

COLLABORATIVE MODELS FOR MEDICATION-ASSISTED TREATMENT
Key Elements of Vermont’s Hub-and-Spoke System

April 2019

Goals

In response to the increase in opioid use disorder (OUD) in Vermont, and in collaboration with local health, addictions, and mental health providers, three partnering organizations—the Blueprint for Health, the Department of Vermont Health Access, and the Vermont Department of Health, Division of Alcohol and Drug Abuse Programs—collaborated to design and implement an integrated medication-assisted therapy (MAT) treatment system called the Hub and Spoke.

The Centers for Medicare & Medicaid Services granted Vermont a Health Home State Plan amendment in 2013 to transform the existing MAT services into Hubs and Spokes.

The four objectives of the Hub-and-Spoke system are to—

- Improve access to addictions treatment
- Integrate health and addictions care for Health Home beneficiaries
- Better use specialty addictions programs and the general medical setting
- Improve health outcomes and promote stable recovery

Clinical Model

Hubs are specialty opioid treatment program (OTP) clinics that dispense medication and provide daily dosing and therapeutic services. Hubs, as OTPs, are the only settings at which methadone is offered for the management of OUD. *Spokes* are general medical settings providing office-based opioid treatment in which medications are prescribed and patients are seen weekly or monthly. The most common Spoke settings in Vermont are primary care; however, OB-GYN, outpatient addictions treatment, and practices specializing in management of chronic pain also are Spoke practices. Both Hubs and Spokes induct patients onto buprenorphine. Hubs, as regional specialty addictions treatment centers, also provide consultation to Spokes.

The Health Home State Plan enhancements added nursing, psychiatry, and care management services to the Hubs. In addition, the Hubs began dispensing all the Food and Drug Administration-Approved medications for OUD. The Health Home enhancements to the Spokes included embedded nursing and addiction counseling staff for each practice setting where MAT was being prescribed. The additional embedded staff helped create a team caring for OUD patients and addressed the concern that that OUD patients in general medical settings require more time and care coordination than physicians have in their schedule. The Hub-and-Spoke Model aligns specialty addictions treatment with a network of integrated physician practices. There currently are nine regional Hubs¹ and 86 Spoke² practices, providing MAT to more than 6,000 Medicaid beneficiaries.

¹ State of Vermont. Vermont Blueprint for Health. Blueprintforhealth.vermont.gov

² Centers for Medicare & Medicaid Services. *Clinical Pathways & Payment Bundles for Medication Assisted Treatment*. Medication Innovation Accelerator Program (IAP) National Webinar Series, January 17, 2017. Brooklyn/Folland Presentation: State Experience: Vermont, Slides 16–29. <https://www.medicaid.gov/state->

Medicaid Authority

The majority of Vermont’s Medicaid program operates under a Section 1115 demonstration project that authorizes the “Global Commitment to Health Demonstration” through which the state can develop and implement alternative payment methods, such as value-based purchasing or other delivery system and provider payment initiatives; purchase services not traditionally covered by Medicaid; and invest in innovations such as the Vermont Blueprint for Health.

The specific authority for the Vermont Health Home Hub-and-Spoke system is a Medicaid Health Home state plan amendment (SPA) under the authority of Section 1945 of the Social Security Act that was created by Section 2703 of the Patient Protection and Affordable Care Act. Vermont received its first Medicaid Health Home SPA approval effective July 2013. The Health Home program expanded statewide effective January 2014.

Health Homes

Both the Hubs and Spokes provide the following six Health Home services required by the Medicaid Health Home SPA: (1) comprehensive care management; (2) care coordination; (3) health promotion; (4) transitional care from inpatient to other settings, including follow-up; (5) patient and family support; (6) referral to community and support services, if relevant; and the use of health information technology to link services, as feasible and appropriate.

Required Infrastructure

The Hub-and-Spoke system built on the foundation of Vermont’s Primary Care reforms. These reforms, called the Blueprint for Health, converted primary care practices into Patient-Centered Medical Homes (PCMHs) and created Community Health Teams (CHTs). The CHT staff members work in primary care practices providing care management and health promotion services to patients. The Blueprint has established performance-based contracts with Local Administrative Agents (LAAs) who are responsible for hiring and organizing the CHTs. These LAAs also hire and deploy the nursing and addictions counseling staff embedded in the Spokes.

Current Capacity

There are nine regional Hubs and 86 Spoke practices. More than 6,000 Medicaid patients receive MAT through either a Hub or a Spoke. By March 2019, the Hubs served 3,693 Medicaid beneficiaries and the Spokes served 3,064.³

Special Features

Vermont’s Hub-and-Spoke Model aligns the highly regulated methadone treatment system with the decentralized general medical settings and creates a care coordination system for patients and a provider support system for practitioners. Both Hubs and Spokes can induct patients onto buprenorphine and transfer patients bidirectionally on the basis of clinical acuity.

[resource-center/innovation-accelerator-program/iap-downloads/reducing-substance-use-disorders/nds5mat-webinar.pdf](https://www.vermont.gov/resources/innovation-accelerator-program/iap-downloads/reducing-substance-use-disorders/nds5mat-webinar.pdf)

³ Vermont Department of Health, Department of Vermont Health Access. *Opioid Use Disorder Treatment Census and Wait List*. January 2019.

