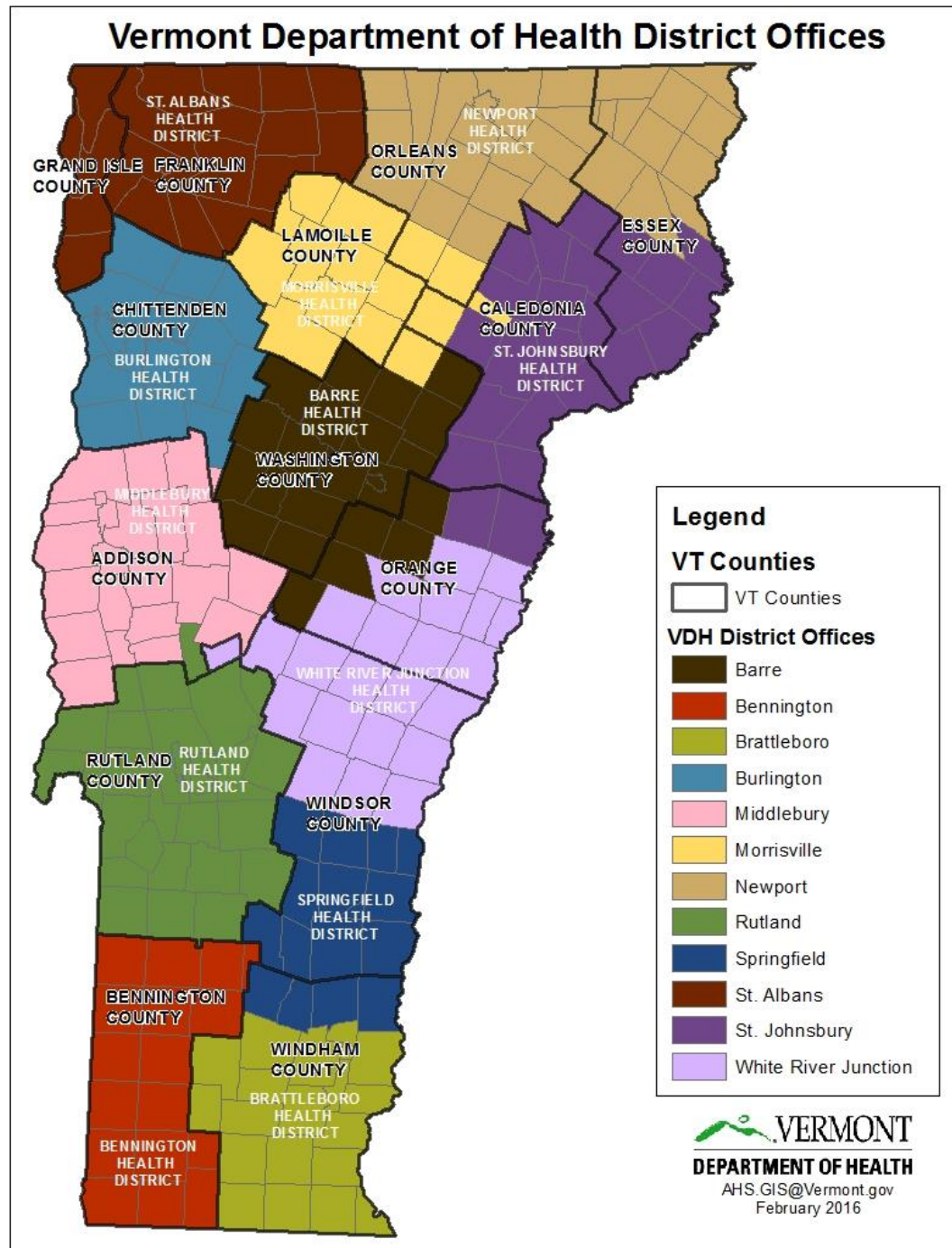




# Oral Health in Vermont and Vermont's District Offices

# Data by State and District Offices

- Unless stated otherwise, all data are calculated for residents living within the areas served by Vermont Department of Health District Offices.



# Oral Health Data – Vermont's District Offices

**Preventive and Access to Care:** How many Vermonters are accessing oral health care? How many dentists are in the area? What percentage of the population on public water systems have fluoridated water?

**Risk Factors:** How many Vermont high school students have an increased risk of oral health problems due to risky behaviors?

**Oral Health Outcomes:** How are Vermonters doing in terms of oral health outcomes?

# Preventive and Access to Care

## Indicators

- Dental visits
- Number of dental providers
- Dental insurance
- Community water fluoridation

## Data Sources

- Behavioral Risk Factor Surveillance Survey (BRFSS)
- Medicaid data
- 2013 Dentist Survey
- Water Fluoridation Reporting System (WFRS)

# Behavioral Risk Factor Surveillance Survey (BRFSS)

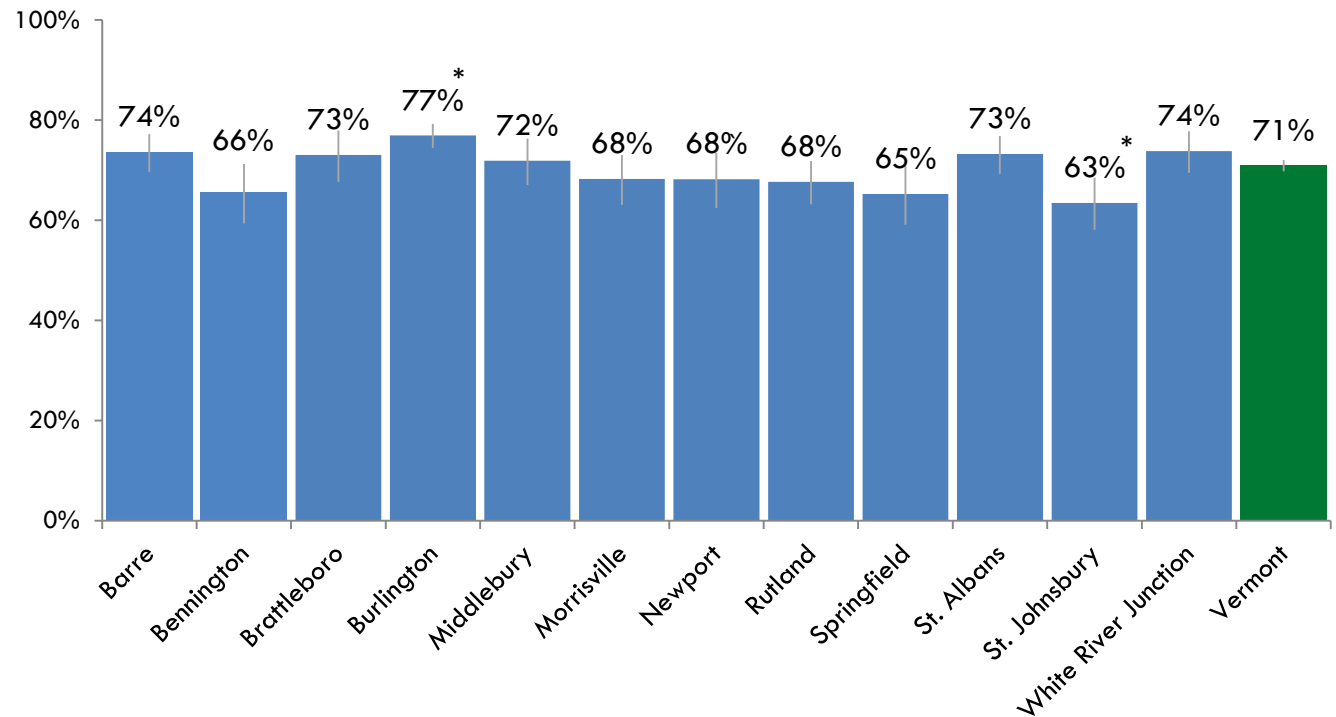
- Telephone survey of adults
- Typically between 6,000 and 7,000 Vermont adults (18 or older) are interviewed as part of the Vermont BRFSS each year
- Self-reported data
- Conducted by the Vermont Department of Health in collaboration with the Centers for Disease Control and Prevention (CDC)
- Additional information can be found on the VDH and CDC websites:
  - <http://healthvermont.gov/research/brfss.aspx>
  - <http://www.cdc.gov/brfss/>

# Access to Care – Dental Visits Among Adults (BRFSS)

In 2012 and 2014 (combined average), 71% of Vermont adults saw their dentist for any reason during the previous year.

*The Healthy Vermonters 2020 goal is 85%.*

**Percent of Adults Who Visited the Dentist in the Last Year (2012 and 2014 Combined Average)**



Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

\*Significantly different from Vermont.

Age-adjusted based on the proportional age breakdowns of the U.S. population in 2000.

# Dental Insurance

- 44% of Vermont adults reported they did not have dental insurance in 2012 (BRFSS).
- Some variation exists by district office, but there are not large differences.

# Medicaid Claims Data

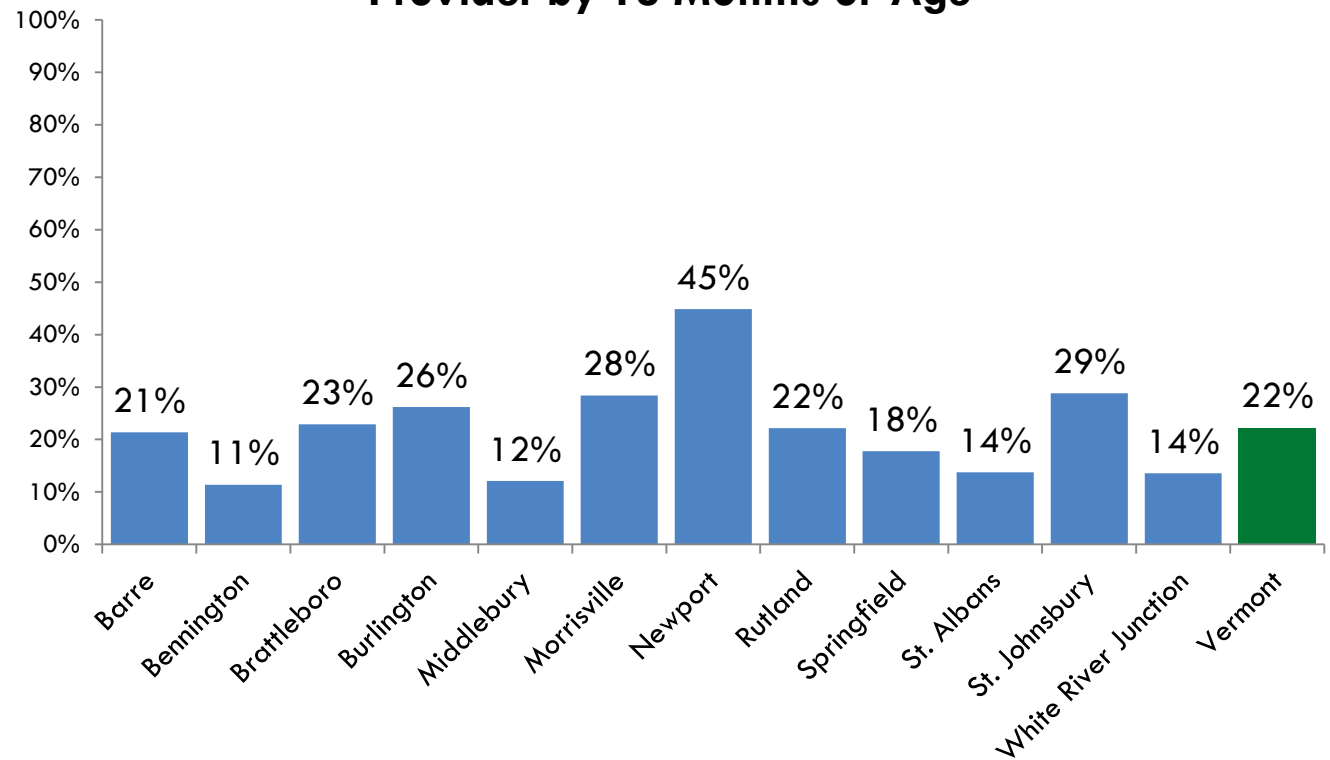
- These data are not representative of all Vermonters.
  - These data only include those who sought care, and does not include those who needed care but did not seek care.
  - These data do not include those who have commercial insurance or do not have dental insurance.



# Access to Care: Dental Services Among Medicaid-Eligible Children by 18 Months of Age

22% of Vermont Medicaid-eligible children born in 2012 received any dental services by a dental provider by 18 months of age.

**Percent of Medicaid-Eligible Vermonters Born in 2012 who Received Any Dental Services by a Dental Provider by 18 Months of Age**



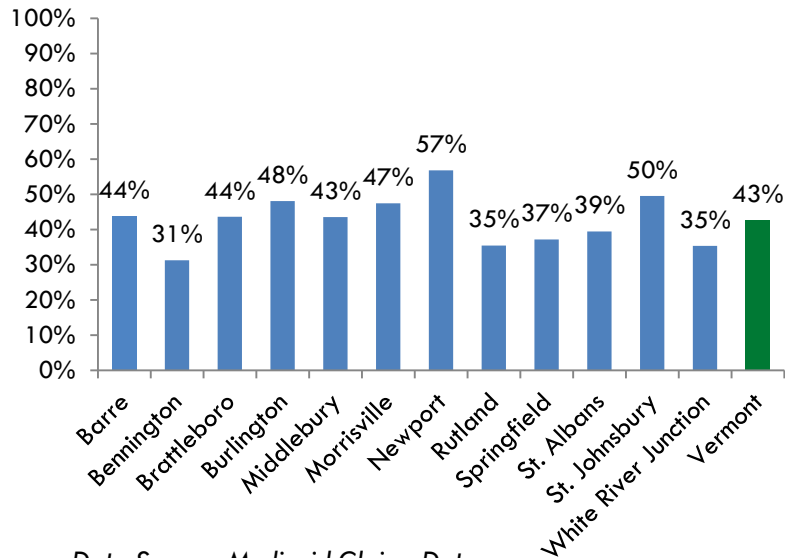
Data Source: Medicaid Claims Data

# Access to Care: Dental Services Among Medicaid-Eligible Children Aged 1-5

43% of Vermont Medicaid-eligible children aged 1-5 received preventive dental services in 2014.

