Health Surveillance

Data Encyclopedia

A review of data sources and resources available at the Vermont Department of Health
The Division of Health Surveillance, Public Health Statistics, has compiled the “Data Encyclopedia: A Review of Data Sources and Resources Available at The Vermont Department of Health.” This publication provides an overview of the data sources commonly used to assess and track population health outcomes and contributors to disease in Vermont. It is intended to provide a high level description of the type of information in each data source, the potential uses and limitations of the data, and the existing reports summarizing the data. For additional information on accessing data from these sources, generating reports and interpreting the significance, please contact Mallory Staskus (Mallory.Staskus@vermont.gov) at the Vermont Department of Health.
Data Sources vs. Data Resources

Data Sources:

- Surveys:
  - Adult Tobacco Survey (ATS)
  - Asthma Call Back Survey (ACBS)
  - Basic Screening Survey (BSS)
  - Behavioral Risk Factor Surveillance System (BRFSS)
  - Child Care Immunization Survey
  - College Health Survey
  - College Immunization Survey
  - Consumer Assessment of Healthcare Providers and Systems (CAHPS)
  - Health Care Workforce Census
  - Vermont Advance Directives Registry (VADR)
  - Birth Information Network (BIN)
  - Vermont Cancer Registry (VCR)
  - Vermont Household Health Insurance Survey (HHIS)
  - Pregnancy Risk Assessment Monitoring System (PRAMS)
  - Vermont School Nurse Report (VT SNR)
  - Young Adult Survey (YAS)
  - Youth Risk Behavior Survey (YRBS)

- Registries and Surveillance Systems:
  - Vermont Clinical Registry

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The data sources included in this document include surveys, registries, claims and discharge, and licensing data. Most of these data sources are cleaned and available for secondary data analysis by analysts granted access to the data. For the data sources that have been “cleaned”, the variables have been formatted, appropriately categorized, and weighted as necessary. However, some data sources contain data that is more “raw” in character and prior to being used steps should be taken to clean and standardize the data for analysis. The four types of data sources presented here are:

- **Surveys** - Surveys contain self-reported responses to questions. Some, but not all, of the surveys included here are from a sample that is then weighted back to reflect the Vermont population. Surveys are usually completed at one point in time (annually, bi-annually, etc.).

- **Registries and Surveillance Systems** - This type of information is collected frequently and continuously. They are meant to show a real time snapshot of the population. In some cases, information is constantly open to change, so it is important to pay attention to time when information is accessed.

- **Claims and Discharge data** - Both of these data sources are based on billing information for visits to a health care provider. Claims data is information based on what an insurer paid for a given service. Discharge data tells us information about a visit to a health care provider based on diagnosis and procedure codes listed at discharge. It is important to note that both of these data sources rely on billing information and in some cases may not entirely describe what occurs during a visit to a health care provider.

- **Regulatory and Licensing data** – These data sources are continuously used to collect license and compliance information. Licensing data captures authorization for establishments or individuals that provide a service that may affect public health. Regulatory data tracks individual and establishment compliance and their capability to meet pre-determined standards that are in place to protect public health.
Data Resources

Individuals can access information about population health status and contributors to health through two primary resources developed by the Vermont Department of Health. These portals include access to various data sources that, in combination, can help to better understand health trends, opportunities for health improvement and current actions for health protection.

- **Healthy Vermonters Toolkit** is built on the concepts of *Results Based Accountability™* and includes:
  - *Population Indicators* (such as smoking prevalence) are measures for which the Health Department, with state government and community partners, shares responsibility for making change. All Healthy Vermonters 2020 indicators are displayed. The Health Department routinely uses three ways to assess population indicators at the local level: by county, by Health Department district office area, and by hospital service area (HSA). Maps & Trends links you to interactive InstantAtlas™ pages, with maps, tables and graphs for all Healthy Vermonters 2020 indicators and goals.
  - *Performance Measures* (such as the percentage of smokers registered with the Vermont Quit Network), are measures for which Health Department programs are responsible for the performance of interventions that, over time, will improve health, as reflected in the population indicators (such as reduced smoking prevalence).

- **Vermont Environmental Public Health Tracking**
  Tracking brings together environmental and public health data to assist in researching possible health threats from environmental exposures such as air pollution and drinking water contaminants. Local, state, regional, and national data will be available through the Vermont Tracking Network. Funded by the Centers for Disease Control and Prevention as part of the [National Environmental Public Health Tracking Program](https://www.clarc.org), Vermont’s Tracking program also links to comparable information from other states and to national data.
Data Sources

- Surveys
- Registries and Surveillance Systems
- Claims and Discharge Data
- Regulatory and Licensing Data
## Adult Tobacco Survey (ATS)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>The Health Department, Division of Health Surveillance, oversees data collection and analysis. <a href="http://www.healthvermont.gov/stats/surveys/adult-tobacco-survey">http://www.healthvermont.gov/stats/surveys/adult-tobacco-survey</a></th>
<th><strong>Contacts</strong></th>
<th>Health Department’s Tobacco Analyst Erin Singer <a href="mailto:Erin.Singer@vermont.gov">Erin.Singer@vermont.gov</a> 802-865-7783</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>Request data through Erin Singer.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Frequency

As of 2008, survey conducted in even calendar years (see data years available).

Data is available for internal use in the Spring of the following year.

### Design

The Vermont Adult Tobacco Survey (VT ATS) is a random digit dial telephone survey conducted over an eight week period during the fall of the calendar year. The sample includes 2,000 respondents each year: 1,000 each of smokers and non-smokers regardless of telephone type. The survey takes approximately 15 minutes to complete. Data is weighted to be representative of the Vermont adult population.

### Population (Units)

Non-institutionalized Vermont residents ≥ 18 years old.

### Strengths

Ideal for evaluating the effectiveness of Vermont Tobacco Control Program efforts to reduce smoking and increase awareness and knowledge of smoking-related issues.

### Limitations

Several states conduct Adult Tobacco Surveys. However, the VT ATS is not part of a national survey and data should not be directly compared to that from other states.

Information is self-reported.

### Reports

- Adult Tobacco Survey Reports (includes full reports from 2007-2014 and select results from 2001-2005).
- Most recent report: [2016 VT ATS Report](#)
- Tobacco Data Pages
- Most recent is [2015 Tobacco Data Pages](#)

### Indicators for analysis

- Other tobacco product use: Smokeless tobacco, cigar products, and e-cigarettes
- Quit attempts and cessation methods among current and former smokers
- Awareness and utilization of 802Quits services
- Secondhand smoke exposure
- Media awareness and exposure
- Tobacco-related policy opinions
## Asthma Call Back Survey (ACBS)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>The Vermont Department of Health, Health Surveillance Division oversees data collection and cleaning.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contacts</strong></td>
<td>Maria Roemhildt, Ph.D. 802-951-4067 <a href="mailto:maria.roemhildt@vermont.gov">maria.roemhildt@vermont.gov</a></td>
</tr>
</tbody>
</table>
| **Data Years Available** | Data available 1990 to 2014 for adults and 2010 for children. (2011, 2013-2015 child data has been collected, but is not yet available because data is not weighted).  
*In 2009, started including both cellphone and landline phone surveys for adults.  
*In 2011, the method for weighting sample data changed—cannot aggregate data from multiple years between the pre 2011 and post 2011 data periods. |
| **Available Geographies** | Statewide |
| **Public Use Data Set** | No public use data set is available, though CDC does produce a series of tables which present state-level results for select outcome measures: [https://www.cdc.gov/asthma/acbs.htm](https://www.cdc.gov/asthma/acbs.htm) |

| **Frequency** | Survey is conducted on an annual basis as a follow-up to individuals reporting asthma on the BRFSS. It is conducted for adults and children. Data is generally available 4-8 months after BRFSS. |
| **Design** | If respondent, who has asthma, agrees to a follow-up call at the end of the Behavioral Risk Factor Surveillance System Survey (BRFSS) they will be called to participate in the ACBS. Parents that report a child in the household has asthma who agree to follow-up call participate in the child ACBS. |
| **Population (Units)** | VT Residents with Asthma |
| **Strengths** | Collects more details about residents with asthma including: Severity, control, medication use, risk factors, triggers, and preventative methods. |
| **Limitations** | We survey a sample of VT residents with asthma who completed BRFSS and agreed to follow-up calls then weight the data to estimate statewide values.  
Self-reported data, however collected over the long term it appears we are seeing that people are self-reporting information consistently. |
| **Reports** | Asthma Surveillance page:  
• Asthma data pages (published annually)  
• Data briefs (published quarterly) |

**Indicators for analysis**  
• Asthma control and severity  
• Preventive measures and exposure to environmental triggers  
• Medication use for control  
• Clinical service utilization  
Data can be linked back to all variables examined in the BRFSS
## Basic Screening Survey (BSS)

### Sponsors
The Vermont Department of Health’s Office of Oral Health. The BSS was developed by the Association of State and Territorial Dental Directors with technical assistance from CDC. Funding sponsors: CDC, Region I Office on Women’s Health, U.S. Department of Health and Human Services.

### Contacts
Denise Kall  
Oral Health Public Health Analyst  
Denise.Kall@vermont.gov  
802-863-7248

### Data Years Available
- **Children’s survey:** 2002-2017  
- **Nursing home survey:** 2014

### Public Use Data Set
Not available

### Frequency

**Children’s survey:** Conducted every 3-5 years. Analyses and reports are completed within a year of data collection.

**Nursing home survey:** Conducted every 3-5 years. Analyses and reports are completed within a year of data collection.

### Design

**Children’s survey:** Conducted in a sample of elementary schools including 750-2000 children. Dental screenings are conducted by dental hygienists to assess oral health status. Optional questionnaire also completed by some parents. Sample weights used to produce population estimates.

**Nursing home survey:** Conducted in a sample of nursing homes including about 350 nursing home residents. Dental screenings are conducted by dental hygienists to assess oral health status. Data were weighted to account for the complex sampling strategy.

**Children’s survey:** 2013-14 and 2016-17 screenings, included a sample of Kindergarten and 3rd graders. In previous years, children in grades 1, 2 & 3 were included.

**Nursing home survey:** The 2013-14 sample includes about 350 nursing home residents.

### Population (Units)

**Children’s survey:** Conducted in a sample of elementary schools including 750-2000 children. Dental screenings are conducted by dental hygienists to assess oral health status. Optional questionnaire also completed by some parents. Sample weights used to produce population estimates.

**Nursing home survey:** Conducted in a sample of nursing homes including about 350 nursing home residents. Dental screenings are conducted by dental hygienists to assess oral health status. Data were weighted to account for the complex sampling strategy.

**Children’s survey:** 2013-14 and 2016-17 screenings, included a sample of Kindergarten and 3rd graders. In previous years, children in grades 1, 2 & 3 were included.

**Nursing home survey:** The 2013-14 sample includes about 350 nursing home residents.

### Strengths

**Children’s survey:**  
- Most data are based on a dental screening.  
- Ideal for understanding the oral health status and dental treatment needs of Vermont elementary school children and nursing home residents.  
- Some data comparable to other states with similar methodologies.  
- Trend analysis.

**Nursing home survey:**  
- Data may underestimate the proportion of children & adults needing dental care because the survey does not include complete diagnostic dental examinations (no x-rays or advanced diagnostic tools).  
- Low and unrepresentative response rate on the questionnaire (children’s survey).  
- Grades included in the children’s survey vary slightly over time.

### Limitations

**Children’s survey:**  
- Data may underestimate the proportion of children & adults needing dental care because the survey does not include complete diagnostic dental examinations (no x-rays or advanced diagnostic tools).  
- Low and unrepresentative response rate on the questionnaire (children’s survey).  
- Grades included in the children’s survey vary slightly over time.

**Nursing home survey:**  
- Some data comparable to other states with similar methodologies.  
- Trend analysis.

### Reports

- *Keep Smiling Vermont: The Oral Health of Vermont’s Children*  
- *Keep Smiling Vermont: The Oral Health of Vermonters in Nursing Homes*  
- *Burden of Oral Disease in Vermont*  
- *Vermont Oral Health Plan*

### Indicators for analysis

**Children’s survey:**  
- Oral health status: decay experience (treated/untreated), need for dental care, dental sealants on permanent molar teeth  
- Demographic characteristics (grade, age, gender, race/ethnicity, participates in free or reduced lunch program)

**Nursing home survey:**  
- Oral health status: decay experience (treated/untreated), need for dental care, tooth loss, use of dentures, suspicious soft tissue lesions  
- Demographic characteristics (age, sex, race/ethnicity)
# Behavioral Risk Factor Surveillance System (BRFSS)

**Sponsors**

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

The Health Department oversees data collection and cleaning

**Contacts**

Jessie Hammond, M.P.H., Program Coordinator
802-863-7663
Jessie.hammond@Vermont.gov

**Data Years Available**

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1990-2016  | Data available 1990-2016
2009: started including cell phone and land line phone surveys for adults; cannot report combined measures that use both land line and cell phone sources until 2011 (had to be land line only).
2011: method for weighting sample data changed; cannot aggregate data from multiple years between the pre and post 2011 data periods. |

**Available Geographies**

- State
- County
- Health District
- Hospital Service Area

**Public Use Data Set**

U.S. file (with state indicator), includes core and optional modules: [https://www.cdc.gov/brfss/data_documentation/index.htm](https://www.cdc.gov/brfss/data_documentation/index.htm)

VT file with state-added questions available upon request

**Frequency**

Survey is conducted on an annual basis. Prior year data is available in July.

**Design**

- Random digit dialed telephone survey.
- Surveys are completed for a representative sample of the population.
- Information is then weighted with a raking procedure (2011-; post-stratification in 2010 and prior)

**Population (Units)**

Vermont residents 18+ (non-institutionalized adults, excludes group homes and prisons)

**Strengths**

- Ideal for looking at risk factors and prevalence of chronic conditions at a population level in Vermont.
- Well-established survey that allows us to look at trends over time. Data can be compared across states.

**Limitations**

- Not a census; a representative sample of surveys is weighted to represent the adult VT population. Information is self-reported.

**Reports**

- BRFSS annual report
- BRFSS District Office reports (bi-annual)
- BRFSS data briefs
- Annual Chronic Disease & Risk Factor Data Pages
- Burden documents (e.g., asthma)

**Indicators for analysis**

**Chronic Conditions:**
- Arthritis
- Asthma
- Cancer
- Cardiovascular Disease
- COPD
- Depression
- Diabetes
- High Cholesterol
- Hypertension
- Obesity
- Oral Health

**Preventive Measures:**
- Family Planning
- Immunizations
- Doctor Visits
- Screening
- Fruit & Vegetable Consumption
- Physical Activity

**Health Insurance /Access:**
- Quality of Life / Healthy Days
- Disability

**Risk Behaviors:**
- Substance Use
- Alcohol Consumption
- Marijuana Use
- Prescription Drug Misuse
- Seatbelt Use
- Sexual Violence
- Tobacco Use

**Demographics:**
- Employment / Occupation
- Education
- Income
- Age
- Gender
## Child Care Immunization Survey

| Sponsors | Data collection and management is overseen by the Department for Children and Families, Child Development Division in collaboration with the Health Department Immunization Program. Health Department District Office Immunization Designees provide local support. |
| Contacts | Karen Halverson  
802-951-1234  
karen.halverson@vermont.gov |
| Data Years Available | 2016  
Limited data for 2011-2015 |
| Available Geographies | State, town, licensed child care programs, able to roll up to county, health district and hospital service area |
| Public Use Data Set | The most recent data is available here: [http://www.healthvermont.gov/immunizations-infectious-disease/immunization/immunization-rates](http://www.healthvermont.gov/immunizations-infectious-disease/immunization/immunization-rates) under “Child Care– Annual Immunization Report” |

### Frequency

- **Collection** occurs annually in the fall.
- **Data** is available by May 1st of the following year.

### Design

- Online survey, open from October through December. All regulated child care programs complete this survey of aggregate immunization compliance data for all enrolled children. Report is required by Health Dept legislative rule, and as a condition of the license. Only data from licensed (not registered) programs is publicly posted.

### Population (Units)

- All children in regulated child care programs.

### Strengths

- Child care providers have access to the VT Immunization Registry to assess individual immunization records, strengthening the reliability of non-nurse reporters.

### Limitations

- Data is not validated.

### Reports

- [2016-2017 report](http://www.healthvermont.gov/immunizations-infectious-disease/immunization/immunization-rates): Detailed program specific data is also available for Health Department use from the Immunization Program.

