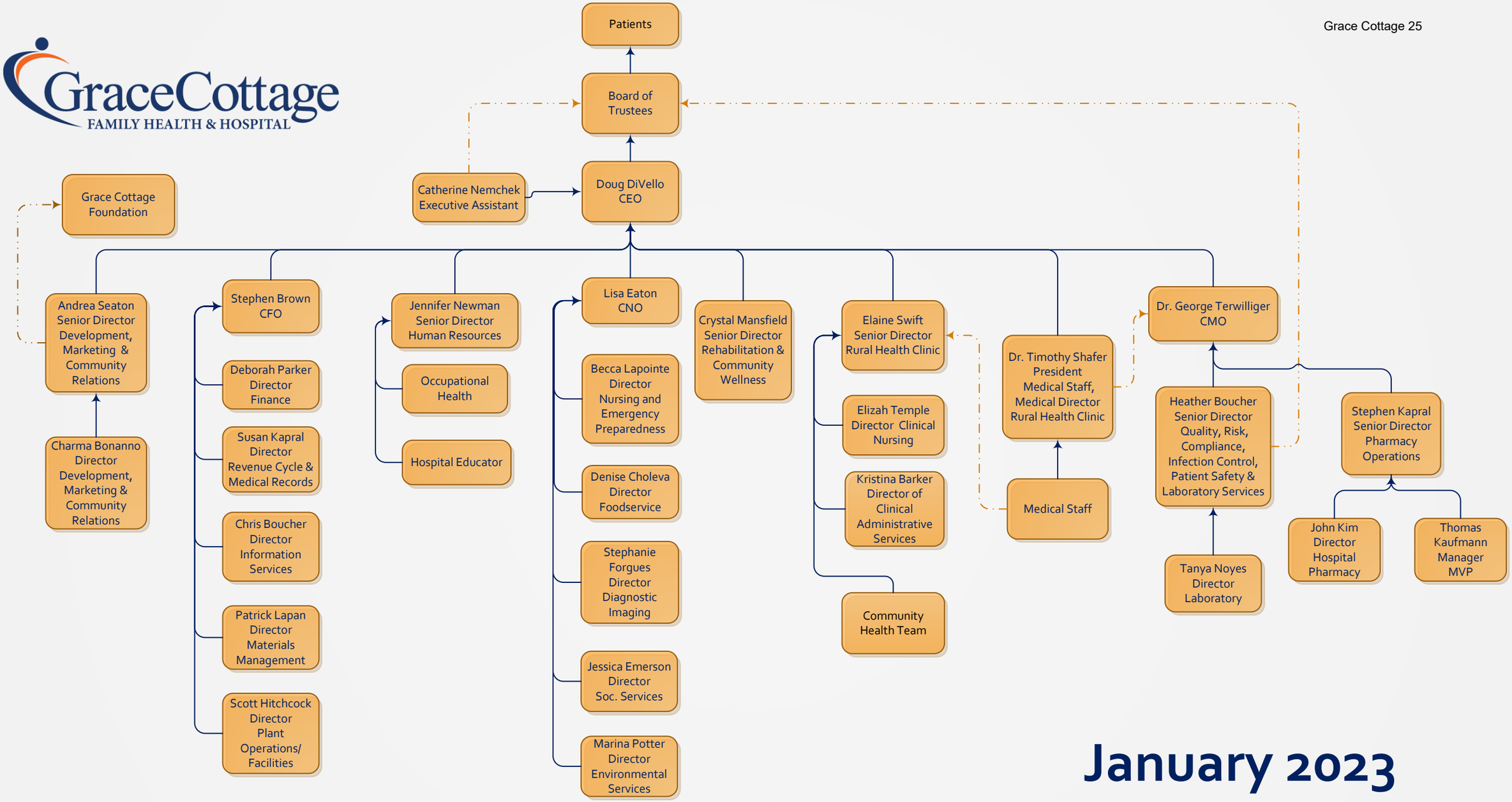
Appendix A

GraceCottage
FAMILY HEALTH & HOSPITAL



January 2023

Privacy Officer: Susan Kapral Ext 3626
IT Security Officer: Chris Boucher Ext 3692
Compliance Officer: Heather Boucher Ext 3707
Anonymous Compliance Hotline: 802-365-3636

Appendix B

E1 LEVEL 2 - ORIGINAL CONDITIONS
A1.0 1/8" = 1'-0"

J1 LEVEL 1- ORIGINAL CONDITIONS
A1.0 1/8" = 1'-0"

COMPLIANCE KEY

- NO
- NOT APPLICABLE
- YES

NOTE: COMPLIANCE ABOVE IS A REFLECTION OF *EITHER* ADA OR FGI COMPLIANCE/ NON-COMPLIANCE. PLEASE SEE CORRESPONDING SPACE PROGRAM COMPARISON DOCUMENT FOR COMPLIANCE COMMENTS.

Grace Cottage 27

LAVALLEE BRENSINGER ARCHITECTS
Boston | Manchester | Portland
155 Dow Street, Suite 400, Manchester, NH 03101
603.622.5450
www.LBPA.com

GRACE COTTAGE FAMILY HEALTH

Grace Cottage HOSPITAL

185 Grafton Rd, Townshend, VT
05353

NO.	DESCRIPTION	DATE

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL

CONTENT:	EXISTING CLINIC FLOOR PLANS
DRAWN BY:	SH
PROJECT NO:	21-101-00
DATE:	03/31/2022
REVISED:	
SCALE:	1/8" = 1'-0"
	A1.0
Project Phase	CON SUBMISSION

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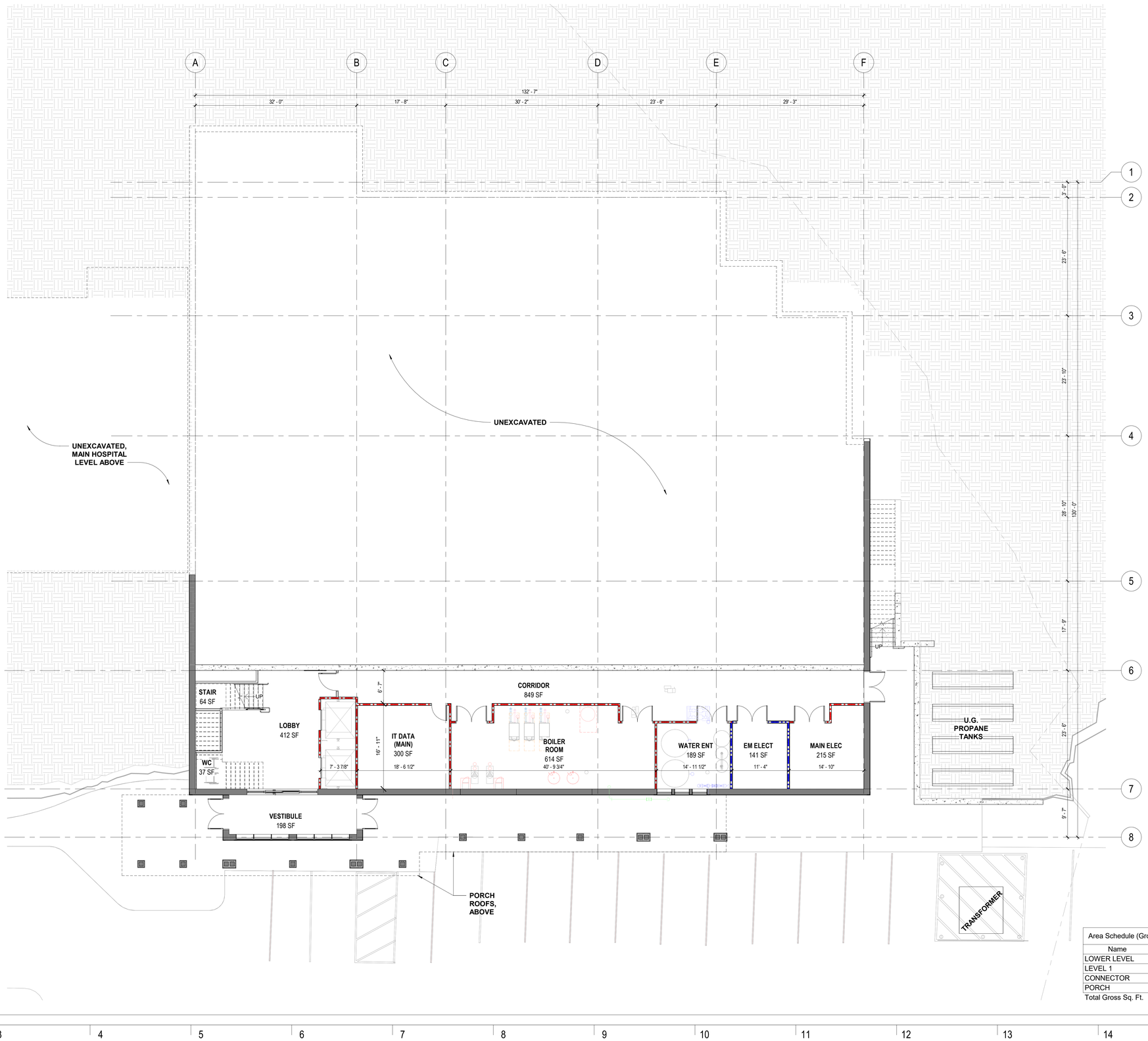

Area Schedule (Gross Building)	
Name	Area
LOWER LEVEL	3732 SF
LEVEL 1	16080 SF
CONNECTOR	746 SF
PORCH	1399 SF
Total Gross Sq. Ft.	21958 SF

J1 LOWER LEVEL - PROPOSED
A1.1 1/8" = 1'-0"

Grace Cottage 28

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GRACE COTTAGE FAMILY HEALTH

GraceCottage HOSPITAL

185 Grafton Rd, Townshend, VT 05353

NO.	DESCRIPTION	DATE

CONTENT: LOWER LEVEL PLAN

DRAWN BY:	BY, SH
PROJECT NO:	21-101-00
DATE:	03/31/2022
REVISED:	
SCALE:	1/8" = 1'-0"

A1.1

Project Phase
CON SUBMISSION

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

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GRACE COTTAGE FAMILY HEALTH

GraceCottage HOSPITAL

185 Grafton Rd, Townshend, VT 05353

NO.	DESCRIPTION	DATE

FIRE PUMP HOUSE 150 SF
CISTERN
50' SETBACK
VESTIBULE 85 SF
STAFF BREAKROOM 451 SF
CONFERENCE 213 SF
STORAGE 130 SF
CONNECTOR 615 SF
ENTRY
TOILET
STAFF
STORAGE
BILL BERRY MEETING ROOM
TOILET
HALL
COMMUNITY DINING ROOM
CRISPE PORCH MEETING AND DINING ROOM
RECEPTION
SERVING
CRISPE PORCH PATIENT AND FAMILY ROOM
COOLER
KITCHEN
DRY GOODS
CORRIDOR 409 SF
EM ELEC 60 SF
BIO 17 SF
ELEC RM 60 SF
TOILET 57 SF
TOILET 57 SF
GAS CYL 53 SF
EVS/STOR 70 SF
IT DATA 105 SF
PAT CARE CRD OFFICE 91 SF
PAT CARE CRD OFFICE 91 SF
CHECK-IN 186 SF
WORK RM 80 SF
CHECK-OUT/PCC 188 SF
WAITING 308 SF
LOBBY 745 SF
OPEN STAIR 282 SF
PATIENT TOILET 64 SF
PATIENT TOILET 63 SF
PAT RES ADV 110 SF
COM HEALTH 110 SF
LICSW 110 SF
BH NURSE 110 SF
SUB WAITING 66 SF
CORR 203 SF
SPOKE 110 SF
COM HEALTH 110 SF
PYSCH NP 110 SF
PYSCH NP 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
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PROVIDER 60 SF
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PROVIDER 60 SF
PROVIDER 60 SF
PROVIDER 60 SF
PROVIDER 60 SF
PROVIDER 60 SF
PROVIDER 58 SF
PROVIDER 60 SF
PROVIDER 60 SF
TEAM ROOM 790 SF
COAT 16 SF
MED RM 124 SF
EQUIP 23 SF
EQUIP 25 SF
CORRIDOR 2351 SF
STAFF TOILET 60 SF
EQUIP 24 SF
MED RM 120 SF
TEAM ROOM 828 SF
COAT 16 SF
EQUIP 24 SF
SCH SUPER OFFICE 105 SF
SCHEDULERS/TRIAGE 426 SF
PATIENT TOILET 80 SF
PATIENT TOILET 80 SF
POC 171 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
EXAM RM 110 SF
TREATMENT RM 180 SF
CONSULT 114 SF
SOILED 123 SF
CLEAN SUPPLY 140 SF
NURSE MGR 100 SF
PRACTICE DIR 100 SF
ADMIN ASST 85 SF
STAFF TOILET 60 SF
GENERATOR
RETAINING WALLS
(4) U.G. PROPANE TANKS
TRANSFORMER
GEN 7
GEN 2 & 3

Area Schedule (Gross Building)

Name	Area
LOWER LEVEL	3732 SF
LEVEL 1	16080 SF
CONNECTOR	746 SF
PORCH	1399 SF
Total Gross Sq. Ft.	21958 SF

J1 LEVEL 1 - PROPOSED
A1.2 1/8" = 1'-0"

CONTENT: LEVEL 1 PLAN
DRAWN BY: BY, SH
PROJECT NO: 21-101-00
DATE: 03/31/2022
REVISED:
SCALE: 1/8" = 1'-0"
A1.2
Project Phase
CON SUBMISSION

FOR ADDITIONAL INFORMATION, REFER TO PROJECT MANUAL.

