VERMONT Blueprint for Health

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Supporting Documentation

Methods & Measures Used in the Reporting for Blueprint's Women's Health Initiative (WHI) Profiles

This document was prepared by
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ONPOINT Health Data

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Program Overview

The Women's Health Initiative helps ensure that women's health providers, primary care practices, and community partners have the resources that they need to support women's well-being, which includes healthy pregnancies, comprehensive family planning, and thriving families. This support comes through enhanced screenings, brief in-office interventions, and referrals to services for primary care, mental health and substance use disorders, interpersonal violence, housing instability, food insecurity, and trauma once identified.

Why: Healthier Women, Children, & Families

As reported from the 2017 Vermont PRAMS survey, an estimated 33% of births resulted from unplanned pregnancies.[1] Unplanned pregnancies have been associated with an increased risk of poor health for mothers and babies and long-term negative outcomes for the health and well-being of these children as they continue to grow.[2] Through assisting women in choosing the timing of their pregnancies, health care providers and community partners can support improved outcomes for women and their families.

What: Women Experience Enhanced Screening, Connections, & Options

The Women's Health Initiative is focused on strengthening relationships between medical practices and community organizations to provide seamless access to care across a spectrum of services through developed referral relationships, protocols, and workflows. Women who visit participating medical providers, including OB/GYN offices, midwifery practices, family-planning clinics, and primary care practices, receive comprehensive family planning counseling and screening to assess mental health, substance use, personal safety, and access to food and housing. Women identified through these screenings as benefiting from additional services are connected to an initiative-funded mental health clinician and referred to more intensive treatment or services in the community as needed. Participating community organizations also provide screening and connect identified women to primary care and women's health providers as needed. Women who wish to become pregnant receive preconception counseling and services. Those who tell their providers that they do not want a pregnancy in the coming year have access to all contraception options, including immediate access to long-acting, reversable contraceptives (LARCs).

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[1] http://www.healthvermont.gov/sites/default/files/documents/pdf/PRAMS_Overview_2017.pdf

[2] https://www.cdc.gov/sixeighteen/pregnancy/index.htm

How: Multi-Disciplinary Expert Support, Community Implementation

Learning Collaboratives (practice and community) offer training in the screening model, referral processes, LARC insertion, and more. Each participating community builds a coalition between the participating medical practices and community organizations. These local coalitions develop formal referral relationships that allow access to necessary services to improve health outcomes for women in their community.

Evaluation of the Women's Health Initiative

The evaluation of the Women's Health Initiative seeks to understand how the program impacts not only outcomes specific to women's health but also the broader health and wellness priorities set by the state in agreements such as the Global Commitment to Health 1115 Medicaid waiver[3] and the All-Payer Accountable Care Organization Model Agreement.[4] The Global Commitment Medicaid Waiver, which has been in place since 2005, prioritizes changing how care is delivered through value-based payment models, increasing access to affordable and high-quality care, improving access to primary care and improving delivery of care to those with chronic conditions. These priorities are echoed in the latter All-Payer Accountable Care Model Agreement, which builds on the state's flexibility in its Medicaid program by using the ACO model for additional flexibility in Medicare and commercial payers. The All-Payer priorities include controlling the growth in health care costs, increasing access to primary care, preventing chronic conditions and reducing their morbidity, and reducing deaths due to suicide and substance use. The flexibility granted in the state's agreement with the U.S. Centers for Medicare and Medicaid Services (CMS) allow the state to advance an integrated, coordinated, system-wide plan for health care reform, with an emphasis on value and quality across the spectrum of services. The Women's Health Initiative exemplifies this approach. It was designed and implemented following a review of existing research, examination of initiatives around the country, and feedback from a broad array of Vermont stakeholders, including women's health providers and mental health clinicians. The evaluation for the Women's Health Initiative, regularly reported in program profiles, aligns with the above agreements and assesses any impacts on access to care, mental health, substance use disorders, and chronic condition outcomes as well as women's health-specific outcomes.

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[3] http://dvha.vermont.gov/administration/vt-gc-1115-demo-interim-eval-report-final-apr2-18.pdf

[4] Green Mountain Care Board, State of Vermont. All-Payer Model Agreement and Justification: http://gmcboard.vermont.gov/payment-reform/APM

All-Payer Model Aligned Measures

Access to Care

The Women's Health Initiative evaluation plan will measure **access to primary** care to determine how well the Initiative connects women, ages 15–44 years, to primary care. Based on primary care attribution, this measure identifies the percentage of members who visited a primary care practice (Blueprint or non-Blueprint) for primary care during the past two years. In addition, evaluation includes performance measures for access to preventive care, specifically **Cervical Cancer Screening** and **Chlamydia Screening** for women attributed to Women's Health Initiative-participating providers. Of note, improvement in the chlamydia screening measure is one of the priority areas identified for the Global Commitment waiver as detailed in the Agency of Human Services Comprehensive Quality Strategy, which assesses the quality of care received by Medicaid members.

Mental Health & Substance Use Disorders

Specific measures to assess the impact-delivery system reform on improvements in mental health and access to treatment include **Follow-up after Discharge from the Emergency Department for Mental Health or Alcohol or Other Drug Dependence**. This measure, also used in the quality assessment of the All-Payer Model Agreement, assesses how well services are coordinated and the health care system's capacity to effectively manage transitions of care. In recognition of the importance of early identification and effective treatment for mental health and substance use disorders, the Agreement includes measures that assess the number of Vermonters that were screened for depression, that received medication-assisted treatment for opioid use disorder, and that were screened for tobacco use and received cessation counseling if needed. The Women's Health Initiative supports these measures by calculating the proportion of **women, ages 15–44 years, identified through claims data, as having mental health disorders, depression, substance use disorders, opioid use disorder, and tobacco use disorder,** in order to help practices and communities understand the prevalence of mental health and substance use disorders in the patient population that the Initiative was designed to reach.

