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

October 3, 2024

Emily Zalkovsky
State Medicaid Director
Texas Health and Human Services Commission
4601 W Guadalupe Street
MC H100
Austin, TX 78751

Dear Director Zalkovsky:

The Centers for Medicare & Medicaid Services (CMS) completed its review of the Interim Evaluation Report, which is required by the Special Terms and Conditions (STCs), specifically STC #60, "Interim Evaluation Report," of the Healthy Texas Women section 1115 demonstration (Project No: 11-W-00326/6). The demonstration was approved on January 22, 2020 and is effective through December 31, 2024. This report covers the demonstration period from January 22, 2020 through December 31, 2021. CMS determined that the evaluation report, submitted on December 22, 2023 and revised on June 17, 2024, is in alignment with the approved Evaluation Design and the requirements set forth in the STCs, and therefore, approves the state's Interim Evaluation Report.

In accordance with STC #64 "Public Access", the approved evaluation report may now be posted to the state's Medicaid website within thirty days. CMS will also post the evaluation report on Medicaid.gov.

The findings in the Interim Evaluation Report demonstrate that there was progress on certain demonstration goals such as those related to access to care and health outcomes. For example, from the baseline (2017-2019) to the post-implementation period (2020-2021), there were increases in the total number of HTW members and the number of HTW members receiving any family planning, family planning-related, and preconception care services. In addition, there were reductions in the likelihoods of women experiencing pregnancy complications, as well as low birthweight, and preterm births. However, there were no observed improvements in key measures of utilization of care over this period. Specifically, data show that there were reductions in the proportion of HTW members receiving most/moderately effective contraceptives, Long-Acting Reversible Contraceptives (LARCs), sexually transmitted infection screening, and cervical cancer screening. While the Interim Evaluation Report could not include a comprehensive analysis of how the COVID-19 public health emergency (PHE) might have

contributed to some of the observed trends, the report presented contextual discussion indicating that some of the utilization findings might be attributable to the PHE.

The Interim Evaluation Report largely is based on descriptive analyses and includes roughly a two-year post-implementation period in its analyses. The state is committed to utilizing robust quasi-experimental methods, such as difference-in-differences analyses, data gathered from beneficiary surveys, and additional years of post-PHE data as the state continues to assess the demonstration and providing these additional analyses in the Summative Evaluation Report, due to CMS on June 30, 2026.

We look forward to our continued partnership on the Healthy Texas Women Demonstration. If you have any questions, please contact your CMS demonstration team.

Sincerely,

Danielle Daly -S

Digitally signed by Danielle Daly -S
Date: 2024.10.03 14:11:05 -04'00'

Danielle Daly
Director
Division of Demonstration Monitoring and Evaluation

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

Healthy Texas Women Section 1115 Demonstration Waiver Evaluation: Interim Report

As Required by Centers for Medicare and Medicaid Services and Texas Health and Human Services Commission

UTHealth School of Public Health
Center for Health Care Data

Donna Alexander, MBA
Kimberly Baker, DrPH, MPH
Cecilia Ganduglia Cazaban, MD, DrPH*
Rachel Edwards, PhD
Susan Tortolero Emery, PhD, CPH
Jixin (Jeff) Fu, MS
Lopita Ghosh, BS
Jessly Joy, MPH, CHES
Youngran Kim, PhD
Trudy Millard Krause, DrPH
Isrrael Perez, MS
Evelyn Spike, MPH
Chau Truong, PhD

*Principal Investigator and Corresponding Author, please address correspondence to Cecilia.M.GandugliaCazaban@uth.tmc.edu

Original Submission: December 2023
Revised: June 2024

UTHealth Houston
School of Public Health
Center for Health Care Data

Table of Contents

List of Figures

List of Tables

Executive Summary

Introduction

On January 22, 2020, the Centers for Medicare and Medicaid Services (CMS) approved the Healthy Texas Women (HTW) Demonstration under a Section 1115 Medicaid Waiver for five years, from January 22, 2020, to December 31, 2024. Texas Health and Human Services Commission (HHSC), the agency that oversees Texas Medicaid programs, selected the University of Texas Health Science Center at Houston's (UTHealth) School of Public Health Center for Health Care Data (CHCD) as the independent evaluator for the 2020-2024 waiver.

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 eligible for Medicaid coverage if they become pregnant, aiming to improve birth outcomes and support optimal birth spacing. The HTW Demonstration services were implemented on February 18, 2020. HTW Demonstration covered services are the same as those provided through the previous state-funded HTW program.

This report presents UTHealth CHCD's interim findings for the CMS-approved Evaluation Design of the HTW Demonstration covering the pre-HTW Demonstration baseline period (2017-2019) and the first two years of the HTW Demonstration (2020-2021) referred to in this document as post-HTW Demonstration period. Notably, the first two years of the Demonstration coincide with the COVID-19 pandemic and the Public Health Emergency (PHE). As has been extensively documented, the pandemic impacted all healthcare access and utilization. Additionally, clients in HTW and Medicaid were not subject to eligibility disenrollment during the PHE, which began on March 18, 2020.[a] This meant women

[a] In March 2020, Congress passed the Families First Coronavirus Response Act, allowing states to receive enhanced federal match provided they maintained continuous coverage for most people enrolled in Medicaid until the end of the federal public health emergency (PHE). The Consolidated Appropriations Act of 2023 separated the continuous Medicaid coverage requirement of the Families First Coronavirus Response Act from the PHE declaration. The requirement to maintain continuous coverage ended as of March 31, 2023. Members

already in the HTW Demonstration were unlikely to leave the program unless they qualified for a more comprehensive program, such as Medicaid for Pregnant Women. Similarly, women whose pregnancy was covered under Medicaid and would have transitioned to HTW prior to the pandemic remained enrolled in Medicaid for the duration of the PHE. These changes to the composition of the HTW population are likely to have influenced the observed effects of the HTW Demonstration.

UTHealth CHCD assessed the impact of the HTW Demonstration in five key areas: access, utilization, health outcomes, costs, and effects of the provider eligibility criteria. Each area had a series of specific hypotheses and corresponding measures. Collectively, the HTW Demonstration is being evaluated using a mixed methods approach, including primary data collection through surveys and secondary administrative and public data analytics. The interim report, however, only contains results obtained from quantitative analysis of administrative data. Primary data collection efforts are described in the current report, but results from the qualitative analysis will not be available until the summative report.

Key Findings

Key findings and implications from this interim report are summarized below by evaluation question.

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?

- The average number of unique clients by year during the post-HTW Demonstration period grew slightly (4%); however, the total number of Member Years (MY) grew by 43 percent. This was due to a substantial growth in the number of clients continuously enrolled (12 months) and an increase in the number of retained clients from one year to another. Additionally, there was, on average, a 51 percent reduction in the number of newly enrolled clients. These trends are directly associated with PHE-related policy changes

enrolled in Healthy Texas Women were continuously enrolled from March 2020 – March 31, 2023, in alignment with continuous Medicaid coverage requirements. Beginning on April 1, 2023, HHSC began the process of redetermining the eligibility for all individuals receiving Medicaid, including HTW, in alignment with Texas' federally approved End of Continuous Medicaid Coverage Mitigation Plan.

that implemented continuous eligibility during the HTW Demonstration period. During the post-HTW Demonstration period included in this report (2020 and 2021), postpartum women maintained enrollment in Medicaid for Pregnant Women, and teenagers who would have aged out of Medicaid maintained enrollment in full Medicaid instead of transitioning into the HTW program. In summary, continuous eligibility policies implemented under the PHE resulted in a change in the age composition as well as life circumstances of the HTW Demonstration population when compared to pre-HTW Demonstration years.

- Pre-HTW Demonstration, an average of 37 percent of HTW clients received services per year. This number grew by three percentage points post-HTW Demonstration (8% change, p-value <0.001). This increase was driven by a growth in medical services (12%) but countered by a 7 percent reduction in prescription services.
- The number of billing providers with at least one paid HTW claim per year grew by 20 percent between the pre- and post-HTW Demonstration periods. However, both pre- and post-HTW Demonstration, less than 10 percent of billing providers were responsible for 80 percent of all paid claims. Implications of this concentration of billing providers are unclear from this interim analysis; however, UTHealth CHCD hopes findings from the provider and client surveys included in the summative report will help elucidate why patient care is concentrated among providers.
- Network adequacy improved in Demonstration Year 2 (DY) compared to baseline network adequacy for primary care physicians (PCP) and pharmacies. However, PCP networks in Micropolitan counties were still 15 percent points below the standard (90%).

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

- Post-HTW Demonstration, the use of most/moderately effective contraceptives among women with continuous annual enrollment declined by 7.7 percentage points and the use of Long Acting Reversible Contraceptives (LARCs) declined by 0.7 percentage points. It should be noted that the absolute number of women receiving contraception through HTW more than doubled in the post-HTW Demonstration period. However, this was accompanied by significant growth in the number of women with continuous

annual enrollment, which resulted in an overall decrease in contraception use rates. Additional years of data will help establish whether this finding is a prevailing trend or an outlier influenced by PHE eligibility policies. Additionally, the client surveys included in the summative report will provide additional insight into women's experiences accessing and utilizing services.

- Chlamydia screening did not change significantly post-HTW Demonstration and was similar to Texas Medicaid reported rates. Almost 100 percent of women screened for chlamydia were also screened for gonorrhea, in line with evidence-based guidelines.
- The evaluation of compliance with cervical cancer screening recommendations pre- and post-HTW Demonstration was not possible as the measure requires a 5-year look-back period. However, the 2021 rate (60%), which was the only year for which complete data was available for the interim report, is 2.8 percentage points higher than the corresponding rate among all Texas Medicaid recipients.

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

- Adherence to hypertension, diabetes, and cholesterol medication measured using prescription days covered, decreased post-HTW Demonstration. The prevalence of these three conditions was less than 2%, and after applying the criteria for the measure (having at least two prescriptions for the specific condition), few clients met the criteria. Therefore, results should be interpreted with caution. None of these changes were statistically significant after limiting the analysis to those women who were continuously enrolled in HTW for at least one year.
- Antidepressant medication management improved during the post-HTW Demonstration period, especially during the continuation phase (6 months of antidepressant medication).
- The rate of pregnancy complications (gestational hypertension, gestational diabetes, and preeclampsia) among all women included in the analyses who delivered under Medicaid increased between 2018 and 2021. However, the increase in pregnancy complications was significantly lower among women who had been enrolled in the HTW Demonstration the year prior to their delivery compared to those without HTW or Medicaid enrollment the year prior to the delivery under STAR Medicaid.

- The severe maternal morbidity rate also increased between 2018 and 2021 for all women included in the analyses who delivered under Medicaid. Changes in rates did not significantly vary based on prior HTW enrollment.
- Rates of adverse birth outcomes (low birth weight and preterm births) increased between 2018 and 2021 for all women included in the analyses who delivered under Medicaid. However, during the post-HTW Demonstration period, these increases were significantly smaller among women enrolled in the year prior to their delivery compared to those without prior HTW or Medicaid enrollment.

Despite methodological limitations discussed in the report, these findings suggest the HTW Demonstration was associated with a reduction in the incidence of pregnancy complications and newborn adverse outcomes during the years assessed, which coincide with the PHE. Whether the positive impact of HTW enrollment during the Demonstration years assessed was limited to the pandemic or will continue requires additional years of data, which we recommend assessing for the summative report.

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

- The Per Member Per Month (PMPM) costs for the HTW Demonstration remained considerably below the CMS pre-established cap. Additionally, PMPM costs declined over the first three years of the HTW Demonstration.

Evaluation Question 5: How does the 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?

- On average, the proportion of active family planning billing providers in Medicaid delivering services through HTW (Measure 5.1.1) grew by 5.2 percentage points (11.4% change) when comparing the pre versus post-HTW Demonstration periods. Though the actual proportion of family planning billing providers was highest in 2019, preliminary analysis found that, on average, the proportion of family planning Medicaid billing providers serving

HTW clients grew post-HTW Demonstration. The full evaluation of this question will be completed with collection and analysis of client surveys, which will be presented in the summative report.

Conclusion

Overall, this interim report was limited in its ability to evaluate all of the measures specified in the CMS-approved Evaluation Design because the report primarily focuses on the first two years of the HTW Demonstration, which overlap entirely with the COVID-19 pandemic and the PHE. However, preliminary results showed some improvement in utilization, network adequacy, and particularly pregnancy and birth-related outcomes. Some of these measures, such as lack of network adequacy in specific regions, are issues that precede the implementation of the HTW-Demonstration. Others, such as a decline in contraceptive utilization, could be influenced by the pandemic context. Additional information that will be available in the summative report from provider and client surveys can help understand these issues and inform strategies for addressing them. Furthermore, the summative report will include additional years of data, including data after the COVID-19-related PHE ended. This information will be critical for determining whether trends identified in this interim report hold once we include further years in the analyses.

Overview

On January 22, 2020, the Centers for Medicare and Medicaid Services (CMS) approved the Healthy Texas Women (HTW) Demonstration under a Section 1115 Medicaid Waiver for five years, from January 22, 2020, to December 31, 2024. Texas Health and Human Services Commission (HHSC), the agency that oversees Texas Medicaid programs, selected the University of Texas Health Science Center at Houston's (UTHealth) School of Public Health Center for Health Care Data (CHCD) as the independent evaluator for the 2020-2024 waiver.

This report presents UTHealth's interim findings for the CMS-approved Evaluation Design of the HTW Demonstration, covering the first two years of the waiver (2020-2021)[2]. We assess the impact of the HTW Demonstration in five key areas: access, utilization, health outcomes, costs, and impact of changes in provider eligibility criteria.

General Background Information

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 other Texas Medicaid programs. Additionally, the HTW Demonstration is designed to improve health outcomes for women in the program by providing preconception and interconception care, aiming to improve birth outcomes and support optimal birth spacing.

Historically, Texas has delivered women's health and family planning services through numerous programs administered by the Texas HHSC and the Texas Department of State Health Services (DSHS). On July 1, 2016, to consolidate the different women's healthcare programs, HHSC launched a state-funded program called Healthy Texas Women (HTW), combining the services of programs providing family planning and primary care services to low-income women aged 15-44. The state-funded 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 the Family Planning Program (FPP)—continue to provide screening and family planning services to low-income women. 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 the HTW Demonstration.

Prior to the launch of the state-funded 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 qualified.

The HTW Demonstration

The HTW Demonstration is available to women aged 18 through 44 who met all other state-funded HTW program eligibility requirements.[1,2] Clients enrolled in the state-funded HTW program when the HTW Demonstration began were automatically transitioned into the HTW Demonstration without a coverage gap. Similar to the state-funded HTW program, women whose Medicaid for Pregnant Women coverage period ends are automatically tested for other types of assistance without the requirement for a new application, and if no longer eligible for Medicaid or CHIP but eligible for HTW, are automatically enrolled in the HTW Demonstration.[b] Texas has continued to serve women aged 15 through 17 who meet all other HTW program requirements through non-Medicaid funded programs.

The HTW Demonstration services were implemented on February 18, 2020. Covered services are the same as those provided through the state-funded HTW program. They can be categorized into three benefit types outlined in the HTW Demonstration Special Terms and Conditions (STCs) that govern the HTW Demonstration[3]. These benefits are provided at no cost to individuals and include:

Family Planning Benefits:

- 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

[b] As a result of the Families First Coronavirus Response Act (FFCRA), women enrolled in Medicaid for Pregnant Women maintained coverage beyond the standard 60-day postpartum period. This resulted in a significant reduction of women transitioning from Medicaid to Pregnant Women to HTW during the COVID-19 public health emergency.

- Drugs, supplies, or devices related to women's health services described above.

Family Planning-Related Benefits: Services provided as part of or follow-up to a family planning visit. Examples of family planning-related services and supplies provided 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: Women's health services related to better preconception care and birth outcomes, including:

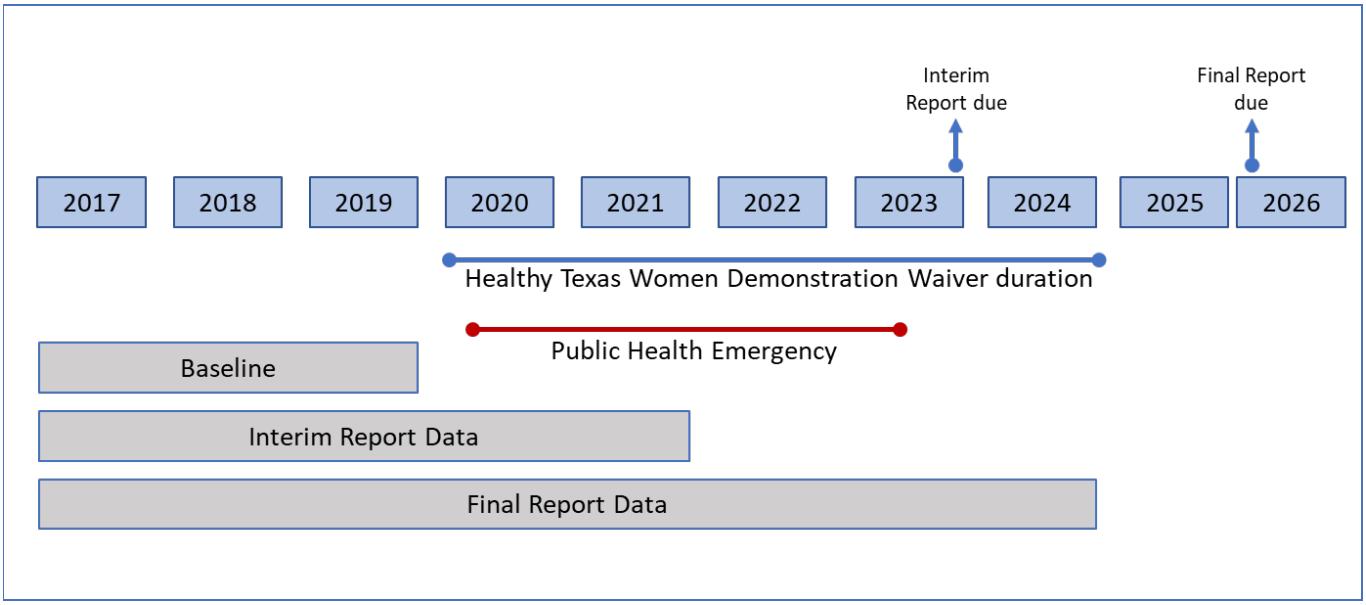
- Screening and pharmaceutical treatment for cholesterol, diabetes, and high blood pressure;
- Breast and cervical cancer screening and diagnostic services;
- Screening and treatment for postpartum depression;
- Immunizations; and
- Mosquito repellant prescribed by an authorized health professional.

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 and refer them to secondary providers for service delivery outside their scope of practice. The HTW Demonstration is administered through a Fee-for-service (FFS) delivery model. Under this model, qualified Medicaid providers can provide HTW Demonstration services to eligible clients if they meet the provider eligibility requirements outlined under Title 1 of the Texas Administrative Code §382.17.

Evaluation Activities

States with Section 1115 Medicaid Waivers are required to contract with an independent party to conduct the Demonstration evaluation. Texas HHSC selected UTHealth CHCD as the independent evaluator to conduct the waiver evaluation in accordance with the CMS-approved Evaluation Design. The evaluation includes two key deliverables: this interim report, to be delivered to CMS on December 31, 2023, and a summative evaluation report, to be delivered to CMS by June 30, 2026. Figure 1 summarizes the timeline and deliverables for the evaluation. This report covers the pre-HTW Demonstration baseline period (2017-2019) and the first two years of the HTW Demonstration (2020-2021), referred to as "post-HTW Demonstration period" in this report, which coincide with the COVID-19 pandemic and the Public Health Emergency (PHE).[4] Box 1 clarifies how to interpret the results from this report. The summative evaluation report, including data through 2024, will be able to assess performance after the end of the PHE, which expired on May 11, 2023.[5]

Figure 1: Evaluation Timeline



Considerations when reading this report (Box 1):

On March 4, 2020, Texas DSHS reported its first Coronavirus-19 case.[6] Two weeks later, on March 18, 2020, Texas adopted maintenance of eligibility requirements under the Families First Coronavirus Response Act (FFCRA), including continuous coverage of individuals enrolled in Medicaid.[7] As a result, this interim report could only assess the impact of the HTW Demonstration during the COVID-19 pandemic. As has been documented, the pandemic impacted healthcare access and utilization.[8] We encourage the reader to interpret the results within the context of the pandemic. Clients in HTW and Medicaid were not subjected to eligibility redetermination or disenrollment during the PHE. This meant women already in the HTW Demonstration were unlikely to leave the program unless they qualified for a more comprehensive program, such as Medicaid for Pregnant Women. Similarly, women who delivered under Medicaid, and would have transitioned to HTW prior the pandemic, remained enrolled in Medicaid for the duration of the PHE. Therefore, the characteristics and life circumstances of women enrolled in HTW changed during the pandemic. These changes to the HTW population will influence the observed impacts of the HTW Demonstration.

Evaluation Questions and Hypothesis

The HTW Demonstration evaluation has focused on answering five questions aimed at assessing whether the goals of the HTW Demonstration were met. The goals (Box 2) target a variety of client-focused and system-focused outcomes. Each evaluation question (Table 1) is addressed through a minimum of one corresponding hypothesis. The evaluation questions and hypotheses are intended to promote the objectives of Title XIX by examining if the expansion of family planning and preventative services for low-income women in Texas supports overall health and birth-related outcomes in Texas Medicaid.

Demonstration Goals (Box 2):

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.

Table 1 below lists the five evaluation questions, their respective hypotheses, their related domains (access, utilization, health outcomes, costs, or provider eligibility changes), their status as of the interim report, and plans for the summative report. The following section details how these hypotheses have been operationalized into specific measures and which study populations, data sources, and analytic methods are being used to evaluate them.

Table 1: Evaluation Questions and Hypotheses

Domain	Evaluation Questions	Hypotheses	Status as of Interim Report	Plans for Summative Report
Access, Utilization, & Health Outcomes	**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?	H.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. H.1.2. The state's outreach and engagement activities support understanding of the HTW Demonstration.	H.1.1. Preliminary findings reported based on data through CY 2021. H.1.2. Data collection initiated (survey Wave 1 completed).	H.1.1. A complete assessment using data through 2024 will be presented in the summative report. H.1.2. A complete assessment based on all survey waves will be presented in the summative report.
	Evaluation Question 2. Did the HTW Demonstration increase the utilization of family planning, preconception care, and postpartum services?	H.2.1. The HTW Demonstration will maintain or increase utilization of family planning services among HTW clients. H. 2.2. The HTW Demonstration will maintain or increase the utilization of preconception care services among HTW clients.	H.2.1. Preliminary findings reported based on data through CY 2021. H.2.2. Only the 2021 rate was reported and compared to the benchmark, as Measure 2.2.1 requires a 5-year look-back period.	H.2.1. A complete assessment using data through 2024 will be presented in the summative report. H.2.2. A complete assessment using data through CY 2024 will be presented in the summative report.

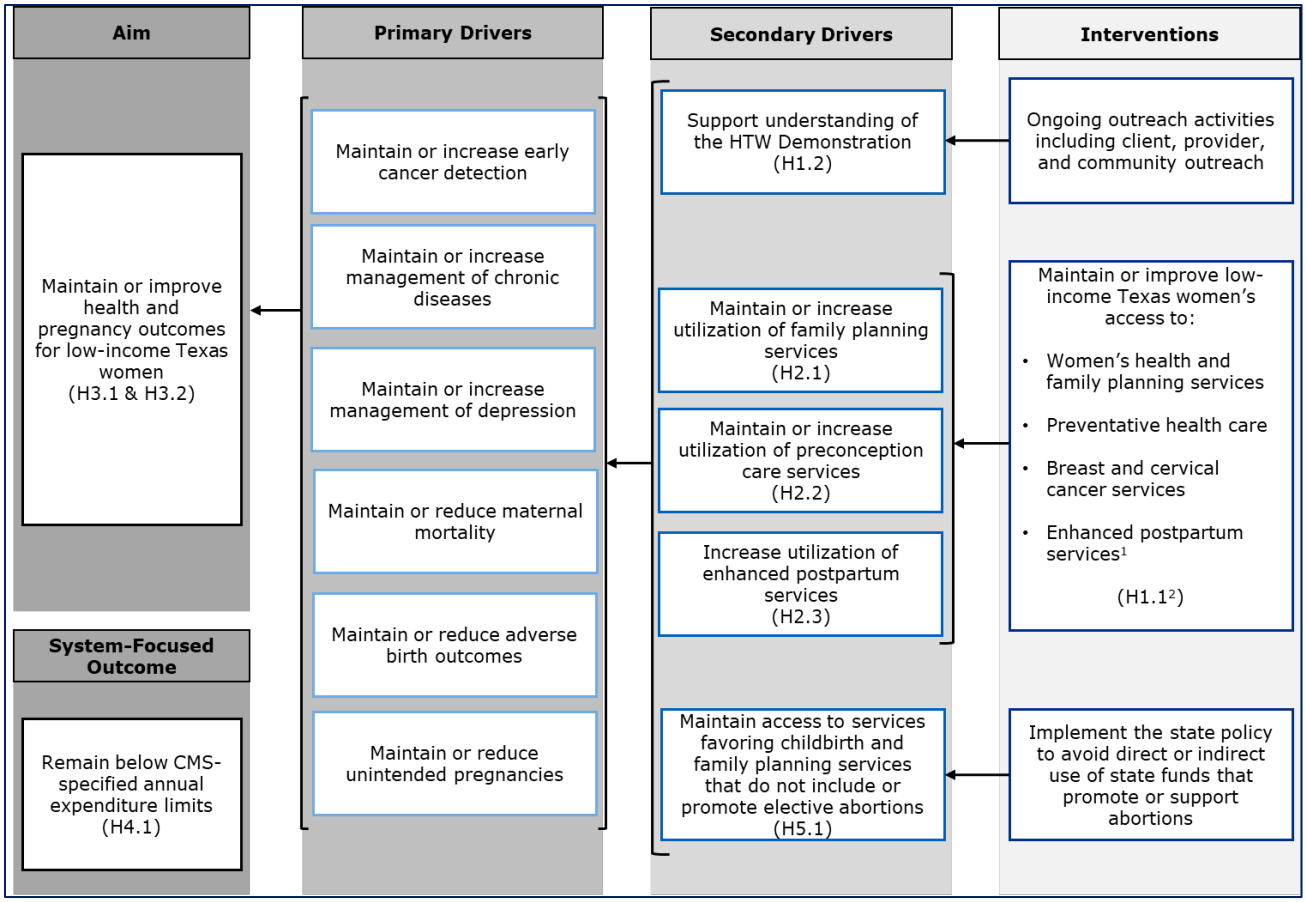
Domain	Evaluation Questions	Hypotheses	Status as of Interim Report	Plans for Summative Report
Access, Utilization, & Health Outcomes	**Evaluation Question 3.** Did the HTW Demonstration improve women's health and pregnancy outcomes?	H.3.1. The HTW Demonstration will maintain or improve women's health among HTW clients.	H.3.1. Preliminary findings reported based on data through CY 2021.	H.3.1. A complete assessment using data through 2024 will be presented in the summative report.
		H.3.2. The HTW Demonstration will maintain or improve pregnancy outcomes and maternal health among HTW clients	H.3.2. For Measure 3.2.1, preliminary findings were reported based on data through CY 2021. For Measure 3.2.2, only the 2018 cohort was reported and compared to the benchmark as this measure requires 27 months of follow-up data. For Measures 3.2.3-3.2.5, differences between the 2018 and 2021 cohorts were reported using a pre-post analysis with a matched comparison group.	H.3.2. A complete assessment using data through 2024 will be presented in the summative report. Additionally, the pre-post analysis with a matched comparison group will be refined as needed.
Cost	**Evaluation Question 4.** Did the HTW Demonstration effectively use public funds to provide women's health care in Texas?	H.4.1. The HTW Demonstration will remain at or below the CMS-specified annual expenditures limits.	H.4.1. Preliminary findings reported based on data through CY 2022.	H.4.1. A complete assessment using data through 2024 will be presented in the summative report.

Domain	Evaluation Questions	Hypotheses	Status as of Interim Report	Plans for Summative Report
Provider Eligibility	**Evaluation Question 5.** How does the 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?	H. 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.	H.5.1. For Measure 5.1.1, preliminary findings were reported based on data through CY 2021. For Measures 5.1.2-5.1.5, data collection was initiated (survey Wave 1 completed).	H.5.1. A complete assessment using data through 2024, and all survey waves, will be presented in the summative report.

Notes. [1] Hypothesis 2.3, "The implementation of the HTW waiver would increase the utilization of postpartum services through the HTW plus program," was removed from the assessment. CMS approval of the HTW Plus program is still pending and is therefore not part of the HTW Demonstration. Therefore, it was agreed with HHSC that the assessment of the HTW Plus program would not be part of this evaluation.

The Demonstration Driver Diagram (Figure 2) shows how these hypotheses align with the interventions, drivers, and outcomes in the HTW Demonstration. The diagram depicts the interventions associated with the HTW Demonstration and how they are expected to impact the Demonstration's overall goals. The initial diagram proposed in the HTW Demonstration Evaluation Design included under question 2, Hypothesis 2.3, which proposed that the waiver would increase utilization of postpartum services through the HTW Plus program. This program was intended to cover a specific set of postpartum benefits for the subsequent 12 months after delivery for women who had been pregnant in the 12 months before enrollment in HTW. However, the HTW Plus program is pending CMS approval and, therefore, is not currently covered under the HTW Demonstration. Consequently, the assessment of the HTW Plus program (and related hypothesis) is excluded from this interim report.

Figure 2. HTW Demonstration Driver Diagram



Notes. [1] CMS approval of the HTW Plus program is still pending and is therefore not part of the HTW Demonstration. Therefore, it was agreed with HHSC that the assessment of the HTW Plus program would not be part of this evaluation. [2] H1.1-H5.1 refers to the corresponding HTW evaluation hypotheses.

Evaluation Approach and Methods

Design

The questions and hypotheses are being assessed through 31 measures covering access, utilization, health outcomes, cost, and the effect of provider eligibility criteria. Outcome measures associated with each hypothesis can be found in Table 2. These measures are being evaluated using a mixed methods approach, including primary data collection through surveys and secondary administrative and public data analytics. The interim report, however, only contains results obtained from quantitative analysis of administrative data. Primary data collection efforts are described in the current report, but results from the qualitative analysis will not be available until the summative evaluation report.

Table 2 provides an overview of the interim report evaluation data, study populations, and quantitative methods. Further details on quantitative and qualitative methods can be found in the CMS-approved Evaluation Design and *Appendix A: Methods*.

Table 2: Evaluation Hypotheses and Measures Evaluation in the Interim Report

Evaluation Hypotheses	Measures
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 and preconception care, for low-income women in Texas.	1.1.1 HTW clients
	1.1.2 HTW clients who received an HTW service
	1.1.3 HTW active billing providers
	1.1.4 Network adequacy
Evaluation Question 2: Did the HTW Demonstration increase the <u>utilization</u> of family planning, preconception care, and postpartum services?	
2.1 The HTW Demonstration will maintain or increase the 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 sexually transmitted infections
2.2 The HTW Demonstration will maintain or increase the utilization of preconception care services among HTW clients	2.2.1 Compliance with Cervical Cancer Screening Recommendations

Evaluation Hypotheses	Measures
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
3.2 The HTW Demonstration will maintain or improve maternal health and pregnancy outcomes among HTW clients.	3.2.1 Unintended pregnancies
	3.2.2 Birth spacing
	3.2.3 Pregnancy complications: Gestational diabetes and preeclampsia.
	3.2.4 Adverse birth outcomes: Low birth weight and preterm births
	3.2.5 Severe maternal morbidity
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
Evaluation Question 5: How does the 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

Data

UTHealth CHCD relied on the following data sources to calculate measures for the evaluation:

- Medicaid enrollment, encounters, and claims for medical and pharmacy services provided by HHSC (Calendar Year [CY] 2017-2021) for HTW and Medicaid clients, which serve as the control group for a limited set of measures.
- Provider-level enrollment files (CY 2017-2021).

- Mother-newborns crosswalk for mothers delivering under Medicaid (CY 2018 & 2021) prepared by HHSC.
- Pregnancy Risk Assessment Monitoring System (PRAMS) data for Medicaid recipients (2017-2021) received from DSHS.
- Medical and Pharmacy Network Adequacy reports (CY 2020-2021).
- Budget Neutrality estimations for (Demonstration Years [DY] 1-3) and total enrollment and spending reports (CY 2017-2019) obtained from HHSC.

This interim report could only include claims and enrollment data through CY 2021 to analyze the specified hypothesis due to data lags and data sharing protocols. More specifically, UTHealth CHCD receives Texas Medicaid claims data in bulk, following a fiscal year calendar, with an approximate 9-12-month lag to accommodate the 8-month data lag for claims adjudication and additional time for data preparation and transfer. Therefore, only CY 2021 data was available when UTHealth CHCD was required to submit the interim report to HHSC (in September 2023). It is expected that CY 2022-2024 data will be available for the summative report, which will allow a more complete evaluation of the HTW waiver, as well as for the assessment of post-PHE years.

UTHealth CHCD will also rely on primary data collected from surveying clients and providers. However, that information will not be available until the summative report.

Population

The target population for the HTW evaluation includes all clients enrolled in the HTW Demonstration. In general, no additional inclusion or exclusion criteria have been applied. The target population is conceptually consistent with an intent-to-treat framework. All women who transitioned to or self-enrolled in the HTW Demonstration are considered part of the intervention group, regardless of whether they actively receive services. HTW enrollees who turned 45 during a measurement year and were still HTW clients were grouped into the 40-44 category. Women 45 or older at the beginning of the year were excluded as women would not normally be eligible for HTW but remained in the program due to PHE continuous enrollment policies. Additionally, some measures had additional population requirements that restricted the target population for that measure (e.g., age limitations or continuous enrollment requirements). These measure-specific exclusions are noted under each measure section and detailed in *Appendix A: Methods.* In addition, for the purposes of the evaluation, we excluded clients 15 to 17 years old from the pre-

HTW Demonstration baseline (or comparison group) to match the clients' age range in the HTW Demonstration period.

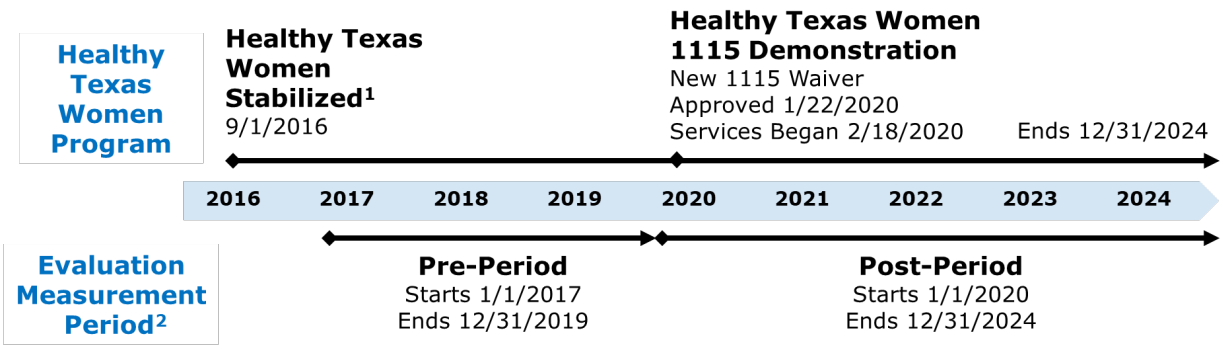
The HTW evaluation also assesses other populations, including that of providers serving HTW clients, and for the assessment of Measure 3.2.1 (Unintended Pregnancies) survey information for women identified as "Medicaid," which could have included both Medicaid and HTW clients available through the Pregnancy Risk Assessment Monitoring System (PRAMS). Additionally, measures under Hypothesis 3 rely on Medicaid-paid births from 2018 and 2021. Mothers who were not enrolled in HTW the year prior to the birth were used as control groups and are, therefore, part of the population studied.

Lastly, population-level data (rather than a sample) has been used for most measures to assess processes and outcomes. Measures relating to clients and providers have been stratified into key demographic subgroups such as age, race/ethnicity, region, or provider type, where applicable.

Study Period

The study period for the HTW evaluation is January 1, 2017, to December 31, 2024 (Figure 3), as explained in the CMS-approved Evaluation Design and corresponds to an approximate three-year period before the HTW Demonstration and a five-year period under the HTW Demonstration. For this interim report, the data analyzed ranged from January 2017 through December 2021, corresponding to two years post-implementation of the HTW Waiver. As outlined in the CMS-approved Evaluation Design, for the purpose of the evaluation, the start of the HTW Demonstration is assumed to be January 1, 2020, although the Demonstration was approved on January 22, 2020, and services did not begin until February of that year.

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. Details can be found in the CMS-approved Evaluation Design.

Quantitative Analysis

The quantitative analysis has been approached through three quasi-experimental methods: one group pre-posttest design, one group post-test only, and a nonequivalent comparison group pretest-posttest design. Most measures are being tested through a one-group pre-posttest design due to the longstanding nature of the HTW program and the absence of a suitable comparison group. Quantitative analytics methods used include:

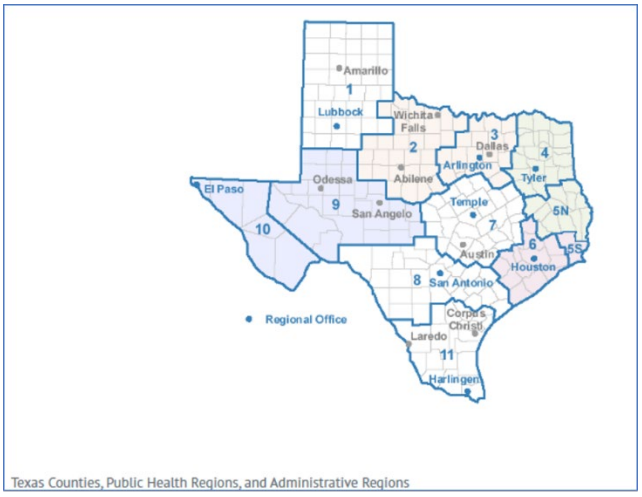
- Descriptive analysis assessing measures of central tendency and dispersion. Pre-post and sub-group comparisons using inferential statistics as appropriate. Methods used include the Chi-square test, Wilcoxon rank sum test, t-tests, Kruskall-Wallis, and ANOVA. When possible, a comparison with other benchmark information or peer review publications was performed to evaluate differences.
- Descriptive trend analysis was used when pre- and post-HTW Demonstration data was available, plotting and analyzing time series data and testing for the presence of a trend through regression modeling when possible. For several measures, reported only as annual rates, the years of follow-up provided little power to test for trends appropriately. We describe the

trajectory and evaluate differences between pre- and post-HTW Demonstration period averages to assess changes further.

- Pre-post analyses with a matched comparison group were used to assess measures under Hypotheses 3.2.3, 3.2.4, and 3.2.5, as a comparison group was available for the pre- and post-HTW Demonstration period. To balance group characteristics of the intervention and comparison groups pre- and post-HTW Demonstration, a propensity score weighting approach recommended for use in DID modeling for policy evaluations was used.[9]

Additionally, all descriptive statistics and analysis are stratified by age, race/ethnicity, and region, if feasible. The regional analysis was based out of Texas Public Health Regions. The map and counties included in each region are shown in the map below (Figure 4). The summative report will adjust regional stratifications to reflect Managed Care Service Areas to align with existing HTW reporting.

Figure 4: Texas Public Health Regions



Center for Health Statistics Texas County Numbers and Public Health Regions. https://www.dshs.texas.gov/center-health-statistics/center-health-statistics-texas-county-numbers-public-health-regions

Details on the methodological and quantitative analysis approaches used for each measure can be found in *Appendix A: Methods.*

Qualitative Data Methods and Collection Updates

Primary data from clients and providers have been collected as part of this evaluation as it offers valuable insight about the HTW Demonstration not otherwise available through administrative data. The primary data collected assessed client and provider perspectives on the HTW Demonstration, including eligibility

requirements, covered services, how to access services, and communication channels.

UTHealth designed a provider survey and a client survey and began administering both surveys in May 2023. UTHealth relied on a stratified random sample of HTW providers and clients to ensure survey responses reflected the overall HTW Demonstration population. A total of approximately 181 providers and 1,612 clients participated in the survey. Data collection for beneficiaries ended on 7/27/2023, and UTHealth received the finalized data on 8/4/2023. Data collection for providers ended on 8/20/2023, and UTHealth received the finalized data on 9/11/2023. Due to the level of effort required to analyze the data, including the development of weighting methods, the date analyses needed to be completed to accommodate review, and revisions of the report, findings from these surveys were not available at the time of writing this interim report. However, the summative report will include Wave 1 findings from both surveys.

In addition, UTHealth plans to implement another round (Wave 2) of both surveys prior to the summative report. UTHealth reviewed preliminary findings from Wave 1 to identify necessary changes for the beneficiary and provider surveys in Wave 2. Additional details on the HTW provider and beneficiary surveys and changes to Wave 2 can be found in *Appendix C: Updates of Primary Data Collection and Qualitative Analyses.*

Access, Utilization, and Health Outcomes

Overview

This section evaluates changes in access, utilization, and health outcomes among the HTW population post-HTW Demonstration. It represents the bulk of the interim report evaluation and is addressed collectively because, while specific measures vary, study populations, data sources, and analytic methods are similar. These three areas are evaluated through six hypotheses and 23 measures. Results for each measure are organized under the corresponding hypothesis and include changes, trends over time, outcomes by subgroups, and finally, when possible, differences from comparison groups. Under each hypothesis, we highlight considerations the reader should be aware of when interpreting results. Results for Hypothesis 1.2 and its six measures, which require analysis of primary data collected from clients, will not be included in this interim report, though progress updates are included.

Methods

Detailed methodology for the analysis of each measure and additional descriptive tables can be found in *Appendices A: Methods* and *B: Additional Results*, respectively.

Key Findings

- The average number of unique HTW clients per year (Measure 1.1.1) during the post-HTW Demonstration period grew slightly (4%); however, the average number of Member Years (MY) for the post-HTW Demonstration calendar years grew by 43 percent. This was due to a significant growth in the number of clients continuously enrolled and an increase in the number of retained clients from one year to the next—both of which may be due to policies enacted during the PHE to maintain client enrollment. This trend was most evident among women aged 25 and older, resulting in an older age distribution among the post-HTW Demonstration population when compared to pre-HTW Demonstration baseline.
- Pre-HTW Demonstration, an average of 37 percent of HTW clients received services per year (Measure 1.1.2). This number grew by three percentage points post-HTW Demonstration (9% change, p-value <0.001). This increase was driven by growth in clients utilizing medical services (12% change) but

was countered by a 7 percent reduction in clients utilizing prescription services.

- The number of active billing providers, or the number of providers billing at least one claim per year (Measure 1.1.3), grew by 20 percent between the pre- and post-HTW Demonstration period. However, fewer than 10 percent of billing providers were responsible for 80 percent of all paid claims pre- and post-HTW Demonstration.
- Network adequacy (Measure 1.1.4) improved in Demonstration Year (DY) 2[c] compared to baseline network adequacy reports for primary care physicians (PCP) and pharmacies. However, PCP networks in Micropolitan counties were still 15 percent below the desired performance standard (90%). In both baseline and DY 2 reports, network adequacy for PCPs and pharmacies was lowest in the MRSA Northeast Texas service area.
- Post-HTW Demonstration use of most/ moderately effective contraceptives among women with continuous annual enrollment declined by 7.7 percentage points (Measure 2.1.1), and use of Long Acting Reversible Contraceptives (LARCs) declined by 0.7 percentage points (Measure 2.2.2). The absolute number of women receiving contraception through HTW more than doubled in the post-HTW Demonstration period. The significant growth in eligible enrolled women and the shift towards an overall older population may have contributed to the decreases in these rates.
- The percentage of HTW clients tested for sexually transmitted diseases (Measure 2.1.3) did not change significantly through time. Specifically, chlamydia screening did not change significantly post-HTW Demonstration either and was, in fact, very close to Texas Medicaid reported rates. Almost 100 percent of women screened for chlamydia were also screened for gonorrhea, in line with evidence-based guideline recommendations.[10-12]
- This interim report could not examine changes in compliance with cervical cancer screenings (Measure 2.2.1), as that measure requires a five-year measurement window. However, preliminary findings based on a partial three-year measurement window suggest compliance with cervical cancer screenings slightly decreased post-HTW Demonstration. However, the 2021 rate (60%), which was the only year for which complete 5-year data was available, was 2.8 percentage points higher than the cervical cancer screening rate for Texas Medicaid recipients in general.

[c] Demonstration Years reflect a given year of the HTW Demonstration and operate on a Calendar Year (January 1 to December 31).

- Medication adherence for hypertension (Measure 3.1.1), diabetes (Measure 3.1.2), and cholesterol (Measure 3.1.3) drugs decreased post-HTW Demonstration. The prevalence of these three conditions was less than 2%, and after applying the criteria for the measure (having at least two prescriptions for the specific condition), few clients met the criteria. Therefore, results should be interpreted with caution. None of these changes were statistically significant after limiting the analysis to those women who were continuously enrolled in HTW for at least one year.
- Antidepressant medication management (Measure 3.1.4) improved, especially during the continuation phase (6 months of antidepressant medication).
- The ability to evaluate pregnancy intentions was limited as the response rate for the question used to assess this in PRAMS did not reach the 50 percent threshold across the year; therefore, CDC recommends interpreting cautiously. No significant changes in unintended pregnancy rates (Measure 3.2.1) were evident for the Texas Medicaid population pre- and post-HTW Demonstration. Unintended pregnancies among Medicaid-insured mothers were significantly higher than those reported for the overall state.
- The interim report could not assess birth spacing (Measure 3.2.2) post-HTW Demonstration as this requires 27 months of follow-up after a delivery, and data was only available through 2021. However, among women with a live Medicaid-paid birth in 2018, we evaluated their rate of subsequent births within 27 months of the index 2018 delivery based on their HTW enrollment the year prior (2017). The difference by HTW enrollment status was small (17.7% for HTW clients and 17.4% for non-HTW clients). Additionally, we evaluated the same measure based on their HTW enrollment following the index birth (HTW enrollment in 2019). HTW clients had a lower rate (better) of inadequate birth spacing in the subsequent 27 months than those who were not enrolled in HTW (17.1% vs 17.9%). This difference became insignificant after adjusting for age, race/ethnicity, and maternal comorbidity conditions. The assessment of birth spacing changes pre- and post-HTW Demonstration will require more years of data, which will be available in the summative evaluation report.
- Overall, propensity score weighted rates for pregnancy complications (Measure 3.2.3; gestational hypertension, gestational diabetes, and preeclampsia) among women who delivered under STAR Medicaid increased between 2018 and 2021. However, the increase in pregnancy complications was significantly smaller among women who had been enrolled in the HTW Demonstration the year prior to giving birth compared to those without HTW

or Medicaid enrolling in the year prior to the delivery under STAR Medicaid. (Change estimate -1.0%, p=0.002).

- The propensity score weighted severe maternal morbidity rate (Measure 3.2.5) also increased between 2018 and 2021. However, severe maternal morbidity did not differ based on HTW enrollment in the prior year (Change estimate 0.2%, p=0.137).
- Propensity score weighted rates of adverse birth outcomes (Measure 3.2.4; low birth weight and preterm births) increased between 2018 and 2021. Differences were smaller among women with previous HTW enrollment compared to those without HTW or Medicaid enrollment in the year prior to the delivery under STAR Medicaid (Change estimate for low birth weight -1.0%, p<0.001; Change estimate for preterm -0.9%, p<0.001).

Access to Family Planning, Family Planning-Related, and Preconception Care Services

Access to family planning, family planning-related, preconception care, and postpartum services was maintained or increased during the HTW Demonstration. (Hypothesis 1.1).

We assessed whether there had been changes in access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas post-HTW Demonstration program through the following measures:

1.1.1 Unique count of women enrolled in HTW

1.1.2 Proportion of HTW clients who receive any HTW service

1.1.3 Unique count of providers billing for any HTW service

1.1.4 Percentage of HTW clients within prescribed network adequacy standards

Additionally, Hypothesis 1.2 will assess clients' perspectives on the HTW Demonstration eligibility requirements, access to services, communication channels, and covered services. Primary data for these measures is currently being collected and analysis results will be presented in the summative report. Updates on the status of this hypothesis assessment are provided measure in *Appendix C: Updates on Primary Data Collection and Qualitative Analyses*.

