregnancy intention: 29.5% (CI: 27.0-32.0%)

Note. [1] PRAMS Annual Report/Databook is generally available two years after the end of each birth year. [2] Texas PRAMS rates provided in Texas Prams Databooks available via: https://dshs.texas.gov/mch/PRAMS.aspx; additional benchmark years should be reported as available. PRAMS = Pregnancy Risk Assessment Monitoring System.

Measure 3.2.2	Birth spacing
Definition	The percentage of HTW clients with a subsequent Medicaid-paid live birth, who had a second or greater number of Medicaid-paid births within 27 months
Study Population	HTW clients Medicaid-paid deliveries
Measure Steward or Source	N/A
Technical Specifications	**Numerator:** Number of HTW clients in denominator with second- or higher-order live singleton Medicaid-paid delivery within 27 months of previous live birth[1] **Denominator**: Number of women with live Medicaid-paid delivery who were enrolled in HTW during the previous year **Rate**: (numerator / denominator) * 100
Exclusion Criteria	HTW clients with multiple births (e.g., twins) or no Medicaid-paid births after HTW enrollment
Data Source(s)/Data Collection Methods	Client-level enrollment files DSP data, if applicable FFS claims data MMC encounter data Vital statistics, if applicable
Comparison Group(s)/ Subgroup(s)	HTW pre/post comparison[2] • Pre: HTW clients during CY 17 with live birth during CY 18 • Post: HTW clients during CY 20 (DY1) 1with live birth during CY 21 (DY2) Medicaid-paid births (matched, if feasible): • During CY 18 among women not previously in HTW during CY 17 • During CY 21 among women not previously in HTW during CY 20 Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Difference-in-differences estimation
Interpretation	No change or a decrease in subsequent births within 27 months would suggest pregnancy outcomes and maternal health were maintained or improved

Measure 3.2.2	Birth spacing
Benchmark	None

Note. [1] A live birth interval of 27 months corresponds to recommended timing between a live birth and next pregnancy (18 months). [2] Measure 3.2.2 identifies intervention/comparison group status based on program enrollment the calendar year prior to the birth year to support attribution of birth spacing. Assigning group status based on prior year enrollment avoids several data complications that would arise by using the current birth year. Women are transitioned into HTW after their postpartum Medicaid coverage ends. Women who gave birth during the same calendar year as HTW enrollment may not have been enrolled in HTW prior to the birth so birth/pregnancy outcomes would not be influenced by HTW services. Moreover, only the first two months of the current birth year would be relevant for identifying prior HTW enrollment given the average length of gestation. HTW = Healthy Texas Women. DSP = Delivery supplemental payment. FFS = Fee-for-service. MMC = Medicaid managed care. CY = Calendar year, January 1-December 31. DY = Demonstration year.

Measure 3.2.3	Pregnancy complications
Definition	Rate per 100,000 live births with one or more of the identified pregnancy complications
Study Population	HTW clients Medicaid-paid deliveries
Measure Steward or Source	N/A
Technical Specifications	**Numerators**: Number of HTW clients diagnosed with any of the following during pregnancy: • High blood pressure • Gestational diabetes • Preeclampsia **Denominator**: Number of HTW clients with Medicaid-paid live birth occurring after HTW enrollment **Rate**: (Numerator / denominator) * 100,000
Exclusion Criteria	HTW clients with no Medicaid pregnancies occurring after HTW enrollment
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data MMC encounter data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison[1] • Pre: HTW clients during CY 17 with live birth during CY 18 • Post: HTW clients during CY 20 (DY1) 1with live birth during CY 21 (DY2) Medicaid-paid births (matched, if feasible): • During CY 18 among women not previously in HTW during CY 17 • During CY 21 among women not previously in HTW during CY 20

Measure 3.2.3	Pregnancy complications
	Client characteristics (age, race/ethnicity, region, etc.) and HTW Plus utilization, where applicable
Analytic Methods	Descriptive statistics Difference-in-differences estimation
Interpretation	No change or a decrease in pregnancy complications would suggest pregnancy outcomes and maternal health were maintained or improved
Benchmark	None