Chronic Conditions (Diabetes, Hypertension, & Multiple Conditions)

To assess the prevalence and comorbidity of the priority chronic conditions highlighted in the Agreement, the Women's Health Initiative evaluation and profiles include the **percentage of women, ages 15–44 years, who were identified through claims data as having diabetes and hypertension.** It also assesses the health status of this group by identifying **the percentage of women, ages 15–44 years, who fell into one of five clinical risk groups** (i.e., Healthy, Acute or Minor Chronic, Moderate Chronic, Significant Chronic, and Cancer or Catastrophic). This information is intended to help practices and communities understand the prevalence and severity of chronic conditions among the Initiative's population. Additionally, a key element of the Women's Health Initiative design is the systematic screening for factors known to negatively impact health (e.g., depression) and to facilitate connections across clinical and community providers (e.g., navigation to community-based diabetes prevention, wellness recovery action planning (WRAP), chronic condition, and tobacco-cessation programs offered free of charge to all Vermonters).

Women's Health-Specific Measures

Comprehensive Family Planning Counseling

The Women's Health Initiative includes comprehensive family planning counseling in its design, beginning with systematic implementation across participating practices of One Key Question®, which asks, "Would you like to become pregnant in the next year?"[5,6] The woman's response to One Key Question, in line with CDC guidelines,[7] determines whether preconception care, contraceptive care, or both are provided to the woman receiving care. As a result, women have access to preconception counseling and to at least one form of each of the 18 FDA-approved contraceptive methods, including LARCs. Performance measures for assessing **pregnancy rate and access to contraceptive care (i.e., the percentage of women provided a most- or moderately effective contraceptive method, for women ages 15–44 years, and postpartum**),[8] and **access to long-acting reversible contraceptives**, are included in the Women's Health Initiative evaluation. Of note, a woman's choice in contraceptive methods is complex and personal; thus, some women will make informed decisions to choose methods with lower efficacy even when offered the full range of contraceptive methods. Individual choice remains a core component of person-centered, comprehensive family-planning counseling and must be respected.[7]

Poverty

The CMS Accountable Health Communities innovation model is intended to test whether systematically identifying and providing effective interventions for non-medical health-related social needs produces improvements in health outcomes, quality of care provided, and health service utilization and cost.[9] To effectively address non-medical health-related social needs, such as interpersonal violence, housing instability and food insecurity, strong connections between clinical care and community services must exist to ensure individuals are linked to available services once the need is identified. Unmet health-related social needs increase the risk for the onset of chronic conditions, reduce one's ability to successfully manage these conditions, and lead to increased health care utilization and cost. Poverty is a driving factor in the presence of social needs and negative impacts on health and well-being.[10] Therefore the Women's Health Initiative evaluation includes Behavioral Risk Factor Surveillance System measures of **household income, health status by household income,**

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[5] https://powertodecide.org/one-key-question

[6] Bellanca HK and Stranger Hunter M. Oregon Foundation for Reproductive Health. One Key Question®: https://www.contraceptionjournal.org/article/S0010-7824(13)00253-9/fulltext

[7] https://www.cdc.gov/sixeighteen/pregnancy/index.htm

[8] Office of Population Affairs, U.S. Department of Health and Human Services. Performance Measures, Unintended Pregnancy, Contraceptive Care. https://www.hhs.gov/opa/performance-measures/index.html.

[9] Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services. Accountable Health Communities Model. https://innovation.cms.gov/initiatives/ahcm

[10] Ibid

education, tobacco use, fruit and vegetable consumption, and **physical activity** to assess the links between poverty and health behaviors and outcomes at the community level.

Attribution Methodology & Data Sources

Assigning patients to participating practices sites (i.e., women's health clinics, OB/GYN practices, family practices, or other primary care practices) for the **practice profiles** and to their region of residence for the **community health profiles** is an important first step to evaluating the population of interest. Assigning or attributing members occurs in three steps. Members are first attributed to participating women's health providers (e.g., OB/GYNs), then to participating primary care providers based on where a member received care, and finally to a Hospital Service Area (HSA) based on a member's location of residence. If a member visited both an OB/GYN and a PCP, they could be attributed to both practices and would appear in the profiles for both practices.[11]

Practice Profile Attribution

The data used in the attribution methodology for practice-level data comes from Vermont's all-payer claims database, the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), which includes submitted eligibility and claims data on Vermont residents covered by Medicaid, Medicare, and contributing commercial plans from July 2008 to the calendar year of the most recent profiles. While claims can link the patient to the provider, the Blueprint provides a practice roster that allows providers (and therefore their patients) to be linked to a practice. The Blueprint also produces a crosswalk that enables mapping from a member's ZIP code and city of residence, found in the insurance eligibility data, to the HSA where that person lives. Members were included in the attribution as long as they had at least one month of health insurance enrollment during the measurement year and resided in Vermont during their last month of enrollment.

[11] In addition to the community-level profiles for the Women's Health Initiative, the Blueprint for Health also produces Community Profiles for the entire population reported in VHCURES. See https://blueprintforhealth.vermont.gov/community-health-profiles.

A standard attribution method was used to assign each member in the VHCURES data to a women's health practice or a primary care practice. This attribution was based on a 24-month look-back using Blueprint roster data and Evaluation and Management (E&M) service codes defined by the U.S. Centers for Medicare & Medicaid Services (CMS) (see Table 2 for further detail). Members were assigned to each type of practice based on the following logic:

- The greatest number of visits[12]
  - If the same visit count, the most-recent visit date
    - If the same most-recent visit date, the largest allowed amount dollar value
      - » If the same most-recent visit date and largest allowed amount dollar value, then the lowest Blueprint practice number

Not all women's health practitioners used by Vermont residents were included in the Blueprint-supplied roster, which omits out-of-state women's health providers used by Vermont residents and Vermont women's health providers not participating in this initiative. Residents who were not attributed to a practice are still included in statewide and community rates.

Blueprint WHI Practice/Practitioner Roster

The practice roster provided by Blueprint contains information on each WHI practice's name, affiliation type (e.g., independent, hospital owned, Federally Qualified Health Center owned, etc.), parent organization, each women's health provider rendering services at that practice, provider identifiers (both NPI and payer specific), and the effective and termination dates of each practitioner at that practice. In the case of practitioners who provided care at more than one practice during a reporting period, practitioners were associated with practices based on where the practitioner's full-time equivalent (FTE) value was greatest. In cases where the FTEs for a practitioner were equal across practices, the association was made to the practice with the lowest practice ID. In the case of Planned Parenthood of New England (PPNE), because many providers work across centers, providers were attributed to only the parent organization as a whole and not to specific centers.

