VERMONT Blueprint for Health

Smart choices. Powerful tools.

Supporting Documentation

Methods & Measures Used in the Reporting for Blueprint's Medication Assisted Treatment Profiles

This document was prepared by
ONPOINT Health Data

December 2017

Table of Contents

Introduction

The Vermont Blueprint for Health Medication Assisted Treatment (MAT) Profiles were commissioned by the Blueprint for Health in partnership with the Vermont Department of Health's Division of Alcohol and Drug Abuse Programs. The profiles offer a statewide view of the Vermont Hub & Spoke program, which provides MAT to Vermonters with opioid addiction.

The Hub & Spoke Program is a systematic treatment response to the opioid epidemic. This program enhances the provision of MAT by adding new health care staff to both Hub designated providers and the Spokes to provide Health Home (HH) services described below. These new health care staff members link addiction treatments with Blueprint primary care practices and Community Health Teams to provide care that is evidence-based and integrated.

Hubs are regional specialty opioid use disorder (OUD) treatment centers regulated as Opioid Treatment Programs (OTPs) that provide intensive treatment for opioid use disorder as well as consultation and support to the Spoke teams of health care professionals offering MAT.

Spokes are teams of health care professionals working with providers that prescribe buprenorphine for OUD. Spokes are general outpatient medical and specialty offices — most often primary care, obstetrics and gynecology (OB/GYN), psychiatry, pain clinics, and specialty addictions treatment programs. The teams of Spoke staff are organized through the Blueprint for Health's network of Patient-Centered Medical Homes and Community Health Teams.

This document describes the methods and measures used to create three sets of service profiles:

1. **Medication Assisted Treatment Profile,** which reports statewide on the people served in Hubs and Spokes and the combined program
2. **Hub Regional Profile,** which reports on the people served by Hubs and results comparing the five Hub programs
3. **Spoke Regional Profile,** which reports on the people served by the Spokes in each Hospital Services Area (HSA) and results comparing the HSAs.

Health Home Services

To support the Hub & Spoke initiative, the Department of Vermont Health Access developed a State Plan Amendment under Section 2703 of the Affordable Care Act to create a "Health Home" (HH) for Vermont Medicaid beneficiaries with opioid use disorder. Under the Health Home framework these beneficiaries are eligible for the following services:

- Comprehensive Care Management (to identify and address gaps in care for the population)
- Care Coordination (to support the development and implementation of holistic and comprehensive plans of care for individuals)
- Support for Transitions of Care (to assure seamless transitions between health and social services and between various levels of substance use treatment programs)
- Referral to Community Supports and Services (to activate the full range of peer recovery, social, economic, vocational, housing, and health services on behalf of individual clients)
- Consumer and Family Supports (including services for family members of people with opioid use disorders, support groups, and coaching and mentoring services to help individuals develop and maintain healthy adult roles)
- Health Promotion (such as tobacco cessation, services to support healthy diet, exercise, and self-management supports for depression and other chronic conditions)

Each Hub & Spoke program participant with Medicaid must receive at least one of these Health Home services each month. These HH services are consistent with the services offered by teams at Patient-Centered Medical Homes to support care of chronic conditions, including substance use.

Health Home Measures

Under the terms of the Hub & Spoke Medicaid State Plan Amendment, Vermont is required to report the "Adult Medicaid Core Measures" to the U.S. Centers for Medicare and Medicaid Services (CMS) on an annual basis for the whole program. These core Health Home Measures include a combination of claims-based and hybrid (i.e., claims and clinical) measures — typically Healthcare Effectiveness Data and Information Set (HEDIS) or Physician Quality Reporting System (PQRS) national measures — and are used to evaluate health services for many conditions. The Hub & Spoke Profiles are also designed to report the Health Home measures and are identified throughout this supporting document.

Summary of Methods

The Blueprint MAT Profile is based on data from Vermont's all-payer claims database, the Vermont Health Care Uniform Reporting and Evaluation System (VHCURES), and from the Vermont Clinical Registry. The population in this profile is comprised of Medicaid beneficiaries, ages 18–64 years, with opioid addiction who received treatment in a Hub and/or a Spoke in calendar year 2016. These profiles do not include the small number of beneficiaries who received Vivitrol, an injectable naltrexone for opioid use disorder, in a Spoke.

The measure results in the profile have not been risk adjusted unless specifically noted. Results with fewer than 11 members are not reported consistent with Medicare guidelines.