### Indicators for analysis

- Immunizations
- Vaccines
- Vaccine preventable diseases
- Child Care
## College Health Survey

| Contacts | Kristen Murray, Ph.D. 802-863-7276 kristen.murray@vermont.gov |
| Data Years Available | 2014; 2016 Discontinued at this time |
| Available Geographies | Statewide |
| Public Use Data Set | Not available |
| Frequency | Design | Population (Units) | Strengths | Limitations | Reports |
| Conducted in 2014 and 2016. | Online survey administered to students enrolled in an Institute of Higher Learning Survey invites were emailed to students at participating institutions | College-age students enrolled in a Vermont Institute of Higher Learning (public or private) | Data can be compared to National Data (i.e. ACHA/NCHAA) Includes similar questions to the YRBS Optional Campus Climate and Sexual Violence Module (2016) | Not all Colleges or Universities elected to participate. Low student response rates; Concerns over students at greatest risk not being included | [2016 College Health Survey State Report](http://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/young-adult-and-college-health) |

### Indicators for analysis

| Substance Use: | Safety, IPV, and Sexual Violence: | Mental Health and Well-being: | Preventive Measures: | Demographics: |
| Tobacco Use | Campus Safety | Depression | Screening | Year in School |
| Alcohol Use | Policy awareness | Symptoms of Distress | Fruit & Vegetable Consumption | Age |
| Marijuana Use | Interpersonal Dating Violence | Diagnoses and Treatment | Physical Activity | Sex |
| Prescription Drug Use | Sexual assaults | Self-harm & Suicide | Obesity | Sexual orientation |
| Other Drug Use | Campus support | | | Gender |
| Reasons for Use | | | | Race |
| Impact and behaviors associated with use | | | | |
| Perceptions typical student substance use | | | | |
| Distracted driving | | | | |

### Subcategories

**Substance Use:**
- Tobacco Use
- Alcohol Use
- Marijuana Use
- Prescription Drug Use
- Other Drug Use
- Reasons for Use
- Impact and behaviors associated with use
- Perceptions typical student substance use
- Distracted driving

**Safety, IPV, and Sexual Violence:**
- Campus Safety
- Policy awareness
- Interpersonal Dating Violence
- Sexual assaults
- Campus support

**Mental Health and Well-being:**
- Depression
- Symptoms of Distress
- Diagnoses and Treatment
- Self-harm & Suicide

**Preventive Measures:**
- Screening
- Fruit & Vegetable Consumption
- Physical Activity
- Obesity

**Sexual Health**

**Impacts on Academic Success**
## College Immunization Survey

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Contacts</th>
</tr>
</thead>
</table>
| Data collection and management is overseen by the Health Department, Immunization Program. | Karen Halverson  
802-951-1234  
karen.halverson@vermont.gov |

<table>
<thead>
<tr>
<th>Data Years Available</th>
<th>Available Geographies</th>
</tr>
</thead>
</table>
| 2008 – 2016  
Limited data for 2001 - 2007 | State, colleges and universities |


<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| • Collection occurs annually during the fall semester.  
• Data is available by May 1st of the following year. | Online survey, open from November through December. Aggregate immunization compliance data completed by student health center or administrator. Report is required by legislative rule. | All new entering, fall semester, full time, undergraduate students. | A well established survey that’s useful for looking at trends in vaccination, and response to legislative requirements. Informative at the school and regional level in the event of vaccine preventable disease. | This report captures only a segment of the on campus population. Data is not validated. | 2016-17 report: 2016-2017 is the first year data has been posted online. Historic data is available from the Immunization Program |

<table>
<thead>
<tr>
<th>Indicators for analysis</th>
<th></th>
</tr>
</thead>
</table>
| Immunizations:  
• Tdap (Tetanus, Diphtheria, Pertussis)  
• MMR (Measles, Mumps, and Rubella)  
• Varicella (chickenpox)  
• Hepatitis B  
• Meningococcal Vaccines  
School health; college health  
Vaccine preventable diseases |
## Consumer Assessment of Healthcare Providers and Systems (CAHPS)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>Department of Vermont Health Access</th>
<th><strong>Contacts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Erin Carmichael&lt;br&gt;Department of Vermont Health Access&lt;br&gt;Quality Improvement Director&lt;br&gt;<a href="mailto:Erin.Carmichael@Vermont.gov">Erin.Carmichael@Vermont.gov</a>&lt;br&gt;802-241-0388</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Data Years Available</strong></th>
<th>2012-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available Geographies</strong></td>
<td>Statewide</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Public Use Data Set</strong></th>
<th>No.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The survey is conducted annually beginning in 2012.</td>
<td>Randomly selected patients (adults and children) receive a mailed survey from the Blueprint primary care practices in Vermont over a three month period. Patients are sent a letter and a copy of the survey twice and asked to return the survey mail. The only follow-up for completing the survey is the second mailing of the survey.</td>
<td>Patients in a primary care setting. Randomly selected patients that returned the paper survey. Patients could be either adult or youth patients at a participating clinic. A parent or guardian completed the survey if the randomly selected patient was under the age of 18.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
</table>
| Information on provider messaging and satisfaction with care among patients in a primary care setting. | Sampling Bias. Unweighted data. | - [Medicaid Experience of Care Scorecard](#)
- Relationship between Medical Home Recognition and Patient Experience Responses for the CAHPS® PCMH Survey. |

| **Indicators for analysis** | |
|----------------------------|• Access to care<br>• Communication between practice/provider and patient<br>• Self-management support<br>• Office staff<br>• Shared decision making among adult respondents<br>• Comprehensiveness (adults-questions about emotional and mental wellbeing, children-questions about injury prevention, growth, emotional stability, diet) |
## Health Care Workforce Census

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Department of Health, Health Surveillance, Research and Statistics; funded by the federal Health Resources &amp; Services Administration</th>
</tr>
</thead>
</table>
| Contacts                  | Moshe Braner  
802-865-7703 or 800-869-2871  
AHS.VDHPhysicianCensus@vermont.gov |
| Data Years Available      | Physicians (MD and DO)—1979, 1996-2014 (even years)  
Entists—1999-2015 (odd years)  
Physician Assistants—1998-2014 (even years)  
Beginning in 2015, the professions list has expanded to include all licensed healthcare professions. |
| Available Geographies     | Any grouping of townships, e.g., state, county, local health districts, hospital service areas. |
| Public Use Data Set       | Public use data sets can be requested through Moshe Braner. |

### Frequency
- Every two years at the time of the relicensing of each profession.
- Cleaned data available about a year after relicensing.

### Design
- All health care providers are required to fill in the census form as part of their relicensing.
- Questions include demographics, education, locations of practice, practice settings, specialties, hours and FTEs, and acceptance of new patients.

### Population (Units)
- Licensed health care providers who are actively serving Vermont patients.
- Residents and fellows are not included in the population of this survey, and neither are those newly licensed in the 3 months preceding the renewal deadline since they do not have to renew.
- Individuals that provide remote services (mostly radiologists and pathologists) for Vermonters from another state are included in the count of providers. However, their work time devoted to VT residents cannot be determined.

### Strengths
- Close to 100% response rate.
- Consistent questions over time allow trend analysis.

### Limitations
- Self-reported by providers, and not further verified.

### Reports
- The Health Care Workforce Census webpage lists reports for all health care professions.

### Indicators for analysis
- Health care providers: dentists, dental hygienists and assistants, mental health care providers, naturopathic physicians, nurses, pharmacists, pharmacy technicians, psychologists, physicians, physicians assistants, clinical social workers.
- Geographical distribution, shortage areas.
**Vermont Household Health Insurance Survey (HHIS)**

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>Web presence is in flux; moving to VDH. Prior to 2016 Department of Financial Regulation was responsible for overseeing VHHIS; Health Department is no responsible</th>
<th><strong>Contacts</strong></th>
<th>Jessie Hammond, M.P.H., Program Coordinator 802-863-7663 <a href="mailto:Jessie.hammond@Vermont.gov">Jessie.hammond@Vermont.gov</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>Upon request</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey is implemented periodically; recommendation on completion is given to legislature at least every 3 years. VDH has not yet administered this survey so data turn around time is unknown.</td>
<td>• Random digit dialed telephone survey  • Surveys are completed for a representative number of Vermont households  • Data are weighted using a raking procedure to represent Vermont population  • Person most knowledgeable about health insurance coverage and health care needs to answer for all household members</td>
<td>Vermont population</td>
<td>• Collects detailed information about health care coverage and access at a population level for Vermont  • Includes questions about medical, dental, and vision insurance.</td>
<td>• It is not a census; a representative sample of households is weighted to represent the entire population.  • Information is self-reported.  • Because one person responds for entire household it is possible information is incomplete for non-responding household members.</td>
<td><strong>Comprehensive Report</strong></td>
</tr>
</tbody>
</table>

| **Indicators for analysis** | • Health insurance coverage (including uninsured and underinsured);  • Health care access;  • Health literacy;  • Health care expenses | **Reports** | **Comprehensive Report** |

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**Data Encyclopedia, December 2017**

Vermont Department of Health
### Sponsors
Vermont PRAMS program in Division of Health Surveillance warehouse Vermont PRAMS data. Data are also securely released to CDC. Vermont PRAMS is funded by CDC and the Vermont Department of Health. Select indicators may be partially sponsored by partnering Departments or agencies.

### Data Years Available
Data available for 2001-2014 birth cohorts. Select indicators vary by phase (3-5 year periods between questionnaire revisions).

### Contacts
PRAMS Coordinator
John Davy
802-863-7661
john.davy@vermont.gov

### Available Geographies
State

### Public Use Data Set
Multi-state data may be requested through the CDC [http://www.cdc.gov/prams/researchers.htm](http://www.cdc.gov/prams/researchers.htm). Vermont data can be requested through the Vermont PRAMS coordinator.

### Frequency
- Data collected on an ongoing basis; analytic files updated per calendar year birth cohort.
- Data available after weighting, generally ≥18 months after a cohort’s last births.

### Design
Paper survey with phone follow-up. Includes select Birth Certificate fields. A questionnaire is mailed to a random sample of Vermont mothers 2-6 months after having a live birth in VT or NH. Drawn from birth certificate data, the sampling fraction is approximately 1 out of 5. Women with low birth weight infants (<2500g) are over-sampled. Data is weighted to be representative of the population.

### Population (Units)
Vermont resident mothers who have recently had a live birth.

### Strengths
- A linkage to the birth certificate means PRAMS builds upon existing information. PRAMS covers topics not available elsewhere: prenatal care content; e.g., smoking cessation strategies; drinking amount; breast-feeding support; intention of pregnancy and sensitive questions on drug use and domestic violence. Can be compared to other PRAMS sites (39 states & NYC for 2014 births)

### Limitations
- Only includes pregnancies resulting in a live birth.
- Self-reported data can tend to underreport certain health outcomes, though a certificate of confidentiality may improve the reporting of questions in sensitive areas.
- Smallest level of geography is state of Vermont.

### Reports

### Indicators for analysis
- Preconception health and family planning
- Prenatal care
- Alcohol, tobacco and drug use
- Stress and abuse
- Breastfeeding
- Sleep environment
- Dental Health
- Postpartum care
## School Health Profiles

| Sponsors | http://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/school-health-profiles The Health Department oversees data collection and cleaning |
| Contacts | Kristen Murray, PhD, Program Coordinator 802-863-7276 kristen.murray@vermont.gov |

### Data Years Available

**Data available 2014; 2016**
The most current data set available is 2016. Prior to 2014, data was collected by the agency of education.

### Available Geographies

State

### Public Use Data Set

U.S. Data is available [https://www.cdc.gov/healthyyouth/data/profiles/requestingfiles.htm](https://www.cdc.gov/healthyyouth/data/profiles/requestingfiles.htm)

### Frequency

Conducted biennially among middle and high school principals and lead health education teachers during the spring of even years.

### Design

The Profiles is a system of surveys collected from two separate self-administered questionnaires (one by the principal and one by the lead health educator(LHE))

### Population (Units)

Principal and LHE at all middle and high schools in Vermont schools.

### Strengths

- Conducted as a census in all public high and middle schools around the state.
- Weighted data is available.
- Data can be used for national comparisons.

### Limitations

Information is self-reported;

### Reports

- School Health Profiles
- State-wide Report
- Data Briefs and joint reports with YRBS

### Indicators for analysis

- School health education requirements and content
- Sexual health education
- Physical education
- School nutrition
- Physical activity
- School health coordination / School wellness teams
- Practices related to bullying and sexual harassment

- School-based health services
- Family engagement and community involvement
- School health policies related to tobacco, alcohol and other drug use prevention, nutrition
- LHE training, professional development, and experience
School Immunization Survey (aka Annual Immunization Status Report)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection and management is overseen by the Health Department, Immunization Program. Survey contractor is the University of MA Medical School. Health Department District Office School Liaisons provide local support.</td>
<td>Karen Halverson 802-951-1234 <a href="mailto:karen.halverson@vermont.gov">karen.halverson@vermont.gov</a></td>
</tr>
<tr>
<td><strong>Data Years Available</strong></td>
<td><strong>Available Geographies</strong></td>
</tr>
<tr>
<td>2010-2016 Limited data for 1989-2009</td>
<td>State, County, Supervisory Union, K – 12 Schools (Independent and Public); able to be roll up to health district and hospital service area</td>
</tr>
</tbody>
</table>

**Public Use Data Set**

**Frequency**
Collection occurs annually during the fall.
Data is available by May 1st of the following year.

**Design**
Online survey, open from October through December. All public schools complete this survey in addition to the VT School Nurse Report. All independent schools complete only this Immunization Status Report. Completed by the school nurse or administrator. Aggregate immunization compliance data by grade for all enrolled students. Report is required by legislative rule.

**Population (Units)**
All students in Kindergarten through 12th grade.

**Strengths**
Data for kindergarten and 7th grade is reported nationally to CDC for inclusion in the School Vaccination Coverage report. A well established survey that’s useful for looking at trends in vaccination, and response to legislative requirements. Useful at the school and regional level in the event of vaccine preventable disease.

**Limitations**
Grades K, 1, 7, and 8 include vaccine level detail for non-compliance (medical and religious exemption, provisional admission). Grades 2 – 6 and 9 – 12 include only grade level non-compliance data. Data is not validated.

**Indicators for analysis**

<table>
<thead>
<tr>
<th>Immunizations:</th>
<th>Vaccines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tdap (Tetanus, Diphtheria, Pertussis)</td>
<td>Vaccine preventable diseases</td>
</tr>
<tr>
<td>Polio</td>
<td>School health</td>
</tr>
<tr>
<td>MMR (Measles, Mumps, and Rubella)</td>
<td></td>
</tr>
<tr>
<td>Varicella (chickenpox)</td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td></td>
</tr>
</tbody>
</table>

**Reports**
- Detailed school specific data is also available for Health Department use from District Office School Liaisons or the Immunization Program
The Vermont School Nurse Report (VT SNR) is an annual survey conducted by school nurses in public schools throughout Vermont. Information is collected by self-report from parents/guardians on forms designed by the Vermont Department of Health. The data is compiled and aggregated by the survey vendor and submitted to the Division of Maternal and Child Health (MCH) at the Health Department.

### Sponsors

The Maternal and Child Health Division coordinates data collection and storage. School Liaisons in the Health Department District Offices act as local level support for questions related to the survey content and monitor for completion.

### Contacts

Program Contact:
Nathaniel Waite RN, BSN
Nathaniel.Waite@vermont.gov; 802-865-1399

Analyst:
Michael J. Kenny
Michael.Kenny@vermont.gov; 802-863-7383

### Data Years Available

Data is currently available for the 2007-08 school year through 2016-17 school year.

### Available Geographies

State, Health District, and Supervisory Union

### Public Use Data Set

Aggregate data may be requested through District Office School liaisons.

### Frequency

Information is collected annually by school nurses in public schools throughout Vermont.

### Design

- Self-report survey.
- Information is reported by parents/guardians to the school nurse. The data is collected using web-based survey software then it is compiled and aggregated by the survey vendor. A final report is submitted to the Division of Maternal and Child Health (MCH) at the Health Department and shared with the Health Department school liaison.

### Population (Units)

Children in school whose parents provide information to the school nurse.

### Strengths

- Information on access to health care and insurance coverage for all school age children (K-12). There is also information on a students’ asthma status and the presence of an asthma action plan at school.
- Some schools are using standardized question language provided by the Health Department on their forms for gathering data.
- Final report includes filterable data by Health Department District Office, Supervisory Union/School District, school, and grade.

### Limitations

This is a convenience sample; methods and collection materials vary at each school site.