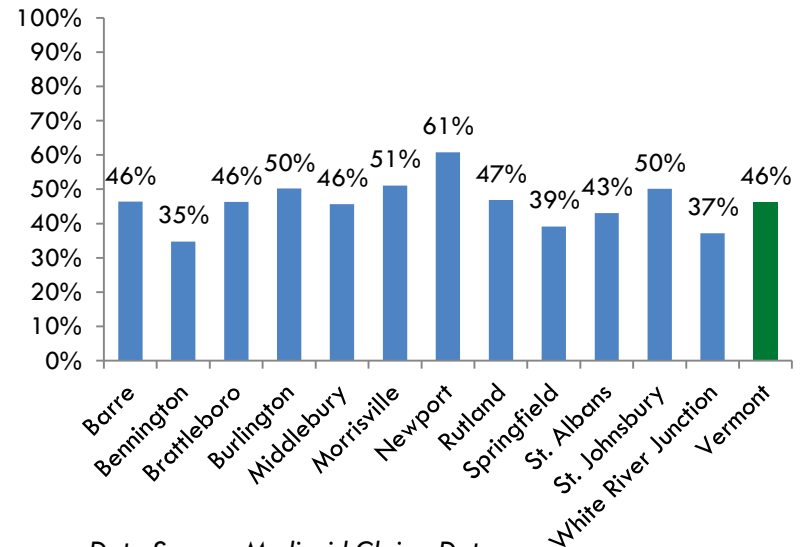
46% of Vermont Medicaid-eligible children aged 1-5 received any dental services by a dental provider in 2014.

**Percent of Medicaid-Eligible Vermonters Aged 1-5 Receiving Preventive Dental Services in 2014**



Data Source: Medicaid Claims Data

**Percent of Medicaid-Eligible Vermonters Aged 1-5 Receiving Any Dental Services in 2014**



Data Source: Medicaid Claims Data

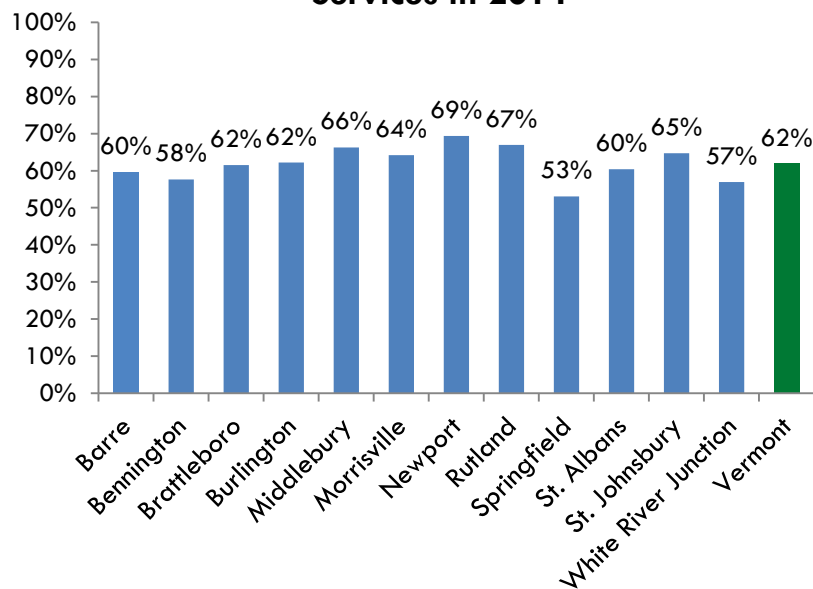
# Access to Care: Dental Services Among Medicaid-Eligible Children Aged 6-18

62% of Vermont Medicaid-eligible children aged 6-18 received preventive dental services in 2014.

66% of Vermont Medicaid-eligible children aged 6-18 received any dental services by a dental provider in 2014.

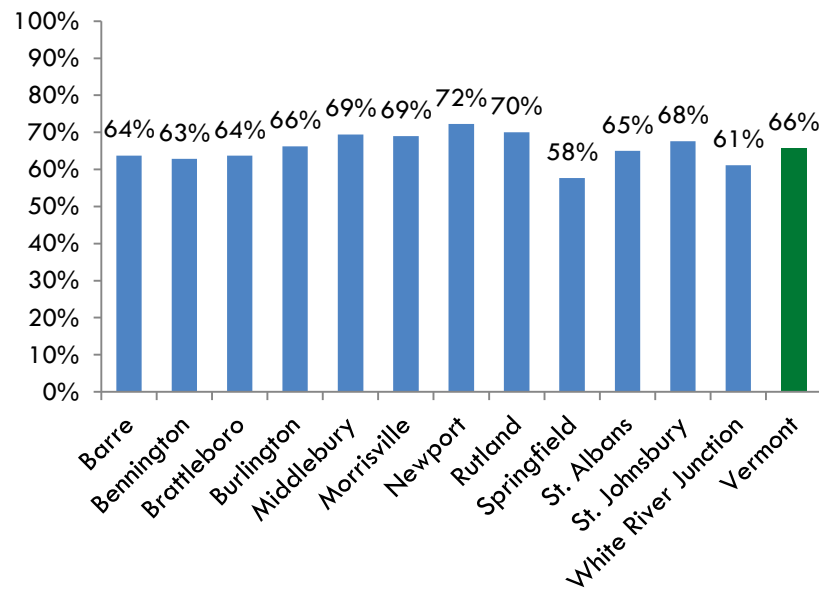
*The Healthy Vermonters 2020 goal for the percent of people in grades K-12 who use the dental care system each year is 85%.*

**Percent of Medicaid-Eligible Vermonters Aged 6-18 Receiving Preventive Dental Services in 2014**



Data Source: Medicaid Claims Data

**Percent of Medicaid-Eligible Vermonters Aged 6-18 Receiving Any Dental Services in 2014**



Data Source: Medicaid Claims Data

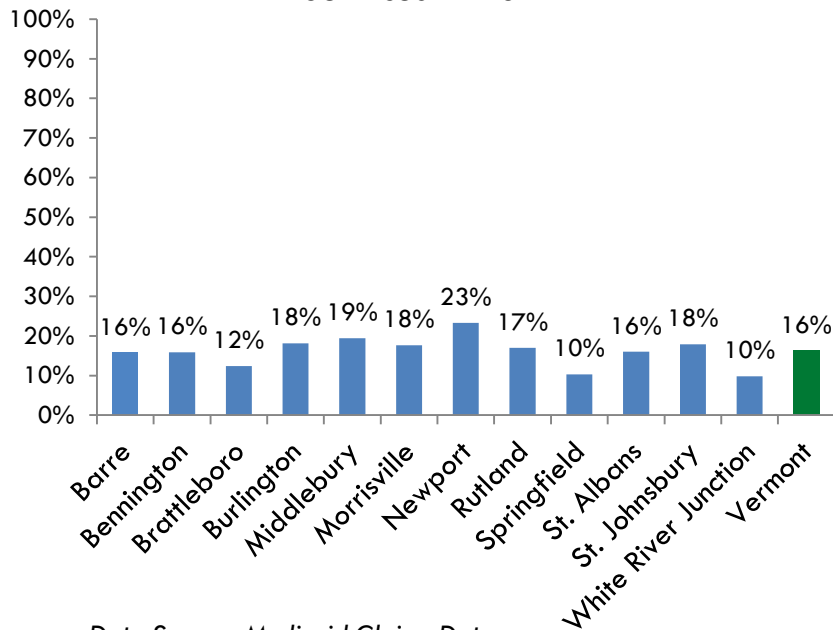
# Access to Care: Dental Services Among Medicaid-Eligible Adults Aged 19-64

16% of Vermont Medicaid-eligible adults aged 19-64 received preventive dental services in 2014.

27% of Vermont Medicaid-eligible adults aged 19-64 received any dental services by a dental provider in 2014.

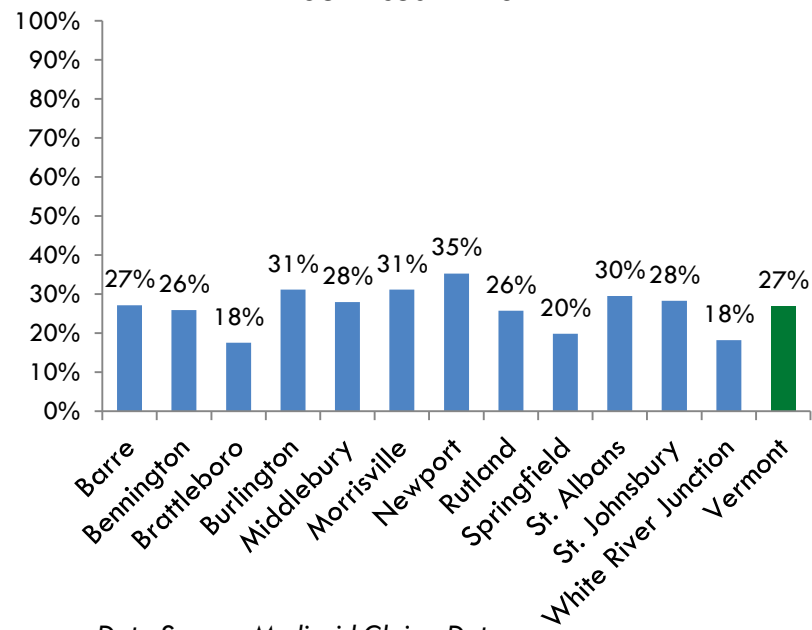
*The Healthy Vermonters 2020 goal for the percent of people age 18+ who use the dental care system each year is 85%.*

**Percent of Medicaid-Eligible Vermonters Aged 19-64 Receiving Preventive Dental Services in 2014**



Data Source: Medicaid Claims Data

**Percent of Medicaid-Eligible Vermonters Aged 19-64 Receiving Any Dental Services in 2014**



Data Source: Medicaid Claims Data

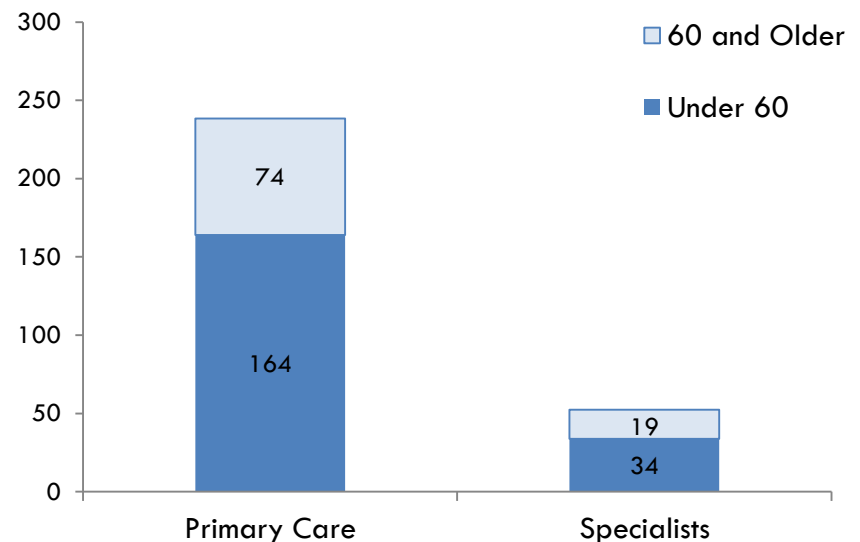
# 2013 Dentist Survey

- ❑ Completed by most dentists online with the license renewal in late summer 2013.
- ❑ Self-reported data.
- ❑ Followed-up via mail and phone calls.
- ❑ The final response rate was 99.5%.
- ❑ Included in this report are dentists who provide patient care in Vermont.
- ❑ Ten dentists who reported fewer than 2 patient care hours per week on the average were excluded.

# Access to Care – Oral Health Care Providers

- In 2013, Vermont had 238.4 full-time equivalent primary care dentists and 52.4 full-time equivalent specialists.
  - ▣ Primary care dentists include general practice and pediatric dentistry.
  - ▣ Specialist dentists include oral surgery, endodontics, orthodontics, periodontics, prosthodontics, and other specialties.