Note. [1] Measure 3.2.3 identifies intervention/comparison group status based on program enrollment the calendar year prior to the birth year to support attribution of pregnancy complications. Assigning group status based on prior year enrollment avoids several data complications that would arise by using the current birth year. Women are transitioned into HTW after their postpartum Medicaid coverage ends. Women who gave birth during the same calendar year as HTW enrollment may not have been enrolled in HTW prior to the birth so birth/pregnancy outcomes would not be influenced by HTW services. Moreover, only the first two months of the current birth year would be relevant for identifying prior HTW enrollment given the average length of gestation. HTW = Healthy Texas Women. FFS = Fee-for-service. MMC = Medicaid managed care. CY = Calendar year, January 1-December 31. DY = Demonstration year, January 1–December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 3.2.4	Adverse birth outcomes
Definition	Rate per 100,000 live births with one or more of the identified adverse birth outcomes
Study Population	HTW clients Medicaid-paid deliveries
Measure Steward or Source	N/A
Technical Specifications	**Numerators**: Number of HTW clients diagnosed with one of the following during pregnancy in DY: • Low birth weight • Preterm birth **Denominator**: Number of HTW clients with Medicaid-paid live birth occurring after HTW enrollment in DY **Rate**: (Numerator / denominator) * 100,000
Exclusion Criteria	HTW clients with no Medicaid pregnancies occurring after HTW enrollment
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data MMC encounter data

Measure 3.2.4	Adverse birth outcomes
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison[1] • Pre: HTW clients during CY 17 with live birth during CY 18 • Post: HTW clients during CY 20 (DY1) 1with live birth during CY 21 (DY2) Medicaid-paid births (matched, if feasible): • During CY 18 among women not previously in HTW during CY 17 • During CY 21 among women not previously in HTW during CY 20 Client characteristics (age, race/ethnicity, region, etc.) and HTW Plus utilization, where applicable
Analytic Methods	Descriptive statistics Difference-in-differences estimation
Interpretation	No change or a decrease in adverse birth outcomes would suggest pregnancy outcomes were maintained or improved

Benchmark	Data prepared for the Healthy Texas Babies Initiative: [2]
	• 2018 Preterm Birth Rate:
	  • Texas: 10.8%
	  • United States: 10.0%
	• 2018 Low Birth Weight Rate:
	  • Texas: 8.5%%
	  • United States: 8.3%

Note. [1] Measure 3.2.4 identifies intervention/comparison group status based on program enrollment the calendar year prior to the birth year to support attribution of adverse birth outcomes. Assigning group status based on prior year enrollment avoids several data complications that would arise by using the current birth year. Women are transitioned into HTW after their postpartum Medicaid coverage ends. Women who gave birth during the same calendar year as HTW enrollment may not have been enrolled in HTW prior to the birth so birth/pregnancy outcomes would not be influenced by HTW services. Moreover, only the first two months of the current birth year would be relevant for identifying prior HTW enrollment given the average length of gestation. [2] Data prepared for the Healthy Texas Babies Initiative are provided in Health Texas Mothers and Babies Data Books available via: https://www.dshs.texas.gov/healthytexasbabies/data.aspx; additional benchmark years should be reported as available. HTW = Healthy Texas Women. FFS = Fee-for-service. MMC = Medicaid managed care. CY = Calendar year, January 1-December 31. DY = Demonstration year, January 1–December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 3.2.5	Severe maternal morbidity
Definition	Rate of severe maternal morbidity per 100,000 live births
Study Population	HTW clients Medicaid-paid deliveries
Measure Steward or Source	Severe maternal morbidity diagnosis codes drawn from the Centers for Disease Control and Prevention. The codes used to calculate this measure are available publicly on the Center for Disease Control and Prevention website: https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm
Technical Specifications	**Numerator**: Number of HTW clients with one or more of the 21 diagnosis code indicators used to identify severe maternal morbidity during delivery hospitalizations **Denominator**: Number of HTW clients with Medicaid-paid live birth occurring after HTW enrollment **Rate**: (Numerator / denominator) * 100,000
Exclusion Criteria	HTW clients with no Medicaid-paid live births occurring after HTW enrollment
Data Source(s)/Data Collection Methods	Client-level enrollment files FFS claims data MMC encounter data
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison[1] • Pre: HTW clients during CY 17 with live birth during CY 18 • Post: HTW clients during CY 20 (DY1) 1with live birth during CY 21 (DY2) Medicaid-paid births (matched, if feasible): • During CY 18 among women not previously in HTW during CY 17 • During CY 21 among women not previously in HTW during CY 20 Client characteristics (age, race/ethnicity, region, etc.) and HTW Pus utilization, where applicable