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

This hypothesis is being evaluated through the following measures:

- 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

Client Characteristics, Enrollment, and Use of Services (Measures 1.1.1 and 1.1.2)

The unique number of women enrolled in the HTW program was 344,920 at the beginning of the study period (2017) and increased to 453,316 by 2021, a 31% increase. The highest number of unique enrolled clients occurred in 2019 when the program had 497,107 unique women enrolled. Detailed tables on women's characteristics can be found in *Appendix B: Additional Results.* The observed changes aligned with changes in the overall Texas Medicaid caseload. Monthly enrollment rates in Texas Medicaid show an absolute growth in enrollment between December 2017 (4,057,555) and December 2021 (5,174,224) of 1,116,669 unique individuals, or a 28% growth.[13]

Table 3 shows the total number of unique clients enrolled in HTW each year, stratified by newly enrolled versus those retained from the prior year, as well as the actual number of member years (MY) or 12-member months within a calendar year (Jan-Dec). Pre- and post-enrollment numbers were estimated as the average for the specific period, and the difference between the averages was reported. The percentage change is the difference between pre- and post-enrollment averages divided by the pre-HTW Demonstration average value. The actual number of unique clients grew by 4 percent; however, the number of MY, or 12-member months within a calendar year, grew between the pre- and post-HTW Demonstration periods, on average, 43 percent--likely an effect of the continuous enrollment requirements implemented during the PHE. The orange line in Figure 5 depicts this trend.

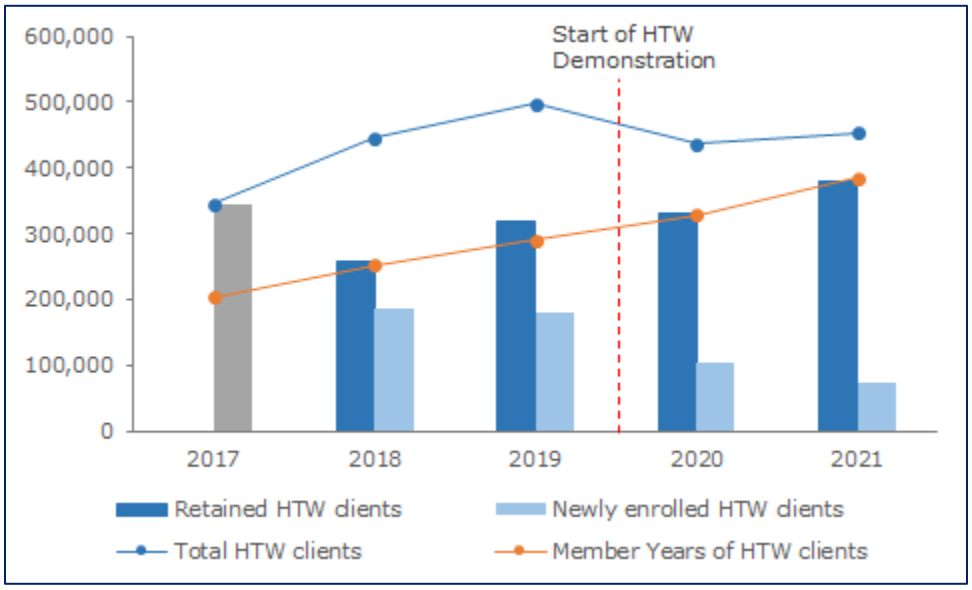
Table 3: HTW Clients, Retained and Newly Enrolled, and Member Years (Measure 1.1.1)

Year	Retained HTW Clients	Newly Enrolled HTW Clients	Total Unique HTW Clients	MYs[1] of HTW Clients
2017	N/A	N/A	344,920	203,662
2018	257,579	187,515	445,094	253,073
2019	318,330	178,777	497,107	290,332
2020	331,656	104,889	436,545	329,219
2021	380,370	72,946	453,316	385,187
Annual Pre-HTW Demonstration Average (2017-2019)	287,955	183,146	429,040	249,022
Annual Post-HTW Demonstration Average (2020-2021)	356,013	88,918	444,931	357,203
Pre/Post Difference in Ns	68,059	-94,229	15,890	108,181
% Change[2]	23.6%	-51.4%	3.7%	43.4%
p-value[3]	<0.001	<0.001	<0.001	<0.001

Notes. [1] MY, Member Year. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [3] P-values are reported from Poisson regressions.

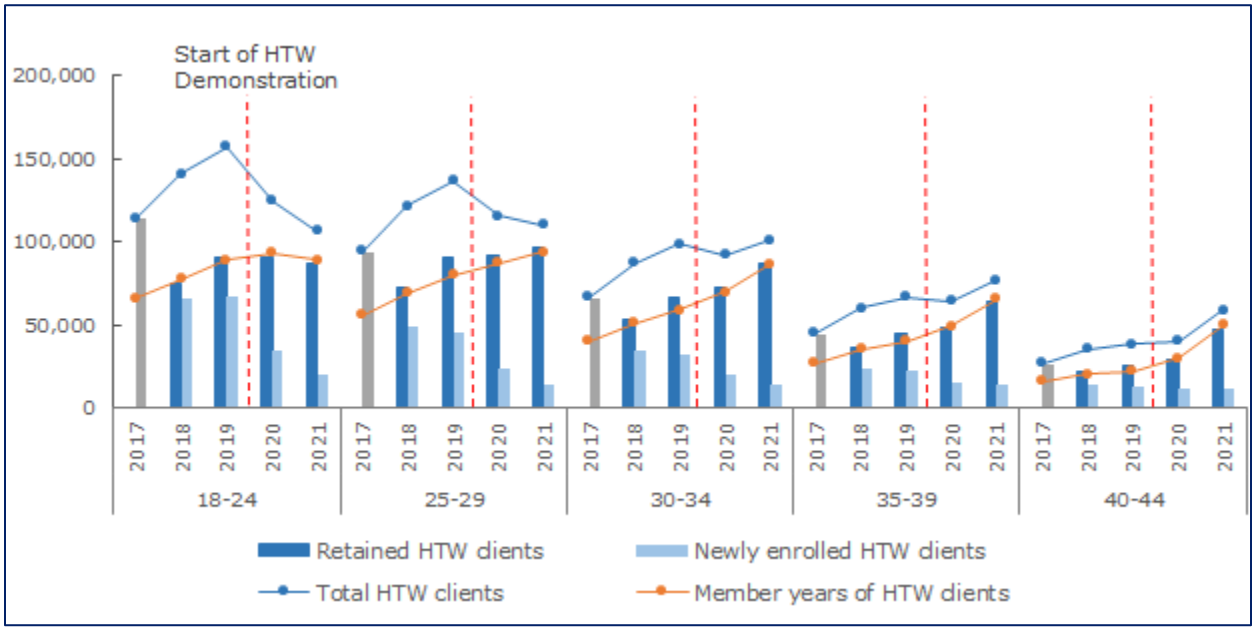
Two factors can explain the growth in MY in the HTW program. First is the 24 percent growth in retained clients post-HTW Demonstration (evidenced by the dark blue bars in Figures 5 and 6), alongside the 51 percent decline in newly enrolled clients (shown by the light blue bars in Figures 5 and 6). This change in the proportion of retained versus new clients was similar across all race and ethnic groups, with similar growth in overall numbers of unique clients and growth in MY. However, the difference was not consistent across age groups. Among the younger age groups (18-24), there was a reduction of 16 percent of unique clients, a 59 percent reduction of newly enrolled clients, and only an 8 percent growth in retained clients. All other older age groups behaved similarly to the overall population. Overall, this resulted in a statistically significant older population post-HTW Demonstration (2020-2021) than the pre-HTW Demonstration period (2017-2019). When evaluating this by Public Health Region (Figure 4: Map of Texas Public Health Regions), we should note the actual average number of unique enrollees shrunk across most regions, with the exception of Regions 3 and 6, where it grew closely to the state average, and Region 11 where there were no changes. The total number of MY grew across regions aligned with the overall state growth (see all detailed tables and figures in *Appendix B: Additional Results*).

Figure 5: Trends in Unique Client Enrollment, Member Years, and Retained vs. Newly Enrolled Clients: Total (Measure 1.1.1)



Notes. Dark blue bars represent HTW clients retained from the prior year, while light blue bars represent those newly enrolled. Since 2017 is the first year of data, the grey bar indicates HTW clients enrolled in 2017 regardless of their previous enrollment.

Figure 6: Trends in Unique Client Enrollment, Member Years, and Retained vs. Newly Enrolled Clients: By Age Groups (Measure 1.1.1)

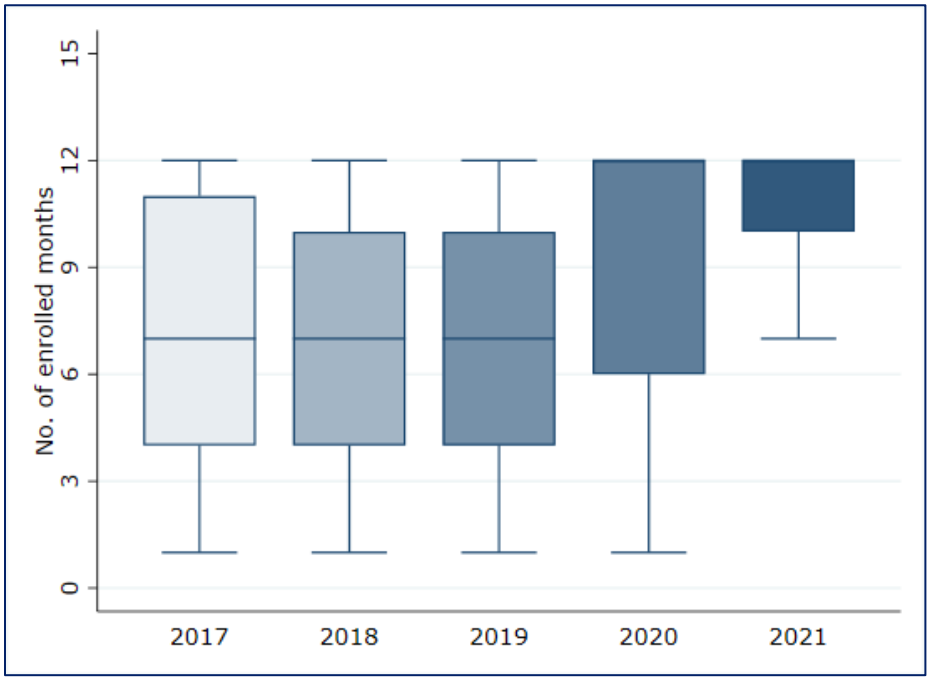


Notes. Dark blue bars represent HTW clients retained from the prior year, while light blue bars represent those newly enrolled. Since 2017 is the first year of data, the grey bar indicates HTW clients enrolled in 2017 regardless of their previous enrollment.

The second factor explaining the growth of MY is the significant growth in continuous enrollment for each individual. The boxplots in Figure 7 show the change in enrollment patterns, displaying the median number of months enrolled per client by year (central line in the box), the interquartile range (IQR) (25th and 75th percentiles shown as the upper and lower edges of each box), and the minimum and maximum values (displayed as whiskers).

The average length of enrollment was quite similar across the pre-HTW Demonstration period, with a median enrollment for the 3-year period of 7 months (IQR 4-10). However, post-HTW Demonstration, the median enrollment changed to 12 months. The graph also shows how variation in enrollment shrunk even more in 2021, where the median was 12 months and the 25th percentile was 10 months. Variation in median and mean enrollment between pre- and post-HTW Demonstration periods was statistically significant (p-value <0.001). Overall, these findings were still evident and followed the same direction when stratifying by age, race, and ethnicity. Detailed tables with statistical comparisons across periods and subgroups are available in *Appendix B: Additional Results.*

Figure 7: Enrolled Months for HTW Clients: Box Plots of Median, Interquartile Range, and Maximum/Minimum values (2017-2021) (Measure 1.1.1)



Notes. Horizontal lines inside the boxes denote medians; bottom and top borders of the boxes, IQR (25th and 75th quartiles); whiskers, range of values. Boxplots without the 75th quartile and whiskers indicate that the median, 75th quartile, and maximum have the same value of 12 months.

As explained previously, the implementation of the HTW Demonstration coincides with the initiation of the PHE. Clients were traditionally enrolled in HTW for 12-

month periods; however, this could occur anytime in the year. The changes in annual average enrollment by calendar year during the post-HTW Demonstration period reflect changes due to the PHE. During this period, re-determination of eligibility was suspended and clients were guaranteed continuous enrollment, therefore increasing the number of months enrolled in a given calendar year. Additionally, postpartum women did not transition to HTW after delivering as they stayed enrolled in the traditional Medicaid program. Similarly, young women who would have previously aged out of Medicaid were able to remain in the program rather than transition into HTW. These can help explain the reduction in new enrollees post-HTW Demonstration, the overall growth of retained clients from previous years and the resulting older population in the HTW program after 2020.

The evaluation of service utilization among HTW clients showed that, on average, pre-HTW Demonstration, 37 percent of women enrolled in HTW received at least a service per year, 34 percent received medical services, and 13.4 percent received prescription services. Post-HTW Demonstration, overall proportion of women who used at least a service grew by 3.4 percentage points (9.2% growth); this was driven by growth in medical services of 3.9 percentage differences points (11.7% growth), as prescription services decreased by 0.5 percentage points (-6.9% decline). Similar changes occurred across all age groups and race/ethnicity groups with no significant differences in direction or magnitude (see *Appendix B: Additional Results*). Though no state-specific information was found regarding prescriptions, national estimations from the Kaiser Family Foundation have shown that during FY 2017 through 2021, the total number of national Medicaid outpatient prescriptions decreased. More specifically, during FY 2020 through FY 2022, outpatient prescription levels remained at levels below those of FY 2017 though net spending increased.[15] A limitation of this analysis and that of the interim report is that measures discussed so far count only the absolute number of prescriptions and do not consider the days supplied. Therefore, reductions described in outpatient prescriptions could be due to actual reductions of prescription medications during the PHE, an increase in the day supply of medications prescribed during the PHE, or a combination of both.

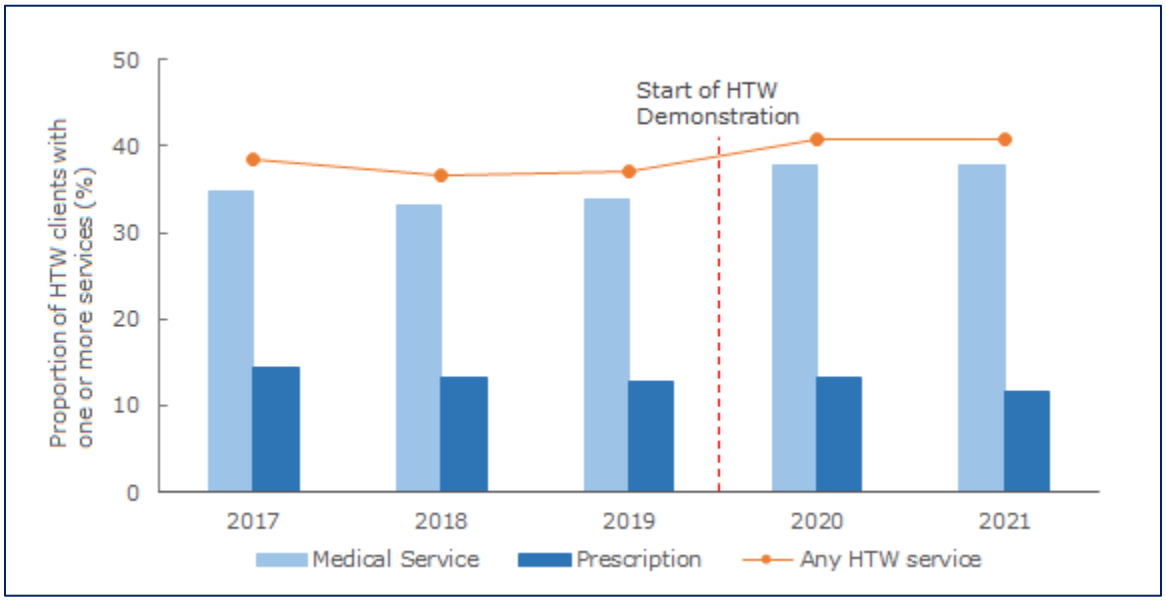
Table 4: Proportion of HTW Clients Receiving Any Services (Medical and Prescription Services by Year): Averages and Changes (Measure 1.1.2)

Year	HTW Clients Receiving Any Service	HTW Clients Receiving a Medical Service	HTW Clients Receiving a Prescription
2017	38.5%	34.7%	14.4%
2018	36.6%	33.2%	13.2%
2019	37.0%	33.8%	12.7%

Year	HTW Clients Receiving Any Service	HTW Clients Receiving a Medical Service	HTW Clients Receiving a Prescription
2020	40.7%	37.7%	13.3%
2021	40.7%	37.9%	11.6%
Annual Pre-HTW Demonstration Average (2017-2019)	37.3%	33.8%	13.4%
Annual Post-HTW Demonstration Average (2020-2021)	40.7%	37.8%	12.4%
Pre/Post Difference in Percentage Points	3.4%	3.9%	-0.9%
% Change[1]	9.2%	11.7%	-6.9%
p-value[2]	<0.001	<0.001	<0.001

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported from Chi-square tests.

Figure 8: Trends in Proportion of HTW Clients Receiving Any Services (Medical and Prescription Services by Year) (Measure 1.1.2)



Providers Billing for Any HTW Service (Measure 1.1.3)

The number of active providers with at least a paid claim for HTW clients was assessed through three different provider designations: billing providers, performing providers, and prescribing providers. We first evaluated the number of billing providers, understood as providers who billed for and were paid for services under the HTW program during the study period. Billing providers often include or represent more than a single performing provider. For instance, a physician group

would appear as a single billing provider under which several physicians would bill for different services performed. We, therefore, also evaluated the number of performing providers with paid claims during the same period. Additionally, we reported on the number of providers who prescribed medications for paid pharmacy claims among the HTW population. It should be noted that provider categories are not necessarily mutually exclusive. For example, a single practice physician could be a billing, performing, and prescribing provider. Additionally, though most prescribing providers are likely performing providers, a performing provider might not have a paid prescribed claim. Therefore, numbers should not necessarily be the same.

Table 5 details the number of unique active providers by each of the described categories and the change in the average between pre- and post-HTW Demonstration periods. Both billing and performing providers grew during the HTW Demonstration period, with 20 percent and 13 percent increases, respectively.

Table 5: Unique Providers Providing Services for HTW Clients (Measure 1.1.3)

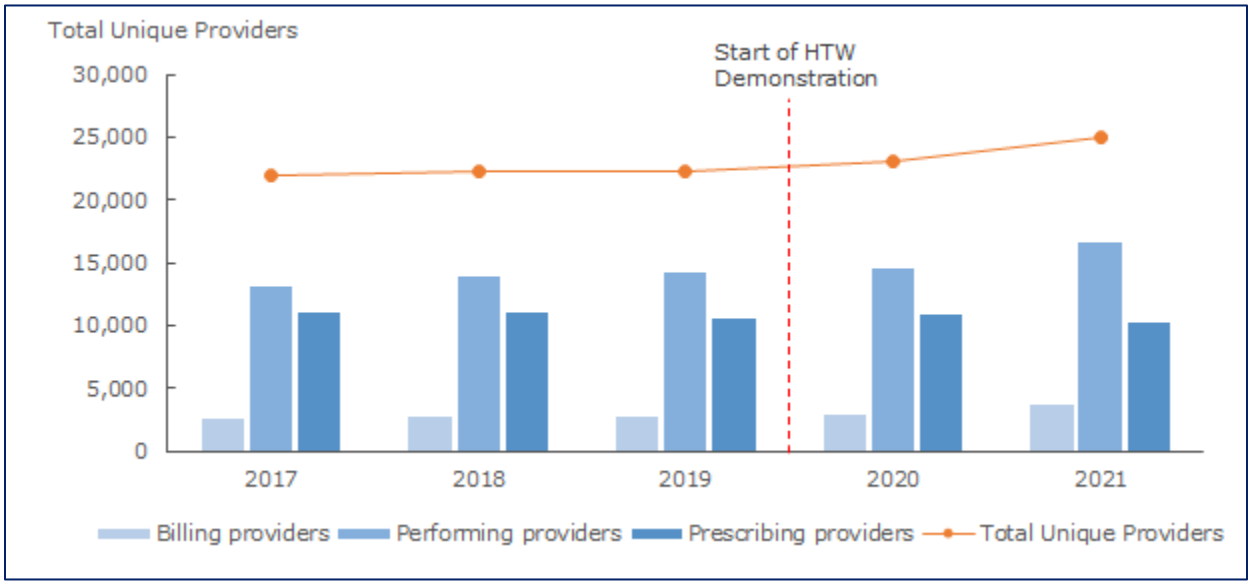
Year	Unique Billing Providers	Unique Performing Providers	Unique Prescribing Providers	Total Unique Providers
2017	2,636	13,143	11,104	21,950
2018	2,706	13,951	10,972	22,319
2019	2,791	14,275	10,552	22,311
2020	2,880	14,549	10,949	23,070
2021	3,612	16,678	10,161	25,039
Annual Pre-HTW Demonstration Average (2017-2019)	2,711	13,790	10,876	22,193
Annual Post -HTW Demonstration Average (2020-2021)	3,246	15,614	10,555	24,055
Pre/Post Difference in Ns	535	1,824	-321	1,861
% Change[1]	19.7%	13.2%	-3.0%	8.4%
p-value[2]	<0.001	<0.001	0.001	<0.001

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported from Poisson regressions.

As can be seen in Figure 9, the incremental changes were evident for both years in the HTW Demonstration period, 2020 and 2021. The number of prescribing providers declined by 3 percent, or 321 fewer providers prescribing outpatient medications, which seems to align with the identification of a reduction in prescriptions for the same period. These changes in the number of active HTW

providers, paired with observed changes in HTW utilization (Measure 1.1.2), suggest that utilization of HTW medical services increased after the Demonstration, but there was a small reduction in prescription services. However, it should be noted that the number of prescribing providers was higher in 2020 (10,949) than in 2019 (10,552), and the decline after the Demonstration was driven by decreases in 2021 when only 10,161 providers had at least a prescription. Therefore, more years of follow-up data would be needed to assess whether the decrease in 2021 is an outlier or an ongoing trend. A complete assessment for the summative report will be possible at the end of the evaluation period. The overall number of unique providers in paid claims grew through time. The change in the average count between the pre- and post-HTW Demonstration period was 8 percent.

Figure 9: Providers Providing Services for HTW Clients (Measure 1.1.3)



We additionally looked into the number of claims paid per provider. We found the distribution of claims filed and paid per provider was significantly skewed. Table 6 below shows the mean, median, and interquartile ranges in number of medical paid claims by year for billing providers. There was an 18 percent increase in the mean number of claims filed post-HTW Demonstration, but it was not statistically significant, principally due to the large confidence intervals. Tables for pharmacy claims per prescribing provider had a similar distribution and are reported in *Appendix B: Additional Results.*

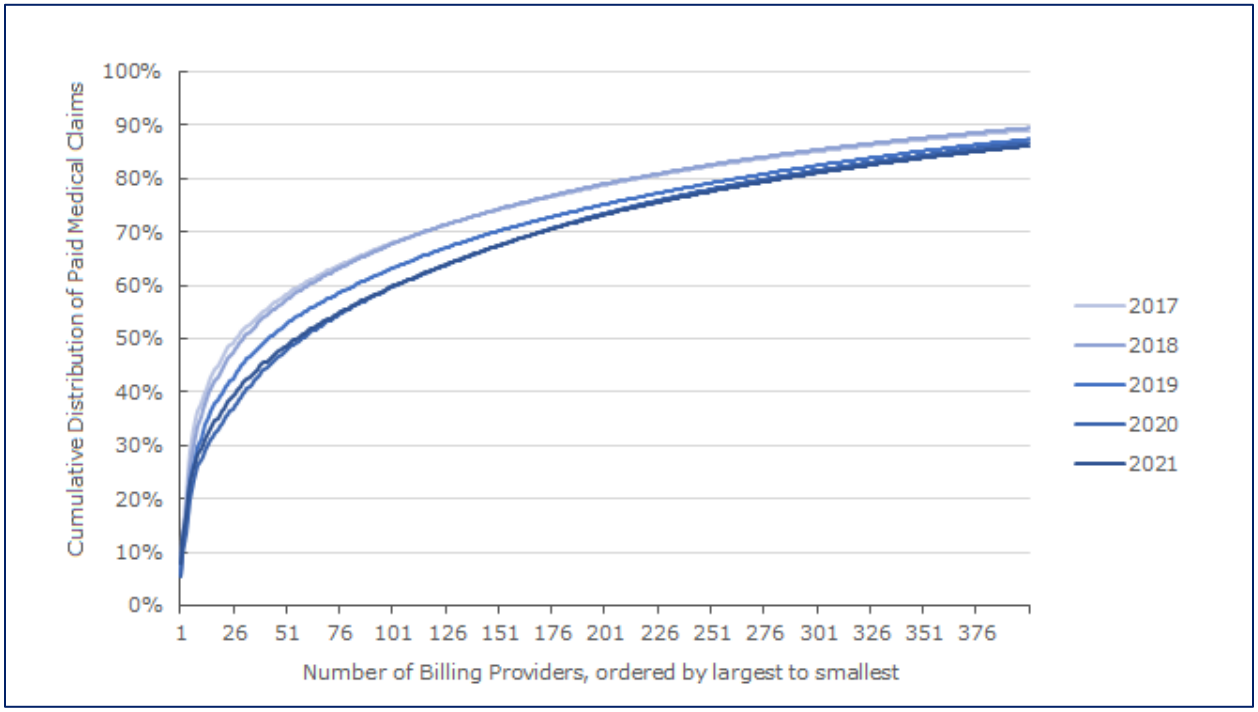
Table 6: Annual Medical Claims per Billing Provider (Measure 1.1.3)

Year	Mean Annual Claims per Billing Provider	Median Annual Claims per Billing Provider	25th Percentile	75th Percentile
2017	130.6	8	2	49
2018	163.9	8	2	59
2019	189.2	10	2	78
2020	207.5	11	2	88
2021	178.9	7	2	53
Annual Pre-HTW Demonstration Average (2017-2019)	161.8	9	2	62
Annual Post -HTW Demonstration Average (2020-2021)	191.6	8	2	69
Pre/Post Difference in Ns or Percentage Points	29.8	-1.0	--	--
% Change[1]	18.4%	-11.1%	--	--
p-value[2]	0.12	0.64	--	--

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported for statistical testing using Wilcoxon rank sum (medians) and t-tests (means).

Additionally, we found that 218 billing providers were responsible for 80 percent of the medical claims filed in 2017. In 2021, 286 billing providers were responsible for 80 percent of claims. Therefore, though the number of billing providers filing for HTW claims has grown through time, there is a consistent trend that less than 10 percent of active billing providers are responsible for the vast majority of the paid HTW services (Figure 10).

Figure 10: Cumulative Distribution of Paid Medical Claims by Billing Providers (Graph displays up to the first 400 billing providers) (Measure 1.1.3)



Network Adequacy (Measure 1.1.4)

Network adequacy standards are developed to ensure that health plans maintain a network of appropriate providers sufficient to provide adequate access to services for the identified population. The HTW program developed network adequacy standards based on previously established distance standards for the Texas HHSC STAR program. Distance standards measure the distance between the HTW client's address of residence and the service address of active providers. For this interim report, PCPs and pharmacies are the selected providers for this measure. Percentages of clients that reside within the standard accessible distance are reported by Medicaid Managed Care Service Areas and county type: Metropolitan (metro), Micropolitan (micro), and rural (as defined by HHSC). Rates are reported on an annual basis.

This interim report relies on network adequacy reports, produced by HHSC, for DYs 1 and 2. DY 1 report relied on 2019 data and is considered our baseline measurement. For the sake of this analysis, the DY 2 report (2020 data) is considered the post-HTW Demonstration network adequacy data source. For both PCPs and pharmacies, the network adequacy calculations were derived from the PCP/pharmacy addresses within HHSC Medicaid provider databases and compared to the HTW client residence addresses. ESRI's ArcGIS geo-mapping software was

used to measure the distance between HTW clients and the closest pharmacy to them.

A PCP was considered "active" if they had an HTW claim in the prior calendar year. The performance standard for all PCP locations (metro counties– 10 miles, micro counties – 20 miles, rural counties – 30 miles) is set at 90 percent for each year. For pharmacies, the distance standards were set at within 2 miles for a metro county, 5 miles for a micro county, and 15 miles for a rural county. Similar to the methodology for the PCP calculation, an active pharmacy was defined as a Texas Medicaid pharmacy with HTW claims during the prior calendar year. The service areas remain the same as previously reviewed for the PCP network adequacy. The standards were set at 80 percent for metro counties, 75 percent for micro counties, and 90 percent for rural counties across all service areas except Medicaid Rural Service Areas (MRSA), which are 75 percent for metro, 55 percent for micro, and 90 percent for rural.

In the baseline assessment, 99.9 percent of HTW clients were included in the calculation for both PCP and Pharmacy network adequacy distance standards, and 95 percent were included in the post-HTW assessment (DY 2).

Network Adequacy for Primary Care Physician Access

General improvement was evident in the DY 2 network adequacy rates for PCPs. The overall measurement for the program was only 0.7 percentage points from the 90 percent goal. There was variation by county type, though. Micro counties were still 15 percentage points below the standard, but metro counties met the standard. There was also variation by region, shown in detailed tables available in *Appendix B: Additional Results.* Overall, in DY 2, 23 out of 39 service areas met or exceeded the standard—a growth of 6 service areas, or 35 percent, when compared to the baseline assessment. Micro counties in the Hidalgo service area remained low and had a decrease in the percentage of HTW clients within the standard distance, from 49 percent during the baseline to 27 percent in DY 2. In DY 2, rural counties in the El Paso service area had a rate of 0, but the enrolled client count also dropped from 35 to 3. Of special note was the MRSA Northeast Texas service area; overall, only 66% of counties met the network adequacy standard for PCP, both at baseline and in DY 2. Additionally, at both baseline and DY 2, only 56 percent of metro counties in the MRSA Northeast Texas service area met PCP standards. However, micro counties meeting standards grew by 4.4 percent points (76% counties at baseline vs. 80% counties during DY 2).

Table 7: PCP Network Adequacy Standards, Proportion of HTW Clients Meeting Standards and Changes by County Type (Baseline vs. DY 2) (Measure 1.1.4)

County Type	Distance Standard from Two PCPs	Estimated Percent of HTW Clients Within Distance Standard from Two PCPs	Variation from Standard (90%)	Absolute Change (Baseline-DY 2)
Baseline Statewide Summary (DY1)	--	87.0	-3	--
Metro	10 Miles	87.5	-2.5	--
Micro	20 Miles	72.7	-17.3	--
Rural	30 Miles	92.1	2.1	--
DY 2 Statewide Summary	--	89.3	-0.7	2.3
Metro	10 Miles	90.0	0.0	2.5
Micro	20 Miles	75.0	-15	2.3
Rural	30 Miles	92.2	2.2	0.1

Reference

Meets Standard

Does Not Meet Standard

Increased

Decreased

Network Adequacy for Pharmacy Access

Statewide, the pharmacy network adequacy was within the standards, overall, and for each of the three county types at both baseline and DY 2. Statewide, micro counties increased their coverage considerably in DY 2 to reach 85.8 percent. When assessed by service area, only two of the service areas had metro counties below the standard: metro counties in Hidalgo and MRSA Northeast (each below performance standards by 2-5 percentage points).

Among the micro counties, the Travis County service area was the lowest, falling 21 and 22 percentage points below the standard (during baseline and DY 2, respectively), followed by the Bexar service area (15 and 14 points below standard, respectively) and Tarrant service area (9 and 15 points below standard, respectively). The rural counties generally met standards, with the exception of El Paso, Hidalgo, and MRSA West Texas at baseline, but each surpassed the standard in DY 2. Table 8 shows standard comparisons and changes pre- and post-HTW

Demonstration implementation. Detailed tables by service areas can be found in *Appendix B: Additional Results.*

Table 8: Pharmacy Network Adequacy Standards, Proportion of HTW Clients Meeting Standards and Changes by County Type (Baseline vs. DY 2) (Measure 1.1.4)

County Type	Distance Standard from a Pharmacy (County Type Specific)	Performance Standard Percentage	Estimated Percent of HTW Clients Within Distance Standard from a Pharmacy	Variation from Standard	Absolute Change (2020-2019)
Baseline (DY1) Statewide Summary	--	--	**87.2**	--	--
Metro	2 Miles	80	87.2	7.2	--
Micro	5 Miles	75	75.5	0.5	--
Rural	15 Miles	90	94.5	4.5	--
DY 2 Statewide Summary	--	--	**87.7**	--	0.5
Metro	2 Miles	80	87.0	7.0	-0.2
Micro	5 Miles	75	85.8	10.8	10.3
Rural	15 Miles	90	96.3	6.3	1.8

Meets Standard
Does Not Meet Standard
Increased
Decreased

Utilization of Family Planning Services Among HTW Clients

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

We assessed changes in family planning services provided pre- and post-HTW Demonstration waiver by evaluating the following measures:

2.1.1 Provision of most or moderately effective contraceptive methods

2.1.2 Long-acting reversible contraceptive use

2.1.3 Tests for any sexually transmitted infection/disease

Use of the Most Effective/Moderately Effective Contraceptive Methods and Long-Acting Reversible Contraceptives (Measures 2.1.1 and 2.1.2)

The evaluation of contraceptive care was evaluated using the Contraceptive Care Women (CCW)[16] measures specified by Medicaid Core Set of Adult's Health Care Quality Measures. The specifications on inclusion, and exclusion criteria, and the codes used for measuring these on medical and pharmacy claims data can be found in the Technical Specifications and Resource Manual for FFY 2021 Reporting document from the Center for Medicare and Medicaid (CMS).[17]

Two rates are assessed and reported here together as they have similar interpretations and implications. The first reflects the provision of the most effective or moderately effective contraceptive methods. The second rate reflects the provision of long-acting reversible contraceptive (LARC) methods. We evaluated these measures following the specification described by Medicaid Core Set of Adult's Health Care Quality Measures, including only women continuously enrolled in HTW for a calendar year, with no more than a 45-day gap as specified in the CMS-approved Evaluation Design.

Overall, both contraception measures decreased over time, see Table 9. Values for most and moderately effective contraception rates ranged from 23.5 percent in 2017 to 14.2 percent in 2021. The average annual rate during the pre-HTW Demonstration period was 24.2 percent, and 16.5 percent during the post-HTW Demonstration period (2020-2021), a 7.7 percent points difference or 31.8 percent reduction. The absolute number of women receiving these services, however, grew from 18,850 to 43,178 in the same time period. However, the denominator or number of eligible women for these services grew considerably as well during the post-HTW Demonstration period as a result of the policies implemented during the PHE.

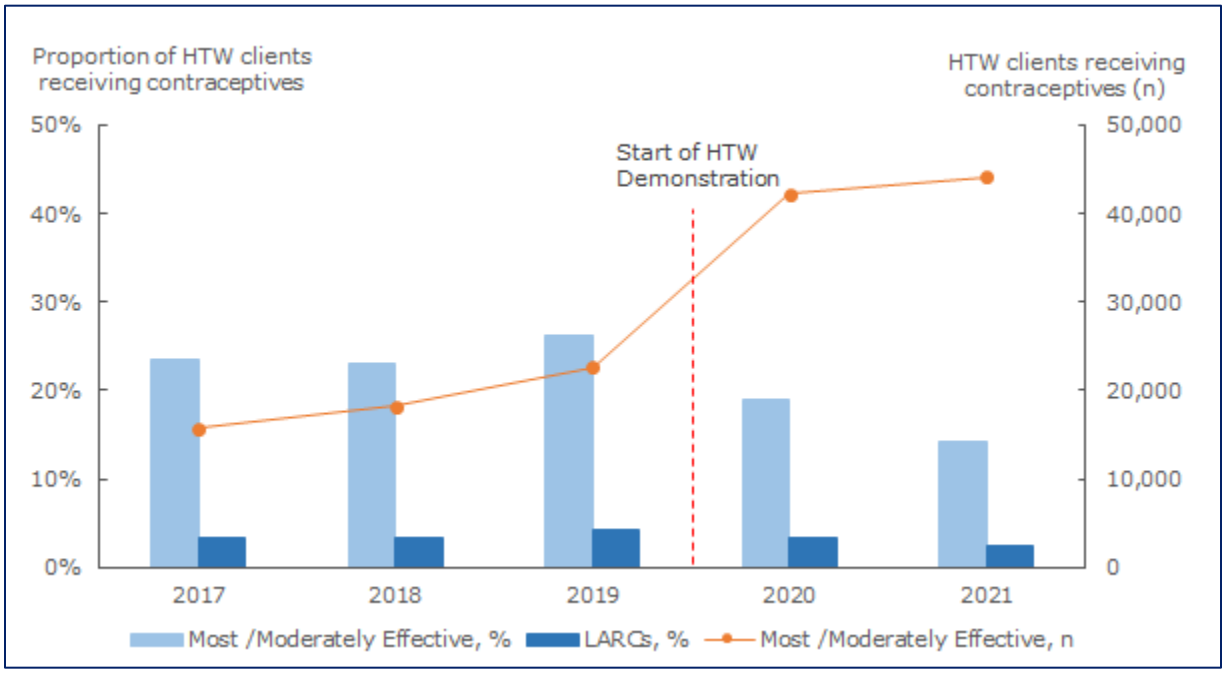
Table 9: Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Rates by Year, Pre- and Post-HTW Demonstration Averages and Changes (Measures 2.1.1-2.1.2)

Year	HTW Clients (Measure Denominator)[1]	Clients Receiving Most/ Moderately Effective Contraceptives	Percent (%)	Clients Receiving LARCs	Percent (%)
2017	66,906	15,721	23.5%	2,165	3.2%
2018	78,961	18,165	23.0%	2,649	3.4%
2019	86,601	22,664	26.2%	3,656	4.2%
2020	223,872	42,197	18.8%	7,553	3.4%
2021	310,845	44,158	14.2%	7,766	2.5%
Annual Pre-HTW Demonstration Average (2017-2019)	77,489	18,850	24.2%	2,823	3.6%
Annual Post - HTW Demonstration Average (2020-2021)	267,359	43,178	16.5%	7,660	2.9%
Pre/Post Difference in Ns or Percentage Points	189,869	24,328	-7.7%	4,836	-0.7%
% Change[2]	--	--	-31.8%	--	-18.5%
p-value[3]	--	--	<0.001	--	<0.001

Notes. [1] HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled who were not pregnant during DY, pregnant during DY but whose pregnancy ended in first ten months, or pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

LARC utilization was 3.2 percent at the beginning of the study period (2017) but had dropped to 2.5 percent by 2021. The annual average for the pre-HTW Demonstration period was 3.6 percent, and 2.9 percent during the post-HTW Demonstration period (2020-2021). This 0.7 percent point difference translated to an 18.5 percent reduction in the number of HTW clients receiving LARCs. As can be seen in Figure 11, both contraceptive measures had their highest utilization rates in 2019 and then decreased in subsequent years.

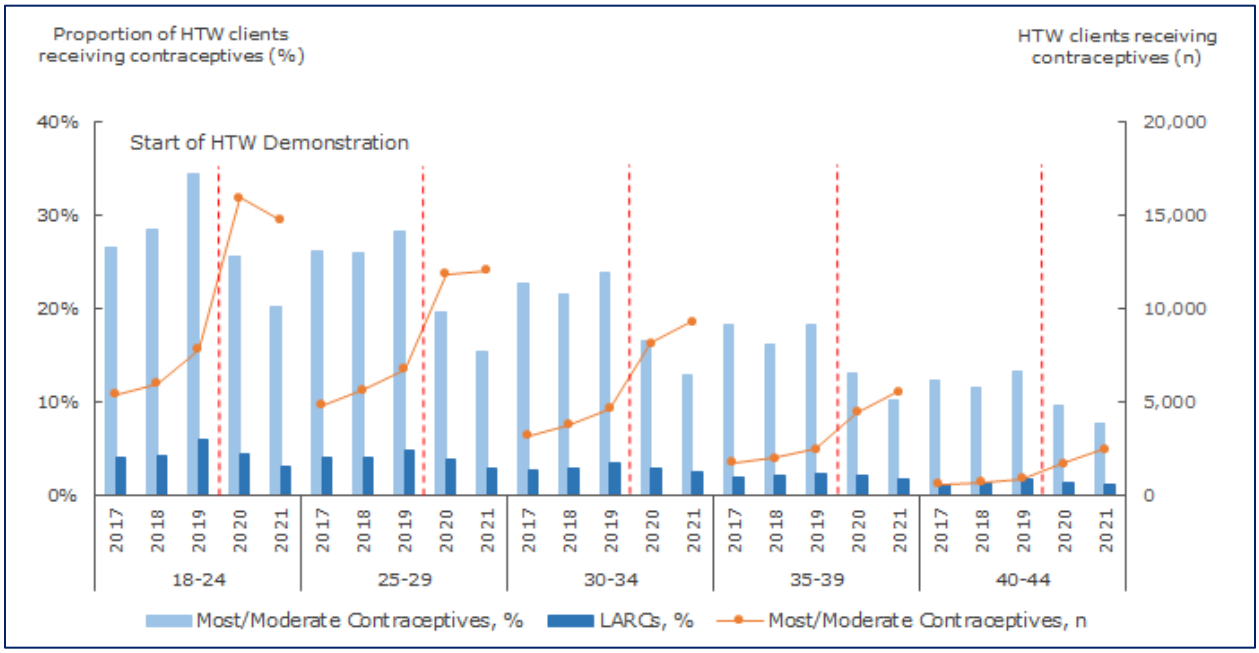
Figure 11: Trends in Rates for Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) in HTW Clients through Time (Measures 2.1.1-2.1.2)



Notes. HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled 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 are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. The light blue bar presents the proportion of HTW clients who received a MEME contraception in DY. The dark blue bar presents the proportion of HTW clients receiving a LARC. The solid line shows the total number of unduplicated HTW clients receiving a MEME contraception in DY.

Women aged 18 to 24 or 25 to 29 were more likely to be using any of the contraceptive methods measured. Detailed tables in *Appendix B: Additional Results* show variation across time, age, race/ethnicity, and regions for both contraceptive measures. Though utilization decreased across all age groups and methods, the youngest group (18-24) had the smallest proportional reduction in the use of most/moderately effective methods, a 7.6 percent points (25.3% reduction) reduction when comparing the pre- to the post-HTW Demonstration periods. The inverse was true for the use of LARCs, where women aged 18 to 24 or 25 to 29 had the largest proportional reductions. Women in these age groups reduced LARC utilization by approximately one percent point post-HTW Demonstration (a 19.2 percent and 22.3 percent reduction, respectively). Figure 12 visualizes the trends described for the age groups.

Figure 12: Trends in Use of Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) by Age Groups (Measures 2.1.1-2.1.2)



Notes. HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled 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 are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. The light blue bar presents the proportion of HTW clients who received a MEME contraception in DY. The dark blue bar presents the proportion of HTW clients receiving a LARC. The solid line shows the total number of unduplicated HTW clients receiving a MEME contraception in DY.

The decline in Most/ Moderately Effective Contraceptive and LARCs use was also evident across all different racial and ethnic groups, though the average reduction was higher among White Non-Hispanics. Please refer to *Appendix B: Additional Results* for tables and figures by subgroups.

The evaluation of changes in contraceptive use by Public Health Regions showed, in general, reductions between pre- and post-HTW Demonstration periods, which aligned with the State's overall trend. However, Region 11 grew its contraceptive use, both for Most/ Moderately Effective Contraceptives and LARCs, by 1.7 percent and 25.1 percent, respectively. The table below (Table 10) summarizes these findings. Detailed analysis by regions and other subgroups can be found in *Appendix B: Additional Results.*

Table 10: Changes Between Pre- and Post-HTW Demonstration Years in Average Rate of Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Used by Public Health Regions (PHR) (Measures 2.1.1-2.1.2)

Public Health Region	Most/ Moderately Effective Contraceptive (% Change[1])	LARC (% Change[1])
1	-27.2%	-7.2%
2	-33.9%	-11.8%
3	-37.1%	-31.1%
4	-45.6%	-28.4%
5	-36.0%	-6.0%
6	-32.3%	-19.4%
7	-42.1%	-14.8%
8	-41.8%	-37.9%
9	-38.3%	22.0%
10	-44.3%	-31.6%
11	3.7%	24.9%
Region Unknown	31.9%	82.7%

Reduction Higher than State
Reduction Smaller than State
Increased

Notes. [1] Column with "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period.

Use of most or moderately effective contraceptive methods among Texas Medicaid clients declined (2 percent points) as well from 2017 to 2021, though LARC utilization actually grew during this same period from 7.4 percent (2017) to 9.1 percent (2021).[18] There is ample evidence in the literature that women, in particular those without insurance and facing economic hardships, were significantly more likely to experience barriers in accessing contraceptive care during the pandemic years.[18-20] Additional consideration should be given to the impact of the maintenance of eligibility policies on the demographics and life context among women in the different programs, such as Texas Medicaid and HTW. The maintenance of eligibility policy also meant that women who delivered in Texas Medicaid remained in the program instead of transitioning into HTW and, therefore, were more likely to be postpartum. On the contrary, in HTW, women became less likely to be postpartum as well as more likely to be older. In addition to barriers to access to contraceptive care during the pandemic described in the literature, it should be considered that the life circumstances of women both in Texas Medicaid and in HTW changed during the Pre- and Post-HTW Demonstration periods

assessed. Without an appropriate comparison group and within the context of the pandemic, it is difficult to evaluate the effect of the Demonstration itself on access to contraceptive care. A better evaluation will be possible for the summative evaluation report, where additional years of data post-PHE will be available.

Testing for Sexually Transmitted Infections/Diseases (Measure 2.1.3)

The CMS-approved Evaluation Design asked for the assessment of total number of unduplicated clients with at least one test for any sexually transmitted infection (STI) per year over the total number of unduplicated clients during that year. This rate decreased from 23.8 percent in 2017 to 20.0 percent in 2021. The average annual rate for the pre-HTW Demonstration period was 22.8, and that for the post-HTW Demonstration 22.2, not a significant change. In addition to the measure required in the CMS-approved Evaluation Design, UTHealth CHCD examined differences in chlamydia screenings to allow for comparisons and benchmarking with other standard reporting. The Medicaid Core Set of Adult Health Care Quality Measures[17] recommends Medicaid programs assess "Testing for Chlamydia" among actively sexual women aged 21 to 24 continuously enrolled in the year of measurement. This measure is also employed by Texas to evaluate testing for STI among its Managed Care Organization (MCO) plans.[22] Additionally, this measure is reported by commercial plans under their Healthcare Effectiveness Data and Information Set (HEDIS) reporting.[23] Details on this measure can be found in *Appendix A: Methods.*

As can be seen in Table 11, the proportion of sexually active women aged 21 to 24 who were screened for chlamydia infection changed very little over time with no significant trend. The annual average rate pre-HTW Demonstration was 66.8 percent and decreased by only one percentage point to 65.9 percent post-HTW Demonstration.