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Appendix C

GraceCottage FAMILY HEALTH & HOSPITAL

LAVALLEE | BRENSINGER ARCHITECTS

Existing & New Clinic Building
Townshend, Vermont

Updated: 03/31/2023

KEY:	
YES	
NO	
NOT APPLICABLE	

New Clinic (Expansion) Space Program

Existing Clinic Space Program

Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Compliance Comments
Patient Reception, Amenities, and Education Space												
Sheltered Canopy drop-off						NONE EXISTING						
Vestibule	1	198	198			North Vest	1	50	50			Stairs are entryway into this space, no ramp.
Lobby	1	312	312			NONE EXISTING						
Concierge / Security Desk / Greeter	1	100	100			NONE EXISTING						
Wheelchair storage	1	37	37			NONE EXISTING						
Conference Room (Patients and Staff)	1	213	213			NONE EXISTING						
Waiting Room	1	308	308			Central Waiting Room	1	287	287			Has 2 chairs for IOS.
NOT REQ'D IN PROPOSED						North Waiting Room	1	119	119			Has 1 chairs for IOS.
NOT REQ'D IN PROPOSED						Waiting Resp Patients	1	124	124			Can accommodate chair for IOS.
Public Toilet (Single Occupancy)	2	65	130			(See PT Tlt D)						
Subtotal Net			1,298									
Net:Gross	0.45		584									
Subtotal			1,882	sf								
Registration (Central)												
Registration Station (check-in)	2	90	180			North Reception/Check-in	1	93	93			Lack of high/ low counter on patient side.
Registration Station (check-out)	2	90	180			Central Reception/Check-in	1	82	82			
Registration Work Room	1	80	80			NONE EXISTING						
Scheduling Supervisor	1	110	110			Scheduling Office	1	32	32			Lack of ADA clearances.
Schedulers (5) / Triage Nurse (1)	1	410	410			Scheduling Center	1	338	338			
Patient Care Coordinator (2 people)	1	90	90			NONE EXISTING						
Sub-waiting for Check-out	1	65	65			NONE EXISTING						
Subtotal Net			1,115									
Net:Gross	0.45		502									
Subtotal			1,617	sf								
Patient Care Team (Work Space)												

Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Compliance Comments
Care Team - Primary Care												
Physicians	7	60	420			Office	1	93	93			Some existing offices have ADA compliance issues with turning radius and/or door approach. Most pathways to offices (including Second Floor) are not ADA compliant.
PA / NP	6	60	360			Office	1	103	103			
RN	6	36	216			Office	1	107	107			
MA/LPN	4	36	144			Office	1	118	118			
Flexible Work Station	3	36	108			Workstation (3)	1	138	138			
NOT REQ'D IN PROPOSED						Office	1	99	99			
Pyschiatric Nurse Practitioner	1	110	110			BH Consult	1	181	181			
Pyschiatric Nurse Practitioner	1	110	110			BH Consult	1	187	187			
LICSW (Social Worker)	1	110	110			Social Worker	1	112	112			
Behavioral Health Nurse	1	110	110			BH Check-in/Intake	1	81	81			
Community Health	1	110	110			Provider Office	1	116	116			See above.
Community Health	1	110	110			Shared Office	1	113	113			
NOT REQ'D IN PROPOSED						Diabetes Edu	1	107	107			See above.
NOT REQ'D IN PROPOSED						Shared Office	1	112	112			
Spoke (1 also LISCW above)(3 people)	1	110	110			Spoke	1	122	122			
Work Area / Coat Closet	2	20	40			NONE EXISTING						
Group Support Team												
Nurse Manager	1	100	100			Director of Nursing Office	1	248	248			
Practice Director	1	100	100			NONE EXISTING						
Admin Assistant	1	85	85			Reception	1	85	85			
Patient Resource Advocate	1	110	110			NONE EXISTING						
NOT REQ'D IN PROPOSED						Work Area	1	75	75			
NOT REQ'D IN PROPOSED						IT Manager	1	130	130			
NOT REQ'D IN PROPOSED						Computer Services Office	1	423	423			See above.
NOT REQ'D IN PROPOSED						Shared Financial Office	1	194	194			
NOT REQ'D IN PROPOSED						CFO Office	1	198	198			
NOT REQ'D IN PROPOSED						CEO Office	1	197	197			
NOT REQ'D IN PROPOSED						CMO Office	1	107	107			
NOT REQ'D IN PROPOSED						Quality & Risk Office	1	85	85			
NOT REQ'D IN PROPOSED						Quality & Risk Office	1	85	85			
NOT REQ'D IN PROPOSED						Quality & Risk Office	1	94	94			
NOT REQ'D IN PROPOSED						Quality & Risk Office/Infection Control	1	162	162			
Subtotal Net			2,453									
Net:Gross	0.45		1,104									
Subtotal			3,557	sf								

Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Compliance Comments
Patient Care (Clinical)												
Exam Room	1	110	110			Exam Rm 1	1	111	111			Exam rooms are required to have a handwashing sink, and provide 80 sq of *clear floor area,* while also meeting exam table clearances (32" at sides and foot of exam table), per FGI. Most pathways to exam rooms are not ADA compliant.
Exam Room	1	110	110			Exam Rm 2	1	109	109			
Exam Room	1	110	110			Exam Rm 3	1	106	106			
Exam Room	1	110	110			Exam Rm 4	1	106	106			
Exam Room	1	110	110			Exam Rm 6	1	94	94			
Exam Room	1	110	110			Exam Rm 7	1	105	105			
Exam Room	1	110	110			Exam Rm 8	1	120	120			
Exam Room	1	110	110			Exam Rm 9	1	136	136			
Exam Room	1	110	110			Exam Rm A	1	96	96			
Exam Room	1	110	110			Exam Rm B	1	127	127			
Exam Room	1	110	110			Exam Rm C	1	152	152			
Exam Room	1	110	110			Exam Rm D	1	197	197			
Exam Room	1	110	110			Exam Rm E	1	166	166			
Exam Room	1	110	110			NONE EXISTING						
Exam Room	1	110	110			Exam Rm G	1	135	135			
Exam Room	1	110	110			Exam Rm H/Office	1	114	114			
Exam Room	1	110	110			Exam	1	58	58			See above.
Exam Room	1	110	110			Exam	1	59	59			See above.
Exam Room	1	110	110			NONE EXISTING						
Isolation Exam Room	1	110	110			NONE EXISTING						
Treatment Room	1	180	180			NONE EXISTING						
Consult Room	1	110	110			NONE EXISTING						
NOT REQ'D IN PROPOSED						Meds	1	128	128			Meds room cannot be shared with entrances to Exam Rooms.
Medication Room	2	120	240			Med Alcove	1	25	25			Due to proximity to circulation path, existing Med Alcove does not meet current FGI requirements.
Soiled Utility / Soiled Holding	1	120	120			Linen Services	1	410	410			Not accessible within these rooms, except for Washer & Dryer Room.
NOT REQ'D IN PROPOSED						Sterilizer	1	123	123			

Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Compliance Comments
NOT REQ'D IN PROPOSED						Intake	1	80	80			
NOT REQ'D IN PROPOSED						Intake A	1	35	35			Not accessible within room.
Point of Care Testing	1	110	110			POC/Lab & Nurse Sta	1	155	155			
NOT REQ'D IN PROPOSED						POC Testing	1	41	41			Not accessible within room.
NOT REQ'D IN PROPOSED						Central Nurse Station C	1	239	239			
Patient Toilet	1	60	60			Patient Toilet A	1	59	59			Existing Toilet Room layouts cannot accommodate turning T, door approach, and/or are not appropriate to accommodate Individuals of Size (IOS).
Patient Toilet	1	60	60			Patient Toilet B	1	22	22			See above.
NOT REQ'D IN PROPOSED						Patient Toilet C	1	30	30			See above.
NOT REQ'D IN PROPOSED						Patient Toilet D	1	49	49			See above.
NOT REQ'D IN PROPOSED						Patient Toilet E	1	28	28			See above.
NOT REQ'D IN PROPOSED						Patient Toilet F	1	25	25			See above.
NOT REQ'D IN PROPOSED						Patient Toilet H	1	26	26			See above.
Clean Supply	1	140	140			NONE EXISTING						
Emergency Stations (Alcoves)	1	6	6			NONE EXISTING						
Equipment Alcove	2	25	50			NONE EXISTING						
Subtotal Net			3,276									
Net:Gross	0.45		1,474									
Subtotal			4,750	sf								
Staff Support Services												
Staff Entrance	1	85	85			NONE EXISTING						
Staff Break Room	1	450	450			NONE EXISTING						
Staff Toilet	1	60	60			Staff Toilet A	1	38	38			Room layout(s) cannot accommodate turning T and/or door approach.
Staff Toilet	1	60	60			Staff Toilet B	1	56	56			See above.
Staff Toilet	1	60	60			Toilet	1	58	58			See above.
Staff Toilet	1	60	60			Staff Toilet D	1	35	35			See above.
NOT REQ'D IN PROPOSED						Staff Toilet E	1	30	30			See above.
Time clock alcove	1	6	6			NONE EXISTING						
Subtotal Net			781									
Net:Gross	0.45		351									
Subtotal			1,132	sf								

Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Room / Space	#	Area	Total Area	FGI Compliant	ADA Compliant	Compliance Comments
Building Support												
EVS / Storage	1	70	70			Housekeeping/ Storage	1	60	60			
Hazardous Bio Waste	1	17	17			NONE EXISTING						
Portable Gas Cylinder Storage	1	53	53			NONE EXISTING						
Building Storage Room	1	130	130			Storage & Kitchen Storage	1	614	614			
Subtotal Net			270									
Net:Gross	0.45		122									
Subtotal			392	sf								
Building Systems												
Boiler Room	1	600	600			N/A (Hospital Expansion)						
Water Service Entrance	1	189	189			N/A (Hospital Expansion)						
Fire Pump Room	1	150	150			Fire Pump	1	170	170			
Main Electrical	1	215	215			N/A (Hospital Expansion)						
Emergency Electrical Room	1	150	150			N/A (Hospital Expansion)						
Electrical Closets	2	64	128			N/A (Hospital Expansion)						
Emergency Electrical Closets	2	64	128			N/A (Hospital Expansion)						
IT Data Room (Main)	1	300	300			IT Server Room	1	162	162			
IT Data Room	1	105	105			NONE EXISTING						
Subtotal Net			1,965									
Net:Gross	0.45		884									
Subtotal			2,849	sf								
Vertical Transportation, Connector												
Connector	1	615	615			Stair A	1	35	35			Elevator access provided.
NOT REQ'D IN PROPOSED						Stair B	1	42	42			See above.
NOT REQ'D IN PROPOSED						Stair C	1	32	32			No elevator provided.
Main Stair (1) & Elevators	2	275	550			Stair D	1	48	48			No elevator provided.
Subtotal Net			1,165									
Net:Gross	0.45		524									
Subtotal			1,689	sf								

Appendix D

2021 Community Health Needs Assessment

GraceCottage
FAMILY HEALTH & HOSPITAL

Table of Contents

Introduction

This report presents the findings of a comprehensive 2021 Community Health Needs Assessment (CHNA) for residents of Windham County and surrounding towns within the Grace Cottage Family Health & Hospital service area. It identifies significant health needs (SHNs) in our community and establishes priorities that the Grace Cottage Medical Executive Team and the Leadership Team has chosen based on an analysis of the findings. An Implementation Plan will be developed in the coming months to address the established priorities.

Grace Cottage first began conducting assessments of the healthcare needs of the community in 2004. As in 2012, 2015, and 2018, Grace Cottage conducted its 2021 Community Health Needs Assessment in partnership with the two other Windham County hospitals, Brattleboro Memorial Hospital and the Brattleboro Retreat. The Vermont Department of Health – Brattleboro Office actively assisted in this project.

While the population health data and resident survey results compiled in this report were prepared in collaboration with the institutions listed above, each of the three hospitals has established its own priorities and implementation strategies. The CHNA findings presented herein provide the most recent, comprehensive data regarding the healthcare issues, conditions and concerns of Windham County residents. The data is available to local health and human services organizations and to the public at large.

This 2021 CHNA complies with IRS Regulations promulgated under the Patient Protection and Affordable Care Act. By law, it is required to be conducted every three years.

This report was approved by the Grace Cottage Board of Trustees at their July 16, 2021, meeting. The associated CHNA Implementation Plan was presented to the Board for approval at their November 19, 2021, meeting. The Report is available to the public on the Grace Cottage website, gracecottage.org.

About Grace Cottage

Grace Cottage Family Health & Hospital is an independent, non-profit healthcare facility located in Townshend, VT.

Grace Cottage Family Health is a Federally-certified Rural Health Clinic. Its nine practitioners provide primary care, pediatrics, geriatrics, and mental health services to more than 7,000 individual patients annually. The Community Health Team at Grace Cottage Family Health works closely with the medical providers and includes an RN Care Coordinator, an RN Diabetes Educator, and a Health Resource Advocate.

Grace Cottage Hospital is a 19-bed inpatient facility for acute and rehabilitative care. It is equipped with a 24-hour emergency department for critical care treatment, a hospice suite, and rehabilitation, laboratory and diagnostic imaging departments. Patients benefit from our hospitalist program whereby doctors serve in weekly rotations on a full-time basis, overseeing patients' care and communicating with patient and family members on matters such as lab results, changes in medication, discharge needs, and more. Outpatient rehabilitation, lab tests, and diagnostic imaging services are open to members of the public with a written doctor's order.

The Grace Cottage Hospital Community Wellness Center offers a variety of free and low-cost classes and support groups for the public (discontinued during the 2020-21 COVID-19 pandemic).

In 2017 and again in 2018, Grace Cottage was recognized as a Top 20 Critical Access Hospital in the USA for Patient Satisfaction by the National Rural Health Association. In 2021, Grace Cottage was certified as an "Age-Friendly Health System" by the Institute for Healthcare Improvement for its excellence in caring for older patients.

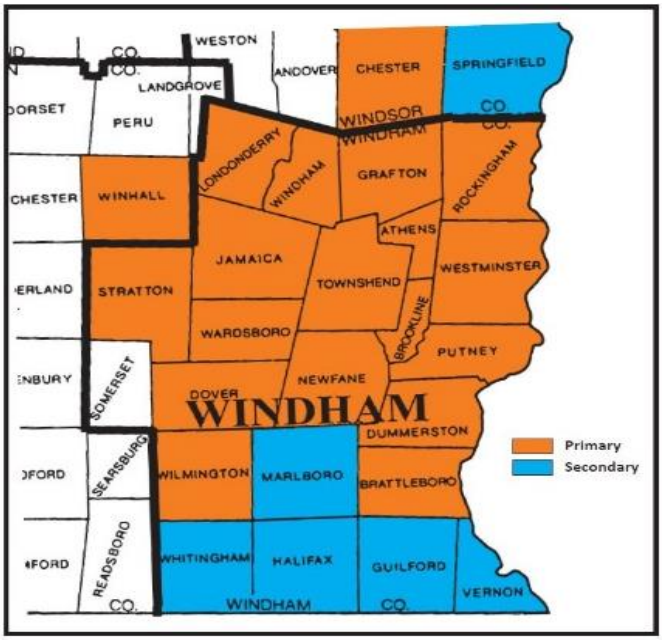
Grace Cottage Service Area[1]

Grace Cottage Family Health & Hospital is located on Grafton Road (Route 35) in Townshend, VT. Townshend is in the geographic center of Windham County, which is located in the southeastern corner of the state, bordered by New Hampshire and Massachusetts.