### Reports

- Asthma Burden Report
- Healthy Vermonter Goals related to school age health and oral health

### Indicators for analysis

- Well-care visits
- Dental visits
- Insurance status
- Presence of an asthma action plan
- School electronic Health Record capability

Promotion of American Academy of Pediatrics’, *Bright Futures* recommendations for well-care visits.
# Young Adult Survey (YAS)

| **Sponsors** | Funded by federal discretionary grants to VDH from the Center for Substance Abuse Prevention (CSAP). The surveys are conducted by PIRE, the evaluation contractor for the Vermont SPF SIG and PFS/RPP grants. |
| **Contacts** | Lori Uerz (VDH): lori.uerz@vermont.gov; 802-652-4149  
Bob Flewelling (PIRE): flewelling@pire.org  
Amy Livingston (PIRE): amy.livingston@partner.vermont.gov |

| **Available Geographies** | State and County |

| **Public Use Data Set** | Not available |

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| Depends on the availability and requirements of the parent grants. The surveys have been conducted in 2008, 2010, 2014, 2016. Another administration is planned for 2018. Data is typically available in the fall of the year it was collected. | The YAS is an online survey hosted by PIRE for which young adult Vermont residents are recruited primarily through Facebook advertising. Drawings for cash awards are used as incentives. The age range for the 2008 and 2010 surveys was 18 to 29, and was 18 to 25 for the 2014 and 2016 surveys. | All Vermont residents in the target age range are eligible to participate. | • The survey provides uniformly collected data from young adults on substance use behaviors and perceptions across Vermont. Sample sizes allow for disaggregation to the county level (for most counties).  
• The data are weighted by age group, gender, and county to increase representativeness of the sample. Statewide prevalence estimates for key behaviors are generally similar to Vermont estimates provided by the National Survey on Drug Use and Health (NSDUH).  
• The recruitment methods and use of online data collection make this a very cost efficient strategy for collecting data from a traditionally hard to reach population. | Although the survey is open to all young adult residents of the state, the sample is self-selected, consisting of persons who are aware of the survey and choose to participate. Therefore it is not necessarily a representative sample. | • Vermont Young Adult Survey 2014: Statewide Summary  
• Included in RPP county-level data profiles and PFS Evaluation Summary found on ADAP website |

| **Indicators for analysis** | • Selected substance use behaviors (alcohol use, binge drinking, marijuana use, prescription drug misuse)  
• Perceived risk of harm from use of alcohol and other drugs  
• Underage access to alcohol  
• Open-ended comments regarding alcohol and other drugs |
### Youth Risk Behavior Survey (YRBS)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Contacts</th>
<th>Available Geographies</th>
</tr>
</thead>
</table>

| Data Years Available | Data available 1993-2015 | The most current data set available is 2015. Data collected between 1993 and 2009 included students in grades 8-12. In 2011, the YRBS expanded to include two separate surveys, one for middle school students (grades 6-8) and one for high school students (grades 9-12). |

| Public Use Data Set | The CDC provides access to state and national data sets in Access and ASCII formats. [https://www.cdc.gov/healthyyouth/data/yrbs/data.htm](https://www.cdc.gov/healthyyouth/data/yrbs/data.htm) In addition, data is available online at Youth Online [https://nccd.cdc.gov/Youthonline/App/Default.aspx](https://nccd.cdc.gov/Youthonline/App/Default.aspx). This interactive site allows users to focus on specific health topics, compare locations, or trends in data. |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| The survey is conducted in the spring of odd years at all public middle and high schools around the state. Data is available in late Fall / winter. | • Paper Survey administered to all middle and high school students during the school day.  
• It includes approximately 100 questions for HS and 70 questions for MS.  
• Data is processed and weighted by the CDC. | Middle and high school age students in Vermont schools. | • In Vermont, the YRBS is conducted as a census in all public high and middle schools around the state.  
• Weighted data is available at both a statewide and sub state level.  
• Data can be used for national comparisons. | It does not reach children who cannot complete the survey without help, do not attend school or who were absent the day the survey was administered. | • [YRBS Statewide Report](https://www.cdc.gov/healthyyouth/data/yrbs/data.htm)  
• Weighted YRBS Local Summary Reports (by [county](https://www.cdc.gov/healthyyouth/data/yrbs/data.htm) and by [school district](https://www.cdc.gov/healthyyouth/data/yrbs/data.htm))  
• [YRBS data briefs](https://www.cdc.gov/healthyyouth/data/yrbs/data.htm) (approximately 6 published each year) |

| Indicators for analysis | Risk Behaviors:  
• Tobacco Use  
• Alcohol Use  
• Marijuana Use  
• Prescription Drug Use  
• Other Drug Use  
• Perceptions of Use and Harm | Personal Safety and Violence:  
• Distracted driving  
• Helmet / Seatbelt Use  
• Sexual Behaviors  
• Bullying  
• Feeling Unsafe | Preventive Measures:  
• Interpersonal Dating Violence  
• Physical Violence  
• Fighting  
• Self-harm  
• Suicide | Demographics:  
• Grade  
• Age  
• Sex  
• Sexual orientation  
• Gender  
• Race |
## Vermont Advance Directives Registry (VADR)

| **Sponsors** | US Living Will Registry (contractor)  
|             | Vermont Ethics Network (Grantee)  
|             | Vermont Department of Health, Division of Health Surveillance |
| **Contacts** | Ashley Spencer  
|             | Ashley.spencer@Vermont.gov  
|             | 802-863-7251 |
| **Data Years Available** | 2007 – Present |
| **Available Geographies** | Reports are only produced at the state level, although town level information is collected |
| **Public Use Data Set** | Not Available |

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Data is available in real time.</td>
<td>Individuals interested in creating an advance directive complete and submit an advanced directive form and registration agreement. Once registered, providers are able to access the registry to view a patient’s wishes in an emergency</td>
<td>Vermonters (18 years or older) who have registered an advance directive.</td>
<td>Registry allows for medical providers to have quick access to Vermont resident advance directives in an emergency.</td>
<td>Only captures residents who have registered their advance directive with the registry.</td>
<td>Vermont Advance Directives Registrations Chart</td>
</tr>
</tbody>
</table>

| **Indicators for analysis** | While providers are able to access the contents of individual advance directives, the Health Department only tracks the number of registrants. |
### Vermont Department of Health, Environmental Health & Health Surveillance, Vermont Birth Information Network (BIN)

**Sponsors**


**Contacts**

Brennan Martin

Brennan.Martin@vermont.gov

(802) 863-7611

**Data Years Available**

Complete data available 2006 through 2014 (as of June 2017).

**Available Geographies**

State, County, and County Town Code

**Public Use Data Set**

Not Available

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<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data are entered on a regular basis, as data are reported and quality assurance is performed. New data is available in June for a five year period ending three years earlier. (Ex. In June of 2017, 2010-2014 data became available).</td>
<td>The BIN uses multiple data sources to identify potential cases and then conducts follow up to confirm or rule out those cases. Originally, it relied predominantly on four data sources: Medicaid claims, reports from Vermont hospitals and physicians, vital records, and records from the Children with Special Health Needs program (CSHN). Since 2011, it has also made use of the &quot;Vermont Healthcare Claims Uniform Reporting and Evaluation System&quot; (VHCURES), an All Payers claims dataset</td>
<td>Currently, the BIN collects information about Vermont-resident children diagnosed in the first year of life with one or more of 47 structural and chromosomal birth defects, 29 metabolic and endocrine conditions, congenital hearing loss, and very low birth weight (infant born with a birth weight less than 1500 grams).</td>
<td>The BIN conducts statewide, population-level passive surveillance using many data sources that is enhanced by rigorous active follow up of all provisional cases.</td>
<td>Small numbers for some conditions mean some prevalence data require suppression, especially when presenting the data broken down by county or other sub-state geographies. Also, it is believed that case ascertainment and follow up is hampered by the BIN’s lack of authority to request records from care providers outside of Vermont.</td>
<td>• Contributions to the National Birth Defect Prevention Network (NBDPN) Annual Report • Data Briefs • Dynamic Prevalence Maps</td>
</tr>
</tbody>
</table>

**Indicators for analysis**


- Demographic factors (age, sex, race/ethnicity, residence)
- Condition type
- Prevalence and yearly trends
- Mortality
- Very low birth weight
# Vermont Cancer Registry (VCR)

|----------|--------------------------------------------------------------------------------|
| Contacts | Jennifer Kachajian  
Jennifer.Kachajian@vermont.gov  
802-651-1977 |
| Data Years Available | Complete data available 1994 through 2014. |
| Available Geographies | State, County, Sub-County, Hospital Service Area and Health District (anticipated with 2015 diagnosis year and will be available during the 2018 calendar year). |
| Public Use Data Set | Data should be requested from the Public Health Analyst of the Vermont Cancer Registry at the Vermont Department of Health. Incidence Maps and Data can be found at: http://www.healthvermont.gov/wellness/cancer. |

## Frequency
- Data are entered on a regular basis, as data are reported and quality assurance is performed.

Each new data year usually becomes available in June, after national comparison data have been published. The dataset is population-based and becomes available 30 months after the close of each diagnosis year.

## Design
- This is a registry. A case must be reported within 180 days of diagnosis by VT healthcare facility or provider. Other states’ cancer registries have 18 months after the end of the diagnosis year to report the occurrence of cancer among Vermonters that were diagnosed or treated out-of-state.

## Population (Units)
- Any Vermonter with an in situ or malignant cancer diagnosis or benign brain tumor.

## Strengths
- All cancer and benign brain tumor diagnoses among Vermonters. Vital status is updated through linkages with Vermont Vital Statistics System and National Death Index. VCR data meet or exceed all national standards for fitness for use.

## Limitations
- Lag in reporting by 30 months, no data prior to 1994, and small numbers for some cancers mean some incidence data require suppression.

## Reports
- Vermont State Cancer Plan and Status Report
- Age-Adjusted Incidence and Mortality Tables
- Cancer Data Pages
- County Fact Sheets
- Data Briefs (Obesity Associated Cancers, Tobacco Associated Cancers, 3-4-50, Colorectal, Breast, Melanoma)
- Dynamic Incidence Maps
- Environmental Public Health Tracking

## Indicators for analysis
- Demographic factors (age, sex, race/ethnicity, residence)
- Primary payer
- Previous cancer diagnosis
- Diagnostic info (primary site, laterality, histology, behavior, grade, Diagnostic confirmation, LN ex/Pos, staging)
- Treatment info (earliest date and most definitive type of each modality)
- Incidence and yearly trends
- Mortality
- Survival
# Vermont Clinical Registry

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Data should be requested from the Blueprint program at the Vermont Department of Health Access.</th>
</tr>
</thead>
</table>
| Contacts | Tim Tremblay  
Timothy.tremblay@vermont.gov  
802-654-8923 |
| Data Years Available | Data collection began at varying times for different sites. More information about this data source will be determined as data is shared with programs at the health department. The most current year of data available is calendar year 2014. Additional data is also available through August 31, 2015. |
| Available Geographies | Statewide and Hospital Service Area (HSA) |
| Public Use Data Set | Not Available |

## Frequency
This data is collected as a registry. Some information is transmitted in real time to the registry platform; other data is manually entered on a daily basis.

## Design
DocSite is a clinical registry. Clinical data from various primary care practice electronic health records (EHRs) is compiled into one database. Data is also manually entered by Blueprint program users. Data includes: clinical encounter information, labs, visits with the community health team, tobacco cessation program, and SASH, and participation in self-management workshops.

## Population (Units)
Individuals receiving care from participating providers and/or engaged with various community resources (Blueprint’s self-management workshops, working with Blueprint’s community health teams, SASH, and tobacco cessation counselors).

## Strengths
When fully populated, eliminates the need for time consuming clinical chart reviews from each practice’s EHRs. The Blueprint uses a full extract for analytic purposes, linking it to the claims data in VHCUREs via its analytics vendor, Onpoint Health Data, and publishing results in practice- and HSA-level profiles. Full access to the extract itself is not currently available to other entities.

## Limitations
Currently offline. Blueprint working on restoring registry access. Contracts not yet executed.

## Reports
- Vermont Health Service Area (HSA) Profile Reports
- Blueprint for Health Annual Reports

## Indicators for analysis
Clinical indicators of health for patients such as:
- HBA1C
- Blood pressure
- BMI
## Vermont Cyanobacteria Monitoring Data and Tracker

### Sponsors
- Vermont Department of Health, Environmental Health (VDH)
- Vermont Department of Environmental Conservation (DEC)
- Lake Champlain Committee (LCC)

### Contacts
Bridget O’Brien
802-951-0114
bridget.obrien@Vermont.gov

### Data Years Available
2012 - current

### Available Geographies
Lake Champlain and Vermont inland lakes where cyanobacteria has been monitored or reported

### Public Use Data Set

Data maps for the current and previous years are housed on this page. The underlying data can be accessed for each of the summary maps.

### Frequency
Data is added to the current year’s map and database as the Health Department receives reports of cyanobacteria. Summary maps and underlying data processed and made available in the spring each year.

### Design
Volunteer monitors and some state staff are trained by the Lake Champlain Committee and the Vermont Department of Environmental Conservation to identify cyanobacteria. Volunteers make weekly observations of a site on a water body, and submit a report through the online tracker with pictures. Reports are reviewed and approved by DEC, VDH, or LCC. Reports received from the general public are also included if confirmed through pictures. At some sites, volunteers or staff take water samples that are then analyzed for cyanobacteria taxa and toxins.

### Population (Units)
Cyanobacteria presence is expressed on the tracker as Generally Safe, Low Alert, or High Alert.

### Strengths
- Allows the public to see where cyanobacteria have been reported or where their absence was noted.
- Indicates locations that have frequently had blooms in the past.
- Other states with monitoring programs do not record the absence of cyanobacteria.

### Limitations
- Grant funded.
- Volunteer based.
- Not all locations are monitored.
- Locations are often only monitored once per week.
- Cyanobacteria conditions can change rapidly, so the tracker cannot give real-time conditions of cyanobacteria at recreational locations.
- Information is only included when blooms are reported.
- Comparing data from year to year is difficult due to changing sites.
- Photographing cyanobacteria can be difficult with glare, etc.

### Reports
DEC Produces an annual report using this data:

### Indicators for analysis
- Lake; Region of Lake Champlain; Water temperature; Date of bloom; Alert Level; Reports type; Toxin levels; Cyanobacteria taxa
### Early Aberration Reporting System

| **Sponsors** | Data is maintained and tracked by an epidemiologist in the Infectious Disease Section. |
| **Contacts** | Veronica Fialkowski  
802-951-4063  
veronica.fialkowski@vermont.gov  
Jennifer Pistole  
802-865-7782  
jennifer.pistole@vermont.gov |
| **Data Years Available** | 2003-2017 (YTD) |
| **Available Geographies** | State, County, Hospital |
| **Public Use Data Set** | Not Available |

### Frequency
- Data is updated daily, 7 days a week

### Design
- Designed to capture and analyze recent Emergency Department visit data for trends and signals of abnormal activity that may indicate the occurrence of events significant to public health (e.g. outbreaks, unusual illnesses)

### Population (Units)
- All Individual Emergency Department visits from participating Vermont hospitals (UVMMC [stopped in 2016], CVH, Copley, BMH, NCH, SVMC)

### Strengths
- Provides very fast data (within 24 hours) on Emergency Department visit activity at half of Vermont hospitals. Covers roughly 75-80% of ED beds in state.
- No missing data, there is 100% reporting from all participating hospitals. For some hospitals, data goes back to 2003.

### Limitations
- EARS system is old and unsupported by its original sponsor, CDC. Is not capable of handling new generation syndromic messaging formats (HL7) that the healthcare industry is widely adopting.
- Not all Vermont hospitals participate.