Table 11: Chlamydia Screening Rates by Year: Averages and Changes Pre- and Post-HTW Demonstration (Measure 2.1.3)

Year	Eligible Population (HTW clients 21-24 years old)[1]	Chlamydia Screening	Percent (%) Chlamydia Screening
2017	18,720	12,685	67.8%
2018	19,927	13,250	66.5%
2019	21,416	14,196	66.3%
2020	25,311	16,395	64.8%

Year	Eligible Population (HTW clients 21-24 years old)[1]	Chlamydia Screening	Percent (%) Chlamydia Screening
2021	22,006	14,742	67.0%
Annual Pre-HTW Demonstration Average (2017-2019)	20,021	13,377	66.8%
Annual Post -HTW Demonstration Average (2020-2021)	23,659	15,569	65.8%
Pre/Post Difference in Ns or Percentage Points	3,638	2,192	-1.0%
% Change[2]	--	--	-1.5%
p-value[3]	--	--	0.001

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled are included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre-and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

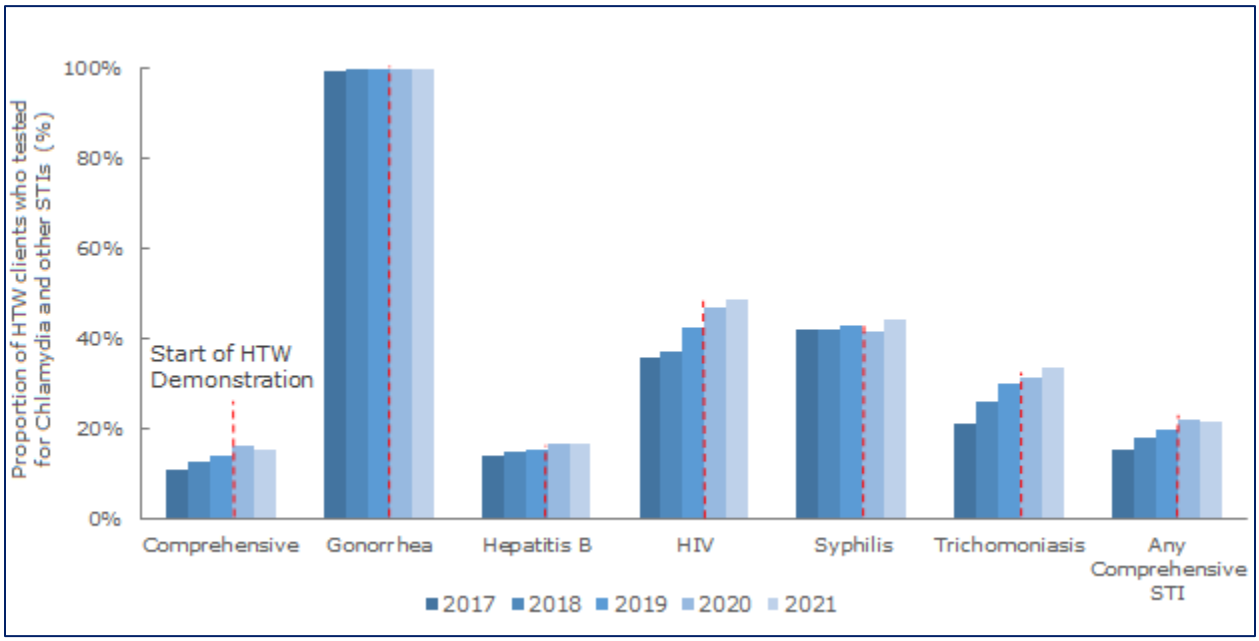
Changes in screening rates pre- and post-HTW Demonstration were very similar across all racial/ethnic groups, ranging from a 0.7 percentage point reduction among White non-Hispanics, a 1.4 percentage point reduction among Hispanics, and a 1.3 percentage point reduction among Black, non-Hispanic women. Finally, Public Health Region 11 had higher screening rates than the State's, with values ranging from 76 percent to 82 percent, which was, on average, 13 percentage points above the state mean (19.5% higher). Detailed tables for all subgroup analyses can be found in *Appendix B: Additional Results*.

Chlamydia screening rates for women in the HTW Demonstration were slightly higher than those reported for the overall Texas Medicaid population during the same time frame, which started as 61.5 percent in 2017 and decreased to 55.4 percent in 2021. In fact, chlamydia screening, which was almost unchanged among the HTW population, decreased by almost 10 percentage points on average during the same period among Medicaid recipients.[24]

According to the Center for Disease Control[10] and the US Preventive Services Task Force (USPSTF),[11] sexually active women who are at risk for STIs should also be screened for gonorrhea. UTHealth CHCD, therefore, also examined whether women in HTW screened for chlamydia were screened for other STIs, including gonorrhea, other STIs, and a comprehensive STI screening code. As can be seen in Figure 13,

almost 100 percent of women tested for chlamydia were also tested for gonorrhea, in accordance with USPSTF recommendations. Additionally, screening for other STIs grew through time.

Figure 13: Screening Trends for Other Sexually Transmitted Infections Among HTW Clients Tested for Chlamydia (Measure 2.1.3)



Notes. HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled who tested for chlamydia are included. Percentages of HTW clients who were also screened for other sexually transmitted infections (STI) are reported. Comprehensive screening includes testing for multiple organisms. Any comprehensive STI screening includes testing for any of the following diseases: Gonorrhea, Hepatitis B, HIV, Syphilis, and Trichomoniasis.

Utilization of Preconception Care Services Among HTW Clients

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

This hypothesis is being evaluated through the following measure:

2.2.1. Compliance with cervical cancer screening recommendations

Compliance with Cervical Cancer Screening (CCS) Recommendations (Measure 2.2.1)

The assessment of this hypothesis was done by evaluating adherence to guideline recommendations for cervical cancer screening (CCS). For this purpose, we used the CCS measure recommended by the Medicaid Core Set of Adult's Health Care Quality Measures.[17] According to the measure specifications, women should be

considered as having been screened for cervical cancer if they meet any of the following criteria:

- Women aged 21 or older who had cervical cytology performed within the last 3 years
- Women aged 30 or older who had cervical high-risk human papillomavirus (hrHPV) testing performed within the last 5 years
- Women aged 30 or older who had cervical cytology/high-risk human papillomavirus (hrHPV) co-testing (or within four days of each other) within the last 5 years.

The required look-back period was 3 to 5 years. For this interim report, we were only able to evaluate years 2019 through 2021 using a 3-year look-back period for each measurement year, which complied with cervical cytology requirements but truncated the measurement of hrHPV. For the reporting year 2019, we used 2017-2019 data for the measurement year 2020, 2018 through 2020, and for 2021, 2019 through 2021. All hrHPV testing was measured using only three retrospective years, though official recommendations suggest at least once every five years. Therefore, comparisons with other national and state benchmarks should be avoided as rates are not comparable. For the purpose of being able to compare with other external reports, we report a separate rate, "CCS Rate for 2021", that uses 5 years of historical data to fully assess CCS as specified by CMS.

Table 12 shows the rates estimated for CCS using a 3-year lookback period. Using this approach, rates declined from 54 percent in 2019 to 38 percent in 2021. Notably, the measure report for 2021 covers screening that occurred from 2019 through 2021 and, therefore, includes two years of pandemic data.

Table 12: Compliance with Cervical Cancer Screening Recommendations (Three-Year Measure: 2019-2021) (Measure 2.2.1)

Year	Eligible Population[1]	Cervix Cytology Testing	hrHPV[2] Testing	HPV or Cervix Cytology Lab	Cervical Cancer Screening Rate (%)
2019	22,321	11,856	6,237	11,969	53.6%
2020	40,269	19,363	10,487	19,557	48.6%
2021	89,963	34,038	18,928	34,291	38.1%

Notes. [1] HTW clients aged 21 or older at the end of the demonstration year (DY) and continuously enrolled during the past three years including the DY are included. HTW clients who had one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment determined monthly), received hospice care, or had a hysterectomy any time during the client's history through the end of DY are excluded. [2] hrHPV, High-Risk Human Papilloma Virus testing.

There is evidence in the literature of moderate declines in CCS, approximately 11 percent, during 2020 as compared to previous years (2018) using Behavioral Risk Factor Surveillance System data.[25] Though we were not able to assess trends or perform before and after comparisons relative to the HTW Demonstration for this interim report, our 3-year CCS aligns with what can be expected based on the literature. The 2020 rate decreased by 5 percentage points (9% reduction) with respect to 2019, similar to what was described. By 2021, the decline was more pronounced, 10 percentage points lower than in 2020 (22% reduction). Since the 2020 rate includes one year of data occurring during the pandemic, and 2021 includes two years, it is reasonable to assume effects of the pandemic could have accumulated. As mentioned, caution should be used in the interpretation of these results.

The full assessment of 2021 CCS rates using five years of historical data shows a screening rate of 60 percent. As can be seen in Table 13, the eligible population decreased considerably compared to the report for 3-year measures as it required five years of continuous enrollment. Information pulled on 2021 Texas Adult Medicaid Cervical Cancer Screening (CCS)[24], following the same specification, shows a screening rate of 57.2 percent. Though we cannot fully assess a trend or changes between pre- and post-HTW Demonstration implementation for CCS, we can see that CCS rates in 2021 were similar to those reported for other women in Medicaid Texas.

Table 13: 2021 Texas Adult Medicaid Cervical Cancer Screening (CCS) (Measure 2.2.1)

Measure in 2021	Eligible Population[1]	hrHPV[2] or Cervix Cytology Lab	Cervical Cancer Screening Rate (%)
CCS[3] for the HTW Population	11,299	6,820	60.4%
CCS[1] for the Texas Medicaid	400,865	229,295	57.2%

Notes. [1] HTW clients aged 21 or older at the end of the demonstration year (DY) and continuously enrolled during the past 5 years including the DY are included. HTW clients who had one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment is determined monthly), received hospice care, or had a hysterectomy any time during the client's history through the end of DY are excluded. [2] hrHPV: High-Risk Human Papilloma Virus testing. [3] CCS: Cervical Cancer Screening

Detailed information on subgroup analysis for the 2021 Cervical Cancer Screening measure can be found in *Appendix B: Additional Results*.

Health Outcomes

This section reports on findings from the assessment of two hypotheses focused on evaluating the potential effects of the HTW Demonstration on women's health and pregnancy outcomes.

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

We evaluated whether there had been changes in women's health among HTW enrollees pre- and post-HTW Demonstration by assessing adherence to medication for chronic conditions whose screening and pharmacological treatment are covered under the HTW program. These measures included:

- 3.1.1 Hypertension medication adherence
- 3.1.2 Diabetes medication adherence
- 3.1.3 Cholesterol medication adherence
- 3.1.4 Antidepressant medication management: effective acute and continuation phase treatment

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

We assessed whether there had been changes in maternal health and pregnancy outcomes among low-income women in Texas post-HTW Demonstration through the following measures:

- 3.2.1 Unintended pregnancies
- 3.2.2 Birth spacing
- 3.2.3 Pregnancy complications: gestational diabetes, gestational hypertension, and preeclampsia
- 3.2.4 Adverse birth outcomes: low birth weight and preterm births
- 3.2.5 Severe maternal morbidity

Most of these measures were assessed through quantitative analysis of Texas HTW and Medicaid claims data. The evaluation of unintended pregnancies (3.2.1) required the use of data prepared by the Department of State Health Services (DSHS) Maternal and Child Health Epidemiology Unit, which was pulled from the Pregnancy Risk Assessment Monitoring System (PRAMS). The evaluation of birth spacing (3.2.2), pregnancy- and birth-related complications (3.2.3 and 3.2.5), and adverse birth outcomes (3.2.4) was based on Medicaid claims and encounters data, as well as a crosswalk provided by HHSC that linked maternal client IDs to newborn

client IDs (used to examine low birth weight and preterm births), for deliveries occurring in 2018 and 2021. Explanations of the approach used can be found under each measure and detailed methods information in *Appendix A: Methods*.

Effect of the HTW Demonstration on Women's Health (Measures 3.1.1-3.1.4)

Women's health was evaluated by assessing HTW clients' adherence to medication for diabetes, hypertension, and hypercholesterolemia as well as the initiation and continuation of treatment for antidepressant medication among those who needed it. HTW benefits pre- and post-HTW Demonstration include screening and pharmaceutical treatment of hypercholesterolemia, diabetes, hypertension, and depression. To evaluate adherence to hypertension, diabetes, and hypercholesterolemia treatment, we used the proportion of days covered (PDC) measures specified in the CMS-approved Evaluation Design and developed by the Pharmacy Quality Alliance.[26] To evaluate antidepressant medication management, as required by the CMS-approved Evaluation Design, we relied on measures developed and specified under Adults Health Care Quality Measures for Medicaid,[17] a National Committee for Quality Assurance measure. This measure assesses two rates: acute-phase phase treatment (initial 12 weeks) and continuation phase (6 months).

Table 14 below depicts the disease prevalence for hypertension, diabetes, hypercholesterolemia and depression among women enrolled in HTW pre- and post-HTW Demonstration. Importantly, not all women with these diagnoses required pharmacological treatment. As mentioned, as of March 2020, HTW and Medicaid clients were not required to go through re-assessment of their eligibility and could stay enrolled in their respective programs.[4] Under Measure 1.1.1, we established that this created changes in the HTW Demonstration population when compared to the pre-HTW Demonstration population. Women enrolled after March 2020 tended to be slightly older as well as less likely to be in their postpartum year. These changes can affect the prevalence of chronic disease. In fact, the prevalence of hypertension, which is low in this population, grew 0.46 percentage points (60.0% change) post-HTW Demonstration, hypercholesterolemia grew 0.33 percentage points (28% change), and depression grew by 0.22 percentage points (12.6% change). However, diabetes decreased by 0.17 percentage points (10.4% change) post-HTW Demonstration. All these changes were statistically significant.

Table 14: Prevalence of Select Chronic Health Conditions, Pre- and Post-HTW Demonstration Averages and Changes (Measures 3.1.1-3.1.4)

Year	HTW Clients	Hypertension[1]		Diabetes[1]		Hyperchole-sterolemia[1]		Depression[1]	
		N	Prev. (%)	N	Prev. (%)	N	Prev. (%)	N	Prev. (%)
2017	344,920	2,299	0.67%	5,326	1.54%	3,553	1.03%	5,823	1.69%
2018	445,094	3,321	0.75%	7,486	1.68%	5,217	1.17%	7,866	1.77%
2019	497,107	4,266	0.86%	8,257	1.66%	6,285	1.26%	9,185	1.85%
2020	436,545	4,955	1.14%	6,096	1.40%	6,107	1.40%	8,810	2.02%
2021	453,316	5,979	1.32%	6,954	1.53%	7,227	1.59%	9,003	1.99%
Annual Pre-HTW Demonstration Average (2017-2019)	429,040	3,295	0.77%	7,023	1.64%	5,018	1.17%	7,625	1.78%
Annual Post - HTW Demonstration Average (2020-2021)	444,931	5,467	1.23%	6,525	1.47%	6,667	1.50%	8,907	2.00%
Pre/Post Difference in Ns or Percentage Points	--	--	0.46%	--	-0.17%	--	0.33%	--	0.22%
% Change[2]	--	--	60.0%	--	-10.4%	--	28.1%	--	12.6%
p-value[3]	--	--	<0.001	--	<0.001	--	<0.001	--	<0.001

Notes. [1] These conditions were determined based on ICD-10 Diagnoses. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [3] P-values are reported from Chi-square tests.

Table 15: Medication Adherence Among Those with Prescriptions for the Treatment of Hypertension, Diabetes, and Hypercholesterolemia (Measures 3.1.1-3.1.4)

Year	Hypertension		Diabetes		Hypercholesterolemia	
	HTW Clients Treated with Medication[1]	Medication Adherence (%)[2]	HTW Clients Treated with Medication[1]	Medication Adherence (%)[2]	HTW Clients Treated with Medication[1]	Medication Adherence (%)[2]
2017	600	25.2%	680	21.2%	208	22.2%
2018	607	27.9%	965	23.0%	273	23.9%
2019	566	30.3%	991	24.7%	287	25.1%
2020	571	23.5%	916	21.0%	383	19.6%
2021	695	20.5%	1,047	19.7%	526	17.8%
Annual Pre-HTW Demonstration Average (2017-2019)	591	27.7%	879	23.2%	256	23.9%
Annual Post - HTW Demonstration Average (2020-2021)	633	21.9%	982	20.3%	454	18.6%
Pre/Post Difference in Ns or Percentage Points	42	-5.9%	103	-2.8%	198	-5.3%
% Change[3]	7.1%	-21.1%	11.7%	-12.3%	77.4%	-22.2%
p-value[4]	--	0.002	--	0.042	--	0.018

Notes. [1] HTW clients are only included if the first fill of their medication occurs at least 91 days before the end of the enrollment period and weighted by the month of enrollment. [2] Medication adherence reports the proportion of HTW clients filled their prescription often enough to cover 80 percent or more of the measurement period weighted by the months of enrollments.[3] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration. [4] P-values are reported for statistical significance of the rate difference using Poisson regression.

Adherence to medication for hypertension, diabetes, and hypercholesterolemia treatment all decreased significantly post-HTW Demonstration. Adherence to antihypertensive medication decreased by 5.9 percentage points, and adherence to diabetes and high cholesterol medication by 2.8 and 5.3 percentage points, respectively, when comparing the averages of the pre-HTW Demonstration years with those of the post-HTW Demonstration years. This is in line with national and international studies which have all shown that many chronic treatments were interrupted or affected by reduced adherence or access difficulties during the pandemic.[27]

The proportion of individuals meeting the antidepressant medication management rates grew post-HTW Demonstration implementation. The Effective Acute Phase Treatment grew by 5.2 percentage points (12.1% change; p-value = 0.078), and the Effective Continuation Phase Treatment rate grew by 5.3 percentage points, or 28.8 percent change (p-value = 0.008) post-HTW Demonstration (see Table 16). Similarly, in Texas Medicaid, the Effective Acute Phase Treatment measure grew on average 2.9 percentage points (5.8% growth) during the same time period (2017-2019 average vs 2020-2021 average) and the Effective Continuation Phase Treatment grew on average 1.4 percentage points (a 4% change) during the same time period.[21]

Table 16: Antidepressant Medication Management: Acute and Continuation Phase (Measure 3.1.4)

Year	HTW Clients Treated with Antidepressant Medication[1]	Rate of Effective Acute Phase Treatment (%)[2]	Rate of Effective Continuation Phase Treatment (%)[2]
2017	131	39.4%	8.9%
2018	338	44.5%	21.4%
2019	456	42.6%	19.0%
2020	853	43.6%	20.5%
2021	619	54.0%	28.2%
Annual Pre-HTW Demonstration Average (2017-2019)	308	42.9%	18.5%
Annual Post-HTW Demonstration Average (2020-2021)	736	48.0%	23.8%

Year	HTW Clients Treated with Antidepressant Medication[1]	Rate of Effective Acute Phase Treatment (%)[2]	Rate of Effective Continuation Phase Treatment (%)[2]
Pre/Post Difference in Ns or Percentage Points	428	5.2%	5.3%
% Change[3]	138.7%	12.1%	28.8%
p-value[4]	--	0.078	0.008

Notes. [1] HTW clients who were treated with antidepressant medication, had a diagnosis of major depression, and had continuous enrollment 105 days prior to the earliest prescription dispensing date for antidepressant medication through 231 days are included. [2] Rates are weighted by the month of enrollment and calculated as Member Years for HTW clients divided by Member Years for HTW with adherence. [3] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [4] P-values are reported for statistical significance of the rate difference using Poisson regression.

The prevalence for the four conditions assessed in this section was relatively low among HTW clients, all of them below two percent. Measures 3.1.1 through 3.1.3 required, as specified in the CMS-approved Evaluation Design, having at least 2 prescriptions to be included in the measure. Similarly, Measure 3.1.4 required continuous enrollment in a given year and at least one prescription for antidepressant medication. This meant very few individuals met the inclusion criteria for these measures, as can be seen in Tables 15 and 16. This needs to be considered when interpreting the findings.

As part of a sensitivity analysis on the adherence measures (Measures 3.1.1 - 3.1.3), we re-ran analyses limiting the denominator in each measure to individuals who had 12 months of continuous enrollment. Detailed tables with these results are available in *Appendix B: Additional Results.* Overall, changes pre- and post-HTW Demonstration were not statistically significant, and the sample size decreased substantially.

Effect of the HTW Demonstration on Pregnancy Outcomes (Measures 3.2.1-3.2.5)

Approach and Analysis

Unintended pregnancies (Measure 3.2.1) were assessed using data from the PRAMS survey specific to Texas. This is a surveillance system designed to monitor maternal attitudes and behaviors before, during, and after pregnancy. Conducted in partnership with the Center for Disease Control and Prevention (CDC) and the Texas DSHS, Texas PRAMS is a statewide population-based assessment that

monitors the health and behaviors of new mothers in Texas. Approximately half of the births in the PRAMS sample are paid by Medicaid, and the survey allows for stratification by payer type. However, it is not specific to HTW clients, so results are reported for the overall Medicaid population. PRAMS data includes a two-year lag from the birth year. Therefore, the interim report includes PRAMS data on unintended pregnancies from 2017 through 2021.

The assessment of pregnancy intention is done using the following question:

"Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant?". The potential answers are classified as "I wanted to be pregnant later" (unintended), "I wanted to be pregnant then or sooner" (intended), "I didn't want to become pregnant then or any time in the future" (unintended); "I wasn't sure what I wanted" (not sure).

Descriptive trend analysis and plotting were done to evaluate this measure, looking into results for the Medicaid population and that for overall Texas.

The assessment of pregnancy complications (Measure 3.2.3), severe maternal morbidity (Measure 3.2.5), and newborn delivery outcomes (Measure 3.2.4) was done as a retrospective evaluation of women delivering under Texas STAR Medicaid (2018 and 2021), comparing results by HTW enrollment status the year before their delivery (2017 and 2020). All Medicaid deliveries that were under a program other than STAR Medicaid, such as Emergency Medicaid or other Medicaid or CHIP programs (STAR Health, STAR+PLUS, STAR Kids, CHIP, CHIP-Perinate) were excluded to allow for better comparisons. This was done to exclude women who would not have been eligible for HTW prior to delivery, for example, due to immigration status or eligibility for other Medicaid coverage.[28]

The current interim report assessed Measures 3.2.3 through 3.2.5 using a pre-post analysis with a matched comparison group.[d] Matching was done using a propensity score weighted linear regression model suggested by Stuart et al.[29] We included

[d] The CMS-approved Evaluation Design proposed a difference-in-differences (DID) model for Measures 3.2.3 through 3.2.5. DID mimics an experimental study by examining the average change in individual-level outcomes for intervention and comparison group clients over time and helps mitigate selection concerns that might exist with a single cross-sectional comparison between groups. However, the study design outlined in the CMS-approved Evaluation Design relies on aggregate measures of distinct cohorts prior to and after the Demonstration began, rather than repeated observations of the same cohort(s) over time. This design is more aligned with a pre-post analysis with a matched comparison group, rather than a traditional DID model. Per CMS guidance, this interim report reflects the study design executed (pre-post analysis with a matched comparison group), rather than what was described in the CMS-approved Evaluation Design.

age, race/ethnicity, and maternal comorbidities using the conditions and specifications from the Maternal Comorbidity Index (MCI) to create propensity scores.[30] Given that some conditions listed within the MCI overlapped with our outcome measures (such as gestational diabetes, gestational hypertension or a number of severe maternal morbidity (SMM) conditions), separate models were run for each analysis to create weights that did not account for the condition being evaluated in the adjustment. This allowed for the assessment and subsequent adjustment of our measures by demographics and appropriate maternal comorbidities. Further details on the methods used in this interim report for each measure are available in *Appendix A: Methods.* These methods, including sample identification, matching techniques, and comorbidity weights, will be reviewed and refined for the summative report, especially in light of the PHE-related maintenance of eligibility policies that may alter HTW enrollment the year prior to their delivery for women who gave birth in 2021.

Tables 17 and 18 describe the four groups created for this evaluation and their characteristics. These groups are defined by their delivery being pre-HTW Demonstration (2018) or post-HTW Demonstration implementation (2021) and by the mother's enrollment in HTW the year prior to the delivery (HTW and Non-HTW clients enrolled in 2017 and 2020, respectively). Women not enrolled in HTW the year prior to their delivery reflects women who were not enrolled in HTW or Medicaid. However, for the ease of interpretation, this group of women is referred to as "Non-HTW clients" for the remainder of this section. As can be seen, some differences across groups, though small in magnitude, are statistically significant.

Mothers with preexisting hypertension and pre-existing diabetes were excluded from the pregnancy complication assessment (Measure 3.2.3) to avoid potential bias or measurement errors. We found that mothers who had diabetes before being pregnant were frequently flagged as having gestational diabetes during their pregnancy. Therefore, to facilitate comparison and reduce the risk of measurement biases due to diagnosis recording, we excluded them from the analysis.

Table 17: Description of Study Population for Pregnancy Complications and Severe Maternal Morbidity

	Total	Medicaid-paid Births in 2018 with HTW Enrollment During the Previous Year (1)	Medicaid-paid Births in 2021 with HTW Enrollment During the Previous Year (2)	Medicaid-paid Births in 2018 with No HTW Enrollment During the Previous Year (3)	Medicaid-paid Births in 2021 with No HTW Enrollment During the Previous Year (4)
Number of Deliveries	247,739	27,188	21,143	122,948	76,460
Maternal Age, Median (IQR)	25 (22-30)	26 (23-30)	27 (23-30)	25 (22-29)	26 (22-30)
Race/ Ethnicity					
NH White	56,620 (22.9)	5,272 (19.4)	4,076 (19.3)	29,842 (24.3)	17,430 (22.8)
NH Black	45,076 (18.2)	6,092 (22.4)	4,495 (21.3)	21,172 (17.2)	13,317 (17.4)
Hispanic	132,351 (53.4)	14,707 (54.1)	11,764 (55.6)	64,581 (52.5)	41,299 (54.0)
Other/ Unknown	13,692 (5.5)	1,117 (4.1)	808 (3.8)	7,353 (6.0)	4,414 (5.8)
Public Health Region					
1	8,929 (3.6)	1,096 (4.0)	768 (3.6)	4,262 (3.5)	2,803 (3.7)
2	5,519 (2.2)	660 (2.4)	464 (2.2)	2,675 (2.2)	1,720 (2.2)
3	56,322 (22.7)	5,437 (20.0)	4,436 (21.0)	28,434 (23.1)	18,015 (23.6)
4	12,010 (4.8)	1,257 (4.6)	1,052 (5.0)	5,893 (4.8)	3,808 (5.0)
5	8,449 (3.4)	1,047 (3.9)	775 (3.7)	4,075 (3.3)	2,552 (3.3)
6	59,106 (23.9)	6,413 (23.6)	5,103 (24.1)	29,266 (23.8)	18,324 (24.0)
7	20,679 (8.3)	2,216 (8.2)	1,761 (8.3)	10,125 (8.2)	6,577 (8.6)
8	28,756 (11.6)	3,326 (12.2)	2,462 (11.6)	14,474 (11.8)	8,494 (11.1)
9	8,298 (3.3)	858 (3.2)	610 (2.9)	4,261 (3.5)	2,569 (3.4)
10	9,145 (3.7)	1,086 (4.0)	752 (3.6)	4,600 (3.7)	2,707 (3.5)
11	30,526 (12.3)	3,792 (13.9)	2,960 (14.0)	14,883 (12.1)	8,891 (11.6)

Notes. All numbers present the number and percentage of deliveries except for maternal age that presents median age and interquartile range (IQR). Maternal comorbidities and severe maternal morbidity were identified from Medicaid paid birth hospitalization claims.

Table 18: Description of Study Population for Pregnancy Complications and Severe Maternal Morbidity Continued

	Total	Medicaid-paid Births in 2018 with HTW Enrollment During the Previous Year (1)	Medicaid-paid Births in 2021 with HTW Enrollment During the Previous Year (2)	Medicaid-paid Births in 2018 with No HTW Enrollment During the Previous Year (3)	Medicaid-paid Births in 2021 with No HTW Enrollment During the Previous Year (4)
Maternal Comorbidities					
Any	145,784 (58.8)	17,373 (63.9)	13,035 (61.7)	71,860 (58.4)	43,516 (56.9)
Obstetrics	93,687 (37.8)	11,014 (40.5)	8,870 (42.0)	44,929 (36.5)	28,874 (37.8)
General Health	85,099 (34.4)	10,439 (38.4)	7,158 (33.9)	42,813 (34.8)	24,689 (32.3)
Substance Use	21,625 (8.7)	3,148 (11.6)	1,609 (7.6)	11,807 (9.6)	5,061 (6.6)
Autoimmune	2,445 (1.0)	344 (1.3)	239 (1.1)	1,155 (0.9)	707 (0.9)
Cardio	1,016 (0.4)	114 (0.4)	85 (0.4)	511 (0.4)	306 (0.4)
Renal	442 (0.2)	60 (0.2)	35 (0.2)	218 (0.2)	129 (0.2)
COVID at Delivery	3,793 (1.5)	--	898 (4.2)	--	2,895 (3.8)
Pregnancy Complications					
Any	47,534 (19.2)	4,731 (17.4)	4,289 (20.3)	22,047 (17.9)	16,467 (21.5)
High Blood Pressure	17,933 (7.2)	1,746 (6.4)	1,499 (7.1)	8,557 (7.0)	6,131 (8.0)
Gestational Diabetes	19,387 (7.8)	2,137 (7.9)	1,922 (9.1)	8,911 (7.2)	6,417 (8.4)
Preeclampsia	17,126 (6.9)	1,545 (5.7)	1,416 (6.7)	7,930 (6.4)	6,235 (8.2)
Adverse Birth Outcomes					
Low Birth Weight	20,312 (8.2)	2,245 (8.3)	1,763 (8.3)	9,545 (7.8)	6,759 (8.8)
Preterm Birth	27,112 (10.9)	3,141 (11.6)	2,512 (11.9)	12,660 (10.3)	8,799 (11.5)
Severe Maternal Morbidity	3,815 (1.5)	373 (1.4)	421 (2.0)	1,648 (1.3)	1,373 (1.8)

Notes. All numbers present the number and percentage of deliveries. Maternal comorbidities and severe maternal morbidity were identified from Medicaid paid birth hospitalization claims.

As mentioned, to avoid biases due to group differences, the analyses of Measures 3.2.3 through 3.2.5 used propensity score weighted linear regression models. After this, the standardized mean difference between groups across all measures described in Tables 17 and 18 was never greater than 0.03. The propensity score weighted standardized mean difference for all aspects considered for each measure can be found in *Appendix B: Additional Results*. Details on the specific outcome and measure specifications are provided under each section, and additional information about Approach, Methods, and Analysis can be found in *Appendix A: Methods.*

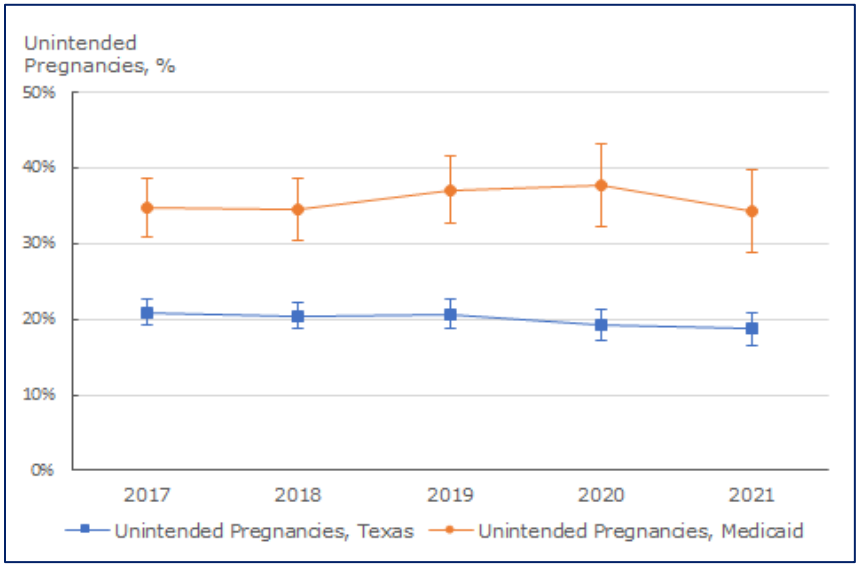
For the interim report, Measure 3.2.2, pertaining to birth spacing, had to rely only on 2018 Medicaid STAR live birth and their associated data as it required 27 months of prospective follow-up and, therefore, has a different population than the remaining three measures (3.2.3-3.2.5). The descriptive table for that sub-cohort can be found in *Appendix B: Additional Results*. Crude Risk Ratio and Adjusted Risk Ratio comparing those with HTW vs. non-HTW enrollment and accounting for age, race, ethnicity, and MCI were created using Modified Poisson regression.

Unintended Pregnancies (3.2.1)

As mentioned, this was assessed using data from the PRAMS survey specific to Texas. Though the survey allows for stratification by payer type, it does not differentiate between women with or without HTW enrollment. Therefore, results are reported for the overall Medicaid population. The rate of unintended pregnancies in Texas ranged from 18.7 percent to 20.9 percent, though confidence intervals across years overlapped, and there was no significant difference pre- and post-HTW Demonstration (Figure 14). The rate of unintended pregnancies for women who were enrolled in Medicaid at the time of the delivery was consistently higher than the statewide rate, ranging from 34.2 percent to 37.8 percent. Differences within this group across years were not significant pre- and post-HTW Demonstration. Therefore, based on the data available, unintended pregnancy rates were not significantly changed among Medicaid-insured women pre- and post-HTW Demonstration.

It should be noted that for 2017 through 2021, the response rate was below the 50 percent threshold, and both the CDC and Texas Department of State Health Services recommended results should be interpreted cautiously.

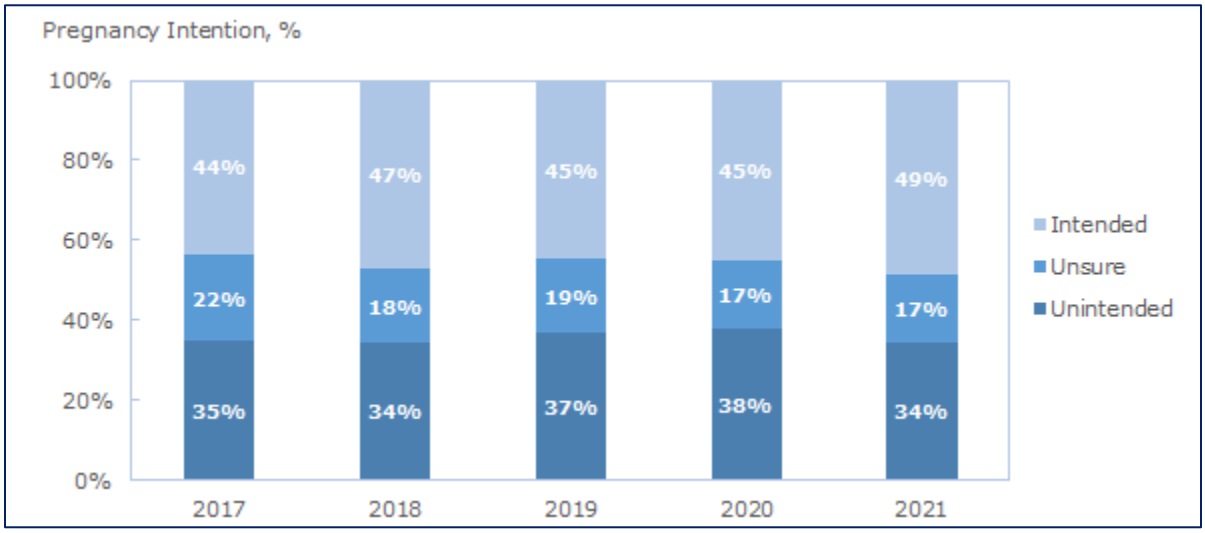
Figure 14: Unintended Pregnancy Rate for Texas and Texas Medicaid (Measure 3.2.1)



Notes. Error bars represent 95% confidence intervals.

As noted above, potential responses to pregnancy intention were categorized as unintended, intended, and not sure. Among women enrolled in Medicaid, women were most likely to indicate their pregnancy was intended (ranging from 43.6 percent to 48.7 percent). There were no statistically significant changes through time, however. Figure 15 shows the different proportions of responses to the pregnancy intendedness question and changes across time.

Figure 15: Pregnancy Intention, Texas Medicaid (2018-2021) (Measure 3.2.1)



Birth Spacing (3.2.2)

The assessment of birth spacing among HTW clients required identifying all Medicaid live births and following mothers for 27 months to identify a subsequent delivery (short interbirth interval). Short interbirth intervals, particularly periods shorter than 6 or 12 months, have been associated with adverse maternal and neonatal outcomes such as postpartum hemorrhage or preterm birth.[31] Given that this interim report was done using data through 2021, we could only identify mothers with subsequent births within 27 months among women with a live birth in 2018 (follow-up period through March 2021). As a result, this interim report can only assess birth spacing rates pre-HTW Demonstration, but the 2021 cohort will be included in the summative report.

Following the measure specification from the CMS-approved Evaluation Design, we evaluated subsequent births within 27 months among women with a live Medicaid-paid birth in 2018, based on their HTW enrollment the year prior (2017). The difference by HTW enrollment status was small (17.7% for HTW clients and 17.4% for non-HTW clients).

Additionally, we classified the 2018 cohort by HTW enrollment at any point in time during the year after the index delivery in Medicaid (see Table 19). We evaluated rates of subsequent deliveries within 27 months between women enrolled in HTW after initial delivery in 2018 vs. non-HTW clients. As mentioned, the Crude Risk Ratio and Adjusted Risk Ratio, accounting for age, race, ethnicity, and maternal comorbidities index, are reported using Modified Poisson regression. A descriptive table that lists the characteristics of the mothers who delivered in 2018 and were included in the analysis can be found in *Appendix B: Additional Results.*

Overall, 17.5 percent of women with a live Medicaid-paid birth in 2018 had an interbirth interval less than 27 months. Mothers who were enrolled in HTW at some point in the 12 months after the delivery were slightly less likely to have an interbirth interval less than 27 months (Crude Risk Ratio 0.96; p-value<0.001) than non-HTW clients (17.1% vs. 17.9%; which reflects 4% change). However, this statistically significant difference was no longer significant after adjustments for age, race, ethnicity, and maternal comorbidities (Adjusted Risk Ratio 0.98; p-value 0.09). See Table 19.

Table 19: Birth Spacing Rates and Risk Ratios Based on HTW Enrollment (Measure 3.2.2)

	Women with Index Delivery in 2018	HTW Enrollment after Index Delivery	No HTW Enrollment after Index Delivery
Total (N)	150,136	80,572	69,564
One or More Deliveries in Subsequent 27 Months N (%)	26,241 (17.5)	13,818 (17.1)	12,423 (17.9)
Risk Ratios	**Crude Risk Ratio (95% CI)**		**p-value**
	0.96 (0.94-0.98)		<0.001
	Adjusted Risk Ratio (95% CI)		**p-value**
	0.98 (0.96-1.00)		0.090

Notes. HTW: Healthy Texas Women. CI: Confidence Interval. Adjusted Risk Ratio was estimated using Modified Poisson regression accounting for age, race/ethnicity, and Maternal Comorbidity Index.

Pregnancy Complications and Severe Maternal Morbidity (3.2.3 and 3.2.5)

Tables 17 and 18 show the characteristics of the cohort and each specific subgroup included in the analysis performed under this section. Tables displaying the characteristics of the groups and standardized mean differences after propensity score weighting can be found in *Appendix B: Additional Results.*

Pregnancy complications were defined as the presence of a diagnosis code for any of the following conditions during pregnancy or delivery: gestational diabetes, gestational hypertension, or preeclampsia. Due to measurement errors and potential confounding, we excluded mothers with historical hypertension and diabetes from the pregnancy complications assessment. This meant 16,155 women (6%) were not included in the analysis of this measure. This exclusion did not affect group balance and no specific demographic group suffered a higher proportion of exclusions than others. Additional information is available in *Appendix B: Additional Results.* Severe maternal morbidity (SMM) was assessed as the presence of any of the 21 conditions identified by CDC[32] and further classified and studied by the Alliance for Innovation on Maternal Health (AIM).[33] Recent recommendations and studies have suggested excluding the receipt of blood transfusion from the SMM definition.[32] We follow the same approach in this report and only include non-transfusion indicators in the SMM rates used for analysis.

Table 20 shows the results of the analysis for Measures 3.2.3 and 3.2.5. Overall, rates of pregnancy complications and SMM increased for both cohorts between 2018 and 2021. However, among women who were in HTW in the year prior to

their birth, the difference in pregnancy complications post-HTW Demonstration was significantly smaller among non-HTW clients. Though the magnitude of this reduction is small, a 1 percent reduction, this was statistically significant. The difference in SMM rate changes between those enrolled versus those not enrolled in HTW was not significant (0.2%; CI (0.0-0.4)). It should be highlighted that the proportion of women in both HTW and non-HTW enrolled groups suffering either a pregnancy complication or an SMM event grew from 2018 to 2021 (see Figures 16 and 17). However, it grew less among those enrolled in HTW, and this difference was significant for the pregnancy complications outcome measure.

Table 20: Results from Change Estimate for Pregnancy Complications and Severe Maternal Morbidity (Measures 3.2.3 and 3.2.5)

	Pregnancy Complication		Severe Maternal Morbidity	
	Rate (95% CI)	**p-value**	**Rate (95% CI)**	**p-value**
HTW, pre (1)	15.5% (15.1 – 15.8)	--	1.4% (1.3 – 1.5)	--
HTW, post (2)	18.2% (17.9 – 18.6)	--	2.0% (1.9 – 2.1)	--
No HTW, pre (3)	17.9% (17.6 – 18.3)	--	1.4% (1.3 – 1.6)	--
No HTW, post (4)	21.7% (21.4 – 22.0)	--	1.9% (1.8 – 2.1)	--
change estimate	-1.0% (-1.6 - -0.4)	0.002	0.2% (0.0 – 0.4)	0.137

Notes. HTW, Healthy Texas Women. Pre and Post, Pre-HTW Demonstration and Post-HTW Demonstration. CI, Confidence Interval. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery. Pregnancy complications are a composite measure of Gestational Diabetes, Gestational Hypertension, and Pre-eclampsia. Severe Maternal Morbidity includes the 21 criteria identified by the CDC and AIMs initiative, but it excludes transfusion-only cases.

Whether the growth in pregnancy complications was due to increased morbidity, difficulty in access to care, or other changes in non-medical drivers of health that could have affected women during the COVID-19 pandemic is beyond the scope and ability of this analysis. Moreover, there could likely be differences among women eligible for the HTW program who were not enrolled in the program versus those that did which this model could not account for, such as education, access or understanding of the health care system. The reader should consider these contextual characteristics when interpreting results. Additionally, we can assume that women who were not enrolled in HTW before their pregnancy and included in this evaluation were either uninsured or had commercial insurance. We are not able to assess this as we have no data on women not enrolled in HTW or Medicaid. However, we can assume that the context and vulnerability of uninsured women and potentially the distribution of uninsured versus commercially insured could have also changed during the pandemic. Lack of data on these potential scenarios creates some uncertainty in the interpretation of the beneficial effect of HTW enrollment in 2021 identified.

Figure 16: Pregnancy Complications: Adjusted Model Estimates (Measure 3.2.3)

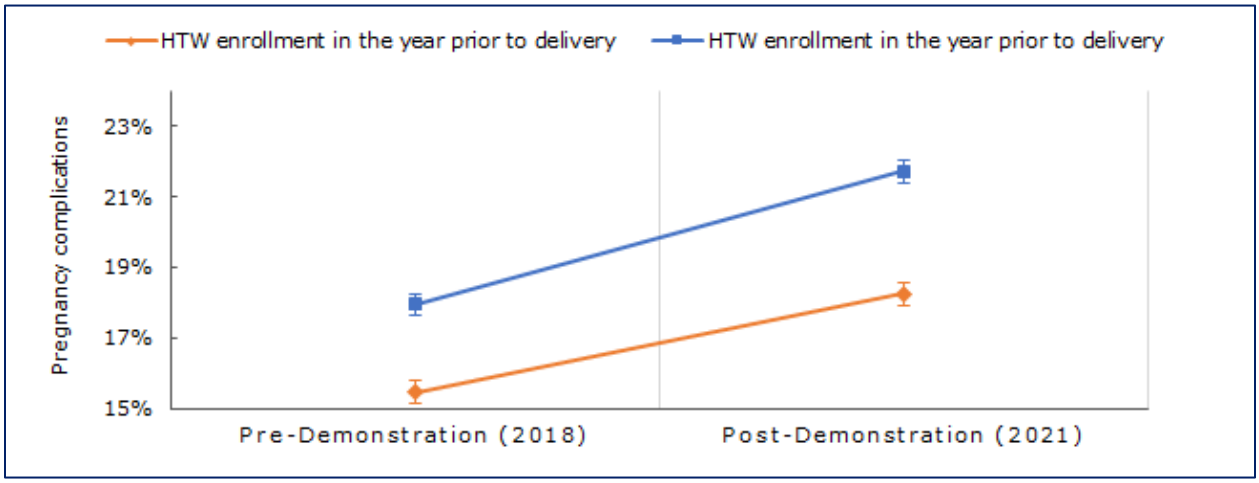
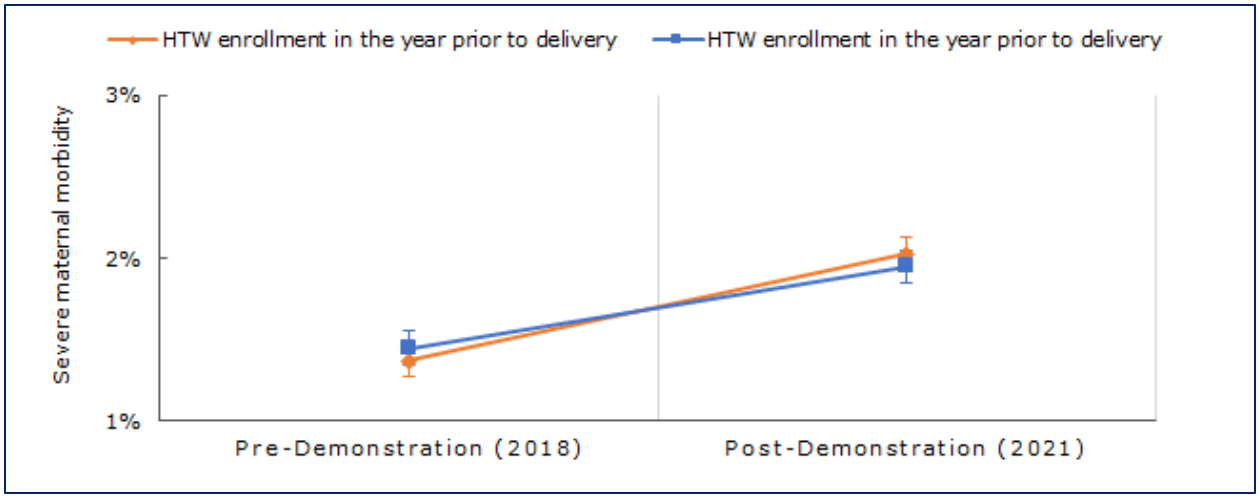


Figure 17: Severe Maternal Morbidity Rates: Adjusted Model Estimates (Measure 3.2.5)



Adverse Birth Outcomes (3.2.4)

We evaluated newborn outcomes by assessing rates of low birth weight (LBW) and preterm birth (PT). LBW was defined as births below 2,500 grams and identified based on flags created by HHSC in provided files that rely on ICD-10 codes. Preterm birth was defined as births less than 37 weeks and identified following the same approach.[34]

Rates of adverse birth outcomes increased between periods pre- and post-HTW Demonstration for both HTW and non-HTW enrolled women. However, differences were smaller among women with previous HTW enrollment compared to those

without HTW enrollment. The propensity score-weighted LBW rate for women enrolled in HTW before their pregnancy grew from 8.3 percent in 2018 to 8.5 percent in 2021. This change was not statistically significant. On the other hand, the LBW rate for those who did not have a record of being enrolled in HTW before pregnancy grew from 8.4 percent to 9.6 percent during the same period. The estimate comparing differences in changes over time between HTW and non-HTW groups was -1.0 percent (95% CI -1.4% - -0.5%), which was statistically significant (p<0.001).

Table 21: Results from Change Estimate for Low Birth Weight and Preterm Births (Measure 3.2.4)

	Low Birth Weight		Preterm Birth	
	Rate (95% CI)	**p-value**	**Rate (95% CI)**	**p-value**
HTW, pre (1)	8.3% (8.0 – 8.5)	--	11.6% (11.3 – 11.8)	--
HTW, post (2)	8.5% (8.3 – 8.7)	--	12.0% (11.7 – 12.2)	--
No HTW, pre (3)	8.4% (8.2 – 8.6)	--	11.2% (10.9 – 11.4)	--
No HTW, post (4)	9.6% (9.4 – 9.8)	--	12.5% (12.3 – 12.8)	--
Change Estimate	-1.0% (-1.4 - -0.5)	<0.001	-0.9% (-1.4 - -0.4)	<0.001

Notes. HTW, Healthy Texas Women; Pre and Post, Pre-HTW Demonstration and Post-HTW Demonstration; CI, Confidence Interval. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery. Rates and estimates accounted for age, race, ethnicity, region, and maternal comorbidities using propensity score estimated weights.