Grace Cottage identified its Primary and Secondary Service Areas by reviewing the towns of residence of our patients, and by considering the proximity of towns to Townshend. On the chart to the right, towns and affiliated villages are listed in order, based on the percentage of patients coming from each town.

The map below shows towns highlighted as primary or secondary service areas. The vast majority of our patients are Windham County residents. Therefore, for the sake of continuity, and in order to share our findings with our CHNA partners most effectively, we decided to report on the health needs of all Windham County residents. On the following pages, the demographic, economic and population health data represents the Windham County population.

The results of our Community Health Needs Assessment survey, conducted in conjunction with our Brattleboro-based partners, reflect the entire group of 2,194 people who completed the survey; the vast majority of these are Windham County residents.



Grace Cottage Unique Patients 2020-21	
Numbers represent the total # of unique patients with at least one encounter in any GC dept. Feb. 2020 thru Jan. 2021	
Grand Total	**100.0%**
	% of Total Patients
PRIMARY SERVICE AREA	**82.4%**
Brattleboro	13.7%
Townshend/W Townshend	13.5%
Newfane/S Newfane	12.5%
Wardsboro/W Wardsboro	6.3%
Jamaica	5.7%
Rockingham/Saxtons River/Bellows Falls	4.4%
Putney	4.4%
E Dover/W Dover	4.0%
Londonderry/S Londonderry	3.8%
Chester	3.7%
Grafton/Cambridgeport	3.6%
Winhall/Bondville	2.4%
Wilmington	1.7%
Dummerston/W Dumm/E Dumm	0.7%
Westminster	0.6%
Brookline	0.5%
Athens	0.4%
Stratton	0.1%
Windham	0.1%
SECONDARY SERVICE AREA	**3.5%**
Vernon	1.2%
Springfield/N Springfield	0.9%
Whitingham/Jacksonville	0.5%
Marlboro	0.4%
Guilford	0.2%
Halifax	0.1%
BEYOND	**14.2%**
Hinsdale, NH	0.6%
Manchester	0.5%
Weston	0.3%
Chesterfield, NH	0.3%
Keene, NH	0.3%
Walpole, NH	0.2%
Bennington	0.2%
OTHER (0.1% or less):	11.8%

Executive Summary

On June 9, 2021, the Grace Cottage Senior Leadership Team, together with the Medical Executive Committee, reviewed and discussed the statistical demographic information that appears on the following pages of this report, comparing it to their clinical experience with patients. They also reviewed the results of the 2021 Community Health Needs Assessment survey, especially the top ten health concerns of the community, as follows:

Significant Community Health Needs Identified by the CHNA Survey

Health Issues & Conditions:

- Arthritis
- Basic Needs (housing, food access, income)
- Cancer (all kinds)
- Healthy Aging
- High Blood Pressure (hypertension)
- Mental Health (anxiety, depression, stress, etc.)
- Physical Fitness
- Social isolation
- Substance Use/Abuse
- Weight Management/Obesity

Barriers To Achieving Good Health:

- Financial Constraints
- Shame (cited as top barrier to seeking help for addiction)
- Time Constraints (many respondents said they are “too busy” to exercise)
- Transportation Limitations

Priorities Established by Grace Cottage Leadership

At the June 9, 2021 meeting, the group ranked the significant community health issues and conditions listed above, establishing the priorities that Grace Cottage will address over the next three years.
Criteria used to prioritize the identified significant health needs included:

- The importance placed by the community on the need
- The severity or urgency of the Significant Health Needs (SHN)
- Alignment with Grace Cottage’s strengths and established priorities
- The ability of Grace Cottage to impact the SHN within a reasonable timeframe
- The feasibility and effectiveness of possible intervention
- The ability to measure outcomes
- The availability of other resources to address the SHN
- The financial resources and human resources required
- Health disparities associated with the need (e.g. race/ethnicity, gender)
- Whether addressing this SHN will have a positive impact on other identified SHNs

[1] Notes for Service Area chart, p.2: %s rounded to nearest tenth of a percent. * Town of patient's mailing address. Population Data Sources: VT: healthvermont.gov/sites/default/files/documents/xls/HS-STAT-Population-of-Vermont-towns-1930-2019.xls; NH: nh.gov/osi/data-center/documents/population-estimates-2019.csv; NYC; census.gov/quickfacts/fact/table/newyorkcitynewyork,NY/PST045219

The chart below shows Grace Cottage's ranked priorities, which will be the focus of services for the next three years. Grace Cottage's CHNA Implementation Plan will provide details of how these priorities will be addressed.

Level 1 Priorities:
• **Mental Health Issues (anxiety, depression, social isolation, stress)**
• **Substance Abuse**
• **Nutritional Fitness/Diabetes**
Level 2 Priorities:
• **Healthy Aging**
• **High Blood Pressure (Hypertension)**
• **Cancer (especially Colon Cancer)**
Level 3 Priorities:
• **Arthritis**
• **Basic Needs (housing, food access, income)**
• **Physical Fitness**

In November of 2021, the Grace Cottage Leadership Team will present an Implementation Plan to the Hospital Board of Trustees to address Level 1 and Level 2 Priorities noted above. Over the next three years, we will report annually on our progress with these issues. The Implementation Plan and the annual update will be posted on our website.

We will not prepare formal strategies for tackling the Level 3 Priorities listed above for the following reasons:

- Grace Cottage's Outpatient Rehabilitative Services already provides physical and occupational therapy for those dealing with arthritis. This will continue, and we do not plan to add other arthritis programs.
- Grace Cottage's Community Health Team members (RN Care Coordinator and Resource Advocate) provide information and help patients access basic needs assistance programs. Grace Cottage Family Health & Hospital also hosts and provides volunteers for a monthly VeggieVanGo free food distribution organized by the Vermont Foodbank. In addition, Grace Cottage offers free- and reduced-fee care for those who quality, thus helping to reduce the burden of healthcare costs for those most in need. These efforts will continue, but Grace Cottage does not have the financial or staff capacity to add new assistance programs.
- Grace Cottage's Community Wellness Center suspended its yoga, Strong Bones, and other fitness classes during the COVID-19 pandemic, but we expect to resume these classes as soon as it is safe to do so. Additional classes may be offered over the next three years, but no major program expansion is anticipated.

We will address all community health needs, and every individual's unique health needs, within the context of our mission and clinical strengths and will work hard to achieve significant positive results.

Thank You to Our Partners

We would like to thank our partners at Brattleboro Memorial Hospital and the Brattleboro Retreat for working together with us to conduct the Community Health Needs Assessment survey and to report on its findings. In addition, Brattleboro Memorial Hospital staff reached out to local social service organizations for the information that appears at the end of this report. We would also like to thank all of the community partners who provided input into the 2021 Community Health Needs Assessment. In particular, we thank the Vermont Department of Health—Brattleboro District for its generous sharing of statistical data, insight, and support in preparing this report.

How Data Was Obtained

Grace Cottage Family Health & Hospital conducted a collaborative Community Health Needs Assessment in partnership with Brattleboro Memorial Hospital, the Brattleboro Retreat, and the Vermont Department of Health. The Windham County Community Health Needs Assessment (CHNA) Steering Committee formed and began meeting In October 2020. The group met at least monthly over the next ten months.

The data collection process took place from January through June 2021. CHNA surveys were available from mid-March to mid-May 2021. The largest portion of the surveys were completed by residents attending COVID-19 vaccination clinics at Grace Cottage and Brattleboro Memorial Hospital. Windham County social service agencies, including Groundworks Collective, which serves housing-insecure clients, also helped to distribute surveys to their clients. Surveys were also distributed by social media.

Sources of Data

This report consists of four primary sources of information:

- Demographic, geographic, economic, and population health data gathered on Windham County residents from a variety of sources, mostly accessed through the Vermont Department of Health's online databank
- Community Health Needs Assessment Survey results (See survey in the Appendix)
- Completed questionnaires submitted by social service agencies representing unique populations of Windham County residents (potentially medically underserved populations.)
- Group discussion and clinical experience of Grace Cottage healthcare providers and leadership

Since Grace Cottage did not receive any written comments regarding its 2018 CHNA Report or Implementation Plan, this was not part of the information collected.

Process for Consulting with Persons Representing the Community's Interests

The 2021 CHNA Steering Committee made significant efforts to assure that the needs and concerns of all segments of the Windham County population were heard, as described in survey efforts above.

Additionally, in the appendix of this report, information is provided from representatives of nine social service agencies and non-profit groups who were asked to identify the needs of the people in the community they serve, their barriers to achieving good health and well-being, and the resources available in the community to address their needs and barriers (see pages 84-94).

Limitations and Information Gaps

The data presented in this report has a few limitations.

First, this report used various secondary sources for information on demographic data, social and economic factors, health behaviors, and health outcomes. These various sources segment by geography in different ways. Some sources use county geography; others are by town. Accordingly, data sources may not be consistent in their geographic scope or reporting period, which limits comparisons. Although the most recent available data was used in this report, the secondary data may be several years old.

Second, the quantitative data collected in the surveys was self-reported. The advantage to self-reported data is that it provides the respondents' own views directly. Thus, the surveys provide respondents' perceptions of themselves and their world. Of course, the main disadvantage of self-reported data is that there is no independent verification of the respondents' answers. Self-reporting may suffer from recall bias, social desirability bias, and errors in self-observation. The survey attempted to correct for social desirability bias by asking questions that deflected the focus away from the respondent (i.e., respondents were first asked which health issues are of most concern to themselves and their family; this was followed by a question about the top health issues of the community).

Third, the consumer survey was not distributed to a random sample. Rather, respondents chose to participate in the survey (whether in hard-copy or online), and thus were a self-selected sample set. This means that one cannot extrapolate statistical conclusions based on the consumer survey results. That said, the consumer survey had very good participation results and was fairly representative of the demographics of the county population.

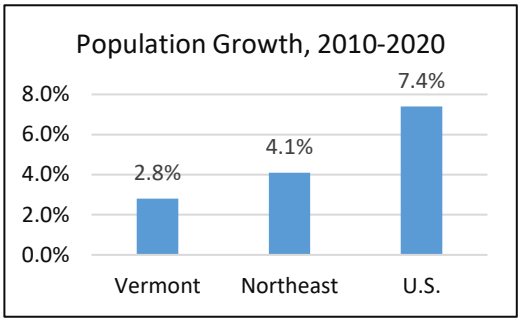
Grace Cottage Hospital

Windham County Demographics

Population Data

Vermont is second only to Wyoming, as the 2nd least populous of the 50 United States.

The concentration of the U.S. population is shifting away from Vermont and the Northeast. The Northeast and Midwest populations are increasing at a much slower pace than the South and the West. During the last decade, the U.S. population grew 7.4% (the lowest growth rate since 1940), while he Northeast's population grew by only 4.1%, and Vermont's grew by just 2.8% (an increase of only 17,336).[2]



The rural nature of Vermont brings challenges as well as benefits. A smaller population means fewer financial resources to support health care. Also, attracting medical providers can be difficult when more lucrative opportunities exist in urban areas. These, plus Vermont's mountainous geography, can affect health care access.

	Windham County 2019*	Windham County 2017**	Vermont	U.S.
Population	42,222	42,869	623,989	328,239,523
Population Density Per Square Mile (2010)	56.7	56.7	67.9	87.4
Population Change since April 2010	-5.1%	-3.7%	-0.3%	6.3%
Age Under 18	17.6%	18.0%	18.3%	22.3%
Age 18-64	58.5%	60.0%	61.7%	61.2%
Age 65 and Older	23.9%	2.0%	20.0%	16.5%
Race/White Alone	94.7%	93.0%	94.2%	76.3%
Race/Other	5.3%	7.0%	5.8%	23.7%
Female	51.1%	51.0%	50.6%	50.8%
Education High School Graduate (age 25+)	92.4%	91.5%	92.7%	88.0%
Education Bachelor's Degree or Higher (age 25+)	38.1%	35.3%	38.0%	32.1%
Median Household Income (2012-2016)	$51,985	$50,917	$61,973	$62,843
Per Capita Annual Income (2012-2016)	$32,535	$28,923	$34,577	$34,103
Persons in Poverty	11.6%	12.7%	10.2%	10.5%
(U.S. Census Quick Facts, July 1, 2019 estimates)				
** 2019 data is being used because 2020 Census data is not yet available. ** 2018 CHNA used 2017 Census data.*				

[2] https://www.census.gov/data/tables/time-series/dec/popchange-data-text.html

Has COVID-19 Caused a Population Boom?

During the 2020-2021 pandemic, the *New York Times*, *VTDigger*, *Seven Days*, and the *Burlington Free Press* have all carried stories suggesting that, because of COVID-19, Vermont has been experiencing a population boom. Stories about out-of-staters buying Vermont houses sight unseen abound, and housing shortages are being reported.

While anecdotal evidence supports the theory of a population boom, there is no concrete data to prove this point on a broad basis. *Vermont Public Radio* reporters Peter Hirschfeld and Angela Evancie, responding to a listener's question about the rumor, reported on their podcast "Brave Little State" that, "The data to back that narrative up just doesn't exist. At least, not yet. And trust us when we say we tried pretty hard to find some cold, hard numbers."[3]

On the other hand, real estate agents report being very busy over the past year. The impact is seen most often in ski towns and their environs. Hirschfeld and Evancie did find that some towns in Windham County have seen a population increase. They said that, "While Vermont lacks the statewide data needed to quantify the volume of in-migration since the pandemic began, in some towns, the COVID boom is real." They cite increased student enrollment in the Windham Central Supervisory Union (serving Windham County towns of Brookline, Dover, Jamaica, Marlboro, Newfane, Stratton, Townshend, Wardsboro, Windham, and Winhall in Bennington County). Dover has an increase of 31 students, and neighboring Wardsboro is up 8 students.[4]

Vermont Business Magazine listed three Windham County towns in the top five for house sales to out-of-state buyers in the past year: Dover was ranked #3, Stratton was 4th, and Wilmington was 5th.[5]

Whether these newcomers will relocate to Vermont permanently, came temporarily during the pandemic, or purchased homes only as vacation properties is unknown.