### Indicators for analysis
- Emergency Department visit date and hospital name
- Patient age, gender, town and state
- Chief complaint, diagnosis, disposition

### Reports
- Flu surveillance data on Vermont Department of Health webpage
**Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE)**

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Data is analyzed by VDH infectious disease epidemiologists. The National Syndromic Surveillance Program (NSSP) provides the BioSense technical platform.</th>
</tr>
</thead>
</table>

| Contacts | Veronica Fialkowski  
802-951-4063  
veronica.fialkowski@vermont.gov  
Jennifer Pistole  
802-865-7782  
jennifer.pistole@vermont.gov |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

<table>
<thead>
<tr>
<th>Data Years Available</th>
<th>2017 (YTD)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Available Geographies</th>
<th>State, County, Hospital, City, Zip</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Public Use Data Set</th>
<th>Not Available</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>The system is updated daily and sometimes hourly.</td>
<td>Designed to capture and analyze recent Emergency Department visit data for trends and signals of abnormal activity that may indicate the occurrence of events significant to public health (e.g. outbreaks, unusual illnesses)</td>
<td>All individual Emergency Department visits from participating hospitals and one urgent care clinic in Vermont, except for North Country Hospital.</td>
<td>Provides timely data on disease activity at Vermont hospitals. Can detect unusual health events before traditional diagnostic methods. Cloud-based program that can be accessed from anywhere.</td>
<td>North Country Hospital is not yet participating. Discharge data takes a few weeks to update into the system.</td>
<td>None.</td>
</tr>
</tbody>
</table>

| Indicators for analysis | • Emergency Department visit date and hospital name  
• Number of ED visits for a given chief complaint or diagnosis  
• Patient age, gender, location, race, ethnicity |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
### End of Life Care (Act 39) Tracking System

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>Public Health Statistics Section – Richard H. McCoy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contacts</strong></td>
<td>Richard H. McCoy</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:richard.mccoy@vermont.gov">richard.mccoy@vermont.gov</a></td>
</tr>
<tr>
<td></td>
<td>802-651-1862</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Data Years Available</strong></th>
<th>2015 - current</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available Geographies</strong></td>
<td>State</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Public Use Data Set</strong></th>
<th>Not Available (prohibited by statute)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Physicians and patients submit the End of Life Care forms as they are completed. Statute requires certain forms to be filed within a specific number of days, depending on date of prescription and date of death.</td>
<td>• The End of Life Care (Act 39) Tracking System is technically not a registry or census. It is a repository of forms and a subset of electronic data from the forms. • The forms are stored in binders in Room 306 in the Public Health Statistics Chief’s office. The information is data entered into an Excel spreadsheet for purposes of tracking, monitoring and collecting statistics.</td>
<td>• Patients that meet the criteria defined in Act 39 and who complete one or more of the forms required by statutes and rules. • The physicians overseeing care and responsible for submitting three of the four total forms are listed, along with the patient, in the Excel tracking data.</td>
<td>• Detailed tracking of all patients who complete the entire process (all 4 forms). • Matching against death records to ensure accuracy and compliance with statutes and rules.</td>
<td>• Incomplete. It does not contain all cases in which a patient may start the process, but not complete. A patient may start the process with primary care physician (first form), but not proceed further. In some cases, the forms are not submitted to our office. • Therefore, this is only a complete picture of patients who fully meet the Act 39 requirements (submission of all 4 forms / finish the process).</td>
<td>• There are no internal or external reports. • Statute gives authority for VDH to consider producing a report. Discussions have not been initiated on the topic. • The only data that is currently provided is Total Number of Events Meeting the Requirements of Act 39.</td>
</tr>
</tbody>
</table>

| **Indicators for analysis** | No indicators are available for use. Only the aggregate (total) number of events, and by year, that meet the requirements of Act 39 is released. |
# Enhanced HIV/AIDS Reporting System (eHARS)

| **Sponsors** | HIV/STD/Hepatitis Program  
Funding through Centers for Disease Control and Prevention; National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention; Division of HIV/AIDS Prevention; Quantitative Sciences and Data Management Branch |
| **Contacts** | Roy Belcher  
802-863-7572  
roy.belcher@Vermont.gov |
| **Data Years Available** | Complete data available 1983 through CY 2016  
No gaps |
| **Available Geographies** | State, County, Health District, Hospital Service Area |
| **Public Use Data Set** | Not Available |

| **Frequency** | Design  
HIV is a reportable disease, as is AIDS. HIV viral load measurements (including non-detectable results) are reportable as are all CD4 counts under 200. eHARS archives case report forms and lab results. |
| **Population (Units)** | Any person who is a resident of Vermont, was diagnosed in Vermont or receiving care in Vermont for HIV or AIDS. |
| **Strengths** | All HIV/AIDS diagnoses among people who were either initially diagnosed in Vermont or are receiving their medical care in Vermont as well as health information regarding all viral loads and CD4 counts under 200. |
| **Limitations** | Lag in reporting when lab results are received without case report forms and therefore cannot be added to the system. Approximately 200 individuals with labs who are not in eHARS. |
| **Reports** |  
• [Vermont HIV Annual Reports](#)  
• [Integrated Epidemiologic Profiles for HIV/AIDS Prevention and Care Planning](#) |

**Indicators for analysis**  
• Demographic factors (age, sex, race/ethnicity, residence)  
• Diagnostic and treatment info (earliest date, residence, provider, facility, continuation of care)
### EvaluationWeb

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>The data system is maintained by Luther Consulting, a contractor of the CDC, and locally maintained by the Department of Health, Division of Health Surveillance, HIV/STD/Hepatitis unit of the Infectious Disease Section.</th>
</tr>
</thead>
</table>
| Contacts          | Daniel Daltry  
802-863-7305  
Daniel.daltry@Vermont.gov |
| Data Years Available | HIV Testing Data is available from 2008 through the present. HIV Prevention Intervention Client Level and Aggregate Level data is available from 2013 through the present. The database is updated as data is received in real time. |
| Available Geographies | State, County, Health District, Hospital Service Area |
| Public Use Data Set | Not Available |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| HIV Testing data is entered within 72 hours of intervention completion by grantees with EvaluationWeb approval, or after the forms are received at the health department on a monthly basis. Data is available to the CDC immediately, but is pulled biannually. | Captures National HIV Prevention Program Monitoring and Evaluation (NHME) HIV testing data. CDC requires the collection of client-level, session-level and aggregate level variables on all implemented activities, including HIV Testing and other HIV Prevention interventions. | • Any person who accesses anonymous Counseling, Testing and Referral services.  
• Any person who completes at least one session of an HIV prevention intervention. | • Provides data in real time upon entry.  
• Integrated data analysis program (Reflexx) allows for easy data extraction and analysis.  
• Web-based interface allows for multiple approved users to utilize at any time. | Not all program staff are e-authenticated to allow for access to the data reporting sections of the program. This means there may be a lag in time between when activities occur and when they are entered. | Summary Reports, grant proposals |

| Indicators for analysis | • Demographic factors (age, sex, race/ethnicity, residence, risk factors for HIV infection)  
• Diagnostic and treatment info (HIV testing earliest date, residence, provider, facility, continuation of care) |

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**Data Encyclopedia, December 2017**  
**Vermont Department of Health**  
**Registries and Surveillance Systems**
### Data Encyclopedia

**Healthy Homes and Lead Poisoning Prevention Surveillance Data (HHLPPS Data)**

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>The Healthy Homes Lead Poisoning Prevention Program warehouses the database.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Matthew Bradstreet, Healthy Homes Program Chief 802-863-7388 <a href="mailto:Matthew.Bradstreet@Vermont.gov">Matthew.Bradstreet@Vermont.gov</a></td>
</tr>
<tr>
<td>Data Years Available</td>
<td>~1993 to present.</td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, County, Hospital Service Area, Health District</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

#### Frequency

- Data is added to the database as information is reported by providers and laboratories in Vermont.
- Prior year data is available at the end of February.

#### Design

- Any lab completing a blood lead test is required to report to the system (a 1032 database). Blood leads are sent in many formats by all laboratories and providers that performed a test. All capillary tests that are above the acceptable level, are required by statute to be followed up with a venous blood level test.

#### Population (Units)

- Children who have been tested for blood lead in Vermont and residents tested out of state (up age 16). This includes Vermonters and those from out-of-state who had the blood lead test performed by a Vermont provider or laboratory.

#### Strengths

- Database includes results from all laboratories and providers that completed a lead test.

#### Limitations

- Relies on older database architecture.

#### Reports

- Environmental Public Health Tracking: Childhood lead poisoning [http://www.healthvermont.gov/tracking](http://www.healthvermont.gov/tracking)

#### Indicators for analysis

- Blood Lead Levels
- Child’s age at test
- Confirmation and re-testing rates
- District office testing vs. Provider testing
- Town of Residence and/or VDH district.

- Among Children who have a blood lead level ≥5mg/dL or greater and who have had a visit from the case manager:
  - Age of property
  - Rental or owned property
**Vermont Immunization Registry (IMR)**

| Sponsors | Vermont Department of Health, Division of Health Surveillance, Public Health Statistics Section. Funded via grant to the Immunization Program at VDH by the Centers for Disease Control. |
| Contacts | Bridget Ahrens 802-951-4094 Bridget.Ahrens@Vermont.gov |
| Data Years Available | Data 1996 to current is more consistently complete. |
| Available Geographies | State, County, Health District, Hospital Service Area, Medical Practice. |
| Public Use Data Set | Individuals may request their own immunization records, but must provide photo identification. |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since it is a registry, data is updated on an ongoing basis. Data is updated at slightly different time intervals depending on how a site delivers its data. As of June 2017, 86% of primary practice sites in Vermont were sending or entering immunizations within 7 days of administration.</td>
<td>Data is collected as a registry from 3 sources: (1) direct transmission of data from an electronic medical record (2) data is provided via monthly batch feed into the system, (3) direct data entry. Most Health Insurers and many pharmacies also report data via a monthly import.</td>
<td>All persons born in VT since 1909 have a record in the registry. Any individual that has had a vaccine in a VT hospital or provider practice and, persons with a Vermont address who received an immunization at Dartmouth Hitchcock Medical Center in NH also have Registry records.</td>
<td>Helps providers assess which immunizations have already been received, preventing unnecessary immunizations and saving medical costs. Provides easy access to printable, consolidated immunization records needed for school, work, etc. Allows school nurses to access immunization data directly. Allows doctors to assess their own immunization practices and assess vaccine coverage. Provides state and county level data for planning and evaluation, and for outreach to underserved areas.</td>
<td>Data on vaccinations prior to 1996 may be incomplete.</td>
<td>• NCQA assessments • Healthy Vermonters 2020 • IISAR-Annual Report (CDC.gov) • Immunization Goal Tracker • Data briefs • Quarterly updates to medical practices</td>
</tr>
</tbody>
</table>

| Indicators for analysis | Vaccination date and type • Lot numbers • Vaccines accepted in the IMR: [http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx](http://www2a.cdc.gov/vaccines/iis/iisstandards/vaccines.asp?rpt=cvx) |
# Infectious Disease Outbreak Database

| Sponsors | Data is maintained and tracked by an epidemiologist in the Infectious Disease Section of the Health Department. | Contacts | Veronica Fialkowski  
802-951-4063  
veronica.fialkowski@vermont.gov |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Years Available</td>
<td>1999-2017 (YTD)</td>
<td>Available Geographies</td>
<td>State, County, Hospital, City</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Not Available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Frequency
Database is updated monthly.

## Design
- Designed to capture descriptive information of infectious disease outbreaks that have occurred in Vermont or that involve Vermonters.

## Population (Units)
Aggregate numbers of VT residents who are ill due to an outbreak.

## Strengths
- Provides quick access to historic outbreak data.
- Allows quick extraction of data elements for grant reporting.

## Limitations
- Relies on archaic software.
- Captures basic information on each outbreak, sometimes lacks in-depth information that is part of more complicated outbreak investigations.

## Reports
- Epidemiology and Laboratory Capacity reports
- Emergency Preparedness grant reports
- HAI Grant reports

## Indicators for analysis
- Number exposed, ill, sent to doctor/ER, hospitalized, dead
- Location of outbreak, setting of outbreak
- Causative agent
- Mode of transmission
- Date outbreak started
- Lead investigator
- Healthcare Acquired Infections (HAI)
### Ladies First Data Management System (Med-IT)

#### Sponsors
Vermont Department of Health, Health Promotion and Disease Prevention, Ladies First Program
Funded by two CDC grants:
- National Breast and Cervical Cancer Early Detection Program (NBCCEDP)
- Well-Integrated Screening and Evaluation for Women Across the Nation Program (WISEWOMAN)

#### Contacts
**Analyst:** Matt Maiberger 865-7758; Matthew.Maiberger@Vermont.gov
**Program:** Nancy Kaplan 951-0007; Nancy.Kaplan@Vermont.gov

#### Data Years Available
- Breast and Cervical Screening Results: 1995 – Present
- Heart Health Screening Results: 2014 - Present

#### Available Geographies
State, County and Town of Residence

#### Public Use Data Set
Not Available

### Frequency
Data is collected on an ongoing basis.

### Design
Designed to meet the Minimum Data Elements (MDE) grant reporting requirements. Data is collected in the form of enrollment applications completed by the members and provider reports completed by the provider and used to report clinical results paid for by the program.

### Population (Units)
Women who have completed an application and found to be eligible for the program. Eligibility Requirements:
- Female
- VT Resident
- Age 21 or older
- Household income ≤ 250% FPL

### Strengths
Primarily used for program monitoring, evaluation, administration and for grant reporting.

### Limitations
- Only includes data for women electing to enroll in Ladies First.
- May not include screening results for services paid for by Medicaid or private insurer.
- MDE data is reported to both grants bi-annually.
- VT and National NBCCEDP Data: [https://www.cdc.gov/cancer/nbccedp/data/summaries/](https://www.cdc.gov/cancer/nbccedp/data/summaries/)

### Indicators for analysis
- Low-income women
- Breast Cancer Screening
- Cervical Cancer Screening
- Heart Health Screening
## Maternal Early Childhood Sustained Home-Visiting Program Database (MESCH)

| Sponsors | Program funded by Children’s Integrated Services/ Child Development Division  
| Data is housed with VDH | Contacts | Lorna Corbett  
| 802-917-4877; lorna.corbett@vermont.gov  
| Jessica Schiller  
| 802-241-0153; jessica.schiller@vermont.gov |

| Data Years Available | Aug 2015 to present | Available Geographies | State |

| Public Use Data Set | Not Available |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| Data are added to the database +/- continuously in real-time. | Information collected about home visiting services provided by regional agencies using the Maternal Early Childhood Sustained Home-Visiting Program evidence-based model. Includes demographic data on participants, home visits, health screenings and referrals provided, and selective outcome data. | Program serves low income, families resident in Vermont, with pregnant mothers up to two years postpartum. | Database designed to meet model developers’ annual fidelity reporting requirements, and to produce Vermont statewide home visiting performance measures. Data also used for program management and oversight, and for continuous quality improvement. | Limited data set, small numbers. | • Annual fidelity reports to MESCH  
• Annual Vermont statewide home visiting performance report required under VT Act 66 (2013)  
• Quarterly enrollment report to the Home-Visiting Alliance group. |

| Indicators for analysis | • Maternal and child demographics  
• Frequency and duration of home visiting services  
• Screening data (ASQ-3; ASQ-SE; vision, hearing and child physical health and development)  
• Satisfaction surveys, Patient Enablement Instrument and Parent Satisfaction Questionnaire  
• Referrals to government and community services; service utilization  
• Breastfeeding initiation and duration; immunization |
### Sponsors
The Office of the Chief Medical Examiner oversees data collection, cleaning, and dissemination. [http://www.healthvermont.gov/systems/medical-examiner](http://www.healthvermont.gov/systems/medical-examiner)

### Contacts
Allison Verbyla MPH
Public Health Analyst II
802.951.1211
802.863.7320
Allison.Verbyla@Vermont.gov

### Data Years Available
2015-2016

### Available Geographies
State, County

### Public Use Data Set
Not Available

### Frequency
The data is collected and updated on a continuous basis. An aggregate form of national data is made available by the Consumer Product Safety Commission (CPSC) typically in June of the following year.

### Design
MECAP is used to gather timely information on deaths that involve consumer products. The intent is to identify potentially hazardous or dangerous products. Data is collected from autopsy reports from the Chief Medical Examiner and other medical examiners in the state. Potential MECAP cases are individually reviewed by the analyst and Chief Medical Examiner before they are reported to CPSC.

### Population (Units)
Unintentional consumer product-related deaths make up the data set. Patients will be of all ages and can be a Vermont resident or an out-of-state resident who died in Vermont. Unintentional types of deaths include poisoning, drowning, electric shock, inhalation, burns, falls, and asphyxiation.

### Strengths
Collecting and analyzing this data can keep people safe from unnecessary potential harms. CPSC looks into remedial action for certain hazardous products. CPSC will prepare hazard reports for these products and alert the public to their potential dangers.

### Limitations
The reports can sometimes fail to identify the consumer product that was involved, and so actual incidences of consumer product deaths can be higher than what is reported. Cases may not have a witness to provide necessary details to prove causality.

### Reports
MECAP individual case reports are written monthly. All definitive cases are reported annually to the CPSC. CPSC collects mortality data from each state. CPSC publishes an annual report based on national data. [https://www.cpsc.gov/About-CPSC/Agency-Reports/Annual-Reports](https://www.cpsc.gov/About-CPSC/Agency-Reports/Annual-Reports)

### Indicators for analysis
Manner of death is accidental and product involved has not been proven to be excluded previously. Case definition does not include:
- Motor vehicles licensed to operate on public roads
- Firearms (except air rifles and BB guns)
- Foods, cosmetics and medical devices
- Boats, life jackets, and other boating equipment, Aircraft, hang-gliders, and ultra-lights
- Products only used in industrial or commercial environments; Hospital/nursing home beds
### Vermont Medication Assistance Program (VMAP) Access Database and CAREWare

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>The Department of Health HIV/STD/Hepatitis Program maintains the data and funding is provided by Health Resources and Services Administration (HRSA), HIV/AIDS Bureau, Ryan White Care Act</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contacts</strong></td>
<td>Erin LaRose 802-863-7244 <a href="mailto:erin.larose@Vermont.gov">erin.larose@Vermont.gov</a></td>
</tr>
<tr>
<td><strong>Data Years Available</strong></td>
<td>2000-current</td>
</tr>
<tr>
<td><strong>Available Geographies</strong></td>
<td>State, County, Health District, Hospital Service Area</td>
</tr>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

### Frequency
- Database is updated as new information comes in; quarterly; and semi-annually. Data is uploaded to HRSA both quarterly and annually.
- Data is uploaded to HRSA both quarterly and annually.