Results from the analysis of PT birth rates were similar to those found for LBW. PT births among women enrolled in HTW were 11.6 percent in 2018 and 12.0 percent in 2021. This change was not statistically significant. PT birth among non-HTW clients was 11.2 percent and grew significantly to 12.5 percent during the same period. The propensity score-weighted model estimate comparing differences in changes over time between HTW and non-HTW groups was -0.9 percent (p-value <0.001). Figure 18 shows how baseline PT rates in 2018 were not significantly different between the HTW and non-HTW cohorts. In 2021, post-HTW Demonstration, PT birth rates grew for both HTW and non-HTW enrolled groups, but the growth was significantly higher for women who were not enrolled in HTW in 2020.

Figure 18: Low Birth Weight: Adjusted Model Estimates (Measure 3.2.4)

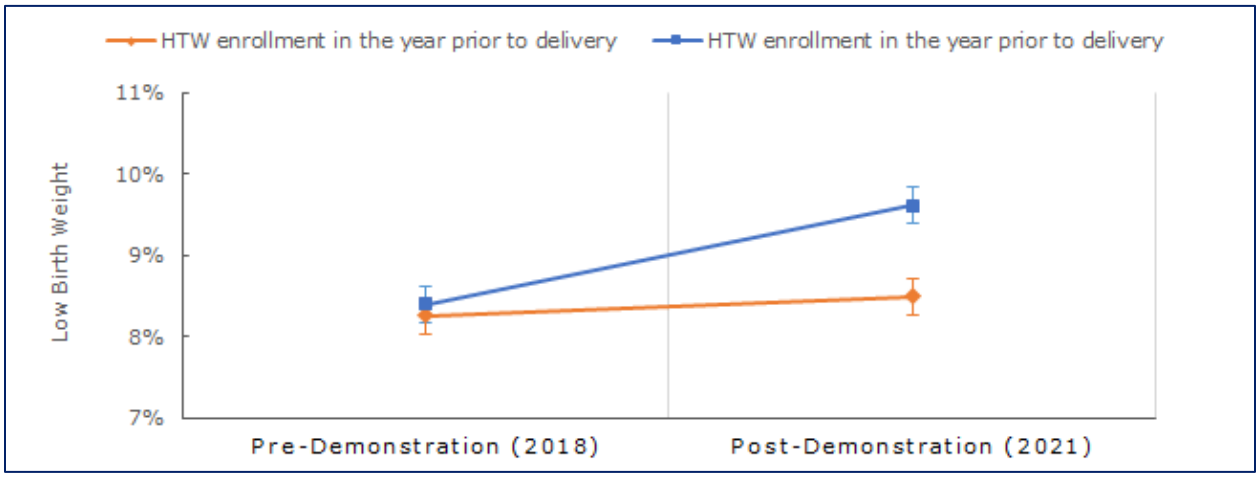
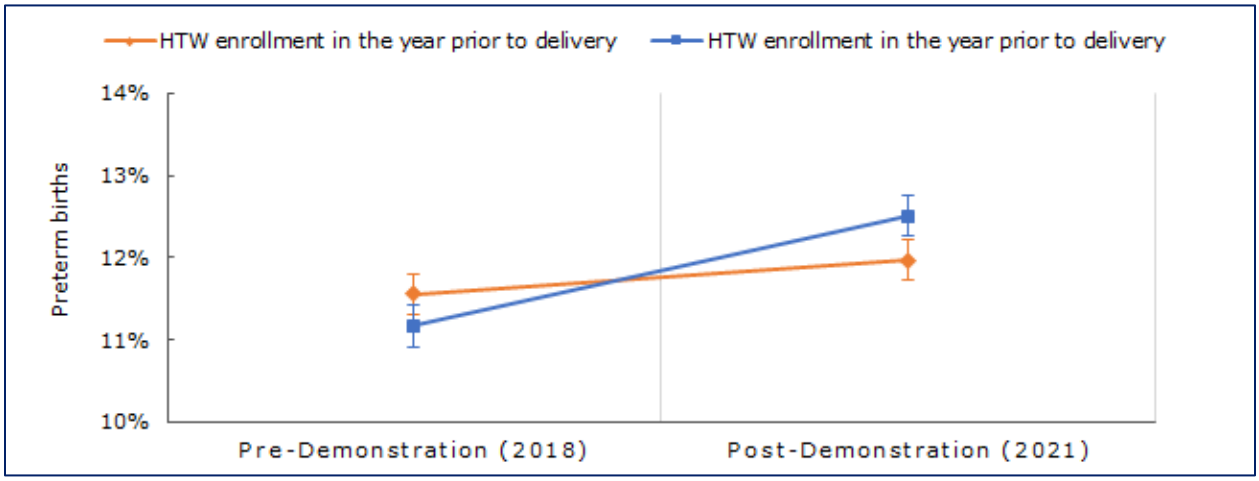


Figure 19: Preterm Birth Rates: Adjusted Model Estimates (Measure 3.2.4)



As mentioned earlier, the post-HTW Demonstration period assessed in this interim report coincides with the COVID-19 pandemic and the PHE. It is necessary to keep this context in mind when interpreting the results from this evaluation. However, our analysis shows that women enrolled in HTW in 2020 who delivered a baby in 2021 were at lower risk of having low birth weight and preterm infants than those who were not enrolled in HTW previously. This protective effect was not evident in our baseline measurement (2018). Whether this protective effect was limited to the pandemic or goes beyond those years requires additional years of data, which will be available in the summative evaluation report.

Limitations

Results from the analysis above should be interpreted alongside several limitations which affect the ability to evaluate the HTW Demonstration program in and of itself. First and foremost is the fact that the data included for the post-HTW Demonstration period assessed during this interim report overlapped in its totality with the COVID-19 pandemic. The pandemic has had a well-documented impact on access to care, preventive care receipt, and morbidity, particularly on minorities and uninsured/underinsured populations, which are demographic categories that a large proportion of HTW clients fall into.

Additionally, the implementation of the FFCRA and the removal of re-determination requirements to maintain enrollment status in both Medicaid and HTW changed the composition of the HTW population after 2020, as demonstrated in Measure 1.1.1. Teenagers remained in Medicaid instead of transitioning into HTW as they aged and women who delivered under Medicaid remained enrolled after their immediate postpartum period instead of being automatically assessed for enrollment in HTW. Furthermore, women in HTW were more likely to remain enrolled in the program. Therefore, the post-HTW Demonstration demographic composition of HTW was older, less likely to be postpartum, and actually had longer periods receiving the HTW benefits. Though we tried to account for as many variables as we could when comparing pre- and post-HTW Demonstration outcomes, the analysis could not address all of these systematic differences.

When assessing the internal validity of the interim evaluation, readers should consider that most measures in this section rely on pre- and post-HTW Demonstration comparisons and that post-HTW Demonstration implementation measurements can be influenced by the socioeconomic and public health context. A lack of a concurrent control group did not allow for assessing how much of the results seen were due to the effects of the pandemic versus those of the HTW Demonstration. Future analysis of data from later years, which will be available for the summative evaluation report, would allow for assessment of the program beyond the pandemic and public health emergency years. Stratified results have been provided to allow for better evaluation of changes across the different populations.

Measures 3.2.2-3.2.5 had the advantage of a control group (Medicaid deliveries among women not previously enrolled in HTW) to strengthen inference by comparing trends among individuals exposed to the same external factors, such as the pandemic. We implemented exclusion criteria (excluded births in emergency Medicaid, CHIP-Perinate, or other Medicaid programs other than STAR) and used

analytical techniques, such as propensity score weighting, to ensure a comparable group. However, there may still be systematic differences between women previously enrolled in HTW and the control group that the exclusion criteria and analytic approaches are not able to account for. For example, the proportion of women not enrolled in HTW pre-pregnancy who were uninsured versus commercially insured may have changed over time, but this analysis did not have the relevant data to account for possible compositional changes. Additionally, there could likely be differences among women eligible for the HTW program who were not enrolled in the program versus those who did, which this model could not account for, such as education, access, or understanding of the health care system.

Lastly, the evaluation of unintended pregnancies had to rely on PRAMS survey data. The results of these surveys did not meet the minimum required threshold and, therefore, need to be interpreted with caution. These data can be stratified by payer but do not allow for identification of women enrolled in HTW. Therefore, this interim report is limited in the ability to evaluate changes in unintended pregnancies among HTW clients in Texas.

Though all these caveats need to be considered when trying to interpret the results, preliminary findings from the interim report provide some evidence that the HTW Demonstration was positively associated with women's pregnancy- and birth-related outcomes.

Costs

Overview

This section describes the results of the assessment of Evaluation Question 4: "Did the HTW Demonstration effectively use public funds to provide women's health care in Texas?" The CMS-approved Evaluation Design operationalized this assessment using the following hypothesis:

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

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 limit is specified in the STC[3] and presented in Table 22. The study population for PMPM costs includes all women enrolled in HTW.

Table 22: Annual PMPM Expenditure Limit

DY1	DY2	DY3	DY4	DY5
$27.13	$28.38	$29.69	$31.06	$32.49

Methods

The evaluation of this question used data from the budget neutrality worksheets provided by HHSC. This worksheet provided the total expenditures for the With Waiver (WW) Demonstration years and the hypothesized expenditures for the Without a Waiver (WOW) HTW population for the Demonstration years. HHSC System Forecasting used Per Member Per Month (PMPM) WOW estimations multiplied by the actual member month caseload for a Demonstration year to estimate what the hypothetical WOW HTW expenditures would have been. The hypothetical and total expenditures and PMPMs for DYs 1-3 (2020-2022) were provided in the budget neutrality worksheet. Additionally, actual pre-HTW Demonstration total expenditures and PMPM for years 2017-2019 were sent separately by HHSC and generated using actual expenditures recorded.

The assessment for this interim report included the comparison of the CMS-specified PMPM expenditure limit, the hypothetical PMPM and total expenditures for a WOW scenario, and the actual PMPM and total expenditures pre- and post-HTW

Demonstration years (DY 1-3). For this purpose, we performed descriptive statistics and descriptive trend analysis for total expenditures, PMPMs, and growth rates.

Key Findings

The HTW PMPM costs stayed considerably below the CMS pre-established cap amount. Additionally, the trend in HTW PMPM declined over the study period.

Total expenditures on the HTW program were $56 million in CY 2017 and $75 million in CY 2021. For years pre-HTW Demonstration, the hypothesized and actual HTW spending were the same as these are WOW scenarios. Post-HTW Demonstration, the WW total spending varied, but it was always considerably lower than the hypothesized WOW spending for the state, as can be seen in Table 23.

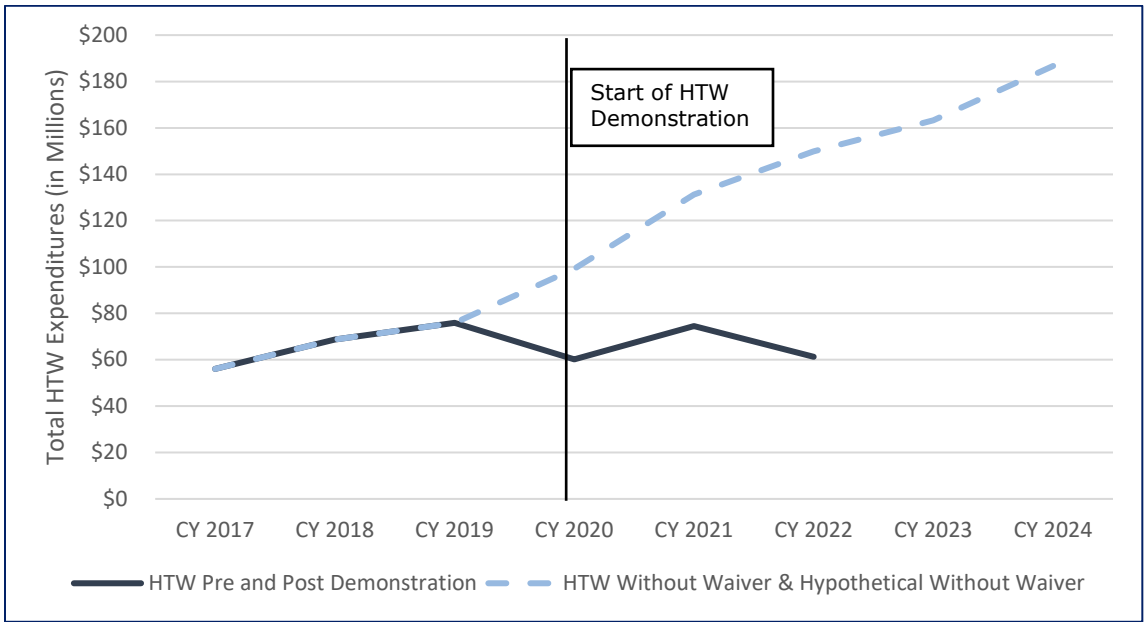
Table 23: Total Expenditures for Years 2017-2024, Without Waiver Estimations and Differences (Measure 4.1.1)

Time Period	HTW Pre- and Post-HTW Demonstration Actual Expenditures	HTW Hypothetical Without Waiver Expenditures	Difference (WOW-WW)	Savings Relative to a WOW Scenario
CY 2017	$56,062,850	N/A	N/A	N/A
CY 2018	$68,726,851	N/A	N/A	N/A
CY 2019	$75,929,204	N/A	N/A	N/A
CY 2020 (DY 1)	$60,140,934	$99,175,940	$39,035,006	39%
CY 2021 (DY 2)	$74,526,920	$131,189,047	$56,662,127	43%
CY 2022 (DY 3)	$61,248,561	$149,850,278	$88,601,717	59%
CY 2023 (DY 4)	TBD	$163,276,887	TBD	TBD
CY 2024 (DY 5)	TBD	$186,697,814	TBD	TBD

Notes. WW: With Waiver. WOW: Without Waiver. TBD: to be determined. N/A: not applicable

The figure below (Figure 20) shows the WOW estimations in light blue and how they were projected to grow. The darker blue line depicts the actual total spending that was observed. The pre-waiver expenditures (2017-2019) overlap with the WOW scenario. WW expenditures during the HTW Demonstration (DY 1-3, 2020-2022) stay below the hypothetical WOWs. Savings ranged from $39 million to $88 million, or 39 percent to 59 percent less costly than a no-waiver scenario. Differences when comparing the total spending estimated in a WOW PMPMs scenario versus actual total expenditures during the HTW Demonstration account for $184.3 million.

Figure 20: Total Expenditures for HTW, Pre- and Post-HTW Demonstration (Measure 4.1.1)



The growth rate for total expenditures of the HTW program varied considerably over time. The average growth rate in total expenditures during the three years of pre-HTW Demonstration expenditures (2017-2019) was 17 percent, while the average growth rate for the three years post-HTW Demonstration period was -5 percent. However, it should be noted that there was considerable variation within these two time periods. Table 24 shows the average monthly enrollment during the pre- and post-HTW Demonstration years evaluated, total expenditures and PMPMs, as well as their growth rates through the time span. Of note, the average monthly enrollment had positive growth across all five years. Between 2017 and 2019, the growth in the number of enrollment months was aligned with the changes in overall expenditures, reflected in the very small changes in PMPMs during those years (1% and 4 % growth in 2018 and 2019, respectively). However, in 2020 (DY 1), the average enrollment month grew by 5 percent while total expenditures decreased by 21 percent, which explains the 24 percent drop in PMPM. Growth in enrollment was very much in line with changes in expenditures in 2021 (DY 2), reflected in almost no changes in 2021 (DY 2) PMPM when compared to 2020 (DY 1). Finally, during 2022 (DY 3), there was a 9 percent growth in enrollment compared to 2021 (DY 2) and an 18 percent decrease in expenditures, which explains the 25 percent decrease in PMPM.

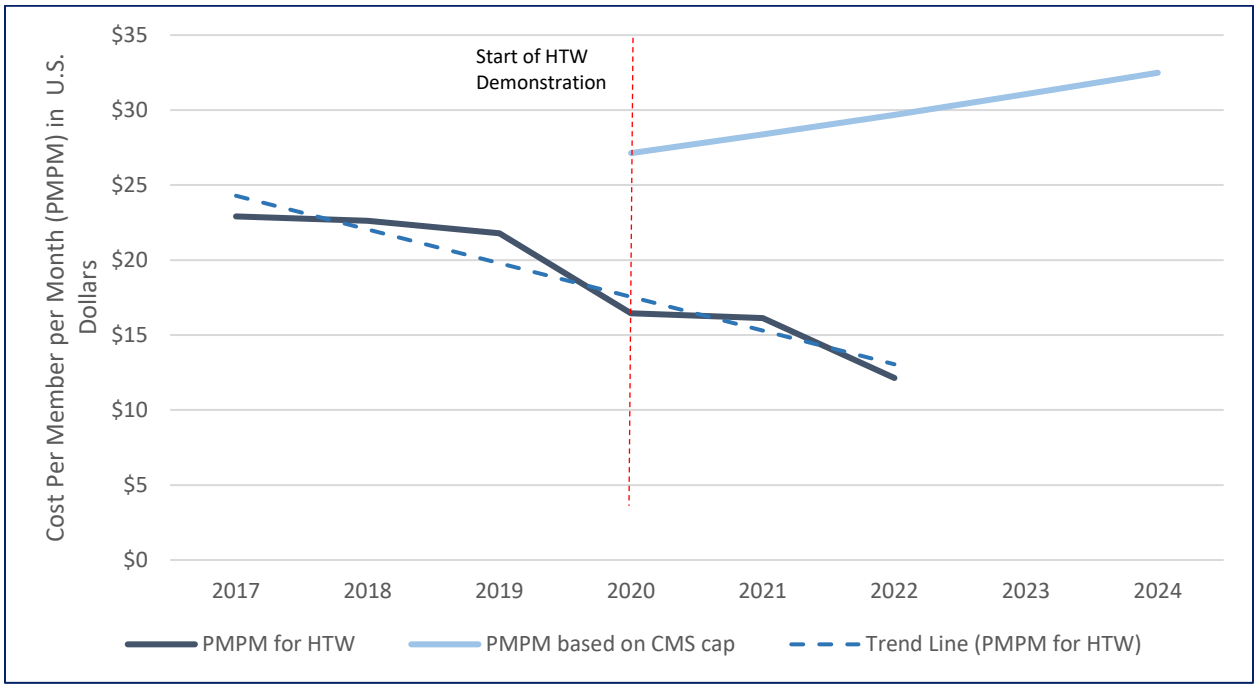
Table 24: Healthy Texas Women Pre- and Post-HTW Demonstration Growth (%) for Enrollment, Total Expenditures, and PMPM (Measure 4.1.1)

Year	Average Monthly Enrollment	Total ($)	PMPM	Growth in Average Monthly Enrollment	Growth in Total Expenditures	Growth in PMPM
CY 2017	203,914	$56,062,850	$22.91	N/A	N/A	N/A
CY 2018	253,302	$68,726,851	$22.61	24%	23%	-1%
CY 2019	290,549	$75,929,204	$21.78	15%	10%	-4%
CY 2020 (DY 1)[1,2]	329,277	$74,530,527	$18.86	13%	-2%	-13%
CY 2021 (DY 2)[2]	385,216	$74,526,920	$16.12	17%	0%	-15%
CY 2022 (DY 3)[2]	420,597	$61,248,561	$12.14	9%	-18%	-25%

Notes. [1] HTW Demonstration services were not implemented until February 18, 2020, but DY1 caseload and costs were adjusted to reflect all of CY 2020 (as of January 1, 2020) to allow for a more accurate comparison to other CYs reported. [2] The composition of HTW clients changed after the COVID-19 PHE due to maintenance of eligibility policies. More specifically, full benefit Medicaid clients who would normally go into HTW post pregnancy remained in full benefit Medicaid, and clients who may have normally exited HTW (due to age or income restrictions) were able to remain in HTW. These changes resulted in a substantial increase in number of HTW clients. Total volume of HTW services, and therefore, HTW expenditures, increased as more clients were enrolled in HTW, but utilization rates did not increase at the same rate as HTW enrollment, causing PMPMs to decrease after CY 2020. The decrease in PMPM was most notable in CY 2022, as the HTW population continued to increase, but volume of HTW services slightly dropped in CY 2022 compared in CY 2021. PMPM: Per Member Per Month. DY: Demonstration Year.

The analysis of the spending pre- and post-HTW Demonstration showed a negative linear trend, with values in PMPM decreasing from $22.91 in 2017 to $12.14 in 2022. This is a 47 percent decrease from 2017 and an average 11 percent reduction per year. As mentioned, decreases were considerably larger in 2020 (DY 1) and 2022 (DY 2). Overall, all PMPMs post-HTW Demonstration were considerably below the estimated CMS PMPM cap (see Figure 21).

Figure 21: Trend in Per Member Per Month (PMPM) Expenditures for HTW through 2022 and CMS Cap PMPM (Measure 4.1.1)



During this evaluation period, the HTW PMPM has stayed consistently below the hypothetical WOW PMPMs. The difference ranges from -$11 to -$18 in PMPM spending. Overall, the WW PMPMs always stayed below the CMS cap.

Table 25: Demonstration Years Per Member Per Month and Total Expenditures (Measure 4.1.1)

	Demonstration Years (DY)				
	DY 1 (2020)	**DY 2 (2021)**	**DY 3 (2022)**	**DY 4 (2023)**	**DY 5 (2024)**
PMPM Based on WOW Scenario	$27.13	$28.38	$29.69	$31.06	$32.49
Member Months (Actual and Projected)	3,655,582	4,622,588	5,047,163	5,256,822	5,746,316
Total Spending (DY1-3) and Estimates for WOW Scenario (DY 4-5)	$99,175,940	$131,189,047	$149,850,278	$163,276,887	$186,697,814
Actual WW PMPM	$16.45	$16.12	$12.14	--	--
Difference between WOW and WW PMPM	$ -11	$ -12	$ -18	--	--

Limitations

The analysis of HTW expenditures was limited to the data that could be derived from the budget neutrality worksheets provided by HHSC. In particular, the worksheets were limited to the aggregated budget data reports previously compiled by HHSC. The WOW scenario, or hypothetical counterfactual, had to rely completely on hypothetical estimations due to a lack of a real control group. The hypothetical estimation relied on PMPMs estimated using data prior to the COVID-19 pandemic. They, therefore, do not account for changes in utilization and type of services used during this period. The differences between the WW and WOW estimates could be biased due to a lack of an appropriate control group that can account for external factors such as the pandemic.

As previously mentioned, other external factors may have affected the measures during the HTW Demonstration. Specifically, national Medicaid expenditures per enrollee decreased by 4.4 percent during FY 2021.[35] These estimations included spending for several services that grew considerably through the COVID-19 pandemic and are not covered by the HTW program, such as COVID-19-related hospital admissions and emergency care services. A steeper reduction in PMPM spending for HTW clients in a similar period could, therefore, be expected.

It has previously been documented that there was an overall decrease in outpatient and planned services during the first months of the pandemic, specifically, a decline in women's use of preventive care.[36] Additionally, the FFCRA extended eligibility for Medicaid beneficiaries, including HTW enrollees. Postpartum women stayed enrolled in Medicaid after March 2020 rather than transitioning to HTW after 60 days. Therefore, the types of services used among the HTW population after the initiation of the PHE likely experienced modifications as well.

Provider Eligibility Criteria

Overview

This section describes the interim results of the Evaluation, question 5: "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?" The CMS-approved Evaluation Design operationalized this assessment using the following hypothesis:

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

Provider eligibility criteria for the HTW program were implemented over ten years ago, placing limits on providers who can provide HTW services.[37] The impact of the provider eligibility criteria on the HTW Demonstration was assessed using estimates of a hypothetical counterfactual in which the provider eligibility criteria do not exist and descriptive analyses of the current program environment under HTW provider eligibility criteria.

Assessing this hypothesis required a mixed methods approach, which included a quantitative analysis of medical and pharmacy claims data and provider files as well as a qualitative analysis of primary data on client and provider perspectives related to accessing and delivering services under the HTW Demonstration. The measures used for the evaluation of this hypothesis are listed below. This interim report details the findings of the quantitative analysis (Measure 5.1.1) as specified in the CMS-approved Evaluation Design. Updates on primary data collection efforts (Measures 5.1.2-5.1.5) are provided in *Appendix C: Updates on Primary Data Collection and Qualitative Analyses*.

5.1.1 Proportion of active family planning providers in Medicaid delivering services through HTW.

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

Methods

The analysis of Measure 5.1.1 required identifying the universe of active family planning billing and rendering providers in Medicaid FFS claims, encounters from managed care covered services, and HTW claims. Active family planning billing providers in Medicaid and HTW were defined as those providers in HTW or other FFS or Medicaid managed care programs with a paid claim for family planning services covered by HTW. We then classified active family planning billing providers as serving HTW or not based on whether they had a paid family planning claim in the HTW program in a given calendar year. Additionally, we confirmed whether the providers were HTW certified or not based on files provided by HHSC.

Importantly, it is unknown why 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 serve specialized populations.

The interim report only summarizes the ratio of Active HTW Family Planning billing providers to the sum of these providers in addition to those active family planning billing providers with no HTW claims and that are not HTW certified. We assessed whether this ratio changed pre- and post-HTW Demonstration started. Additional information on providers' perspectives on the HTW program, which may provide insight into reasons for participating in HTW or not, will be summarized in the summative evaluation report.

Key Findings

The proportion of active family planning providers in Medicaid delivering services through HTW grew 5.2 percent points (11.4% growth) on average from pre-HTW Demonstration to post-HTW Demonstration, a statistically significant growth.

Proportion of Active Family Planning Providers in Medicaid Delivering Services through HTW (Measure 5.1.1)

On average, the proportion of active family planning billing providers in Medicaid delivering services through HTW grew by 5.2 percentage points (11.4% change) when comparing the pre versus post HTW demonstration periods. The average proportion for the pre-HTW Demonstration period was 45.3 percent, and that of the post-HTW Demonstration was 50.5 percent.

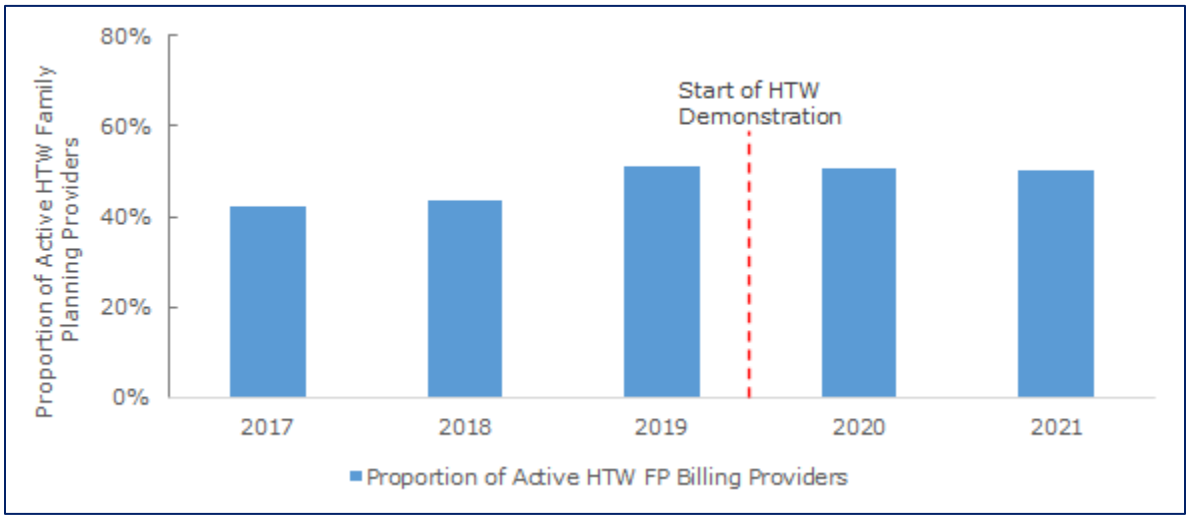
Table 26: Proportion of Active Family Planning Billing Providers in Medicaid delivering services through HTW (Measure 5.1.1)

Year	Active FP-Billing Providers[1]	Active HTW FP-Billing Providers	Proportion of Active HTW FP Billing Providers
2017	2,863	1,203	42.0%
2018	2,736	1,192	43.6%
2019	2,546	1,298	51.0%
2020	2,472	1,255	50.8%
2021	2,476	1,245	50.3%
Annual Pre-HTW Demonstration Average (2017-2019)	2,715	1,231	45.3%
Annual Post -HTW Demonstration Average (2020-2021)	2,474	1,250	50.5%
Pre/Post Difference in Ns or Percentage Points	--	--	5.2%
% Change[2]	--	--	11.4%
p-value[3]	--	--	<0.001

Notes. FP: family planning. [1] Active FP-billing providers include HTW providers and non-HTW/non-HTW certified Medicaid providers identified using "billing provider NPI" on at least one paid claim for FP during the measurement year. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [3] P-values are reported from Chi-square tests.

Though the change in averages for the pre- and post-HTW Demonstration period was statistically significant, it should be noted that the growth in the number of active HTW billing providers began in 2019 (Figure 22). The highest proportion of active family planning providers in Medicaid who bill services for HTW clients was highest in 2019 (51.0%), but the pre-HTW Demonstration average was smaller due to years 2017 and 2018 when the proportion was 42.0 and 43.6 percent respectively.

Figure 22: Trends in Active HTW Family Planning Billing (Measure 5.1.1)



Notes. FP, family planning. Proportion of active HTW FP-billing providers was calculated by dividing the number of HTW FP-billing providers that had at least one paid FP claims by the number of HTW FP-billing providers and non-HTW/non-HTW certified Medicaid billing providers that had at least one paid FP claims during the measurement year.

Limitations

The effect of provider eligibility criteria on HTW access to and use of services could not be thoroughly evaluated in this interim report due to the absence of a control group that could act as a counterfactual. Therefore, this report seeks to assess the proportion of Texas Medicaid and HTW providers who bill or render family planning services for HTW clients. However, it is unknown why providers offering similar services in Medicaid are not providing those services to HTW clients. 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 standards. Although the primary data collection and analysis will look into provider experiences working with the HTW program, it will be limited to providers currently serving HTW clients. Therefore, this evaluation will not be able to provide an answer to that question.

Evaluation Limitations

Several methodological limitations can affect the results described in this interim report and should be considered when reading and interpreting results. The primary challenge, as mentioned in the CMS-approved Evaluation Design, is the similarity of the HTW Demonstration to its predecessor program. While the HTW Demonstration seeks to enhance access to these services, it has not changed them substantively or the populations receiving them. Therefore, changes are hypothetically likely to be modest, given the similarity of the counterfactual condition.

Additionally, the implementation of the HTW Demonstration coincides almost entirely with the COVID-19 pandemic, and this interim report does not include any post-HTW Demonstration period data after the end of the PHE. The pandemic has had a well-documented impact on access to care, preventive care receipt, and morbidity, particularly on minorities and uninsured/underinsured populations, much like HTW clients.[8] Under the FFCRA, Texas suspended Medicaid eligibility redetermination requirements, which changed the characteristics of women enrolled in HTW during the PHE. Women who gave birth under Medicaid for Pregnant Women were no longer automatically assessed for HTW eligibility after 60 days postpartum but instead remained enrolled under traditional Medicaid. These environmental confounders may have impacted the results seen during the post-HTW Demonstration period. Except for Measure 3.2, all other measures lack a control group for whom outcomes can be assessed during the 2020-2021 period. Therefore, for most of this evaluation, we rely on pre-post observations and cannot explain how much of the results are due to the effects of the pandemic and associated policies versus those of the HTW Demonstration.

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. Additionally, relying on diagnosis codes and procedure codes introduces the risk of bias in measurement, as these are all subject to issues such as upcoding and miscoding. To avoid this, whenever possible, measures were developed using standard, validated, and commonly used measures for research and industry performance measurement purposes.

Only data from 2017 through 2021 were available for this interim report, therefore, certain measures that require a long period of follow-up (Measures 2.2.1 and 3.2.2) were impossible to assess appropriately.

To help mitigate these limitations, results are reported with additional benchmark measures, when available, for the rest of the Texas Medicaid population or using national references to contextualize some of the changes observed pre- and post-HTW Demonstration. A more comprehensive evaluation that includes additional years of data after the end of the PHE will be possible for the summative evaluation report.

Conclusions and Implications

On January 20, 2020, CMS granted approval to the HTW Demonstration for a duration of five years. Texas HHSC, the overseeing agency for Texas Medicaid programs, designated UTHealth CHCD as the independent evaluator for the 2020-2024 waiver period.

This report outlines the interim findings of the evaluation for the HTW Demonstration, which encompasses the pre-HTW Demonstration baseline period (2017-2019) and the initial two years of the HTW Demonstration (2020-2021). It is essential to acknowledge that the initial two years of the Demonstration coincided with the COVID-19 pandemic and the PHE. As widely documented, the pandemic had a substantial impact on healthcare access and utilization. Moreover, clients in HTW and Medicaid were exempted from eligibility reassessment or disenrollment during the PHE that commenced on March 18, 2020. Consequently, women already enrolled in the HTW Demonstration were unlikely to exit the program unless they qualified for a more comprehensive alternative, such as Medicaid for Pregnant Women. Similarly, pregnant women who would have transitioned to HTW from Medicaid before the pandemic remained enrolled in Medicaid for the entire PHE period. These changes to the composition of the HTW population can be presumed to have influenced the observed effects of the HTW Demonstration assessed in this report.

UTHealth's CHCD evaluation of the HTW Demonstration encompassed five critical areas: access, utilization, health outcomes, costs, and the impact of provider eligibility criteria. Each area was accompanied by specific hypotheses and corresponding measures. The evaluation process employs a mixed methods approach, including primary data collection through surveys and secondary analysis of administrative and public data. However, this interim report exclusively presented results derived from the quantitative analysis of administrative data. Outcomes from the qualitative analysis will be incorporated into the final summative report. The results of the interim evaluation are summarized below. The different sections of this report dive into the analysis approach, detailed results, variation by subgroup analysis, and statistically significant changes.

Hypothesis 1.1 postulated the HTW demonstration would increase or maintain access to family planning, family planning-related, and preconception services for low-income women in Texas. Our analysis revealed there were modest increases and improvements in the measures included for this assessment during the post-HTW Demonstration period evaluated. The average number of unique clients per

year in the post-HTW Demonstration period increased modestly by 4%. Pre-HTW Demonstration, approximately 37% of HTW clients received at least one service per year. This increased by three percentage points post-HTW Demonstration (8% change), primarily due to a 12% increase in medical services, offset by a 7% reduction in prescription services. The number of billing providers with at least one paid HTW claim per year increased by 20% between the pre- and post-HTW Demonstration periods. Network adequacy improved in Demonstration Year 2 (DY) compared to the baseline for primary care physicians (PCP) and pharmacies.

Interestingly, the analysis of Hypothesis 1.1. also revealed there was significant growth in continuous enrollment in the program, a trend influenced by the continuous eligibility policies during the HTW Demonstration period in response to the PHE. In summary, the PHE-induced continuous eligibility policies led to changes in the age composition and life circumstances of the HTW Demonstration population, who were less likely postpartum compared to pre-HTW Demonstration years. Additionally, the evaluation of Measure 1.1.3 also revealed both pre- and post-HTW Demonstration, less than 10% of billing providers accounted for 80% of all paid claims. The implications of this remain unclear in this interim analysis, but findings from provider and client surveys in the summative report may shed light on it. Though network adequacy parameters improved considerably, PCP networks in Micropolitan counties still lagged 15 percentage points below the standard (90%).

The analysis of Hypothesis 2.1, which stated the HTW Demonstration would increase or maintain the utilization of family planning services, showed a decrease in the use of most/moderately effective contraceptives among women with continuous annual enrollment (7.7 percentage points decline) as well as a decline in the use of LARCs (0.7 percentage points). Chlamydia screening, used to evaluate testing for STIs, changed minimally post-HTW Demonstration and was similar to Texas Medicaid reported rates. Almost 100 percent of women screened for chlamydia were also screened for gonorrhea, in line with evidence-based guidelines. Though utilization rates of family planning services declined in the post-HTW period, it should be noted the absolute number of women receiving contraception through HTW more than doubled in the post-HTW Demonstration period. However, this was accompanied by significant growth in the number of women with continuous annual enrollment, which resulted in an overall decrease in contraception use rates. Additional years of data will help establish whether this finding is a prevailing trend or an outlier influenced by PHE eligibility policies. Additionally, the client surveys included in the summative report will provide additional insight into women's experiences accessing and utilizing services.

Hypothesis 2.2, which postulated the HTW Demonstration would increase or maintain utilization of preconception services, could not be appropriately assessed. The evaluation of compliance with cervical cancer screening recommendations pre- and post-HTW Demonstration was not possible as the measure requires a 5-year look-back period. However, the 2021 rate (60%), which was the only year for which complete data was available for the interim report, is 2.8 percentage points higher than the corresponding rate among all Texas Medicaid recipients.

Hypothesis 3.1 proposed the HTW Demonstration would improve or maintain women's health among HTW clients. The analysis of the measures under this hypothesis showed mixed results. Adherence to hypertension, diabetes, and cholesterol medication measured using prescription days covered, decreased post-HTW Demonstration. On the other hand, antidepressant medication management improved post-HTW Demonstration, especially during the continuation phase (6 months of antidepressant medication). The prevalence of these conditions was less than 2%, and after applying the criteria for the measure (having at least two prescriptions for the specific condition), few clients met the criteria. Therefore, results should be interpreted with caution and might not accurately reflect the health of the overall HTW population.

Hypothesis 3.2 postulated the HTW Demonstration would maintain or improve maternal health and pregnancy outcomes. The interim report found the rate of pregnancy complications (gestational hypertension, gestational diabetes, and preeclampsia) among all women included in the analyses who delivered under STAR Medicaid increased between 2018 and 2021. However, the increase in pregnancy complications was significantly lower among women who had been enrolled in the HTW Demonstration the year prior to their delivery compared to those without HTW enrollment the year prior to the delivery. Additionally, though rates of adverse birth outcomes (low birth weight and preterm births) increased between 2018 and 2021, the increase was significantly smaller among women enrolled in the HTW Demonstration the year prior to their delivery compared to those without prior HTW enrollment. The evaluation could not identify a significant difference in severe maternal morbidity (SMM) among women based on their history of HTW enrollment prior to delivery. Despite methodological limitations discussed in the report, these findings suggest the HTW Demonstration had a positive impact in reducing the incidence of pregnancy complications and newborn adverse outcomes during the years assessed, which coincide with the PHE. Whether the positive impact of HTW enrollment during the Demonstration years assessed was limited to the pandemic or will continue requires additional years of data which we recommend assessing for the summative report.

The interim analysis showed the HTW Demonstration stayed below the annual expenditure limits set by CMS (Hypothesis 4). In fact, the PMPM expenditures declined during the first three years of the HTW Demonstration. Additionally, the interim report identified a small but significant growth in the proportion of active family planning providers delivering services through HTW (Hypothesis 5.1). Though the actual proportion of family planning providers was highest in 2019, preliminary analysis found the proportion of family planning providers delivering services through HTW clients grew post-HTW Demonstration.

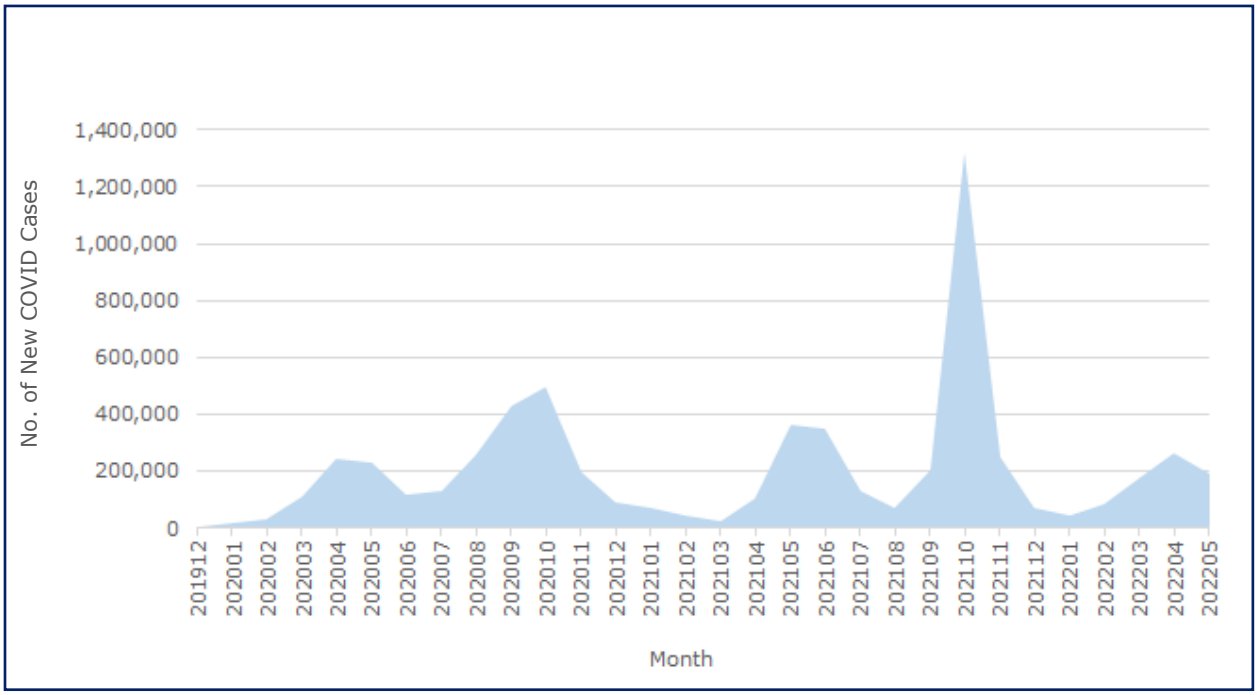
Implications of the COVID-19 Pandemic and Findings

The COVID-19 pandemic significantly affected communities across the United States. For example, due to the overwhelming demand on medical staff and facilities and policies halting non-urgent surgeries and procedures, individuals across the nation reported reduced access to healthcare, particularly in the early months of the pandemic.[38] Additionally, healthcare use and spending nationwide dropped strikingly during the spring of 2020, with clear evidence of a significant effect on access to physician office visits, preventive care, and elective care.[39-40] Some evidence suggests that the pandemic particularly disrupted women's healthcare access.[41]

Texas was not the exception, and, like elsewhere, the pandemic led to significant healthcare disruptions. The 2023-2028 Texas State Health Plan summarized findings on healthcare access for Texans during the pandemic.[42] Survey research from June and July 2020 indicated that 38.7 percent of adults could not receive one or more types of care due to the pandemic. Women consistently reported higher rates of unmet medical needs compared to men during these periods.[43] Texas implemented a halt in non-urgent medical procedures early in the pandemic and varying sheltering-in-place and social distancing policies throughout the PHE. Figure 23 shows the number of new COVID-19 cases in Texas, highlighting the first peak in April/May 2020, followed by repeating peaks in winter (November/January) and summer (May/July) of subsequent years. In particular, the highest number of new cases occurred during the winter of 2021. Research has suggested that though social distancing policies did lead to reductions in healthcare utilization, much of the reduction would have occurred even in the absence of these policies. Reductions in healthcare utilization was also driven by factors such as sheltering in place policies and other factors, such as fear of infection or challenges in healthcare access.[44] The combination of COVID-19 cases peaks, policies in place to prevent infection spread,

and subsequent healthcare disruptions are likely to have affected access and care of women enrolled in the HTW program during 2020 and 2021.

Figure 23: New COVID-19 Cases in Texas



Notes. Data and graph provided by Texas HHSC. Data Sources: AHQP Claims Universe, AHQP References Universe, TMHP, Vendor Drug FFS Claims (Mcaid_drug_202009_202310_ACS), Historical Texas COVID-19 Data (Accessible Dashboard Data). HTW Data Prepared By: Data Dissemination, Office of Data Analytics and Performance, Texas HHSC, December 2023 (CRT). COVID Counts Prepared By: Research & Evaluation, Office of Data Analytics and Performance, Texas HHSC, April 2024 (DJN).

The interim report's findings, which evaluated data through December 2021, align in part with the literature on the COVID-19 pandemic's effects on healthcare utilization. The assessment of overall care utilization during the post-HTW Demonstration period is in line with that reported by the state (Measure 1.1.2). We identified a decline in the utilization of contraceptive methods (Measures 2.1.1 and 2.1.2) during 2020 and 2021. Though other primary care measures, such as screening for Chlamydia (Measure 2.1.3), did not show a reduction, it should be noted that because this screening is recommended among sexually active women, the criteria to be included in the denominator requires either a medical encounter where this is coded (sexually active related procedure or diagnosis or pregnancy-related encounter) or a prescription related claim during the measurement year. Therefore, the denominator of this measure implies that someone has already accessed healthcare during the measurement year, and in fact, the same episode that could make someone qualify to be in the denominator for the measure, such as an annual women's exam, could be the same episode where the screening occurs. Therefore, this measure is less sensitive to access issues, as it requires including

someone with access to care. On the contrary, both measures related to contraception are applied to the universe of women enrolled and aged 21 to 44 during the measurement year. Therefore, these measures are more sensitive to reductions in access to care as the inclusion criteria are not dependent on having access to care.

The report identified reduced adherence to chronic disease medications (hypertension, diabetes, and cholesterol) among HTW women during 2020 and 2021. This is in line with national and international studies, which have all shown that many chronic treatments were interrupted or affected by reduced adherence or access difficulties during the pandemic.[27] In addition, state-reported data and national evaluations have identified a reduction in prescriptions during this period.[15] In Texas, prescription medication utilization showed a more gradual decline than other healthcare services, not directly correlating decrease with infection peaks. This suggests that while acute care services saw significant reductions, ongoing medication management for chronic conditions might have been somewhat more stable, albeit still impacted. Whether this is purely related to COVID-19 effects or part of a larger trend remains to be assessed.

Overall, this interim report was limited in its ability to evaluate the impact of the HTW Demonstration. The primary challenge, as mentioned in the CMS-approved Evaluation Design, is the similarity of the HTW Demonstration to its predecessor program. While the HTW Demonstration seeks to enhance access to these services, it has not changed them substantively or the populations receiving them. Therefore, changes are hypothetically likely to be modest, given the similarity of the counterfactual condition.

The HTW interim report 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. Additionally, relying on diagnosis codes and procedure codes introduces the risk of bias in measurement as these are all subject to issues such as upcoding and miscoding. Finally, only data from 2017 through 2021 were available for this interim report. Therefore, certain measures that require multiple years of post-HTW Demonstration data, such as cervical cancer screening or birth spacing (Measures 2.2.1 and 3.2.2), could not be appropriately assessed.

To help mitigate these limitations, whenever possible, the evaluation used standard, validated, and commonly used measures for research and industry performance measurement purposes. Additionally, results are reported with additional benchmark measures, when available, for the rest of the Texas Medicaid population or using national references to contextualize some of the changes observed pre- and post-HTW Demonstration.

The summative report will include additional years of data (through 2024), which will allow for the assessment of measures requiring long measurement periods, such as compliance with cervical cancer screening and birth spacing. Researchers will also continue to refine methods related to Measures 3.2.3 through 3.2.5 to ensure results reflect the most rigorous and unbiased estimates possible in light of data availability and PHE-related policies that may impact the comparability of the 2018 and 2021 birth cohorts. Additionally, evaluating years beyond the PHE, which ended on May 2023,[45] will enable the assessment of the postulated hypotheses in a context that more closely resembles the pre-HTW Demonstration period. Additional data will be particularly relevant to access-related measures such as contraception, STI screening, or chronic disease medication adherence, as research suggests these may have been particularly affected by the pandemic. This will also allow the summative report to assess whether the identified associations and trends changes remain after the end of the PHE and the COVID-19 pandemic. Of note, the summative report analyses will also have to account for the changes in the HTW population after the end of the maintenance of eligibility policies and PHE, which may revert some of the demographic (i.e., age composition) and life stage changes (i.e., proportion of the population in the postpartum period) characteristics of the HTW population to more closely resemble the pre-HTW Demonstration period.

Finally, the addition of qualitative data for the summative report will hopefully allow for better interpretation and understanding of the findings from the quantitative analysis as well as shed light on the actual experiences from both clients and providers.