Population increases or decreases have had and will continue to have an impact on state finances, and thus on funds for health care and other services. According to the Vermont Tax Structure Commission's December 2019 report, Vermont has the dubious distinction of being the only state with the highest employment rate and the slowest population growth in the U.S. [6]

[3] https://www.vpr.org/post/vermont-really-having-covid-boom#stream/0
[4] Ibid.
[5] "Economy Stronger Than Expected," *VT Business Magazine*, May 2021, p. 37.
[6] https://ljfo.vermont.gov/assets/Subjects/Commission-Resources/05a742b874/Population-Changes-and-Vermont-State-Revenue-FULL-REPORT.pdf, p.45

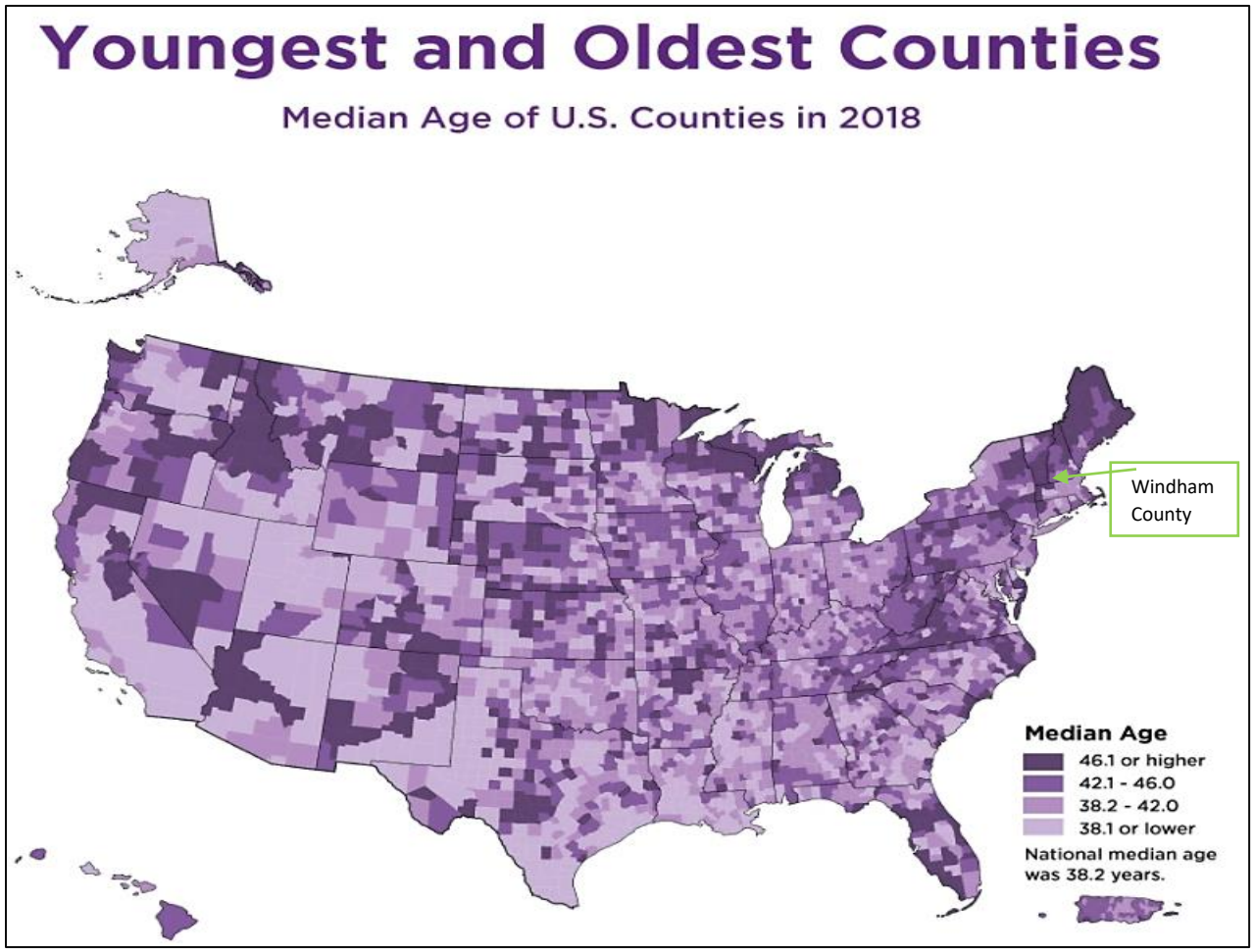
Windham County's Aging Population

For a number of years, Vermont's business and legislative leaders have expressed concern about the rate at which Vermont's population is aging. The 2018 Community Assessment report from the social services organization Southeastern Vermont Community Action stated that, "Vermont's most notable demographic trend is the aging of its population."[7] Statistics bear that out.

Windham County, VT, ranks in the highest median-age bracket of all U.S. counties (46.1 or higher – see map below).[8] Among the states, Vermont ranks third, following Maine and New Hampshire, as the state with the highest median age in the country (Maine = 45.0; New Hampshire = 43.1; Vermont = 43.0).[9]

At the time of the 2010 U.S. Census, 14.6% of Vermont's population was age 65+, and Windham County's was 22%. The 2019 U.S Census's American Community Survey showed Vermont at 20% (an increase of 5.4%) and Windham County at 23.9% (a 1.9% increase).[10]

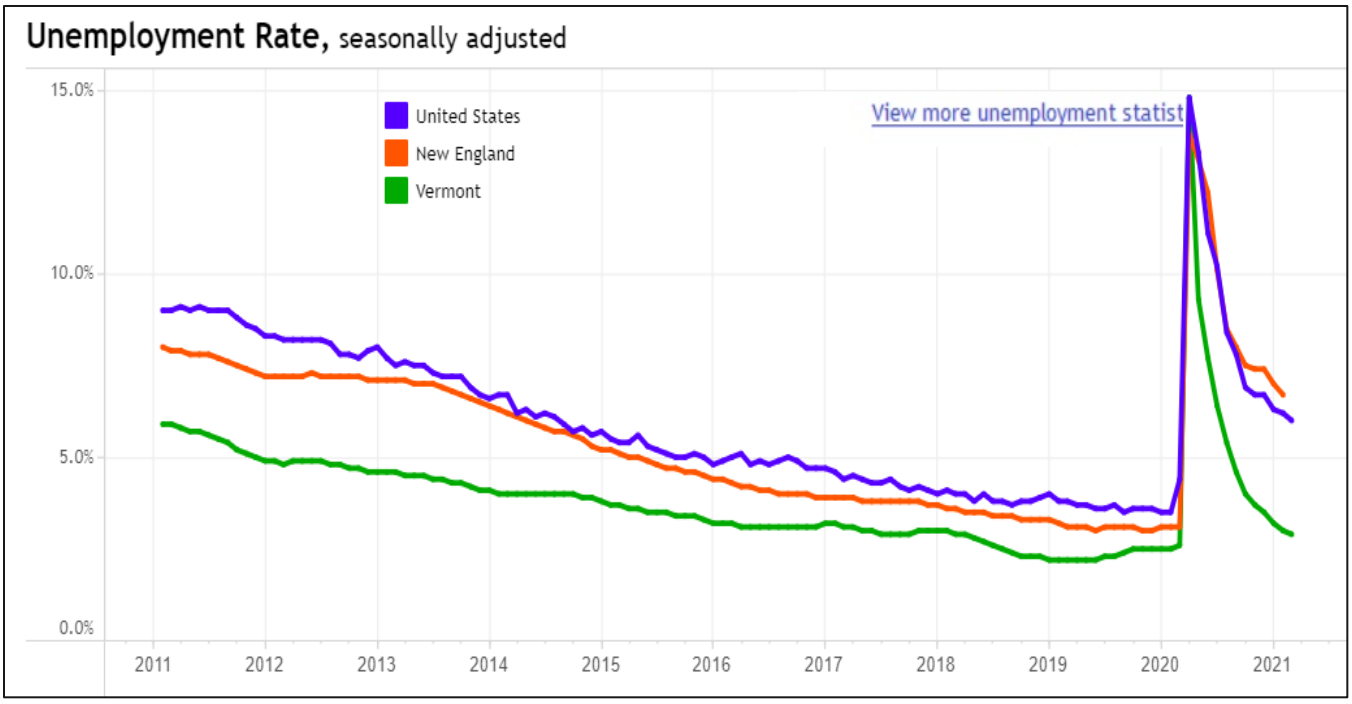
As Vermont's population ages, the demands on its health care system also increase.



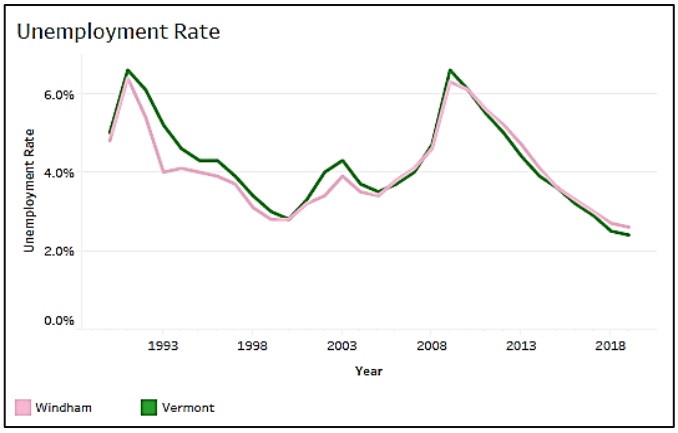
[7] https://www.sevca.org/images/pdf/Community_Assessment_2018-with_Attachments.pdf, p. 12
[8] *https://www.census.gov/library/visualizations/2018/comm/youngest-oldest-counties.html*
[9] http://www.statsamerica.org/sip/rank_list.aspx?rank_label=pop46&ct=S09
[10] https://data.census.gov/cedsci/table?q=2010%20vermont&tid=ACSST1Y2010.S0101;

Windham County Employment

The effects of the COVID-19 pandemic on Vermont's unemployment rate are obvious in this chart provided by the Vermont Department of Labor. Has there ever been such a sudden and dramatic increase in unemployment? It's hard to imagine. During the Depression era, Vermont workers were much more likely to have been farmers, and thus less affected by the country's economic crisis. By contrast, today's pandemic has affected thousands of workers across the state, as well as across the New England Region and the country as a whole.



Vermont's and Windham County's unemployment rates have fluctuated over time, but not as drastically as during the COVID-19 pandemic. This Department of Labor (DOL) chart shows that the economic downturn of 2008 also affected unemployment noticeably. There was a previous sharp rise in the mid-1990s.[11]

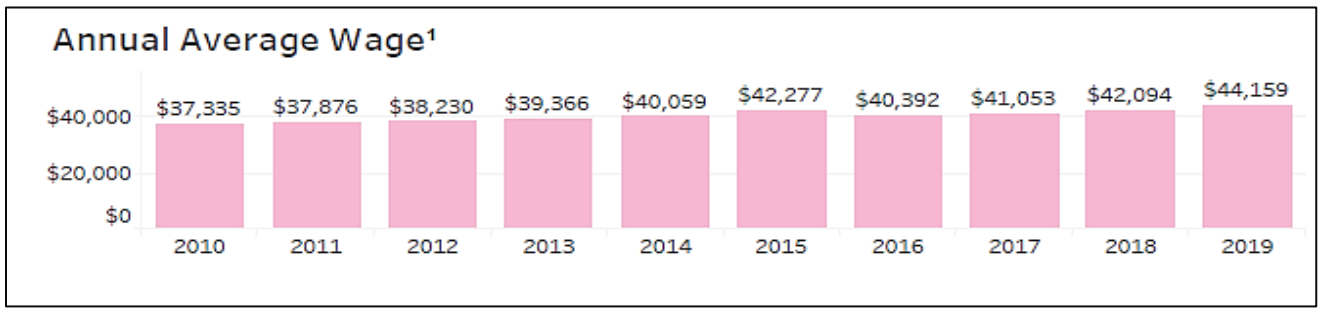


In 2019 Windham County had a labor force of 21,977, the sixth largest of Vermont's 14 counties.[12] Just before the pandemic, Vermont's unemployment rate was the lowest in almost four decades. In 2019, the statewide unemployment rate was 2.4%, the lowest annual rate since 1976. Vermont's average workforce numbered 342,226 people. By contrast, in April 2021, the DOL reported that almost 10% of that workforce, a total of 33,818 Vermonters, were filing for unemployment.[13]

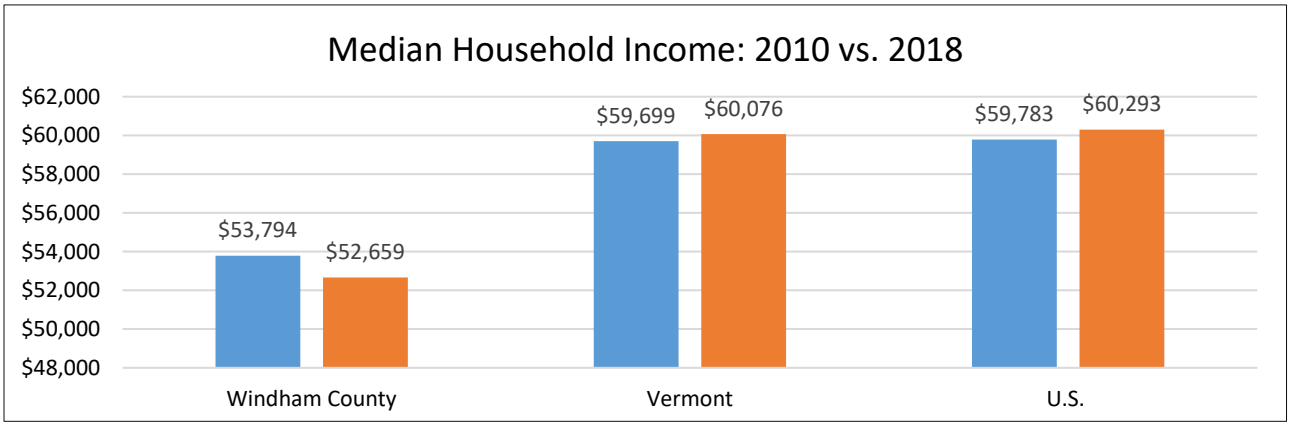
[11] http://www.vtlmi.info/profile2020.pdf, p. 112.
[12] http://www.vtlmi.info/profile2020.pdf, p. 110
[13] http://www.vtlmi.info/