### Design
- Eligibility, demographic and service provision information.

### Population (Units)
- Vermont residents diagnosed with HIV/AIDS and with a FPL of 500% or less.

### Strengths
- All HIV/AIDS service information in Vermont. (outpatient ambulatory, medical nutrition therapy, mental health, medical case management, dental, medication adherence)
- Data in CAREWare is not ‘real-time’; Provider Data Import is received semi-annually.

### Limitations
- Data in CAREWare is not ‘real-time’; Provider Data Import is received semi-annually.

### Reports
- Integrated Epidemiologic Profiles for HIV/AIDS Prevention and Care Planning
- Ryan White Services Report (RSR)
- Ryan White Data Report (RDR)
- Provider Data Import (PDI)
- Comprehensive Integrated Plan for HIV Services and Prevention and Statewide Coordinated Statement of Need (SCSN).

### Indicators for analysis
- Demographic factors (age, sex, race/ethnicity, residence) for people receiving a care service listed above [strengths]
- Medication Adherence info for Treatment Cascade
- Service information related to outpatient ambulatory, medical nutrition therapy, mental health, medical case management, dental, medication adherence.
### National Electronic Disease Surveillance System (NEDSS) aka NEDSS Base System (NBS)

| **Sponsors** | Data is maintained and tracked by an epidemiologist in the Infectious Disease Section. | **Contacts** | Veronica Fialkowski  
802-951-4063; veronica.fialkowski@vermont.gov  
Jennifer Pistole  
802-865-7782; jennifer.pistole@vermont.gov |
<table>
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<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Data Years Available</strong></td>
<td>2006-2017 (YTD)</td>
<td><strong>Available Geographies</strong></td>
<td>State, County, City, Zip</td>
</tr>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>No; aggregate data posted online or provided by request</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Frequency** | The system is updated daily as disease reports are received from health care providers and laboratories. | **Design** | The data are organized by unique occurrences of a reportable disease. Thus individuals could be in the database multiple times due to a diagnosis of different reportable diseases or due to a re-occurrence of the same reportable disease. This system is used by PHNs in District Offices and transmits data electronically to CDC. |
| **Population (Units)** | Every instance of a reportable disease diagnosed in Vermont. Occurrences in Vermont are represented in this data set (VT residents and out-of-state residents diagnosed in VT). We also receive data on VT residents diagnosed with reportable diseases in other states. | **Strengths** | • It is a complete surveillance database of all reportable diseases.  
• Allows for analysis of trends over time.  
• Analysis can be performed by individual or by disease occurrence. |
| **Limitations** | • Some VT residents who are diagnosed out of state may not be reported to VDH.  
• Data quality varies due to many different staff entering in data. |
| **Reports** | CDC’s Morbidity and Mortality Weekly Report (MMWR) summarizes national reportable disease data, including VT data. |

**Indicators for analysis**
- Demographic factors (age, sex, race)
- Disease-specific data
- Geographic location
# Newborn Hearing Screening Database

**Sponsors**
Vermont Department of Health, Maternal Child Health, Children with Special Health Needs, Vermont Early Hearing Detection & Intervention Program

**Contacts**
Linda Hazard
(802) 272-1588
Linda.hazard@partner.vermont.gov

**Data Years Available**
2015

**Available Geographies**
State

**Public Use Data Set**
Not Available

## Frequency
- Data is collected quarterly/annually and is available one and a half years after the close of the calendar year.

## Design
- Data Reporting is required by Administrative Rules.
- Hospitals, midwives, primary care providers, audiologists and early intervention providers submit data into the Childhood Hearing Health System part of the SPHINX Health Department database.

## Population (Units)
- Birth to 5 years 364 days of age infants.
- Deaf, Hard of Hearing or Deaf Blind infants

## Strengths
- Comparable to other state and territories.
- Tracks our progress in meeting nations goals: screen hearing by 1 month of age, diagnose hearing loss by 3 months of age and entrance into early intervention by 6 months of age.

## Limitations
- Small population of Deaf, Hard of Hearing or Deaf Blind infants therefore data cannot be broken down by county for diagnostic evaluations and entrance into early intervention services.

## Reports
- CDC Quarterly/Annual Report.
- Hospital Assurance Monthly
- Database Quality Assurance Quarterly

## Indicators for analysis
- Hearing Screening
- Diagnostic Audiology by 3 months of age
- Entrance into early intervention by 6 months of age
Newborn Screening

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Vermont Newborn Screening Program (VNBSP, NBS).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Cynthia L. Ingham, RN</td>
</tr>
<tr>
<td></td>
<td>Chief, VT NBS Program</td>
</tr>
<tr>
<td></td>
<td>802-951-5180</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Cindy.ingham@Vermont.gov">Cindy.ingham@Vermont.gov</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Years Available</th>
<th>Vermont Department of Health assumed responsibility for this program 01/01/02, although the program started in 1963. Statistical reports are available from 2002, but in individual reports. They are not kept in a single warehouse.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available Geographies</td>
<td>State</td>
</tr>
</tbody>
</table>

| Public Use Data Set | Not Available                                                                                   |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually, with quarterly QA hospital “report cards”</td>
<td>Review of specimens submitted, number of out-of-range or unsatisfactory specimens, and diagnoses confirmed</td>
<td>Infants screened in Vermont only. May have been born out-of-state.</td>
<td>Track incidence of rare diseases; Monitor hospital QA; demonstrate staff workload</td>
<td>Does not correlate to resident births. Some resident and occurrent births are screened and diagnosed out-of-state. Incidence of disorders is extremely low, and reporting could lead to identification of specific individuals.</td>
<td>• Birth Information Network</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Title V annual report</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Quarterly hospital QA report cards</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicators for analysis</th>
<th>Conditions screened for:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• 3-Methylcrotonyl-CoA carboxylase deficiency (3MCC)</td>
</tr>
<tr>
<td></td>
<td>• 3-OH 3-CH3 glutaric aciduria (HMG)</td>
</tr>
<tr>
<td></td>
<td>• Argininosuccinic acidemia (ASA)</td>
</tr>
<tr>
<td></td>
<td>• Beta-ketothiolase deficiency (BKT)</td>
</tr>
<tr>
<td></td>
<td>• Biotinidase deficiency (BIOT)</td>
</tr>
<tr>
<td></td>
<td>• Carnitine uptake defect (CUD)</td>
</tr>
<tr>
<td></td>
<td>• Citrullinemia (CIT)</td>
</tr>
<tr>
<td></td>
<td>• Congenital adrenal hyperplasia (CAH)</td>
</tr>
<tr>
<td></td>
<td>• Congenital hypothyroidism (CH)</td>
</tr>
<tr>
<td></td>
<td>• Cystic fibrosis (CF)</td>
</tr>
<tr>
<td></td>
<td>• Galactosemia (GALT)</td>
</tr>
<tr>
<td></td>
<td>• Glutaric acidemia type I (GA I)</td>
</tr>
<tr>
<td></td>
<td>• Hb S/Beta-thalassemia (Hb S/Th or Hb S/A)</td>
</tr>
<tr>
<td></td>
<td>• Hb S/C disease (Hb S/C)</td>
</tr>
<tr>
<td></td>
<td>• Holocarboxylase synthetase deficiency (MCD or multiple carboxylase def.)</td>
</tr>
<tr>
<td></td>
<td>• Homocystinuria (HCY)</td>
</tr>
<tr>
<td></td>
<td>• Isovaleric acidemia (IVA)</td>
</tr>
<tr>
<td></td>
<td>• Long-chain L-3-OH acyl-CoA dehydrogenase deficiency (LCHAD)</td>
</tr>
<tr>
<td></td>
<td>• Maple syrup urine disease (MSUD)</td>
</tr>
<tr>
<td></td>
<td>• Medium-chain acyl-CoA dehydrogenase deficiency (MCAD)</td>
</tr>
<tr>
<td></td>
<td>• Methylmalonic acidemia (Cbl A, B)</td>
</tr>
<tr>
<td></td>
<td>• Methylmalonic acidemia (mutase deficiency) (MUT)</td>
</tr>
<tr>
<td></td>
<td>• Phenylketonuria (PKU)</td>
</tr>
<tr>
<td></td>
<td>• Propionic acidemia (PROP)</td>
</tr>
<tr>
<td></td>
<td>• Severe Combined Immunodeficiency (SCID)</td>
</tr>
<tr>
<td></td>
<td>• Sickle cell anemia (SCA or Hb S/S)</td>
</tr>
<tr>
<td></td>
<td>• Trifunctional protein deficiency (TFP)</td>
</tr>
<tr>
<td></td>
<td>• Tyrosinemia type I (TYR I)</td>
</tr>
<tr>
<td></td>
<td>• Very long-chain acyl-CoA dehydrogenase deficiency (VLCAD)</td>
</tr>
</tbody>
</table>
## Vermont Nurse-Family Partnership Home Visiting Program Database

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Program funded by HRSA under Maternal, Infant and Early Childhood Home Visiting (MIECHV) program.</th>
</tr>
</thead>
</table>
| Contacts | Program Coordinator: Ann Giombetti 802-865-1336; Ann.Giombetti@vermont.gov  
Health Data Administrator: Morgan Paine 802-859-5940; Morgan.Paine@vermont.gov |
| Data Years Available | July 2012 – Present |
| Available Geographies | Data collected from Franklin, Lamoille, Grand Isle, Washington, Orange, Windsor, Windham, Caledonia, Orleans, Essex, Rutland and Bennington counties in Vermont. |
| Public Use Data Set | Not Available |

### Frequency Design

| Data is added to the database monthly. | Information collected about home visiting services provided by five regional Home Health Agencies using the Nurse-Family Partnership evidence-based model. Includes demographic data on participants, home visits, health screenings and referrals provided, and selective outcome data. |

### Population (Units)

| Program serves Vermont resident, low-income, first time mothers enrolled prior to 28 weeks of pregnancy and their child/children up to the age of 2 years. |

### Strengths

| Database designed to meet federal grant reporting requirements, and to produce Vermont statewide home visiting performance measures. Data also used for program management and oversight, and for continuous quality improvement. |

### Limitations

| Contains only a subset of data collected by the Nurse Family Partnership program. NFP program operating in only 12 of 14 Vermont counties (presently not available in Chittenden or Addison counties) |

### Reports

- Annual DGIS benchmark report to HRSA  
- Quarterly Reports to LIAs  
- Annual Vermont statewide Home visiting performance report required under VT Act 66 (2013)

### Indicators for analysis

- Maternal and child demographics  
- Frequency and duration of home visiting services  
- Screening data (ASQ-3, ASQ-SE, EPNDS Maternal Depression, smoking, alcohol, drugs, intimate partner violence).  
- Referrals to government and community services; and service utilization  
- Breastfeeding initiation and duration smoking cessation during pregnancy; child injuries; maternal and child ED utilization; well-child and well-woman preventative health service utilization; safe sleep practices
## Vermont Parents as Teachers Home Visiting Program Database (PAT+)

| **Sponsors** | Program funded by Children’s Integrated Services/ Child Development Division. Limited funding to Chittenden by SAMHSA under Linking Actions for Unmet Needs in Children’s Health (Project LAUNCH) program. Data is housed with VDH. |
| **Contacts** | Lorna Corbett 802-917-4877; lorna.corbett@vermont.gov  
Jessica Schiller 802-241-0153; jessica.schiller@vermont.gov |
| **Data Years Available** | October 2013 to present |
| **Available Geographies** | State |
| **Public Use Data Set** | Not Available |

### Frequency and Design
- **Frequency:** Data are added to the database +/- continuously in real-time.
- **Design:** Information collected about home visiting services provided by regional agencies using the Parents as Teachers evidence-based model. Includes demographic data on participants, home visits, health screenings and referrals provided, and selective outcome data.

### Population (Units)
- **Population:** Program serves low income, families resident in Vermont, with children up to the age of 5-6 years.

### Strengths
- Database designed to meet model developers’ annual fidelity reporting requirements, and to produce Vermont statewide home visiting performance measures. Data also used for program management and oversight, and for continuous quality improvement.

### Limitations
- Limited data set, small numbers.

### Reports
- Annual fidelity reports to PAT
- Annual Vermont statewide home visiting performance report required under VT Act 66 (2013)
- Quarterly enrollment report to the Home-Visiting Alliance group.

### Indicators for analysis
- Maternal and child demographics
- Frequency and duration of home visiting services
- Screening data (ASQ-3; ASQ-SE; vision, hearing and child physical health and development)
- Family Protective Factors survey; family satisfaction survey
- Referrals to government and community services; service utilization
- Breastfeeding initiation and duration; immunization
# Vermont Population Estimates

| **Sponsors** | The United States Census Bureau produces the annual estimates as part of the Federal State Cooperative for Population Estimates (FSCPE). The Center for Rural Studies at the University of Vermont and VDH work jointly as the Vermont FSCPE partners. |
| **Contacts** | Mike Nyland-Funke  802-863-7261  michael.nyland-funke@Vermont.gov |
| **Data Years Available** | Estimates for individual years are available from 1970-2015. |
| **Available Geographies** | Total population available for state, county, town, health district, hospital service area, rational service area. Age-gender detail available for state, county, district, HSA, RSA. |
| **Public Use Data Set** | A number of public use data files are made available here: http://www.healthvermont.gov/health-statistics-vital-records/vital-records-population-data/vermont-population-estimates |

## Frequency

Updated annually. For a given calendar year, estimates are typically available in the fall of the following year.

## Design

Estimates are produced by the U.S. Census Bureau. The Census Bureau provides total population estimates for the state, counties and towns, and age-gender estimates for the state and counties. VDH uses these estimates to calculate age-gender estimates for other non-county geographies (district, HSA, RSA).

## Population (Units)

Estimates are of the Vermont resident population.

## Strengths

- Updated regularly.
- Level of detail is sufficient for most analyses undertaken at VDH.

## Limitations

- No age-gender data for towns except in Census years.
- Limited race/ethnicity data.

## Reports

Annual population reports can be found here: http://www.healthvermont.gov/health-statistics-vital-records/vital-records-population-data/vermont-population-estimates

## Indicators for analysis

These estimates provide the population (denominator) data for countless programs in and out of state government.
### Vermont Prescription Monitoring System (VPMS)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>This is a state funded data system. Data is warehoused by an external contractor and locally managed by the Health Department VPMS analyst.</th>
</tr>
</thead>
</table>
| **Contacts** | Lela Kretzer  
802-863-6354  
Lela.Kretzer@vermont.gov |
| **Data Years Available** | 2010- to present. Data from 2010-2016 processed by different contractor than present data. |
| **Available Geographies** | State, County |
| **Public Use Data Set** | Not available |

#### Frequency
Data enters the warehouse database as it is collected from pharmacies at least once each business day. The annual report is usually available 8 months after the end of the calendar year.

#### Design
Data is submitted directly by pharmacies for all Schedule II-IV controlled substances dispensed from Vermont-licensed pharmacies. Data is then processed by a contractor into flat files for use by the Health Department. Live data is accessible to health care providers who have registered with VPMS.

#### Population (Units)
All prescriptions for controlled substances (Schedule II-IV) dispensed by Vermont licensed pharmacies.

#### Strengths
Universal database of controlled substances dispensed in Vermont. Variables on prescription, patient, provider and dispenser. Data is up-to-date and entered into the system as information becomes available.

#### Limitations
- Raw data only accessible by two analysts.
- Legal restrictions on what can be released.
- This registry has many users entering data with varying levels of data training.