Appendix A: Methods

The following sections describe the methods used for the measurement and analysis of each specific hypothesis. For measures that strictly followed the CMS-approved Evaluation Design, we refer the reader to said document. However, several measures required small changes, such as additional exclusion criteria in the denominator or further analysis to better understand results. Additionally, in certain circumstances, the CMS-approved Evaluation Design suggested a series of statistical analyses and left it to the external evaluator to decide on the best approach. Details on these modifications, additions, and final statistical approaches can be found in the document below. They are grouped following the same organization as the body of the interim report, with an introduction detailing the methods shared across most, if not all, measures, followed by measure-specific clarifications. Aligned with this interim report, this section focuses on quantitative analyses of administrative data. Updates related to evaluation questions and hypotheses addressed through the provider and client surveys are provided in *Appendix C: Updates on Primary Data Collection and Qualitative Analyses*.

Design

The questions and hypotheses are being assessed through 31 measures covering access, utilization, health outcomes, cost, and the effect of provider eligibility criteria. In general, the analysis done for this interim report was based on an observational retrospective design, comparing before and after measures using administrative data. When possible, a comparison group was created and a difference-in-differences approach was used.

As explained in the CMS-approved Evaluation Design, the evaluation uses as baseline or pre-HTW Demonstration years data from 2017 through 2019. The post-HTW Demonstration years run from 2020 through 2024. For the purposes of the analysis, the start date assumed for the post-HTW Demonstration period is January 1st 2020, although the Demonstration was approved on January 22, 2020 and services did not begin until February of that year. For this interim report, the data analyzed ranged from January 2017 through December 2021, corresponding to two years post-implementation of the HTW Waiver.

Some measures under Hypothesis 3.2 use a truncated portion of the study period due to operationalization constraints or source-specific data lags. Details can be found in the CMS-approved Evaluation Design.

Data

UTHealth CHCD relied on the following data sources to calculate measures for the evaluation:

- Medicaid enrollment, encounters, and claims for medical and pharmacy services provided by HHSC (Calendar Year [CY] 2017-2021) for HTW and Medicaid clients, which serve as the control group for a limited set of measures.
- Provider-level enrollment files (CY 2017-2021).
- Mother-newborns crosswalk for mothers delivering under Medicaid (CY 2018 & 2021) prepared by HHSC.
- Pregnancy Risk Assessment Monitoring System (PRAMS) data for Medicaid recipients (2017-2021) received from DSHS.
- Medical and Pharmacy Network Adequacy reports (CY 2020-2021).
- Budget Neutrality estimations for (Demonstration Years [DY] 1-3) and total enrollment and spending reports (CY 2017-2019) obtained from HHSC.
- Primary Data collected from surveying clients and providers.

Population

The target population for the HTW evaluation includes all clients enrolled in the HTW Demonstration. In general, no additional inclusion or exclusion criteria have been applied. The target population is conceptually consistent with an intent-to-treat framework. All women who transitioned to or self-enrolled in the HTW Demonstration are considered part of the intervention group, regardless of whether they actively receive services. For the purposes of the evaluation, we excluded clients 15 to 17 years old from the pre-HTW Demonstration baseline to match the clients' age range in the HTW Demonstration. The PHE modified re-enrollment requirements, which had an effect on the age of individuals enrolled in the HTW program, allowing for women who would have traditionally aged out of HTW to remain. For the purpose of the interim report analysis, HTW enrollees who turned 45 during a measurement year and were still HTW clients were grouped into the 40-44 category. Women 45 or older at the beginning of the year (January 1st) were excluded as these women would not be normally eligible for HTW program.

The HTW evaluation also assesses other populations, including that of providers serving HTW clients, and for the assessment of Measure 3.2.1 (Unintended Pregnancies) survey information for women identified as “Medicaid,” which could

have included both Medicaid and HTW clients available through the Pregnancy Risk Assessment Monitoring System (PRAMS). Additionally, measures under Hypothesis 3 rely on Medicaid-paid births from 2018 and 2021. Mothers who were not enrolled in HTW the year prior to the birth were used as control groups and are, therefore, part of the population studied.

Lastly, population-level data (rather than a sample) has been used for most measures to assess processes and outcomes. Measures relating to clients and providers have been stratified into key demographic subgroups such as age, race/ethnicity, region, or provider type, where applicable.

Quantitative Analysis

The quantitative analysis has been approached through three quasi-experimental methods: one group pre-posttest design, one group post-test only, and a nonequivalent comparison group pretest-posttest design. Most measures are being tested through a one-group pre-posttest design due to the longstanding nature of the HTW program and the absence of a suitable comparison group. Quantitative analytics methods used include:

Descriptive analysis assessing measures of central tendency and dispersion. Statistical differences using Chi-Square (age group, race/ethnicity, region, and receipt of HTW services), Kruskal-Wallis test (median enrolled months), and ANOVA (mean enrolled months). For Pre/Post-HTW Demonstration periods, comparisons were done using Wilcoxon rank sum tests (median enrolled months) and t-tests (mean enrolled months). All measures described were also created and stratified by age categories, race/ethnicity categories, and regions. A total of five age categories were created. Race and ethnicity were categorized as White non-Hispanic, Black, Hispanic (all races), and Other. The "Other" category included clients recorded in enrollment files as Asian, American Indian or Alaskan, Other, or Unknown. Regions were created using the Department State Health Services Public Health Regions (PHR).[46] Box plots, bar graphs, and line graphs were used as well.

Pre-post and sub-group comparisons using inferential statistics were done when appropriate. Pre- and post-HTW Demonstration annual averages were estimated as the sum of counts or rates for the years in each period (pre-HTW Demonstration: 2017-2018-2019 and post-HTW Demonstration: 2020 and 2021) divided by the number of years in each period. Point changes are estimated by subtracting the value of the measurement from the pre-HTW Demonstration period from the value of the post-HTW Demonstration period. Percentage changes reflect the percentage changes calculated by dividing the measure difference between pre- and post-HTW

Demonstration periods by the value of the measure at the pre-HTW Demonstration period. Statistical methods used include the Chi-square test, Wilcoxon rank sum test, t-tests, Kruskal-Wallis, and ANOVA. When possible, a comparison with other benchmark information or peer review publications was performed to evaluate differences.

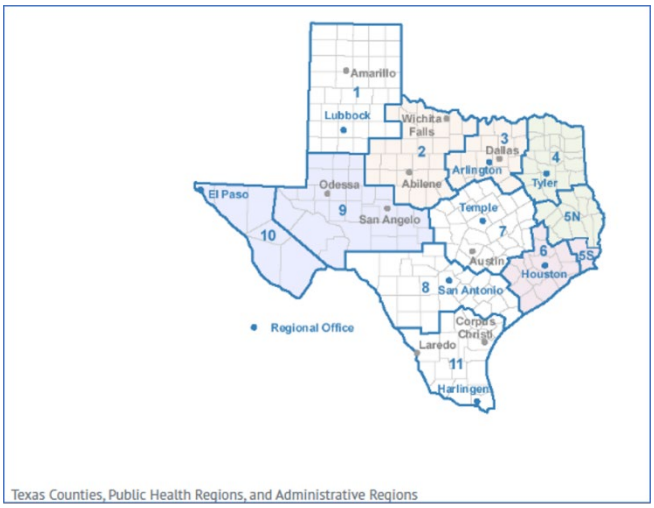
Descriptive trend analysis was used when pre- and post-HTW Demonstration data was available, plotting and analyzing time series data and testing for the presence of a trend through regression modeling when possible. For several measures, reported only as annual rates, the years of follow-up provided little power to test for trends appropriately. We describe the trajectory and evaluate differences between pre-and post-period averages to assess changes further.

The current interim report assessed Measures 3.2.3 through 3.2.5 using a pre-post analysis with a matched comparison group.[e] To balance group characteristics of the intervention and comparison groups pre- and post-HTW Demonstration, a propensity score weighting approach recommended for use in DID modeling for policy evaluations was used.[47]

Additionally, all descriptive statistics and analysis are stratified by age, race/ethnicity, and region if feasible. The regional analysis was based out of Texas Public Health Regions. The map and counties included in each region are shown in a map (Figure 4). The summative report will include analyses using Managed Care Service Areas, per the request of Texas HHSC.

[e] The CMS-approved Evaluation Design proposed a difference-in-differences (DID) model for Measures 3.2.3 through 3.2.5. DID mimics an experimental study by examining the average change in individual-level outcomes for intervention and comparison group clients over time and helps mitigate selection concerns that might exist with a single cross-sectional comparison between groups. However, the study design outlined in the CMS-approved Evaluation Design relies on aggregate measures of distinct cohorts prior to and after the Demonstration began, rather than repeated observations of the same cohort(s) over time. This design is more aligned with a pre-post analysis with a matched comparison group, rather than a traditional DID model. Per CMS guidance, this interim report reflects the study design executed (pre-post with using a matched comparison group), rather than what was described in the CMS-approved Evaluation Design.

Figure 4: Texas Public Health Regions



Center for Health Statistics Texas County Numbers and Public Health Regions. https://www.dshs.texas.gov/center-health-statistics/center-health-statistics-texas-county-numbers-public-health-regions

Evaluation Question #1: Access to family planning, family planning-related, and preconception care services

Measure 1.1.1. Unique Count of Women Enrolled in HTW

Measurement of unique client counts followed the specifications under the CMS-approved Evaluation Design. In addition to unique client counts, we examined the number of new enrollees (clients who had not been enrolled at least one month the prior year) and the number of retained clients (clients who had been enrolled anytime the prior year) to better understand changes in enrollment patterns. The year 2017 was used as the baseline year and, therefore, was not classified by retained and newly enrolled clients. Additionally, we measured the number of member/months in the program per calendar year (number of individuals participating in HTW program each month, from January through December) and report this as member years (MY), which reflects the total number of member months in a year divided by 12. We used this to compare changes in unique counts of members and changes in counts of MY. Growth in MY, unaccompanied by a similar growth in unique client counts, translates into longer enrollment periods. It should be noted that clients in HTW were enrolled for 12-month periods that could begin anytime during the year. However, this changed after the PHE began, as clients were no longer subject to re-enrollment. To better understand the growth in MY observed, which was considerably larger than the growth in unique client

counts, we assessed the number of continuously enrolled months for each individual during a calendar year.

Measure 1.1.2. Proportion of Clients who Received Any HTW service

Measurement of the proportion of clients who received any HTW services was assessed as described by the CMS-approved Evaluation Design. Clients with at least one paid claim (medical or pharmacy) in a year were counted as having received an HTW-paid service during that given year.

Measure 1.1.3. Unique Counts of Providers Billing for Any HTW Service

As specified in the CMS-approved Evaluation Design, this measure shows the number of unique billing and prescribing providers with at least one paid HTW medical or pharmacy claim in a given year. Additionally, the unique number of performing providers in a given year is also summarized. We report this measure for "Billing Providers" (those identified in the billing provider field in the claims, "Performing Providers" (those identified in the performing provider line level variable in the paid claim), and "Prescribing Providers" (providers who appear as prescribing providers in a paid prescription claim). A performing provider can be a prescribing provider, as well as a billing provider. This is particularly true in cases of single practices, for example. Often, billing providers represent organizations that group several performing providers, such as Federally Qualified Health Centers or physician group practices. Lastly, to create a composite measure, we report the total number of unique providers across all possible fields. Totals do not add up because a unique provider could belong to more than one category. We evaluated the number of claims each provider had (stratified by provider category) and assessed the distribution of paid claims. Additionally, we display the cumulative frequency of claims by unique providers ordered from providers with the largest number of claims to the lowest and stratified by year.

Measure 1.1.4. Percentage of HTW Clients within Prescribed Network Adequacy Standards

This measure was assessed following instructions in the CMS-approved Evaluation Design and using reports on Network Adequacy created by HHSC during the years 2020 and 2021.

Evaluation Question #2: Utilization of Family Planning Services Among HTW Clients

Measure 2.1.1. Provision of Most Effective/Moderately Effective Contraceptive Methods and Measure and 2.1.2. Provision of Long-Acting Reversible Contraceptives (LARCs)

Both these measures were calculated following the CMS-approved Evaluation Design, which specified the use of measure "CCW-AD: Contraceptive Care-All Women ages 21-44" from the Core Set of Adult's Health Care Quality Measures for Medicaid.[17] Specific codes for inclusion, exclusion criteria as well as for identification of drugs and procedures involved in this measure can be found in the Technical Specification of said document.

Measure 2.1.3. Test for Any Sexually Transmitted Infection (STI)

Several STI-related measures were analyzed. The first measure aligned with the CMS-approved Evaluation Design, which asked for the assessment of the total number of unduplicated clients with at least one test for any sexually transmitted infection (STI) during a year over the total number of unduplicated clients during that year. We assessed the provision of at least any of the following screenings using Current Procedural Terminology (CPT) codes and HCPCS (Healthcare Common Procedure Coding System) codes: Gonorrhea, Hepatitis B, HIV, Syphilis, and Trichomoniasis, as well as codes for comprehensive (panel).

In addition to the simple measure specified in the CMS-approved Evaluation Design, two additional measures on STI testing were examined: 1) testing for chlamydia among sexually active women, and 2) tests for gonorrhea or other STIs among women who screened positive for chlamydia. The Medicaid Core Set of Adult Health Care Quality Measures[17] suggests monitoring testing for sexually transmitted infections (STIs) across Medicaid programs through "Testing for Chlamydia" among sexually active women aged 21 to 24. This measure is also employed by HHSC to evaluate testing for STIs among its Managed Care Organization (MCO) plans.[22] Additionally, this measure is reported by commercial plans under their Healthcare Effectiveness Data and Information Set (HEDIS) reporting.[23] To allow for comparisons and benchmarking with other standard measure reporting related to STI testing, we applied this measure to the HTW population as specified in the Medicaid Core Set of Adult Health Care Quality Measures (including directions for

identifying sexually active women and continuous enrollment criteria). For a list of codes used for inclusion and exclusion criteria, as well as for identification of STI testing, please refer to CMS-approved Evaluation Design. Additionally, because of recommendations by the Center for Disease Control[10] and the US Preventive Services Task Force (USPSTF),[11] among those women screened for chlamydia, we assessed those who were also screened for gonorrhea.

Measure 2.2.1. Compliance with Cervical Cancer Screening (CCS)

For this measure, specifications align with the Medicaid Core Set of Adult's Health Care Quality Measures, as specified in the CMS-approved Evaluation Design.

Full measure reporting required five years of data, making comparison of pre- and post-HTW Demonstration rates unfeasible. We therefore report total and proportion of eligible women who met the criteria for cervix cytology in the past three years, as well as women who had an hrHPV test within those three years for 2019, 2020, and 2021. Additionally, we measured adherence to CCS in 2021 using the full specification recommended by Medicaid's Core Set of measures and benchmark it against reports of the same measure for other populations.

Evaluation Question #3: Health Outcomes

Measure 3.1.1 through 3.1.3. Hypertension, Hypercholesterolemia, and Diabetes Medication Adherence

To evaluate adherence to hypertension, diabetes, and hypercholesterolemia treatment, we used the proportion of days covered measures specified in the CMS-approved Evaluation Design and developed by the Pharmacy Quality Alliance.[26] Among those individuals with two or more prescriptions for these conditions, these measures assess the percentage that filled their prescription often enough to cover 80 percent or more days during the period they are supposed to be taking the medication in the calendar year (Proportion of Days Covered).

The rate of PDC for each drug by year is reported by calculating the number of member-months of HTW clients with a proportion of days covered (PDC) at 80 percent or higher for Measures 3.1.1-3.1.3 during the measurement period (numerator) divided by the number of member-months of HTW clients with at least two said medication fills on unique dates of service during the measurement period (denominator). P-values are reported to compare adherence rates between pre- and post-HTW Demonstration periods using rate=exp ($\beta 0$ + $\beta 1$*pre/post).

Additionally, we repeated measurement and testing, limiting the analysis to individuals who had 12 months of continuous enrollment during a calendar year and tested using a weighted Chi-square test.

Measure 3.1.4. Antidepressant Medication Management

To evaluate antidepressant medication management, we relied on measures developed and specified under Adults Health Care Quality Measures for Medicaid,[17] a National Committee for Quality Assurance measure as specified in the CMS-approved Evaluation design. This measure assesses two rates: acute-phase phase treatment, which reports the percentage of individuals who remain on antidepressant medication for at least 12 weeks after the index prescription start date, and continuation phase treatment, which reports the percentage of individuals who remained on antidepressant medication for at least six months after the index prescription start date.

Measure 3.2.1. Unintended Pregnancies

Unintended pregnancies (3.2.1) were assessed using data from the PRAMS survey specific to Texas. This is a surveillance system designed to monitor maternal attitudes and behaviors before, during, and after pregnancy. Conducted in partnership with the Center for Disease Control and Prevention (CDC) and the Texas DSHS, Texas PRAMS is a statewide population-based assessment that monitors the health and behaviors of new mothers in Texas. Approximately half of the births in the PRAMS sample are paid by Medicaid, and the survey allows for stratification by payer type. However, it is not specific to HTW clients, so results are reported for the overall Medicaid population. PRAMS data include a two-year lag from the birth year. Therefore, the interim report includes PRAMS data on unintended pregnancies from 2017 through 2021.

The assessment of pregnancy intention is done using the following question and answer classification:

"Thinking back to just before you got pregnant with your new baby, how did you feel about becoming pregnant?". The potential answers are classified as "I wanted to be pregnant later" (unintended), "I wanted to be pregnant then or sooner" (intended), "I didn't want to become pregnant then or any time in the future" (unintended); "I wasn't sure what I wanted" (not sure).

We performed descriptive trend analysis and compared Medicaid rates to that of the overall state of Texas.

Measure 3.2.2-3.2.5. Birth Spacing, Pregnancy Complications, Severe Maternal Morbidity, and Adverse Birth Outcomes

The remaining four measures under Hypothesis 3.2 used claims data pulled from the cohort of mothers identified and linked to newborns for Medicaid-paid births during 2018 and 2021 by a crosswalk developed by HHSC. This crosswalk was then used to pull all medical and pharmacy claims of identified mother-infant dyads before and after the delivery index date. All Medicaid deliveries that were under a program other than STAR Medicaid, such as Emergency Medicaid or other Medicaid programs (STAR Health, STAR+PLUS, STAR Kids, CHIP, CHIP-Perinate) were excluded to allow for better comparisons. This was done to exclude women who would not have been eligible for HTW prior to delivery, for example, due to immigration status or eligibility for other Medicaid coverage.

Mothers were then classified based on their HTW enrollment the year before the delivery (2017 and 2020), allowing for the creation of a group of women who had been enrolled in HTW pre-pregnancy and a comparison group who had not. The resulting comparison group could have been prior to their pregnancy uninsured, commercially insured, or Medicaid STAR if they had recently been pregnant and not transitioned out.

In order to adjust outcome analysis for potential confounding, we measured age, race/ethnicity, geographic region, and all comorbidities included in the Maternal Comorbidity Index (MCI).[48] These comorbidities were categorized and used in models to adjust (see Table 27). For Measures 3.2.3 (Gestational Diabetes, Gestational Hypertension), we excluded the conditions related to the Obstetric category and overall MCI. A similar approach was used in the analysis of Measure 3.2.5 (SMM) when the condition in the MCI overlapped with the conditions listed in SMM.

Table 27: Maternal Comorbidities

Maternal Comorbidities	
Obstetrics-related	Placenta previa
	Previous cesarean delivery
	Multiple gestation
	Gestational hypertension (maternal hypertension)
	Gestational diabetes mellitus (maternal)
	Mild preeclampsia or preeclampsia
	Severe preeclampsia

Maternal Comorbidities	
General Health	Preexisting hypertension
	Preexisting diabetes mellitus
	Obesity
	Asthma
Renal-related	Chronic renal disease
Cardio-related	Pulmonary hypertension
	Cardiac valvular disease
	Chronic congestive heart failure
	Chronic ischemic heart
	Congenital heart disease
Autoimmune-related	Systemic lupus erythematosus
	Human immunodeficiency (HIV)
	Cystic fibrosis
	Sickle cell disease
Substance Abuse-related	Substance use disorder
	Alcohol abuse
	Tobacco use

Measure 3.2.2: Birth Spacing

This measure was evaluated following the CMS-approved Evaluation Design, which proposed measuring 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 based on their HTW enrollment the year prior to the index delivery. This was designed to compare women with index deliveries in 2018 and 2021, classify them based on their HTW enrollment the year prior (2017 and 2020), and follow them for 27 months.

For the interim report, we could not fully assess this measure as only data through 2021 was available, therefore making the assessment of the post-HTW Demonstration group not feasible. We report through the birth spacing rates for the year 2018 based on HTW enrollment. The descriptive table for this sub-cohort can be found in *Appendix B: Additional Results*.

For the purpose of this interim report, we first ran the analysis comparing women based on their HTW enrollment before the index (2018) delivery, which meant looking at their enrollment in 2017. Additionally, we ran the analysis by looking at their enrollment status in HTW after their delivery, which, in this case, meant 2019.

Crude Risk Ratio and Adjusted Risk Ratio comparing those with HTW vs. non-HTW enrollment and accounting for age, race, ethnicity, and (MCI) were created using Modified Poisson regression.

Measure 3.2.3-3.2.5: Pregnancy Complications, Severe Maternal Morbidity, and Adverse Birth Outcomes

Pregnancy complications were defined as the presence of a diagnosis code for any of the following conditions during pregnancy or delivery: gestational diabetes, gestational hypertension, or preeclampsia. We used International Classification Disease codes (ICD-10) previously validated to identify these conditions.[48] Due to measurement errors and potential confounding, we excluded mothers with historical hypertension and diabetes from the pregnancy complications assessment. This meant 16,155 women (6%) were not included in the analysis of this measure. This exclusion did not affect group balance, and no specific demographic group suffered a higher proportion of exclusions than others.

Table 28: Clients Included in the Analysis Before and After Exclusion by Category

	Clients Before Exclusion		Clients After Exclusion	
	N	%	N	%
HTW, pre	27,188	10.97	24,992	10.79
HTW, post	21,143	8.53	19,791	8.55
No HTW, pre	122,948	49.63	114,747	49.55
No HTW, post	76,460	30.86	72,054	31.11
Total	247,739	100	231,584	100

Notes. HTW: Healthy Texas Women. Pre and Post: Pre-HTW Demonstration and Post-HTW Demonstration. N: counts of unique clients. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery.

Severe maternal morbidity (SMM) was assessed as the presence of any of the 21 conditions identified by CDC[32] and further classified and studied by the Alliance for Innovation on Maternal Health (AIM).[33] Recent recommendations and studies have suggested excluding the receipt of blood transfusion from the SMM definition.[32] We follow the same approach in this report and only include non-transfusion indicators in the SMM rates used for analysis.

Adverse birth outcomes assessed were preterm births (PT) and low birth weight (LBW) newborns. LBW was defined as births below 2,500 grams and identified based on flags created by HHSC in provided files that rely on ICD-10 codes. Preterm birth was defined as births less than 37 weeks and identified following the same approach.[34] The information on these outcomes was provided by HHSC in the Mother-Newborn crosswalk.

Statistical Analysis

The current interim report assessed Measures 3.2.3 through 3.2.5 using a pre-post analysis with a matched comparison group. A frequent concern with non-experimental treatment and comparison group study designs in policy evaluation applications is that the program and intervention groups may differ in ways that are related to their trends over time, or their compositions may change over time.[f] To address this concern, we conducted analyses using propensity score weighted linear regression model suggested by Stuart et al.[29] There are four groups defined by time and intervention status: treatment pre-HTW Demonstration (Group 1), treatment post-HTW Demonstration (Group 2), comparison pre-HTW Demonstration (Group 3), and comparison post-HTW Demonstration (Group 4). This propensity score weighting strategy defines the propensity score as the probability of being in Group 1 (versus Groups 2, 3, or 4) and weights the four groups to be balanced on a set of characteristics. To estimate the propensity scores, we fitted a multinomial logistic regression predicting Group as a function of a set of observed covariates *X,* including age, race/ethnicity, and maternal comorbidities. Each individual will have four resulting propensity scores, $e_k(X_i)$: the probability of being in Group *k*, for *k*=1 to 4. The weights are then created in such a way that each of the four groups is weighted to be similar to Group 1, the treatment group in the pre-period. The weight for individual *i* was calculated as:

$$w_i = \frac{e_1(X_i)}{e_g(X_i)}$$

where *g* refers to the group that individual *i* was actually in. Thus, individuals in Group 1 will receive a weight of 1, while individuals in other groups receive a weight that is proportional to the probability of their being in Group 1 relative to the probability of their being in the group they were actually in.

As mentioned previously, not all MCI comorbidities could be included in each of the three analyses, as some comorbidities overlapped with pregnancy complications and others with SMM. We, therefore, run separate models for each measure analysis and created weights specific to each measure. Tables below describe

[f] 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.

means and proportions for each group as well as the resulting propensity score weighted standardized mean differences for each measure analysis.

Table 29: Mean and Propensity Score Weighted Standardized Mean Difference Across Groups for Pregnancy-Related Complications Comparisons (Measures 3.2.3-3.2.5)

	Mean				Propensity Score Weighted Mean				Propensity Score Weighted Standardized Mean Difference		
	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	2 vs 1	3 vs 1	4 vs 1
Maternal age (mean)	26.5	26.9	25.7	26.1	26.5	26.7	26.6	26.61	0.03	0.01	0.02
Race/Ethnicity (%)											
NH White	19.5	19.3	24.4	22.9	19.5	19.7	19.5	19.55	0.00	0.00	0.00
NH Black	21.5	20.7	16.5	16.8	21.5	21.6	21.5	21.57	0.00	0.00	0.00
Hispanic	55.0	56.2	53.2	54.5	55.0	54.7	55.0	54.89	-0.01	0.00	0.00
NH Other	4.0	3.8	5.9	5.8	4.0	4.1	4.0	4.00	0.00	0.00	0.00
Maternal Comorbidities (%)											
Obstetrics	38.5	40.6	34.6	36.3	38.5	38.6	38.6	38.85	0.00	0.00	0.01
General health	33.0	29.3	30.2	28.1	33.0	32.6	32.8	32.99	-0.01	0.00	0.00
Substance use	10.7	7.3	8.8	6.3	10.7	10.5	10.6	10.72	0.00	0.00	0.00
Autoimmmune	1.1	1.1	0.8	0.9	1.1	1.1	1.1	1.13	0.00	0.00	0.00
Cardio	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.26	0.00	0.00	0.00
Renal	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.10	0.00	0.00	0.00

Notes. HTW: Healthy Texas Women. Pre and Post: Pre-HTW Demonstration and Post-HTW Demonstration. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery.

Table 30: Mean and Propensity Score Weighted Standardized Mean Difference Across Groups for Severe Maternal Morbidity Comparisons (Measure 3.2.3-3.2.5)

	Mean				Propensity Score Weighted Mean				Propensity Score Weighted Standardized Mean Difference		
	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	2 vs 1	3 vs 1	4 vs 1
Maternal age (mean)	26.7	27.1	25.9	26.2	26.7	26.9	26.8	26.8	0.03	0.01	0.02
Race/Ethnicity (%)											
NH White	19.4	19.3	24.3	22.8	19.4	19.6	19.4	19.5	0.00	0.00	0.00
NH Black	22.4	21.3	17.2	17.4	22.4	22.4	22.5	22.5	0.00	0.00	0.00
Hispanic	54.1	55.6	52.5	54.0	54.1	53.8	54.1	54.0	-0.01	0.00	0.00
NH Other	4.1	3.8	6.0	5.8	4.1	4.2	4.1	4.1	0.00	0.00	0.00
Maternal Comorbidities (%)											
Obstetrics	40.5	42.0	36.5	37.8	40.5	40.5	40.6	40.8	0.00	0.00	0.01
General health	38.4	33.9	34.8	32.3	38.4	38.0	38.3	38.3	-0.01	0.00	0.00
Substance use	11.6	7.6	9.6	6.6	11.6	11.4	11.6	11.6	-0.01	0.00	0.00
Autoimmmune	1.3	1.1	0.9	0.9	1.3	1.2	1.3	1.3	0.00	0.00	0.00
Cardio	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.00	0.00	0.00
Renal	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00	0.00

Notes. HTW: Healthy Texas Women. Pre and Post: Pre-HTW Demonstration and Post-HTW Demonstration. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery.

Table 31: Mean and Propensity Score Weighted Standardized Mean Difference Across Groups for Low Weight and Preterm Births (Measures 3.2.3-3.2.5)

	Pre-Matching mean				Propensity Score Weighted Mean				Propensity Score Weighted Standardized Mean Difference		
	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	HTW, pre (1)	HTW, post (2)	No HTW, pre (3)	No HTW, post (4)	2 vs 1	3 vs 1	4 vs 1
Maternal age (mean)	26.7	27.1	25.9	26.2	26.7	26.9	26.8	26.8	0.03	0.01	0.02
Race/Ethnicity (%)											
NH White	19.4	19.3	24.3	22.8	19.4	19.6	19.4	19.5	0.00	0.00	0.00
NH Black	22.4	21.3	17.2	17.4	22.4	22.4	22.5	22.5	0.00	0.00	0.00
Hispanic	54.1	55.6	52.5	54.0	54.1	53.8	54.1	54.0	-0.01	0.00	0.00
NH Other	4.1	3.8	6.0	5.8	4.1	4.2	4.1	4.1	0.00	0.00	0.00
Maternal Comorbidities (%)											
Obstetrics	40.5	42.0	36.5	37.8	40.5	40.5	40.6	40.8	0.00	0.00	0.01
General health	38.4	33.9	34.8	32.3	38.4	38.0	38.3	38.3	-0.01	0.00	0.00
Substance use	11.6	7.6	9.6	6.6	11.6	11.4	11.6	11.6	-0.01	0.00	0.00
Autoimmmune	1.3	1.1	0.9	0.9	1.3	1.2	1.3	1.3	0.00	0.00	0.00
Cardio	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.00	0.00	0.00
Renal	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.00	0.00	0.00

Notes. HTW: Healthy Texas Women. Pre and Post: Pre-HTW Demonstration and Post-HTW Demonstration. The analysis includes women whose child's delivery was paid for by Medicaid and categorized based on whether their delivery occurred before the HTW Demonstration (2018) or after its implementation (2021), as well as by the mother's enrollment in HTW the year prior to delivery.

These weights were then incorporated into the model that was run for each one of the measures (3.2.3-3.2.5). Results were displayed as the proportion of the population meeting the outcome criteria. Additionally, we plotted proportions for each HTW and control groups, pre- and post-HTW Demonstration Periods.

Evaluation Question #4: Costs

Measurement of Demonstration costs followed the specifications under the CMS-approved Evaluation Design.

Evaluation Question #5: Provider Eligibility Criteria

The evaluation of Measure 5.1.1 followed the CMS-approved Evaluation Design. The identification of providers billing for family planning services was done using the list of Current Procedural Terminology (CPT) codes and logic provided by Texas HHSC.

Appendix B: Additional Results

Evaluation Question #1: Access to Family Planning, Family Planning-Related, and Preconception Care Services

Table 29: Client Characteristics, Enrollment, and Use of Services (Measures 1.1.1 and 1.1.2)

	Total, N (%)	Pre-HTW Demonstration (2017-2019), N (%)	Post-HTW Demonstration (2020-2021), N (%)	P-value
No. of HTW Enrollees	2,176,982	1,287,121	889,861	--
Age Group				
18-24	643,567 (29.6)	412,231 (32.0)	231,336 (26.0)	<0.001
25-29	577,546 (26.5)	352,159 (27.4)	225,387 (25.3)	--
30-34	445,379 (20.5)	252,378 (19.6)	193,001 (21.7)	--
35-39	311,593 (14.3)	170,476 (13.2)	141,117 (15.9)	--
40-44	198,897 (9.1)	99,877 (7.8)	99,020 (11.1)	--
Race/Ethnicity				
NH White	486,618 (22.4)	292,974 (22.8)	193,644 (21.8)	<0.001
NH Black	516,188 (23.7)	307,321 (23.9)	208,867 (23.5)	--
Hispanic	1,039,231 (47.7)	621,358 (48.3)	417,873 (47.0)	--
Asian	27,585 (1.3)	16,843 (1.3)	10,742 (1.2)	--
American Indian or Alaskan	5,986 (0.3)	3,575 (0.3)	2,411 (0.3)	--
Other/Unknown	101,374 (4.7)	45,050 (3.5)	56,324 (6.3)	--
Texas Public Health Region				
1	76,476 (3.5)	46,702 (3.6)	29,774 (3.3)	<0.001
2	41,266 (1.9)	25,412 (2.0)	15,854 (1.8)	--
3	451,039 (20.7)	267,571 (20.8)	183,468 (20.6)	--
4	98,712 (4.5)	59,646 (4.6)	39,066 (4.4)	--

	Total, N (%)	Pre-HTW Demonstration (2017-2019), N (%)	Post-HTW Demonstration (2020-2021), N (%)	P-value
5	76,583 (3.5)	47,100 (3.7)	29,483 (3.3)	--
6	539,259 (24.8)	321,745 (25.0)	217,514 (24.4)	--
7	199,344 (9.2)	120,210 (9.3)	79,134 (8.9)	--
8	244,552 (11.2)	147,789 (11.5)	96,763 (10.9)	--
9	54,387 (2.5)	32,784 (2.5)	21,603 (2.4)	--
10	84,656 (3.9)	52,468 (4.1)	32,188 (3.6)	--
11	264,271 (12.1)	158,825 (12.3)	105,446 (11.8)	--
Unknown	46,437 (2.1)	6,869 (0.5)	39,568 (4.4)	--
No. of Enrolled Months				
Median (IQR)	9 (5-12)	7 (4-10)	12 (8-12)	<0.001
Mean (SD)	8.1 (3.9)	7.0 (3.7)	9.6 (3.6)	<0.001
Receipt of HTW service				
Prescription	277,860 (12.8)	171,915 (13.4)	105,945 (11.9)	<0.001
Medical	770,561 (35.4)	435,683 (33.8)	334,878 (37.6)	<0.001
Any	838,166 (38.5)	479,899 (37.3)	358,267 (40.3)	<0.001

Notes. All numbers indicate the number of HTW clients and percentage except for No. of enrolled months. P-values are reported for statistical differences between pre- and post-HTW Demonstration periods using Chi-square (age group, race/ethnicity, region, and receipt of HTW service), Wilcoxon rank sum (median enrolled months), and t-tests (mean enrolled months).

Table 30: Client Characteristics, Enrollment, and Use of Services: By Year (Measures 1.1.1 and 1.1.2)

	Total, N (%)	2017, N (%)	2018, N (%)	2019, N (%)	2020, N (%)	2021, N (%)	P-value
No. of HTW Enrollees	2,176,982	344,920	445,094	497,107	436,545	453,316	--
Age Group							
18-24	643,567 (29.6)	114,447 (33.2)	140,875 (31.7)	156,909 (31.6)	124,613 (28.5)	106,723 (23.5)	<0.001
25-29	577,546 (26.5)	94,028 (27.3)	121,737 (27.4)	136,394 (27.4)	115,285 (26.4)	110,102 (24.3)	--
30-34	445,379 (20.5)	65,988 (19.1)	87,467 (19.7)	98,923 (19.9)	91,918 (21.1)	101,083 (22.3)	--
35-39	311,593 (14.3)	44,145 (12.8)	59,798 (13.4)	66,533 (13.4)	64,299 (14.7)	76,818 (16.9)	--
40-44	198,897 (9.1)	26,312 (7.6)	35,217 (7.9)	38,348 (7.7)	40,430 (9.3)	58,590 (12.9)	--
Race/Ethnicity							
NH White	486,618 (22.4)	79,111 (22.9)	102,040 (22.9)	111,823 (22.5)	97,162 (22.3)	96,482 (21.3)	<0.001
NH Black	516,188 (23.7)	82,751 (24.0)	107,198 (24.1)	117,372 (23.6)	104,372 (23.9)	104,495 (23.1)	--
Hispanic	1,039,231 (47.7)	166,202 (48.2)	212,915 (47.8)	242,241 (48.7)	212,857 (48.8)	205,016 (45.2)	--
Asian	27,585 (1.3)	4,480 (1.3)	5,900 (1.3)	6,463 (1.3)	5,346 (1.2)	5,396 (1.2)	--
American Indian or Alaskan	5,986 (0.3)	962 (0.3)	1,278 (0.3)	1,335 (0.3)	1,220 (0.3)	1,191 (0.3)	--
Other/Unknown	101,374 (4.7)	11,414 (3.3)	15,763 (3.5)	17,873 (3.6)	15,588 (3.6)	40,736 (9.0)	--
Texas Public Health Region							
1	76,476 (3.5)	12,924 (3.7)	15,923 (3.6)	17,855 (3.6)	15,203 (3.5)	14,571 (3.2)	<0.001
2	41,266 (1.9)	7,072 (2.1)	8,590 (1.9)	9,750 (2.0)	8,171 (1.9)	7,683 (1.7)	--
3	451,039 (20.7)	68,931 (20.0)	92,087 (20.7)	106,553 (21.4)	93,668 (21.5)	89,800 (19.8)	--
4	98,712 (4.5)	16,098 (4.7)	20,470 (4.6)	23,078 (4.6)	19,982 (4.6)	19,084 (4.2)	--
5	76,583 (3.5)	12,944 (3.8)	16,587 (3.7)	17,569 (3.5)	15,107 (3.5)	14,376 (3.2)	--
6	539,259 (24.8)	84,646 (24.5)	114,581 (25.7)	122,518 (24.6)	109,631 (25.1)	107,883 (23.8)	--
7	199,344 (9.2)	32,970 (9.6)	41,042 (9.2)	46,198 (9.3)	40,292 (9.2)	38,842 (8.6)	--
8	244,552 (11.2)	40,164 (11.6)	50,328 (11.3)	57,297 (11.5)	50,288 (11.5)	46,475 (10.3)	--
9	54,387 (2.5)	9,022 (2.6)	11,055 (2.5)	12,707 (2.6)	11,117 (2.5)	10,486 (2.3)	--
10	84,656 (3.9)	14,845 (4.3)	18,002 (4.0)	19,621 (3.9)	16,754 (3.8)	15,434 (3.4)	--
11	264,271 (12.1)	43,581 (12.6)	54,009 (12.1)	61,235 (12.3)	54,039 (12.4)	51,407 (11.3)	--

	Total, N (%)	2017, N (%)	2018, N (%)	2019, N (%)	2020, N (%)	2021, N (%)	P-value
Unknown	46,437 (2.1)	1,723 (0.5)	2,420 (0.5)	2,726 (0.5)	2,293 (0.5)	37,275 (8.2)	--
No. of Enrolled Months							
Median (IQR)	9 (5-12)	7 (4-11)	7 (4-10)	7 (4-10)	12 (6-12)	12 (10-12)	<0.001
Mean (SD)	8.1 (3.9)	7.1 (3.7)	6.8 (3.7)	7.0 (3.6)	9.0 (3.9)	10.2 (3.3)	<0.001
Receipt of HTW service							
Prescription	277,860 (12.8)	49,797 (14.4)	58,852 (13.2)	63,266 (12.7)	58,128 (13.3)	47,817 (10.5)	<0.001
Medical	770,561 (35.4)	119,753 (34.7)	147,694 (33.2)	168,236 (33.8)	164,488 (37.7)	170,390 (37.6)	<0.001
Any	838,166 (38.5)	132,922 (38.5)	162,852 (36.6)	184,125 (37.0)	177,642 (40.7)	180,625 (39.8)	<0.001

Notes. All numbers indicate the number of HTW clients and percentage except for No. of enrolled months. P-values are reported for statistical differences across years using Chi-square (age group, race/ethnicity, region, and receipt of HTW service), Kruskal-Wallis (median enrolled months), and ANOVA (mean enrolled months).

Table 31: Unique Clients, Retained vs. New and Member Years: By Age Group (Measure 1.1.1)

Age	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
18-24	2017	N/A	114,447	114,447	65,979
	2018	74,804	66,071	140,875	77,616
	2019	89,942	66,967	156,909	89,059
	2020	90,150	34,463	124,613	92,994
	2021	87,016	19,707	106,723	89,026
	Annual Pre-HTW Demonstration Average (2017-2019)	82,373	66,519	137,410	77,551
	Annual Post-HTW Demonstration Average (2020-2021)	88,583	27,085	115,668	91,010
	Pre/Post Difference in Ns or Percentage Points	6,210	-39,434	-21,742	13,459

Age	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	% Change[3]	7.5%	-59.3%	-15.8%	17.4%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
25-29	2017	N/A	94,028	94,028	55,651
	2018	72,321	49,416	121,737	69,254
	2019	90,926	45,468	136,394	79,866
	2020	91,617	23,668	115,285	87,023
	2021	96,173	13,929	110,102	93,880
	Annual Pre-HTW Demonstration Average (2017-2019)	81,624	47,442	117,386	68,257
	Annual Post-HTW Demonstration Average (2020-2021)	93,895	18,799	112,694	90,452
	Pre/Post Difference in Ns or Percentage Points	12,272	-28,644	-4,693	22,195
	% Change[3]	15.0%	-60.4%	-4.0%	32.5%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
30-34	2017	N/A	65,988	65,988	39,850
	2018	52,867	34,600	87,467	50,828
	2019	66,998	31,925	98,923	59,096
	2020	72,133	19,785	91,918	69,970
	2021	86,827	14,256	101,083	86,545
	Annual Pre-HTW Demonstration Average (2017-2019)	59,933	33,263	84,126	49,925
	Annual Post-HTW Demonstration	79,480	17,021	96,501	78,257

Age	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Average (2020-2021)				
	Pre/Post Difference in Ns or Percentage Points re/Post Diff.	19,548	-16,242	12,375	28,333
	% Change[3]	32.6%	-48.8%	14.7%	56.8%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
35-39	2017	N/A	44,145	44,145	26,827
	2018	35,989	23,809	59,798	35,287
	2019	44,617	21,916	66,533	40,210
	2020	48,590	15,709	64,299	49,089
	2021	63,394	13,424	76,818	65,645
	Annual Pre-HTW Demonstration Average (2017-2019)	40,303	22,863	56,825	34,108
	Annual Post-HTW Demonstration Average (2020-2021)	55,992	14,567	70,559	57,367
	Pre/Post Difference in Ns or Percentage Points	15,689	-8,296	13,733	23,259
	% Change[3]	38.9%	-36.3%	24.2%	68.2%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
40-44	2017	N/A	26,312	26,312	15,355
	2018	21,598	13,619	35,217	20,088
	2019	25,847	12,501	38,348	22,101
	2020	29,166	11,264	40,430	30,143
	2021	46,960	11,630	58,590	50,090

Age	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Annual Pre-HTW Demonstration Average (2017-2019)	23,723	13,060	33,292	19,181
	Annual Post-HTW Demonstration Average (2020-2021)	38,063	11,447	49,510	40,117
	Pre/Post Difference in Ns or Percentage Points	14,341	-1,613	16,218	20,935
	% Change[3]	60.5%	-12.4%	48.7%	109.1%
	p-value[4]	<0.001	<0.001	<0.001	<0.001

Notes. [1] HTW Clients who were enrolled in both previous and measurement years. [2] HTW Clients who were enrolled in the measurement year but not in previous year. [3] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [4]P-values are reported from Poisson regressions.

Table 32: Unique Clients, Retained vs. New and Member Years: By Race and Ethnicity (Measure 1.1.1)

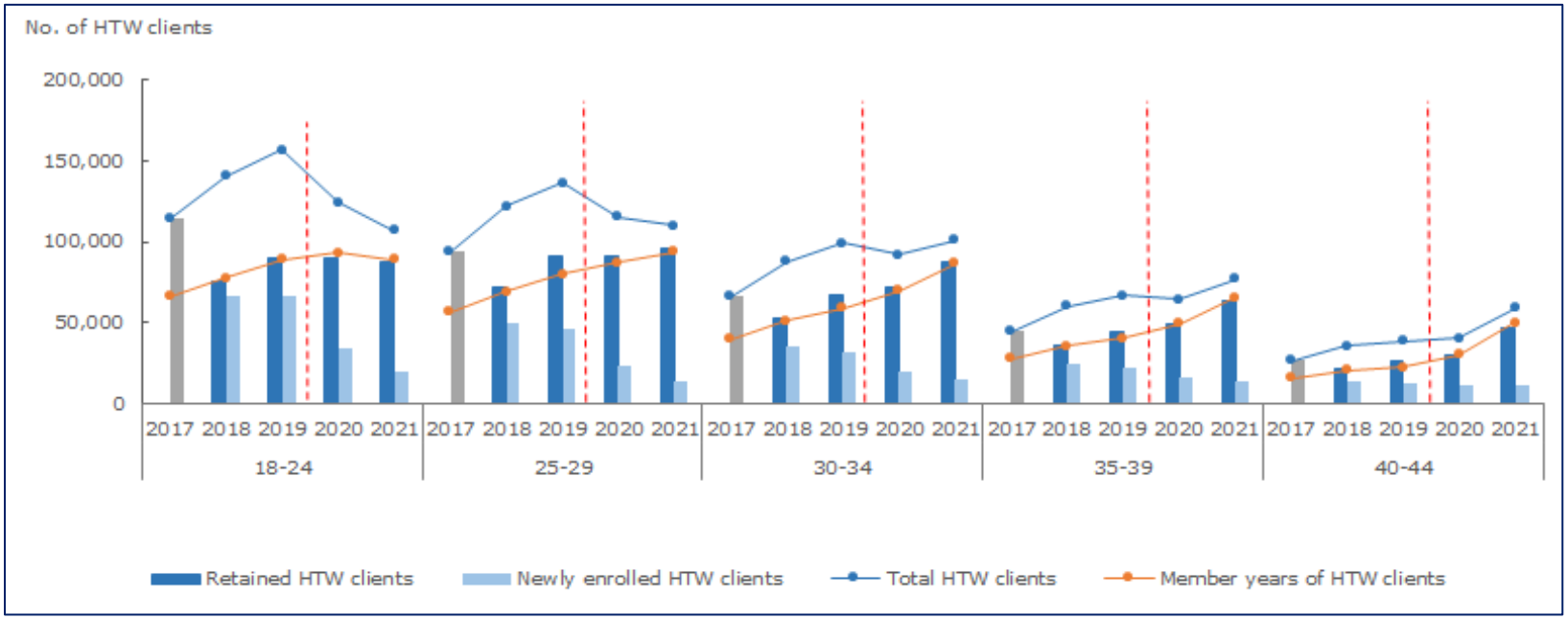
Race/ Ethnicity	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
NH White	2017	N/A	79,111	79,111	45,967
	2018	57,039	45,001	102,040	56,797
	2019	69,068	42,755	111,823	63,953
	2020	71,429	25,733	97,162	72,516
	2021	84,375	12,107	96,482	85,613
	Annual Pre-HTW Demonstration Average (2017-2019)	63,054	43,878	97,658	55,572
	Annual Post-HTW Demonstration Average (2020-2021)	77,902	18,920	96,822	79,065
	Pre/Post Difference in Ns or Percentage Points	14,849	-24,958	-836	23,492
	% Change[3]	23.5%	-56.9%	-0.9%	42.3%
	p-value[4]	<0.001	<0.001	0.003	<0.001
NH Black	2017	N/A	82,751	82,751	48,795
	2018	63,718	43,480	107,198	61,859
	2019	78,099	39,273	117,372	69,249
	2020	80,097	24,275	104,372	78,807
	2021	92,653	11,842	104,495	92,494
	Annual Pre-HTW Demonstration Average (2017-2019)	70,909	41,377	102,440	59,968
	Annual Post-HTW Demonstration	86,375	18,059	104,434	85,651

Race/ Ethnicity	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Average (2020-2021)				
	Pre/Post Difference in Ns or Percentage Points	15,467	-23,318	1,993	25,683
	% Change[3]	21.8%	-56.4%	1.9%	42.8%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
Hispanic	2017	N/A	166,202	166,202	99,300
	2018	124,630	88,285	212,915	121,784
	2019	156,021	86,220	242,241	142,585
	2020	164,596	48,261	212,857	161,478
	2021	184,048	20,968	205,016	181,898
	Annual Pre-HTW Demonstration Average (2017-2019)	140,326	87,253	207,119	121,223
	Annual Post-HTW Demonstration Average (2020-2021)	174,322	34,615	208,937	171,688
	Pre/Post Difference in Ns or Percentage Points	33,997	-52,638	1,817	50,465
	% Change[3]	24.2%	-60.3%	0.9%	41.6%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
Other/ Unknown	2017	N/A	16,856	16,856	9,600
	2018	12,192	10,749	22,941	12,633
	2019	15,142	10,529	25,671	14,545
	2020	15,534	6,620	22,154	16,418
	2021	19,294	28,029	47,323	25,182

Race/ Ethnicity	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Annual Pre-HTW Demonstration Average (2017-2019)	13,667	10,639	21,823	12,259
	Annual Post-HTW Demonstration Average (2020-2021)	17,414	17,325	34,739	20,800
	Pre/Post Difference in Ns or Percentage Points	3,747	6,686	12,916	8,541
	% Change[3]	27.4%	62.8%	59.2%	69.7%
	p-value[4]	<0.001	0.001	<0.001	<0.001

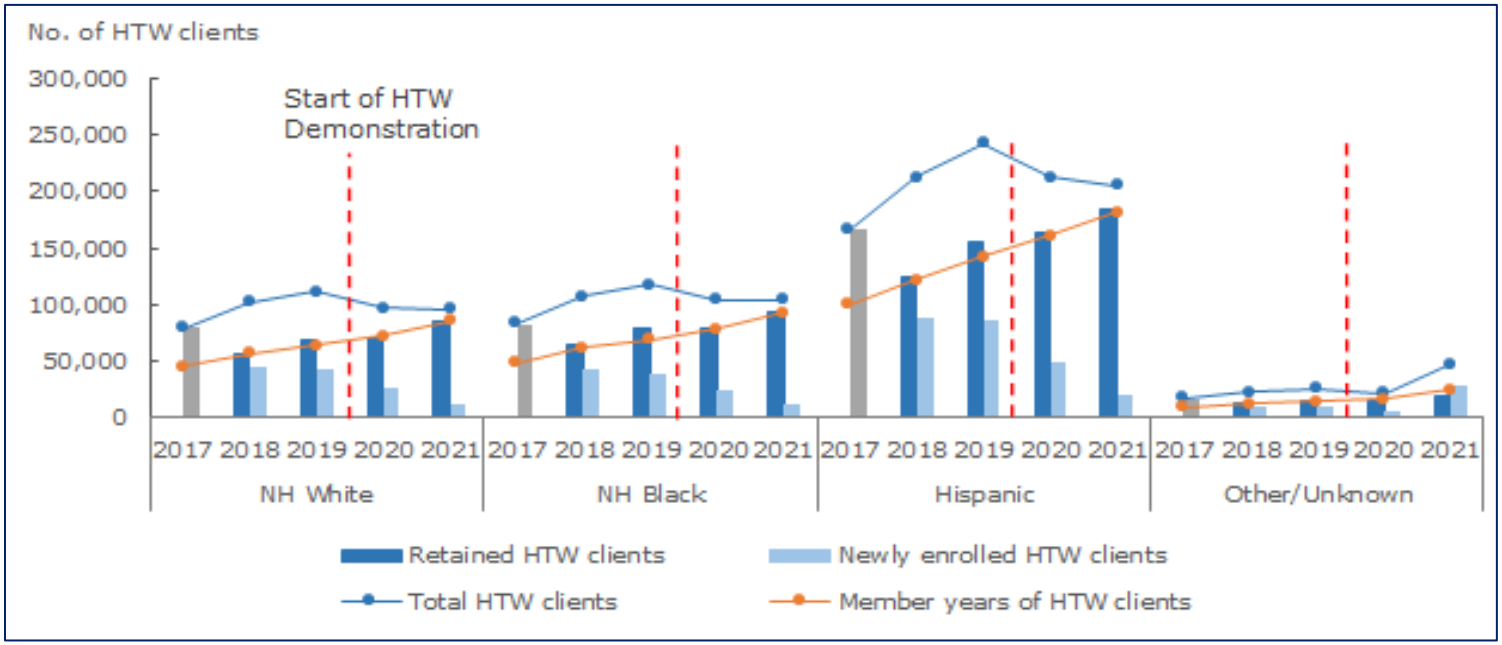
Notes. [1] HTW Clients who were enrolled in both previous and measurement years. [2] HTW Clients who were enrolled in the measurement year but not in previous year. [3] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [4] P-values are reported from Poisson regressions.