**Full-Time Equivalent Dentists by Specialty and Age in Vermont (2013)**

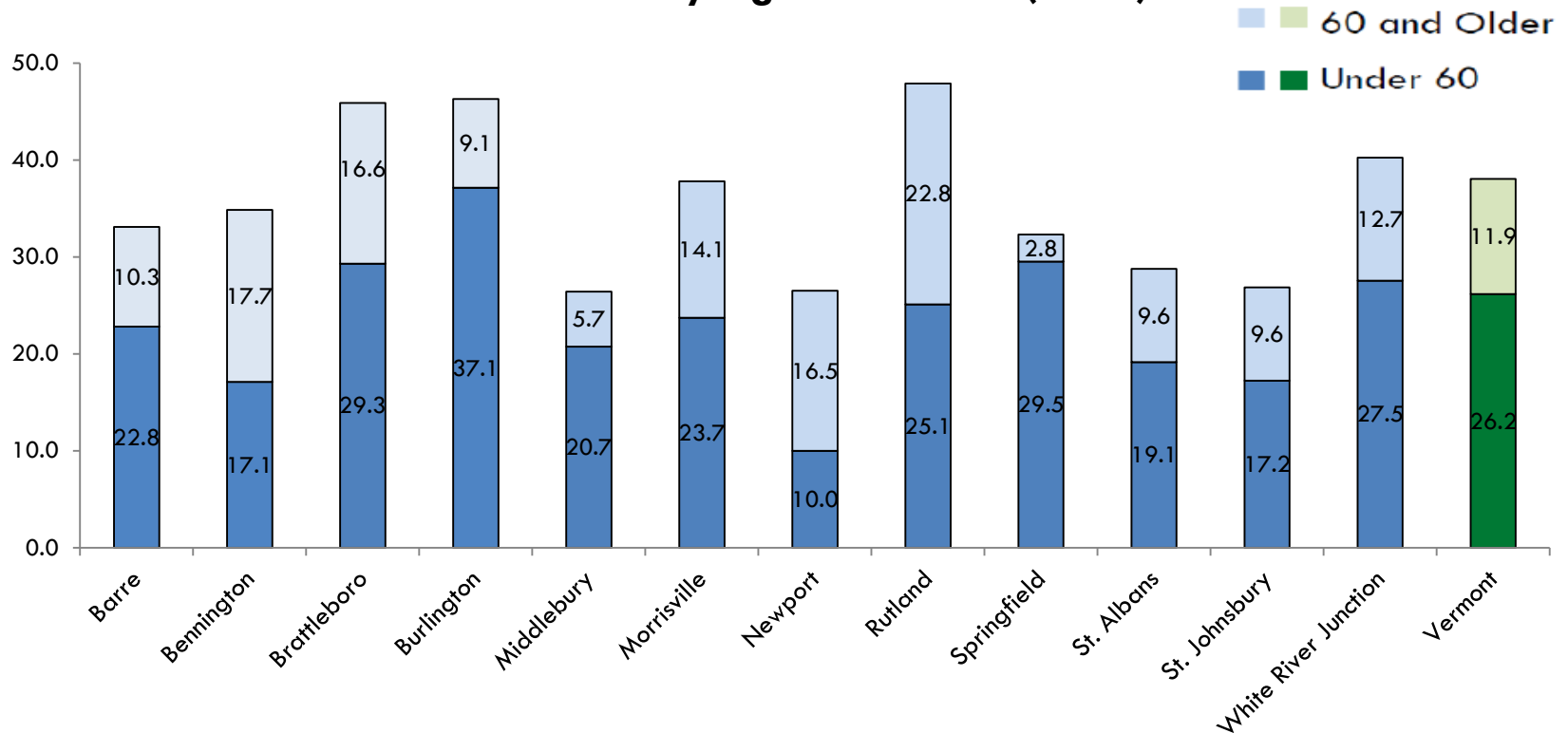


Data Source: 2013 Dentist Survey

# Access to Care – Oral Health Care Providers

In 2013, Vermont had 38 primary care dentists per 100,000 Vermonters.

**Primary Care Dentists Full-Time Equivalency per 100,000 Vermonters by Age of Dentists (2013)**

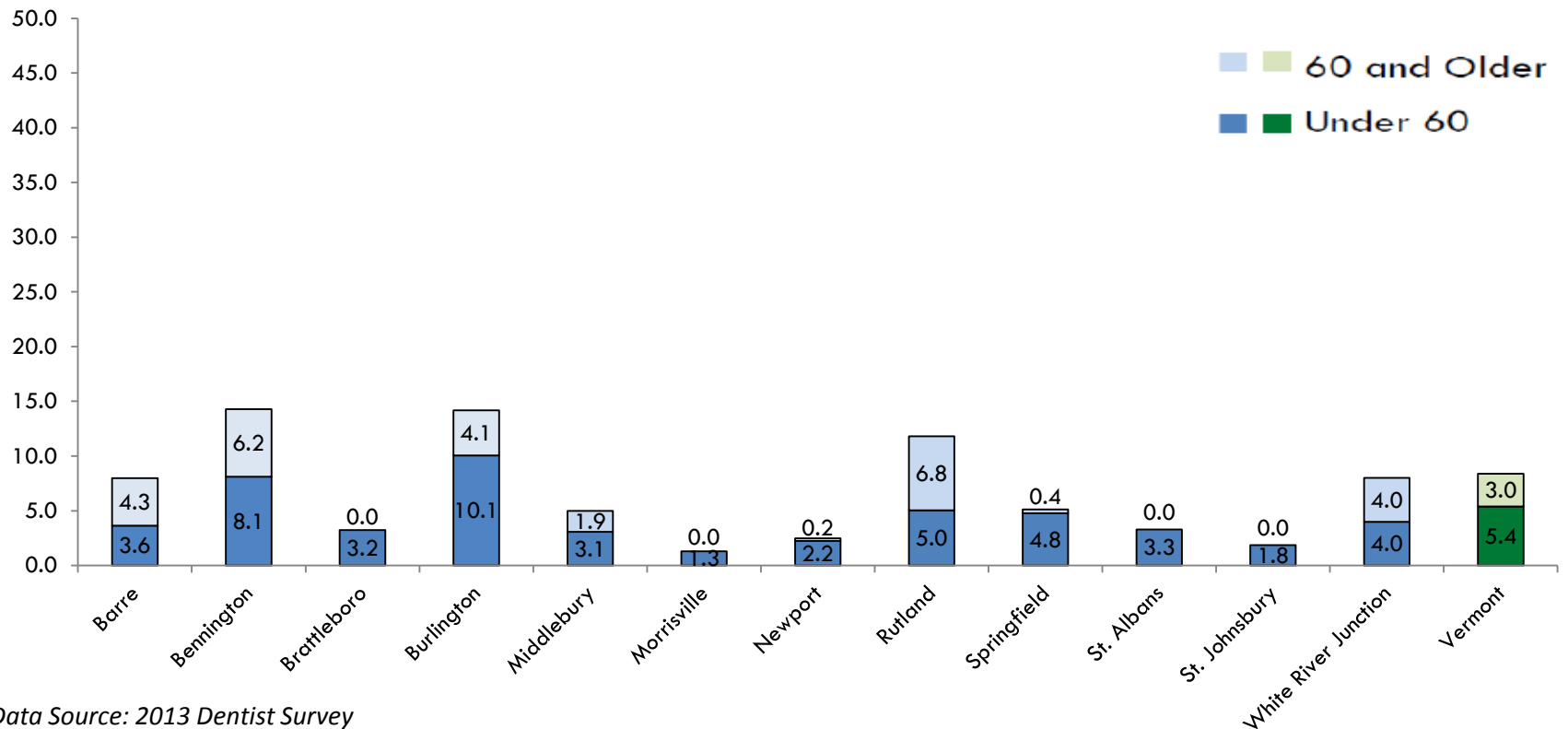


Data Source: 2013 Dentist Survey

# Access to Care – Oral Health Care Providers

In 2013, Vermont had 8.4 specialist dentists per 100,000 Vermonters.

## Specialist Dentists Full-Time Equivalency per 100,000 Vermonters by Age of Dentists (2013)



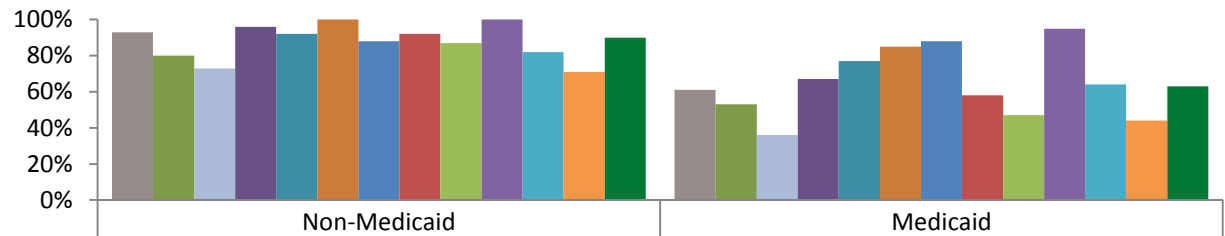
Data Source: 2013 Dentist Survey



# Access to Care – Primary Care Dentists Accepting New Patients

90% of primary care dentists in Vermont were accepting new non-Medicaid patients, but only 63% were accepting new Medicaid patients in 2013.

## Percent of Primary Care Dentists Accepting New Patients in 2013



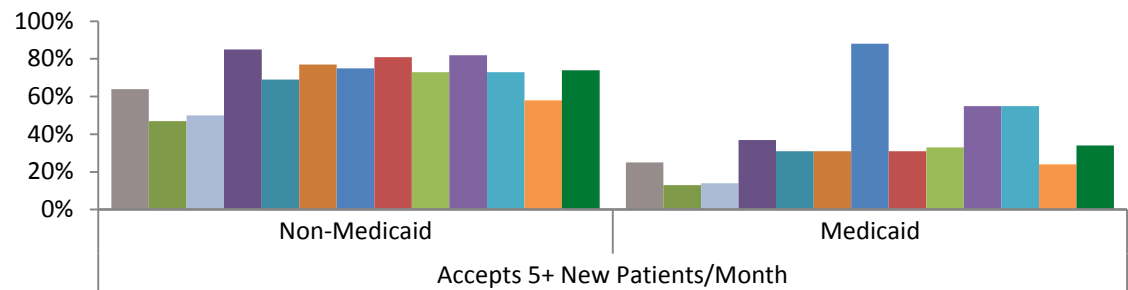
	Accepts any new Patients	
	Non-Medicaid	Medicaid
■ Barre	93%	61%
■ Bennington	80%	53%
■ Brattleboro	73%	36%
■ Burlington	96%	67%
■ Middlebury	92%	77%
■ Morrisville	100%	85%
■ Newport	88%	88%
■ Rutland	92%	58%
■ Springfield	87%	47%
■ St. Albans	100%	95%
■ St. Johnsbury	82%	64%
■ White River Junction	71%	44%
■ Vermont	90%	63%

Data Source: 2013 Dentist Survey

# Access to Care – Primary Care Dentists Accepting New Patients

74% of primary care dentists in Vermont were accepting 5 or more new non-Medicaid patients a month, but only 34% were accepting 5 or more new Medicaid patients a month in 2013.

## Percent of Primary Care Dentists Accepting 5+ New Patients/Month in 2013



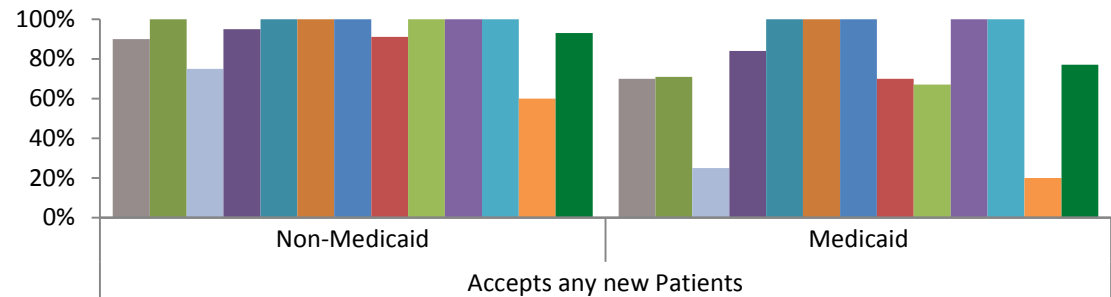
	Accepts 5+ New Patients/Month	
	Non-Medicaid	Medicaid
■ Barre	64%	25%
■ Bennington	47%	13%
■ Brattleboro	50%	14%
■ Burlington	85%	37%
■ Middlebury	69%	31%
■ Morrisville	77%	31%
■ Newport	75%	88%
■ Rutland	81%	31%
■ Springfield	73%	33%
■ St. Albans	82%	55%
■ St. Johnsbury	73%	55%
■ White River Junction	58%	24%
■ Vermont	74%	34%

Data Source: 2013 Dentist Survey

# Access to Care – Specialist Dentists Accepting New Patients

93% of specialist dentists in Vermont were accepting new non-Medicaid patients, but only 77% were accepting new Medicaid patients in 2013.

## Percent of Specialist Dentists Accepting New Patients in 2013



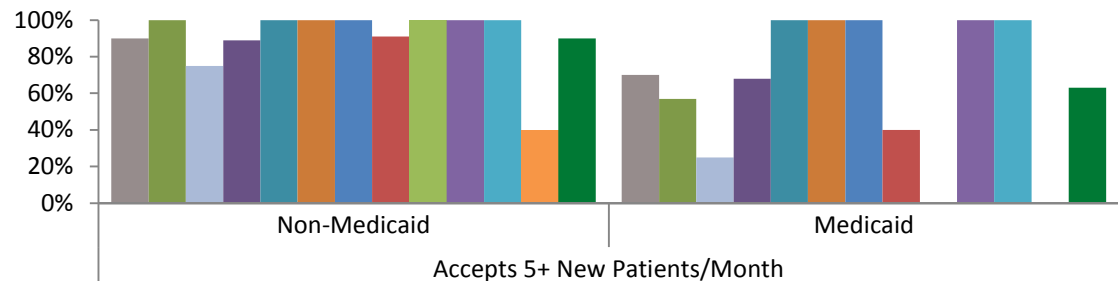
	Accepts any new Patients	
	Non-Medicaid	Medicaid
■ Barre	90%	70%
■ Bennington	100%	71%
■ Brattleboro	75%	25%
■ Burlington	95%	84%
■ Middlebury	100%	100%
■ Morrisville	100%	100%
■ Newport	100%	100%
■ Rutland	91%	70%
■ Springfield	100%	67%
■ St. Albans	100%	100%
■ St. Johnsbury	100%	100%
■ White River Junction	60%	20%
■ Vermont	93%	77%

Data Source: 2013 Dentist Survey

# Access to Care – Specialist Dentists Accepting New Patients

90% of specialist dentists in Vermont were accepting 5 or more new non-Medicaid patients a month, but only 63% were accepting 5 or more new Medicaid patients a month in 2013.