Measure 3.2.5	Severe maternal morbidity
Analytic Methods	Descriptive statistics Difference-in-differences estimation
Interpretation	No change or a decrease in severe maternal morbidity would suggest maternal health was maintained or improved
Benchmark	Data prepared for the Healthy Texas Babies Initiative: [2] • 2017 Texas Severe Maternal Morbidity Rate: • 169.7 per 10,000 delivery hospitalizations

Note. [1] Measure 3.2.5 identifies intervention/comparison group status based on program enrollment the calendar year prior to the birth year to support attribution of severe maternal morbidity. Assigning group status based on prior year enrollment avoids several data complications that would arise by using the current birth year. Women are transitioned into HTW after their postpartum Medicaid coverage ends. Women who gave birth during the same calendar year as HTW enrollment may not have been enrolled in HTW prior to the birth so birth/pregnancy outcomes would not be influenced by HTW services. Moreover, only the first two months of the current birth year would be relevant for identifying prior HTW enrollment given the average length of gestation. [2] Data prepared for the Healthy Texas Babies Initiative are provided in Health Texas Mothers and Babies Data Books available via: https://www.dshs.texas.gov/healthytexasbabies/data.aspx; additional benchmark years should be reported as available. HTW = Healthy Texas Women. FFS = Fee-for-service. MMC = Medicaid managed care. CY = Calendar year, January 1-December 31. DY = Demonstration year, January 1–December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Evaluation Question 4. *Did the HTW Demonstration effectively use public funds to provide women's health care in Texas?*

Hypothesis 4.1: The HTW Demonstration will remain at or below the CMS-specified annual expenditures limits.

Measure 4.1.1	**Per member per month costs**
Definition	Per member per month costs compared to CMS annual expenditure limits
Study Population	HTW clients
Measure Steward or Source	N/A
Technical Specifications	Actual per member per month costs during DY
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Demonstration Budget Neutrality Worksheet HHSC-calculated per member per month costs in pre-period
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes following HTW Plus implementation (9/1/2020) Demonstration per member per month annual expenditure limits:[1] • DY1: $27.13 • DY2: $30.87 • DY3: $33.44 • DY4: $34.63 • DY5: $36.09
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	Per member per month costs at or below the CMS-specified annual expenditure limits would suggest effective use of public funds
Benchmark	None

Note. [1] Per member per month annual expenditures include costs associated with HTW Plus. If CMS does not approve the HTW Plus amendment, annual expenditures should reflect amounts specified in STCs. CMS = Centers for Medicare & Medicaid Services. HTW = Healthy Texas Women. HHSC = Health and Human Services Commission. DY = Demonstration year, January 1–December 31. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Evaluation Question 5. ***How does implementation of the HTW provider eligibility criteria outlined in Goal 5 of the HTW Demonstration affect access to and utilization of women's health and family planning services?***

Hypothesis 5.1: The implementation of the HTW provider eligibility criteria does not adversely affect access to and utilization of women's health and family planning services.

Measure 5.1.1	**Proportion of active family planning providers in Medicaid delivering services through HTW**
Definition	The proportion of active family planning providers in Medicaid delivering services through HTW. Active family planning providers in Medicaid are defined as providers in HTW or other FFS or MMC programs with a paid claim for family planning services covered by HTW.
Study Population	HTW certified providers HTW active billing providers Medicaid active billing providers delivering HTW-like family planning services under traditional FFS or MMC
Measure Steward or Source	N/A
Technical Specifications	Unique count of HTW providers who: • Are listed as billing provider on a paid claim for a HTW family planning service during CY Unique count of Medicaid providers who: • Are listed as billing provider on a paid claim in traditional FFS or MMC for a family planning service covered under HTW during CY, and • Are not listed as an HTW certified provider or do not have HTW paid claims during CY **Numerator**: HTW active billing providers delivering HTW family planning services during CY **Denominator**: HTW active billing providers delivering HTW family planning services during CY + Medicaid active billing providers delivering HTW-like family planning services in traditional FFS or MMC programs during CY **Rate**: (Numerator / denominator) * 100
Exclusion Criteria	Medicaid providers delivering services not included under HTW family planning services HTW-like services delivered to men, pregnant women, or women younger than 18 or older than 45 HTW-related prescriptions filled
Data Source(s)/Data Collection Methods	FFS claims data MMC encounter data Provider-level enrollment files