Data Sources

As noted above, the Blueprint MAT Profile consists of population-based reporting and uses eligibility and claims data supplied to the state's all-payer claims database, VHCURES. This report includes data for Vermont residents, ages 18–64 years, for whom Medicaid was the primary payer (i.e., excluding those with primary commercial coverage or dual eligibility for Medicare).

The MAT population subset includes any member receiving buprenorphine treatment during the measurement year as identified in the pharmacy claims data using a particular set of National Drug Codes (NDCs) (see Table 1) or any member receiving methadone in a Hub as identified in the medical claims data using the "H0020" program procedure code.

Table 1. Buprenorphine NDCs for Spoke Selection

Product Name	NDCs
BUNAVAIL®	59385001201, 59385001230, 59385001401, 59385001430, 59385001601, 59385001630
Buprenorphine and Naloxone	228315403, 228315503, 406192303, 406192403, 42291017430, 42291017530, 55700018430
Buprenorphine Hydrochloride and Naloxone Hydrochloride	228315403, 228315503, 406192303, 406192403, 42291017430, 42291017530
Buprenorphine Hydrochloride	54017613, 54017713, 93537856, 93537956, 228315303, 228315603, 378092393, 378092493, 35356055530, 35356055630, 50383092493, 50383093093, 54569657800, 55700030230, 55700030330, 68258299103, 68308020230
Buprenorphine Hydrochloride / Naloxone	54569640800, 65162041503, 65162041603
Buprenorphine/Naloxone	53217013830, 54569640800, 65162041503, 65162041603, 54018813, 54018913, 93572056, 93572156, 228315403, 228315473, 228315503, 228315573, 406192303, 406192403, 42291017430, 42291017530, 50383028793, 50383029493, 53217013830, 54569640800, 55700018430, 65162041503, 65162041603

The opioid-addicted, non-MAT population subset includes any member flagged as having opioid addiction during the measurement year with a 24-month look-back (see Table 2 who did not participate in a Hub or a Spoke during the measurement year.

For Blueprint practices supplying data to the Blueprint Clinical Registry, VHCURES data also were linked to clinical data. This linkage was accomplished using fields available in both data sets (i.e., ZIP code of residence, first name, last name, date of birth, and gender). Approximately 85 percent of Vermont Clinical Registry IDs were successfully matched to a VHCURES member. (Out-of-state residents and uninsured residents could not be linked between the two data sets.) The linked data was used to calculate those measures that required both claims data and clinical outcomes data, such as Adult Body Mass Index Assessment and Screening for Clinical Depression. Hubs and specialty addictions treatment Spokes do not yet report to the clinical registry, so measure results are not available for people served in these settings.

Attribution Methods

The MAT, Hub Regional, and Spoke Regional profiles each use a separate attribution process. Therefore, among the three profiles, there are some slight variations in the denominator populations as well as in the rates for the Hub & Spoke participants. The method of attribution used for each profile is listed below:

MAT Profile Attribution

Attribution of members was made to a Hub or a Spoke as determined by where the member received a plurality of treatment months. This was based on a 12-month look-back for members receiving medication assisted treatment as determined by a list of NDC codes for buprenorphine (Table 1) for Spoke treatment and the "H0020" program code for Hub treatment. The member was assigned to a Hub or a Spoke using the following logic and tie-breaker rules:

- Highest number of treatment months
  - If the same number of treatment months, then the most recent visit date
    - » If the same visit date, then the largest treatment dollars

Hub Regional Profile Attribution

Attribution of members was made to a Hub site as determined by the billing provider NPI. This was based on a 12-month look-back using the "H0020" program code for members receiving Medication Assisted Treatment at a Hub treatment center. The member was assigned to a Hub treatment center using the following logic and tie-breaker rules:

- Highest number of treatment months
  - If the same number of treatment months, then the most recent visit date
    - » If the same visit date, then the largest treatment dollars

Spoke Regional Profile Attribution

Attribution of members was made to a Spoke site as determined by the prescribing provider's NPI and the billing provider's Health Service Area (HSA). This was based on a 12-month look-back for members receiving Medication Assisted Treatment as determined by the list of NDC codes for buprenorphine (Table 1). The member was assigned to a Spoke provider using the following logic and tie-breaker rules:

- Highest number of treatment months
  - If the same number of treatment months, then the most recent visit date
    - » If the same visit date, then the largest treatment dollars

Demographics, Health Status, & Risk-Adjusted Measures

Demographic and health status information derived from the VHCURES claims data served as the primary inputs for the risk-adjustment methods used for the Blueprint MAT Profile. Utilized components included age, gender, presence of a Blueprint-selected chronic condition, health status as measured by 3M™ Clinical Risk Groups (CRGs), and the occurrence of a maternity diagnosis. (Further detail on Blueprint's selected chronic conditions and 3M CRGs is provided in the narrative below.)