Windham County's Median Household Income

Windham County's average annual wage (adjusted for inflation) has not increased much over the past decade. [14]



In fact, when adjusted for inflation and compared to the state and the U.S. as a whole, Windham County's median household income has decreased by almost $1,000 since 2010, while Vermont's and the nation's median household incomes have increased slightly. [15]



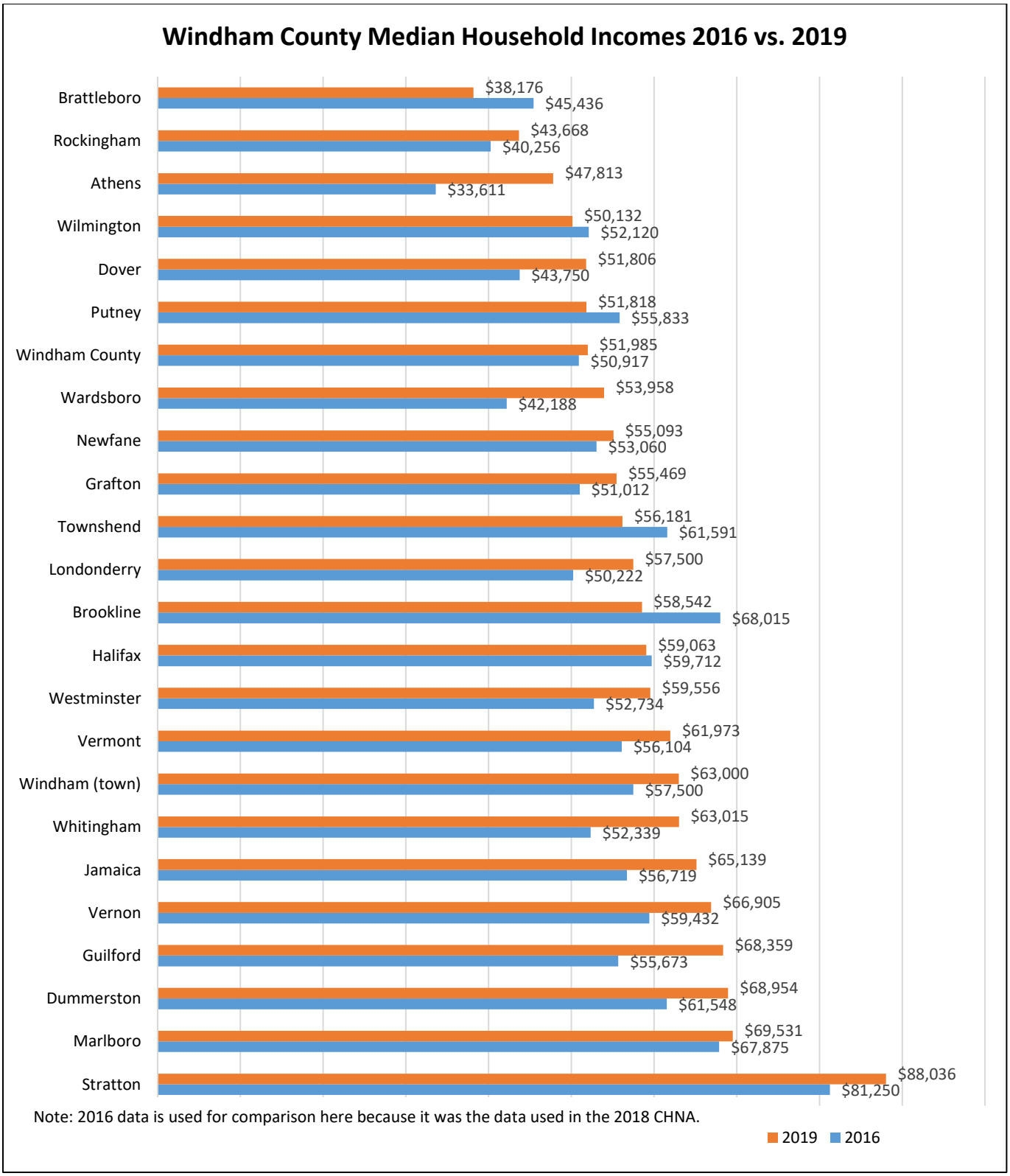
Median household incomes for individual Windham County towns are shown on page 6 of this report.

Poverty in Windham County

The Federal Poverty Level (FPL) is a measure of income issued every year by the U.S. Department of Health and Human Services. FPLs are used to determine eligibility for federal programs and benefits, including health insurance. For 2021, the FPL income numbers are: $12,760 for individuals (up slightly from $12,140 in 2018); $17,240 for a family of 2 ($16,460 in 2018); $21,720 for a family of 3 ($20,780); $26,200 for a family of 4 ($25,100). Families at or below these numbers are considered to be living in poverty. Families with incomes up to 250% of the FPL are considered low-income.[16]

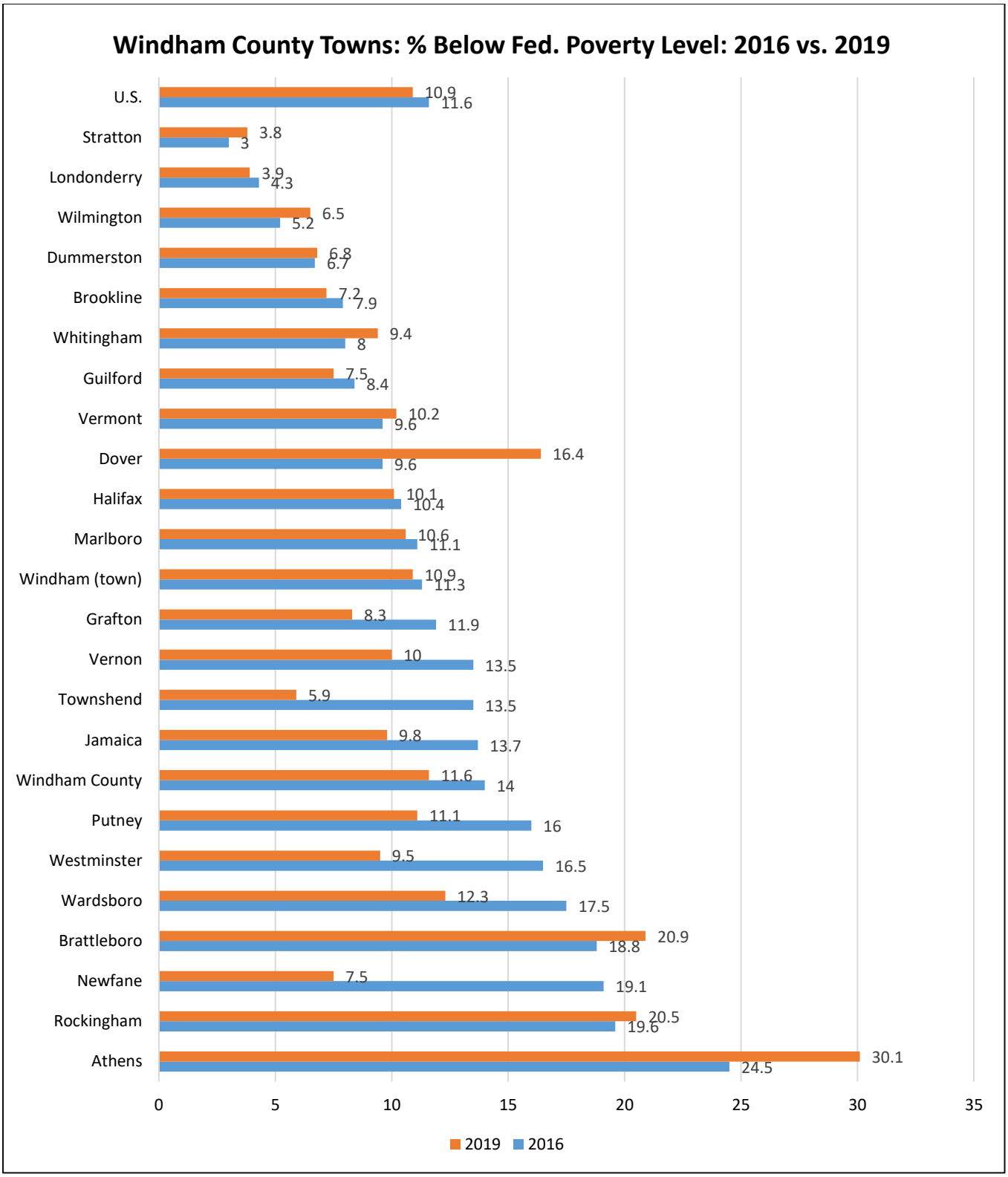
The percentage of Windham County's residents who live below the federal poverty level varies widely across the towns within the county, and the percentage itself hides those within a town who struggle with poverty despite a seemingly low poverty rate town-wide. Some Windham County towns have seen noticeable shifts since the 2018 CHNA. Poverty rates for individual Windham County towns and shown on page 7.

[14] http://www.vtlmi.info/profile2020.pdf
[15] Ibid.
[16] https://aspe.hhs.gov/2020-poverty-guidelines



[17]

[17] https://data.census.gov/cedsci/table?g=0400000US50&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2016.DP03; https://data.census.gov/cedsci/table?g=0400000US50&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2019.DP03; https://data.census.gov/cedsci/table?t=Income%20and%20Poverty&g=0500000US50025.060000&tid=ACSST5Y2019.S1901



[18]

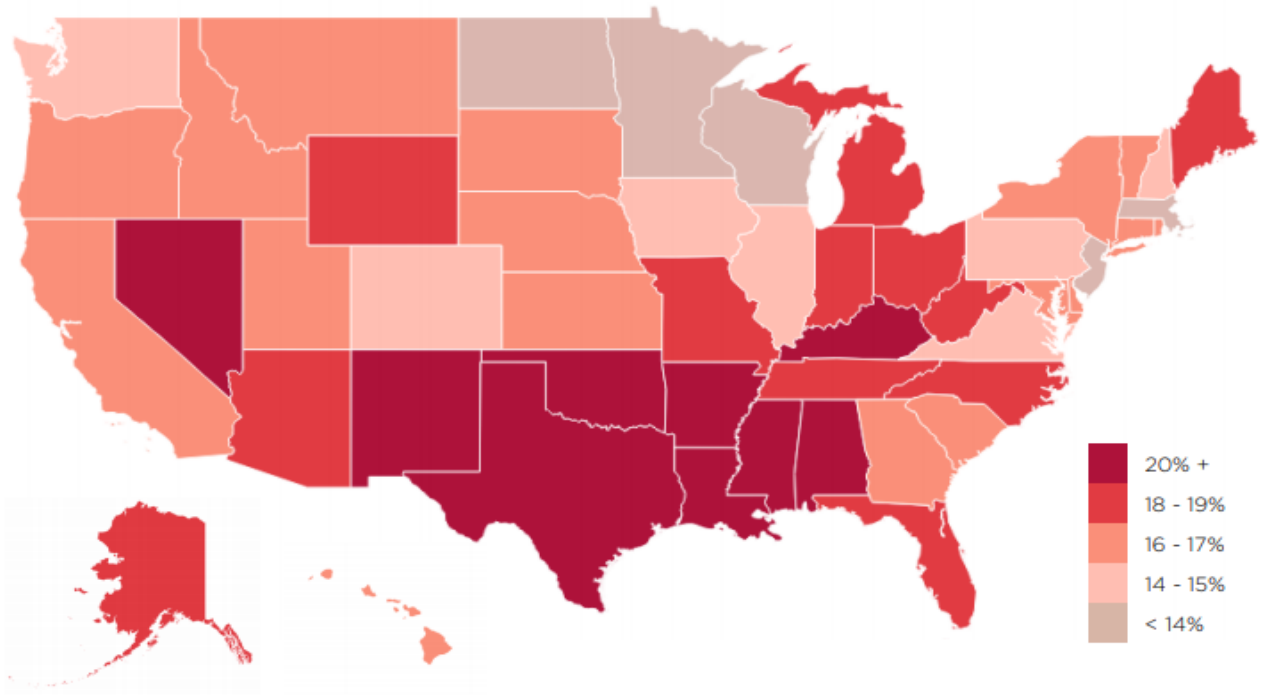
[18] https://data.census.gov/cedsci/table?g=0400000US50&d=ACS%205-Year%20Estimates%20Data%20Profiles&tid=ACSDP5Y2016.DP03; https://www.census.gov/quickfacts/fact/table/US,VT,windhamcountyvermont/PST045219; https://data.census.gov/cedsci/table?t=Income%20and%20Poverty&g=0500000US50025.060000&tid=ACSST5Y2019.S1701

Poverty's Impact on Health and Food Insecurity

The relationship between one's economic status and one's health has been well-documented. Poverty can be both a cause, and a consequence, of poor health. Poverty can affect access to healthy food, thus leading to food insecurity as well as poor health. Households that experience food insecurity are unable to obtain enough good food for an active, healthy life for all household members.[19]

Before the COVID-19 crisis began, more than 37 million people in the U.S., including more than 11 million children, lived in food-insecure households (actually the lowest food insecurity rate since the 2008 Great Recession). The pandemic and the accompanying rise in unemployment has created food insecurity for those newly unemployed and has exacerbated the situation for others. Demand at food pantries and food banks has soared over the past year.