**Percent of Specialist Dentists Accepting 5+ New Patients/Month in 2013**



	Accepts 5+ New Patients/Month	
	Non-Medicaid	Medicaid
■ Barre	90%	70%
■ Bennington	100%	57%
■ Brattleboro	75%	25%
■ Burlington	89%	68%
■ Middlebury	100%	100%
■ Morrisville	100%	100%
■ Newport	100%	100%
■ Rutland	91%	40%
■ Springfield	100%	0%
■ St. Albans	100%	100%
■ St. Johnsbury	100%	100%
■ White River Junction	40%	0%
■ Vermont	90%	63%

Data Source: 2013 Dentist Survey

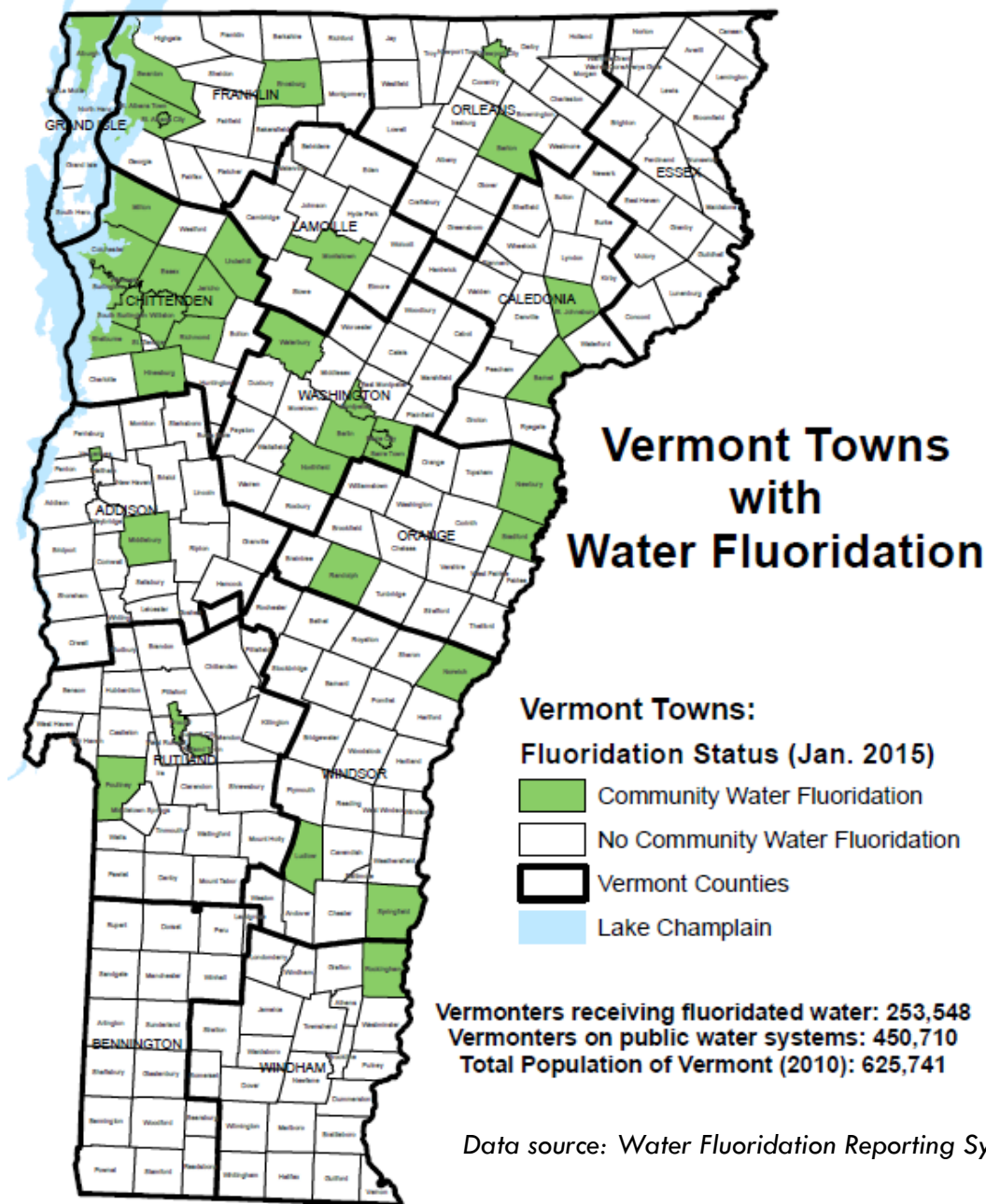
Vermont Department of Health

March 2016

# Water Fluoridation Reporting System (WFRS)

- An online tool that helps states manage the quality of their water fluoridation programs.
- Helps describe the percentage of the U.S. population on community water systems who receive 0.70 ppm optimally fluoridated drinking water.
  - A community water system is a public water system that supplies water to the same population year-round.
- WFRS monitors the number and quality of water fluoridation systems, as well as the state population on public water supply systems.
- This system was developed by CDC in partnership with the Association of State and Territorial Dental Directors (ASTDD).

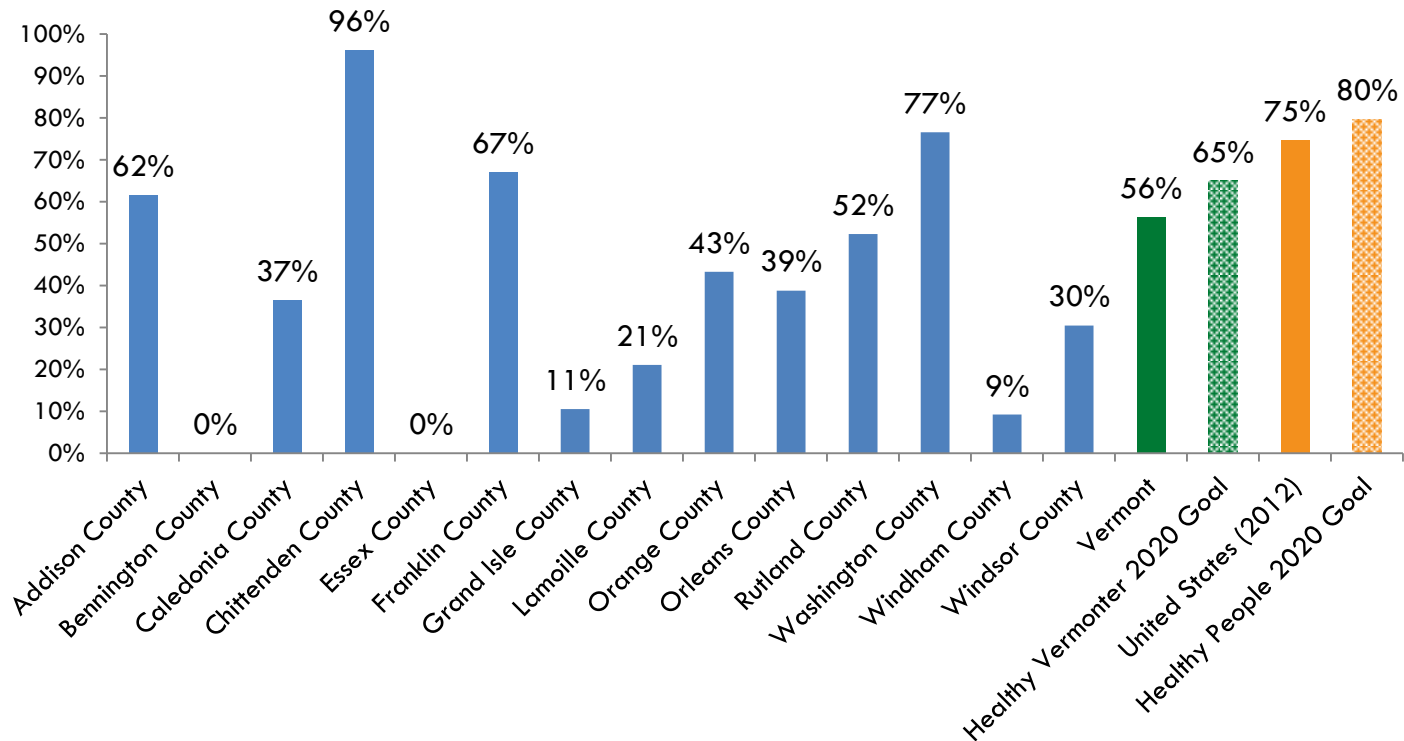
# Community Water Fluoridation



# Community Water Fluoridation

56% of Vermont's population served by community public water systems have optimally fluoridated water. This is lower than the United States, the Healthy Vermonters 2020 goal of 65%, and the Healthy People 2020 Goal.

**Percent of Population Served by Community Public Water Systems that have Optimally Fluoridated Water (2015)**



Data source: Water Fluoridation Reporting System

# Risk Factors

## Indicators

- Sugar-sweetened beverages
- Use of snuff/dip

## Data Sources

- Youth Risk Behavior Survey (YRBS)



# Youth Risk Behavior Survey (YRBS)

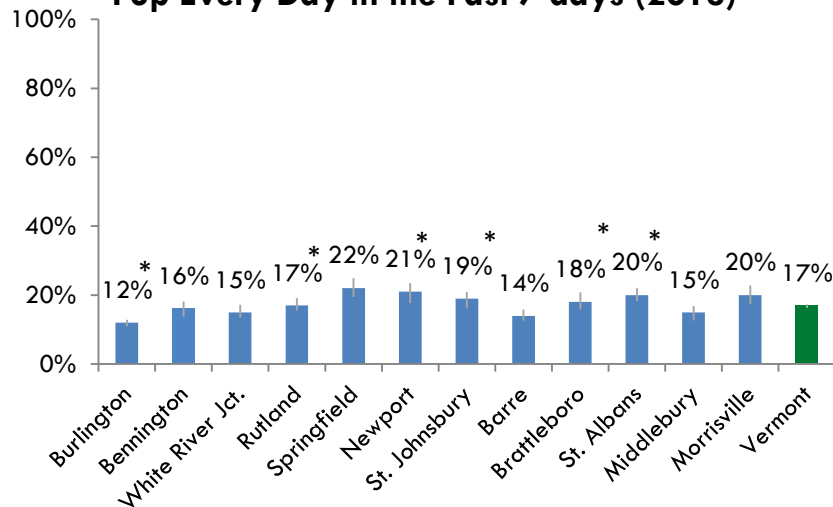
- A paper survey administered in Vermont middle and high schools every two years since 1993.
- The YRBS measures the prevalence of behaviors that contribute to the leading causes of death, disease, and injury among youth.
- Vermont surveys over 30,000 students at each administration.
- Weighted data is compiled to generate a representative state sample.

# Risk Factors – Sugar-sweetened Beverage Consumption Among High School Students (YRBS)

17% of Vermonters in grades 9-12 drank at least one soda daily in the past 7 days.

17% of Vermonters in grades 9-12 drank at least one sugar-sweetened beverage daily (not including soda) in the past 7 days.

**Percent of Students in Grades 9-12 who Reported Drinking at Least One Can, Bottle, or Glass of Soda or Pop Every Day in the Past 7 days (2013)**

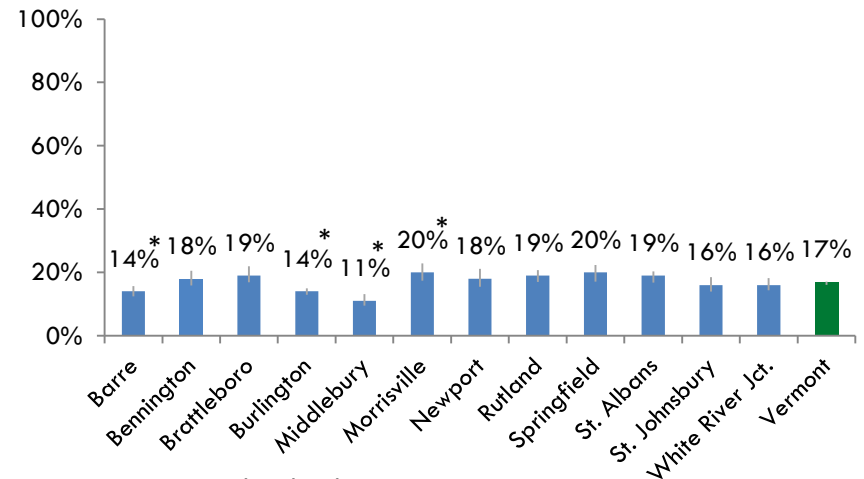


Data Source: Youth Risk Behavior Survey (YRBS)

\*Significantly different from Vermont.

Note: The question instructed students not to include diet soda or pop.