Adjustments also were made for the partial length of Medicaid enrollment reported for some members during the measurement year. Average members — i.e., cumulative member months divided by 12 — were reported for each group. For the purposes of risk adjustment, members also were stratified by gender and age group: 18–34 years, 35–44 years, and 45–64 years.

Prevalence rates listed in the profiles include the entire denominator population.

Selected Chronic Diseases

Blueprint-selected chronic diseases were identified from the VHCURES claims data using diagnosis coding reported in the medical claims and were based on nationally accepted definitions (e.g., HEDIS). The algorithm employed to determine Blueprint-selected chronic conditions was based on 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 for those conditions also were required (see Table 2).

Table 2. Selected Chronic Condition Definitions

Chronic Disease	Medical Claim ICD-9 & ICD-10 Diagnosis Code(s) (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
Attention Deficit Disorder (ADD)	ICD-9: 31400, 31401 ICD-10: F90		American Academy of Pediatrics and National Initiative for Children's Healthcare Quality
Depression	ICD-9: 296.2, 296.3, 300.4, 309.1, 311 ICD-10: F32, F33		HEDIS AMM Measure
Hepatitis C	ICD-9: V0262, 7041, 7044, 7051, 7054, 7070, 7071 ICD-10: B1710, B17141, B182, B1920, B1921, Z2252		
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		
Opioid Dependence	ICD-9: 30400, 30401, 30402, 30470, 30471, 30472 ICD-10: F1120, F1123, F1124, F11220, F11221, F11222, F11229, F11250, F11251, F11259, F11281, F11282, F11288		
Other Substance Use	ICD-9: 303, 304 (excludes 30401, 30402, 30470, 30471, 30472), 305 (excludes 3051), 30400, 30401, 30402, 30470, 30471, 30472 ICD-10: F12, F13, 14, F15, F16, F18, F19 (excludes F1920, F1921)		
Tobacco Dependence	ICD-9: 305.1 ICD-10: F172		

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

Concurrent Pain

Chronic pain is associated with use of medications leading to opioid addiction and has been shown to occur in higher prevalence in persons with opioid addiction. Blueprint developed a measure of concurrent persistent pain using medical and pharmacy claims from the current year through review of published methods and clinical consultation. ICD diagnosis codes specific to chronic pain, diagnosis codes for musculoskeletal conditions (e.g., low back pain, neck pain, spinal stenosis) and migraines, and pharmacy claims for non-steroidal anti-inflammatory drugs (NSAIDs), anti-convulsants, muscle relaxants, antidepressants, opiates, and migraine vascular 5Ht1 agonist medications. Opiates used to treat respiratory conditions (e.g., cough) were excluded. Selective serotonin reuptake inhibitors (SSRIs) and other medications in the antidepressant category were excluded based on clinician review. Buprenorphine used to treat opioid addiction was excluded. Methadone was not excluded from the drug claims since it is not billed in the prescription drugs when use to treat opioid addiction but only when used to treat pain. The following algorithm was applied to determine concurrent pain during the year:

- Any visit during the year with a primary or secondary diagnosis of chronic pain
- Four or more visits during the year with a primary or secondary diagnosis of other musculoskeletal or migraine conditions associated with pain, or
- Four or more prescriptions that are used to treat pain during the year.

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 MAT Profile's risk-adjustment regression model, these nine categories were combined further into a *Significant Chronic* defined as CRG greater than or equal to 6. Table 3 identifies both the nine CRG major categories (Column 1) as well as the aggregated categories used in the Blueprint profile's regression model (Column 3).