#### Reports
- VPMS Annual Reports
- VPMS Quarterly Reports
- VPMS Annual Legislative Report

#### Indicators for analysis
- Prescription Drug Monitoring, Prescription Drug Misuse
- Opioids, sedatives, stimulants, hormones, cannabinoids
- Recipient demographics: age, sex
| **Sponsors** | Public Health Statistics Section – Richard H. McCoy | **Contacts** | Richard H. McCoy  
richard.mccoy@vermont.gov; 802-651-1862 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Data Years Available</strong></td>
<td>1909 - current</td>
<td><strong>Available Geographies</strong></td>
<td>State, Town</td>
</tr>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>None. The database itself is still a work-in-progress with data quality issues to be addressed.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
</table>
| Birth and death events (VT occurrences) are populated in the database daily. Corrections, deletions and other changes are reflected in the database immediately. | SQL database designed by the VDH ITS team following specifications provided by National Association for Public Health Statistics and Information Systems (NAPHSIS). Content and format are specified by the national user agreement and requirements of federal agencies that verify birth and death records in the database (utilizing the EVVE software). This is not a “mirror” or copy of the Vital Records’ birth and death SQL database or files. The information in this database came from microfilm images and paper records at the Secretary of State’s Office; data entered by a contractor (Ancestry.com). | All VT occurrences of:  
• birth certificates  
• delayed birth certificates  
• death certificates  
• certificates of live birth of a foreign-born child. | Contains birth and death records pre-dating the Vital Records’ birth and death SQL database and files. This database contains records back to 1909 with 99%+ completeness | Significant data quality issues for birth and death records caused by data entry and poor image quality of the original source. Multiple years were spent conducting methodical clean-up, which is expected to require another 12 – 18 months before suitable for public purposes. Select items from birth and death certificates were transcribed and entered into this database. For example, death certificates in the database contain manner and cause of death, but not injury data. It also contains underlying cause of death, but not immediate or contributing causes, thus it is not recommended to use the cause of death data for any comprehensive study or public health decisions. | There are no external reports.  
• There is a nightly match error rate report that is run by an analyst to review problems with specific records identified by federal agencies.  
• It is not envisioned that this database has value for reporting purposes. It is meant for administrative use only. |

**Indicators for analysis**

Not currently available for external use while data quality review and clean-up is ongoing.

**Births**: baby and parent names; sex; date of birth; date filed; place of birth; town of birth; mother’s town of residence; parents’ birth state/country

**Deaths**: decedent’s name; parent and spouse names; sex; date of death; date of birth; date filed; place of death; town of death; underlying cause of death; manner of death; veteran and which war
## Refugee Domestic Health Assessment (DHA) Data

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Refugee Health Program</th>
<th>Contacts</th>
<th>Vermont Department of Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Martha Friedman</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>802-863-7344</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:Martha.friedman@Vermont.gov">Martha.friedman@Vermont.gov</a></td>
<td></td>
</tr>
</tbody>
</table>

| Data Years Available | October 2012 – present | Available Geographies | State, County, Health District |

| Public Use Data Set | Not Available |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>System is updated as Domestic Health Assessment forms are received from health care providers.</td>
<td>Data is collected through domestic health assessment forms. Data elements are based on CDC recommendations. All newly arriving refugees are required to have a DHA within 90 days of arrival in the country. Providers send forms to the Refugee Health Program after they are seen.</td>
<td>All refugees resettled in Vermont.</td>
<td>Use: tracking certain disease prevalence trends; functioning of refugee health system. Some components comparable to other states. Only data source that provides a state-based assessment of the health of newly arrived refugees.</td>
<td>Lag time between exams and receipt of some reports may be considerable. Data is mostly infectious disease indicators and vaccinations. It does not include chronic diseases or substance use indicators.</td>
<td>Used for trimester reports to Office of Refugee Resettlement.</td>
</tr>
</tbody>
</table>

| Indicators for analysis | • Demographic factors (age, sex, country of origin, language, arrival date) • Screenings (tuberculosis, Hepatitis B, STDs, vaccinations, children’s lead levels) • Referrals (dental, vision, mental health, WIC, TB program, other) • Time to DHA appointment and time to DHA exam |

---

**Data Years Available:** October 2012 – present

**Available Geographies:** State, County, Health District

**Public Use Data Set:** Not Available

**Frequency:**
- System is updated as Domestic Health Assessment forms are received from health care providers.

**Design:**
- Data is collected through domestic health assessment forms. Data elements are based on CDC recommendations. All newly arriving refugees are required to have a DHA within 90 days of arrival in the country. Providers send forms to the Refugee Health Program after they are seen.

**Population (Units):**
- All refugees resettled in Vermont.

**Strengths:**
- Use: tracking certain disease prevalence trends; functioning of refugee health system.
- Some components comparable to other states.
- Only data source that provides a state-based assessment of the health of newly arrived refugees.

**Limitations:**
- Lag time between exams and receipt of some reports may be considerable.
- Data is mostly infectious disease indicators and vaccinations. It does not include chronic diseases or substance use indicators.

**Reports:**
- Used for trimester reports to Office of Refugee Resettlement.
## Sexually Transmitted Disease Management Information System (STDMIS)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>CDC created the data system that is locally maintained by the HIV/AIDS, STD, and Hepatitis Program Chief.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Daniel Daltry 802-863-7305 <a href="mailto:daniel.daltry@vermont.gov">daniel.daltry@vermont.gov</a></td>
</tr>
<tr>
<td>Data Years Available</td>
<td>1998-present</td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, City, County</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Not available to public, but data reports can be produced upon request.</td>
</tr>
</tbody>
</table>

### Frequency
Database is updated as labs/case report forms come in, several times a week and then as case investigators interview patients. Data is uploaded to CDC at the start of each week.

### Design
Chlamydia, gonorrhea, and syphilis are reportable infections. STDMIS archives case report forms, lab results, risk profile, and treatment information for each reported case.

### Population (Units)
Any Vermont resident who is diagnosed with a reportable sexually transmitted infection (STI), regardless of state they are tested in.

### Strengths
- All sexually transmitted infection diagnoses among Vermonters, including treatment information and risk profile of the case and their sexual partners.

### Limitations
- Currently the system is not set up to receive electronic reporting.

### Reports
- Integrated Epidemiologic Profiles for HIV/AIDS Prevention and Care Planning
- Summary Reports
- Healthy Vermonters 2020

### Indicators for analysis
- Demographic factors (age, sex, race/ethnicity, residence, sexual orientation)
- Diagnostic and treatment info (earliest date diagnosis, provider, facility, continuation of care)
- Information on risk behaviors
- Sexually Transmitted Infection Information (chlamydia, gonorrhea, and syphilis)
Statewide Incident Reporting Network (SIREN)

| Sponsors | SIREN is Vermont's pre-hospital patient care reporting system. The Health Department manages the database and oversees data collection performed by EMS Agencies. |
| Contacts | EMS Data Manager 802-951-0106 siren@vermont.gov |
| Data Years Available | The Health Department initially contracted with the SIREN vendor in 2009 when three Emergency Medical Services (EMS) agencies began submitting patient care reports. By 2015, 100% of Vermont based ambulance agencies were submitting patient care reports to SIREN. |
| Available Geographies | Data is entered using street address (includes town, county, and state) |
| Public Use Data Set | No. This data is HIPAA protected. |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| Patient information is collected real-time as a medical record. Vermont EMS Rules mandate submission of pre-hospital patient data to the state within one business day of the incident occurring for all ambulance/transport responses. First response agencies are encouraged but not required to submit electronic records. | SIREN is a secure, web-based, NEMSIS (National EMS Information System) Version 3 gold compliant, vendor hosted solution, comprised of real-time patient data entered by EMS providers. The database contains data collection, storage, extraction and analytical capabilities. Patient care reports are comprised of national and state coded and free text data. | Any patient receiving pre-hospital, emergency medical care by a Vermont licensed ambulance agency. Records are patient and incident specific. | Real-time data; applicable to a variety of public health analyses; possible data linkage capabilities with other State data systems. | Dependent on EMS provider data collection; detailed patient info may be documented in narrative as free text rather than as extractable national and state defined data components; patient narrative data are not routinely incorporated in analysis. First Response agencies not required to report. | - EMS Use of Naloxone Data Brief  
- Data briefs by injury type  
- EMS Annual Report (pending)  
- IO procedures by certification level  

| Indicators for analysis | Injury: motor vehicle crash, intentional, elderly falls, child passenger safety; Naloxone use; Cardiac arrest |
### Substance Abuse Impaired Driving Rehabilitation Program Database (IDRP)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>Impaired Driving Rehabilitation Program (formerly Project CRASH).</th>
</tr>
</thead>
</table>
| **Contacts** | Patty Breneman  
              Patricia.Breneman@vermont.gov;  
              802-652-2030 |
| **Data Years Available** | 2016 |
| **Available Geographies** | State, City |
| **Public Use Data Set** | Not Available |

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
</table>
| Weekly – continuous data entry | Data on individuals who enroll in the IDRP program.  
Data arranged by individual.  
Includes school enrollment and completion, treatment enrollment and completion, BAC, and type of offense. | Individuals enrolled in the Impaired Driving Rehabilitation Program. | Highly consistent data – only two data entry staffers for the past decade.  
Person-level information, including multiple offenses.  
Type of offense, school enrollment and completion dates all in one data system. | SQL relational database (many to one relationships that need to be carefully queried).  
Many laws and regulations that if unknown make the data difficult to interpret.  
Data follows changes in law, which means some values are different for the same field even though they may signify the same thing. | Data briefs |

**Indicators for analysis**  
- Completion Reports  
- Enrollment rosters  
- Multiple Offender data
### Substance Abuse Treatment Information System (SATIS)

| **Sponsors** | Vermont Department of Health’s Alcohol and Drug Abuse Programs (ADAP). Admit and discharge data is required by Substance Abuse and Mental Health Services Administration (SAMHSA) to support the Substance Abuse Prevention and Treatment Block Grant (SAPTBG). |
| **Contacts** | Anne VanDonsel, 802-652-4142 Anne.VanDonsel@vermont.gov |
| **Data Years Available** | FY2000 – FY2016 (2016 is incomplete as of 5/9/17) |
| **Available Geographies** | Includes zip code as a geographic marker – able to roll up to state, county, district and hospital service area |
| **Public Use Data Set** | Not Available |

<table>
<thead>
<tr>
<th><strong>Frequency</strong></th>
<th><strong>Design</strong></th>
<th><strong>Population (Units)</strong></th>
<th><strong>Strengths</strong></th>
<th><strong>Limitations</strong></th>
<th><strong>Reports</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Providers submit data monthly for admissions, services, and discharges provided the previous month. There are data lags of varying amounts when providers are unable to submit as required.</td>
<td>Three linked tables representing episodes of care provided by ADAP Preferred Providers. <strong>Admission:</strong> Includes demographic information, education, employment, referral source, primary/secondary/tertiary substances, route of administration, frequency of use, age of first use, payment responsibility, income, dependents, social connectedness, pregnant, living arrangement, arrests, diagnosis codes etc., <strong>Service(s):</strong> Dates and types of service – units of service varies by level of care. Payment responsibility. <strong>Discharge:</strong> Discharge date &amp; reason, education at time of discharge, employment, primary/secondary/tertiary substances, route of administration, frequency of use, social connectedness, living arrangement, arrests</td>
<td>Client level service data for people served through the ADAP funded preferred provider system.</td>
<td>Includes demographic information; collects information that allows evaluation of change between admission and discharge.</td>
<td>Person level data cannot be linked to other data sources. Variation between providers because of different data collection tools. Limited to direct treatment services funded by ADAP. Excludes medical: spokes, hospitals, private practitioners. Units of service data is unreliable due to changes in unit measures over time. Data are in Microsoft Access; there are plans to move to an online structure.</td>
<td>• VDH Performance Scorecard • Routine treatment reporting • Alcohol Tobacco and Other Drugs Profile • SAMHSA’s Treatment Episode Data Set (TEDs) • ADAP internal reporting</td>
</tr>
</tbody>
</table>

| **Indicators for analysis** | Description of the data collected is here (under the treatment section) • Service utilization • Trend analysis by age; gender; substance: alcohol, heroin/opiates, marijuana/hashish; location • Outcomes evaluation |
**Universal Developmental Screening (UDS) Registry**

| **Sponsors** | Vermont Department of Health, Maternal Child Health |
| **Contacts** | Janet Kilburn  
865-1323  
Janet.Kilburn@Vermont.gov |
| **Data Years Available** | 2017 |
| **Available Geographies** | State and primary care practice level |
| **Public Use Data Set** | Not Available |
| **Frequency** | Design | Population (Units) | Strengths | Limitations | Reports |
| Data is collected ongoing and available immediately. | Statewide registry (part of SPHINX) for collecting developmental screening results from multiple providers (e.g. primary care practices, child care programs, Children’s Integrated Services providers, home visitors, community service providers, Early Head Start). | Children from birth up to age 6 who have received developmental and/or autism screening in Vermont | Comprehensive and accurate statewide source for developmental screening results. | Registry data is not comprehensive yet since we launched just this year. Registry is currently being piloted by 5 primary care practices, child care and community providers in 3 state regions. | Primary care practice reports, ACO reports and individual client reports |
| **Indicators for analysis** | Developmental screening |
### Vital Statistics

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Vermont Department of Health Vital Records Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Cindy Hooley&lt;br&gt;802-651-1636&lt;br&gt;<a href="mailto:Cynthia.hooley@Vermont.gov">Cynthia.hooley@Vermont.gov</a></td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, County, Health District, Hospital Service Area, Town (for limited items)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>With exception of Civil Unions, data is updated almost daily. Final data sets are available within two years following the completion of the calendar year.</td>
<td>Births: Births in Vermont are reported within 5 days. Hospital births are submitted to through the Electronic Birth Registration System. Deaths: Death in Vermont are reported within 48 hours. Demographic information and cause of death information is entered into the Electronic Death Registration System by the funeral director and licensed medical professional, respectively to create a death certificate. Fetal deaths and abortions: Hospitals, physician offices and clinics send reports to the Vital Records Office. Marriages: Certificates are registered in the issuing town and towns send copies to the Vital Records Office. Divorces: Records are sent to the Vital Records Office. Marriage, divorce, fetal death and abortion information is entered into a MS Access database weekly.</td>
<td>All events that occur in Vermont. In addition, births and deaths to Vermont residents which occur in other states are sent to the Vital Records Office for use in resident statistics.</td>
<td>Births and deaths are a census of all births and deaths for Vermonters. There is other information that is collected as part of the birth and death certificate that we can use for analyses.</td>
<td>Birth and death data may not be considered final for a year or more after the end of the calendar year. Resident data from other states may not be as complete as data collected for Vermont occurrences.</td>
<td><a href="http://www.healthvermont.gov/health-statistics-vital-records/vital-records-population-data/vital-statistics-reports-and-maps">Vital Statistics Annual Reports</a> <a href="http://www.healthvermont.gov/health-statistics-vital-records/vital-records-population-data/vital-statistics-reports-and-maps">Healthy Vermonters 2020</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicators for analysis</th>
<th>From births:</th>
<th>From deaths:</th>
<th>Marital status at time of death</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Birth weight&lt;br&gt;• Prenatal care&lt;br&gt;• Smoking during pregnancy&lt;br&gt;• Gestational age</td>
<td>• Underlying cause of death&lt;br&gt;• Injury deaths&lt;br&gt;• Suicides&lt;br&gt;• Drug related deaths</td>
<td>• Deaths to veterans&lt;br&gt;• Infant deaths&lt;br&gt;• Maternal deaths</td>
</tr>
</tbody>
</table>
## Women Infants and Children (WIC) Database

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Vermont Department of Health, Maternal Child Health Division, Women Infants and Children Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Program: Donna Bister, 802-863-7508, <a href="mailto:donna.bister@Vermont.gov">donna.bister@Vermont.gov</a> Analyst: Mike Kenny, 802-863-7383, <a href="mailto:Michael.Kenny@Vermont.gov">Michael.Kenny@Vermont.gov</a></td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, Health District, County</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>None</td>
</tr>
</tbody>
</table>

### Frequency

- Data was previously made available annually.

### Design

- Data is pulled from WIC management information system, analysis set includes one randomly selected record per individual

### Population (Units)

- Infants and children who participated in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) in the calendar year

### Strengths

- Many years of data, consistent analysis & comparison with national data through 2011
- Based on all participating individuals (not a sample).

### Limitations

- Not representative of the entire population
- Analysis methodology changed slightly after 2012
- Data for 2015 and beyond has not been pulled or analyzed

### Reports

- PNSS and PedNSS State and local reports 2009-2011
- Healthy Vermonters 2020 Childhood Obesity indicator

### Indicators for analysis

- Through 2011, analysis included
  - Underweight (age 2 & older)
  - Overweight (age 2 & older)
  - Obesity (age 2 & older)
  - Short stature
  - Anemia
  - Birthweight (low and high)
  - Breastfeeding initiation, duration & exclusivity
- For 2012-2014
  - Combined overweight & obesity measure only
### Blueprint Vermont Healthcare Claims Uniform Reporting and Evaluation System Data Set

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Data maintained by external vendor (OnPoint Health Data, ME). An analytics group at Onpoint is tasked with doing a variety of analyses for the Blueprint staff using this data set.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Blueprint Data Analyst &amp; Information Chief Tim Tremblay <a href="mailto:Timothy.tremblay@vermont.gov">Timothy.tremblay@vermont.gov</a> 802-654-8923</td>
</tr>
<tr>
<td>Data Years Available</td>
<td>2007-2016</td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, Hospital Service Area</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

### Frequency
- Data in the VHCURES data set is updated as claims are paid and processed. The extract for Blueprint analytics is updated as appropriate (currently every 6 months). Eventually, real-time access through a virtual “work bench” with Onpoint has been discussed to improve access to the data. Data are available one year after collection.