**Percent of Students in Grades 9-12 who Drank a Can, Bottle or Glass of a Sugar-sweetened Beverage (Not including Soda) Every Day in the past 7 Days (2013)**



Data Source: Youth Risk Behavior Survey (YRBS)

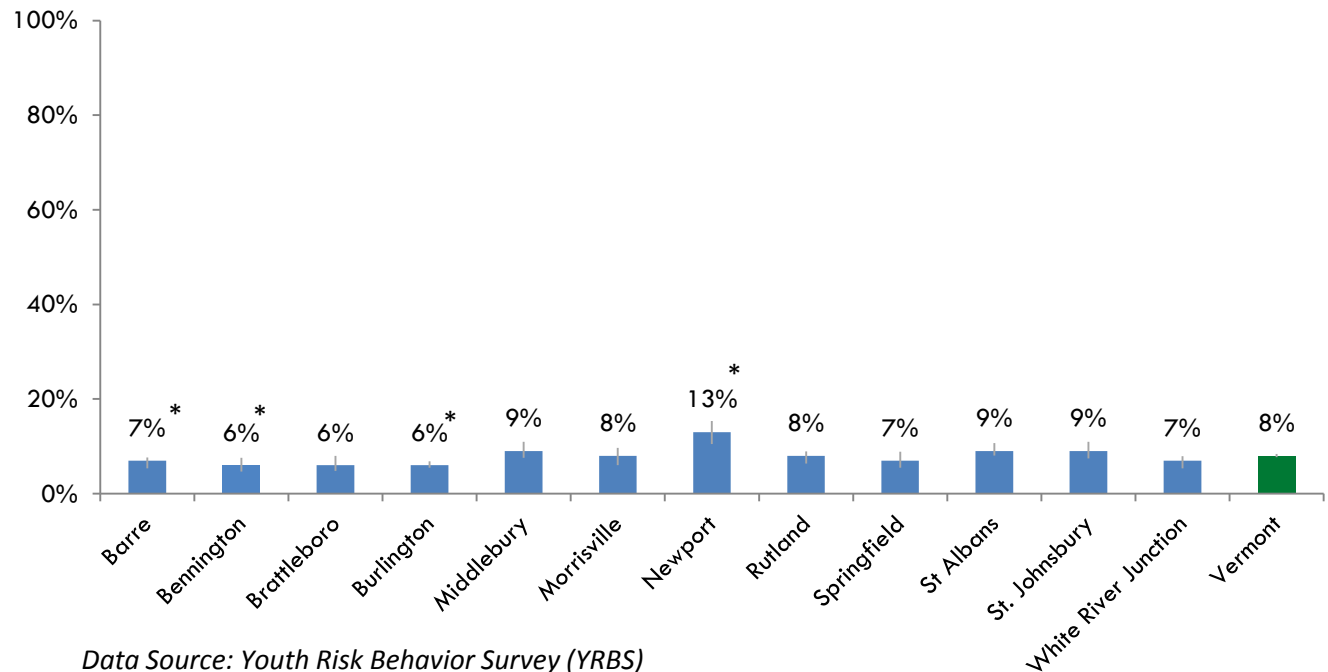
\*Significantly different from Vermont.

NOTE: The question instructed students not to include soda or pop, diet drinks, or 100% fruit juice.

# Risk Factors – Snuff/dip Use Among High School Students (YRBS)

8% of Vermonters in grades 9-12 reported using chewing tobacco, snuff, or dip during the past 30 days.

### Percent of Students in Grades 9-12 who Used Snuff/dip During the Past 30 days (2013)



Data Source: Youth Risk Behavior Survey (YRBS)

\*Significantly different from Vermont.

# Oral Health Outcomes

## Indicators

- ❑ Tooth loss
- ❑ Treated for extractions, endodontics or restorations
- ❑ Emergency Department visits

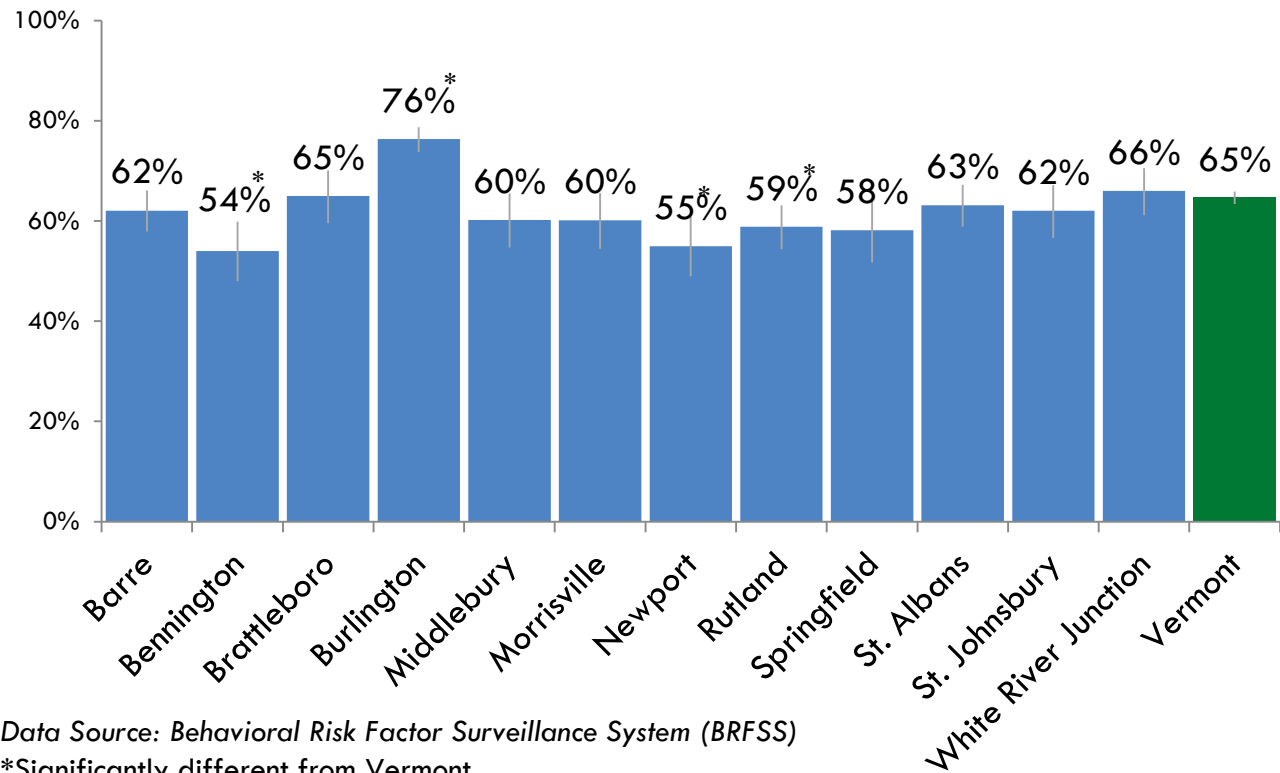
## Data Sources

- ❑ Behavioral Risk Factor Surveillance Survey (BRFSS)
- ❑ Medicaid claims
- ❑ Vermont Uniform Hospital Discharge Data Set (VUHDDS)

# Oral Health Outcomes: No Teeth Lost Among Adults Aged 18-64 (BRFSS)

65% of Vermont adults aged 18-64 did not have any tooth loss due to tooth decay or gum disease, in 2012 and 2014 (combined average).

**Percent of Adults Aged 18-64 With No Teeth Lost (2012 and 2014 combined average)**



Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

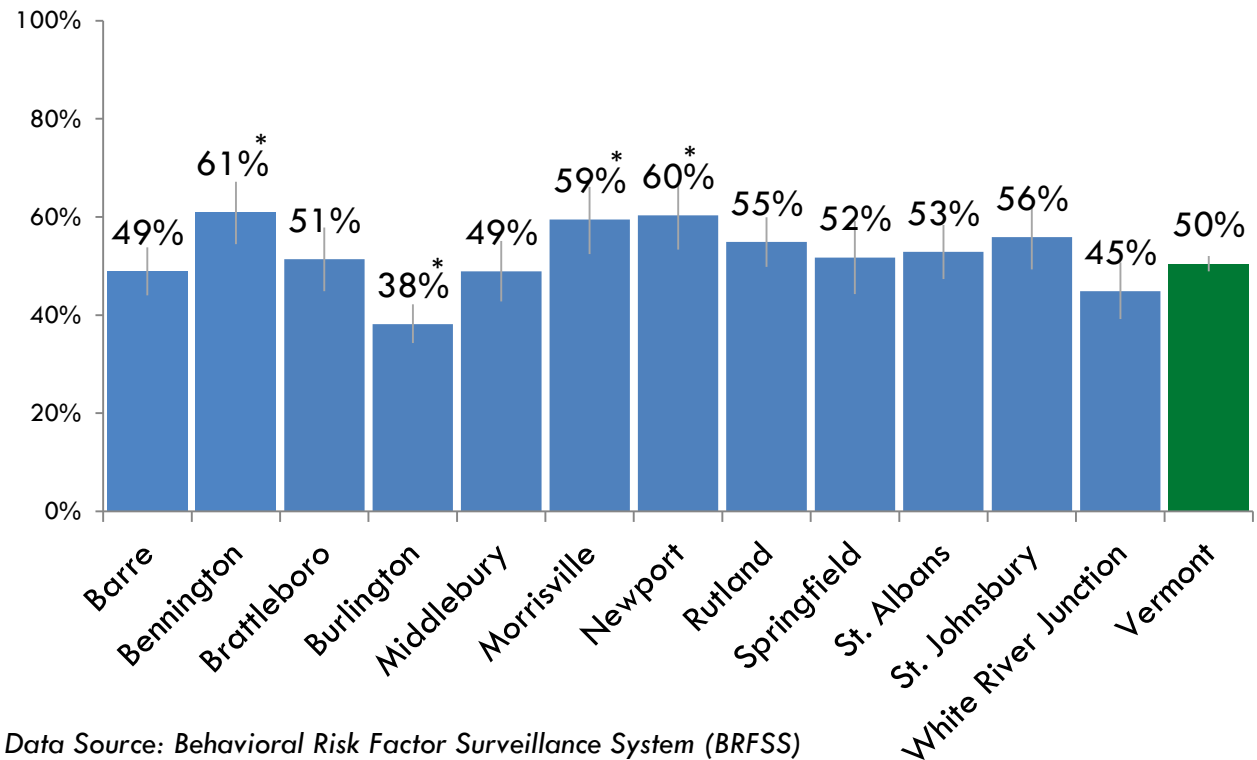
\*Significantly different from Vermont.

# Healthy Vermonters 2020 Goal: Tooth Loss Among Adults Aged 45-64 (BRFSS)

50% of Vermont adults aged 45-64 have had a tooth extracted due to tooth decay or gum disease, in 2012 and 2014 (combined average).

*The Healthy Vermonters 2020 goal for the percent of adults age 45-64 who have ever had a tooth extracted because of dental caries or periodontal disease is 45%.*

**Percent of Adults 45-64 who Have Ever Had a Tooth Extracted (2012 and 2014 combined average)**



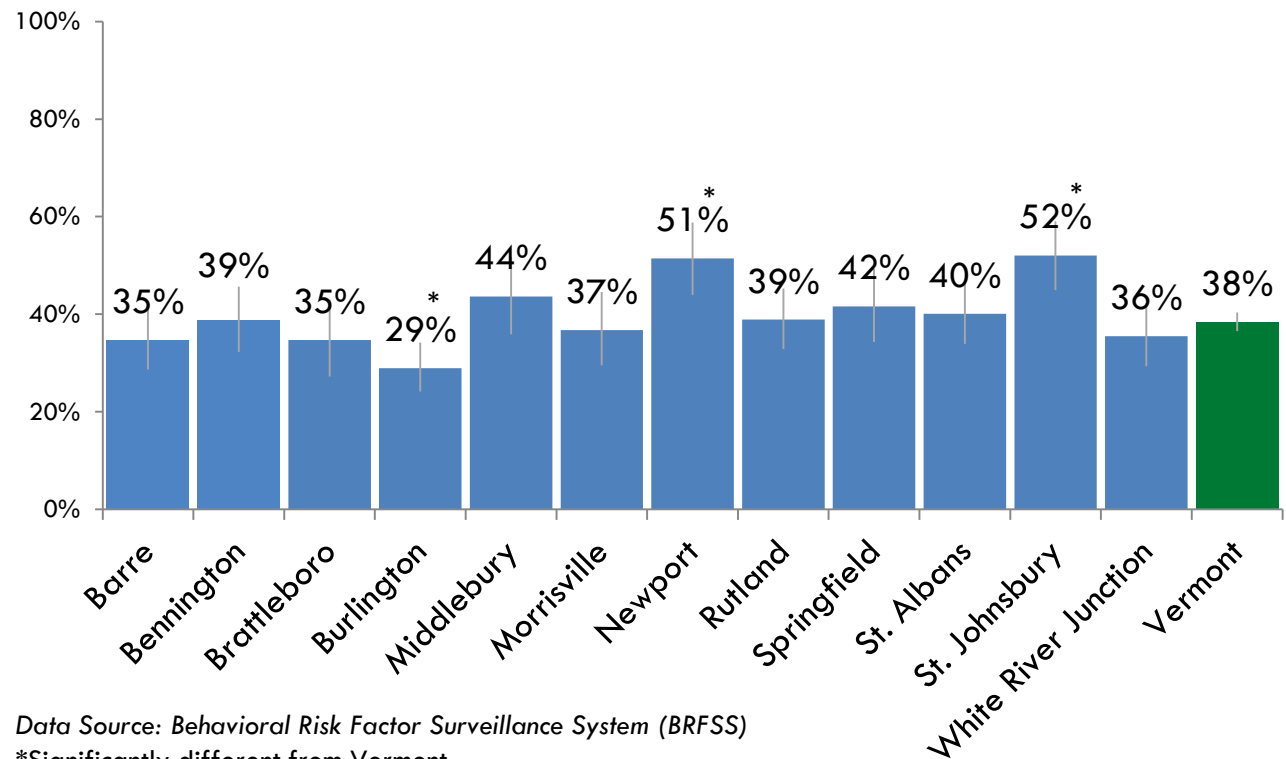
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

\*Significantly different from Vermont.

# Oral Health Outcomes: Six or More Teeth Lost Among Adults Aged $\geq 65$ years (BRFSS)

38% of Vermont adults 65 and older have lost six or more teeth due to tooth decay or gum disease.