Figure 1. Projected rates of food insecurity among the overall population in 2020 by state



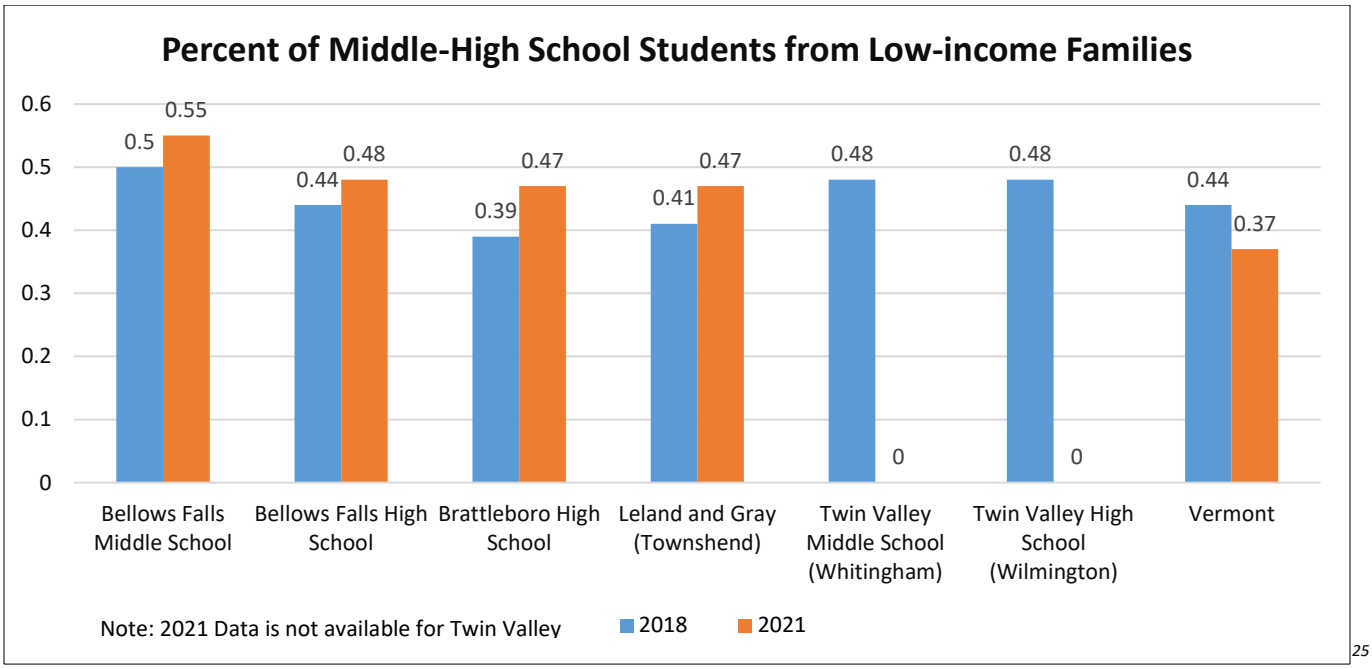
While this map shows that Vermont's food insecurity situation is not as dire as some states, there is still cause for concern. Many adults and children still go hungry in Vermont—as much as 16-17% of the population in the past year--16 or 17 individual Vermonters per 100--as this map indicates.[20] Pre-pandemic, the state's rate was 11.3%.[21]

Food insecurity is also a significant problem in Windham County, affecting 12 out of every 100 residents (pre-pandemic data). For children, the rate is worse: 17.2% of Vermonters under the age of 18 live in food-insecure households, according to Feeding America.[22] During the 2020-21 school year, an average of 36.7% percent of

[19] https://www.feedingamerica.org/sites/default/files/2020-05/Brief_Local%20Impact_5.19.2020.pdf
[20] Ibid.
[21] https://map.feedingamerica.org/county/2018/overall/vermont
[22] https://map.feedingamerica.org/county/2018/child/vermont/county/windham

secondary-school-age students in Windham County qualified for free- or reduced-price lunches. (To qualify as income-eligible for free meals, a household's income must be at or below 130% of the Federal Poverty Level guidelines. To qualify for reduced-price meals, a household's income must be 130-185% of FPL.[23]

Some Vermont schools qualify for the Community Eligibility Provision (CEP) program, administered by the Vermont Department of Education and the USDA. Through this program, eligible schools can provide breakfast and lunch to all students at no charge. Three Windham County schools participate in CEP – Academy School, Green Street School, and Oak Grove School, all in Brattleboro.[24]



[25]

A number of organizations are helping Windham County residents to access healthy foods, especially fruits and vegetables. These include the Vermont Department for Children & Families through its 3Squares (SNAP) program and the Vermont Foodbank though its support of local food shelves and through its VeggiVanGo program.

VeggieVanGo trucks arrive at a variety of location throughout Windham County each month—low-income housing sites, schools, and hospitals--with large bins of fresh produce to give away to families and individuals in need. Grace Cottage Hospital and Brattleboro Memorial Hospital both host monthly VeggieVanGo events.

[23] https://education.vermont.gov/documents/edu-nutrition-2021-free-and-reduced-eligibility-report
[24] Ibid.
[25] Ibid, numbers rounded to the nearest 1/10th.

Windham County has food shelves, at the following locations:

- Agape Christian Fellowship, Canal Street, Brattleboro (weekly)
- Bread of Life, Vernon Advent Christian Church, 4554 Fort Bridgman Rd., Vernon, VT (2xmonth)
- Deerfield Valley Food Pantry, Church Street, Wilmington (2xmonth)
- Grafton Community Church, 55 Main St. (Route 121) Grafton, VT (most mornings)
- Groundworks Collaborative's Foodworks, 143 Canal Street, Brattleboro (6xweek)
- Guilford Food Pantry, Guilford Center Road, Guilford (weekly)
- Jamaica-Wardsboro Food Pantry, Main Street, Wardsboro (monthly)
- Neighbors Pantry, Main Street, Londonderry (monthly)
- Our Place Drop-in Center, Island Street, Bellows Falls (6xweek)
- Putney Food Shelf, Christian Square, Putney (2xweek)
- Retreat Farm Community Food Shelf, 45 Farmhouse Square Rd, Brattleboro (24/7)
- Neighbors Pantry, 2nd Congregational Church, 2021 North Main St., Londonderry (monthly)
- St. Brigid's Kitchen and Pantry, Walnut Street, Brattleboro (2xweek)
- Townshend Food Shelf, Townshend church (weekly)

Windham County also has meal sites for the general public:

- Brigid's Kitchen and Pantry, Walnut Street, Brattleboro (lunch: M, W, Thu)
- Loaves & Fishes, Main Street, Brattleboro (lunch: Tue, F)

Other organizations working to improve food security include:

- 3SquaresVT (formerly known as food stamps), administered through VT's Dept. of Families & Children.
- Commodity Supplemental Food Program, monthly food boxes distributed to adults 60+ by VT Foodbank.
- Edible Brattleboro has gardens and a Share-the-Harvest Stand in Brattleboro. It partners with the Brattleboro Food Co-op and local farmers, giving away leftovers from Farmers Markets.
- Food Connects helps to connect local farmers to schools, healthcare facilities, and other outlets by delivering locally produced food; provides educational and consulting to improve the food system.
- The Hunger Council of Windham Region helps schools and other site set up meal programs; provides nutrition education to professionals and the public; works to change state and federal policy.
- Meals on Wheels/Senior Solutions – Delivering nutritious meals to seniors and others.
- Vermont 211 – Dial 2-1-1 or visit vermont211.org; "Community Resource Directory" by zip code.

Special Resources during COVID-19, now discontinued:

- *Everyone Eats! Brattleboro* leverages state & FEMA funds to buy and distribute to-go meals from local restaurants. Anyone negatively impacted by COVID is welcome to receive a meal, no questions asked. As of May 2021, *Everyone Eats! Brattleboro* had distributed 150,000 meals, at a rate of 5,000 meals a week, through a variety of community partners. Currently funded at least through September 2021.
- Farmers to Families, food box distribution, funded in 2020 by the USDA and in 2021 by donations to the Vermont Foodbank (ended in May). Followed by the Vermont Foodbank's Full Plates VT program, which ran from June-September, offering fresh produce and shelf-stable items. Recipients were required to self-certify that they meet the income requirements as part of the registration process (300% federal poverty level), but they were not asked to show proof of income.

Windham County: Health Care Access

Health Care Equity

Equality doesn't always mean equity. Equity means that all people have a fair and just opportunity. As this graphic illustrates, sometimes adaptations and accommodations are necessary in order to achieve an equitable result.[26]

George Washington University's Milken School of Public Health explains it this way: "Equality means each individual or group of people is given the same resources or opportunities. Equity recognizes that each person has different circumstances and allocates the exact resources and opportunities needed to reach an equal outcome."[27]

While Vermont is often ranked as one of the healthiest states in the nation, data shows that not everyone has an equal opportunity to be healthy. Health insurance coverage, economic status, age, race, gender, ethnicity, social position, sexual orientation and disability, distance from healthcare sources, and the number of available medical providers—all of these and more have an impact on a person's and a family's health opportunities.

Those entrusted with preparing this 2021 Windham County Community Health Needs Assessment have been careful to consider the needs of the "Potentially Medically Underserved" – defined as respondents in one or more of the following categories: Age 65+, household income less than $35,000, people of color, transgendered, and/or limited English speakers. (See pages 62-75 for survey responses indicating these specific needs.)

In order for all Vermonters to be as healthy as they can be, the healthcare facilities that serve them must consider the social and environmental factors that affect health—factors often labeled as "social determinants of health." The goal is to improve health not only through the direct provision of healthcare services, but also by connecting Vermonters with social services and community partners that can provide housing, healthy food, heat assistance, transportation, and other necessary resources.

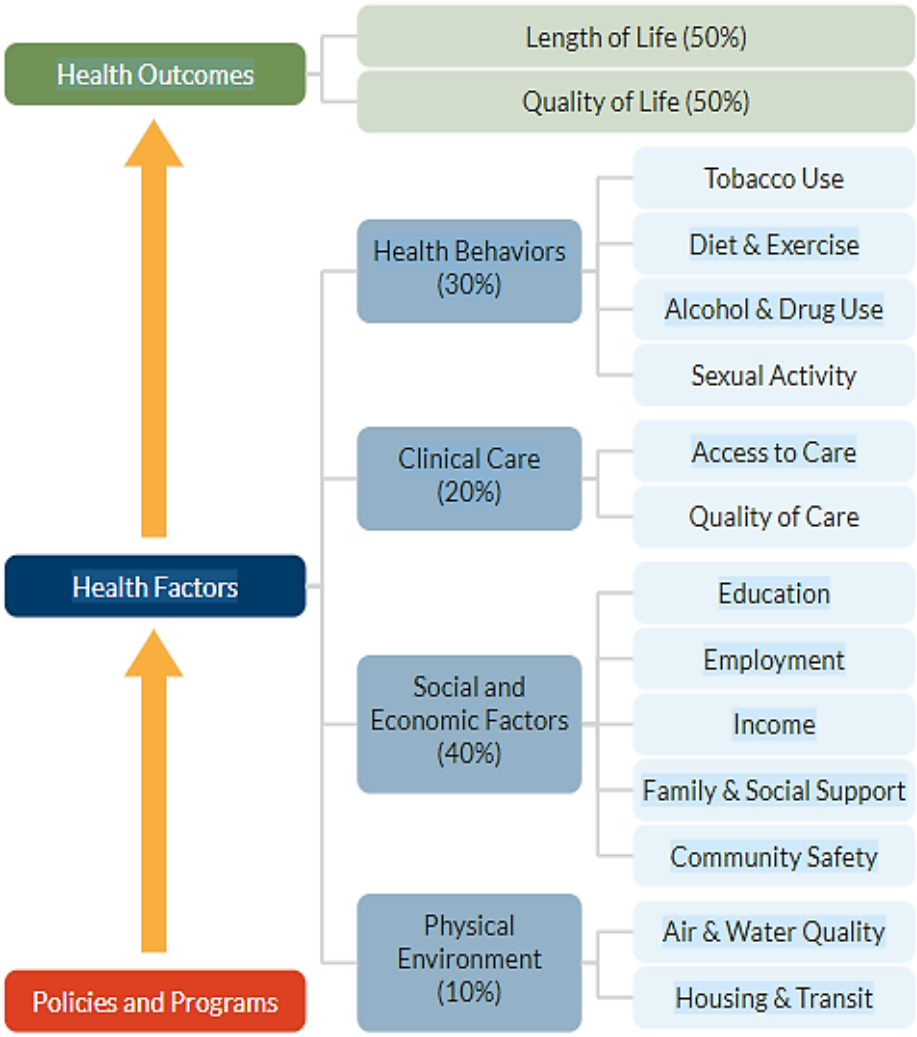
[26] *https://www.healthvermont.gov/about-us/how-are-we-doing/state-health-improvement-plan*
[27] https://onlinepublichealth.gwu.edu/resources/equity-vs-equality/

Useful Terms for Understanding Health Care Equity[28]

Health Equity exists when all people have a fair and just opportunity to be healthy – especially those who have experienced socioeconomic disadvantage, historical injustice, and other avoidable systemic inequalities that are often associated with social categories of race, gender, ethnicity, social position, sexual orientation and disability.

Health Disparities are statistical differences in health that occur between groups of people. These could be from any cause.

Health Inequities exist when avoidable inequalities lead to an uneven distribution of the resources and opportunities for health, and are differences in health that are avoidable, unfair or stemming from injustice. The concept of health inequities focuses on conditions that create health, and emphasizes the systemic distribution of opportunity, wealth and power.



Discrimination is the unequal treatment of members of various groups based on race, gender, social class, sexual orientation, physical ability, religion and other categories.

Prejudice is an unfavorable opinion or feeling formed beforehand or without knowledge, thought or reason.

Social Determinants of Health are the conditions in which people live, learn, work, play, worship and age that affect a wide range of health, functioning; and quality of life outcomes and risks. These include social, economic and physical conditions, as well as patterns of social engagement and sense of security and wellbeing.