Using this information, Onpoint performed a crosswalk to rendering provider identifiers available in the VHCURES data. Onpoint undertook manual investigation of practitioners who appeared in the Blueprint roster but could not be found in the VHCURES data. Successful matches were updated in the VHCURES provider tables to enhance the reliability of the attribution (see Table 1 for an example of roster-linkage end results using simulated data).

[12] A visit is operationally defined as one or more claims for a member with the same start date of service with the same attending or rendering provider.

Table 1. Example Practice Roster Data with Linkage to VHCURES Rendering Provider ID*

Practitioner Name	NPI	Practitioner Effective Date	Practitioner Termination Date	Practice ID	Practice Name	Practice Affiliation	VHCURES Rendering Provider ID
Ana Harding	1234567890	06/30/1992		VT2	Main Street Women's Health Care	Central Health Care	9712345
Lara Knowles	1034567891	08/01/2005		VT2	Main Street Women's Health Care	Central Health Care	9712376
Jake Tate	3456789012	10/01/2009	11/12/2011	VT2	Main Street Women's Health Care	Central Health Care	9823456
Kimora Dunn	4632456789	05/12/2011		VT2	Main Street Women's Health Care	Central Health Care	5467890

* Note that these data are simulated; no actual member/provider identifiers appear in this document.

E&M Coding & Primary Care Specialties

A standard set of Evaluation and Management (E&M) Current Procedural Terminology (CPT) codes (specifically, CPT-4 codes, which are used to describe medical procedures and physician services), Healthcare Common Procedure Coding System (HCPCS) codes, and Uniform Billing (UB) revenue codes were used to identify primary care services. This code list originated in the Multi-payer Advanced Primary Care Practice (MAPCP) Demonstration, in which the Blueprint participated, under CMS. Onpoint identified women's health visits using primary care codes, supplementing the work with additional codes related to women's health visits as described in Table 2.

In order to facilitate the accuracy of identifying E&M visits to women's health practitioners, Onpoint separated claims into professional and facility claim types. While most practices bill for primary care visits on professional claims, many remain billed on a facility claim type. These practices include Federally Qualified Health Centers (FQHCs), Rural Health Centers (RHCs), and Critical Access Hospitals (CAHs) (see Table 3). For Medicaid and Medicare primary care visits that were billed on a facility claim, it was necessary to use the attending provider instead of the rendering provider.

To be included in the attribution process as a participating women's health or PCP provider claim, a claim needed to meet one of the following four sets of criteria:

1. Professional claim, processed as a primary-payer claim, with a valid service-site type, AND with a CPT/HCPCS procedure code listed in Table 2; OR
2. Facility claim, processed as a primary-payer claim, with a CAH bill type listed in Table 3, AND with a CAH revenue code listed in Table 3, AND with a procedure code listed in Table 2; OR
3. Facility claim, processed as a primary-payer claim, with an FQHC bill type listed in Table 3, AND with an FQHC revenue code listed in Table 3; OR
4. Facility claim, processed as a primary-payer claim, with an FQHC bill type listed in Table 3, AND with a CPT/HCPCS procedure code listed in Table 2.

Table 2. E&M CPT/HCPCS Procedure Codes Used to Identify Women's Health Visits from VHCURES*

Visit Type	Codes Used to Identify	Used in PCP Attribution	Used in Women's Health Provider Attribution
CPT/HCPCS Procedure Code Description Summary			
Evaluation and Management – Office or Other Outpatient Services	• New Patient: 99201-99205 • Established Patient: 99211-99215 • Clinic visit used by FQHC & RHC: T1015	Yes	Yes
Consultations – Office or Other Outpatient Consultations	New or Established Patient: 99241-99245	Yes	Yes
Nursing Facility Services	• E & M New/Established patient: 99304-99306 • Subsequent Nursing Facility Care: 99307-99310 • Nursing Facility Discharge: 99315-99316 • Annual Nursing Facility Assessment: 99318	Yes	Yes
Domiciliary, Rest Home (e.g., Boarding Home), or Custodial Care Service	• Domiciliary or Rest Home Visit New Patient: 99324-99328 • Domiciliary or Rest Home Visit Established Patient: 99334-99337 • Domiciliary or Rest Home Care Supervision: 99339-99340	Yes	Yes
Home Services	• New Patient: 99341-99345 • Established Patient: 99347-99350	Yes	Yes
Prolonged Services – Prolonged Physician Service With Direct (Face-to-Face) Patient Contact	99354 and 99355	Yes	Yes
Prolonged Services – Prolonged Physician Service Without Direct (Face-to-Face) Patient Contact	99358 and 99359	Yes	Yes
Preventive Medicine Services	• New Patient: 99381–99387 • Established Patient: 99391–99397	Yes	Yes
Medicare Covered Wellness Visits	• G0402 – Initial Preventive Physical Exam ("Welcome To Medicare" Visit) • G0438 – Annual Wellness Visit, First Visit • G0439 – Annual Wellness Visit, Subsequent Visit	Yes	Yes
Counseling Risk Factor Reduction and Behavior Change Intervention	• New or Established Patient Preventive Medicine, Individual Counseling: 99401–99404 • New or Established Patient Behavior Change Interventions, Individual: 99406-99409 • New or Established Patient Preventive Medicine, Group Counseling: 99411–99412	Yes	Yes
Other Preventive Medicine Services – Administration and Interpretation	99420	Yes	Yes
Other Preventive Medicine Services – Unlisted Preventive	99429	Yes	Yes
Newborn Care Services	• Initial and subsequent care for evaluation and management of normal newborn infant: 99460-99463 • Attendance at delivery (when requested by the delivering physician) and initial stabilization of newborn: 99464	Yes	Yes