### Adults 65 and Older who Have Lost Six or More Teeth (2012 and 2014 combined average)



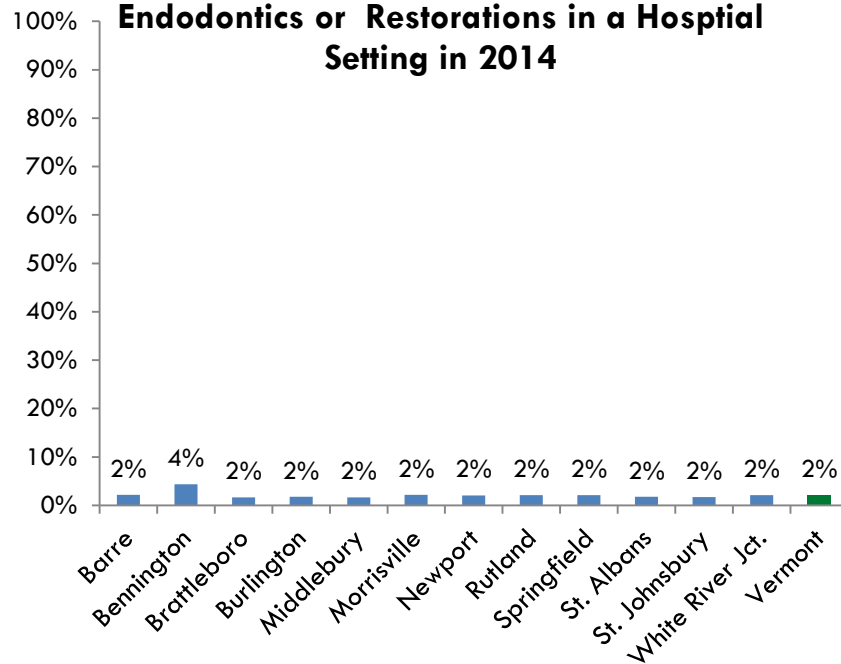
Data Source: Behavioral Risk Factor Surveillance System (BRFSS)

\*Significantly different from Vermont.

# Oral Health Outcomes: Medicaid-Eligible Children Aged 1-5 Treated for Extractions, Endodontics or Restorations

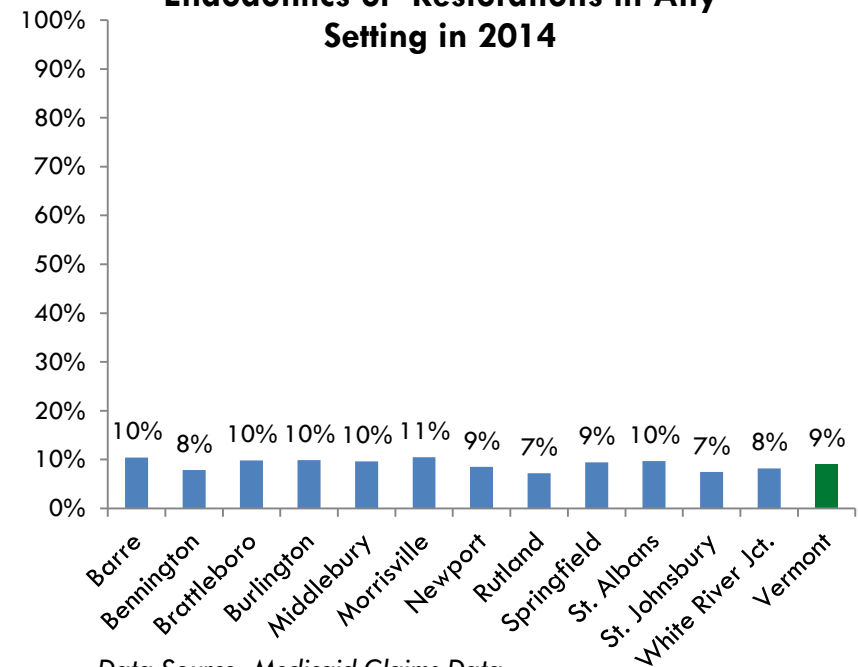
1,718 (9%) Medicaid-eligible children aged 1-5 years were treated for extractions, endodontics or restorations in 2014. Of those children, 23% were treated in a hospital setting for a total of \$1,907,344 paid claims and an average of \$4,829 per visit.

**Percent of Medicaid-Eligible Vermonters Aged 1-5 Treated for Extractions, Endodontics or Restorations in a Hospital Setting in 2014**



Data Source: Medicaid Claims Data

**Percent of Medicaid-Eligible Vermonters Aged 1-5 Treated for Extractions, Endodontics or Restorations in Any Setting in 2014**



Data Source: Medicaid Claims Data



# Oral Health Outcomes: Medicaid-Eligible Children Aged 1-5 Treated for Extractions, Endodontics or Restorations (2014)

	Office				Hospital				Total			
	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Child	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Child	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Child
Barre	163	8.5%	\$62,367	\$383	42	2.2%	\$219,078	\$5,216	200	10.4%	\$281,446	\$1,407
Bennington	47	3.5%	\$15,723	\$335	58	4.4%	\$260,331	\$4,488	104	7.8%	\$276,054	\$2,654
Brattleboro	99	8.5%	\$62,909	\$635	19	1.6%	\$79,922	\$4,206	115	9.8%	\$142,831	\$1,242
Burlington	295	8.4%	\$140,226	\$475	61	1.7%	\$297,811	\$4,882	346	9.9%	\$438,036	\$1,266
Middlebury	74	8.2%	\$39,297	\$531	15	1.7%	\$80,460	\$5,364	87	9.6%	\$119,757	\$1,377
Morrisville	97	8.4%	\$34,790	\$359	25	2.2%	\$102,200	\$4,088	121	10.5%	\$136,990	\$1,132
Newport	78	6.7%	\$20,869	\$268	24	2.0%	\$104,731	\$4,364	100	8.5%	\$125,599	\$1,256
Rutland	109	5.4%	\$47,783	\$438	43	2.1%	\$279,055	\$6,490	145	7.2%	\$326,838	\$2,254
Springfield	88	7.7%	\$44,626	\$507	24	2.1%	\$106,565	\$4,440	108	9.5%	\$151,191	\$1,400
St. Albans	158	8.3%	\$62,446	\$395	34	1.8%	\$162,844	\$4,790	186	9.7%	\$225,290	\$1,211
St. Johnsbury	74	6.0%	\$23,806	\$322	21	1.7%	\$95,495	\$4,547	93	7.5%	\$119,300	\$1,283
Wht Rvr Jct	86	6.2%	\$35,656	\$415	29	2.1%	\$118,856	\$4,098	113	8.2%	\$154,512	\$1,367
<b>Vermont</b>	<b>1,368</b>	<b>7.3%</b>	<b>\$590,498</b>	<b>\$432</b>	<b>395</b>	<b>2.1%</b>	<b>\$1,907,344</b>	<b>\$4,829</b>	<b>1,718</b>	<b>9.1%</b>	<b>\$2,497,842</b>	<b>\$1,454</b>

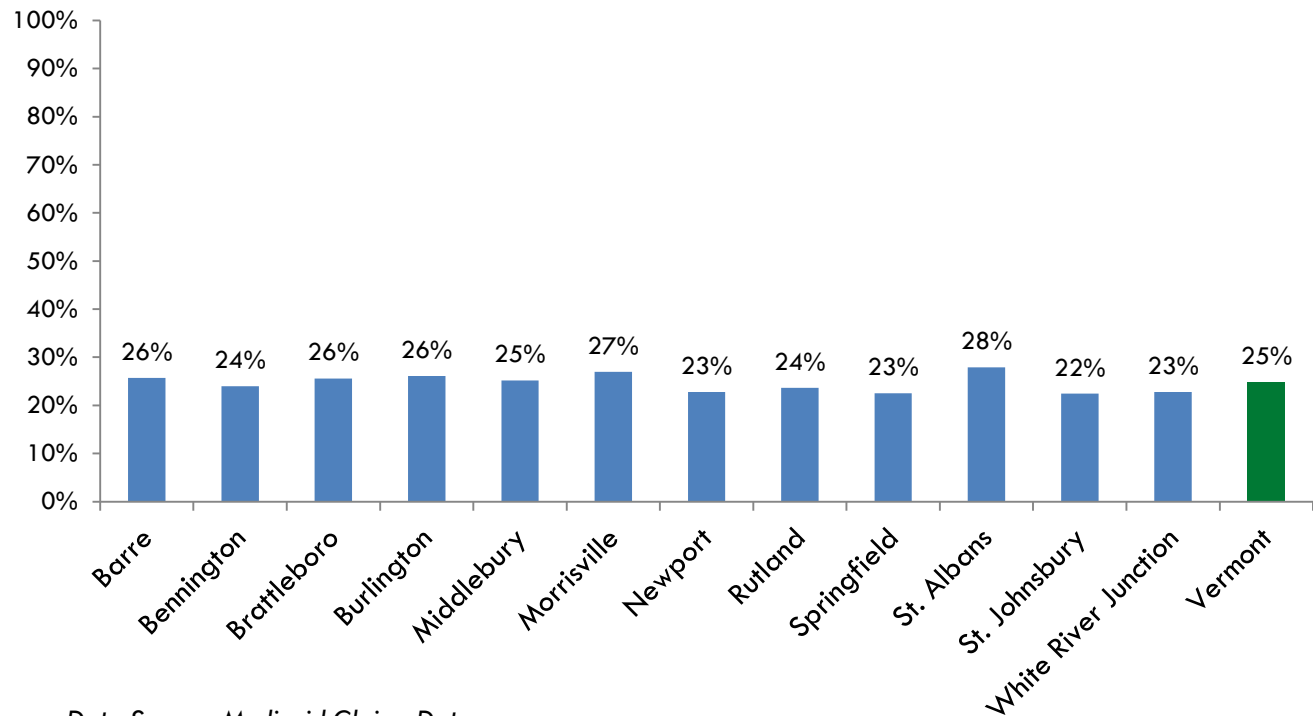
Note: Amount paid is rounded to the dollar, but the overall total takes into account the full amount.

Data Source: Medicaid Claims Data

# Oral Health Outcomes: Medicaid-Eligible Children Aged 6-18 Treated for Extractions, Endodontics or Restorations

11,718  
(25%)  
Medicaid-eligible children aged 6-18 years were treated for extractions, endodontics or restorations in 2014.

**Percent of Medicaid-Eligible Vermonters Aged 6-18 Treated for Extractions, Endodontics or Restorations in Any Setting in 2014**



Data Source: Medicaid Claims Data

# Oral Health Outcomes: Medicaid-Eligible Children Aged 6-18 Treated for Extractions, Endodontics or Restorations (2014)

	Office				Hospital				Total			
	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Person	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Person	Number of Eligible Children Receiving Treatment	Percent of Eligible Children Receiving Treatment	Total Amount Paid	Average Paid per Person
Barre	1,144	25%	\$561,432	\$491	24	0.5%	\$60,624	\$2,526	1,160	26%	\$622,056	\$536
Bennington	712	21%	\$428,352	\$602	98	3.0%	\$366,796	\$3,743	795	24%	\$795,148	\$1,000
Brattleboro	753	25%	\$373,135	\$496	18	0.6%	\$46,566	\$2,587	763	26%	\$419,701	\$550
Burlington	2,154	26%	\$1,026,018	\$476	42	0.5%	\$107,629	\$2,563	2,179	26%	\$1,133,646	\$520
Middlebury	618	25%	\$317,709	\$514	12	0.5%	\$52,550	\$4,379	628	25%	\$370,258	\$590
Morrisville	761	26%	\$330,919	\$435	41	1.4%	\$146,023	\$3,562	794	27%	\$476,941	\$601
Newport	647	22%	\$246,968	\$382	21	0.7%	\$64,454	\$3,069	667	23%	\$311,422	\$467
Rutland	1,182	23%	\$561,425	\$475	28	0.6%	\$74,225	\$2,651	1,201	24%	\$635,651	\$529
Springfield	647	22%	\$333,357	\$515	22	0.7%	\$57,154	\$2,598	662	23%	\$390,511	\$590
St. Albans	1,300	27%	\$601,921	\$463	23	0.5%	\$97,444	\$4,237	1,320	28%	\$699,365	\$530
St. Johnsbury	730	22%	\$280,053	\$384	16	0.5%	\$39,902	\$2,494	740	22%	\$319,955	\$432
Wht Rvr Jct	788	22%	\$390,699	\$496	28	0.8%	\$70,701	\$2,525	809	23%	\$461,399	\$570
Vermont	11,436	24%	\$5,451,988	\$477	373	0.8%	\$1,184,067	\$3,174	11,718	25%	\$6,636,055	\$566

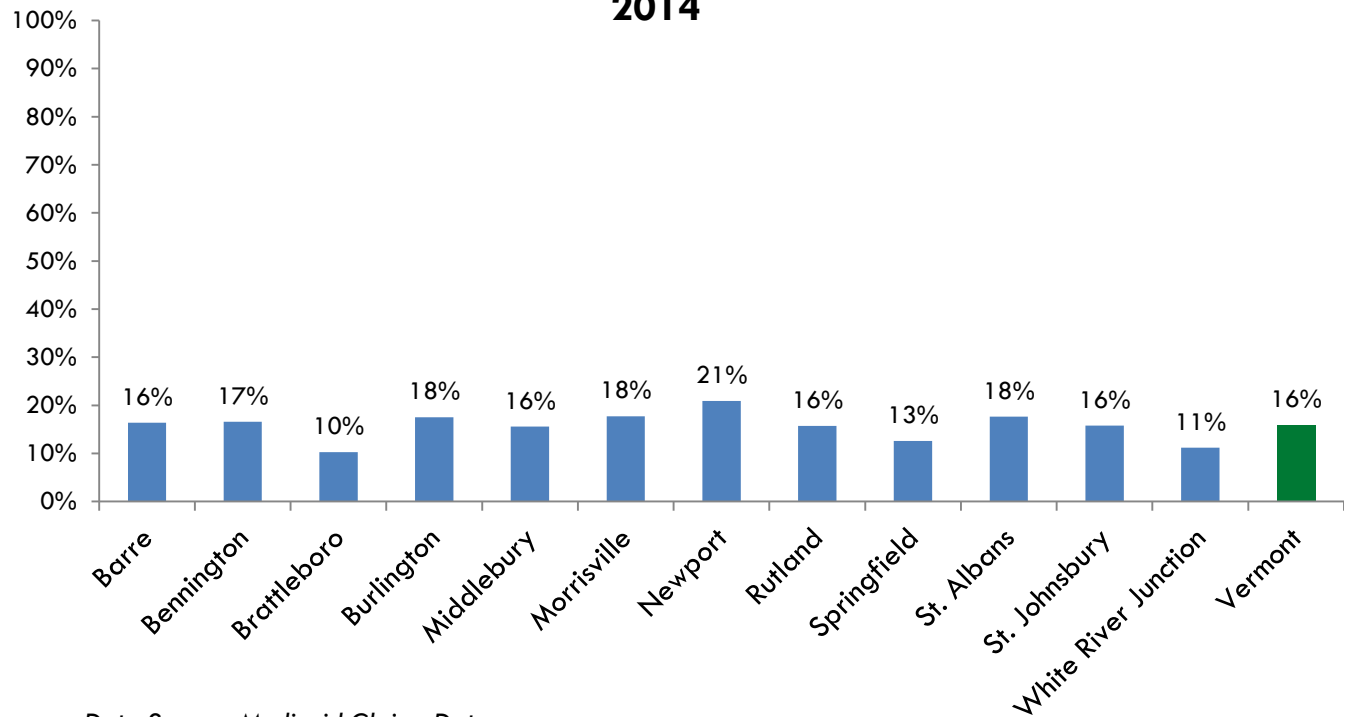
Note: Amount paid is rounded to the dollar, but the overall total takes into account the full amount.