[Vermont's Treatment Needs Questionnaire](#) helps the assessing clinician determine whether the patient would be better served at a Hub or a Spoke. The questionnaire considers need for daily structure, severity of addiction, and drivers of acuity such as homelessness and criminal justice involvement. The questionnaire is administered during the initial screening at either a Hub or Spoke site, along with interviews and laboratory evaluations.⁴ A second tool, the [OBOT Stability Index](#) provides a common framework for monitoring treatment response and helps generate recommendations for frequency of visits in Spoke settings. Spokes may see patients as frequently as three times a week or as little as once per month.

Financing

Spokes

- Waivered Spoke providers bill fee for service for evaluation and management services to Medicaid.⁵
- Pharmacies bill Medicaid for prescribed medications.
- Spoke staff (nurses and licensed addictions counselors) are paid for by Medicaid through a monthly payment to LAA.
- The monthly payment LAAs receive for the Spoke staff is based on the number of unique patients for whom Medicaid paid a pharmacy claim for OUD medications during the most recent 3-month period. The payment is calculated on the basis of the cost to employ a full-time nurse and licensed addictions counselor, which currently is \$163.75 per member per month. Federal match is claimed for the Spoke Team under the Health Home SPA.

Hubs

Hubs bill a monthly, bundled rate to the state Medicaid agency for their enrolled OTP patients and also may bill an enhanced Health Home rate of \$114.75 for patients who received at least one Health Home service each month. If the Hub did not provide a Health Home service, they can bill only the basic OTP rate.

Hubs use a “buy and bill” approach for dispensed Buprenorphine or Vivitrol. Methadone is included in the base OTP bundled rate.

Achievements

- Since the implementation of the Hub-and-Spoke model, Vermont has seen increases in the number of waived providers from 203 in 2003 to 342 in 2012.⁶

⁴ Department of Vermont Health Access Managed Care Entity. *Vermont Buprenorphine Clinical Practice Guidelines*. August 2015. [dvha.vermont.gov/for-providers/buprenorphine-practice-guidelines-revised-final-10-15.pdf](https://www.dvha.vermont.gov/for-providers/buprenorphine-practice-guidelines-revised-final-10-15.pdf)

⁵ *Waivered physician* refers to a physician who has received a waiver from the Substance Abuse and Mental Health Services Administration to prescribe buprenorphine for opioid dependence treatment in accordance with the Drug Addiction Treatment Act of 2000 (<https://www.samhsa.gov/medication-assisted-treatment/buprenorphine-waiver-management>).

⁶ Centers for Medicare & Medicaid Services. *Clinical Pathways & Payment Bundles for Medication Assisted Treatment*. Medication Innovation Accelerator Program (IAP) National Webinar Series, January 17, 2017. Brooklyn/Folland Presentation: State Experience: Vermont, Slides 16–29. <https://www.medicare.gov/state-resource-center/innovation-accelerator-program/iap-downloads/reducing-substance-use-disorders/nds5mat-webinar.pdf>

- The number of waived physicians at 100 authorized capacity almost doubled between 2003 and 2012 (from 37 to 73),⁷ and the number of patients treated per waived physician increased by 50 percent.⁸
- In 2012, 2,350 patients were served, and in 2016 that number was 5,374.⁹
- Medicaid health care costs have decreased by 7 percent to 10 percent since 2013¹⁰ because of lower inpatient admissions and emergency department visits; the program resulted in initial Medicaid savings of \$6.7M.¹¹
- Vermont’s overdose death rate decreased by 7 percent between 2013 and 2014, whereas other New England states have experienced increases of between 4.5 and 73.9 percent.¹²
- Vermont has the highest capacity for treating OUD in the country, with 10.56 people in treatment per 1,000 population, up from 3.76 per 1,000 population in 2012; 70 percent of Medicaid recipients with an OUD receive MAT.¹³
- In December 2016, the statewide OTP waitlist fell below 500 for the first time. As of September 2017, the statewide waitlist had dropped to 110 and, in the county that historically had had the longest list, it dropped to zero.¹⁴

Quality Metrics

Vermont publishes [regional profiles](#) for both Hubs and Spokes that include quality, cost, and utilization data.

Cost Indicators

- Expenditures per capita
- Spoke staff expenditures
- Total MAT and non-MAT expenditures
- Total MAT expenditures per capita by treatment category
- All other health care expenditures per capita by major category

⁷ Ibid.

⁸ Brooklyn JR, Sigmon SC. Vermont Hub-and-Spoke Model of Care for opioid use disorder: development, implementation, and impact. *Journal of Addiction Medicine*. 2017;11(4):286-292.

⁹ Centers for Medicare & Medicaid Services. Clinical Pathways & Payment Bundles for Medication Assisted Treatment. Medication Innovation Accelerator Program (IAP) National Webinar Series, January 17, 2017. Brooklyn/Folland Presentation: State Experience: Vermont, Slides 16–29. <https://www.medicaid.gov/state-resource-center/innovation-accelerator-program/iap-downloads/reducing-substance-use-disorders/nds5mat-webinar.pdf>

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ Brooklyn, Sigmon, 2017. Op. cit.

¹⁴ State of Vermont, Department of Vermont Health Access. Blueprint for Health. *Blueprint for Health 2017 Annual Report*. January 29, 2018. <https://blueprintforhealth.vermont.gov/news/blueprint-health-2017-annual-report-published>

Quality Indicators

- Inpatient discharges
- Outpatient emergency department visits
- Advanced imaging
- Adult body mass index
- Screening for clinical depression
- Tobacco use screening
- Cervical cancer screening

Utilization Indicators

- Case load growth
- Medicaid enrollment and MAT treatment
- MAT rate per 100,000 Medicaid beneficiaries