Measure 5.1.1	Proportion of active family planning providers in Medicaid delivering services through HTW
Comparison Group(s)/ Subgroup(s)	HTW Pre/post comparison • Pre: 1/1/2017 – 12/31/2019 • Post: 1/1/2020 – 12/31/2024 ○ Explore changes after HTW Plus implementation Provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Descriptive trend analysis
Interpretation	No change or an increase in the proportion of active family planning providers delivering services through HTW would suggest the HTW provider network is stable or expanding as a share of Medicaid family planning providers under the provider eligibility criteria
Benchmark	None

Note. HTW = Healthy Texas Women. CY = Calendar year, January 1–December 31. FFS = fee for service. MMC = Medicaid Managed Care. HTW Plus = An enhanced postpartum service package available to a subset of HTW clients who were pregnant in the 12 months prior to HTW enrollment. HTW Plus services are available to eligible women for the duration of the 12-month certification period.

Measure 5.1.2	Appointment wait times
Definition	Average amount of time HTW clients wait to obtain care from an HTW provider
Study Population	HTW clients
Measure Steward or Source	N/A – External evaluator will develop survey. Survey questions may be adapted from national surveys, such as the 2018 Biennial Health Insurance Survey
Technical Specifications	Possible questions include: • Thinking back to the last time you made an appointment with an HTW provider, how long did you have to wait to get this appointment?
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Separated by HTW service categories or HTW provider types, if feasible[1] Client characteristics (age, race/ethnicity, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable

Measure 5.1.2	Appointment wait times
Interpretation	The proportion of respondents reporting short appointment wait times, or satisfaction with appointment wait times, will demonstrate the extent to which there is timely access to care under the HTW provider eligibility criteria

Benchmark	SFY 19-20 Texas Medicaid Appointment Availability Standards:[2]
	• Routine Primary Care
	  ○ Standard: within 14 calendar days
	  ○ STAR Adult minimum threshold: 95.8%[3]
	• Preventive Health Services for Adults
	  ○ Standard: within 90 calendar days
	  ○ STAR Adult minimum threshold: 99.0%[3]

Note. [1] Service categories may reflect HTW service groupings provided in the Demonstration Covered Services section of the evaluation design or alternative service groups determined by the evaluator. [2] Texas Medicaid appointment availability standards and minimum thresholds available via: https://hhs.texas.gov/about-hhs/process-improvement/improving-services-texans/medicaid-chip-quality-efficiency-improvement/appointment-availability. [3] Minimum thresholds are calculated by adding 10 points to the statewide mean. MCOs who fail to meet minimum thresholds are assessed for Corrective Action Plans. HTW = Healthy Texas Women. SFY = State Fiscal Year, September 1-August 31. MCO = Managed care organization.

Measure 5.1.3	Barriers to receiving care
Definition	Perceived barriers to receiving HTW services
Study Population	HTW clients
Measure Steward or Source	N/A – External evaluator will develop survey. Survey questions may be adapted from national surveys, such as the CAHPS-HPS, Adult Medicaid Survey 5.0, and the Medicare Current Beneficiary Survey
Technical Specifications	Perceived barriers, if any, to receiving HTW services or obtaining care when needed, including language barriers, non-emergency medical transportation, child care, etc. Suggested questions include: • Were you able to access and use the HTW provider directory? • Was it easy to find a doctor who provides HTW services? • Did you have to change your usual provider of care to receive HTW services? • When you needed care right away, how often did you get care as soon as you needed?