Data Source: Medicaid Claims Data

# Oral Health Outcomes: Medicaid-Eligible Children Aged 19-64 Treated for Extractions, Endodontics or Restorations

15,011  
(16%)  
Medicaid-eligible adults aged 19-64 years were treated for extractions, endodontics or restorations in 2014.

**Percent of Medicaid-Eligible Vermonters Aged 19-64 Treated for Extractions, Endodontics or Restorations in Any Setting in 2014**



Data Source: Medicaid Claims Data

# Oral Health Outcomes: Medicaid-Eligible Children Aged 19-64 Treated for Extractions, Endodontics or Restorations (2014)

	Office				Hospital				Total			
	Number of Eligible Adults Receiving Treatment	Percent of Eligible Adults Receiving Treatment	Total Amount Paid	Average Paid per Adult	Number of Eligible Adults Receiving Treatment	Percent of Eligible Adults Receiving Treatment	Total Amount Paid	Average Paid per Adult	Number of Eligible Adults Receiving Treatment	Percent of Eligible Adults Receiving Treatment	Total Amount Paid	Average Paid per Adult
Barre	1,508	16%	\$653,917	\$434	40	0.4%	\$37,679	\$942	1,530	16%	\$691,596	\$452
Bennington	1,061	16%	\$507,407	\$478	27	0.4%	\$17,114	\$634	1,071	17%	\$524,521	\$490
Brattleboro	667	10%	\$291,886	\$438	22	0.3%	\$23,317	\$1,060	679	10%	\$315,203	\$464
Burlington	3,219	17%	\$1,161,134	\$361	96	0.5%	\$78,491	\$818	3,272	18%	\$1,239,625	\$379
Middlebury	678	15%	\$256,295	\$378	18	0.4%	\$17,633	\$980	683	16%	\$273,928	\$401
Morrisville	964	18%	\$361,885	\$375	21	0.4%	\$29,908	\$1,424	975	18%	\$391,793	\$402
Newport	1,146	20%	\$375,115	\$327	50	0.9%	\$44,237	\$885	1,173	21%	\$419,352	\$358
Rutland	1,670	15%	\$705,452	\$422	74	0.7%	\$68,576	\$927	1,702	16%	\$774,028	\$455
Springfield	727	12%	\$254,392	\$350	26	0.4%	\$43,051	\$1,656	745	13%	\$297,444	\$399
St. Albans	1,431	17%	\$523,096	\$366	49	0.6%	\$67,757	\$1,383	1,450	18%	\$590,853	\$407
St. Johnsbury	940	15%	\$331,093	\$352	38	0.6%	\$52,289	\$1,376	958	16%	\$383,382	\$400
Wht Rvr Jct	749	11%	\$226,614	\$303	36	0.5%	\$83,057	\$2,307	773	11%	\$309,671	\$401
Vermont	14,760	16%	\$5,648,286	\$383	497	0.5%	\$563,110	\$1,133	15,011	16%	\$6,211,396	\$414

Note: Amount paid is rounded to the dollar, but the overall total takes into account the full amount.

Data Source: Medicaid Claims Data

# Oral Health Outcomes: General Assistance Vouchers

1,392 Vermonters utilized General Assistance Vouchers for dental services, for a total of \$933,695, in State Fiscal Year 2015.

## Number of Individuals who Utilized General Assistance (GA) Vouchers for Dental Services, including Amount Paid, in State Fiscal Year 2015

	Number of Individuals	Total Amount Paid	Average Paid per Individual
Barre	170	\$102,084	\$600
Bennington	216	\$165,032	\$764
Brattleboro	98	\$75,251	\$768
Burlington	196	\$127,342	\$650
Middlebury	48	\$27,899	\$581
Morrisville	122	\$75,117	\$616
Newport	69	\$36,382	\$527
Rutland	130	\$80,420	\$619
Springfield	69	\$62,576	\$907
St. Albans	136	\$78,986	\$581
St. Johnsbury	108	\$77,347	\$716
White River Jct.	30	\$25,260	\$842
Vermont	1,392	\$933,695	\$671

Data Source: Medicaid Claims Data

# Vermont Uniform Hospital Discharge Data Set (VUHDDS)

- VUHDDS includes hospital discharge data from hospitals in Vermont, New Hampshire, Massachusetts, and New York. However, New Hampshire data for 2010-2013 were not available at the time of this report.
  - Historically, new Hampshire Emergency Department visits were 10% of all CCS 136 Emergency Department visits (based on the average percentage from 2005-2009). This percentage varied by District Office as shown in the following slides.
- VUHDDS data are based on visits and not people. A person who is seen in the emergency department for disorders of teeth and jaw more than once in a year will be counted each time as a separate visit.
- These data only include those who sought care, and does not include those who needed care but did not seek care.

# Oral Health Outcomes: Emergency Department Visits

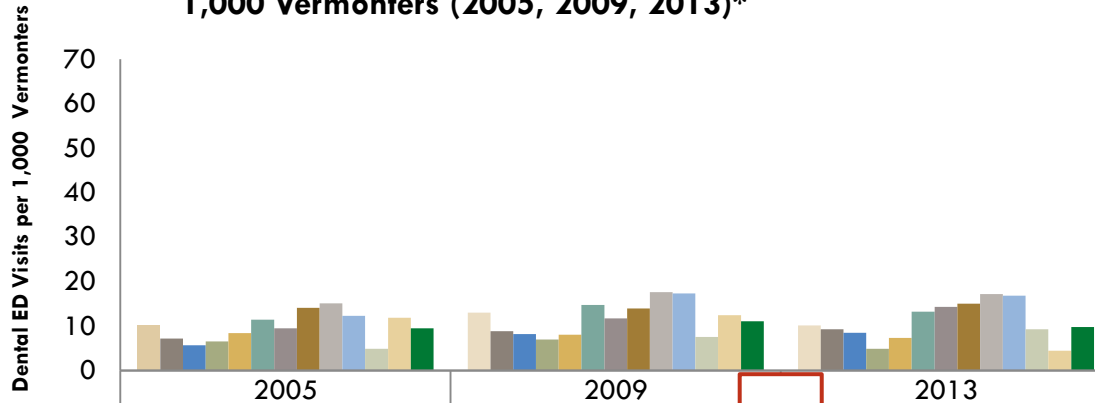
For Emergency Department Visits for Disorders of Teeth and Jaw:

- the rate of visits has remained fairly steady for all Vermonters from 2005 to 2013.
- in 2013, there were 10 visits per 1,000 Vermonters (a total of 6,155 visits) in Vermont, Massachusetts, and New York hospitals. However, this does not include data from New Hampshire.
- the rate of visits was highest for 25-34 year-olds, followed by 18-24 year-olds.
- the percent of visits where Medicaid was listed as their primary payer increased from 2005 to 2013 in Vermont, from 48% to 58%.



# Oral Health Outcomes: Emergency Department Visits

**Rate of Emergency Department Visits for Disorders of Teeth and Jaw per 1,000 Vermonters (2005, 2009, 2013)\***



	2005	2009	2013
Barre	10	13	10
Bennington	7	9	9
Brattleboro	6	8	8
Burlington	7	7	5
Middlebury	8	8	7
Morrisville	11	15	13
Newport	10	12	14
Rutland	14	14	15
Springfield	15	18	17
St. Albans	12	17	17
St. Johnsbury	5	8	9
White River Junction	12	12	5
Vermont	10	11	10

NH data for 2013 are not available.

\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009), but varied by District Office as shown in this table.

District Office	% of Visits that Occurred in NH Hospitals (2005-2009 Average)
Barre	1%
Bennington	0%
Brattleboro	4%
Burlington	0%
Middlebury	1%
Morrisville	1%
Newport	6%
Rutland	1%
Springfield	22%
St. Albans	0%
St. Johnsbury	50%
White River Jct.	60%
<b>Vermont</b>	<b>10%</b>

Data Source: Vermont Uniform Hospital Discharge Data Set

# Oral Health Outcomes: Emergency Department Visits

**Number of Emergency Department Visits for Disorders of Teeth and Jaw (2005, 2009, 2013)\***

	Number of Visits		
	2005	2009	2013
Barre	684	868	677
Bennington	266	329	340
Brattleboro	206	299	304
Burlington	1001	1086	786
Middlebury	307	296	269
Morrisville	338	448	413
Newport	269	331	401
Rutland	891	870	916
Springfield	519	600	577
St. Albans	672	950	933
St. Johnsbury	168	263	323
White River Jct.	582	604	216
<b>Vermont</b>	<b>5903</b>	<b>6944</b>	<b>6155</b>

NH data for 2013 are not available.

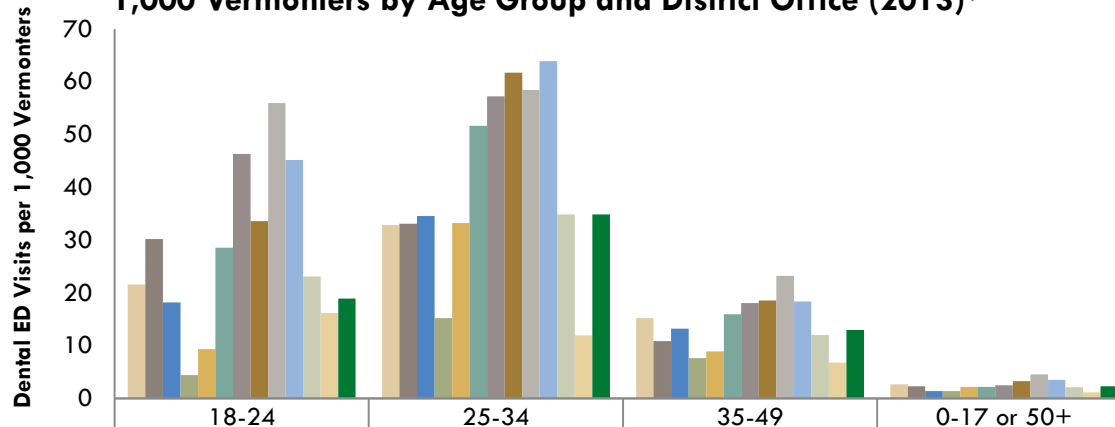
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Rutland	1%
Springfield	22%
St. Albans	0%
St. Johnsbury	50%
White River Jct.	60%
<b>Vermont</b>	<b>10%</b>

Data Source: Vermont Uniform Hospital Discharge Data Set

# Oral Health Outcomes: Emergency Department Visits

**Emergency Department Visits for Disorders of Teeth and Jaw per 1,000 Vermonters by Age Group and District Office (2013)\***



\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009), but varied by District Office as shown in this table.

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Morrisville	1%
Newport	6%
Rutland	1%
Springfield	22%
St. Albans	0%
St. Johnsbury	50%
White River Jct.	60%
<b>Vermont</b>	<b>10%</b>

Data Source: Vermont Uniform Hospital Discharge Data Set

March 2016

# Oral Health Outcomes: Emergency Department Visits

Visits by 25-34 year-olds comprised 41% of all ED visits for disorders of Teeth and Jaw for Vermonters, but this age group represents only 11% of Vermont's population.