Table 3. CRG Health Status Major Categories

#	CRG Major Category Description	Examples	Aggregation for Regression Model
1	Healthy	N/A	Reference group
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

It should be noted that CRGs do not include maternity and child birth in clinical classification. Since pregnant women, women delivering, and newborns contribute to utilization and expenditures, members who had claims for any of these diagnoses were flagged as a binary (0/1) variable for the risk-adjustment model. The following ICD-9 and ICD-10 diagnosis codings were used for this purpose:

- Pregnancy and child birth: ICD-9 codes 630–677 and ICD-10 codes O00-O9A (and all 3rd and 4th digits)
- Conditions in perinatal period: ICD-9 codes 760–779 and ICD-10 codes P00-P96 (and all 3rd and 4th digits)
- Supervision of pregnancy: ICD-9 codes V22, V23, V24, V27 and ICD-10 codes Z33, Z34, Z39 (and all 3rd and 4th digits)
- Live-born infants: ICD-9 code V3 and ICD-10 code Z38 (and all 3rd and 4th digits)

Risk Adjustment for Outpatient ED Visits, Inpatient Discharges, & Total Expenditures

Risk adjustment was applied to three measures — outpatient ED visits, inpatient discharges, and total expenditures per capita — to account for potential differences in demographics and health status between treatment groups. All other measures included in the Blueprint MAT Profiles were expressed as crude rates. For utilization measures, a Poisson distribution was assumed. Models included age/gender stratification groups, the selected chronic conditions, CRG classification, and maternity. Adjusted rates were produced by summing the differences between each member's actual value and their predicted measurement from the model. Rates were weighted for partial lengths of Medicaid enrollment. Risk adjustment for reporting was implemented in SAS (Version 9.3) using regression methods.

Adjusted values were computed for each member by adding model residuals (e) to the population grand mean ($\bar{y}$). To report the overall adjusted rate for each practice, the mean of the adjusted values for the members in each treatment group ($\bar{y}_{\text{hub}}$, $\bar{y}_{\text{spoke}}$) and statewide

($\bar{y}_{\text{statewide}}$) were computed. The following equations represent the models for the MAT Profiles. (Note that for the risk-adjustment model, males, ages 18–34 years, and "healthy" individuals (from the 3M CRG categories) served as the reference group and therefore do not appear in the model statement.

Model

$$y = \alpha + (F\_AGE1834)\beta_1 + (F\_AGE3544)\beta_2 + (F\_AGE4564)\beta_3 + (M\_AGE3544)\beta_4 + (M\_AGE4564)\beta_5 + (CRG\_SIGNIFICAN\_CHRONIC)\beta_6 + (MATERNITY)\beta_7 + (OTHER\_SUBSTANCE\_USE)\beta_8 + (TOBACCO\_DEPENDENCE)\beta_9 + (MENTAL\_HEALTH\_NONSUBSTANCE\_USE)\beta_{10} + (HEPATITIS\_C)\beta_{11}$$

$$\bar{y} = \left(\frac{\sum y_i}{MMA}\right)$$

$$y_{\text{adj}} = \bar{y} + e$$

$$e = y - \hat{y}$$

$$\bar{y}_{\text{hub, spoke}} = \left(\frac{\sum y_{adj_i}}{\sum MMA_i}\right) \text{ for each treatment group}$$

$$\bar{y}_{\text{statewide}} = \left(\frac{\sum y_{adj_i}}{\sum MMA_i}\right) \text{ for all members (equals the grand mean)}$$

Where:

- α is the intercept
- ε is the error term
- $\hat{y}$ is the predicted value from the regression model for each member
- e is the residual
- MMA is the average enrollment for each participant (i.e., the cumulative member months of enrollment during the year divided by 12)
- Subscript i indicates a value for an individual member

Measurement of Expenditures

Expenditures were measured based on the allowed amount on claims, which included both the plan payments and the member's out-of-pocket payments (i.e., deductible, coinsurance, and copayments). For each member, total expenditures were determined for the measurement year. In addition, expenditures by major and selected service categories were determined. Each

detailed expenditure category was capped separately at the 99th percentile of the statewide study population to reduce the distorting influence of extreme outlier cases.

Expenditures rates were computed as an annualized crude per capita rate unless explicitly stated otherwise. Lower and upper confidence intervals of 95 percent also were included. The major and detailed expenditure categories (see Table 4) were based on type of claim, primary diagnosis codes, revenue codes, site of service codes, provider taxonomy codes, and pharmacy therapeutic groupings based on assignment of National Drug Codes (NDCs) using Red Book®. The reporting was hierarchical and rolled up service-line claim payments to the header claim level. For example, if an outpatient hospital claim contained a primary diagnosis of mental health or substance abuse (i.e., ICD-9 codes 290–316 or ICD-10 codes F01–F99), then the entire claim, regardless of the specific services performed, was assigned to the category of outpatient hospital mental health / substance abuse.