Measure 5.1.3	Barriers to receiving care
	• How often were you able to get an appointment for a check-up or routine care at a doctor's office or clinic as soon as you needed? • How often was it easy to get the care, tests, or treatment you needed? • Have you had trouble getting needed care? If so, what type of care did you have trouble receiving? • In the last 6 months, have you missed a scheduled appointment with an HTW provider? What caused you to miss the scheduled appointment? • How easy is it for you to get to your doctor's office? • Do you have trouble getting to your doctor's office?
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Separated by HTW service categories or HTW provider types, if feasible[1] Client characteristics (age, race/ethnicity, region, etc.), and provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	Respondent perspectives provide direct insight into barriers receiving services under the HTW Demonstration
Benchmark	Texas CMS Core Measure, 2018 Medicaid Adult State Rate:[2] • Getting care needed – global proportion of % always: 55.0% • Getting care quickly needed – global proportion of % always: 59.6%

Note. [1] Service categories may reflect HTW service groupings provided in the Demonstration Covered Services section of the evaluation design or alternative service groups determined by the evaluator. [2] Medicaid Texas rates available via the Texas Healthcare Learning Collaborative Portal: https://thlcportal.com/measures/cmscoremeasuredashboard; additional benchmark years should be reported as available. HTW = Healthy Texas Women.

Measure 5.1.4	Providers accepting new clients
Definition	HTW active billing providers accepting new HTW clients
Study Population	HTW active billing providers
Measure Steward or Source	N/A – External evaluator will develop survey. Survey questions may be adapted from national surveys, such as: The 2018 National Electronic Health Records Survey
Technical Specifications	Proportion of HTW active billing providers accepting new HTW clients: **Numerator**: Total number of provider respondents currently accepting new HTW clients **Denominator**: Total number of unduplicated provider respondents **Rate**: (numerator / denominator) * 100
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	The proportion of respondents accepting new clients will demonstrate the extent to which there is adequate access to care under the HTW provider eligibility criteria
Benchmark	2016 Texas State Rate - Physicians Accepting New Patients: 93%[1] • Among providers accepting new patients, providers accepting Medicaid patients: 41%

Note. [1] Texas Medical Association Physician survey available via: https://www.texmed.org/surveys/. Texas Medical Association conducts the survey every two years; additional benchmarks should be reported as available. HTW = Healthy Texas Women. CHIP = Children's Health Insurance Program.

Measure 5.1.5	Barriers to providing care
Definition	Perceived barriers to providing HTW services
Study Population	HTW active billing providers
Measure Steward or Source	N/A
Technical Specifications	Perceived barriers, if any, to providing HTW services including staff shortages or turnover, high client-to-provider rates, lack of trainings, or geographic location of office/clinic.
Exclusion Criteria	None
Data Source(s)/Data Collection Methods	Primary data collection (to be developed by external evaluator)
Comparison Group(s)/ Subgroup(s)	Provider characteristics (provider type, region, etc.), where applicable
Analytic Methods	Descriptive statistics Thematic content analysis, if applicable
Interpretation	Respondent perspectives provide direct insight into barriers delivering services under the HTW Demonstration
Benchmark	None

Note. HTW = Healthy Texas Women.

Appendix F. List of Acronyms

Acronym	Full Name
BCCS	Breast and Cervical Cancer Services
BRFSS	Behavioral Risk Factor Surveillance System
CAHPS	Consumer Assessment of Health Care Providers and Systems
CHIP	Children's Health Insurance Program
CMS	Centers for Medicare and Medicaid Services
CPT Code	Current Procedural Terminology Code
CY	Calendar year
DID	Difference-in-differences
DSHS	Texas Department of State Health Services
DSP	Delivery supplemental payment
DSRIP	Delivery System Reform Incentive Program
DTA	Descriptive trend analysis
DY	Demonstration year
EPHC	Expanded Primary Health Care
EPSDT	Early and Periodic Screening, Diagnostic, and Treatment
FFS	Fee-for-service
FPL	Federal Poverty Level
FPP	Family Planning Program
HHSC	Texas Health and Human Services Commission
HTW	Healthy Texas Women
HTW Plus	HTW Enhanced postpartum service package
ICD-10-CM	International Classification of Diseases, 10th Revision, Clinical Modification code
IPSD	Index prescription start date
IUD	Intrauterine device
IUS	Intrauterine system
LARC	Long-acting reversible contraceptive