## Number and Percent of Emergency Department Visits for Disorders of Teeth and Jaw by Age Group for Vermonters (2013) \*

Age Group	# of Emergency Department Visits for Disorders of Teeth and Jaw for Vermonters	% of Total Emergency Department Visits for Disorders of Teeth and Jaw for Vermonters	% of Vermont population in this age group
<b>18-24</b>	1269	21%	11%
<b>25-34</b>	2508	41%	11%
<b>35-49</b>	1516	25%	19%
<b>0-17 or 50+</b>	862	14%	59%
<b>Total</b>	6155	100%	100%

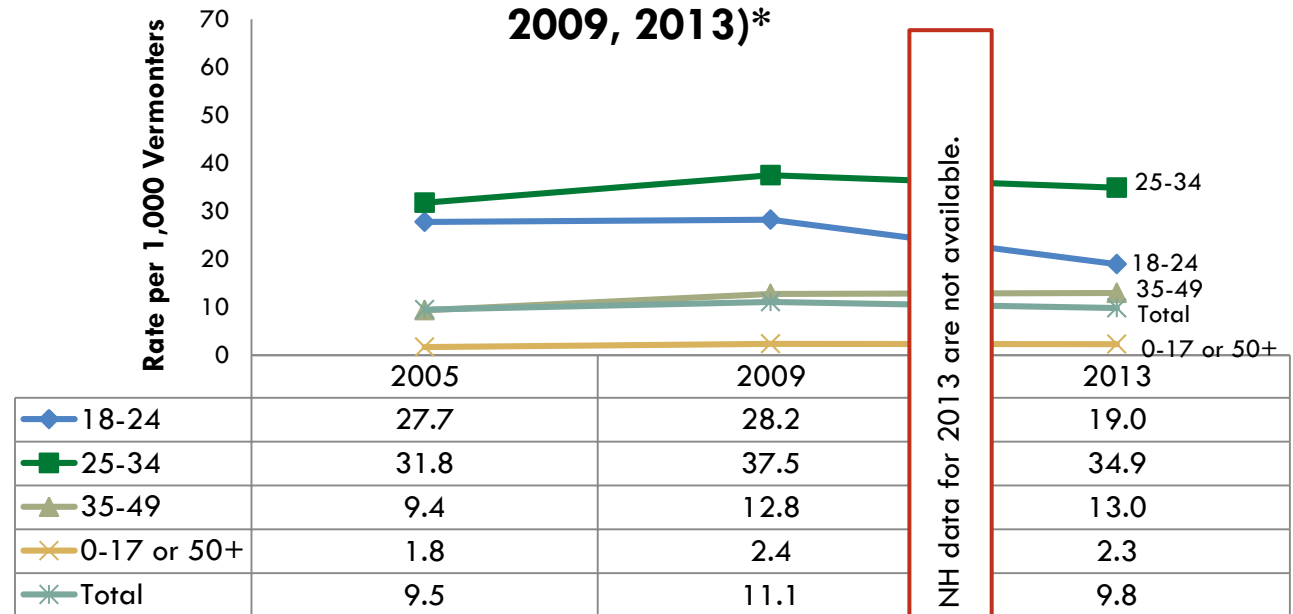
\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009), but varied by District Office.

Data Source: Vermont Uniform Hospital Discharge Data Set

# Oral Health Outcomes: Emergency Department Visits

From 2005 to 2013, the rate of Emergency Department visits for Disorders of Teeth and Jaw per 1,000 Vermonters increased for all age groups, except 18-24 year olds, whose rate decreased.

**Rate of Emergency Department Visits for Disorders of Teeth and Jaw per 1,000 Vermonters (2005, 2009, 2013)\***

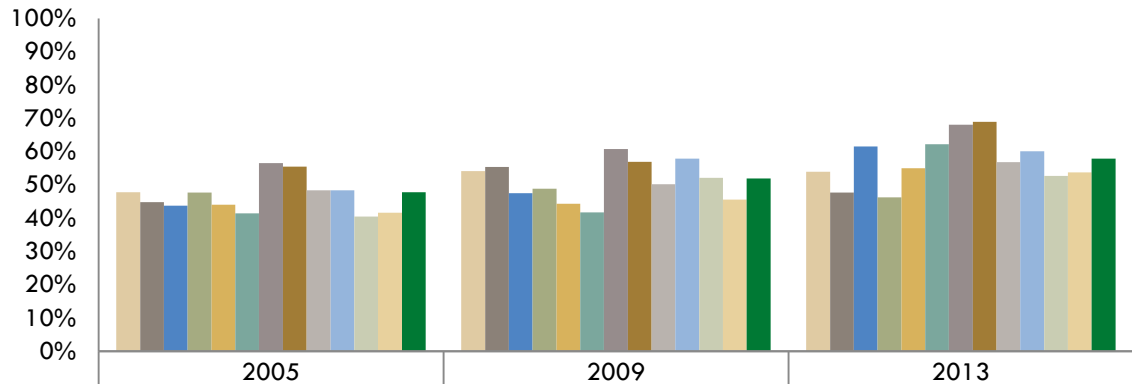


Data Source: Vermont Uniform Hospital Discharge Data Set

\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009).

# Oral Health Outcomes: Emergency Department Visits

**Percent of Emergency Department Visits for Disorders of Teeth and Jaw with Primary Payer listed as Medicaid (2005, 2009, 2013)\***



	2005	2009	2013
Barre	48%	54%	54%
Bennington	45%	55%	48%
Brattleboro	44%	47%	62%
Burlington	48%	49%	46%
Middlebury	44%	44%	55%
Morrisville	41%	42%	62%
Newport	57%	61%	68%
Rutland	55%	57%	69%
Springfield	48%	50%	57%
St. Albans	48%	58%	60%
St. Johnsbury	40%	52%	53%
White River Junction	42%	46%	54%
Vermont	48%	52%	58%

\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009), but varied by District Office as shown in this table.

District Office	% of Visits that Occurred in NH Hospitals (2005-2009 Average)
Barre	1%
Bennington	0%
Brattleboro	4%
Burlington	0%
Middlebury	1%
Morrisville	1%
Newport	6%
Rutland	1%
Springfield	22%
St. Albans	0%
St. Johnsbury	50%
White River Jct.	60%
<b>Vermont</b>	<b>10%</b>

Data Source: Vermont Uniform Hospital Discharge Data Set

March 2016

# Summary

# Preventive and Access to Care

- Forty-four percent of Vermont adults reported they did not have dental insurance.
- The majority of Vermont adults report visiting the dentist in the last year, but Medicaid claims show only 27% of Medicaid-eligible adults have seen a dentist in the last year.
- A low percentage of Medicaid-eligible Vermonters received dental care in 2014, especially those under 19 months (22%), under 6 (46%), and adults (27%).



# Preventive and Access to Care

- In 2013, Vermont dentists were more likely to accept new non-Medicaid patients than new Medicaid patients. This same pattern was true for accepting 5 or more new patients a month.

# Preventive and Access to Care

- The percent of Vermont's population served by community public water systems who have optimally fluoridated water is lower than the United States and the Healthy Vermonters 2020 goal.

# Risk Factors

- Vermont high school students participate in risky behaviors, including:
  - 17% consuming at least one soda daily,
  - 17% consuming at least one other type of sugar-sweetened beverage daily, and
  - 8% using snuff/dip.

# Oral Health Outcomes

- Fifty percent of Vermont adults aged 45-64 have had a tooth extracted due to tooth decay or gum disease.
- Thirty-eight percent of Vermont adults 65 and older have lost six or more teeth due to tooth decay or gum disease.

# Oral Health Outcomes

- Medicaid-eligible Vermonters are receiving treatment for extractions, endodontics, or restorations, including:
  - ▣ 9% of children aged 1-5 (23% of these in the hospital).
  - ▣ 25% of children aged 6-18.
  - ▣ 16% of adults aged 19-64.
  - ▣ a total amount paid for all of these visits for all ages of \$15,345,293 in 2014.
- In State Fiscal Year 2015, 1,392 Vermonters utilized General Assistance Vouchers, for a total of \$933,695.

# Oral Health Outcomes

For Emergency Department Visits for Disorders of Teeth and Jaw:

- the rate of visits has remained fairly steady for all Vermonters from 2005 to 2013.
- in 2013, there were 10 visits per 1,000 Vermonters (a total of 6,155 visits). However, this does not include data from New Hampshire.
- the rate of visits is highest for 25-34 year-olds, followed by 18-24 year-olds.

# Questions?

- For more information about the Oral Health Program at the Vermont Department of Health,
  - please go to: <http://healthvermont.gov/family/dental/services.aspx>,
  - or contact Robin Miller, RDH, MPH at [Robin.N.Miller@vermont.gov](mailto:Robin.N.Miller@vermont.gov).
- For more information about Oral Health data in Vermont, please contact:
  - Denise Kall, PhD at [Denise.Kall@vermont.gov](mailto:Denise.Kall@vermont.gov).

# Data Notes - BRFSS

- Behavioral Risk Factor Surveillance System (BRFSS) Survey Questions used in the above analyses included:
- "How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontics. [Responses: Within the past year (anytime less than 12 months), Within the past 2 years (1 year but less than 2 years), Within the past 5 years (2 years but less than 5 years ago), 5 or more years ago, and Never]"
- "How many of your teeth have been removed because of tooth decay or gum disease? Include teeth lost to infection, but do not include teeth lost for other reasons, such as injury or orthodontics. [Responses: 1 to 5, 6 or more but not all, All, and None]"
- For more information on the Behavioral Risk Factor Survey (BRFSS), please see: <http://healthvermont.gov/research/brfss/brfss.aspx>.



# Data Notes - BRFSS

- Confidence Intervals were used for statistical comparisons between the state and the various sub-geographies. A confidence interval represents the range in which a parameter estimate would fall, which is calculated based on the observed data. For this analysis, we used a 95% confidence interval, meaning that we are 95% confident that the true value of the parameter being examined falls within the specified confidence interval. Statistical significance is assessed by comparing the confidence intervals of different groups. If the confidence intervals from two groups, such as that for the state and a specific county, do not overlap we consider the estimates to be significantly different from one another.

# Data Notes - BRFSS

- In U.S. data, age adjustment is used for comparison of regions with varying age breakdowns. In order to remain consistent with the methods of comparison at a national level, statistics in Vermont were age adjusted. The estimates were adjusted based on the proportional age breakdowns of the standard U.S. population in 2000. For more detailed information on age adjustment visit <http://www.cdc.gov/nchs/data/statnt/statnt20.pdf>.
- Note that beginning in 2011 the CDC implemented changes to the BRFSS weighting methodology in order to more accurately represent the adult population. In 2011 and later, weights are calculated using an iterative proportional fitting (or "raking") methodology. This allows the weights to be calculated using a smaller sample size, adjusts for more demographic variables, and incorporates cell phone interview data into estimates. While these adjustments make the calculations more representative of the population, the changes in methodology also limit the ability to compare results from 2011 forward with those from previous years. The Vermont Department of Health recommends that comparisons between BRFSS data from 2011 forward and earlier years be made with caution. Statistical differences may be due to methodological changes, rather than changes in opinion or behavior.

# Data Notes – Medicaid Claims Data

- This analysis was conducted using Vermont’s Medicaid data, accessed through Vermont Healthcare Claims Uniform Reporting and Evaluating System (VHCURES).
- District office is based on the recipient’s county of residence as of their last month of Medicaid eligibility within the timeframe
- For the analysis of those born in 2012 who received any dental services by a dental provider by 18 months of age:
  - This included only Vermonters who were Medicaid-eligible (including Medicaid Managed Care and Traditional Medicaid aid categories) and were enrolled in Medicaid for 95% or more of their lifetimes.
  - age was calculated as of date of service.
- For all other analyses using Medicaid Claims Data:
  - Vermonters who were Medicaid-eligible (including Medicaid Managed Care and Traditional Medicaid aid categories) and have been continuously enrolled in Medicaid for three consecutive months were included in the analysis.
  - Age was calculated as of December 31, 2014.

# Data Notes – Medicaid Claims Data

Vermonters can appear in more than one of these numbers.

% of Medicaid-eligible Vermonters who had a preventive visit

This includes Vermonters who had paid claims for any one of the following preventive procedure codes (CPT between D1000 and D1999). If a Vermonter received one of these procedures more than once in this timeframe, he/she only appears in the number once.

% of Medicaid-eligible Vermonters who received any dental services by a dental provider

This includes Vermonters who had paid dental claims for any one of the following dental procedure codes (CPT between D0120 and D9999) filed on a dental claim form (claim type L). If a Vermonter received one of these procedures more than once in this timeframe, he/she only appears in the number once.

% of Medicaid-eligible Vermonters treated for extractions, endodontics or restorations

This includes Vermonters who had paid claims for any one of the following procedures: dental restorations (CPT between D2000 and D2999), endodontic procedures (CPT between D3000 and D3999), or dental extractions (CPT between D7111 and D7250). preventive visits are not included. If a Vermonter received one of these procedures more than once in this timeframe, he/she only appears in the number once. A Vermonter can appear in both the office percentage and the hospital percentage for dental treatment. Each visit is counted as hospital or office visit, but never both for the same date of service.

Number of Individuals who Utilized General Assistance (GA) Vouchers for Dental Services

This includes Vermonters who had claims for a State Category of Service Code for Dental between '0801' and '0899' and a funding source code C (General Assistance (GA) OVHA).

# Data Notes - Emergency Department Visits for Disorders of Teeth and Jaw for Vermonters from 2009 and 2013, by Principal Diagnosis

The Primary Diagnosis Clinical Classification Software (CCS) Category 136, Disorders of Teeth and Jaw, includes the following diagnoses:

Principal Diagnosis	2009	NH data for 2013 are not available.	2013*
520: Diseases of tooth development and eruption	99		67
521: Diseases of hard tissue of teeth	1,074		1,138
522: Diseases of pulp and periapical tissues	1,616		2,026
523: Gingival and periodontal diseases	161		126
524: Dentofacial anomalies, including malocclusion	200		133
525: Other diseases and conditions of the teeth and supporting structures	3,613		2,529
526: Diseases of the jaw	181		38
78492: Jaw pain			99
<b>Total</b>	<b>6,944</b>		<b>6,156</b>
<i>Data Source: Vermont Uniform Hospital Discharge Data Set</i>			

\* New Hampshire data for 2010-2013 are not available at the time of this report. Historically, the percent of CCS 136 Emergency Department visits that occurred in New Hampshire hospitals was 10% for all Vermonters (based on the average percentage from 2005-2009), but varied by District Office.

# Data Notes - Additional Information

- For more information on the Dental Provider Survey, see:  
<http://healthvermont.gov/research/HlthCarePrvSrvys/HealthCareProviderSurveys.aspx>
- For more information on the Youth Risk Behavior Survey, see:  
<http://healthvermont.gov/research/yrbs.aspx>
- For more information on the Vermont Uniform Hospital Discharge Data Set, see:  
<http://healthvermont.gov/research/hospital-utilization/>