Visit Type	Codes Used to Identify	Used in PCP Attribution	Used in Women's Health Provider Attribution
CPT/HCPCS Procedure Code Description Summary			
	• Delivery/birthing room resuscitation: 99465		
All Ages Comprehensive Preventive Visits	• Annual GYN Exam BCBS: S0610, S0612, S0613	No	Yes
Adult and Pediatric Health Screening	• Diabetes Screening: 82947, 83036 • Hepatitis C Screening: 86803 • Syphilis Infection Screening: 86592, 86780	No	Yes
Women's Health Screening	• Asymptomatic Bacteriuria Screening in Pregnant Females: 87081, 87084, 87086, 87088 • Breast and Ovarian Cancer Susceptibility, Genetic Counseling and Evaluation for BRCA Testing: 96040 • Breast Cancer Screening: 77052, 77055-77057, 77063, G0202 • Breast Feeding support, Supplies, and Counseling: A4281-A4286, E0602-E0604, S9443 • Cervical Cancer Screening: 88141-88143, 88147-88148, 88150, 88152-88154, 88164-88167, 88174-88175, G0101, G0123, G0141, G0143-G0145, G0147-G0148, Q0091 • Chlamydia Screening: 86631-86632, 87110, 87270, 87490-87491, 87800 • DXA Scan: 77080 • Glucose Screening: 82950-82951 • Gonorrhea Screening: 87850, 87590, 87591 • Hepatitis B Virus Infection Screening for Pregnant Female: 87340 • HIV Screening and Counseling: 86689, 86701-86703, 87390, 87534-87536, G0432-G0433, G0435 • HPV DNA Testing: 87620-87625 • Iron Deficiency Anemia Screening: 80055, 85013-85014, 85018, 08025, 85027 • Rh (D) Incompatibility Screening in Pregnant Female: 86901	No	Yes
Contraception and Contraceptive Counseling	• Contraceptive Methods: A4261, A4264, A4266, A4268, J7297-J7298, J7300-J7301, J7303, J7304, J7306-J7307, S4981, S4989, S4993, 11976, 11980-11983, 58300-58301, 58565, 58600, 58605, 58611, 58615, 58661, 58671, 96372, J1050, 57170 • Non-Biodegradable Drug Delivery Implant: 11981-11983	No	Yes
Well Woman Visit (During Pregnancy)	• Global OB-Covered Well Woman Visits: 59400, 59510, 59610, 59618, 59425-59426, 59430, 59614, 59622	No	Yes
STI Counseling	• STI Counseling: 86593, 86695-86696, G0445	No	Yes
Additional Postpartum Care after Delivery	59410, 59430, 59515		

***** Professional claims in VHCURES were determined as those having a valid Service Site (Professional) (MC037) reported in the medical claims (i.e., SVC_SITE_TYPE ≠ '-1' [payer supplied no value] or '-2' [payer supplied an incorrect or invalid value]). (2) HCPCS code T1015 (i.e., clinic visit/encounter) was not included in the original attribution specifications for Blueprint but was determined to be widely used by some FQHCs and RHCs in the absence of other codes to identify visits. (3) women's health practitioner visits billed on facility claims were identified as those with a reported Type of Bill (Institutional) code of '71', '73', '77', or '85'. (4) For facility claims with a reported Type of Bill (Institutional) code of '85', revenue codes for professional services (i.e., '0960'–'0989') were included. (5) For commercial, Medicaid, and Medicare data, the VHCURES field of Rendering Provider was used to identify the practitioner. (6) For Medicare facility claims, the VHCURES field of Attending Provider was used; when the attending provider information was not provided, the rendering provider was used instead. (7) For Medicaid facility claims, when VHCURES attending provider information was not provided, rendering provider was used.

Table 3. Facility Claims: Included Bill Types and Revenue Codes

Facility Claim Types	Codes Used to Identify
Bill Type, Revenue Code, and Place of Service Description Summary	
Federally Qualified Health Centers (FQHCs) and Rural Health Centers (RHCs)	Bill Types: 71,73,77 Revenue Codes: • 0521 = Clinic visit by member to RHC/FQHC • 0522 = Home visit by RHC/FQHC practitioner • 0524 = Free Standing Family Clinic • 0525 = Nursing home visit by RHC/FQHC practitioner
Critical Access Hospitals (CAHs) Professional Services	Bill Type: 85 Revenue Codes: 0960-0989 Professional Services

Practice Attribution Process: Practice Profiles

During the course of any 24-month look-back period, members may have visited multiple women's health providers or multiple women's health practices. These may have included different Blueprint practices and women's health providers as well as non-Blueprint practices and women's health providers — both in Vermont as well as in bordering states.

Attribution was run twice, once for PCPs and once for women's health providers. Patients could be attributed to a PCP, a women's health provider, one of each, or none of the above.

Member-to-Practice Attribution

Attribution was performed for each unique combination of year and month of enrollment (i.e., 72 combinations consisting of each individual month for calendar years 2008–2015). The resulting attribution output includes a unique member ID based on the 24-month look-back. The practice most recently visited by the member and the practice with the greatest allowed amount dollar value for that member's women's health visits also were identified for use in handling "ties." (Note that member visits were associated with individual practitioners as an interim step of the attribution process, as shown in Tables 5 and 6 below.)

Onpoint also used the practitioner effective and termination dates provided in the Blueprint roster for the attribution process. If a member's visits to a practitioner did not fall within the range of the effective and termination dates for that practitioner in that practice, the member's visits to that practitioner were not included. This ensured that members were not attributed to the wrong practitioner-practice combination.

In the case of practitioners who provided care at more than one practice during a reporting period, practitioners were associated with practices based on where the practitioner's full-time equivalent (FTE) value was greatest (except for PPNE, for which the association was instead to the parent organization as a whole). In cases where the FTEs for a practitioner were equal across practices, the association was made to the practice with the lowest practice ID.

Practice mergers and conversions were handled as follows:

1. For those practices that had merged, or converted into, or succeeded one another, their Blueprint practice IDs were merged (recoded) so that all displayed the latest Blueprint practice ID for that practice lineage.
2. Participating practices (or merged Blueprint practice lineages) were dropped from annual profiles as a Blueprint practice when, and only when, the practice/lineage had been closed prior to the profile year (without a successor/child practice). That is, practice patient population outcomes were not be generated for a measurement year in which the practice did not exist in any form with no successor.