Acronym	Full Name
MAGI	Modified Adjusted Gross income
MCO	Managed care organization
MMC	Medicaid Managed Care
NHIS	National Health Interview Survey
NPI	National provider identifier
PCP	Primary care provider
PMPM	Per member per month
PRAMS	Pregnancy Risk Assessment Monitoring System
PSM	Propensity score matching
SFY	State fiscal year
SQL	Structured Query Language
STCs	Special Terms and Conditions
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TAC	Texas Administrative Code
THID	Texas Hospital Inpatient Discharge data
TMHP	Texas Medicaid and Healthcare Partnership
TPI	Texas provider identifier
TWHP	Texas Women's Health Program

Appendix G. References

Athey, S., & Imbens, G. W. (2006). Identification and inference in nonlinear difference-in-differences models. *Econometrica,* 74(2), 431-497.

Bertrand, M., Duflo, E., & Mullainathan, S. (2004). How much should we trust differences-in-differences estimates?. *The Quarterly journal of economics,* 119(1), 249-275.

Centers for Disease Control and Prevention. (2020). Prevalence of Selected Maternal and Child Health Indicators for all PRAMS sites, Pregnancy Risk Assessment Monitoring System (PRAMS), 2016-2017. Retrieved from https://www.cdc.gov/prams/prams-data/mch-indicators/states/pdf/2018/All-PRAMS-Sites-2016-2017_508.pdf

Etikan, I., Musa, S. A., & Alkassim, R. S. (2015). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4.

Kormondy, M. and Archer, N. (2018). Healthy Texas Mothers & Babies Data Book. Austin, TX: Division for Community Health Improvement, Texas Department of State Health Services, 2018.

Matulewicz, H., Bradley, K., & Wagner, S. (June, 2019). White Paper: Beneficiary Survey Design and Administration for Eligibility and Coverage Demonstration Evaluations. Retrieved from Mathematica: https://www.mathematica.org/our-publications-and-findings/publications/beneficiary-survey-design-and-administration-for-eligibility-and-coverage-demonstration-evaluations

National Center for Health Statistics. (2020). Teen Birth Rate by State. Retrieved from https://www.cdc.gov/nchs/pressroom/sosmap/teen-births/teenbirths.htm.

Nowell, L. S., Norris, J. M., White, D. E., and Moules, N. J. 2017. Thematic analysis: Striving to meeting the trustworthiness criteria. *International Journal of Qualitative Methods*, 16, 1-13.

Polkinghorne, D. E. (2005). Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology*, 52(2), 137-145.

Schoenberg, M., Heider, F., Rosenthal, J., Schwartz, C., & Kaye, N. (2015, March 1). *States experiences designing and implementing Medicaid Delivery System Reform Incentive Payment (DSRIP) pools*. Retrieved from National Academy for State Health Policy: https://nashp.org/state-experiences-designing-and-implementing-medicaid-delivery-system-reform-incentive-payment-dsrip-pools/

Texas Department of State Health Services. (2019). Pregnancy Risk Assessment Monitoring System (PRAMS) 2017 Data Book Summary. Retrieved from https://www.dshs.texas.gov/mch/PRAMS.aspx

Texas Department of State Health Services. (2020). 2017 Texas Pregnancy Risk Assessment Monitoring System (PRAMS), Maternal and Child Health Epidemiology Unit. Unpublished statistic.

Texas Health and Human Services Commission. (2017, March). *Final Report of the Former Texas Women's Health Program: Fiscal Year 2015 Savings and Performance*. Austin, TX: Texas Health and Human Services Commission.

Texas Health and Human Services Commission. (2017, June 28). Healthy Texas Women Section 1115 Demonstration Waiver Application. Retrieved from Centers for Medicare & Medicaid Services: State Waivers List: https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/index.html

Texas Health and Human Services Commission. (2019). Medicaid Paid Births SFY 2001-SFY 2017. Unpublished statistical file. Prepared by Texas Health and Human Services Commission.

Texas Health and Human Services Commission. (2019, November). *2019 Healthy Texas Mothers & Babies Data Book.* Austin, TX: Texas Health and Human Services Commission.

Texas Health and Human Services Commission. (2020, May). *Texas Women's Health Programs Report Fiscal Year 2019*. Austin, TX: Texas Health and Human Services Commission.

Vaismoradi, M., Turunen, H., and Bondas, T. 2013. Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing and Health Sciences,* 15*,* 398-405.