Figure 24: Trends in Unique Clients, Retained vs. New and Member Years by Age Group (Measure 1.1.1)



Notes. Dark blue bars represent HTW clients retained from the prior year, while light blue bars represent those newly enrolled. Since 2017 is the first year of data, the grey bar indicates HTW clients enrolled in 2017 regardless of their previous enrollment.

Figure 25: Trends in Unique Clients, Retained vs. New and Member Years: By Race and Ethnicity (Measure 1.1.1)



Notes. Dark blue bars represent HTW clients retained from the prior year, while light blue bars represent those newly enrolled. Since 2017 is the first year of data, the grey bar indicates HTW clients enrolled in 2017 regardless of their previous enrollment.

Table 33: Unique Clients, Retained vs. New and Member Years: By Texas Public Health Region (Measure 1.1.1)

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
1	2017	N/A	12,924	12,924	7,589
	2018	9,210	6,713	15,923	9,106
	2019	11,498	6,357	17,855	10,353
	2020	11,895	3,308	15,203	11,502
	2021	12,924	1,647	14,571	12,997
	Annual Pre-HTW Demonstration Average (2017-2019)	10,354	6,535	15,567	9,016
	Annual Post-HTW Demonstration Average (2020-2021)	12,410	2,478	14,887	12,249
	Pre/Post Difference in Ns or Percentage Points	2,056	-4,058	-680	3,233
	% Change[3]	19.9%	-62.1%	-4.4%	35.9%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
2	2017		7,072	7,072	4,126
	2018	4,900	3,690	8,590	4,753
	2019	6,067	3,683	9,750	5,566
	2020	6,322	1,849	8,171	6,153
	2021	6,775	908	7,683	6,874
	Annual Pre-HTW Demonstration Average (2017-2019)	5,484	3,687	8,471	4,815
	Annual Post-HTW Demonstration	6,549	1,379	7,927	6,513

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Average (2020-2021)				
	Pre/Post Difference in Ns or Percentage Points	1,065	-2,308	-544	1,698
	% Change[3]	19.4%	-62.6%	-6.4%	35.3%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
3	2017	N/A	68,931	68,931	39,545
	2018	50,420	41,667	92,087	52,049
	2019	65,849	40,704	106,553	61,677
	2020	69,530	24,138	93,668	70,257
	2021	78,428	11,372	89,800	80,363
	Annual Pre-HTW Demonstration Average (2017-2019)	58,135	41,186	89,190	51,091
	Annual Post-HTW Demonstration Average (2020-2021)	73,979	17,755	91,734	75,310
	Pre/Post Difference in Ns or Percentage Points	15,845	-23,431	2,544	24,220
	% Change[3]	27.3%	-56.9%	2.9%	47.4%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
4	2017	N/A	16,098	16,098	9,456
	2018	11,744	8,726	20,470	11,827
	2019	14,825	8,253	23,078	13,528
	2020	15,330	4,652	19,982	15,139
	2021	16,798	2,286	19,084	17,064

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Annual Pre-HTW Demonstration Average (2017-2019)	13,285	8,490	19,882	11,604
	Annual Post-HTW Demonstration Average (2020-2021)	16,064	3,469	19,533	16,102
	Pre/Post Difference in Ns or Percentage Points	2,780	-5,021	-349	4,498
	% Change[3]	20.9%	-59.1%	-1.8%	38.8%
	p-value[4]	<0.001	<0.001	0.007	<0.001
5	2017	N/A	12,944	12,944	7,885
	2018	9,986	6,601	16,587	9,448
	2019	11,720	5,849	17,569	10,391
	2020	11,807	3,300	15,107	11,467
	2021	12,810	1,566	14,376	12,809
	Annual Pre-HTW Demonstration Average (2017-2019)	10,853	6,225	15,700	9,241
	Annual Post-HTW Demonstration Average (2020-2021)	12,309	2,433	14,742	12,138
	Pre/Post Difference in Ns or Percentage Points	1,456	-3,792	-959	2,897
	% Change[3]	13.4%	-60.9%	-6.1%	31.3%
	p-value[4]	<0.001	<0.001	<0.001	<0.001

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
6	2017	N/A	84,646	84,646	50,862
	2018	68,154	46,427	114,581	64,840
	2019	79,763	42,755	122,518	72,026
	2020	82,386	27,245	109,631	82,700
	2021	94,644	13,239	107,883	96,433
	Annual Pre-HTW Demonstration Average (2017-2019)	73,959	44,591	107,248	62,576
	Annual Post-HTW Demonstration Average (2020-2021)	88,515	20,242	108,757	89,567
	Pre/Post Difference in Ns or Percentage Points	14,557	-24,349	1,509	26,990
	% Change[3]	19.7%	-54.6%	1.4%	43.1%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
7	2017	N/A	32,970	32,970	19,247
	2018	23,421	17,621	41,042	23,409
	2019	29,214	16,984	46,198	26,668
	2020	30,352	9,940	40,292	30,585
	2021	34,272	4,570	38,842	35,022
	Annual Pre-HTW Demonstration Average (2017-2019)	26,318	17,303	40,070	23,108
	Annual Post-HTW Demonstration Average (2020-2021)	32,312	7,255	39,567	32,804

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Pre/Post Difference in Ns or Percentage Points	5,995	-10,048	-503	9,695
	% Change[3]	22.8%	-58.1%	-1.3%	42.0%
	p-value[4]	<0.001	<0.001	0.006	<0.001
8	2017	N/A	40,164	40,164	23,611
	2018	28,876	21,452	50,328	28,711
	2019	36,719	20,578	57,297	33,508
	2020	38,806	11,482	50,288	38,120
	2021	41,595	4,880	46,475	41,862
	Annual Pre-HTW Demonstration Average (2017-2019)	32,798	21,015	49,263	28,610
	Annual Post-HTW Demonstration Average (2020-2021)	40,201	8,181	48,382	39,991
	Pre/Post Difference in Ns or Percentage Points	7,403	-12,834	-882	11,381
	% Change[3]	22.6%	-61.1%	-1.8%	39.8%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
9	2017	N/A	9,022	9,022	5,303
	2018	6,234	4,821	11,055	6,073
	2019	7,748	4,959	12,707	7,266
	2020	8,208	2,909	11,117	8,226
	2021	9,245	1,241	10,486	9,317
	Annual Pre-HTW Demonstration	6,991	4,890	10,928	6,214

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Average (2017-2019)				
	Annual Post-HTW Demonstration Average (2020-2021)	8,727	2,075	10,802	8,772
	Pre/Post Difference in Ns or Percentage Points	1,736	-2,815	-127	2,557
	% Change[3]	24.8%	-57.6%	-1.2%	41.2%
	p-value[4]	<0.001	<0.001	0.184	<0.001
10	2017	N/A	14,845	14,845	8,937
	2018	10,816	7,186	18,002	10,743
	2019	13,068	6,553	19,621	11,781
	2020	13,124	3,630	16,754	12,904
	2021	13,968	1,466	15,434	14,017
	Annual Pre-HTW Demonstration Average (2017-2019)	11,942	6,870	17,489	10,487
	Annual Post-HTW Demonstration Average (2020-2021)	13,546	2,548	16,094	13,460
	Pre/Post Difference in Ns or Percentage Points	1,604	-4,322	-1,395	2,974
	% Change[3]	13.4%	-62.9%	-8.0%	28.4%
	p-value[4]	<0.001	<0.001	<0.001	<0.001
11	2017	N/A	43,581	43,581	26,356
	2018	32,544	21,465	54,009	31,151

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	2019	40,316	20,919	61,235	36,448
	2020	42,172	11,867	54,039	40,924
	2021	45,911	5,496	51,407	45,803
	Annual Pre-HTW Demonstration Average (2017-2019)	36,430	21,192	52,942	31,318
	Annual Post-HTW Demonstration Average (2020-2021)	44,042	8,682	52,723	43,363
	Pre/Post Difference in Ns or Percentage Points	7,612	-12,511	-219	12,045
	% Change[3]	20.9%	-59.0%	-0.4%	38.5%
	p-value[4]	<0.001	<0.001	0.297	<0.001
Unknown	2017	N/A	1,723	1,723	743
	2018	1,274	1,146	2,420	962
	2019	1,543	1,183	2,726	1,120
	2020	1,724	569	2,293	1,243
	2021	13,000	24,275	37,275	12,625
	Annual Pre-HTW Demonstration Average (2017-2019)	1,409	1,165	2,290	942
	Annual Post-HTW Demonstration Average (2020-2021)	7,362	12,422	19,784	6,934

Public Health Region	Year	Retained HTW Clients[1]	Newly Enrolled HTW Clients[2]	Total HTW Clients	Member Years of HTW Clients
	Pre/Post Difference in Ns or Percentage Points	5,954	11,258	17,494	5,992
	% Change[3]	422.7%	966.7%	764.1%	636.2%
	p-value[4]	<0.001	<0.001	<0.001	<0.001

Notes. [1] HTW Clients who were enrolled in both previous and measurement years. [2] HTW Clients who were enrolled in the measurement year but not in previous year. [3] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [4] P-values are reported from Poisson regressions.

Figure 26: Trends in Unique Clients, Retained vs. New and Member Years: By Texas Public Health Region (Measure 1.1.1)

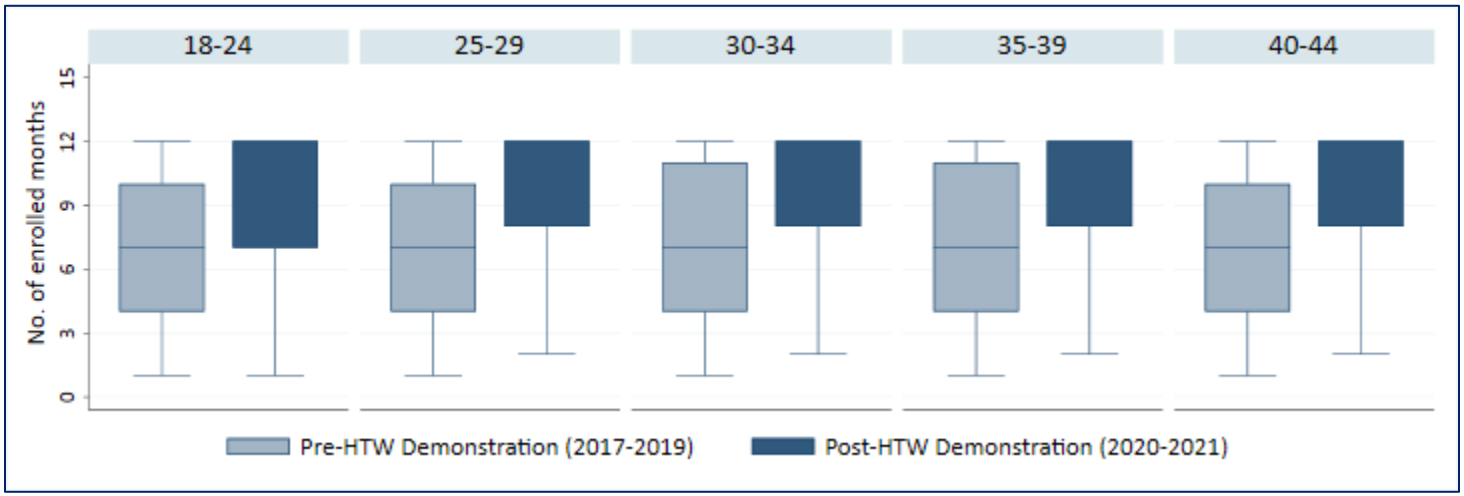
Notes. Dark blue bars represent HTW clients retained from the prior year, while light blue bars represent those newly enrolled. Since 2017 is the first year of data, the grey bar indicates HTW clients enrolled in 2017 regardless of their previous enrollment.

Table 34: Enrollment Months per Year per Client (Measure 1.1.1)

Subgroup	Median (IQR)[1]			Mean (SD)[2]		
	Pre-HTW Demonstration (2017-2019)	**Post-HTW Demonstration** (2020-2021)	**p-value[3]**	**Pre- HTW Demonstration** (2017-2019)	**Post- HTW Demonstration** (2020-2021)	**p-value[3]**
All	7 (4-10)	12 (8-12)	<0.001	7.0 (3.7)	9.6 (3.6)	<0.001
Age Group						
18-24	7 (4-10)	12 (7-12)	<0.001	6.8 (3.6)	9.4 (3.7)	<0.001
25-29	7 (4-10)	12 (8-12)	<0.001	7.0 (3.7)	9.6 (3.7)	<0.001
30-34	7 (4-11)	12 (8-12)	<0.001	7.1 (3.7)	9.7 (3.6)	<0.001
35-39	7 (4-11)	12 (8-12)	<0.001	7.2 (3.7)	9.8 (3.6)	<0.001
40-44	7 (4-10)	12 (8-12)	<0.001	6.9 (3.7)	9.7 (3.6)	<0.001
Race/ Ethnicity						
NH White	7 (4-10)	12 (8-12)	<0.001	6.8 (3.6)	9.8 (3.5)	<0.001
NH Black	7 (4-10)	12 (8-12)	<0.001	7.0 (3.7)	9.8 (3.5)	<0.001
Hispanic	7 (4-10)	12 (9-12)	<0.001	7.0 (3.7)	9.9 (3.5)	<0.001
Other/ Unknown	7 (4-10)	7 (3-12)	<0.001	6.7 (3.6)	7.2 (4.5)	<0.001
Texas Public Health Region						
1	7 (4-10)	12 (8-12)	<0.001	7.0 (3.6)	9.9 (3.5)	<0.001
2	7 (4-10)	12 (8-12)	<0.001	6.8 (3.6)	9.9 (3.5)	<0.001
3	7 (4-10)	12 (9-12)	<0.001	6.9 (3.6)	9.9 (3.5)	<0.001
4	7 (4-10)	12 (9-12)	<0.001	7.0 (3.7)	9.9 (3.4)	<0.001
5	7 (4-11)	12 (9-12)	<0.001	7.1 (3.7)	9.9 (3.5)	<0.001
6	7 (4-11)	12 (9-12)	<0.001	7.0 (3.7)	9.9 (3.4)	<0.001
7	7 (4-10)	12 (9-12)	<0.001	6.9 (3.6)	9.9 (3.4)	<0.001
8	7 (4-10)	12 (9-12)	<0.001	7.0 (3.7)	9.9 (3.4)	<0.001
9	7 (4-10)	12 (8-12)	<0.001	6.8 (3.6)	9.7 (3.5)	<0.001
10	7 (4-11)	12 (9-12)	<0.001	7.2 (3.7)	10.0 (3.4)	<0.001
11	7 (4-11)	12 (9-12)	<0.001	7.1 (3.7)	9.9 (3.5)	<0.001
Unknown	4 (3-7)	3 (2-4)	<0.001	4.9 (2.9)	4.2 (3.5)	<0.001

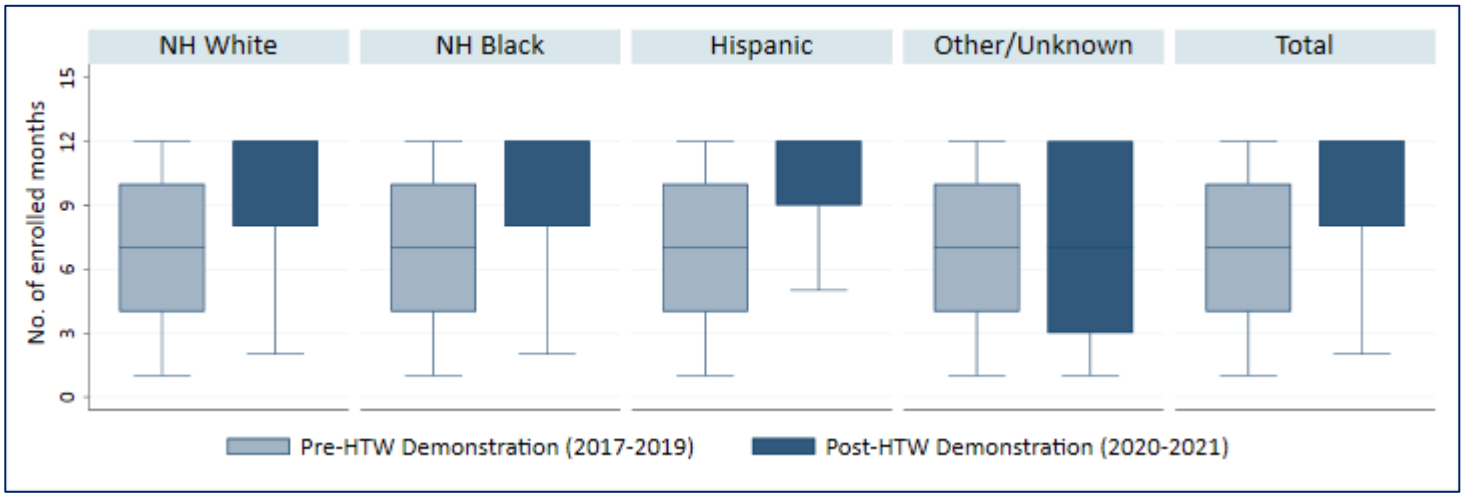
Notes. [1] IQR, interquartile range. [2] Standard deviation. [3] P-values are reported for significant differences between pre-and post-HTW Demonstration periods using Wilcoxon rank sum for median enrolled months and t-tests for mean enrolled months.

Figure 27: Enrolled Months for HTW Clients: Box Plots of Median, Interquartile Range, and Extreme Values Pre- and Post-HTW Demonstration: By Age Group (Measure 1.1.1)



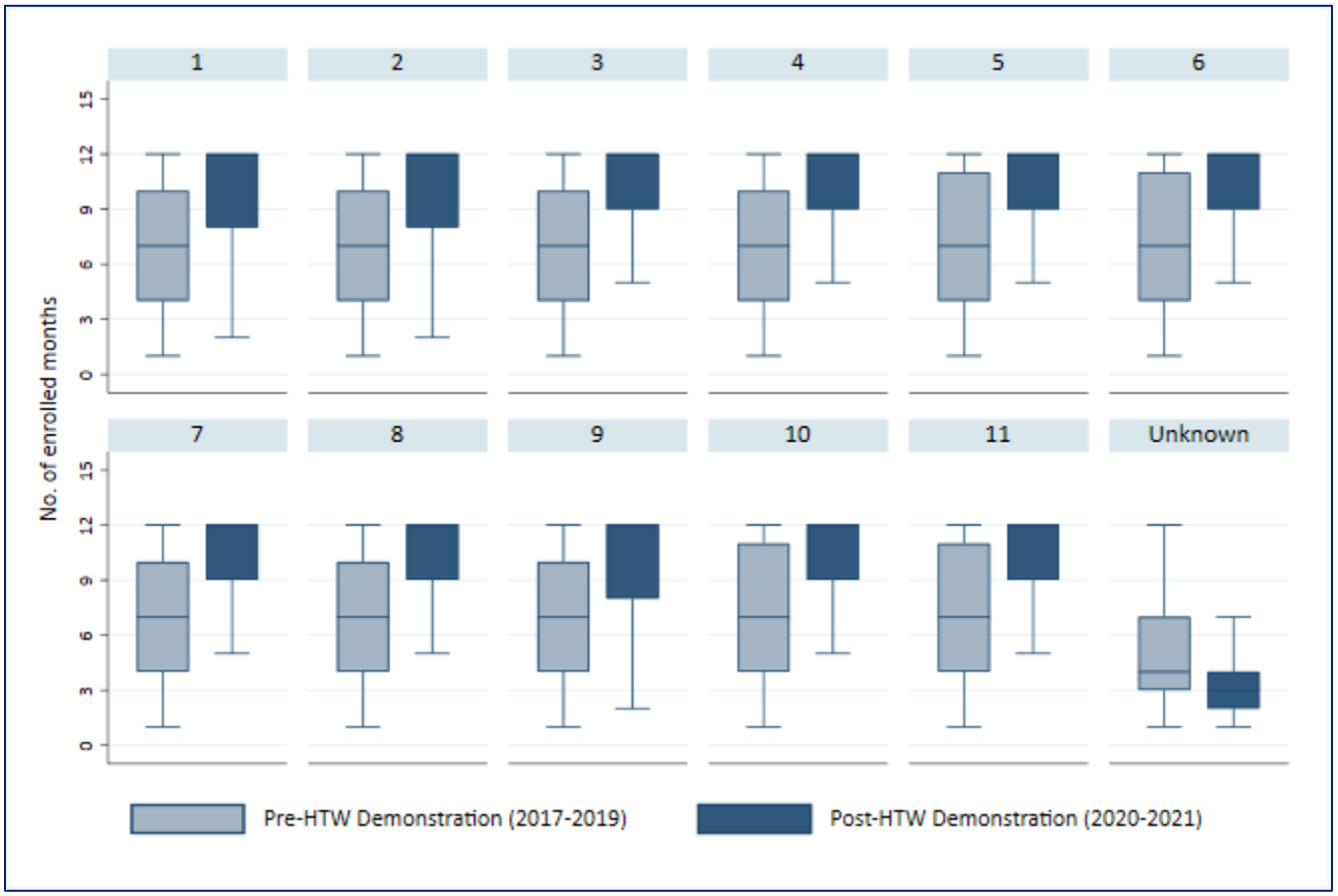
Notes. Horizontal lines inside the boxes denote medians. Bottom and top borders of the boxes denote IQR (25th and 75th quartiles). Whiskers denote a range of values. Boxplots without the 75th quartile and whiskers indicate that the median, 75th quartile, and maximum have the same value of 12 months.

Figure 28: Enrolled Months for HTW Clients: Box Plots of Median, Interquartile Range, and Extreme Values Pre- and Post-HTW Demonstration: By Race and Ethnicity (Measure 1.1.1)



Notes. Horizontal lines inside the boxes denote medians. Bottom and top borders of the boxes denote IQR (25th and 75th quartiles). Whiskers denote a range of values. Boxplots without the 75th quartile and whiskers indicate that the median, 75th quartile, and maximum have the same value of 12 months.

Figure 29: Enrolled Months for HTW Clients: Box Plots of Median, Interquartile Range, and Extreme Values Pre- and Post-HTW Demonstration: By Public Health Region (Measure 1.1.1)



Notes. Horizontal lines inside the boxes denote medians. Bottom and top borders of the boxes denote IQR (25th and 75th quartiles). Whiskers denote a range of values. Boxplots without the 75th quartile and whiskers indicate that the median, 75th quartile, and maximum have the same value of 12 months.

Table 35: Annual Proportion of HTW Clients Receiving Any Services, Medical and Prescription Services: By Age Group (Measure 1.1.2)

Age	Year	Any HTW Service	Medical Service	Prescription
18-24	2017	41.1%	37.0%	15.9%
	2018	39.8%	36.0%	15.0%
	2019	40.8%	37.2%	14.5%
	2020	45.8%	42.3%	15.5%
	2021	43.4%	40.9%	12.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	40.5%	36.8%	15.1%
	Annual Post-HTW Demonstration Average (2020-2021)	44.7%	41.7%	14.0%
	Pre/Post Difference in Ns or Percentage Points	4.1%	4.9%	-1.1%
	% Change[1]	10.2%	13.3%	-7.0%
	p-values[2]	<0.001	<0.001	<0.001
25-29	2017	39.2%	35.1%	15.8%
	2018	36.9%	33.2%	14.4%
	2019	36.8%	33.4%	13.6%
	2020	41.0%	37.8%	14.5%
	2021	41.2%	38.9%	11.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	37.5%	33.8%	14.5%
	Annual Post-HTW Demonstration Average (2020-2021)	41.1%	38.3%	13.1%
	Pre/Post Difference in Ns or Percentage Points	3.6%	4.5%	-1.4%
	% Change[1]	9.7%	13.4%	-9.4%
	p-values[2]	<0.001	<0.001	<0.001

Age	Year	Any HTW Service	Medical Service	Prescription
30-34	2017	36.9%	33.1%	13.9%
	2018	34.7%	31.3%	12.6%
	2019	35.0%	31.9%	12.2%
	2020	38.5%	35.6%	12.7%
	2021	39.0%	36.7%	10.3%
	Annual Pre-HTW Demonstration Average (2017-2019)	35.4%	32.0%	12.8%
	Annual Post-HTW Demonstration Average (2020-2021)	38.8%	36.2%	11.4%
	Pre/Post Difference in Ns or Percentage Points	3.3%	4.2%	-1.4%
	% Change[1]	9.4%	13.1%	-10.8%
	p-values[2]	<0.001	<0.001	<0.001
35-39	2017	35.6%	32.3%	11.7%
	2018	33.3%	30.4%	10.6%
	2019	33.4%	30.9%	10.0%
	2020	36.3%	33.7%	10.6%
	2021	36.6%	34.5%	9.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	33.9%	31.1%	10.7%
	Annual Post-HTW Demonstration Average (2020-2021)	36.4%	34.1%	9.8%
	Pre/Post Difference in Ns or Percentage Points	2.5%	3.1%	-0.9%
	% Change[1]	7.4%	9.8%	-8.7%
	p-values[2]	<0.001	<0.001	<0.001
40-44	2017	34.0%	31.5%	9.2%
	2018	33.1%	31.2%	8.2%

Age	Year	Any HTW Service	Medical Service	Prescription
	2019	33.8%	31.9%	8.3%
	2020	36.2%	34.3%	9.0%
	2021	36.5%	34.7%	7.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	33.6%	31.5%	8.5%
	Annual Post-HTW Demonstration Average (2020-2021)	36.4%	34.5%	8.4%
	Pre/Post Difference in Ns or Percentage Points	2.8%	3.0%	-0.1%
	% Change[1]	8.2%	9.5%	-1.5%
	p-values[2]	<0.001	<0.001	0.29

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported from Chi-square tests.

Figure 30: Annual Trends in Proportion of HTW Clients Receiving Any Services, Medical and Prescription Services: By Age Group (Measure 1.1.2)

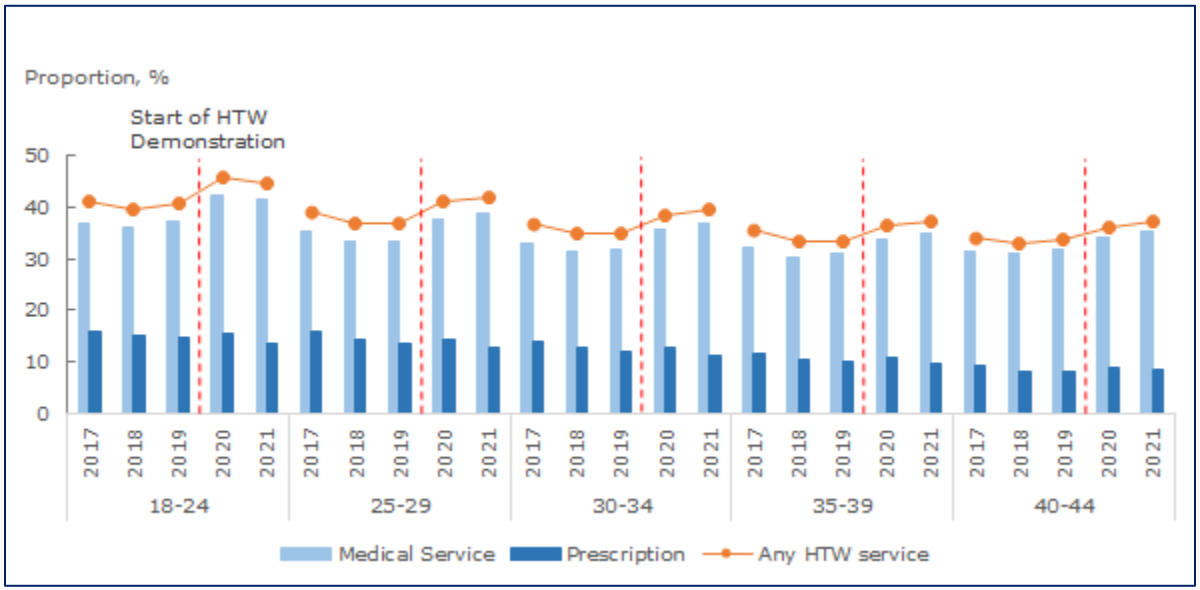


Table 36: Annual Proportion of HTW Clients Receiving Any Services, Medical Services, and Prescription Services: By Race and Ethnicity (Measure 1.1.2)

Age	Year	Any HTW Service	Medical Service	Prescription
NH White	2017	35.5%	30.8%	14.5%
	2018	33.4%	29.1%	13.0%
	2019	33.2%	29.1%	12.5%
	2020	36.5%	32.7%	12.8%
	2021	36.6%	34.0%	9.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	33.9%	29.6%	13.2%
	Annual Post-HTW Demonstration Average (2020-2021)	36.6%	33.4%	11.3%
	Pre/Post Difference in Ns or Percentage Points	2.7%	3.8%	-1.9%
	% Change[1]	7.9%	12.8%	-14.6%
	p-values[2]	<0.001	<0.001	<0.001
NH Black	2017	41.2%	38.0%	16.0%
	2018	39.0%	36.1%	14.7%
	2019	39.2%	36.4%	14.1%
	2020	42.6%	40.0%	14.7%
	2021	44.0%	41.9%	12.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	39.7%	36.7%	14.8%
	Annual Post-HTW Demonstration Average (2020-2021)	43.3%	41.0%	13.4%
	Pre/Post Difference in Ns or Percentage Points	3.6%	4.2%	-1.4%
	% Change[1]	9.2%	11.5%	-9.4%
	p-values[2]	<0.001	<0.001	<0.001

Age	Year	Any HTW Service	Medical Service	Prescription
Hispanic	2017	38.9%	35.2%	13.8%
	2018	37.2%	34.0%	12.8%
	2019	38.1%	35.1%	12.4%
	2020	42.0%	39.1%	13.0%
	2021	42.7%	40.4%	11.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	38.0%	34.7%	12.9%
	Annual Post-HTW Demonstration Average (2020-2021)	42.4%	39.8%	12.1%
	Pre/Post Difference in Ns or Percentage Points	4.4%	5.0%	-0.7%
	% Change[1]	11.5%	14.5%	-5.8%
	p-values[2]	<0.001	<0.001	<0.001
Other/ Unknown	2017	36.4%	32.4%	13.3%
	2018	33.4%	30.1%	11.5%
	2019	34.0%	30.8%	11.1%
	2020	37.2%	34.3%	12.0%
	2021	24.7%	23.2%	5.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	34.4%	31.0%	11.8%
	Annual Post-HTW Demonstration Average (2020-2021)	28.7%	26.7%	7.8%
	Pre/Post Difference in Ns or Percentage Points	-5.7%	-4.3%	-4.0%
	% Change[1]	-16.6%	-13.7%	-34.3%
	p-values[2]	<0.001	<0.001	<0.001

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported from Chi-square tests.

Figure 31: Annual Trends in Proportion of HTW Clients Receiving Any Services, Medical Services, and Prescription Services: By Race and Ethnicity (Measure 1.1.2)

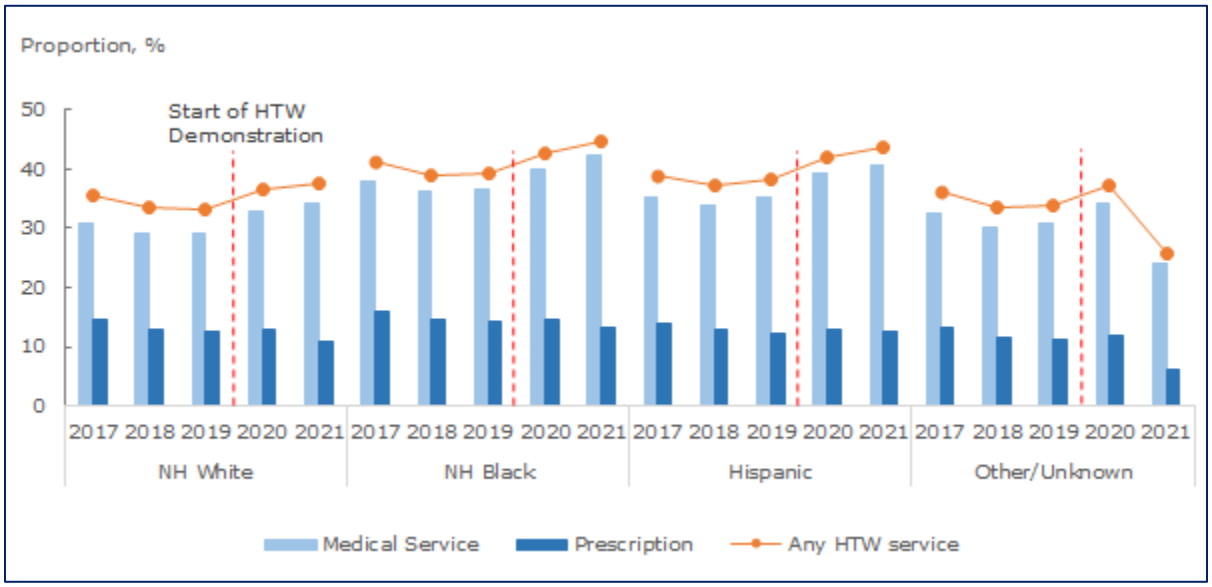


Table 37: Annual Proportion of HTW Clients Receiving Any Services, Medical Services, and Prescription Services: By Public Health Region (Measure 1.1.2)

Public Health Region	Year	Any HTW service	Medical Service	Prescription
1	2017	39.0%	34.9%	13.8%
	2018	41.1%	37.3%	12.2%
	2019	41.7%	38.2%	11.5%
	2020	45.7%	42.7%	12.3%
	2021	47.3%	44.4%	11.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	40.8%	37.0%	12.4%
	Annual Post-HTW Demonstration Average (2020-2021)	46.5%	43.5%	11.8%
	Pre/Post Difference in Ns or Percentage Points	5.7%	6.5%	-0.6%
	% Change[1]	14.1%	17.7%	-4.9%
	p-values[2]	<0.001	<0.001	0.013
2	2017	36.6%	32.0%	12.7%
	2018	37.7%	33.7%	12.1%
	2019	36.9%	32.7%	12.9%
	2020	41.5%	37.3%	13.4%
	2021	41.6%	37.9%	11.5%
	Annual Pre-HTW Demonstration Average (2017-2019)	37.1%	32.9%	12.6%
	Annual Post-HTW Demonstration Average (2020-2021)	41.5%	37.6%	12.5%

Public Health Region	Year	Any HTW service	Medical Service	Prescription
	Pre/Post Difference in Ns or Percentage Points	4.4%	4.7%	-0.1%
	% Change[1]	12.0%	14.4%	-0.8%
	p-values[2]	<0.001	<0.001	0.77
3	2017	35.1%	31.4%	13.6%
	2018	33.3%	29.9%	12.4%
	2019	34.5%	31.5%	11.8%
	2020	38.2%	35.3%	12.3%
	2021	39.9%	36.9%	10.5%
	Annual Pre-HTW Demonstration Average (2017-2019)	34.2%	30.9%	12.5%
	Annual Post-HTW Demonstration Average (2020-2021)	39.0%	36.1%	11.4%
	Pre/Post Difference in Ns or Percentage Points	4.8%	5.2%	-1.1%
	% Change[1]	14.1%	16.6%	-8.4%
	p-values[2]	<0.001	<0.001	<0.001
4	2017	42.7%	37.5%	19.6%
	2018	41.1%	36.8%	17.6%
	2019	39.2%	35.1%	16.0%
	2020	42.9%	39.1%	16.5%
	2021	44.8%	41.7%	14.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	40.8%	36.3%	17.5%

Public Health Region	Year	Any HTW service	Medical Service	Prescription
	Annual Post-HTW Demonstration Average (2020-2021)	43.8%	40.4%	15.4%
	Pre/Post Difference in Ns or Percentage Points	3.1%	4.1%	-2.2%
	% Change[1]	7.5%	11.2%	-12.3%
	p-values[2]	<0.001	<0.001	<0.001
5	2017	42.9%	38.5%	18.3%
	2018	37.1%	32.8%	15.8%
	2019	36.2%	31.8%	15.6%
	2020	40.3%	36.6%	15.8%
	2021	42.0%	38.7%	13.3%
	Annual Pre-HTW Demonstration Average (2017-2019)	38.4%	34.0%	16.4%
	Annual Post-HTW Demonstration Average (2020-2021)	41.2%	37.7%	14.6%
	Pre/Post Difference in Ns or Percentage Points	2.8%	3.7%	-1.8%
	% Change[1]	7.3%	10.8%	-11.0%
	p-values[2]	<0.001	<0.001	<0.001
6	2017	40.1%	36.5%	14.9%
	2018	36.4%	33.1%	13.6%
	2019	36.9%	33.7%	13.4%
	2020	39.8%	36.8%	13.9%
	2021	43.0%	40.3%	12.8%

Public Health Region	Year	Any HTW service	Medical Service	Prescription
	Annual Pre-HTW Demonstration Average (2017-2019)	37.6%	34.2%	13.9%
	Annual Post-HTW Demonstration Average (2020-2021)	41.4%	38.5%	13.3%
	Pre/Post Difference in Ns or Percentage Points	3.8%	4.3%	-0.5%
	% Change[1]	10.2%	12.7%	-3.7%
	p-values[2]	<0.001	<0.001	<0.001
7	2017	35.7%	31.7%	13.7%
	2018	33.4%	29.6%	12.5%
	2019	32.9%	29.5%	11.9%
	2020	38.1%	34.8%	12.7%
	2021	38.0%	34.5%	10.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	33.8%	30.1%	12.6%
	Annual Post-HTW Demonstration Average (2020-2021)	38.1%	34.7%	11.8%
	Pre/Post Difference in Ns or Percentage Points	4.2%	4.5%	-0.8%
	% Change[1]	12.4%	15.1%	-6.5%
	p-values[2]	<0.001	<0.001	<0.001
8	2017	35.3%	31.6%	14.1%
	2018	36.1%	33.0%	13.1%
	2019	36.3%	33.3%	12.5%

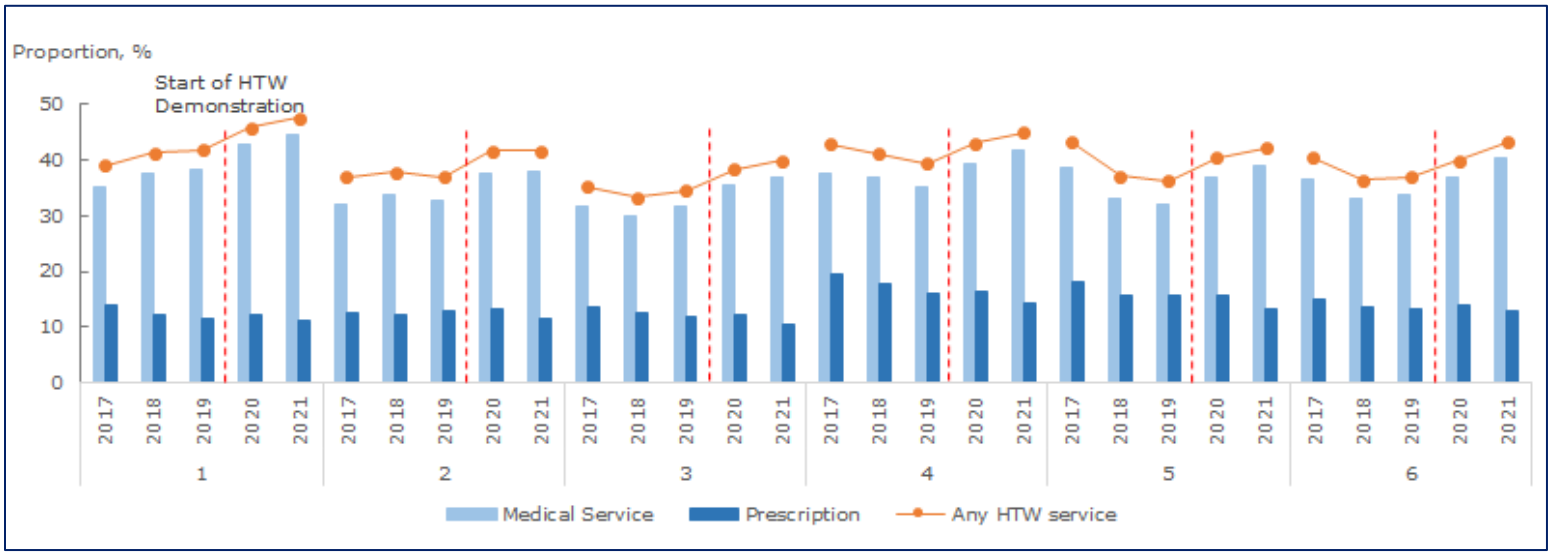
Public Health Region	Year	Any HTW service	Medical Service	Prescription
	2020	38.3%	35.3%	13.5%
	2021	37.9%	34.6%	11.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	35.9%	32.8%	13.1%
	Annual Post-HTW Demonstration Average (2020-2021)	38.1%	35.0%	12.7%
	Pre/Post Difference in Ns or Percentage Points	2.2%	2.2%	-0.4%
	% Change[1]	6.0%	6.8%	-3.4%
	p-values[2]	<0.001	<0.001	0.001
9	2017	35.1%	29.8%	14.1%
	2018	31.5%	26.8%	12.7%
	2019	32.9%	29.3%	11.0%
	2020	38.8%	35.7%	11.4%
	2021	42.4%	39.9%	11.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	33.0%	28.6%	12.4%
	Annual Post-HTW Demonstration Average (2020-2021)	40.5%	37.7%	11.2%
	Pre/Post Difference in Ns or Percentage Points	7.5%	9.1%	-1.2%
	% Change[1]	22.7%	31.9%	-9.6%
	p-values[2]	<0.001	<0.001	<0.001
10	2017	39.2%	34.1%	18.0%

Public Health Region	Year	Any HTW service	Medical Service	Prescription
	2018	40.6%	37.1%	17.3%
	2019	39.7%	36.9%	16.6%
	2020	42.1%	38.9%	18.1%
	2021	40.2%	36.4%	16.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	39.9%	36.2%	17.2%
	Annual Post-HTW Demonstration Average (2020-2021)	41.2%	37.7%	17.4%
	Pre/Post Difference in Ns or Percentage Points	1.3%	1.5%	0.2%
	% Change[1]	3.3%	4.2%	1.3%
	p-values[2]	<0.001	<0.001	0.39
11	2017	44.5%	41.7%	12.1%
	2018	42.5%	39.9%	11.5%
	2019	44.4%	41.7%	11.5%
	2020	49.4%	47.1%	11.9%
	2021	48.5%	45.7%	11.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	43.8%	41.1%	11.6%
	Annual Post-HTW Demonstration Average (2020-2021)	49.0%	46.4%	11.4%
	Pre/Post Difference in Ns or Percentage Points	5.2%	5.3%	-0.2%
	% Change[1]	11.8%	13.0%	-1.7%

Public Health Region	Year	Any HTW service	Medical Service	Prescription
	p-values[2]	<0.001	<0.001	0.13
Unknown	2017	25.7%	22.3%	10.0%
	2018	23.7%	20.7%	8.7%
	2019	21.9%	19.0%	8.5%
	2020	21.5%	19.2%	7.2%
	2021	26.2%	25.6%	8.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	23.5%	20.4%	8.9%
	Annual Post-HTW Demonstration Average (2020-2021)	25.9%	25.2%	8.0%
	Pre/Post Difference in Ns or Percentage Points	2.5%	4.8%	-0.9%
	% Change[1]	10.4%	23.4%	-10.1%
	p-values[2]	<0.001	<0.001	0.012

Notes. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. [2] P-values are reported from Chi-square tests.