Medication Assisted Treatment Expenditures

The subset of health care expenditures associated with treatment for opioid use disorder was created to help compare the use of other general health care services between Hub and Spoke participants. The Medication Assisted Treatment (MAT) includes the following categories:

- Professional Opioid Use Disorder (OUD)
- Buprenorphine Dispensed in a Hub
- Urinalysis
- Hub Bundled Payments
- MAT Pharmacy (Buprenorphine)

Table 4. Expenditure Reporting Category Definitions

Description	Major Category	Detail Category
Hospital Inpatient	Claim type description = 'Facility', type of setting = 'Inpatient', and place of setting = 'Acute inpatient or hospital' (whole claim is assigned hierarchically in order below based on finding the diagnosis or revenue code)	
Mental Health / Substance Abuse – Inpatient		1. Primary diagnosis code = ICD-9 290–316, ICD-10 F01–F99
Maternity-Related and Newborns		2. Primary diagnosis code = ICD-9 630–677, 760–779, V22–V24, V27, V30–V39; ICD-10 O00–O9A, P00–P96, Z33, Z34, Z38, Z39
Surgical		3. Revenue code = 0360–0369 (operating room service) within the claim
Medical		4. All others
Hospital Outpatient	Claim type description = 'Facility' and type of setting = 'Outpatient' and place of setting = 'Hospital' (whole claim is assigned hierarchically in order below based on finding the diagnosis or revenue code)	

Description	Major Category	Detail Category
Hospital Mental Health / Substance Abuse		1. Primary diagnosis code = ICD-9 290–316, ICD-10 F01–F99
Observation Room		2. Revenue code = 0762
Emergency Room		3. Revenue codes = 0450–0459
Outpatient Surgery		4. Revenue codes = 0360–0369 (operating room services)
Outpatient Radiology		5. Revenue codes = 0320–0359, 0610–0619
Outpatient Laboratory		6. Revenue codes = 0300–0319
Hospital-Dispensed Pharmacy		7. Revenue codes = 0250–0259
Outpatient Physical Therapy		8. Revenue Codes = 0420–0429
Outpatient Other Therapy		9. Revenue Codes = 0430–0439, 0440–0449
Other Outpatient Hospital		10. All Others
Professional Total	Claim type description = 'Professional' and type of setting = 'Provider' or claim type = 'Outpatient' and type of setting = 'FQHC' or 'Rural Health Clinic'	
Physician Services	Primary diagnosis code not ICD-9 290–316 or ICD-10 F01–F99	Provider taxonomy coding indicates provider specialty is an allopathic or osteopathic physician (excluding psychiatrist)
Physician Inpatient Setting		With Place of Service code = 21
Physician Outpatient Setting		With Place of Service codes = 19, 22
Physician Office Setting		With Place of Service code = 11
Professional Non-Physician		Provider taxonomy coding indicates nurse practitioner, physician assistant, physical therapist, chiropractor, podiatrist, speech therapist, occupational therapist, optometrist/optician, respiratory therapist
Professional Mental Health Provider	Primary diagnosis code = ICD-9 290–316 or ICD-10 F01–F99	Provider taxonomy coding indicates psychiatrist, psychologist, MSW, LICSW, LCSW, or claims from other providers with a principal diagnosis of mental health or substance abuse
Professional OUD	Primary diagnosis code = ICD-9 30400-30403, 30470-30472 or ICD-10 F1120, F1122-F1125, F1128, F1129	
Buprenorphine Dispensed in Hub	Procedure code = J3490	
Urinalysis	Procedure codes = G0431, 80301, G0479, G0480, 83925, 80348, G0434, G6056, 80102, 80361, 80154, 82145, 83840, 80360, 80365, G6058, 82520, 80349, G0481, G0477, 80346, 80302, G6046, 82055, G6031, G6045, 80358, 82205, 80324, 80353, G6042, G0478, 80152, 80160, G6053, 80356, 80359, G6044, G0461, G0444, 80321, 80300, 80371, 80362, G0462, 80354, 80373, G0482, G6040, G0483, G0451, 80350, G6043, G0438, G0452, G6032, G6036, 80345, G6037, G0432, G6052, 80368, 80355, 84600, G6047, G0439, 80366, 80320, 80332, G0447, 80326, G0433, 80325, G6055, 80323, 80372, G6034, 80369, 80367, 80304, 80338, 80352, G6041, 80303	
Pharmacy	From pharmacy claims and medical claims paid to pharmacies	
Pharmacy Mental Health		Red Book classification used to determine therapeutic CNS medications based on NDC codes