From the member-to-practitioner attribution results, practice-level attribution was generated by assigning each VHCURES member ID to the practice using the following algorithm for the 24-month look-back period:

- The greatest number of visits
  - If the same visit count, the most-recent visit date
    - If the same most-recent visit date, the largest allowed amount dollar value
      - » If the same most-recent visit date and largest allowed amount dollar value, then the lowest Blueprint practice number

Inputs

- Claims data in the extract format and Blueprint Rosters, see below.
- Provider roster
  - Provider NPI
  - Provider name
  - Practice identifier
  - Start date (when the provider belongs to the practice)
  - End date (when the provider belongs to the practice)
  - Full-time equivalent
- Practice roster
  - Practice identifier
  - Practice NPI
  - Practice name
  - Start date (when the practice belongs to Blueprint)
  - End date (when the practice belongs to Blueprint)

Intermediate Result

A table, which can be used for quality assurance and potentially in analytics, that shows each unique member ID (internal_member_id) with all of their PCP-like visits, summarized by month and provider:

- Unique member ID
- Month/year
- Internal provider ID
- Practice identifier
- Number of visits
- Most-recent visit (N/Y)
- Allowed amount

End Result

Each internal_member_id is attributed to a Blueprint practice for each month in the incurred period for the extract. The output is at minimum:

- Internal_Member_ID
- Practice Identifier
- Month of eligibility

Example Member Attribution

Table 4 provides an example of attribution for a single member for December 2017 with a 24-month look-back. In this example, Member ID 123 visited three different women's health care practitioners during the 24-month look-back period and had an equal number of two visits with each practitioner.

Table 4. Example Member-to-Practice Attribution, Intermediate Summary Level Results

Member ID	Provider ID	Blueprint Practice ID	Blueprint Practice Name	Practitioner Name	E&M Visits During 24-Month Look-Back	Most Recent Visit	Total Payments On E&M Visits
123	4321234	VT1	Southside Women's Medicine	John Smith	2	N	$135.80
123	9712345	VT2	Main Street Women's Health Care	Ana Harding	2	N	$120.34
123	9712376	VT2	Main Street Women's Health Care	Lara Knowles	2	Y	$61.77

Aggregating to the practice level, Member ID 123 had four visits at Main Street Women's Health Care and two visits at Southside Women's Medicine (Table 4, above). Therefore, at the practice level, Member ID 123 was attributed to Main Street Women's Health Care (Table 5).

Table 5. Example Member-to-Practice Attribution, Final Practice Selection

Member ID	Blueprint Practice ID	Blueprint Practice Name
123	VT2	Main Street Women's Health Care

Member IDs that were assigned to a primary care practitioner not identified in Blueprint's roster or who remained unattributed to a corresponding Blueprint roster practice were assigned to a practice name of "Non-Blueprint Practice" and served as a comparison group.

Hospital Service Area Attribution Process: Community Profiles

Separately from the practice attribution process, members with one or more months of insurance enrollment coverage during the measurement year also were attributed to Hospital Service Areas (HSAs). These assignments were based upon the member's most recent ZIP code and town of residence during the measurement year in the insurance eligibility file. Because HSAs can cross ZIP code lines and since all payers do not include town information (e.g., Medicare does not submit this field), members were attributed to HSAs using a three-step process:

1. If the ZIP code of residence was entirely inside an HSA, the patient was directly attributed to the HSA.
2. If the ZIP code crossed HSA lines, the patient was attributed to an HSA based on their town of residence.
3. If the ZIP code crossed HSA lines and the town of residence was not available or could not be readily matched to a town in the reference file, the patient was attributed to an HSA based on the HSA where the plurality of patients in the ZIP code live.

Table 6 identifies the towns included in each HSA.

Table 6. Towns Within Hospital Service Area (HSA)

HSA	Towns	HSA	Towns	HSA	Towns	HSA	Towns
Barre	Barre City Barre Town Berlin Bolton Cabot Calais Duxbury East Montpelier Fayston Marshfield Middlesex Montpelier Moretown Northfield Orange Plainfield Roxbury Topsham Waitsfield Warren Washington Waterbury Williamstown	Burlington (cont'd)	Fairfax Ferrisburgh Fletcher Grand Isle Hinesburg Huntington Jericho Milton Monkton North Hero Richmond Shelburne South Burlington South Hero St. George Starksboro Underhill Westford Williston Winooski	Newport (cont'd)	Irasburg Jay Lemington Lewis Lowell Morgan Newport City Newport Town Norton Troy Warner's Grant Warren Gore Westfield Westmore	Springfield (cont'd)	Peru Rockingham Springfield Weathersfield Weston
				Randolph	Barnard Bethel Braintree Brookfield Chelsea Granville Hancock Pittsfield Randolph	St. Albans	Alburgh Bakersfield Berkshire Enosburg Fairfield Franklin Georgia Highgate Isle La Motte Montgomery Richford Sheldon St. Albans City St. Albans Town Swanton
						St. Johnsbury	Barnet Burke

HSA	Towns	HSA	Towns	HSA	Towns	HSA	Towns
	Woodbury Worcester	Middlebury	Addison Bridport Bristol Cornwall Lincoln Middlebury New Haven Orwell Panton Ripton Salisbury Shoreham Vergennes Waltham Weybridge Whiting		Rochester Stockbridge		Concord Danville East Haven Granby Guildhall Kirby Lunenburg Lyndon Maidstone Newark Sheffield St. Johnsbury Sutton Victory Walden Waterford Wheelock
Bennington	Arlington Bennington Dorset Dover Glastenbury Manchester Pownal Readsboro Rupert Sandgate Searsburg Shaftsbury Somerset Stamford Sunderland Whitingham Wilmington Woodford	Morrisville	Belvidere Craftsbury Eden Elmore Greensboro Hardwick Hyde Park Johnson Morristown Stannard Stowe Waterville Wolcott	Rutland	Benson Brandon Castleton Chittenden Clarendon Danby Fair Haven Goshen Hubbardton Ira Killington Leicester Mendon Middletown Springs Mount Holly Mount Tabor Pawlet Pittsford Poultney Proctor Rutland Rutland City Shrewsbury Sudbury Tinmouth Wallingford Wells West Haven West Rutland		
Brattleboro	Brattleboro Brookline Dummerston Guilford Halifax Jamaica Marlboro Newfane Putney Stratton Townshend Vernon Wardsboro Westminster Windham Winhall	Newport	Albany Averill Averys Gore Barton Bloomfield Brighton Brownington Brunswick Canaan Charleston Coventry Derby Ferdinand Glover Holland			White River Junction	Bradford Bridgewater Corinth Fairlee Groton Hartford Hartland Newbury Norwich Peacham Plymouth Pomfret Reading Royalton Ryegate Sharon Strafford Thetford Tunbridge Vershire West Fairlee West Windsor Windsor Woodstock