Figure 32: Annual Trends in Proportion of HTW Clients Receiving Any Services, Medical Services, and Prescription Services: By Public Health Region (Measure 1.1.2)



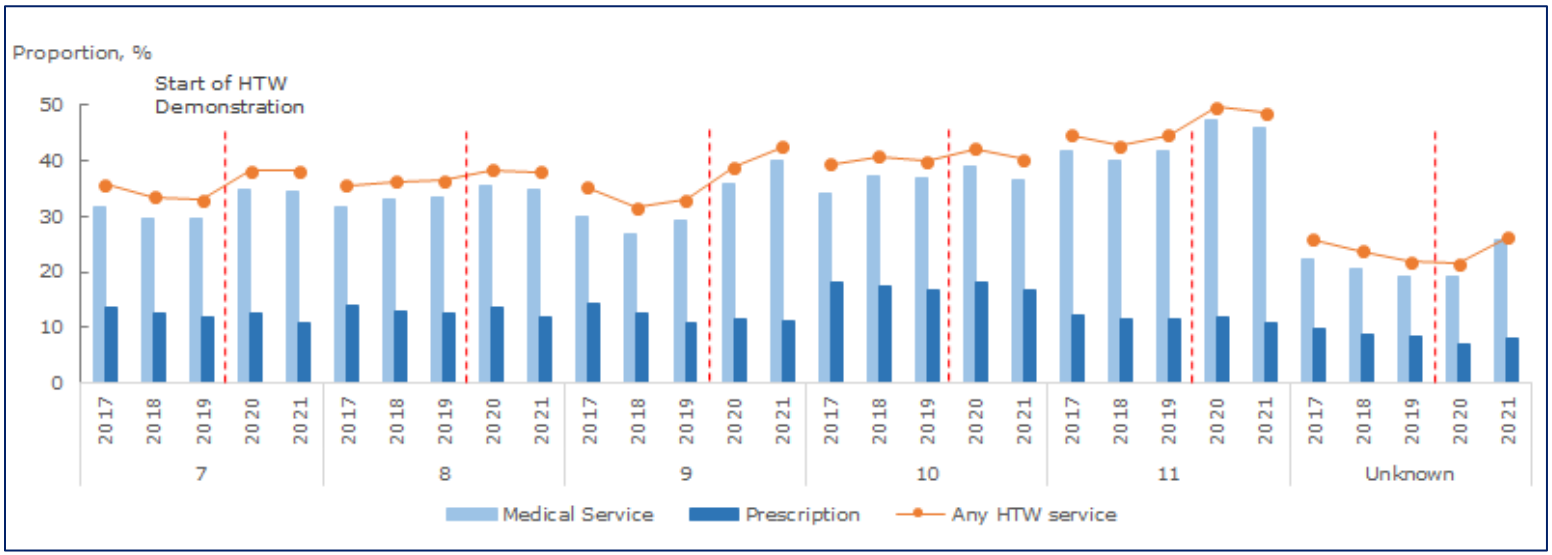


Table 38: Statewide Summary of PCP Network Adequacy (Measure 1.1.4)

	Number of Members for Whom Access Based on Distance was Calculated	Distance Standard from Two PCPs (County Type Specific)	Performance Standard Percentage	Estimated Percent of Members Within Distance Standard from Two PCPs	Variation from Standard	Absolute Change (2020-2019)
Baseline (DY 1) Statewide Summary	262,690	--	90	87	-3	--
Metro	220,709	10 Miles	90	87.5	-2.5	--
Micro	16,735	20 Miles	90	72.7	-17.3	--
Rural	25,246	30 Miles	90	92.1	2.1	--
DY 2 Statewide Summary	334,271	--	90	89.3	-0.7	2.3
Metro	286,824	10 Miles	90	90	0	2.5
Micro	20,053	20 Miles	90	75	-15	2.3
Rural	27,394	30 Miles	90	92.2	2.2	0.1

Table 39: Detailed Comparison of 2019 vs 2020 for PCP Network Adequacy Standards: By Medicaid Managed Care Service Area and County Type (Measure 1.1.4)

Medicaid MC Service Area / County Type	Baseline (DY 1) from Standard	DY 2 Variation from Standard	Absolute Change from Baseline to DY 2
Bexar	-0.4	1.7	2.1
Metro	-0.7	1.6	2.3
Micro	-9.2	-7.1	2
Rural	8.2	8.2	0.1
Dallas	-1.6	0.5	2
Metro	-1.5	0.5	2.1
Micro	N/A	N/A	N/A
Rural	-6.6	-7	-0.4

Medicaid MC Service Area / County Type	Baseline (DY 1) from Standard	DY 2 Variation from Standard	Absolute Change from Baseline to DY 2
El Paso	4.3	2.9	-1.4
Metro	4.5	2.9	-1.6
Micro	N/A	N/A	N/A
Rural	-47.1	-90	-42.9
Harris	3.1	2.2	-0.9
Metro	2.9	2.1	-0.8
Micro	10	-10.8	-20.8
Rural	10	10	0
Hidalgo	-0.4	1.9	2.3
Metro	2.9	6.4	3.5
Micro	-40.2	-62.8	-22.6
Rural	-13.5	-23.2	-9.6
Jefferson	-2.3	91.2	3.6
Metro	-0.6	7	7.6
Micro	0.9	2.6	1.8
Rural	-11.7	-19.4	-7.8
Lubbock	5.3	5.7	0.5
Metro	4.9	5.8	0.9
Micro	N/A	N/A	N/A
Rural	6.8	5.5	-1.3
MRSA Central Texas	-11.1	3.8	14.9
Metro	-15.9	4.3	20.2
Micro	-34	-5.7	28.3
Rural	3.9	4.8	0.9
MRSA Northeast Texas	-23.9	-23.4	0.4
Metro	-34	-34.1	-0.1
Micro	-24.7	-20.3	4.4
Rural	4.6	-0.7	-5.3
MRSA West Texas	-0.2	1.5	1.7

Medicaid MC Service Area / County Type	Baseline (DY 1) from Standard	DY 2 Variation from Standard	Absolute Change from Baseline to DY 2
Metro	5.7	4.9	-0.8
Micro	-13.4	-12.1	1.3
Rural	-1.9	2	3.9
Nueces	-7.8	-2.7	5.1
Metro	-11.5	-4.9	6.6
Micro	-22.4	-14.4	7.9
Rural	8.7	9.7	1
Tarrant	-11.9	-6.9	5.1
Metro	-11.9	-6.7	5.3
Micro	-11.6	-19.7	-8.1
Rural	N/A	N/A	N/A
Travis	-3.5	-0.9	2.5
Metro	-5.9	-2.7	3.2
Micro	9.4	10	0.6
Rural	10	10	0

Notes. N/A indicates "Not Applicable" due to low client enrollment numbers.

Table 40: Pharmacy Network Adequacy Standards, Proportion of HTW Clients Meeting Standards, and Changes Pre- and Post-HTW Demonstration (Measure 1.1.4)

Medicaid MC Service Area / County Type	Number of Members for Whom Access Based on Distance was Calculated	Number of Members Within Distance Standard from a Pharmacy	Distance Standard from a Pharmacy (County Type Specific)	Performance Standard Percentage	Estimated Percent of Members Within Distance Standard from a Pharmacy	Variation from Standard
Baseline (DY 1) Statewide Summary	**262,690**	**228,991**	--	--	**87.2**	--
Metro	220,709	192,493	2 Miles	80	87.2	7.2
Micro	16,735	12,637	5 Miles	75	75.5	0.5
Rural	25,246	23,861	15 Miles	90	94.5	4.5
DY 2 Statewide Summary	**334,271**	**293,033**	--	--	**87.7**	--
Metro	286,824	249,433	2 Miles	80	87	7
Micro	20,053	17,206	5 Miles	75	85.8	10.8
Rural	27,394	26,394	15 Miles	90	96.3	6.3

Table 41: Detailed Comparison of Baseline vs. DY 1 for Pharmacy Network Adequacy Standards: By Medicaid Managed Care Service Area and County Type (Measure 1.1.4)

Medicaid MC Service Area / County Type	Baseline (DY 1) Variation from Standard	DY 2 Variation from Standard	Change from Baseline to DY 1
Bexar			
Metro	9.7	9.7	0
Micro	-15.8	-14.7	1.1
Rural	9.7	9.5	-0.2
Dallas			
Metro	8.6	8.4	-0.2
Micro			0
Rural	9.4	8.3	-1.1
El Paso			
Metro	5.1	4.6	-0.5
Micro			0
Rural	-90	10	100
Harris			
Metro	12.6	11.8	-0.9
Micro	5.4	-0.8	-6.2
Rural	9.2	8.8	-0.4
Hidalgo			
Metro	-2.8	-2.5	0.2
Micro	9.3	8.9	-0.5
Rural	-6.9	6.8	13.7

Medicaid MC Service Area / County Type	Baseline (DY 1) Variation from Standard	DY 2 Variation from Standard	Change from Baseline to DY 1
Jefferson			
Metro	4.3	2.9	-1.4
Micro	-3.9	-4.5	-0.5
Rural	6.9	6.8	-0.2
Lubbock			
Metro	10.8	10	-0.8
Micro			0
Rural	8.8	-0.4	-9.2
MRSA Central Texas			
Metro	7	5.3	-1.7
Micro	30.9	31.8	0.9
Rural	8	7.7	-0.4
MRSA Northeast Texas			
Metro	-2.8	-5.2	-2.4
Micro	17.6	45	27.4
Rural	6.2	5.6	-0.7
MRSA West Texas			
Metro	6.5	5.2	-1.3
Micro	34	34.8	0.7
Rural	-2.1	4.7	6.8
Nueces			
Metro	8.4	9.7	1.2
Micro	17	18.6	1.6
Rural	8.4	9.3	0.9

Medicaid MC Service Area / County Type	Baseline (DY 1) Variation from Standard	DY 2 Variation from Standard	Change from Baseline to DY 1
Tarrant			
Metro	9.4	9.2	-0.2
Micro	-9.4	-15	-5.5
Rural			
Travis			
Metro	1.6	3	1.4
Micro	-21.4	-22.1	-0.7
Rural	4.1	6.5	2.4

Evaluation Question #2: Utilization of Family Planning Services Among HTW Clients

Table 42: Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Rates: By Age Groups, Pre- and Post-HTW Demonstration Averages and Changes (Measures 2.1.1 and 2.1.2)

Age	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
18-24	2017	20,383	5,420	26.6%	810	4.0%
	2018	21,070	6,013	28.5%	914	4.3%
	2019	22,697	7,828	34.5%	1,351	6.0%
	2020	62,053	15,933	25.7%	2,807	4.5%
	2021	72,646	14,748	20.3%	2,316	3.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	21,383	6,420	29.9%	1,025	4.8%
	Annual Post-HTW Demonstration Average (2020-2021)	67,350	15,341	23.0%	2,562	3.9%
	Pre/Post Difference in Ns or Percentage Points	45,966	8,920	-6.9%	1,537	-0.9%
	% Change[2]	--	--	-23.0%	--	-18.9%
	p-value[3]	--	--	<0.001	--	<0.001
25-29	2017	18,257	4,786	26.2%	736	4.0%

Age	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	2018	21,864	5,684	26.0%	876	4.0%
	2019	24,011	6,790	28.3%	1,175	4.9%
	2020	60,233	11,881	19.7%	2,283	3.8%
	2021	78,473	12,061	15.4%	2,287	2.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	21,377	5,753	26.8%	929	4.3%
	Annual Post-HTW Demonstration Average (2020-2021)	69,353	11,971	17.5%	2,285	3.4%
	Pre/Post Difference in Ns or Percentage Points	47,976	6,218	-9.3%	1,356	-1.0%
	% Change[2]	--	--	-34.6%	--	-22.2%
	p-value[3]	--	--	<0.001	--	<0.001
30-34	2017	13,881	3,164	22.8%	387	2.8%
	2018	17,519	3,764	21.5%	517	3.0%
	2019	19,385	4,643	24.0%	690	3.6%
	2020	49,199	8,169	16.6%	1,473	3.0%
	2021	72,482	9,317	12.9%	1,801	2.5%
	Annual Pre-HTW Demonstration Average (2017-2019)	16,928	3,857	22.7%	531	3.1%

Age	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Annual Post-HTW Demonstration Average (2020-2021)	60,841	8,743	14.7%	1,637	2.7%
	Pre/Post Difference in Ns or Percentage Points	43,912	4,886	-8.0%	1,106	-0.4%
	% Change[2]	--	--	-35.2%	--	-11.6%
	p-value[3]	--	--	<0.001	--	<0.001
35-39	2017	9,573	1,757	18.4%	178	1.9%
	2018	12,301	1,987	16.2%	252	2.0%
	2019	13,763	2,505	18.2%	322	2.3%
	2020	34,407	4,475	13.0%	730	2.1%
	2021	54,826	5,554	10.1%	959	1.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	11,879	2,083	17.6%	251	2.1%
	Annual Post-HTW Demonstration Average (2020-2021)	44,617	5,015	11.6%	845	1.9%
	Pre/Post Difference in Ns or Percentage Points	32,738	2,932	-6.0%	594	-0.1%
	% Change[2]	--	--	-34.2%	--	-7.1%

Age	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	p-value[3]	--	--	<0.001	--	0.012
40-44	2017	4,812	594	12.3%	54	1.1%
	2018	6,207	717	11.6%	90	1.4%
	2019	6,745	898	13.3%	118	1.7%
	2020	17,980	1,739	9.7%	260	1.4%
	2021	32,418	2,478	7.6%	403	1.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	5,921	736	12.4%	87	1.4%
	Annual Post-HTW Demonstration Average (2020-2021)	25,199	2,109	8.7%	332	1.3%
	Pre/Post Difference in Ns or Percentage Points	19,278	1,372	-3.7%	244	-0.1%
	% Change[2]	--	--	-30.2%	--	-6.7%
	p-value[3]	--	--	<0.001	--	<0.001

Notes. [1] HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled who were not pregnant during DY, pregnant during DY but whose pregnancy ended in first ten months, or pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 43: Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Rates: By Race and Ethnicity, Pre- and Post-HTW Demonstration Averages and Changes (Measures 2.1.1 and 2.1.2)

Race/ Ethnicity	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
NH White	2017	13,952	3,450	24.7%	410	2.9%
	2018	16,359	3,971	24.3%	549	3.4%
	2019	17,656	4,669	26.4%	756	4.3%
	2020	48,574	8,406	17.3%	1,463	3.0%
	2021	69,655	8,613	12.4%	1,480	2.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	15,989	4,030	25.1%	572	3.5%
	Annual Post-HTW Demonstration Average (2020-2021)	59,115	8,510	14.8%	1,472	2.6%
	Pre/Post Difference in Ns or Percentage Points	43,126	4,480	-10.3%	900	-1.0%
	% Change[2]	--	--	-41.0%	--	-27.1%
	p-value[3]	--	--	<0.001	--	<0.001
NH Black	2017	16,857	3,766	22.3%	432	2.6%
	2018	20,358	4,268	21.0%	464	2.3%
	2019	21,878	5,341	24.4%	636	2.9%

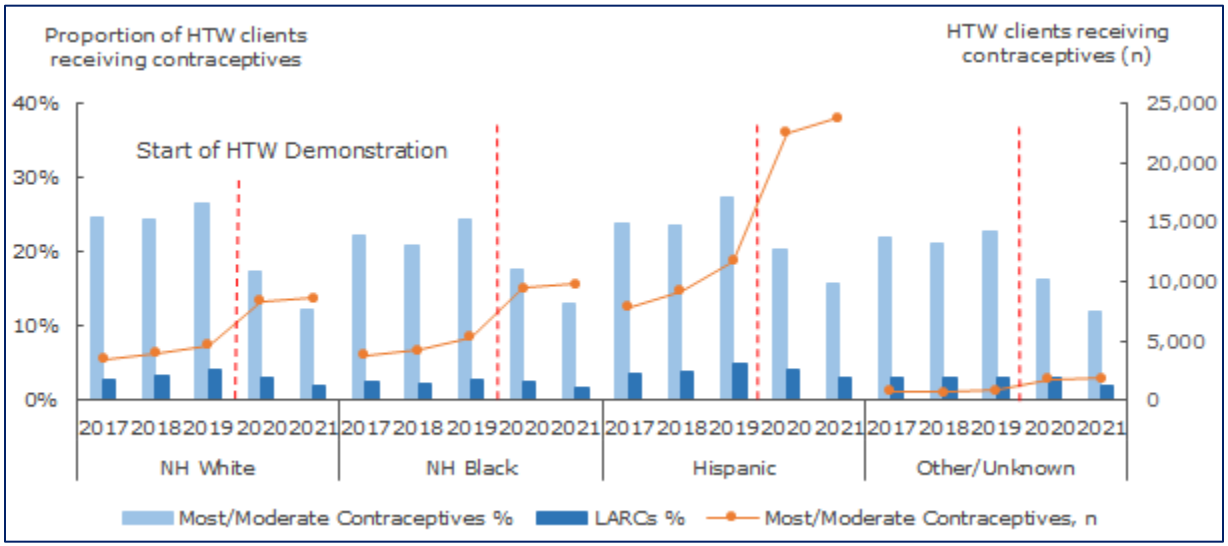
Race/ Ethnicity	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	2020	53,588	9,468	17.7%	1,298	2.4%
	2021	75,396	9,815	13.0%	1,310	1.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	19,698	4,458	22.6%	511	2.6%
	Annual Post-HTW Demonstration Average (2020-2021)	64,492	9,642	15.3%	1,304	2.1%
	Pre/Post Difference in Ns or Percentage Points	44,794	5,183	-7.2%	793	-0.5%
	% Change[2]	--	--	-32.0%	--	-19.5%
	p-value[3]	--	--	<0.001	--	<0.001
Hispanic	2017	33,039	7,835	23.7%	1,226	3.7%
	2018	38,801	9,197	23.7%	1,531	3.9%
	2019	43,216	11,775	27.2%	2,143	5.0%
	2020	110,890	22,553	20.3%	4,467	4.0%
	2021	149,835	23,808	15.9%	4,663	3.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	38,352	9,602	24.9%	1,633	4.2%

Race/ Ethnicity	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Annual Post-HTW Demonstration Average (2020-2021)	130,363	23,181	18.1%	4,565	3.6%
	Pre/Post Difference in Ns or Percentage Points	92,011	13,578	-6.8%	2,932	-0.6%
	% Change[2]	--	--	-27.2%	--	-15.1%
	p-value[3]	--	--	<0.001	--	<0.001
Other/ Unknown	2017	3,058	670	21.9%	97	3.2%
	2018	3,443	729	21.2%	105	3.0%
	2019	3,851	879	22.8%	121	3.1%
	2020	10,820	1,770	16.4%	325	3.0%
	2021	15,959	1,922	12.0%	313	2.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,451	759	22.0%	108	3.1%
	Annual Post-HTW Demonstration Average (2020-2021)	13,390	1,846	14.2%	319	2.5%
	Pre/Post Difference in Ns	9,939	1,087	-7.8%	211	-0.6%

Race/ Ethnicity	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	or Percentage Points					
	% Change[2]	--	--	-35.4%	--	-20.5%
	p-value[3]	--	--	<0.001	--	<0.001

Notes. [1] HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled who were not pregnant during DY, pregnant during DY but whose pregnancy ended in first ten months, or pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Figure 33: Trends in Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Rates: By Race and Ethnicity, Pre- and Post-HTW Demonstration (Measures 2.1.1 and 2.1.2)



Notes. HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled who were not pregnant during DY, pregnant during DY but whose pregnancy ended in first ten months, or pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. The light blue bar presents the proportion of HTW clients who received a MEME contraception in DY. The dark blue bar presents the proportion of HTW clients receiving a long-acting reversible method of contraception (LARC). The solid line shows the total number of unduplicated HTW clients receiving a MEME contraception in DY.

Table 44: Most Effective/ Moderately Effective (MEME) Contraceptives and Long-Acting Reversible Contraceptives (LARCs) Rates: By Public Health Regions (PHR), Pre- and Post-HTW Demonstration Averages and Changes (Measures 2.1.1 and 2.1.2)

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
1	2017	2,057	519	25.2%	65	3.2%
	2018	2,799	650	23.2%	87	3.1%
	2019	3,033	881	29.0%	119	3.9%
	2020	7,972	1,738	21.8%	297	3.7%
	2021	10,632	1,680	15.8%	274	2.6%
	Annual Pre-HTW Demonstration Average (2017-2019)	2,630	683	25.8%	90	3.4%
	Annual Post-HTW Demonstration Average (2020-2021)	9,302	1,709	18.8%	286	3.2%
	Pre/Post Difference in Ns or Percentage Points	6,672	1,026	-7.0%	195	-0.2%
	% Change[2]	--	--	-27.2%	--	-7.2%
	p-value[3]	--	--	<0.001	--	0.121
2	2017	1,101	274	24.9%	25	2.3%
	2018	1,337	281	21.0%	38	2.8%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	2019	1,497	409	27.3%	56	3.7%
	2020	4,260	787	18.5%	131	3.1%
	2021	5,626	777	13.8%	120	2.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	1,312	321	24.4%	40	3.0%
	Annual Post-HTW Demonstration Average (2020-2021)	4,943	782	16.1%	126	2.6%
	Pre/Post Difference in Ns or Percentage Points	3,631	461	-8.3%	86	-0.3%
	% Change[2]	--	--	-33.9%	--	-11.8%
	p-value[3]	--	--	<0.001	--	0.111
3	2017	10,369	2,331	22.5%	363	3.5%
	2018	15,368	3,009	19.6%	529	3.4%
	2019	17,416	3,864	22.2%	708	4.1%
	2020	47,385	7,599	16.0%	1,443	3.0%
	2021	65,933	7,191	10.9%	1,324	2.0%
	Annual Pre-HTW Demonstration	14,384	3,068	21.4%	533	3.7%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Average (2017-2019)					
	Annual Post-HTW Demonstration Average (2020-2021)	56,659	7,395	13.5%	1,384	2.5%
	Pre/Post Difference in Ns or Percentage Points	42,275	4,327	-7.9%	850	-1.1%
	% Change[2]	--	--	-37.1%	--	-31.1%
	p-value[3]	--	--	<0.001	--	<0.001
4	2017	2,785	964	34.6%	94	3.4%
	2018	3,837	1,212	31.6%	129	3.4%
	2019	4,233	1,342	31.7%	169	4.0%
	2020	10,503	2,215	21.1%	324	3.1%
	2021	14,000	2,022	14.4%	285	2.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,618	1,173	32.6%	131	3.6%
	Annual Post-HTW Demonstration Average (2020-2021)	12,252	2,119	17.8%	305	2.6%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Pre/Post Difference in Ns or Percentage Points	8,633	946	-14.9%	174	-1.0%
	% Change[2]	--	--	-45.6%	--	-28.4%
	p-value[3]	--	--	<0.001	--	<0.001
5	2017	3,210	762	23.7%	58	1.8%
	2018	3,220	788	24.5%	68	2.1%
	2019	3,339	947	28.4%	94	2.8%
	2020	7,899	1,520	19.2%	197	2.5%
	2021	10,442	1,404	13.4%	180	1.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,256	832	25.5%	73	2.2%
	Annual Post-HTW Demonstration Average (2020-2021)	9,171	1,462	16.3%	189	2.1%
	Pre/Post Difference in Ns or Percentage Points	5,914	630	-9.2%	115	-0.1%
	% Change[2]	--	--	-36.0%	--	-6.0%
	p-value[3]	--	--	<0.001	--	0.277

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
6	2017	21,431	4,417	20.6%	639	3.0%
	2018	20,906	4,602	22.0%	638	3.1%
	2019	22,073	5,521	25.0%	855	3.9%
	2020	55,565	9,751	17.5%	1,712	3.1%
	2021	79,152	10,282	13.0%	1,773	2.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	21,470	4,847	22.5%	--	3.3%
	Annual Post-HTW Demonstration Average (2020-2021)	67,359	10,017	15.3%	--	2.7%
	Pre/Post Difference in Ns or Percentage Points	45,889	5,170	-7.3%	--	-0.6%
	% Change[2]	--	--	-32.3%	--	-19.4%
	p-value[3]	--	--	<0.001	--	<0.001
7	2017	5,471	1,392	25.4%	171	3.1%
	2018	6,868	1,561	22.7%	217	3.2%
	2019	7,509	1,856	24.7%	272	3.6%
	2020	20,919	3,464	16.6%	696	3.3%
	2021	28,954	3,351	11.6%	666	2.3%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Annual Pre-HTW Demonstration Average (2017-2019)	6,616	1,603	24.3%	220	3.3%
	Annual Post-HTW Demonstration Average (2020-2021)	24,937	3,408	14.1%	681	2.8%
	Pre/Post Difference in Ns or Percentage Points	18,321	1,805	-10.2%	461	-0.5%
	% Change[2]	--	--	-42.1%	--	-14.8%
	p-value[3]	--	--	<0.001	--	<0.001
8	2017	6,754	1,942	28.8%	359	5.3%
	2018	8,907	2,397	26.9%	453	5.1%
	2019	10,157	2,782	27.4%	580	5.7%
	2020	26,299	4,922	18.7%	1,027	3.9%
	2021	34,504	4,657	13.5%	954	2.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	8,606	2,374	27.7%	464	5.4%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Annual Post-HTW Demonstration Average (2020-2021)	30,402	4,790	16.1%	991	3.3%
	Pre/Post Difference in Ns or Percentage Points	21,796	2,416	-11.6%	527	-2.0%
	% Change[2]	--	--	-41.8%	--	-37.9%
	p-value[3]	--	--	<0.001	--	<0.001
9	2017	1,344	334	24.9%	31	2.3%
	2018	1,685	396	23.5%	39	2.3%
	2019	1,914	462	24.1%	58	3.0%
	2020	5,451	910	16.7%	192	3.5%
	2021	7,632	1,002	13.1%	206	2.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	1,648	397	24.2%	43	2.6%
	Annual Post-HTW Demonstration Average (2020-2021)	6,542	956	14.9%	199	3.1%
	Pre/Post Difference in Ns	4,894	559	-9.3%	156	0.6%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	or Percentage Points					
	% Change[2]	--	--	-38.3%	--	22.0%
	p-value[3]	--	--	<0.001	--	0.107
10	2017	2,855	1,033	36.2%	157	5.5%
	2018	3,749	1,258	33.6%	215	5.7%
	2019	4,045	1,327	32.8%	325	8.0%
	2020	9,145	1,988	21.7%	455	5.0%
	2021	11,819	1,931	16.3%	451	3.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,550	1,206	34.2%	232	6.4%
	Annual Post-HTW Demonstration Average (2020-2021)	10,482	1,960	19.0%	453	4.4%
	Pre/Post Difference in Ns or Percentage Points	6,932	754	-15.1%	221	-2.0%
	% Change[2]	--	--	-44.3%	--	-31.6%
	p-value[3]	--	--	<0.001	--	<0.001
11	2017	9,474	1,741	18.4%	201	2.1%
	2018	10,241	1,999	19.5%	236	2.3%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	2019	11,350	3,267	28.8%	418	3.7%
	2020	28,200	7,280	25.8%	1,074	3.8%
	2021	37,728	7,656	20.3%	1,110	2.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	10,355	2,336	22.2%	285	2.7%
	Annual Post-HTW Demonstration Average (2020-2021)	32,964	7,468	23.1%	1,092	3.4%
	Pre/Post Difference in Ns or Percentage Points	22,609	5,132	0.8%	807	0.7%
	% Change[2]	--	--	3.7%	--	24.9%
	p-value[3]	--	--	0.731	--	<0.001
Unknown	2017	55	12	21.8%	2	3.6%
	2018	44	12	27.3%	0	0.0%
	2019	35	6	17.1%	2	5.7%
	2020	274	23	8.4%	5	1.8%
	2021	4,423	2,205	49.9%	423	9.6%
	Annual Pre-HTW Demonstration	45	10	22.1%	1	3.1%

Public Health Region	Year	Eligible Population[1]	Most Effective/ Moderately Effective Contraceptives	% Most Effective/ Moderately Effective Contraceptives	Long-acting Reversible Contraceptives	% Long-acting Reversible Contraceptives
	Average (2017-2019)					
	Annual Post-HTW Demonstration Average (2020-2021)	2,349	1,114	29.1%	214	5.7%
	Pre/Post Difference in Ns or Percentage Points	2,304	1,104	7.0%	213	2.6%
	% Change[2]	--	--	31.9%	--	82.7%
	p-value[3]	--	--	<0.001	--	0.014

Notes. [1] HTW clients aged 18 to 44 at the end of the demonstration year (DY) and continuously enrolled who were not pregnant during DY, pregnant during DY but whose pregnancy ended in first ten months, or pregnant during DY but whose pregnancy ended in ectopic pregnancy, stillbirth, miscarriage, or induced abortion are included. HTW clients who were infertile, had a live birth in the last two months of DY, or were still pregnant at the end of DY are excluded. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 45: Chlamydia Screening Rates: By Age, Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

Age	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
20	2017	2,994	2,110	70.5%
	2018	3,212	2,238	69.7%
	2019	3,588	2,505	69.8%
	2020	4,932	3,180	64.5%
	2021	4,476	2,981	66.6%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,265	2,284	70.0%
	Annual Post-HTW Demonstration Average (2020-2021)	4,704	3,081	65.5%
	Pre/Post Difference in Ns or Percentage Points	1,439	796	-4.5%
	% Change[2]	--	--	-6.4%
	p-value[3]	--	--	<0.001
21	2017	4,744	3,193	67.3%
	2018	5,247	3,490	66.5%
	2019	5,497	3,628	66.0%
	2020	6,499	4,261	65.6%
	2021	5,700	3,855	67.6%
	Annual Pre-HTW Demonstration Average (2017-2019)	5,163	3,437	66.6%
	Annual Post-HTW Demonstration Average (2020-2021)	6,100	4,058	66.6%
	Pre/Post Difference in Ns or Percentage Points	937	621	0.0%

Age	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	% Change[2]	--	--	0.0%
	p-value[3]	--	--	0.938
22	2017	4,691	3,206	68.3%
	2018	4,977	3,313	66.6%
	2019	5,521	3,700	67.0%
	2020	6,436	4,159	64.6%
	2021	5,720	3,830	67.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	5,063	3,406	67.3%
	Annual Post-HTW Demonstration Average (2020-2021)	6,078	3,995	65.8%
	Pre/Post Difference in Ns or Percentage Points	1,015	588	-1.5%
	% Change[2]	--	--	-2.3%
	p-value[3]	--	--	0.007
23	2017	4,852	3,296	67.9%
	2018	4,992	3,319	66.5%
	2019	5,287	3,467	65.6%
	2020	6,343	4,050	63.8%
	2021	5,397	3,606	66.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	5,044	3,361	66.7%
	Annual Post-HTW Demonstration Average (2020-2021)	5,870	3,828	65.3%
	Pre/Post Difference in Ns or Percentage Points	826	467	-1.3%
	% Change[2]	--	--	-2.0%

Age	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	p-value[4]	--	--	0.015
24	2017	1,438	879	61.1%
	2018	1,499	890	59.4%
	2019	1,522	895	58.8%
	2020	1,101	745	67.7%
	2021	713	470	65.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	1,486	888	59.8%
	Annual Post-HTW Demonstration Average (2020-2021)	907	608	66.8%
	Pre/Post Difference in Ns or Percentage Points	-579	-281	7.0%
	% Change[2]	--	--	11.8%
	p-value[3]	--	--	<0.001

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled are included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre-and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. Percent Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 46: Chlamydia Screening Rates: By Race and Ethnicity, Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

Race/ Ethnicity	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
NH White	2017	3,147	1,825	58.0%
	2018	3,357	1,981	59.0%
	2019	3,555	2,066	58.1%
	2020	4,099	2,305	56.2%
	2021	3,231	1,930	59.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,353	1,957	58.4%
	Annual Post-HTW Demonstration Average (2020-2021)	3,665	2,118	58.0%
	Pre/Post Difference in Ns or Percentage Points	312	160	-0.4%
	% Change[2]	--	--	-0.7%
	p-value[3]	--	--	0.429
NH Black	2017	4,800	3,457	72.0%
	2018	4,926	3,427	69.6%
	2019	5,035	3,479	69.1%
	2020	6,164	4,219	68.4%
	2021	5,416	3,762	69.5%
	Annual Pre-HTW Demonstration Average (2017-2019)	4,920	3,454	70.2%
	Annual Post-HTW Demonstration Average (2020-2021)	5,790	3,991	69.0%

Race/ Ethnicity	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	Pre/Post Difference in Ns or Percentage Points	870	536	-1.3%
	% Change[2]	--	--	-1.8%
	p-value[3]	--	--	0.024
Hispanic	2017	9,970	6,877	69.0%
	2018	10,784	7,295	67.6%
	2019	11,842	8,013	67.7%
	2020	13,877	9,106	65.6%
	2021	11,842	8,035	67.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	10,865	7,395	68.1%
	Annual Post-HTW Demonstration Average (2020-2021)	12,860	8,571	66.7%
	Pre/Post Difference in Ns or Percentage Points	1,994	1,176	-1.4%
	% Change[2]	---	---	-2.0%
	p-value[3]	---	---	<0.001
Other/ Unknown	2017	803	526	65.5%
	2018	860	547	63.6%
	2019	984	638	64.8%
	2020	1,171	765	65.3%
	2021	1,517	1,015	66.9%
	Annual Pre-HTW Demonstration Average (2017-2019)	882	570	64.6%
	Annual Post-HTW Demonstration Average (2020-2021)	1,344	890	66.1%

Race/ Ethnicity	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	Pre/Post Difference in Ns or Percentage Points	462	320	1.5%
	% Change[2]	--	--	2.3%
	p-value[3]	--	--	0.225

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled are included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre-and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 47: Chlamydia Screening Rates: By Texas Public Health Region (PHR), Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
1	2017	594	356	59.9%
	2018	713	447	62.7%
	2019	807	513	63.6%
	2020	925	534	57.7%
	2021	814	484	59.5%
	Annual Pre-HTW Demonstration Average (2017-2019)	705	439	62.1%
	Annual Post-HTW Demonstration Average (2020-2021)	870	509	58.6%
	Pre/Post Difference in Ns or Percentage Points	165	70	-3.5%
	% Change[2]	--	--	-5.6%
	p-value[3]	--	--	0.019
2	2017	330	100	30.3%
	2018	396	189	47.7%
	2019	389	195	50.1%

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	2020	441	226	51.2%
	2021	326	177	54.3%
	Annual Pre-HTW Demonstration Average (2017-2019)	372	161	42.7%
	Annual Post-HTW Demonstration Average (2020-2021)	384	202	52.8%
	Pre/Post Difference in Ns or Percentage Points	12	40	10.1%
	% Change[2]	--	--	23.5%
	p-value[3]	--	--	<0.001
3	2017	3,020	1,498	49.6%
	2018	3,472	1,754	50.5%
	2019	3,866	2,058	53.2%
	2020	4,577	2,307	50.4%
	2021	3,554	1,746	49.1%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,453	1,770	51.1%
	Annual Post-HTW Demonstration Average (2020-2021)	4,066	2,027	49.8%
	Pre/Post Difference in Ns or Percentage Points	613	257	-1.4%
	% Change[2]	--	--	-2.6%
	p-value[3]	--	--	0.056
4	2017	850	541	63.6%
	2018	935	596	63.7%
	2019	1,015	614	60.5%
	2020	1,256	805	64.1%
	2021	849	593	69.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	933	584	62.6%
	Annual Post-HTW Demonstration Average (2020-2021)	1,053	699	67.0%

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	Pre/Post Difference in Ns or Percentage Points	119	115	4.3%
	% Change[2]	--	--	6.9%
	p-value[3]	--	--	0.005
5	2017	752	535	71.1%
	2018	781	541	69.3%
	2019	765	533	69.7%
	2020	810	520	64.2%
	2021	665	452	68.0%
	Annual Pre-HTW Demonstration Average (2017-2019)	766	536	70.0%
	Annual Post-HTW Demonstration Average (2020-2021)	738	486	66.1%
	Pre/Post Difference in Ns or Percentage Points	-29	-50	-3.9%
	% Change[2]	--	--	-5.6%
	p-value[3]	--	--	0.008
6	2017	5,382	4,065	75.5%
	2018	5,045	3,561	70.6%
	2019	5,282	3,717	70.4%
	2020	6,421	4,454	69.4%
	2021	5,689	4,134	72.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	5,236	3,781	72.2%
	Annual Post-HTW Demonstration Average (2020-2021)	6,055	4,294	71.0%
	Pre/Post Difference in Ns or Percentage Points	819	513	-1.1%
	%% Change[2]	--	--	-1.6%
	p-value[3]	--	--	0.018
7	2017	1,417	927	65.4%

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	2018	1,512	1,004	66.4%
	2019	1,589	995	62.6%
	2020	2,147	1,341	62.5%
	2021	1,660	1,016	61.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	1,506	975	64.8%
	Annual Post-HTW Demonstration Average (2020-2021)	1,904	1,179	61.8%
	Pre/Post Difference in Ns or Percentage Points	398	203	-3.0%
	% Change[2]	--	--	-4.6%
	p-value[3]	--	--	0.007
8	2017	1,697	1,066	62.8%
	2018	2,072	1,345	64.9%
	2019	2,171	1,402	64.6%
	2020	2,523	1,646	65.2%
	2021	1,844	1,220	66.2%
	Annual Pre-HTW Demonstration Average (2017-2019)	1,980	1,271	64.1%
	Annual Post-HTW Demonstration Average (2020-2021)	2,184	1,433	65.7%
	Pre/Post Difference in Ns or Percentage Points	204	162	1.6%
	% Change[2]	--	--	2.5%
	p-value[3]	--	--	0.131
9	2017	346	181	52.3%
	2018	362	215	59.4%
	2019	478	253	52.9%
	2020	510	274	53.7%
	2021	435	255	58.6%

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	Annual Pre-HTW Demonstration Average (2017-2019)	395	216	54.9%
	Annual Post-HTW Demonstration Average (2020-2021)	473	265	56.2%
	Pre/Post Difference in Ns or Percentage Points	77	48	1.3%
	% Change[2]	--	--	2.4%
	p-value[3]	--	--	0.562
10	2017	900	616	68.4%
	2018	962	659	68.5%
	2019	967	677	70.0%
	2020	1,008	713	70.7%
	2021	668	473	70.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	943	651	69.0%
	Annual Post-HTW Demonstration Average (2020-2021)	838	593	70.8%
	Pre/Post Difference in Ns or Percentage Points	-105	-58	1.8%
	% Change[2]	--	--	2.6%
	p-value[3]	--	--	0.213
11	2017	3,415	2,790	81.7%
	2018	3,645	2,917	80.0%
	2019	4,061	3,229	79.5%
	2020	4,675	3,565	76.3%
	2021	4,224	3,288	77.8%
	Annual Pre-HTW Demonstration Average (2017-2019)	3,707	2,979	80.4%
	Annual Post-HTW Demonstration Average (2020-2021)	4,450	3,427	77.0%
	Pre/Post Difference in Ns or Percentage Points	743	448	-3.4%

PHR	Year	Eligible Population[1]	Chlamydia Screening (N)	Chlamydia Screening (%)
	% Change[2]	--	--	-4.2%
	p-value[3]	--	--	<0.001
Unknown	2017	17	10	58.8%
	2018	32	22	68.8%
	2019	26	10	38.5%
	2020	18	10	55.6%
	2021	1,278	904	70.7%
	Annual Pre-HTW Demonstration Average (2017-2019)	25	14	55.3%
	Annual Post-HTW Demonstration Average (2020-2021)	648	457	63.1%
	Pre/Post Difference in Ns or Percentage Points	623	443	7.8%
	% Change[2]	--	--	14.1%
	p-value[3]	--	--	0.008

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled are included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 48: Screening for Other Sexually Transmitted Infections: Comprehensive, Gonorrhea, and Hepatitis B: Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

Year	Eligible Population[1]	Compre-hensive Screening (N)	Compre-hensive Screening (%)	Gonorrhea Screening (N)	Gonorrhea Screening (%)	Hepatitis B Screening (N)	Hepatitis B Screening (%)
2017	12,685	1,366	11%	12,636	99.6%	1,759	13.9%
2018	13,250	1,672	13%	13,214	99.7%	1,949	14.7%
2019	14,196	1,960	14%	14,176	99.9%	2,200	15.5%
2020	16,395	2,690	16%	16,359	99.8%	2,704	16.5%
2021	14,742	2,247	15%	14,714	99.8%	2,474	16.8%
Annual Pre-HTW Demonstration Average (2017-2019)	13,377	1,666	12.4%	13,342	99.7%	1,969	14.7%
Annual Post-HTW Demonstration Average (2020-2021)	15,569	2,469	15.8%	15,537	99.8%	2,589	16.6%
Pre/Post Difference in Ns or Percentage Points	2,192	803	3.4%	2,195	0.1%	620	1.9%
% Change[2]	--	--	27.6%	--	0.1%	--	13.2%
p-value[3]	--	--	<0.001	--	0.127	--	<0.001

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) and continuously enrolled who tested for chlamydia are included. Percentages of HTW clients who were also screened for other sexually transmitted infections (STI) are reported. Comprehensive screening includes testing for multiple organisms. Any comprehensive STI screening includes testing for any of the following diseases: Gonorrhea, Hepatitis B, HIV, Syphilis, and Trichomoniasis. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that report results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 49: Screening for Other Sexually Transmitted Infections: HIV and Syphilis: Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

Year	Eligible Population[1]	HIV Screening (N)	HIV Screening (%)	Syphilis Screening (N)	Syphilis Screening (%)
2017	12,685	4,519	35.6%	5,342	42.1%
2018	13,250	4,901	37.0%	5,560	42.0%
2019	14,196	6,037	42.5%	6,059	42.7%
2020	16,395	7,712	47.0%	6,803	41.5%
2021	14,742	7,180	48.7%	6,539	44.4%
Annual Pre-HTW Demonstration Average (2017-2019)	13,377	5,152	38.4%	5,654	42.3%
Annual Post-HTW Demonstration Average (2020-2021)	15,569	7,446	47.9%	6,671	42.9%
Pre/Post Difference in Ns or Percentage Points	2,192	2,294	9.5%	1,017	0.7%
% Change[2]	--	--	24.7%	--	1.6%
p-value[3]	--	--	<0.001	--	0.117

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) continuously enrolled and were tested for chlamydia were included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 50: Screening for Other Sexually Transmitted Infections: Trichomoniasis and Any Comprehensive STI Screening: Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.1.3)

Year	Eligible Population[1]	Trichomoniasis Screening (N)	Trichomoniasis Screening (%)	Any Comprehensive STI Screening (N)	Any Comprehensive STI Screening (%)
2017	12,685	2,663	21.0%	1,921	15.1%
2018	13,250	3,431	25.9%	2,354	17.8%
2019	14,196	4,227	29.8%	2,823	19.9%
2020	16,395	5,152	31.4%	3,612	22.0%
2021	14,742	4,921	33.4%	3,167	21.5%
Annual Pre-HTW Demonstration Average (2017-2019)	13,377	3,440	25.6%	2,366	17.6%
Annual Post-HTW Demonstration Average (2020-2021)	15,569	5,037	32.4%	3,390	21.8%
Pre/Post Difference in Ns or Percentage Points	2,192	1,596	6.8%	1,024	4.2%
% Change[2]	--	--	26.8%	--	23.6%
p-value[3]	--	--	<0.001	--	<0.001

Notes. [1] HTW clients aged 21-24 at the end of the demonstration year (DY) continuously enrolled and were tested for chlamydia were included. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values were reported for statistical testing using Chi-square to compare compliance rates between pre- and post-HTW Demonstration periods. P-values were only presented in cells that reported results for the measure.

Table 51: Compliance with Cervical Cancer Screening Recommendations (Three-Year Measure: 2019-2021): By Subgroups, Pre- and Post-HTW Demonstration Averages and Changes (Measure 2.2.1)

Subgroup	Eligible Population[1]	HPV or Cervix Cytology Lab (N)	HPV or Cervix Cytology Lab (%)	P-value[2]
No. of HTW enrollees	152,553	65,817	43.1%	<0.001
Calendar Year				
2019	22,321	11,969	53.6%	<0.001
2020	40,269	19,557	48.6%	
2021	89,963	34,291	38.1%	
Age Group				
21-24	17,175	7,066	41.1%	<0.001
25-29	49,574	21,205	42.8%	
30-34	41,882	18,734	44.7%	
35-39	27,596	11,960	43.3%	
40-44	15,373	6,494	42.2%	
45+	953	358	37.6%	
Race/ Ethnicity				
NH White	19,812	11,800	59.6%	<0.001
NH Black	20,098	16,158	80.4%	
Hispanic	42,204	35,414	83.9%	
Other/ Unknown	4,622	2,445	52.9%	
Public Health Region				
1	5,035	1,542	30.6%	<0.001
2	2,676	1,019	38.1%	
3	30,557	9,987	32.7%	
4	7,575	3,825	50.5%	

Subgroup	Eligible Population[1]	HPV or Cervix Cytology Lab (N)	HPV or Cervix Cytology Lab (%)	P-value[2]
5	5,826	2,598	44.6	
6	38,778	16,479	42.5%	
7	12,700	4,941	38.9%	
8	17,608	8,361	47.5%	
9	3,571	1,350	37.8%	
10	7,197	3,974	55.2%	
11	19,324	10,639	55.1%	
Unknown	1,706	1,102	64.6%	

Notes. [1] HTW clients aged 21 or older at the end of the demonstration year (DY) and continuously enrolled during the past three years including DY, are included. HTW clients who had one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment is determined monthly), received hospice care, or had hysterectomy any time during the client's history through the end of DY are excluded. [2] P-values are reported for statistical differences across categories using Chi-Square tests.

Table 52: Compliance with Cervical Cancer Screening Recommendations (Five-Year Measure: 2021) (Measure 2.2.1) Subgroup Analysis, Pre- and Post-HTW Demonstration Averages and Changes

	Eligible Population[1]	HPV or Cervix Cytology Lab, N	HPV or Cervix Cytology Lab, %	p-value[2]
No. of HTW enrollees	11,299	6,820	60.4%	--
Age Group				
25-29	875	497	56.8%	0.005
30-34	4,579	2,726	59.5%	
35-39	3,439	2,153	62.6%	
40-44	2,186	1,320	60.4%	
45+	220	124	56.4%	
Race/ Ethnicity				
NH White	2,248	1,236	55.0%	<0.001
NH Black	2,844	1,687	59.3%	
Hispanic	5,642	3,629	64.3%	
Other/ Unknown	565	268	47.4%	
Public Health Region				
1	353	174	49.3%	<0.001
2	178	102	57.3%	
3	1,960	926	47.2%	
4	622	398	64.0%	
5	488	314	64.3%	
6	2,845	1,692	59.5%	
7	869	481	55.4%	
8	1,299	831	64.0%	
9	234	132	56.4%	
10	593	431	72.7%	
11	1,524	1,096	71.9%	
Unknown	334	243	72.8%	

Notes. [1] HTW clients aged 21 or older at the end of the demonstration year (DY) and continuously enrolled during the past five years including the DY are

included. HTW clients who had one or more gaps in HTW enrollment lasting more than 45 days (or more than one month if enrollment is determined monthly), received hospice care, or had hysterectomy any time during the client's history through the end of DY are excluded. [2] P-values are reported for statistical differences across categories using Chi-Square tests.

Evaluation Question #3: Health Outcomes

Table 53: Hypertension (HTN) Treatment Medication Adherence among Women Enrolled in HTW with Antihypertension Medication Prescription (Measure 3.1.1)

Year	HTW Clients with HTN Medication	HTW Clients with HTN Medication Adherence[1]	MY for HTW Clients with HTN Medication	MY for HTW Clients with HTN Medication Adherence[1]	Rate of HTN Medication Adherence[1]
2017	1,104	459	600	151	25.2%
2018	1,182	537	607	169	27.9%
2019	1,111	528	566	171	30.3%
2020	813	284	571	134	23.5%
2021	891	260	695	142	20.5%
Annual Pre-HTW Demonstration Average (2017-2019)	1,132	508	591	164	27.7%
Annual Post -HTW Demonstration Average (2020-2021)	852	272	633	138	21.9%
Pre/Post Difference in Ns or Percentage Points	-280	-236	42	-25	-5.9%
% Change[2]	-24.8	-46.5	7.1	-15.6	-21.1%
p-value[3]	<0.001	<0.001	0.063	0.024	0.002

Notes. HTN, hypertension. MY, member year. HTW clients are only included if the first fill of their HTN medication occurs at least 91 days before the end of the enrollment period. [1] Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values are reported for statistical significance using Poisson regression.

Table 54: Diabetes Treatment Medication Adherence among Women Enrolled in HTW with Non-insulin Medication Prescription (Measure 3.1.2)

Year	HTW Clients with Diabetes Medication	HTW Clients with Diabetes Medication Adherence[1]	MY for HTW Clients with Diabetes Medication	MY for HTW Clients with Diabetes Medication Adherence[1]	Rate of Diabetes Medication Adherence[1]
2017	1,260	471	680	144	21.2%
2018	1,850	776	965	222	23.0%
2019	1,840	751	991	245	24.7%
2020	1,299	431	916	193	21.0%
2021	1,386	432	1,047	207	19.7%
Annual Pre-HTW Demonstration Average (2017-2019)	1,650	666	879	204	23.2%
Annual Post -HTW Demonstration Average (2020-2021)	1,343	432	982	200	20.3%
Pre/Post Difference in Ns or Percentage Points	-308	-235	103	-4	-2.8%
% Change[2]	-18.6	-35.2	11.7	-2.0	-12.3%
p-value[3]	<0.001	<0.001	<0.001	0.754	0.042

Notes. MY, member year. HTW clients are only included if the first fill of their Diabetes medication occurs at least 91 days before the end of the enrollment period. [1] Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values are reported for statistical significance using Poisson regression.