Description	Major Category	Detail Category
MAT Pharmacy		See NDC codes listed in Table 7
Special Medicaid Services	From category of service and fund source coding as identified in consultation with Vermont Medicaid staff.	Examples include Hub treatment, day treatment, residential care, school-based services, dental services, transportation, and case-management
Hub Bundled Payment	Any medical claim with procedure code = H0020	

Measurement of Utilization

Selected utilization measures were determined from the claims data using the definitions outlined in Table 5. The diagnostic testing and non-hospital outpatient visit measures were based on Current Procedural Terminology (CPT) coding linked to the Berenson-Eggers Type of Service (BETOS) classification system developed by CMS. Utilization rates were computed as an annualized crude rate per 1,000 members unless explicitly stated otherwise. Lower and upper confidence intervals of 95 percent also have been included.

Table 5. Methods & Coding for the Utilization by Type of Service Section

Category/Measure	Methods/Coding
Inpatient Hospital	
Inpatient Discharges	NCQA HEDIS Inpatient Utilization (IPU) measure: Medical, Surgical, Maternity. Mental disorders are not excluded. Counts the number of inpatient discharges.
Inpatient Days	NCQA HEDIS Inpatient Utilization (IPU) measure: Medical, Surgical, Maternity. Mental disorders are not excluded. Last date of service minus first date of service. If inpatient days > 90, inpatient days were capped at 90.
Outpatient Service Encounters	
Outpatient Emergency Department Visits	NCQA HEDIS Ambulatory Care (AMB) emergency department visit specifications but does not exclude mental disorders

Category/Measure	Methods/Coding
Outpatient Potentially Avoidable Emergency Department Visits	NCQA HEDIS Ambulatory Care (AMB) emergency department visit specifications and ICD-9 / ICD-10 primary diagnosis codes: ICD-9 • 034.0 – sore throat, strep • 079.99 – viral infection, unspecified • 300.00, 300.02 – anxiety, unspecified or generalized • 372.00, 372.30 – conjunctivitis, acute or unspecified • 380.10, 381.01, 381.4, 382.00, 382.9 – external and middle ear infections, acute or unspecified • 461.9, 473.9, 462, 465.9 – upper respiratory infections, acute or unspecified • 466.0, 786.2, 490 – bronchitis, acute or unspecified, or cough • 493 – asthma • 691.0, 691.8, 692.6, 692.9, 782.1 – dermatitis and rash • 719.4 – joint pain • 724.2, 724.5 – lower/unspecified back pain • 729.1, 729.5 – muscle/soft tissue limb pain • 780.79 – fatigue • 784.0 – headache ICD-10 • J020, J0300, J0301 – sore throat, strep • B9710 – viral infection, unspecified • F419, F411 – anxiety, unspecified or generalized • H1030, H1031, H1032, H1033, H109 – conjunctivitis, acute or unspecified • H6590–H6593, H6690–H6693, H6000–H6003, H6010–H6013, H60311–H60319, H60321–H60329, H60391–H60399, H6500–H6507, H66001–H66009 – external and middle ear infections, acute or unspecified • J028, J029, J0190, J0191, J069, J329 – upper respiratory infections, acute or unspecified • J40, J200, J201, J202, J203, J204, J205, J206, J207, J208, J209, R05 - bronchitis, acute or unspecified, or cough • J4520, J4530, J4540, J4550, J4522, J4532, J4542, J4552, J4521, J4531, J4531, J4541, J4551, J45990, J45991, J45909, J45998, J45902, J45901 – asthma • L22, L200, L2081, L2082, L2084, L2089, L209, L237, L247, L255, L239, L249, L259, L300, L302, L308, L309, R21 – dermatitis and rash • M25511, M25512, M25519, M25521, M25522, M25529, M25531, M25532, M25539, M25551, M25552, M25559, M25561, M25562, M25569, M25571, M25572, M25579, M2550 – joint pain • M545, M5489, M549 – lower or unspecified back pain • M6080, M60811, M60812, M60819, M60821, M60822, M60829, M60831, M60832, M60839, M60841, M60842, M60849, M60851, M60852, M60859, M60861, M60862, M60869, M60871, M60872, M60879, M6088, M6089, M609, M791, M797, M79601, M79602, M79603, M79604, M79605, M79606, M79609, M79621, M79622, M79629, M79631, M79632, M79639, M79641, M79642, M79643, M79644, M79645, M79646, M79651, M79652, M79659, M79661, M79662, M79669, M79671, M79672, M79673, M79674, M79675, M79676 – muscle/soft tissue limb pain • G933, R530, R531, R5381, R5383 - fatigue • G441, R51 - headache
Non-Hospital Outpatient Visits	Measure defined by Dartmouth Institute: BETOS M1A, M1B, M4A, M4B, M5A, M5C, M5D, M6
Professional Encounters	
Primary Care Encounters	Claim type description = 'Professional' and type of setting = 'Provider' and provider specialty based on taxonomy coding is pediatrics, internal medicine, family practice, nurse practitioner, or physician assistant
Medical Specialist Encounters	Claim type description = 'Professional' and type of setting = 'Provider' and provider specialty coding based on taxonomy coding is allergy/immunology, cardiology, critical care, dermatology, endocrinology, gastroenterology, geriatric medicine, hematology/oncology, infectious disease, neurology, nephrology, pulmonary medicine, rheumatology, emergency medicine
Surgical Specialist Encounters	Claim type description = 'Professional' and type of setting = 'Provider' and provider specialty coding based on taxonomy coding is the following surgical specialty types: general surgery, cardio-thoracic, ENT, hand, neurological, plastic/reconstructive, OB/GYN, ophthalmology, orthopedic, pediatric, urology, vascular
Diagnostic Testing	
Standard Imaging	BETOS I1A–I1F
Advanced Imaging	BETOS I2A–I2D
Echography	BETOS I3A–I3F