### Design
- Follows same data collection process as the broader VHCURES data set. The Blueprint version of VHCURES has additional value added including a flag for Blueprint practices. There is also additional information about attribution (to either a participating or non-participating Blueprint practice).

### Population (Units)
- Paid claims of Vermont residents. (Same as VHCURES with additional value added).

### Strengths
- It is useful for measuring expenditures, and person level information among Vermonters utilizing the health care system.

### Limitations
- Since this only includes paid claims, we do not have information on what was originally included on the submitted claims or how the claim was adjusted. OnPoint does not share its data cleaning technique, so when numbers do not match broader VHCURES data the reasons cannot be explained.

### Reports
- Vermont Blueprint for Health Annual Reports
- Hospital Service Area Profiles

### Indicators for analysis
- Pediatric and adult data
- Well-care visits; Developmental screenings
- Expenditures; Service utilization - Inpatient, outpatient, mental health, pharmacy
- Chronic Disease information – COPD, asthma, heart failure, risk behaviors
- Chlamydia, breast cancer, cervical cancer screening
- Alcohol & substance use treatment
### Vermont Healthcare Claims Uniform Reporting and Evaluation System (VHCURES)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Vermont Department of Health</th>
</tr>
</thead>
</table>
| **Sponsors** | Green Mountain Care Board  
Onpoint Health Data is the contractor for data collection, consolidation and user support. |
| **Contacts** | Susan Barrett  
Susan.Barrett@vermont.gov  
802-828-2919 |

<table>
<thead>
<tr>
<th>Data Years Available</th>
<th>Data set starts with claims incurred since Jan 1, 2007.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Available</strong></td>
<td><strong>Geographies</strong></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| The data set is continually changing and adjusting. New claims are fed in on a regular basis, which data users should be cautious of when performing analyses. Typically adjustments and payments are completed within 9 months of the date of service. | VHCURES is Vermont’s All-Payer claims database (APCD). The comprehensive, longitudinal APCD regularly collect medical and pharmacy claims data and eligibility data, from both private and public payers. Insurers (and Medicaid) covering more than 200 Vermont lives are required to report paid claims data to this database. Blueprint has a subset of this data set that has additional data points (see Blueprint Vermont Healthcare Claims Uniform Reporting and Evaluation System Data Set) | Individuals with paid insurance claims. | Able to track health care expenditures, utilization, multiple payer information  
Information is at an individual level and we can see most encounters with the health care system (primary care, hospital, ED, pharmacy), as long as a claim is filed. | For some patients (self-pay) we cannot fully see their utilization of the health care system, as we can only see paid insurance claims.  
We cannot speak to individuals that are not utilizing the health care system, including those who do and do not have insurance. | • APCER Report  
• Vermont Blueprint for Health Reports  
• Evaluating Health Care Delivery Reform Initiatives in the Face of “Cost Disease”  
• 2007–2011 Vermont Health Care Cost and Utilization Report by the Health Care Cost Institute  
• Tracking Spending Among Commercially Insured Beneficiaries Using a Distributed Data Model  
• The Dartmouth Atlas of Children’s Healthcare in New England  
• Price Variation Analysis  
• Vermont Health Systems Payment Variation Report  
• PCSA Spatial Analysis  
• Tri-State Variation in Health Services Utilization & Expenditures in Northern New England  
• GMCB Analytic Plan Presentation: Analysis in Support of Health Care Reform  
• Health Care Reform Analysis Summary  
• Presentation: Vermont Health Spending Growth Drivers Commercial and Medicaid, 2008-2012 |

| Indicators for analysis | Data Dictionary |
## Vermont Uniform Hospital Discharge Data Set (VUHDDS)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>The Health Department has an MOU with GMCB to manage and report on Vermont’s hospital discharge data.</th>
</tr>
</thead>
</table>
| **Contacts** | Barbara Carroll  
(802) 865-7704; Barbara.Carroll@vermont.gov |
| **Data Years Available** | Analysts can access data for 2002 - 2015. Data files from 1980 through 2001 may be available to the Health Department analysts upon request and approval. The earlier data years do not include as many variables or types of records. |
| **Available Geographies** | Available geographies: State, County, Health District, Hospital Service Area |
Public use files do not include data on Vermont residents discharged from hospitals in bordering states. |

### Frequency
- Updated annually.  
- Annual reports are usually available a year and a half after the calendar year ends.

#### Design
Data include all discharges submitted by Vermont hospitals to VAHHS-NSO, which then delivers the data to the Health Department as contracted with GMCB. Data for Vermont residents discharged from hospitals in NY, NH, and MA are received from those states per MOUs and are available to Health Department analysts.

In addition to information on primary diagnosis code and up to 19 additional diagnosis codes associated with each visit, hospitals may report up to 20 procedure codes, injury codes listed at discharge, patient age, sex, geographic location of origin, expected primary payer, revenue codes, and total charges associated with a visit.

#### Population (Units)
- The unit is a hospital inpatient, outpatient, or ED discharge/visit.
- Most analyses are limited to VT residents or to VT hospitals.

#### Strengths
- Census of all Vermont hospital visits including inpatient, outpatient and Emergency Department, regardless of insurance status or state of residence.
- Includes ICD-9-CM, ICD-10-CM/PCS and/or CPT codes, allowing analyses of charges by diagnosis or procedure.

#### Limitations
- The data do not include a person-level indicator which limits analyses of readmissions and numbers of individuals with chronic conditions.
- Data include charges, not actual costs.
- 2010 and 2011 NH data are currently only available as incomplete sets, making trend analysis difficult for those two years. 2014 and 2015 MA data are currently unavailable.
- Discharges from strictly mental health hospitals are not included in the hospital discharge data set. The White River Junction VA Medical Center has not submitted data since 2006.

### Indicators for analysis
- Up to 20 diagnosis codes mentioned at discharge (ICD-9-CM/ICD-10-CM), including a hospital-determined principal diagnosis for all discharges.
- Up to 20 ICD-9-CM procedure codes (ICD-9-CM, or ICD-10-PCS for inpatients and CPT codes for outpatients). Some discharges have no procedure codes. Hospitals determine primary procedure code for discharges when using ICD-9-CM or ICD-10-PCS coding systems.
- Injury codes
- Charges (distinguished from paid claims)
- Primary Payer
- Age/Sex/Hospital Service Area
### Asbestos and Lead Regulatory Program – Auditing Compliance Tool (CLASSACT)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Asbestos and Lead Regulatory Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Vernon Nelson</td>
</tr>
<tr>
<td></td>
<td><a href="mailto:Vernon.Nelson@vermont.gov">Vernon.Nelson@vermont.gov</a>; 802-865-7784</td>
</tr>
<tr>
<td>Data Years Available</td>
<td>2001 - present</td>
</tr>
<tr>
<td>Available Geographies</td>
<td>State, abatement address</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

**Program staff update database periodically with data taken from Compliance Inspections of licensed contractor entities, training providers and AHERA schools.**

**ClassACT is a Freeware product. The product was developed under USEPA funds for states and tribes to implement their lead programs. The EPA does not make any warranty expressed or implied of the enclosed products. Product support will be handled through the ClassACT Project Officer.**

This product was developed with assistance from the members of the Consortium of North East States and Tribes (CONEST) and the Mid-Atlantic Regional Environmental Consortium (MAREC).

**Frequency**

<table>
<thead>
<tr>
<th>Program staff update database periodically with data taken from Compliance Inspections of licensed contractor entities, training providers and AHERA schools.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>ClassACT is a Freeware product. The product was developed under USEPA funds for states and tribes to implement their lead programs. The EPA does not make any warranty expressed or implied of the enclosed products. Product support will be handled through the ClassACT Project Officer.</td>
<td>Vermont specific schools (public and Non-Profit) and licensed training providers.</td>
<td>Generate reports for overall report totals. The ability to print as .RTF and .PDF files of compliance inspection report by Inspector.</td>
<td>ClassACT product is limited; not user-friendly for reporting or editing existing reports.</td>
<td>EPA - compliance reports</td>
</tr>
</tbody>
</table>

**Indicators for analysis**

- Compliance history for both training providers and AHERA
- Address specific abatement history
# Asbestos and Lead Regulatory Program Licensing Database (ALRP)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Asbestos and Lead Regulatory Program</th>
<th>Contacts</th>
<th>Vernon Nelson  <a href="mailto:Vernon.Nelson@vermont.gov">Vernon.Nelson@vermont.gov</a>; 802-865-7784</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Years Available</td>
<td>1996 - present</td>
<td>Available Geographies</td>
<td>Addresses available for contractors</td>
</tr>
<tr>
<td>Public Use Data Set</td>
<td>Only publicly available data is licensed contractor list.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program staff update</td>
<td>Access 2003 database built by EPA in 2000, upgraded to Access 2003 (called CERT 2000) used by Vermont to keep track of all licensed individuals and companies wanting to abate asbestos and/or lead from houses, public buildings, commercial building and superstructures like bridges, water tanks, etc. Have the ability to print wallet cards and license certificates for individual contractors; and print license certificates for entity contractors.</td>
<td>Individuals and Entity contractor’s data for license holders of the Asbestos and Lead Regulatory Program in VT. Contractors come from mainly New England states but we’ve had companies from California, Texas, Ohio, New York to name a few.</td>
<td>Includes citations to individuals and entities that have received unannounced inspections of permitted projects; updated in real-time. Generate quarterly reports for Asbestos and Lead licensed contractors.</td>
<td>This data is Access 2003 format and requires programming language knowledge to repair database. Would like to upgrade database to Access 2010 to keep current. Access is limited; not user-friendly for reporting or changing existing reports.</td>
</tr>
<tr>
<td>data daily with data for licensed contractors entities and individuals.</td>
<td></td>
<td></td>
<td></td>
<td>• VDH Asbestos and Lead Regulatory Program Website • EPA required Asbestos &amp; Lead reports</td>
</tr>
</tbody>
</table>

| Indicators for analysis   | • Contractor licensing history • Expiration reports generated             |                           |                                                           |                                          |

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### Asbestos Regulatory Program – Permitting Database (ASB PERMIT)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Asbestos and Lead Regulatory Program</th>
</tr>
</thead>
</table>
| Contacts | Vernon Nelson  
Vernon.Nelson@vermont.gov; 802-865-7784  
Christopher Kinnick  
Christopher.Kinnick@vermont.gov 802-863-7382 |
| Data Years Available | 1985 - present |
| Available Geographies | State, abatement address |
| Public Use Data Set | Not Available |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| Program staff update database daily with data for licensed contractor entities wanting to abate asbestos from a building. | Microsoft Access was used to design a database to document state specific requirements regarding data reporting. Program staff had IT support as well in developing a working system.  
Over the years, new data fields were added to capture data being requested by State and Federal Stakeholders.  
Database was used to keep track of all licensed companies wanting to abate asbestos from any type of structure that contained Asbestos.  
Has the ability to print permit certificates related to project and entity contractor. | Entity contractors provide regulatory data in order to procure a permit to abate asbestos from structures within Vermont.  
The database is flexible. Its data field, tables and forms can be updated at any time.  
Generate reports for open permits, field lists to prepare for unannounced inspections, waste management reports. | This data is Access 2003 format and requires programming language knowledge to repair database.  
Access is limited; not user-friendly for reporting or changing existing reports. | EPA required Asbestos & Lead reports |

| Indicators for analysis | • Citation history  
• Address specific abatement history |
# Essential Maintenance Practices In-House Registry (EMP Registry)

<table>
<thead>
<tr>
<th><strong>Sponsors</strong></th>
<th>Asbestos and Lead Regulatory Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contacts</strong></td>
<td><a href="mailto:empcompliance@vermont.gov">empcompliance@vermont.gov</a>; (802)865-7786</td>
</tr>
<tr>
<td><strong>Data Years Available</strong></td>
<td>2006 - present</td>
</tr>
<tr>
<td><strong>Available Geographies</strong></td>
<td>abatement address</td>
</tr>
<tr>
<td><strong>Public Use Data Set</strong></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

## Frequency
- Program staff update database daily with data received from property owners/managers or child care facility owners/operators.

## Design
- Microsoft Access was used to design a database to document state specific requirements regarding data reporting. Program staff had IT support as well in developing a working system.
- Over the years, new data fields were added to capture data being requested by State and Federal Stakeholders.
- Database was used to keep track of all compliance statements or affidavits for rental and child care properties and EMP trainees, trainers and locations trained.
- Has the ability to print trainee certificates and related reports for state and federal stakeholders.

## Population (Units)
- Contains properties, property owners, property managers, child care facility owners/operators, EMP trainees and their certificates, compliance statements filed, 30-day reminders before and after expiration date.

## Strengths
- At the time of its creation, it was the only storage of rental and child care property compliance statements needing to be filed every 365-days based on state statute.

## Limitations
- This data is Access 2003 format and requires programming language knowledge to repair database.
- Access is limited; not user-friendly for reporting or changing existing reports.

## Reports
- EPA required Asbestos & Lead reports
- Vermont Housing & Conservation Board
- Vermont Healthy Homes

## Indicators for analysis
- Citation history
- Address specific abatement history
<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos and Lead Regulatory Program</td>
<td><a href="mailto:empcompliance@vermont.gov">empcompliance@vermont.gov</a> ;</td>
</tr>
<tr>
<td></td>
<td>(802)865-7786</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Years Available</th>
<th>Available Geographies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013 - present</td>
<td>abatement address</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Public Use Data Set</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Only publicly available data is property search on compliance status: <a href="https://secure.vermont.gov/VDH/emp/CheckEMPStatus.php">https://secure.vermont.gov/VDH/emp/CheckEMPStatus.php</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property owners, property managers or child care facility owners/operators file a compliance statement every 365 days or when a change of tenant at their property(ies) occur.</td>
<td>Vermont Information Consortium (VIC) developed a registry to contain all properties, property owners, property managers, child care facility owners/operators, EMP trainees and their certificates, compliance statements filed with EMP inspections and other necessary data fields. Program staff assisted VIC in the developing this registry and processes. Many reporting tools were added for easy reporting out.</td>
<td>Contains properties, property owners, property managers, child care facility owners/operators, EMP trainees and their certificates, compliance statements filed, 30-day reminders before and after expiration date.</td>
<td>Self-reporting. Online lookup of any property within the registry for current compliance statement.</td>
<td>Registry back-end is not accessible by program staff. Registry reports are few and not programmable. Each report must be built by VIC.</td>
<td>VDH Asbestos and Lead Regulatory Program Website VT Office of the Attorney General – Lead in Housing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicators for analysis</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Citation history</td>
<td></td>
</tr>
<tr>
<td>• Address specific abatement history</td>
<td></td>
</tr>
</tbody>
</table>
### Lead Regulatory Program – Permitting Database (Pb PERMIT)

<table>
<thead>
<tr>
<th>Sponsors</th>
<th>Asbestos and Lead Regulatory Program</th>
</tr>
</thead>
</table>
| Contacts          | Vernon Nelson  
|                   | Vernon.Nelson@vermont.gov; 802-865-7784                                                           |
| Data Years Available | 2005 – present                                                                                       |
| Available Geographies | abatement address                                                                                   |
| Public Use Data Set | Not available                                                                                       |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program staff update database daily with data for licensed contractor entities wanting to abate Lead from a building.</td>
<td>Microsoft Access was used to design a database to document state specific requirements regarding data reporting. Program staff had IT support as well in developing a working system. Over the years, new data fields were added to capture data being requested by State and Federal Stakeholders. Has the ability to print permit certificates related to project and entity contractor.</td>
<td>Entity contractors provide regulatory data in order to procure a permit to abate Lead from structures within Vermont.</td>
<td>The database is flexible. Its data field, tables and forms can be updated at any time. Generate reports for open permits, field lists to prepare for unannounced inspections, waste management reports.</td>
<td>This data is Access 2003 format and requires programming language knowledge to repair database. Access is limited; not user-friendly for reporting or changing existing reports.</td>
<td>EPA required Asbestos &amp; Lead reports</td>
</tr>
</tbody>
</table>

| Indicators for analysis | • Permit projects history  
|                         | • Address specific abatement history |
**USAFoodSafety Database**

| Sponsors | VDH Food and Lodging Program  
USAFoodSafety (USAFS) Database Software  
Data hosted by Computer Aid, Inc. (CAI) |
|---|---|
| Contacts | Elisabeth Wirsing  
802-951-0109  
Elisabeth.wirsing@Vermont.gov |
| Data Years Available | May 2016 to present. The program transitioned from the Legacy 1032 database (approx. 1990 – 2016) and transferred limited licensing data to the new system. |
| Available Geographies | Statewide food safety inspection, licensing and complaint data |
| Public Use Data Set | Not available at this time. A public portal, hosted by CAI, is anticipated to go live in late 2017. |

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Design</th>
<th>Population (Units)</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Reports</th>
</tr>
</thead>
</table>
| Licensing and inspection data is collected daily. | Regulatory program licensing data for businesses describes the VDH licenses held and timeframes. Inspection data is generated by Public Health Inspectors conducting food safety and sanitation inspections for compliance with department regulations and statutes. Complaint data is reported by the public or other state agencies and partners, and is investigated for observed compliance with health regulations. | Business license holders with the Department of Health. | Data is useful for program analysis, trends in violations, tracking compliance of a licensee. | • Data is very specific to the VDH Food and Lodging program.  
• Complaint data is self-reported from the public. | Data is used for grant reports, program evaluation, public portal for inspection report access (coming 2017), and legislative requests.  
Public Portal will be accessed from this link: [http://www.healthvermont.gov/health-environment/food-lodging/inspection-reports](http://www.healthvermont.gov/health-environment/food-lodging/inspection-reports) |

| Indicators for analysis | Licensing Information:  
• Payment data for fees processed  
• Inspection Data  
• Foodborne illness complaints  
• Sanitation complaints |

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Data Resources

- Performance Scorecards
- Public Health Data Explorer
- Social Vulnerability Index
### Controller
The Health Department (Planning and Healthcare Quality unit)

### Contacts
Heidi Gortakowski
Heidi.Gortakowski@Vermont.gov; 802-951-0142

### Years of Data Included
Indicator trend data begins in 2000 where available, and has the most recently available data. Performance measures trends vary depending on the measure but are updated within the last quarter of available data.