Summary, Limitations, & Opportunities

Member IDs were attributed to Vermont women's health care practices. Initial attribution results were reviewed with Blueprint and crosschecked against practice-specific counts acquired by Blueprint from the practices themselves. These practice-supplied counts, which were not based on an attribution algorithm but rather included any member that had visited the practice, were somewhat higher than the counts developed through attribution (which accounted for members who visited more than one practice within the 24-month look-back).

Improvements in provider attribution could be achieved through additions to the Blueprint roster, including the listing of practices used in bordering states, as well as by improvements in provider data submitted to VHCURES — something that has been discussed as part of the coming rule changes for VHCURES.

Performance Measure Specifications

The key measures used to evaluate the progress and opportunities for improvement under the Women's Health Initiative are summarized in Table 7 and described in the following sections.
To address privacy concerns, data at the practice and HSA level were blinded where the numerator was between 1 and 10 and/or the denominator was less than 30. Profiles were created for all participating practices even when there was significant blinding at the practice level to allow the practices to view HSA and state trends.

Table 7. Summary Table of Measure Specifications

Area	Metric	Population	Data Source	National Benchmark Measure
Socioeconomic and Behavioral Risk Factors	Adults living in a household with an annual household income of less than $25,000 annually	All adults	BRFSS	BRFSS
	Adults with less than a high school education	All adults	BRFSS	BRFSS
	Adults who report no leisure time physical activity	All adults	BRFSS	BRFSS
	Adults who currently smoke cigarettes	All adults	BRFSS	BRFSS
Demographics and Health Risk	Median Age	Females, ages 15-44 years; All patients	VHCURES	N/A
	CRG Health Status (Healthy, Acute or Minor Chronic, Moderate Chronic, Significant Chronic, Cancer or Catastrophic)	Females, ages 15-44 years	VHCURES	N/A
	Insurance Type	Females, ages 15-44 years	VHCURES	N/A
Selected Chronic Conditions	Depression	Females, ages 15-44 years	VHCURES	NCQA HEDIS AMM Denominator
	Asthma	Females, ages 15-44 years	VHCURES	NCQA HEDIS AMA denominator
	Hypertension	Females, ages 15-44 years	VHCURES	NCQA HEDIS CBP Denominator
	Diabetes	Females, ages 15-44 years	VHCURES	NCQA HEDIS CDC Denominator
	Mental Health Non-Substance Use	Females, ages 15-44 years	VHCURES	N/A
	Substance Use Disorder Total	Females, ages 15-44 years	VHCURES	N/A
	Tobacco Dependence	Females, ages 15-44 years	VHCURES	N/A
	Opioid Use Disorder	Females, ages 15-44 years	VHCURES	N/A
	Other Substance Use Disorders	Females, ages 15-44 years	VHCURES	N/A

Area	Metric	Population	Data Source	National Benchmark Measure
Access to Care and Prevention	Access to Primary Care (Practice Attribution)	Females, ages 15-44 years	VHCURES	N/A
	Cervical Cancer Screening	Females, ages 15-44 years	VHCURES	NCQA HEDIS CCS Measure
	Chlamydia Screening	Females, ages 15-44 years	VHCURES	NCQA HEDIS CHL Measure
Access to Contraceptive Care	All Women: Most or Moderately Effective Contraception (MEMC)	Females, ages 15-44 years	VHCURES	CCW, Office of Population Affairs
	All Women: Long-Acting Reversible Contraception (LARC)	Females, ages 15-44 years	VHCURES	CCW, Office of Population Affairs
	Postpartum Women: Most or Moderately Effective Contraception (MEMC)	Postpartum females, ages 15-44 years	VHCURES	CCP, Office of Population Affairs
	Postpartum Women: Long-Acting Reversible Contraception (LARC)	Postpartum females, ages 15-44 years	VHCURES	CCP, Office of Population Affairs
Follow-Up after Emergency Department Visit	Follow-Up after Emergency Department Visit for Patients with a Primary Diagnosis of Mental Illness – 7 Day	Females and males, ages 6+ years	VHCURES	NCQA HEDIS FUM Measure
	Follow-Up after Emergency Department Visit for Patients with a Primary Diagnosis of Mental Illness – 30 Day	Females and males, ages 6+ years	VHCURES	NCQA HEDIS FUM Measure
	Follow-Up after Emergency Department Visit for Patients with a Primary Diagnosis of Alcohol and other Drug Dependence – 7 Day	Females and males, ages 13+ years	VHCURES	NCQA HEDIS FUA Measure
	Follow-Up after Emergency Department Visit for Patients with a Primary Diagnosis of Alcohol and other Drug Dependence – 30 Day	Females and males, ages 13+ years	VHCURES	NCQA HEDIS FUA Measure
Pregnancies and Birth Rates	Rate of Live Births	Females, ages 15-44 years	VHCURES	N/A
	Rate of Miscarriages	Females, ages 15-44 years	VHCURES	N/A
	Rate of Abortions	Females, ages 15-44 years	VHCURES	N/A
Teen Pregnancies	Rate of Pregnancies	Females, ages 15-17	VHCURES	N/A
	Rate of Pregnancies	Females, ages 18-19	VHCURES	N/A
	Rate of Pregnancies	Females, ages 15-19	VHCURES	N/A

Blueprint-Selected Chronic Diseases

Blueprint-selected chronic diseases (Table 8) were identified from the VHCURES medical claims data using diagnosis coding based on nationally accepted definitions (e.g., NCQA HEDIS). The algorithm employed to determine Blueprint-selected chronic diseases used the following criteria: One or more inpatient visits, one or more outpatient emergency department (ED) visits, or two or more non-hospital outpatient visits. For identifying members with diabetes and asthma, at least two pharmacy prescriptions also were required as part of the algorithm.