Category/Measure	Methods/Coding
Colonoscopy	BETOS P8D
Admissions	
Prevention Quality Indicator #05: Asthma/COPD	This measure assesses the observed rate of Ambulatory Care Sensitive (ACS) admissions with a principal diagnosis of chronic obstructive pulmonary disorder (COPD) or asthma per 1,000 members, ages 40 years and older. The specified diagnosis codes can be found on the AHRQ website.
Prevention Quality Indicator #92: Composite (Chronic)	Chronic Composite, AHRQ: This measure assesses the observed rate of ACS admissions for the composite of chronic conditions per 1,000 members, ages 18 years and older. The measure includes admissions for at least one of the following conditions: diabetes with short-term complications, diabetes with long-term complications, uncontrolled diabetes without complications, diabetes with lower-extremity amputations, chronic obstructive pulmonary disorder (COPD), asthma, hypertension, heart failure, and angina without a cardiac procedure. The specified diagnosis codes for these conditions can be found on the AHRQ website.
Prevention Quality Indicator #08: Congestive Heart Failure (CHF)	This measure assesses the observed rate of ACS admissions with a principal diagnosis of heart failure per 1,000 members, ages 18 years and older. The specified diagnosis codes can be found on the AHRQ website.
Measurement of Plan All-Cause Readmissions	Plan All-Cause Readmissions, NCQA HEDIS. This measure represents a comparison of the rate of (a) continuously enrolled members, ages 18 years and older, that had an inpatient stay followed by an acute readmission for any diagnosis within 30 days during the measurement year to (b) the expected rate of readmissions given risk factors of the patient (i.e., presence of surgeries, discharge condition, comorbidity, age, and gender). The rate is expressed as a ratio of the observed to expected readmissions where the expected number of readmissions has been risk adjusted. Because the risk probabilities for this measure are generated by NCQA, neither the statewide ratio nor the national ratio is the typical 1.0. The ratio should be used to compare the relative difference between practices and HSAs.
Health Home Utilization	
Ambulatory Care ED Visits	Center for Medicare & Medicaid Services FY16 Health Home Measures
Inpatient Utilization	Center for Medicare & Medicaid Services FY16 Health Home Measures
Short-Term Nursing Facility Admissions	Center for Medicare & Medicaid Services FY16 Health Home Measures
Long-Term Nursing Facility Admissions	Center for Medicare & Medicaid Services FY16 Health Home Measures

* When comparing to AHRQ's national benchmarks for the observed rate, it is important to keep in mind that AHRQ guidelines suggest including the entire population for the specified area in the denominator. The rates provided in the Blueprint MAT Profiles are based on members attributed to a Hub or a Spoke for which the denominator is the sum of average members for the treatment group.

Measurement of Effective & Preventive Care

Seven primary measures were selected for inclusion in the Blueprint MAT Profiles. While it is beyond the scope of this document to provide all the detailed specifications for each effective and preventive care measure, the denominator and numerator for each are summarized below. Since health plans may supplement claims data with medical chart reviews, the effective and preventive care measures reported in the Blueprint MAT Profiles are not directly comparable to summary HEDIS rates reported by National Committee for Quality Assurance (NCQA) or health plans.