Table 55: Hypercholesterolemia (HCL) Treatment Medication Adherence among Women Enrolled in HTW with Cholesterol Medication Prescription (Measure 3.1.3)

Year	HTW Clients with HCL Medication	HTW Clients with HCL Medication Adherence[1]	MY for HTW Clients with HCL Medication	MY for HTW Clients with HCL Medication Adherence[1]	Rate of HCL Medication Adherence[1]
2017	387	154	208	46	22.2%
2018	528	228	273	65	23.9%
2019	531	228	287	72	25.1%
2020	496	146	383	75	19.6%
2021	658	185	526	94	17.8%
Annual Pre-HTW Demonstration Average (2017-2019)	482	203	256	61	23.9%
Annual Post -HTW Demonstration Average (2020-2021)	577	166	454	84	18.6%
Pre/Post Difference in Ns or Percentage Points	95	-38	198	23	-5.3%
% Change[2]	19.7	-18.6	77.4	37.9	-22.2%
p-value[3]	<0.001	0.003	<0.001	0.003	0.018

Notes. HCL, hypercholesterolemia; MY, member year. HTW clients are only included if the first fill of their HCL medication occurs at least 91 days before the end of the enrollment period. [1] Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values are reported for statistical significance using Poisson regression.

Table 56: Medication Adherence among Women Enrolled in HTW for 12 Continuous Months (Hypertension, Diabetes, and Hypercholesterolemia Medication) (Measures 3.1.1, 3.1.2, 3.1.3)

Year	Hypertension		Diabetes		Hypercholesterolemia	
	HTW Clients treated with Medication	Medication Adherence[1] (%)	HTW Clients treated with Medication	Medication Adherence[1] (%)	HTW Clients treated with Medication	Medication Adherence[1] (%)
2017	225	17.3%	238	14.3%	78	7.7%
2018	229	20.5%	365	12.6%	107	9.3%
2019	200	19.0%	369	15.4%	120	16.7%
2020	400	20.5%	634	16.4%	292	16.8%
2021	572	17.3%	842	14.7%	442	13.1%
Annual Pre-HTW Demonstration Average (2017-2019)	218	19.0%	324	14.1%	102	11.8%
Annual Post -HTW Demonstration Average (2020-2021)	486	18.6%	738	15.4%	367	14.6%
Pre/Post Difference in Ns or Percentage Points	268	-0.3%	414	1.4%	265	2.8%
% Change[2]	122.9	-1.8%	127.8	9.6%	261.0	23.5%
p-value[3]	<0.001	0.15	<0.001	0.36	<0.001	0.24

Notes. HTW clients are only included if the first fill of their medication occurs at least 91 days before the end of the enrollment period and were continuously enrolled during the measurement year. [1] Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as the number of HTW clients treated medication divided by the number of HTW clients with adherence. [2] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [3] P-values are reported for statistical significance using Poisson regression.

Table 57: Antidepressant Medication Management: Effective Acute Phase Treatment (Measure 3.1.4)

Year	HTW Clients with Antidepressant Medication	HTW clients with Effective Acute Phase Treatment	MY for HTW clients with Antidepressant Medication	MY for HTW Clients with Effective Acute Phase Treatment	Rate of Effective Acute Phase Treatment
2017	131	50	118	47	39.4%
2018	338	148	318	141	44.5%
2019	456	188	421	180	42.6%
2020	853	372	830	362	43.6%
2021	619	334	616	333	54.0%
Annual Pre-HTW Demonstration Average (2017-2019)	308	129	286	122	42.9%
Annual Post -HTW Demonstration Average (2020-2021)	736	353	723	347	48.0%
Pre/Post Difference in Ns or Percentage Points	428	224	438	225	5.2%
% Change[1]	138.7	174.4	153.2	183.7	12.1%
p-value[2]	<0.001	<0.001	<0.001	<0.001	0.078

Notes. MY, member year. HTW clients are only included if they were treated with antidepressant medication, had a diagnosis of major depression, and had continuous enrollment 105 days prior to the earliest prescription dispensing date for antidepressant medication through 231 days. Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [2] P-values are reported for statistical significance using Poisson regression.

Table 58: Antidepressant Medication Management: Effective Continuation Phase Treatment (Measure 3.1.4)

Year	HTW Clients with Antidepressant Medication	HTW Clients with Effective Continuation Phase Treatment	MY for HTW Clients with Antidepressant Medication	MY for HTW Clients with Effective Continuation Phase Treatment	Rate of Effective Continuation Phase Treatment
2017	131	11	118	11	8.9%
2018	338	71	318	68	21.4%
2019	456	83	421	80	19.0%
2020	853	174	830	171	20.5%
2021	619	174	616	174	28.2%
Annual Pre-HTW Demonstration Average (2017-2019)	308	55	286	53	18.5%
Annual Post -HTW Demonstration Average (2020-2021)	736	174	723	172	23.8%
Pre/Post Difference in Ns or Percentage Points	428	119	438	119	5.3%
% Change[1]	138.7	216.4	153.2	226.0	28.8%
p-value[2]	<0.001	<0.001	<0.001	<0.001	0.008

Notes. MY, member year. HTW clients are only included if they were treated with antidepressant medication, had a diagnosis of major depression, and had continuous enrollment 105 days prior to the earliest prescription dispensing date for antidepressant medication through 231 days. Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [2] P-values are reported for statistical significance using Poisson regression.

Table 59: Antidepressant Medication Management for Those Individuals with 12 Months of Continuous Enrollment in a Given Year (Measure 3.1.4)

Year	HTW Clients Treated with Antidepressant Medication	Rate of Effective Acute Phase Treatment (%)	Rate of Effective Continuation Phase Treatment (%)
2017	75	44.0%	12.0%
2018	233	45.9%	21.0%
2019	308	45.5%	21.4%
2020	732	43.4%	21.3%
2021	602	54.3%	28.6%
Annual Pre-HTW Demonstration Average (2017-2019)	205	45.5%	20.1%
Annual Post -HTW Demonstration Average (2020-2021)	667	48.4%	24.6%
Pre/Post Difference in Ns or Percentage Points	462	2.9%	4.5%
% Change[1]	224.8	6.4%	22.1%
p-value[2]	<0.001	0.39	0.06

Notes. HTW clients are only included if they were treated with antidepressant medication, had a diagnosis of major depression, had continuous enrollment 105 days prior to the earliest prescription dispensing date for antidepressant medication through 231 days, and had 12 months of continuous enrollment during the measurement year. Adherence was defined as filling prescription often enough to cover 80% or more days within calendar year. Rates were calculated as MY for HTW clients divided by MY for HTW with adherence. [1] Row titled "% Change" indicates the percentage change calculated by dividing the measure difference between pre- and post-HTW Demonstration periods by the value of the measure at the pre-HTW Demonstration period. % Change is only presented in cells that reported results for the measure. [2] P-values are reported for statistical significance using Poisson regression.

Table 60: Birth Spacing Measure Cohort Characteristics (Measure 3.2.3)

	Total	HTW After Initial Delivery in 2018[1]	No HTW After Initial Delivery in 2018	P-value[2]
Number of deliveries	150,136	80,572	69,564	--
Maternal age, median (IQR)[3]	25 (22-29)	25 (22-29)	25 (22-30)	0.008
Race/Ethnicity				
NH White	35,114 (23.4)	18,236 (22.6)	16,878 (24.3)	<0.001
NH Black	27,264 (18.2)	14,551 (18.1)	12,713 (18.3)	
Hispanic	79,288 (52.8)	43,291 (53.7)	35,997 (51.7)	
NH Other	8,470 (5.6)	4,494 (5.6)	3,976 (5.7)	
Public Health Region				
1	5,358 (3.6)	2,736 (3.4)	2,622 (3.8)	<0.001
2	3,335 (2.2)	1,649 (2.0)	1,686 (2.4)	
3	33,871 (22.6)	18,718 (23.2)	15,153 (21.8)	
4	7,150 (4.8)	3,852 (4.8)	3,298 (4.7)	
5	5,122 (3.4)	2,653 (3.3)	2,469 (3.5)	
6	35,679 (23.8)	19,123 (23.7)	16,556 (23.8)	
7	12,341 (8.2)	6,525 (8.1)	5,816 (8.4)	
8	17,800 (11.9)	9,072 (11.3)	8,728 (12.5)	
9	5,119 (3.4)	2,665 (3.3)	2,454 (3.5)	
10	5,686 (3.8)	3,333 (4.1)	2,353 (3.4)	
11	18,675 (12.4)	10,246 (12.7)	8,429 (12.1)	
Maternal Comorbidities				
Any	89,233 (59.4)	47,665 (59.2)	41,568 (59.8)	0.019
Obstetrics	55,943 (37.3)	30,011 (37.2)	25,932 (37.3)	0.90
General health	53,252 (35.5)	28,117 (34.9)	25,135 (36.1)	<0.001
Substance use	14,955 (10.0)	7,579 (9.4)	7,376 (10.6)	<0.001
Autoimmune	1,499 (1.0)	768 (1.0)	731 (1.1)	0.058

	Total	HTW After Initial Delivery in 2018[1]	No HTW After Initial Delivery in 2018	P-value[2]
Cardio	625 (0.4)	322 (0.4)	303 (0.4)	0.28
Renal	278 (0.2)	119 (0.1)	159 (0.2)	<0.001
Inadequate birth spacing[4]	26,241 (17.5)	13,818 (17.1)	12,423 (17.9)	<0.001
Pregnancy complications				
Any	26,778 (17.8)	14,405 (17.9)	12,373 (17.8)	0.64
High blood pressure	10,303 (6.9)	5,532 (6.9)	4,771 (6.9)	0.95
Gestational diabetes	11,048 (7.4)	6,009 (7.5)	5,039 (7.2)	0.11
Preeclampsia	9,475 (6.3)	5,028 (6.2)	4,447 (6.4)	0.23
Adverse birth outcomes				
LBW	11,790 (7.9)	6,129 (7.6)	5,661 (8.1)	<0.001
Preterm	15,801 (10.5)	8,094 (10.0)	7,707 (11.1)	<0.001
SMM[5]	2,021 (1.3)	1,080 (1.3)	941 (1.4)	0.84

Notes. Women who had a Medicaid-funded live birth in 2018 are included. All numbers indicate the number of women and percentage of them except for maternal age. [1] HTW enrollment at any time point during the year after the index delivery in HTW. [2] P-values are reported for statistical differences between women who were enrolled in HTW vs those not enrolled using Chi-square tests for categorical variables and Wilcoxon rank sum test for median maternal age. [3] IQR, interquartile range. [4] Inadequate birth spacing is defined as having any subsequent births within 27 months of the initial birth. [5] SMM, severe maternal morbidity.

Appendix C: Updates on Primary Data Collection and Qualitative Analyses

Beneficiary Primary Data Collection

Overview

The beneficiary survey data collection, processing, and weighting ran from May 18 to July 27, 2023. A total of 1,612 beneficiary responses were collected through online and telephone collection methods.

The provider survey data collection, processing, and weighting ran from May 10 to August 30, 2023. A total of 181 HTW provider locations responded to the survey through online and paper collection methods.

The survey sought to collect data for 2 evaluation hypotheses and 10 evaluation measures, as follows:

- Evaluation Hypothesis 1: Did the HTW Demonstration increase access to family planning, family planning-related, preconception care, and postpartum services for low-income women in Texas?
  - 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
- Evaluation Hypothesis 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?
  - 5.1.2 Appointment wait times
  - 5.1.3 Barriers to receiving care
  - 5.1.4 Providers accepting new clients

- 5.1.5 Barriers to providing care

Questionnaire Design

The questionnaire was collaboratively developed by UTHealth CHCD researchers and a third-party, a full-service survey and market research firm with expertise in research designs and implementation, SRSS AUS Marketing Research Systems, Inc. (SSRS), to address research questions and hypotheses for evaluation of the HTW program. To ensure respondent comprehension and assess questionnaire length, a live pre-test of the questionnaire was conducted by telephone on February 7, 2023. In total, 14 pre-test interviews were completed. Based on the pre-test, some questions were removed due to issues with length. Other adjustments were made to ease respondent comprehension and assist with interviewer administration. Table 1 below shows the list of evaluation measures that guided questionnaire design and their corresponding, finalized survey questions. The final survey consisted of 55 total questions. Table 61 shows how each of the questions addressed the components of the CMS-approved Evaluation Design. Items assessing current health status, health history, and demographic information were also included in the final survey.

The questionnaire was then formatted and translated into Spanish so respondents could complete the survey in English or Spanish. Before the field period, SSRS programmed the study into Confirmit Computer Assisted Telephone and Web Interviewing (CATI/CAWI) software. Extensive program checking was conducted to ensure that skip patterns and sample splits followed the questionnaire design.

Table 61: Methods, Hypotheses, Measures, and Survey Questions for Beneficiary Primary Data Collection

Evaluation Hypothesis	Corresponding Measures	Corresponding Survey Questions[1]
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?	1.2.1 Motivating factors for HTW enrollment and renewal	Q1. How did you enroll in the Healthy Texas Women program? Q22. Did you have to switch from your usual health care provider to a provider who participates in the Healthy Texas women program to receive services? Q23. How easy or difficult would you say it was to enroll in the program? Q24. If you are eligible next year, how likely are you to re-enroll in the Healthy Texas Women program? Q25. What was the most difficult part of enrolling in the Healthy Texas Women program? Q26. How important were each of the following factors in your decision to enroll in the Healthy Texas Women program? Q27. What specific conditions, question, or service did you want to see a doctor or health care provider about that was a factor in your decision to enroll in the Healthy Texas Women Program? Q28. Now thinking about the Healthy Texas Women program overall, how would you rate each of the following? [Health care received/communication/etc.]
	1.2.2 Understanding of eligibility requirements	Q9. As far as you know, are there restrictions based on gender, age, health insurance coverage status, income, and pregnancy status for someone to enroll in the Healthy Texas Women program?
	1.2.3 Understanding of HTW benefits	Q10. As far as you know, which of the following services are covered by the Healthy Texas Women program? Q36. The last time you had each of the following services, was it covered under the Health Texas Women program?

Evaluation Hypothesis	Corresponding Measures	Corresponding Survey Questions[1]
	1.2.4 Awareness of how to obtain services	Q11. Have you received any services from a primary care provider paid for in part or entirely by the HTW program in the past 12 months? Q12. Have you ever received services from a primary care provider through the HTW program? Q13. Have you received any services from a specialist provider through the HTW program in the past 12 months? Q14. Have you ever received any services from a specialist provider through the HTW program? Q15. Have you received a prescription medication covered by the Healthy Texas Women program in the last 12 months? Q16. Have you ever received a prescription medication covered by the Healthy Texas Women program?
	1.2.5 Effectiveness of outreach channels 1.2.6 Effectiveness of HTW Demonstration resources	Q2. Have you ever heard, read, or seen information about the Healthy Texas Women program from any of these other sources? Q5. Have you ever done any of the following to get more information about the HTW program? Q6. Was the information provided about HTW program by each of the following helpful [scale]? Q7. How easy or difficult was it to use each of the following sources for information about the HTW program? Q8. What was the most difficult part about using [insert item] for information about the HTW program? Q30. If you needed to find out the following types of information about a provider that participated in the Healthy Texas Women program how confident are you that you could find the information?

Evaluation Hypothesis	Corresponding Measures	Corresponding Survey Questions[1]
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?	5.1.2 Appointment wait times 5.1.3 Barriers to receiving care	Q17. In the last 12 months, have you had to miss a scheduled appointment with a Healthy Texas Women program provider? Q18. Are each of the following a reason you had to miss an appointment with a Healthy Texas Women provider? Q19. Are there any other reasons you had to miss an appointment with a Healthy Texas Women provider? Q20. Did any of the following factors keep you from using Healthy Texas Women services [, or not]? Q21. How (easy) or (difficult) was it for you to do each of the following? [Travel to appointment/Get an appointment/etc.] Q29. How (easy) or (difficult) was it for you to (INSERT ITEM) that participated in the Healthy Texas Women program? [Find providers/travel/schedule/etc.] Q31. The last time you wanted an appointment with a provider who participates in Healthy Texas Women, how long did you have to wait to get an appointment? Were you able to get an appointment: Q32. How satisfied, if at all, were you with how long you had to wait to get an appointment? Q.33 Now thinking about all your visits with health care providers who participate in the Healthy Texas Women program, how often did they (INSERT ITEM)? [Explain things/listen/show respect/etc.]

Notes. [1] Some of these questions were double-barreled or a sub-question depending on answers to previous questions.

Beneficiary Primary Data Collection Updates

The beneficiary survey sample was based on a file received from the Texas HHSC with names and contact information for all individuals enrolled in HTW during November 2022 who were enrolled in HTW for at least six months. This file also included a flag for whether the respondent received a service covered by the HTW program in the prior 12 months. From this list, SSRS pulled a stratified random sample designed to reach a minimum of 120 respondents in each Texas Public Health Region[46] and an additional 1,000 respondents who had received a service covered by HTW (see Tables 62 and 63). SSRS identified a total of 19,433 beneficiaries for the final survey sample. A total of 1,612 surveys were completed by program beneficiaries online or by phone, giving a response rate of 8.3%. In total, 28 respondents completed the survey in Spanish.

Table 62. Proposed Sampling Strategy for Beneficiary Primary Data Collection

Method of Primary Data Collection	Study Population (N)	Sampling Technique	Target Analytic Sample[1,2]	Actual Sample
Print and/or online beneficiary survey	HTW clients (340,095)[3]	Stratified random sample of all HTW clients based on key demographic subgroups (e.g., region, age, race/ethnicity)	1,600	1,612

Notes. [1] Target analytic samples for the beneficiary and provider surveys meet conventional criteria for statistical power (0.80) at α = 0.05. [2] The external evaluator will apply survey weights to ensure survey samples are representative of all HTW clients and providers. [3] Reflects the number of beneficiaries in the data file we received from HHSC in December 2022.

Table 63. Key Demographic Targets and Sample Sizes for Beneficiary Primary Data Collection

	Target Analytic Sample	Actual Sample
Total	1,600	1,612
Service Use		
Previous Service	1,000	1,248
No Previous Service	--	346
Texas Public Health Regions		
Lubbock	137	123
Temple	160	150
San Antonio	194	201
Harlingen	205	244
Arlington	314	272
Houston	314	332

	Target Analytic Sample	Actual Sample
South Tyler	137	153
El Paso	137	137
Urbanicity		
Urban	720	694
Suburban	592	614
Rural	288	304

Survey Administration

Procedure and Timeline

The field period for the beneficiary survey was May 18 through July 27, 2023. The web program went 'live' with the first mailing on May 18, 2023. On that date, SSRS designated interviewers in its phone rooms during business hours (9:00 AM – 5:00 PM ET, Monday through Friday; 10:00 AM – 6:00 PM ET, Saturday; 11:00 AM – 8:00 PM ET, Sunday) to interview respondents who preferred completing the questionnaire by phone in English or Spanish. After hours, respondents could leave their information on a dedicated voicemail, and interviewers would call them to complete the survey later in the field period. Respondents could choose a language for hearing the voicemail greeting and leaving their message.

Recruitment to the survey occurred through the following multi-step procedure:

1. All sampled beneficiaries were sent an invitation letter via USPS first class mail. The letter introduced the survey and asked respondents to go to a study specific URL (htwsurvey.org) or call a toll-free number to take part in the survey. Respondents were provided a unique passcode they would enter on the survey's landing page or tell the interviewers if they chose to call in. The letters were mailed first class with the larger batches being presorted. Prospective respondents were offered a non-contingent incentive and the letters also provided prospective respondents with information about an additional $10 incentive contingent on completing the survey.
2. On the survey's landing page, respondents were welcomed to the survey and provided with information about the survey, assurance that their responses were confidential, contact information for questions, and a prompt to enter their passcode. Respondents could also select their preferred language to complete the survey.

3. Approximately one week after the initial mailing, all sampled beneficiaries received a reminder postcard in the mail with the same information as the initial mailing, asking them to complete the survey online or by calling a toll-free number.
4. Approximately two weeks after the initial invitation letter, respondents received a final reminder letter with an additional non-contingent incentive.
5. Shortly after the final reminder email was sent, SSRS began outbound calls to any sampled beneficiaries who had not yet completed online or by calling in.

Recruitment was conducted in two waves. Wave 1 was mailed on May 18, 2023, with 6,933 records. After about two weeks in field, the results from Wave 1 were used to make slight adjustments to the Wave 2 design to ensure study-specific targets sizes for subgroups of interest were met. Wave 2 was mailed on June 27, 2023, with 12,500 records. Table 64 presents the dates for letter and postcard notifications for both Wave 1 and Wave 2.

Table 64. Contact Schedule for Beneficiary Primary Data Collection

Notification Type	Wave 1	Wave 2
Initial Invitation Letter	05/18/2023	06/27/2023
Reminder Postcard	05/23/2023	07/05/2023
First Reminder Letter	05/31/2023	07/12/2023
Outbound Dialing	06/05/2023	07/13/2023
Field Close	07/27/2023	07/27/2023

Online Data Collection

The website's landing page included a brief description of the survey and information about the post-incentive for those qualifying and completing the survey. From the landing page, respondents could also link to a page with FAQs about the study. Respondents were prompted to select a language to complete the study in, then to enter the unique passcode that appeared in their invitation mailing. Once they entered the passcode, respondents were asked first to confirm that they were the person named on the invitation letter who is enrolled in the HTW program. They were then directed to the questionnaire itself.

Respondents could suspend the survey at any point and resume later from the point where they suspended. At the end of the survey, respondents were asked to provide a mailing address to receive the additional $10 incentive by mail.

Telephone Data Collection

Telephone interviewers received written materials about the survey instrument and formal training. The written materials were provided prior to the live pretest and again at the beginning of the field period. Training materials included an annotated questionnaire that contained information about the goals of the study, eligibility criteria, the meaning and pronunciation of key terms, potential obstacles to be overcome in getting good answers to questions, and respondent problems that could be anticipated ahead of time, as well as strategies for addressing the potential issues. Call center supervisors and interviewers were given instructions to help them maximize response rates and ensure accurate data collection.

For outbound calls, SSRS enacted the following procedures during the field period:

- Up to three follow-up attempts were made to contact non-responsive numbers (e.g., no answer, busy, answering machine).
- Non-responsive numbers were contacted at varying the times of day, and the days of the week that call-backs were placed using a programmed differential call rule.
- Interviewers explained the purpose of the study and its importance.
- Respondents were offered the option of scheduling a call-back at their convenience.
- Respondents were reminded of the $10 post-incentive.

Quality Control and Data Cleaning

SSRS project managers and research directors monitored the progress of the study on a daily basis. Quality measures involved data-checking along with feedback provided by call center supervisors to interviewers and to the project team. For the web component, the SSRS team enacted the following measures:

- Extensive program checking: Prior to fielding, project management staff tested the web program extensively to ensure that skip patterns were working correctly, and the program can be used efficiently by respondents and interviewers using laptops, smartphones, and tablets.
- Unique passcodes: to avoid duplication, respondents had to log on to the survey using a unique passcode provided to them in the mailing materials. This ensured there was no duplication of respondents and that people could not complete the survey unless they were specifically invited to do so.

- Data quality checks: Cases were flagged for review if they met any of the following criteria. If two or more of these criteria were met, they would have been removed. No cases in the final data met this criterion.
  - Length less than 25% of the average by mode
  - Refused or skipped more than 30% of questions asked
  - Straight-lined (i.e., gave the same response for every item) the majority of grid questions asked (web only)

Prior to processing the final data files, the data was thoroughly cleaned with a computer validation program that establishes editing parameters in order to locate any errors, including data that do not follow skip patterns, out-of-range values, and errors in data field locations.

Weighting Procedures

Weighting is generally used in survey analysis to compensate for sample designs and patterns of non-response that might bias results. The weighting ensures that the demographic profile of the sample matches the profile of the target population.

The sample was weighted in stages. The first stage of the weighting was the application of a base weight to account for different selection probabilities and response rates across sample strata. In the second stage sample demographics were post-stratified to match population parameters. These parameters included age, race, Texas region, and urbanicity (Table 65).

Table 65. Weighting Benchmarks for Beneficiary Primary Data

	Parameter	Unweighted	Weighted
Age			
18-24	15.9%	10.9%	15.5%
25-29	21.3%	19.3%	21.2%
30-34	23.8%	22.8%	23.7%
35-39	19.4%	21.9%	19.6%
40-45	15.3%	19.6%	15.5%
45+[1]	--	--	--
Race/Ethnicity			
White, non-Hispanic	23.1%	19.9%	22.4%
Black, non-Hispanic	24.5%	21.8%	24.7%
Hispanic	46.7%	53.3%	47.1%
Asian, non-Hispanic	1.4%	1.3%	1.4%
Indian, non-Hispanic	0.3%	0.3%	0.3%
Other, non-Hispanic	4.0%	3.3%	4.1%
Texas Health Regions			
Lubbock	3.4%	7.6%	3.4%
Temple	10.7%	9.3%	10.1%
San Antonio	11.6%	12.5%	11.7%
Harlingen	11.5%	15.1%	11.6%
Arlington	24.1%	16.9%	23.9%
Houston	26.7%	20.6%	27.0%
South Tyler	6.1%	9.5%	6.2%
El Paso	6.0%	8.5%	6.0%
Urbanicity			
Urban	45.7%	43.1%	46.2%
Suburban	36.0%	38.1%	36.1%
Rural	18.3%	18.9%	17.7%

Notes. [1] Women aged 45 and older are not eligible for the HTW, but their eligibility was maintained in this instance due to the Public Health Emergency declaration.

Provider Primary Data Collection

Questionnaire Design

The questionnaire was collaboratively developed by UTHealth CHCD researchers and a third-party, full-service survey and market research firm with expertise in research designs and implementation, SRSS AUS Marketing Research Systems, Inc. (SSRS), to address research questions and hypotheses for evaluation of the HTW program. To ensure respondent comprehension and assess questionnaire length, a live pretest of the questionnaire was conducted from March 15, 2023, through April 28, 2023. Pre-testing for the provider survey involved testing the recruitment process for finding clinic administrators and receiving feedback on the survey itself.

Through phone calls, 15 administrators were found who were the most knowledgeable in the clinic on the HTW program and who agreed to participate in an interview. After multiple attempts at reaching out by email and phone, no providers could participate in this sample. Three administrators were able to complete an online version of the survey that was edited to include open-ended questions for feedback. Interviews were then conducted using contacts identified through provider files.

The primary issue administrators cited during pre-testing was finding time to complete the 30-minute in-depth interview. Some language was added to the online survey home page to present the survey in as little of a burden as possible, highlighting that the self-administered survey should only take 15 minutes. Some providers also raised confidentiality concerns, and language was added to assure them of confidentiality.

Table 66 lists the evaluation measures that guided questionnaire design and their corresponding, finalized survey questions. Items assessing provider background and clinic characteristics were also included in the final survey. There was a total of 37 questions.

Table 66. Methods, Hypotheses, Measures, and Survey Questions for Provider Primary Data Collection

Evaluation Hypothesis	Corresponding Measures	Corresponding Survey Questions[1]
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?	1.2.1 Motivating factors for HTW enrollment and renewal	Q8. How easy or difficult would you say it was to enroll your practice in HTW? Q9. What was the most difficult part of enrolling in the program? [open ended] Q10. How important were each of the following factors in your decision to enroll in the HTW program? Q11. What other factors, if any, were important in your decision to enroll in the HTW program? Q12. How likely is your clinic likely to renew their practice's enrollment in the HTW program? Q17. How much of a challenge has each of the following been for your clinic in providing care to HTW patients? [Filing claims, patient qualification, reimbursements, etc.]
	1.2.2 Understanding of eligibility requirements	Q5. As far as you know, which of the following conditions are a requirement for health care providers or clinics to be eligible for the Healthy Texas Women program? Q6. As far as you know, how often do providers need to renew their certification for the Healthy Texas Women program and attest that they do not perform or promote elective abortions or affiliate with individuals or entities that perform or promote elective abortions?
	1.2.3 Understanding of HTW benefits	Q3. Before being invited to participate in this survey, did you know you or your clinic was a part of the Healthy Texas Women program? Q7. As far as you know, which of the following services are covered by Healthy Texas Women? (Please select all that apply)
	1.2.5 Effectiveness of outreach channels 1.2.6 Effectiveness of HTW Demonstration resources	Q13. How helpful has information about the Healthy Texas Women program from the following sources been? Q.14 To your knowledge, have you or anyone at the clinic ever sought out information about the Healthy Texas Women program from any of the following sources? Q15. How helpful, if at all, was the information provided from each of the following sources?

Evaluation Hypothesis	Corresponding Measures	Corresponding Survey Questions[1]
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?	5.1.4 Providers accepting new clients	Q16. In a typical month, about how many patients does your clinic see overall? Q16B. And among all the patients your clinic sees, about what percent are enrolled in Healthy Texas women? Q18. Is your clinic currently accepting new patients who are covered by HTW? Q19. Are each of the following a reason your clinic is not currently accepting new patients covered by HTW?
	5.1.5 Barriers to providing care	Q20. How much of a problem are each of the following for your clinic in providing care for HTW patients? Q21. How easy or difficult would you say finding specialists who accept referrals for Healthy Texas Women patients is: Q22. Overall, would you say HTW covers all, most, or just some of the costs to deliver health care service? Q23. Now thinking about the patients at your clinic who are enrolled in the HTW program, for about how many of your HTW patients does your clinic provide each of the following: Q23B. And continuing to think about the patients at your clinic who are enrolled in the HTW program, for about how many of your HTW patients does your clinic provide each of the following: Q25. In general, do you think the providers at your clinic are able to spend enough time in visits with patients enrolled in HTW? Q26. Now continuing to think about your specific clinic or practice, in a typical month… [physicians enrolled in HTW/specialists enrolled in HTW in clinic]

Notes. [1] Some of these questions were double-barreled or a sub-question depending on answers to previous questions.

Provider Primary Data Collection Updates

The provider sample was based on a file received from HHSC with names and contact information for all program providers. These providers included HTW contracted providers as of December 2022, Medicaid providers who completed the HTW attestation as of December 2022, and active HTW providers (e.g., performing and billing providers) between June and November 2022 (the most recent month of data available as of December 2022). Certain providers were excluded, including laboratories, anesthesiology, radiology, ambulance services, and medical supply companies. From the provided list, SSRS pulled a random sample of 950 providers.

The target analytic sample for the provider survey changed to 200 from the original 300 proposed in the CMS-approved Evaluation Design (see Table 67). This was due mainly to a shift from surveying individual providers to actually aiming to include provider administrators that often represent several providers working under one organization, such as a physician group or clinic, or an FQHC. Additionally, HHSC confirmed providers could not be offered incentives for completing the survey and, therefore, we adjusted response expectations.

SSRS recruited over the phone for approximately a week before each wave to identify the clinic administrators that would best be able to answer the survey and address the survey invitation directly to them. Approximately 100 invitations were sent out in each wave to these specifically named individuals (approximately 200 total). The rest of the 950-provider sample was a random of clinics that were sent invitation letters.

Table 67. Proposed Sampling Strategy for Provider Primary Data Collection

Method of Primary Data Collection	Study Population (N)	Sampling Technique	Target Analytic Sample[1,2]	Wave 1 Mailings	Wave 2 Mailings
Print and/or online beneficiary survey	HTW active billing providers (1,726)[3]	Stratified random sample of all HTW providers based on key demographic subgroups (e.g., region, provider type) or convenience sample[4]	200	300	650

Notes. [1] Target analytic samples for the beneficiary and provider surveys meet conventional criteria for statistical power (0.80) at α = 0.05. [2] The external evaluator will apply survey weights to ensure survey samples are representative of all HTW clients and providers. [3] Reflects 1,726 unique, finalized locations from the data file sent by HHSC. Certain providers were excluded, including anesthesiology, radiology, ambulance services, and medical supply companies. [4] Clinics will first be screened by phone to identify the appropriate administrator to address the survey notices to.

Survey Administration

A pre-recruitment process was used in an attempt to increase response rates. From May 10 through May 30, 2023, SSRS interviewers made multiple attempts to call each of the clinics in this sample to reach the person within the clinic or facility most knowledgeable about the HTW program. Interviewers collected the name and position of this staff member and confirmed their mailing address. The interviewer also told the respondents they should receive a FedEx packet in the mail in the coming months with a formal invitation to take part in the study.

Recruitment to the survey occurred through the following multi-step procedure:

1. HHSC sent out announcement emails to contractors of Women's Health and Education Services that subscribe to alerts, and anyone interested in subscribing to HTW alerts on their email listserv to let them know that a survey was going to be sent out and for clinics to respond if they received an invitation.
2. All sampled clinics were sent a FedEx packet addressed to the person reached through the pre-recruitment process or addresses generically to the 'Clinic Administrator'. The packet included an invitation letter that introduced the survey and asked the respondent to go to a study specific URL (htwprovidersurvey.org) or fill in the enclosed paper survey and return it in the provided prepaid envelope. The letter also included a phone number and email address that respondents could use to contact SSRS project staff with questions or concerns.

   On the survey's landing page, respondents were welcomed to the survey and provided with information about the survey, assurance that their responses were confidential, contact information for questions, and a prompt to enter the unique passcode on their intervention letter.
3. Approximately one week after the initial mailing, all sampled clinics received a reminder letter via USPS with the same information as the initial mailing, asking them to complete either the paper copy they were previously sent or the online survey.
4. Approximately two weeks after the initial invitation letter, respondents received a final reminder letter and another paper version of the survey.

Recruitment was conducted in two waves. Wave 1 was mailed on May 31, 2023, with 303 records. After about two weeks in field, the results from Wave 1 were

used to make slight adjustments to the Wave 2 design to ensure study-specific targets sizes for subgroups of interest were met. Wave 2 was mailed on July 30, 2023, with 647 records. Table 68 presents the dates for initial invitation and reminder notifications for both Wave 1 and Wave 2.

Table 68. Contact Schedule for Provider Primary Data Collection

Notification Type	Wave 1	Wave 2
HHSC Announcement Email	05/30/2023	07/19/2023
Invitation Letter	05/31/2023	07/20/2023
First Reminder Letter	06/07/2023	07/25/2023
Second Reminder Letter	06/15/2023	08/04/2023
Field Close	8/30/2023	08/30/2023

Quality Control and Data Cleaning

SSRS project managers and research directors monitored the progress of the study on a daily basis. For the web component, the SSRS team enacted the following measures:

- Extensive program checking: Prior to fielding, project management staff tested the web program extensively to ensure that skip patterns were working correctly, and the program can be used efficiently by respondents and interviewers using laptops, smartphones, and tablets.
- Unique passcodes: to avoid duplication, respondents had to log on to the survey using a unique passcode provided to them in the mailing materials. This ensured there was no duplication of respondents and that people could not complete the survey unless they were specifically invited to do so.

Paper surveys were scanned and the hardcopy data were combined with data from the web surveys. There were 5 cases where the same clinic or facility location completed the surveys online and by mailing in a paper survey. In these cases, data from the web survey were preferred over the paper survey.

Weighting Procedures

Weighting is generally used in survey analysis to compensate for sample designs and patterns of non-response that might bias results. The weighting ensures that the demographic profile of the sample matches the profile of the target population.

The sample was weighed in stages. The first stage of the weighting was the application of a base weight to account for different selection probabilities and

response rates across sample strata. In the second stage sample demographics were post-stratified to match population parameters. These parameters included age, race, Texas region, and urbanicity (Table 71).

Table 69: Weighting Benchmarks for Beneficiary Primary Data

	Parameter	Unweighted	Weighted
Texas Public Health Regions			
Lubbock	4.7%	4.4%	4.7%
Temple	9.8%	4.4%	9.2%
San Antonio	10.1%	9.4%	10.2%
Harlingen	12.3%	16.0%	12.4%
Arlington	24.5%	17.1%	24.7%
Houston	24.6%	27.6%	24.8%
South Tyler	7.7%	9.9%	7.7%
El Paso	6.4%	11.0%	6.4%
Urbanicity			
Urban	43.4%	28.7%	43.0%
Suburban	45.0%	49.2%	45.2%
Rural	11.6%	22.1%	11.7%
Number of Associated Providers			
1	69.7%	74.6%	69.9%
2 or more	30.3%	25.4%	30.1%

Development of Wave 2 Surveys for Providers and Clients:

Based on preliminary findings from Wave 1, UTHealth is considering the following changes to the beneficiary and provider surveys for Wave 2:

- Updates to response scales in the beneficiary survey to detect more nuanced differences in perspectives, where necessary
- Addition of a question to the beneficiary survey to better understand decisions for enrolling in HTW
- Addition of a question to the provider survey to better understand barriers to providing care
- Introduction of different versions of provider survey questions, tailored to whether a provider has previously completed the survey in Wave 1.

Appendix D: References

(1) Healthy Texas Women. *HTW: Who Can Apply?* Texas Health and Human Services Commission, https://www.healthytexaswomen.org/healthcare-programs/healthy-texas-women/htw-who-can-apply
(2) Texas Health and Human Services. Healthy Texas Women Section 1115 Demonstration Waiver Evaluation Design. Department of Health and Human Services, Ed.; 2021.
(3) Centers for Medicare and Medicaid Services. Healthy Texas Women: Special Terms and Conditions. Department of Health and Human Services, Ed.
(4) Texas Health and Human Services. *End of Continuous Medicaid Coverage FAQ*; 2023. https://www.hhs.texas.gov/sites/default/files/documents/end-continuous-medicaid-coverage-faqs.pdf.
(5) The White House. FACT SHEET: Actions Taken by the Biden-Harris Administration to Ensure Continued COVID-19 Protections and Surge Preparedness After Public Health Emergency Transition. 2023.
(6) Dusen, C. V. DSHS Announces First Case of COVID-19 in Texas. Texas Health and Human Services: 2020.
(7) Rep. Lowey, N. M. Families First Coronavirus Response Act. Means, H. o. R.-A. B. W. a., Ed.; 2020; Vol. H.R. 6201.
(8) Texas Health and Human Services Commission. *Impact of COVID-19 on Vulnerable Populations in Texas*; Texas Health and Human Services Commission, 2022. https://hhs.texas.gov/sites/default/files/documents/covid-19-impact-on-vulnerable-populations-in-texas-dec-2022.pdf.
(9) Austin, P.; Stuart, E. A. Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. *Statistics in Medicine* **2015**. DOI: 10.1002/sim.6607.
(10) Division of STD Prevention, N. C. f. H., Viral Hepatitis, STD, and TB Prevention. *Screening Recommendations and Considerations Referenced in Treatment Guidelines and Original Sources*. Centers for Disease Control and Prevention, 2022. https://www.cdc.gov/std/treatment-guidelines/screening-recommendations.htm
(11) U. S. Preventive Services Task Force; Davidson, K. W.; Barry, M. J.; Mangione, C. M.; Cabana, M.; Caughey, A. B.; Davis, E. M.; Donahue, K. E.; Doubeni, C. A.; Krist, A. H.; et al. Screening for Chlamydia and Gonorrhea: US Preventive Services Task Force Recommendation Statement. *JAMA* **2021**, *326* (10), 949-956. DOI: 10.1001/jama.2021.14081 From NLM Medline.
(12) American College of Obstetricians and Gynecologists. *Chlamydia, Gonorrhea, and Syphilis*. 2021. https://www.acog.org/store/products/patient-education/pamphlets/gynecologic-problems/chlamydia-gonorrhea-and-syphilis
(13) Healthcare Statistics | Texas Health and Human Services. www.hhs.texas.gov. https://www.hhs.texas.gov/about/records-statistics/data-statistics/healthcare-statistics
(14) Texas Women's Health Programs Report. https://www.hhs.texas.gov/sites/default/files/documents/texas-womens-health-programs-report-fy2021-august-2022.pdf
(15) Williams E, Burns A, Published RR. Recent Trends in Medicaid Outpatient Prescription Drug Utilization and Spending. KFF. Published December 19, 2023. https://www.kff.org/medicaid/issue-brief/recent-trends-in-medicaid-outpatient-prescription-drug-utilization-and-spending/

(16) HHS Office of Population Affairs. *MEASURE CCW: CONTRACEPTIVE CARE – ALL WOMEN AGES 15 TO 44* 2021. https://opa.hhs.gov/sites/default/files/2022-10/2021-CCW-Measure-Specs-v2.pdf
(17) Center for Medicaid and CHIP Services. Core Set of Adult Health Care Quality Measures for Medicaid (Adult Core Set) Technical Specifications and Resource Manual for Federal Fiscal Year 2023 Reporting Centers for Medicare and Medicaid Services, Ed.; 2023.
(18) Kavanaugh, M. L.; Pleasure, Z. H.; Pliskin, E.; Zolna, M.; MacFarlane, K. Financial Instability and Delays in Access to Sexual and Reproductive Health Care Due to COVID-19. *J Womens Health (Larchmt)* **2022**, *31* (4), 469-479. DOI: 10.1089/jwh.2021.0493 From NLM Medline.
(19) Aly, J.; Choi, L.; Christy, A. Y. The impact of coronavirus on reproduction: contraceptive access, pregnancy rates, pregnancy delay, and the role of vaccination. *F S Rev* **2022**, *3* (3), 190-200. DOI: 10.1016/j.xfnr.2022.05.002 From NLM PubMed-not-MEDLINE.
(20) Diamond-Smith, N.; Logan, R.; Marshall, C.; Corbetta-Rastelli, C.; Gutierrez, S.; Adler, A.; Kerns, J. COVID-19's impact on contraception experiences: Exacerbation of structural inequities in women's health. *Contraception* **2021**, *104* (6), 600-605. DOI: 10.1016/j.contraception.2021.08.011 From NLM Medline.
(21) Texas Healthcare Learning Collaborative. thlcportal.com. https://thlcportal.com/measures/cmscoremeasuredashboard
(22) Medical Quality of Care Measures. https://thlcportal.com/measures/medical
(23) National Committee for Quality Assurance. *HEDIS Measures and Technical Resources*. https://www.ncqa.org/hedis/measures/
(24) CMS Core Measures. https://thlcportal.com/measures/cmscoremeasuredashboard
(25) Fedewa, S. A.; Star, J.; Bandi, P.; Minihan, A.; Han, X.; Yabroff, K. R.; Jemal, A. Changes in Cancer Screening in the US During the COVID-19 Pandemic. *JAMA Netw Open* **2022**, *5* (6), e2215490. DOI: 10.1001/jamanetworkopen.2022.15490 From NLM Medline.
(26) Pharmacy Quality Alliance. Adherence Measures "Proportion Days Covered". 2022. https://www.pqaalliance.org/measures-overview
(27) Olmastroni E, Galimberti F, Tragni E, Catapano AL, Casula M. Impact of COVID-19 Pandemic on Adherence to Chronic Therapies: A Systematic Review. Int J Environ Res Public Health. 2023 Feb 21;20(5):3825. doi: 10.3390/ijerph20053825. PMID: 36900831; PMCID: PMC10001666.
(28) Texas Health and Human Services Commission. *Texas Medicaid and CHIP Reference Guide: Fourteenth Edition*; 2022. https://www.hhs.texas.gov/sites/default/files/documents/texas-medicaid-chip-reference-guide-14th-edition.pdf.
(29) Stuart, E. A.; Huskamp, H. A.; Duckworth, K.; Simmons, J.; Song, Z.; Chernew, M.; Barry, C. L. Using propensity scores in difference-in-differences models to estimate the effects of a policy change. *Health Serv Outcomes Res Methodol* **2014**, *14* (4), 166-182. DOI: 10.1007/s10742-014-0123-z From NLM PubMed-not-MEDLINE.
(30) Bateman, B. T.; Mhyre, J. M.; Hernandez-Diaz, S.; Huybrechts, K. F.; Fischer, M. A.; Creanga, A. A.; Callaghan, W. M.; Gagne, J. J. Development of a comorbidity index for use in obstetric patients. *Obstet Gynecol* **2013**, *122* (5), 957-965. DOI: 10.1097/AOG.0b013e3182a603bb From NLM Medline.
(31) Conde-Agudelo, A.; Rosas-Bermudez, A.; Castano, F.; Norton, M. H. Effects of birth spacing on maternal, perinatal, infant, and child health: a systematic review of causal mechanisms. *Stud Fam Plann* **2012**, *43* (2), 93-114. DOI: 10.1111/j.1728-4465.2012.00308.x From NLM Medline.
(32) Division of Reproductive Health; Promotion, N. C. f. C. D. P. a. H. *How Does CDC Identify Severe Maternal Morbidity?* 2023. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/smm/severe-morbidity-ICD.htm
(33) Alliance for Innovation on Maternal Health. *AIM Data Resources*. American College of Obstetricians and Gynecologists, https://saferbirth.org/aim-data/resources/

(34) Texas Department of State Health Services. MATERNAL AND CHILD HEALTH EPIDEMIOLOGY, 2021 HEALTHY TEXAS MOTHERS AND BABIES DATA BOOK. 2021.
(35) MACPAC; The Medicaid and CHIP Payment and Access Commission. MACStats: Medicaid and CHIP Data Book. The Medicaid and CHIP Payment and Access Commission, Ed.; 2022.
(36) Becker, N.; Moniz, M.; Tipirneni, R.; Dalton, V.; Ayanian, J. Utilization of Women's Preventive Health Services During the COVID-19 Pandemic. *JAMA Health Forum* **2021**. DOI: 10.1001/jamahealthforum.2021.1408.
(37) ADMINISTRATION OF AND EFFICIENCY, COST-SAVING, AND FRAUD PREVENTION MEASURES FOR CERTAIN HEALTH AND HUMAN SERVICES AND HEALTH BENEFITS PROGRAMS. In *32.024(c-1)*, First Called Session ed.; 2011.
(38) Reduced Access to Care During COVID-19 | Data | Centers for Disease Control and Prevention. Centers for Disease Control and Prevention. Published August 6, 2021. https://data.cdc.gov/NCHS/Reduced-Accessto-Care-During-COVID-19/th9n-ghnr
(39) Whaley C., Pera M., Cantor J., Chang J., Velasco J., Hagg H., Bravata D. Changes in health services use among commercially insured US populations during the COVID-19 pandemic. JAMA Netw. Open. 2020;
(40) Mehrotra A., Chernew M., Linetsky D., Hatch H., Cutler D. The Impact of the COVID-19 Pandemic on Outpatient Visits: A Rebound Emerge. 2020. s. 2020.
(41) Turner K, Brownstein NC, Whiting J, Arevalo M, Islam JY, Vadaparampil ST, Meade CD, Gwede CK, Kasting ML, Head KJ, Christy SM. Impact of the COVID-19 Pandemic on Women's Health Care Access: A Cross-Sectional Study. J Womens Health (Larchmt). 2022 Dec;31(12):1690-1702.
(42) Statewide Health Coordinating Council. 2023-2028 Texas State Health Plan.; 2022. https://www.dshs.texas.gov/sites/default/files/legislative/2022-Reports/Statewide-Health-Coordinating-Council-2023-2028-Texas-State-Health-Plan.pdf
(43) Reduced Access to Care During COVID-19 | Data | Centers for Disease Control and Prevention. Centers for Disease Control and Prevention. Published August 6, 2021 https://data.cdc.gov/NCHS/Reduced-Accessto-Care-During-COVID-19/th9n-ghnr
(44) Cantor J, Sood N, Bravata DM, Pera M, Whaley C. The impact of the COVID-19 pandemic and policy response on health care utilization: Evidence from county-level medical claims and cellphone data. J Health Econ. 2022 Mar;82:102581. doi: 10.1016/j.jhealeco.2022.102581. Epub 2022 Jan 13. PMID: 35067386; PMCID: PMC8755425.
(45) Texas Health and Human Services Commission. Continuous Medicaid Coverage Unwinding Plan. Texas Health and Human Services, Ed.; 2023.
(46) Texas Department of State Health Services. *Public Health Regions*. 2023. https://www.dshs.texas.gov/regional-local-health-operations/public-health-regions
(47) Athey, S.; Imbens, G. IDENTIFICATION AND INFERENCE IN NONLINEAR DIFFERENCE-IN-DIFFERENCES MODELS *Econometrica* **2006**, *74* (2).
(48) Metcalfe, A.; Lix, L. M.; Johnson, J. A.; Currie, G.; Lyon, A. W.; Bernier, F.; Tough, S. C. Validation of an obstetric comorbidity index in an external population. BJOG 2015, 122 (13), 1748-1755. DOI: 10.1111/1471-0528.13254 From NLM Medline.