Table 8. Definitions for Blueprint-Selected Chronic Diseases

Chronic Disease	Medical Claim ICD-9 & ICD-10 Diagnosis Code (Include 4th & 5th Digits)*	Pharmacy	Source from which ICD-9 & ICD-10 Codes were Determined
Asthma	ICD-9: 493 ICD-10: J45	NCQA NDC List	HEDIS ASM Measure
Depression	ICD-9: 296.2, 296.3, 300.4, 309.1, 311 ICD-10: F32, F33	N/A	HEDIS AMM Measure
Diabetes	ICD-9: 250, 357.2, 362.0, 366.41, 648.0 ICD-10: E10, E11, E13, O24	NCQA NDC List	HEDIS CDC Measure
Hypertension (Essential)	ICD-9: 401 ICD-10: I10	N/A	HEDIS CBP Measure
Mental Health Non-Substance Use	ICD-9: 290, 291, 292, 293, 294, 295, 296, 297, 298, 300, 301, 302, 313, 314, 306, 307, 308, 309, 310, 311, 312 ICD-10: F0, F2, F3, F4, F5, F6, F9).	N/A	N/A
Opioid Substance Use Disorders	ICD-9: 304.00, 304.01, 304.02, 304.70, 304.71, 304.72 ICD-10: F1120, F1123, F1124, F11220, F11221, F11222, F11229, F11250, F11251, F11259, F11281, F11282, F1128	N/A	N/A
Non-Opioid Substance Use Disorders	ICD-9: 303, 304 (excludes 304.01, 304.02, 304.70, 304.71, 304.72), 305 (excludes 305.1), 304.00, 304.01, 304.02, 304.70, 304.71, 304,72 ICD-10: F12, F13, 14, F15, F16, F18, F19 (excludes F1920, F1921)	N/A	N/A
Substance Use Disorders	This measure identifies members diagnosed with either non opioid substance use disorder, opioid use disorder, or both.	N/A	N/A
Tobacco Dependence	ICD-9: 305.1 ICD-10: F172	N/A	N/A

* Includes principal diagnosis and any secondary diagnosis code reported on the claim.

Clinical Risk Groups

Clinical Risk Groups (CRGs) were applied to the VHCURES claims data to determine each member's health status. CRGs are a product of 3M™ Health Information Systems and are used throughout the United States as a method of risk-adjusting populations. The grouper first classifies each member into one of 1,080 distinct clinical groups based on the diagnoses reported on claims and then further aggregates these clinical groupings into nine major clinical CRG statuses. Due to small numbers in some categories used for the Blueprint Community Profiles' risk-adjustment regression model, these nine categories were combined further into five aggregated categories: Healthy, Acute or Minor Chronic, Moderate Chronic, Significant Chronic, and Cancer or Catastrophic. Table 9 identifies both the nine principal CRG categories (columns 1 and 2) as well as the aggregated categories used in the Blueprint profiles' regression model (Column 4). (Note: CRGs do not include pregnancy and child birth in clinical classification.)

Table 9. CRG Major Health Status Categories

#	CRG Major Health Status Categories	Examples	Aggregation for Regression Model
1	Healthy	N/A	Reference Group (Healthy)
2	History of significant acute disease	Acute ear, nose, or throat illness	Acute or Minor Chronic
3	Single minor chronic disease	Minor chronic joint	Acute or Minor Chronic
4	Minor chronic disease in multiple organ systems	Minor chronic joint and migraine	Moderate Chronic
5	Single dominant or moderate chronic disease	Diabetes	Moderate Chronic
6	Significant chronic disease in multiple organ systems	Diabetes and hypertension	Significant Chronic
7	Dominant chronic disease in 3 or more organ systems	CHF, diabetes, and COPD	Significant Chronic
8	Dominant, metastatic, and complicated malignancies	Malignant breast cancer	Cancer or Catastrophic
9	Catastrophic conditions	HIV, cystic fibrosis, muscular dystrophy, quadriplegia	Cancer or Catastrophic

Behavioral Risk Factor Surveillance System (BRFSS) Measures

Additional measures based on data from the Behavioral Risk Factor Surveillance System (BRFSS) are included in the profiles to provide context regarding key risk factors and diagnoses. Risk factors include households with income of less than $25,000 annually, cigarette smoking, no leisure-time physical activity/exercise, and those with a personal doctor. Diagnoses include COPD, hypertension, and diabetes. Estimates of these risk factors were reported at the community level with 95% confidence intervals. See the BRFSS section in the adult Blueprint Profiles[13] for further detail on these measures. For more information on BRFSS methods, please see the Vermont Department of Health BRFSS page[14] and the CDC's website on BRFSS.[15]

Measurement of Access to Care

Primary measures of effective and preventive care were selected for inclusion in the Women's Health Initiative profiles. While it is beyond the scope of this document to provide all of the detailed specifications for each effective and preventive care measure, the denominator and numerator for each are summarized below. Onpoint follows NCQA HEDIS specifications for each measure including continuous enrollment requirements.

Cervical Cancer Screening - Core-30, NQF #0032, HEDIS Measure

This measure assesses the percentage of women either (a) ages 21–64 years who received one or more Papanicolaou (Pap) tests to screen for cervical cancer during the measurement year or the two years prior to the measurement year or (b) ages 30–64 years who received one or more Pap tests to screen

[13] https://blueprintforhealth.vermont.gov/community-health-profiles/community-health-profiles-methodology

[14] http://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/brfss

[15] https://www.cdc.gov/brfss/index.html

for cervical cancer during the measurement year or four years prior to the measurement year. This is a claims-based measure.

The denominator requires continuous enrollment in Medicaid during the measurement year or in commercial during the measurement year and the two years prior to the measurement year. Women with evidence of a hysterectomy are excluded. The numerator is based on identification of CPT, HCPCS, ICD-9, ICD-10, and UB revenue codes in the claims data that indicate a Pap test.