These measures are a mixture of claims-based and hybrid (i.e., clinical and claims) measures. The source of the clinical data is the Vermont Clinical Registry, which is primarily populated by primary care practices (not including Hub facilities). When there is reporting on behalf of a Hub facility, it likely was reported by that patient's primary care practice. One implication for clinical

measures is that we are reporting on a subset of the MAT population who have measurements in the clinical registry. Some of the claims-based measures have very small sample sizes as well, including Follow-up After Hospitalization for Mental Illness (HEDIS), and Breast Cancer Screening (HEDIS).

Breast Cancer Screening

Core-11, MSSP-20, NQF #0031, HEDIS Measure

This measure assesses the percentage of women, ages 52–64 years, who had a mammogram to screen for breast cancer during the measurement year or the prior year. This is a claims-based measure.

The denominator requires continuous enrollment during the two-year period. Women with evidence of bilateral mastectomy are excluded. The numerator is based on the identification of CPT, Healthcare Common Procedure Coding System (HCPCS), ICD-9, ICD-10, and Uniform Billing (UB) revenue codes in the claims data that indicated a mammogram.

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 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 and the three or four 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.

Follow-Up After Hospitalization for Mental Illness

Core-4, NQF #0576, HEDIS Measure

This measure assesses the percentage of discharges for members, ages 18 years and older, who were hospitalized for treatment of selected mental health diagnoses and who had an outpatient visit, an intensive outpatient encounter, or a partial hospitalization with a mental health provider in which the member received a follow-up visit within seven days of discharge. This is a claims-based measure.

The denominator is based on discharges, not members. For inclusion, individuals must be discharged alive from an acute inpatient setting (including an acute care psychiatric facility) with a principal diagnosis of mental illness on or between the first and last day of the measurement year. Members must be continuously enrolled in Medicaid for inclusion. Follow-up criteria must include a visit with a mental health practitioner, a visit to a behavioral healthcare facility, a visit to a non-behavioral healthcare facility with a mental health provider, and/or a visit to a non-behavioral healthcare facility with a diagnosis of mental illness.

Controlling High Blood Pressure

Core-39, NQF #0018, HEDIS Measure

This measure assesses the percentage of members, ages 18–64 years, who had a diagnosis of hypertension and whose blood pressure was adequately controlled (< 140/90 mmHg) during the measurement period. This is a hybrid measure that includes both claims and clinical data.

The denominator requires continuous enrollment in Medicaid during the measurement year and the year prior with an allowable gap of 45 days during each 12-month enrollment period. The denominator includes members who had a valid blood pressure measurement in the Blueprint clinical registry and who had an outpatient visit with a diagnosis of essential hypertension (based on claims data codes) within the first six months of the measurement period or any time prior to the measurement period. The numerator includes members whose blood pressure at the most recent visit was adequately controlled (< 140/90 mmHg) during the measurement period.

Adult Body Mass Index Assessment

This measure assesses the percentage of members, ages 18–64 years, who had an outpatient visit and whose body mass index (BMI) was documented during the measurement year or the year prior to the measurement year. This is a hybrid measure that includes both claims and clinical data.

The denominator requires continuous enrollment in Medicaid during the measurement year and the year prior with an allowable gap of 45 days during each 12-month enrollment period. The denominator includes members who had at least one clinical measure in the Blueprint clinical registry and an outpatient visit identified in the claims data during the measurement year or the year prior. The numerator is based on members who had a valid BMI reading as identified in the clinical data.

Screening for Clinical Depression

Core-19, NQF #0418, CMS Measure

This measure assesses the percentage of members, ages 18–64 years, who had an outpatient visit and were screened for clinical depression. This is a hybrid measure that includes both claims and clinical data.

The denominator requires continuous enrollment in Medicaid for at least 90 days during the measurement year. The denominator includes members who had an outpatient visit identified in the claims data during the measurement year. The numerator is based on members who were screened for clinical depression as identified in the clinical data. The Blueprint MAT Profiles diverge from the original specifications and do not include information on follow-up due to insufficient reporting in the clinical data registry.

Tobacco Use Screening

Core-36, NQF #1651, Joint Commission Measure

This measure assesses the percentage of members, ages 18–64 years, who were screened for tobacco use one or more times within a 24-month look-back period and who received cessation counseling intervention. This is a hybrid measure that includes both claims and clinical data.

Reliable data. Informed decisions. Strategic advantage.

75 Washington Avenue
Suite 1E
Portland, ME 04101

207 623-2555

www.OnpointHealthData.org