Chart:[29]

[28] https://www.healthvermont.gov/about-us/how-are-we-doing/state-health-improvement-plan
[29] https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model

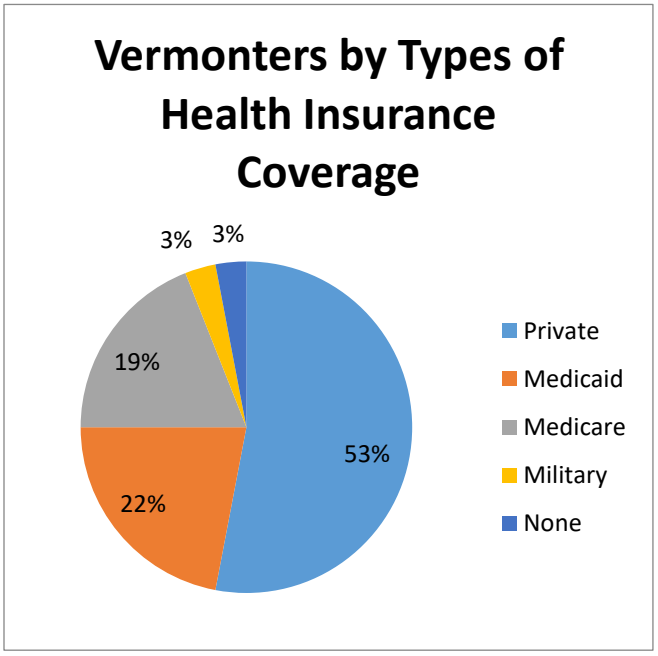
Access and Insurance

Access to comprehensive healthcare services is important for overall health. That access may be limited if a person does not have health insurance, lacks money for co-pays, or has no transportation for getting to appointments. It may also be limited if there are no medical providers available.

The Vermont Department of Health and Vermont's Office of Rural Health & Primary Care are working to improve access to primary care, dental care, and mental health care for all Vermonters – especially the uninsured, under-served and most rural populations. The partners who are preparing this report are also working together to improve access to patients and potential patients in their service area.

How well is this working for Windham County residents?

Most Vermonters have some level of health insurance. Based on results of a telephone survey that reached 3,002 Vermonters, the Department of Health reported in 2018 that 97% of Vermont residents have some type of health insurance coverage. A majority (53%) have private health insurance; 19% have Medicare and 22% have Medicaid. Three percent said they are uninsured. Because Medicare is available for anyone over age 65, those represented by the 3% Medicaid statistic are likely to be under age 65.



These numbers have not changed substantially since the last survey in 2014.[30]

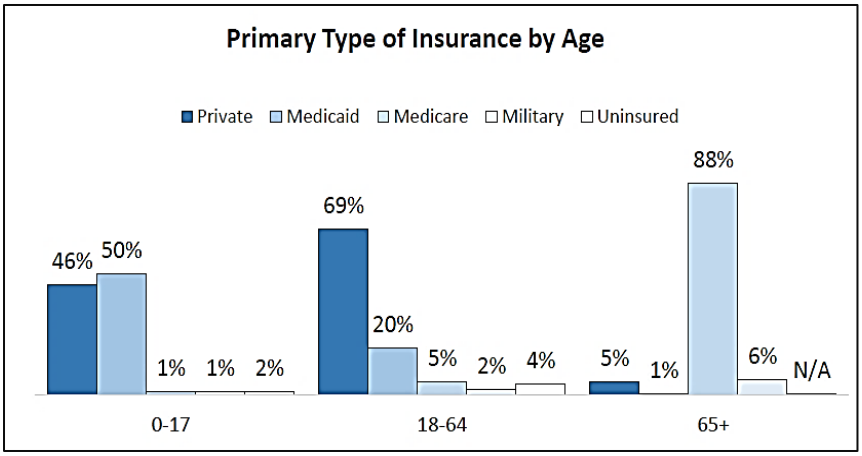
It is worth noting, however, that the percentage of Vermonters with private insurance has decreased substantially since 2000 (60% to 53%), while the percentages of Medicare (14% to 19%) and Medicaid (16% to 22%) have increased.[31]

In 2021, the Robert Wood Johnson Foundation (RWJ) conducted research in conjunction with the University of Wisconsin Population Health Institute (UWPHI). Their more-recent data is nearly, but not exactly, the same as that gathered by the VT Department of Health.

According to RWJ and UWPHI's "County Health Rankings," 5% of Vermonters and 5% of Windham County residents are uninsured, two points higher on both accounts than Vermont's 2018 survey results.[32] The RWJ/UWPHI report also indicates that 10% of Americans under age 65 are uninsured.[33] Thus, Vermonters and Windham County residents have better access to healthcare through insurance coverage than do Americans overall.

[30] Vermont Household Health Insurance Survey Vermont Department of Health Data Compendium - July, 2018, p. 3 & 5, https://www.healthvermont.gov/sites/default/files/documents/pdf/VHHIS_Report_2018.pdf
[31] Ibid.
[32] https://www.countyhealthrankings.org/app/vermont/2021/rankings/windham/county/outcomes/overall/snapshot
[33] https://www.countyhealthrankings.org/sites/default/files/media/document/CHR2021_VT.pdf

The state's health insurance survey also provided information about insurance coverage for Vermonters by age: (see chart at right)[34]



Having health insurance is one thing, but being able to afford to use it is another. Many Vermonters are "under-insured," meaning they either have high deductibles that they cannot afford to pay, or important health care services are not covered by their insurance. Vermont's 2018 health insurance survey found that more than a third of Vermonters (36%) under age 65 are under-insured, up from 27% in 2014.[35]

Those who have health insurance are more likely to seek care when they need it than those who do not. To illustrate this point, the state's survey found that 22% of uninsured Vermonters have delayed routine care due to cost, compared to 2% of those with insurance. Twice as many uninsured Vermonters delayed getting a prescription (6% vs. 3%). Four percent of uninsured Vermonters skipped doses or took smaller amounts of medications to make them last longer,[36] a tendency that may lead to worse health outcomes, especially for chronic conditions.[37]

Nearly one-third of Windham County Community Health Needs Assessment survey respondents indicated that the cost of co-pays and deductibles is often a barrier to good health. (Note: some respondents skipped this question; for those who answered, nearly one-third indicated this is their greatest barrier to accessing health care.)

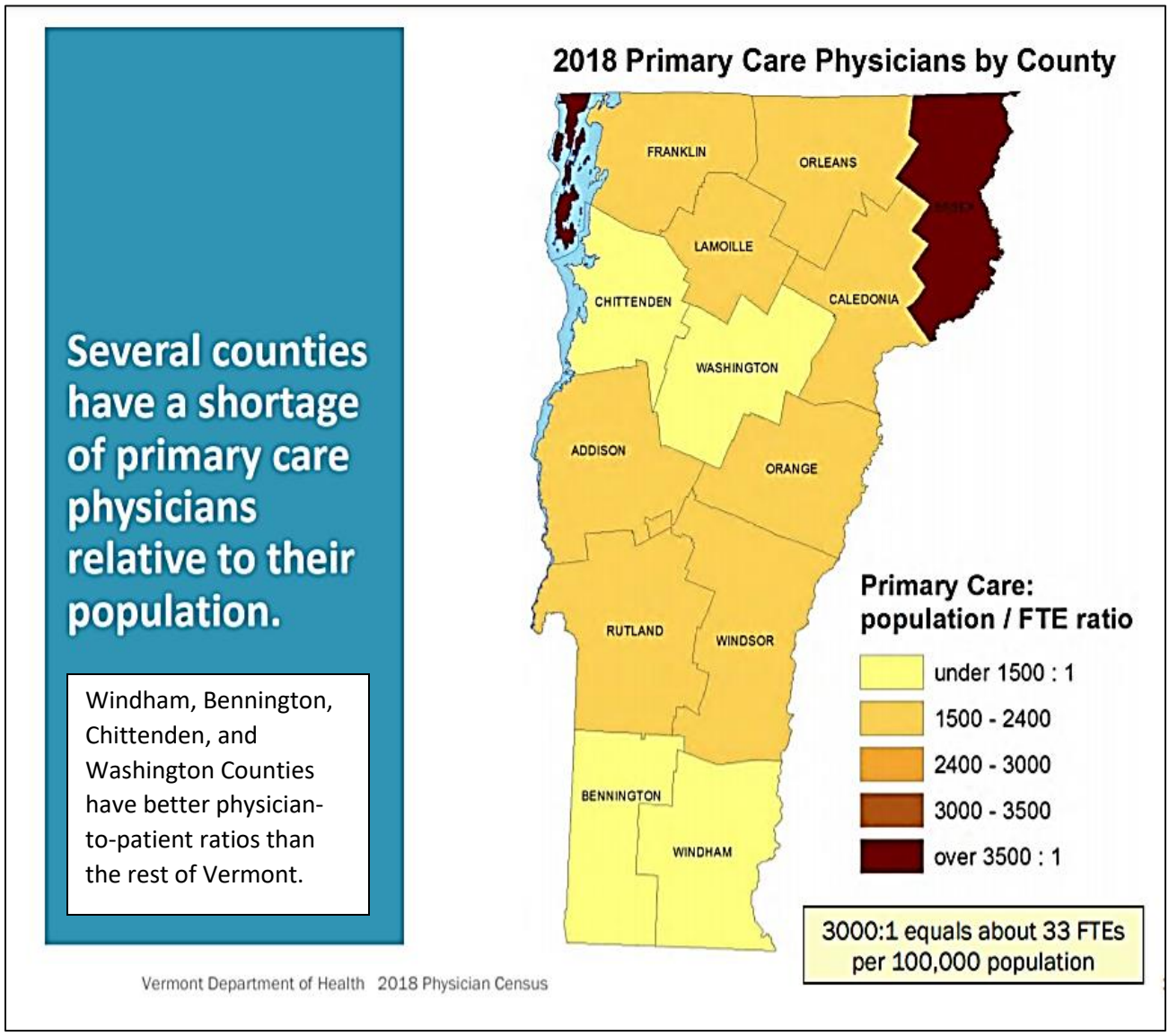
In order to help mitigate this situation, each Windham County hospital has at least one staff member who helps people sign up for health insurance and other benefits that may reduce their cost of living, thus reserving some money for co-pays and deductibles. Here is a summary of this work (note: each hospital keeps records differently):

- The Brattleboro Retreat helped 25 patients in 2019, 43 patients in 2020, and 16 patients thus far in 2021* with free care or reduced fee applications. Over the past three years, the Retreat has helped 20 Windham County clients with VT Medicaid enrollment, and 10 county residents with VT Medicaid for the Aged, Blind & Disabled enrollment.
- Over the past three years, Brattleboro Memorial Hospital helped 97 Individuals with Financial Assistance, and helped 69 patients with insurance enrollment; 19 new mothers were helped with Medicaid, and 13 Inpatient/Emergency Department patients and 36 additional individuals were assisted with insurance enrollment; 21 of these were clients of Groundworks, an agency that assists those without stable housing; 6 individuals assisted are Blind, Aged and/or Disabled.*
- Grace Cottage's Resource Advocate helped 67 individuals qualify for free or reduced-fee care in 2020, and 20 so far in 2021.* In addition, the Resource Advocate helped 32 new applicants in 2020 and 8 new applicants in 2021 to obtain health insurance through VT Health Connect.

*Jan. to May 2021

[34] https://www.healthvermont.gov/sites/default/files/documents/pdf/VHHIS_Report_2018.pdf
[35] Vermont Household Health Insurance Survey Vermont Department of Health Data Compendium - July, 2018; https://www.healthvermont.gov/sites/default/files/documents/pdf/VHHIS_Report_2018.pdf
[36] https://www.healthvermont.gov/sites/default/files/documents/pdf/VHHIS_Report_2018.pdf
[37] Windham County CHNA survey results are provided in the second half of this report.

Access and Availability of Providers



[38]

Throughout the U.S., there are many regions that lack an adequate number of providers offering primary care, dental, and mental health providers and services. The federal government works with state partners to determine which of these should be classified with "shortage designations," and therefore eligible to receive certain federal resources.

The Vermont Department of Health tracks provider-to-patient ratio for a variety of medical provider types, including primary care, oral health, and mental health. This data helps in establishing shortage designations.

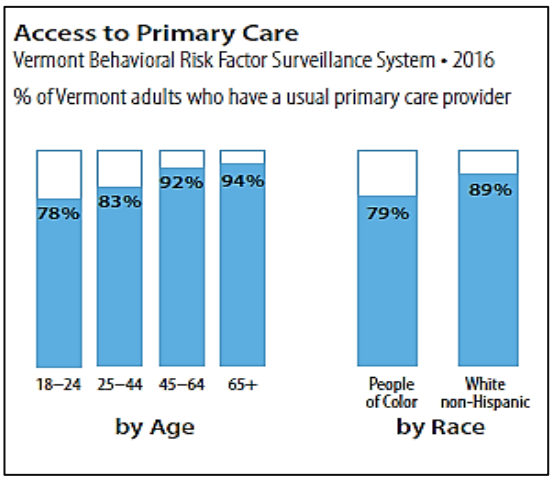
The two main shortage designations are "Health Professional Shortage Area" (HPSA) and "Medically Underserved Area" (MUA).

[38] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS-Stats-phys18-ppt-.pdf

Grace Cottage Family Health currently qualifies as a HPSA because of its Rural Health Center status.[39]

Several towns in Windham County are designated as MUAs, meaning they have a shortage of primary care health services, a high infant mortality rate, a high poverty rate, or a high elderly population. Towns in Windham County that qualify as MUAs include:

Athens	Grafton	Rockingham	Wardsboro
Brookline	Jamaica	Stratton	Westminster
Dover	Newfane	Townshend	



The Vermont Department of Health reports that 67% of Vermonters have an established primary care provider (PCP), either a physician, a nurse practitioner, or a physician assistant, that they see for their primary care needs.[40] This means that 67% of Vermonters have a "Medical Home," a medical practice and provider who is seen for all primary care issues. An important difference between having a "Medical Home" and going to urgent care is the continuity of care. A provider in a "Medical Home" has a record of a patient's health issues over time, so that patterns and progression of diseases can be noted and treated. (chart source: [41])

While 67% of Vermonters have a PCP, 33% do not. These individuals are more likely to go to urgent care or the Emergency Department of a hospital when they need care, or to put off seeking care until the situation is dire. Currently, the state's goal is to increase the percentage of Vermonters with a PCP to at least 75%.[42]

Working against that goal is the reality of Vermont's aging medical providers. Vermont is the third oldest state in the U.S., with its population aging at a faster rate than other states.[43] Windham County's medical provider workforce is aging at pace with the rest of the population. According to the Vermont Department of Health's 2018 Physician Census, 48% of Windham County's primary care physicians are age 60 and older.