Chlamydia Screening - Core-7, NQF #0033, HEDIS Measure

This measure assesses the percentage of female members, ages 16–24 years, identified as sexually active and who had at least one test for chlamydia in the measurement year. This is a claims-based measure.

The denominator requires continuous enrollment during the measurement year and sexual activity as determined by pharmacy data (e.g., dispensed contraceptives) or claims or encounters indicating sexual activity (e.g., pregnancy, pregnancy tests, chlamydia tests, or other claims related to sexual activity).

Follow-Up After Discharge from the Emergency Department for Alcohol or Other Drug Dependence - NQF #2605, HEDIS Measure

This measure assesses the percentage of ED visits for members, ages 13 years and older, with a principal diagnosis of alcohol or other drug (AOD) dependence, who had a follow-up visit for AOD dependence within 1) 7 days of the ED visit or 2) 30 days of the ED visit

The denominator for this measure is an ED visit with a principal diagnosis of AOD dependence on or between January 1 and December 1 of the measurement year. It is based on the number of ED visits, not members. The denominator excludes ED visits followed by an admission to an acute or nonacute inpatient care setting on the date of the ED visit or within the following 30 days regardless of principal diagnosis for the admission. The numerator includes members with a follow-up visit for a principal diagnosis of substance use disorder (SUD) with any practitioner within 30 days after the ED visit, including visits that occur on the date of the ED visit.

Due to the small number of members meeting the criteria, this measure was not limited to females, ages 15-44 years, but instead was expanded to include all eligible members, ages 13 years and older, regardless of gender.

Follow-Up After Discharge from the Emergency Department for Mental Health - NQF #2605, HEDIS Measure

This measure assesses the percentage of ED visits for members, ages 6 years and older, with a principal diagnosis of mental illness, who had a follow-up visit for mental health within 1) days of the ED visit or 2) 30 days of the ED visit.

The denominator for this measure is an ED visit with a principal diagnosis of mental illness on or between January 1 and December 1 of the measurement year. It is based on the number of ED visits,

not members. The denominator excludes mental-illness visits followed by an admission to an acute or nonacute inpatient care setting on the date of the ED visit or within the following 30 days regardless of principal diagnosis for the admission. The numerator includes members with a follow-up visit for a principal diagnosis of a mental health disorder with any practitioner within 30 days after the ED visit, including visits that occur on the date of the ED visit.

Due to the small number of members meeting the criteria, this measure was not limited to females, ages 15-44 years, but instead was expanded to include all members, ages 6 years and older, regardless of gender.

Contraceptive Care – Most or Moderately Effective Contraception, All Women

The percentage of women, ages 15–44 years, at risk of unintended pregnancy that were provided a most-effective (i.e., sterilization, contraceptive implants, intrauterine devices or systems (IUD/IUS)) or moderately effective (i.e., injectables, oral pills, patch, ring, or diaphragm) method of contraception.

Contraceptive Care – Long-Acting Reversible Contraception, All Women

The percentage of women, ages 15–44 years, at risk of unintended pregnancy that were provided a LARC (implants or intrauterine devices or systems (IUD/IUS)) method.

Contraceptive Care – Most or Moderately Effective Contraception, Postpartum Women

The percentage of postpartum women, ages 15–44 years, at risk of unintended pregnancy that were provided a most-effective (i.e., sterilization, contraceptive implants, intrauterine devices or systems (IUD/IUS)) or moderately effective (i.e., injectables, oral pills, patch, ring, or diaphragm) method of contraception between 3 and 60 days of delivery.

Contraceptive Care – Long-Acting Reversible Contraception, Postpartum Women

The percentage of women, ages 15–44 years, at risk of unintended pregnancy that were provided a LARC (implants or intrauterine devices or systems (IUD/IUS)) method between 3 and 60 days of delivery.

Utilization: ED Use for Mental Health/Substance Use

This measure assesses the rate of emergency department (ED) utilization for mental health and/or alcohol and other drug dependence. The ED visits are identified using the same methods as used to identify ED visits in the follow-up after discharge from ED measures described above. The visits for both types of visits (mental health and alcohol and other drug dependence) per 1,000 patients are combined for the purposes of this measure.

Pregnancy, Pregnancy Loss, & Birth Rates

Live Births

This measure identifies the proportion of patients, ages 15–44 years, who had a live birth during the calendar year, presented per 1,000 patients. Members with multiple births during the year are counted

only once. The rate of live births is calculated using a variety of codes and includes any member with at least one claim with a CPT, ICD-9 diagnosis code, or ICD-9 or ICD-10 procedure code that indicated a live birth.

Miscarriages

This measure identifies the rate of miscarriages and other pregnancy loss among patients, ages 15–44 years, during the calendar year, presented per 1,000 members. Members with multiple claims/episodes are counted only once for this measure because it is difficult to separate complications of miscarriages from additional events. This measure includes a variety of types of pregnancy loss, including stillbirths and ectopic pregnancies. Induced abortions are quantified separately. This measure could be considered a low estimate of the rate of miscarriages because it does not include any miscarriages that were not reflected in claims and does not account for members who had multiple miscarriages during the calendar year.

Abortions

This measure identifies the rate of induced abortions among members, ages 15–44 years, during the calendar year, presented per 1,000 members. Members with multiple claims/episodes are counted only once for this measure because it is difficult to separate complications of abortions from additional events. This measure could be considered a low estimate of the rate of abortions because it does not include any abortions that were not reflected in claims and does not account for members who had multiple abortions during the calendar year.

Pregnancy Rates

The pregnancy rate is calculated as the sum of the members who had any claim indicating a pregnancy outcome (i.e., live births, miscarriages, and abortions) during the calendar year. Because individuals may be pregnant in two calendar years but should only be reported once, this rate does not focus on the number of pregnancy-related claims but on the final outcome of each pregnancy. To avoid double-counting of individuals who had follow-up visits/complications that would occur after the pregnancy outcome, separate events are not separated. Rather, this measure just looks at whether the patient had one or more claims for any pregnancy outcome during the year.

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