### Geographies Displayed
Statewide (see Public Health Data Explorer – HV2020 for sub-state data).

### Access
http://www.healthvermont.gov/about/performance

### Data Tool Updates
The performance scorecard is updated on a quarterly basis with performance improvement measures. Indicators on the scorecard are updated as new data becomes available (once a year).

### Reporting Structure
The Scorecard reports are structured in a table format with color coding, where green signifies improvement from the previous period, yellow signifies no change from the previous period, and red signifies things are moving in the wrong direction from the previous period.

### Population Restrictions
Surveillance measures are calculated similarly to the corresponding Healthy People measures. This means numbers are age-adjusted and could slightly differ from crude calculations.

More information is available in the Turning the Curve pages of the dashboard.

### Strengths
This allows public access to performance improvement data, to the Health Department’s Healthy Vermonter Goals, and to other Health Department priorities and frequently requested data.

These pages allow for transparency of Health Department goals and activities.

### Limitations
The Scorecard and Data Explorer utilize most of the same data but have different methods for updating. Occasionally the Vermont data of the Scorecard is more recent than the data on the Data Explorer.

### Data Sources Referenced
- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behaviors Survey (YRBS)
- U.S. Census data
- Healthcare Workforce Census
- Vital Statistics
- Pregnancy Risk Assessment Monitoring Survey (PRAMS)
- Asthma Call Back Survey (ACBS)
- Vermont Uniform Hospital Discharge Data Set (VUHDDS)
- Women Infants and Children (WIC) data
- Adult Tobacco Survey (ATS)
- National Survey on Drug Use and Health (NSDUH)
- School Nurses’ Report

### Index of Topics
- All of HV2020 (see Public Health Data Explorer – HV2020)
- State Health Improvement Plan
- 3 behaviors lead to 4 diseases that cause more than 50% of Vermont deaths
- Opioids
- Vector, food and waterborne diseases
ALCOHOL & OTHER DRUG USE SCORECARD

The scorecard reflects how well we are doing in preventing/treating alcohol and drug abuse.

- **Percent of persons age 12 and older who need and do not receive illicit drug use treatment**
  - 2014: 3%, 2% (→ 8)

- **Percent of adolescents in grades 9-12 who used marijuana in the past 30 days**
  - 2015: 22%, 20% (→ 2)

Data Source: Youth Risk Behavior Survey (YRBS)
## Data Encyclopedia – Environmental Public Health Tracking (EPHT)

<table>
<thead>
<tr>
<th>Controller</th>
<th>Vermont Department of Health, Environmental Health CDC, National Environmental Public Health Tracking</th>
</tr>
</thead>
</table>
| Contacts   | David Grass  
David.Grass@vermont.gov 802-951-4064 |
| Years of Data Included | The Tracking portal includes the most recent publicly available data for each indicator; years of data included vary by indicator but are generally available for the period 2000-2013 with more recent data available for several datasets. |
| Geographies Displayed | State, County, Sub-County |

<table>
<thead>
<tr>
<th>Data Tool Updates</th>
<th>Reporting Structure</th>
<th>Population Restrictions</th>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Tracking portal is updated three or four times per year depending on availability of new data and software tools.</td>
<td>Tables, charts, and maps are presented for various environmental exposures (e.g. air, drinking water) and for health outcomes that may be related to environmental exposures (e.g. cancer, childhood blood lead levels). There are a variety of indicators, some focusing on trends and some focusing on within-state geographic comparison (with error bars); additional stratification (age, sex, etc.) is available where allowed by data stewards. Tracking participates in two CDC data calls per year submitting Vermont data not otherwise available to the federal government (e.g. birth defects, childhood lead poisoning) for display on the National portal as well as on the Vermont portal.</td>
<td>Nationally consistent measures are calculated per CDC definition using specified population denominators. Some indicators overlap with HV2020, but case definitions and population restrictions vary meaning EPHT crude and age-adjusted rates may differ slightly from HV2020 rates.</td>
<td>Twenty three states plus New York City provide standardized data to the National Tracking network allowing comparison to Vermont data. Vermont-specific measures include Standardized Incidence Ratios for specific cancers, the Blue Green Algae Tracker and the Tick Tracker.</td>
<td>100% CDC grant funded. EPHT is a relatively new program and has had limited opportunity to utilize Tracking data for linkage studies due to initial focus on building the portal infrastructure.</td>
</tr>
</tbody>
</table>

| Data Sources Referenced | | |
|--------------------------|--------------------------|
| • BRFSS  
• Vermont Cancer Registry  
• VUHDDS | • U.S. Census  
• Vital Statistics |

| Index of Topics | | |
|-----------------|-----------------|
• Asthma and COPD  
• Birth Defects  
• Cancer  
• Carbon Monoxide  
• Heart Attack  
• Childhood Lead Poisoning  
• Reproductive Health |
| Environmental Indicators  
• Air Quality  
• Climate Change  
• Drinking Water |
### Asthma Hospitalization - Male and Female: Annual Number and Rates per 10,000 Population

#### Year: 2013

<table>
<thead>
<tr>
<th>County / State</th>
<th>Number</th>
<th>Crude Rate</th>
<th>Age Adjusted Rate</th>
<th>95% Confidence Interval (for the Age Adjusted Rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERMONT</td>
<td>317</td>
<td>5.1</td>
<td>4.8</td>
<td>(4.3 - 5.4)</td>
</tr>
<tr>
<td>ADDISON</td>
<td>14</td>
<td>3.8</td>
<td>3.8</td>
<td>(2.0 - 6.8)</td>
</tr>
<tr>
<td>BENNINGTON</td>
<td>22</td>
<td>6.0</td>
<td>5.7</td>
<td>(3.4 - 9.2)</td>
</tr>
<tr>
<td>CALEDONIA</td>
<td>10</td>
<td>3.2</td>
<td>3.3</td>
<td>(1.5 - 6.6)</td>
</tr>
<tr>
<td>CHITTENDEN</td>
<td>73</td>
<td>4.6</td>
<td>4.9</td>
<td>(3.8 - 6.2)</td>
</tr>
<tr>
<td>ESSEX</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FRANKLIN</td>
<td>19</td>
<td>3.9</td>
<td>3.6</td>
<td>(2.2 - 5.9)</td>
</tr>
<tr>
<td>GRAND ISLE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LAMOILLE</td>
<td>7</td>
<td>2.8</td>
<td>3.2</td>
<td>(1.2 - 7.2)</td>
</tr>
<tr>
<td>ORANGE</td>
<td>6</td>
<td>2.1</td>
<td>1.9</td>
<td>(0.7 - 4.6)</td>
</tr>
<tr>
<td>ORLEANS</td>
<td>15</td>
<td>5.5</td>
<td>4.8</td>
<td>(2.6 - 8.5)</td>
</tr>
<tr>
<td>RUTLAND</td>
<td>81</td>
<td>15.2</td>
<td>12.5</td>
<td>(10.0 - 14.8)</td>
</tr>
</tbody>
</table>

*Numbers and rates based upon fewer than six cases are not displayed. When only one county has small numbers, a second county is not shown, see data notes.*
## Data Tool Updates

<table>
<thead>
<tr>
<th>Data Tool Updates</th>
<th>Reporting Structure</th>
<th>Population Restrictions</th>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data is updated two times a year. All newly available data is added during each update.</td>
<td>The Data Explorer visualizes the 134 HV2020 indicators using maps, tables, and trends of regional and statewide data. You can view a map for each year of data and a trend graph that shows the state trend and the trend in a selected region. Map, table, and trend graphs all reflect the same data. Community profiles display data points for a specific geography. Currently there are four community profiles reflecting Department priorities. These are a mix of HV2020 indicators and other indicators.</td>
<td>Surveillance measures are calculated similarly to the corresponding Healthy People measures. This means numbers are age-adjusted and could slightly differ from crude calculations. More information is available in the Data Notes section of the Maps and Trends pages.</td>
<td>Allows public access to local and trend data of the Health Department’s Healthy Vermonters Goals. These pages allow for transparency of Health Department goals and activities.</td>
<td>At this time data the HV2020 data is presented by measure, and all regional subgroup information is presented together on one page. Only a few select indicators are viewable for a given region in one location.</td>
</tr>
</tbody>
</table>

## Data Sources Referenced

- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behaviors Survey (YRBS)
- U.S. Census data
- Healthcare Workforce Census
- Vital Statistics
- Pregnancy Risk Assessment Monitory Survey (PRAMS)
- Asthma Call Back Survey (ACBS)
- Vermont Uniform Hospital Discharge Data Set (VUHDDS)
- Women Infants and Children (WIC) data
- Adult Tobacco Survey (ATS)
- National Survey on Drug Use and Health (NSDUH)
- School Nurses’ Report

## Index of Topics

- Access to Health Services
- Arthritis & Osteoporosis
- Cancer
- Diabetes & Chronic Kidney Disease
- Early Childhood Screening
- Environmental Health & Food Safety
- Family Planning
- Heart Disease & Stroke
- HIV & STD
- Immunization & Infectious Disease
- Injury & Violence Prevention
- Maternal & Infant Health
- Mental Health
- Nutrition & Weight Status
- Older Adults
- Oral Health
- Physical Activity
- Public Health Preparedness
- Respiratory Diseases
- School Age Health
- Social Determinants of Health
- Substance Abuse
- Tobacco Use
**Tobacco Use**

Percent of adolescents in grades 9-12 who smoke cigarettes; YRBS, 2015

*This is a Healthy Vermonters 2020 objective*

<table>
<thead>
<tr>
<th>Counties (2015)</th>
<th>YRBS, Indicator Value</th>
<th>Statistically Compared to State</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADDISON</td>
<td>12</td>
<td>Same</td>
</tr>
<tr>
<td>BENNINGTON</td>
<td>10</td>
<td>Same</td>
</tr>
<tr>
<td>CALEDONIA</td>
<td>17</td>
<td>Worse</td>
</tr>
<tr>
<td>CHITTENDEN</td>
<td>8</td>
<td>Better</td>
</tr>
<tr>
<td>ESSEX</td>
<td>20</td>
<td>Worse</td>
</tr>
<tr>
<td>FRANKLIN</td>
<td>11</td>
<td>Same</td>
</tr>
<tr>
<td>GRAND ISLE</td>
<td>7</td>
<td>Same</td>
</tr>
<tr>
<td>LAMOILLE</td>
<td>11</td>
<td>Same</td>
</tr>
<tr>
<td>ORANGE</td>
<td>12</td>
<td>Same</td>
</tr>
<tr>
<td>ORLEANS</td>
<td>12</td>
<td>Same</td>
</tr>
<tr>
<td>RUTLAND</td>
<td>8</td>
<td>Better</td>
</tr>
<tr>
<td>WASHINGTON</td>
<td>10</td>
<td>Same</td>
</tr>
<tr>
<td>WINDHAM</td>
<td>11</td>
<td>Same</td>
</tr>
<tr>
<td>WINDSOR</td>
<td>10</td>
<td>Same</td>
</tr>
</tbody>
</table>

**INSTRUCTIONS:** This webpage is interactive. To sort, click table column headings. To display data on the TREND chart, select the table, map, or legend (ctrl-click for multiple selections). To watch a slideshow of changes over time, click Play on the ANIMATION bar below.

**About this indicator**

Survey Question: Students who answered ‘1 or more’ to, ‘During the last 30 days, on how many days did you smoke cigarettes?’

**TREND** - To view trend, scroll over tables, map, or legend
### Social Vulnerability Index (SVI)

<table>
<thead>
<tr>
<th>Controller</th>
<th>Vermont Department of Health, Environmental Public Health Tracking and Health Surveillance GIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>Pete Young  <a href="mailto:Peter.young@Vermont.gov">Peter.young@Vermont.gov</a>; 802-652-2062</td>
</tr>
<tr>
<td>Years of Data Included</td>
<td>2011-2015</td>
</tr>
<tr>
<td>Geographies Displayed</td>
<td>Census Tract</td>
</tr>
</tbody>
</table>

#### Data Tool Updates

The tool has been updated once since the SVI’s creation (2 years after the original). ACS data uses 5 years combined and is released annually.

#### Reporting Structure

This SVI draws together 16 different measures of vulnerability in three different themes: socioeconomic vulnerability, demographic vulnerability, and housing/transportation vulnerability. For every measure, census tracts above the 90th percentile, or the most vulnerable 10%, are assigned a flag. The overall vulnerability index is created by counting the total number of flags in each census tract. Each SVI measure map is displayed with 6 classes of data. These 6 classes are broken into quantiles, meaning each class has the same number of census tracts. In this way, the three lower classes are below the state median and the three higher classes are above the state median. Census Tracts with a Relative Standard Error of 30% or higher were marked with a caution symbol. Due to high uncertainty, these values should be considered with caution.

#### Population Restrictions

ACS data is collected by the US Census. Five year combined data is used to create population and demographic estimates at the census tract level.

#### Strengths

Planning tool to evaluate the relative vulnerability of populations in different parts of the state. It can be consulted in the event of an emergency, either natural or man-made, to identify populations that may need more assistance.

#### Limitations

It is important to remember that this Social Vulnerability Index is just a first step in screening for populations that may be more or less vulnerable. Depending on the situation, different measures could be more or less important and should be looked at more closely. Lastly, local information might be more accurate than these estimates and should always be considered if it is available.

#### Data Sources Referenced

American Community Survey (ACS)

#### Index of Topics

- **Socioeconomic**
  - Poverty
  - Unemployment
  - Per capita income
  - Education
  - Health Insurance

- **Demographic**
  - Children
  - Elderly
  - Disability
  - Single Parent
  - Minority
  - Limited English

- **Housing/Transportation**
  - Large apartment buildings
  - Mobile homes
  - Crowding
  - No Vehicle
  - Group quarters
Social Vulnerability Index (continued)

Vermont Social Vulnerability Index (SVI)
*Based upon 2011-2015 American Community Survey data

This map shows: the number of vulnerability measures above the 90th percentile for Vermont census tracts. For each of the vulnerability measures, census tracts in the 90th percentile of vulnerability were assigned a flag. This SVI exhibits the sum of all flags for each census tract. There are a total of 16 measures in the SVI.

For More Information (PDF) About the SVI...
For More Information (Video) About the SVI...

View maps showing individual SVI Measures:
Socioeconomic Theme
Demographic Theme
Housing/Transportation Theme

Vermont has 183 populated census tracts. These are divided into 6 groups by vulnerability measure flags:
57 tracts have 0 flags
48 tracts have 1 flag
37 tracts have 2 flags
17 tracts have 3 flags
10 tracts have 4 flags
3 tracts have 5 flags
5 tracts have 6 flags
4 tracts have 7 flags
1 tract has 8 flags
1 tract has 9 flags

The darker blue categories on this map are census tracts where there are more flagged socioeconomic variables, while the lighter yellow categories have fewer flags.