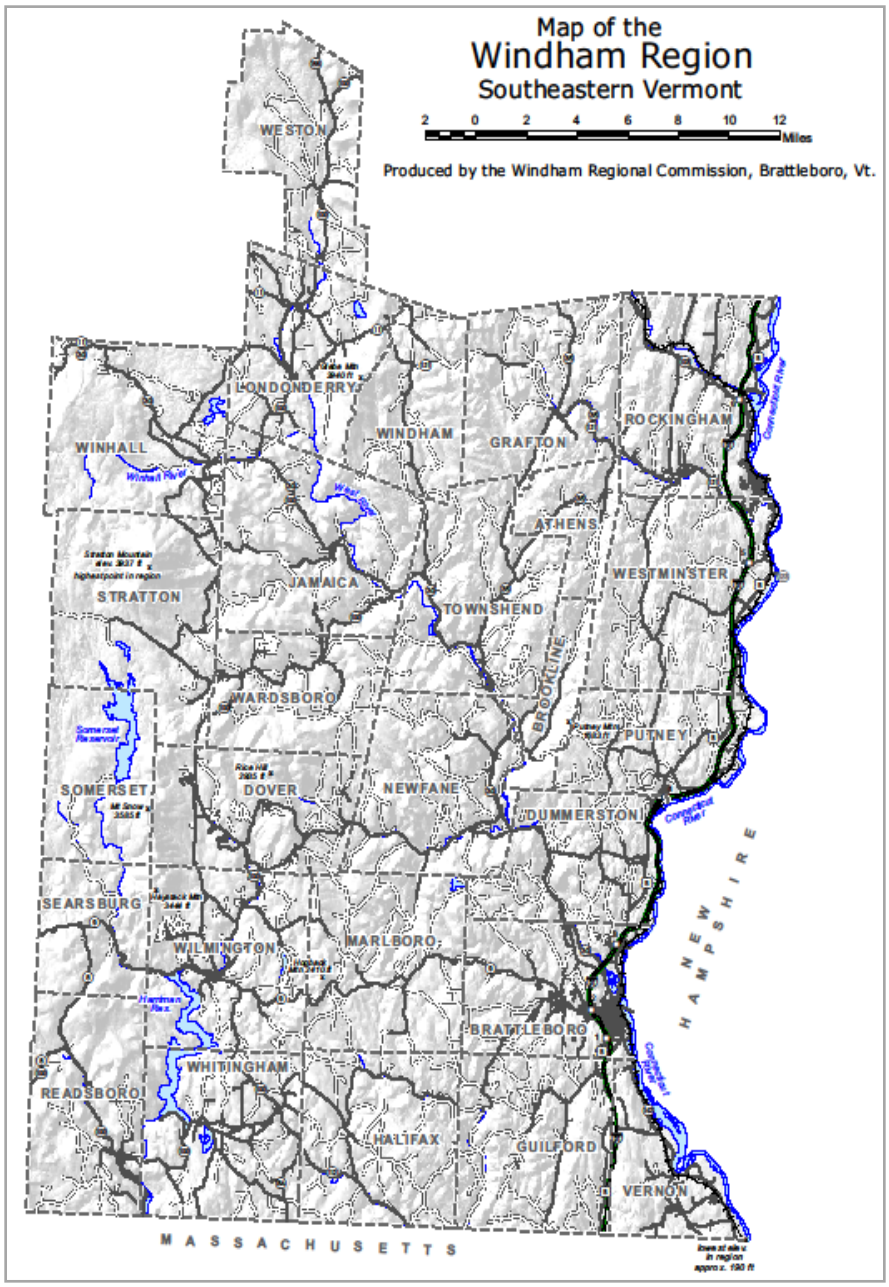
By contrast, primary care increasingly relies on Nurse Practitioners, Advanced Practice Registered Nurses, and Physician Assistants, and those providers are generally younger. While county-specific statistics are not available, overall, only 22% of Vermont's NP/APRNs are age 60+,[44] and only 16% of its Physicians Assistants are 60+.[45]

At press time for this report, there are at least five primary care providers accepting new patients in Windham County. The situation is fluid because the loss of just one provider can send hundreds of patients scrambling for a new provider. Residents may then experience health care service shortages in the form of long wait times for appointments, particularly when they are seeing a provider for the first time.

[39] https://www.healthvermont.gov/systems/health-professionals/shortages-and-designations
[40] https://www.healthvermont.gov/scorecard-health-services-access
[41]https://www.healthvermont.gov/sites/default/files/documents/pdf/VT%20State%20Health%20Assessment%202018%20Full%20Report.pdf
[42] https://www.healthvermont.gov/scorecard-health-services-access
[43]file:///G:/COMMUNITY%20HEALTH%20NEEDS%20ASSESSMENTS/2021%20Research/Rural%20Health%20Services%20Report%20Final%20Draft%201%203%202020%20v11.pdf
[44] https://www.healthvermont.gov/sites/default/files/documents/PDF/HS-stats-APRN19BK.PDF
[45] https://www.healthvermont.gov/sites/default/files/documents/PDF/PA18BK.PDF

Access: Geography and Transportation

Vermont's road conditions are a common barrier to healthcare. Windham County has a total of 1,491 miles of roads; 868 miles, or 58% of these, are unpaved. This makes travel difficult during the five winter months and the mud season that follows. Additionally, the geography of Windham County, specifically the mountains, can be challenging, as road conditions vary greatly throughout the county based on elevation. The land climbs sharply from Brattleboro, in the southeastern corner of Windham County (278 feet above sea level); to Townshend, in the northwest (616 feet elevation); and to the town of Windham (1,950 feet in elevation), at the county's far northwestern corner.



Lack of Public Transportation

Most of Windham County has infrequent or no public transportation. Residents with economic challenges often find the costs of buying and maintaining a car and purchasing gasoline are insurmountable barriers when faced with a choice between food, heating fuel, car insurance, or gasoline. It is not uncommon for low-income patients to cite lack of transportation as the reason for canceling a medical appointment.

Lack of public transportation in Windham County plays a significant and persistent role in limiting access to health and human services. Windham County's 2015 Community Health Needs Assessment identified lack of transportation as a major factor affecting access to health care services.

The Windham Regional Commission works to assess the transportation difficulties and opportunities, including tapping into infrastructure improvement appropriations. At present, the challenges persist.

Map: Dirt Roads vs. Paved Roads & Relief Map for Windham County. Darkest lines are paved roads: double-dotted lines are unpaved; single-dotted lines are town borders; shading indicates mountains.[46]

[46] Windham Regional Commission, 2013.

Windham County Population Health

"Social Determinants of Health"

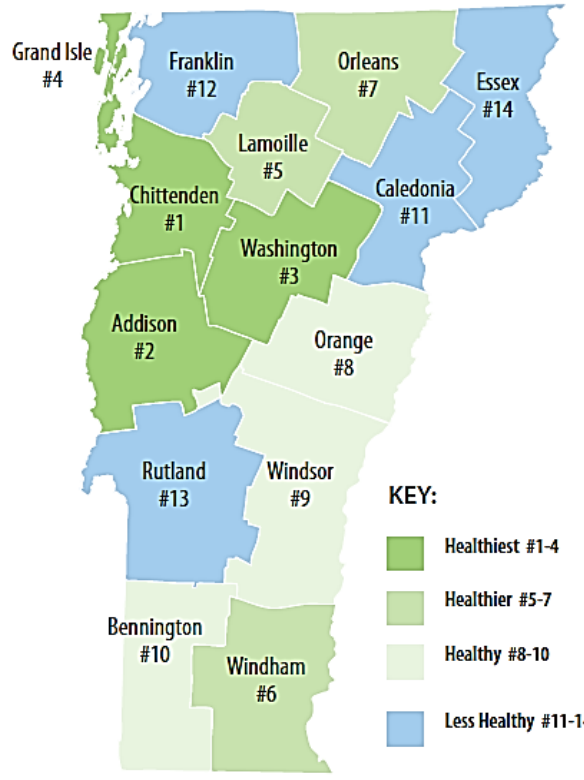
The Vermont Department of Health (VDH) and Windham County's healthcare providers recognize the strong link between social indicators – demographic, economic, and access to health care factors – and the actual health of Windham County residents.

Every ten years, the U.S. Department of Health and Human Services (HHS) creates a nationwide "Healthy People" report, providing information about current conditions and setting benchmarks for improvement in the coming decade. The report aims to encourage collaboration among health and social services providers, and to help individuals make more informed healthcare choices. According to HHS, "Chronic diseases are responsible for 7 in 10 deaths each year, and treating people with chronic diseases accounts for many of our nation's health care costs … most chronic diseases can be prevented by eating well, being physically active, avoiding tobacco and excessive drinking, and getting regular health screenings … Chronic diseases—such as heart disease, cancer, and diabetes—are the leading causes of death and disability in the U.S."[47]

Vermont also creates a statewide "Healthy People" report every ten years. According to Vermont's "Healthy People 2020" report, "Health is shaped by factors well beyond genetics and health care. Income, education and occupation, housing and the built environment, access to care, race, ethnicity and cultural identity, stress, disability and depression are 'social determinants' that affect population health."[48]

VDH's "Healthy Vermonters 2020" report also includes data on current conditions and goals for improving health outcomes. The most up-to-date data can be found at healthvermont.gov.

VDH cites the following chronic conditions as having the greatest impact on the health of Vermonters: cancer, diabetes, heart disease, high blood pressure, high cholesterol, lung disease, mental health, obesity, lack of physical activity, stress, and substance abuse. Thus, it makes sense, individually and as a healthcare system, to focus on preventing and treating these chronic diseases. Data for these conditions in Windham County is presented on the following pages. Windham County is currently ranked in the middle of the pack, sixth healthiest among Vermont's 14 counties. [49]



Health Outcome Rankings, by County
Rankings are based on a combination of morbidity measures (poor or fair health, poor physical health days, poor mental health days, low birthweight) and mortality (premature death).

[47] https://www.cdc.gov/chronicdisease/center/index.htm
[48] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[49] Ibid.

Windham County Behavioral Risk Assessments

The Vermont Department of Health and the Vermont Agency of Education conducted the Vermont Youth Risk Behavior Survey (YRBS) every other year. Developed by the U.S. Centers for Disease Control (CDC), YRBS helps to monitor priority health risk behaviors that contribute to death, disease, injury, and social problems among youth. Two surveys are conducted, one for middle school students (grades 6-8) and another one for high schoolers (grade 9-12). Students are asked about physical activity, nutrition, weight status, tobacco use, alcohol and other substance use, violence and bullying, and sexual behaviors. Nearly all schools participate.

The CDC & VDH also conduct a similar assessment of adults. Called the Behavioral Risk Factor Surveillance System (BRFSS), this survey covers a wide range of health and lifestyle topics, from housing and food security, to pregnancy and sexual health, to smoking and tobacco use, alcohol, firearms, tick bites, to health habits and chronic disease. All states and territories, plus Washington D.C. are surveyed. Vermont's most recent BRFSS reached 6,544 adults.

Much of the population health data provided in this report comes from these two surveys, YRBS and BRFSS.

The 2021 YRBS has been delayed until autumn, with hopes that students will be fully back in school. Because the 2021 results were not available in time for this report, data from the 2019 survey is reported here. Similarly, the 2020 BRFSS is just now underway, so 2018 data is being reported here.

According to the VDH, "Personal health behaviors have a major impact on the health of the population and contribute to the leading causes of disease and premature death."[50] Medical providers and health researchers recognize that beyond personal preferences and choices, behavior is greatly influenced by the conditions, communities, systems and social structures in which people live. The need to belong to a group that shares common values and habits is a powerful influence on behavior.

The Vermont Department of Health has created the slogan "3-4-50" to emphasize the connection between risk behaviors and chronic disease. VDH points to three behaviors (lack of physical activity, poor nutrition, and tobacco use) that contribute to the development and severity of four chronic diseases (cancer, Type 2 diabetes, heart disease and stroke, and lung disease) that claim the lives of more than 50% of all Vermonters.[51]

Some risks can be circular. For example, poor diet and sugar-sweetened beverages may cause tooth decay and obesity. Vermonters who are obese or smoke tend to have more tooth loss, making it harder to eat healthy foods.

While personal behavior is an important measure for preventing disease, Vermont communities can be powerful agents of change. Changes in policies or programming can help create conditions so that everyone has an equal chance to be healthy.

This 2021 Windham County Community Health Needs Assessment is one tool in this process, helping to guide the prevention, treatment, and outreach strategies of Windham County's three hospitals.

[50] https://www.healthvermont.gov/health-statistics-vital-records/population-health-surveys-data/brfss
[51] https://www.healthvermont.gov/3-4-50

Windham County's Four Most Common Chronic Diseases

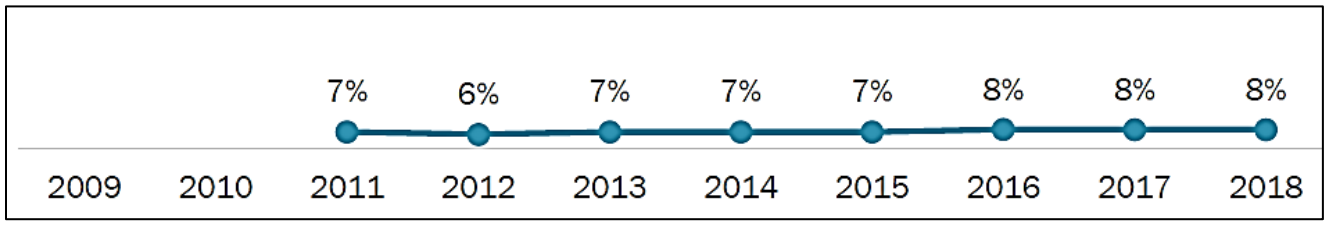
Because research has shown that more than half of all deaths are due to the same four chronic diseases, often caused by three common behaviors, it makes sense to focus on these diseases and these behaviors when assessing community health and designing programs and interventions for the future.

First, here is a Windham County perspective on the four chronic diseases: cancer, Type 2 diabetes, heart disease and stroke, and lung disease.

Cancers

Cancer is not a single disease, but a group of more than 100 different diseases that often develop gradually as the result of a complex mix of lifestyle, environment, and genetic factors. Certain behaviors put people at a higher risk for certain cancers. Nearly two-third of cancer deaths in the U.S. can be linked to tobacco use, poor diet, obesity, and lack of exercise.[52]

Cancer affects thousands of Vermonters and is now the leading cause of death.[53] Each year, approximately 3,700 Vermonters are diagnosed and 1,400 of them die.[54] Cancer prevalence among Vermont adults has remained relatively consistent since 2011.[55]



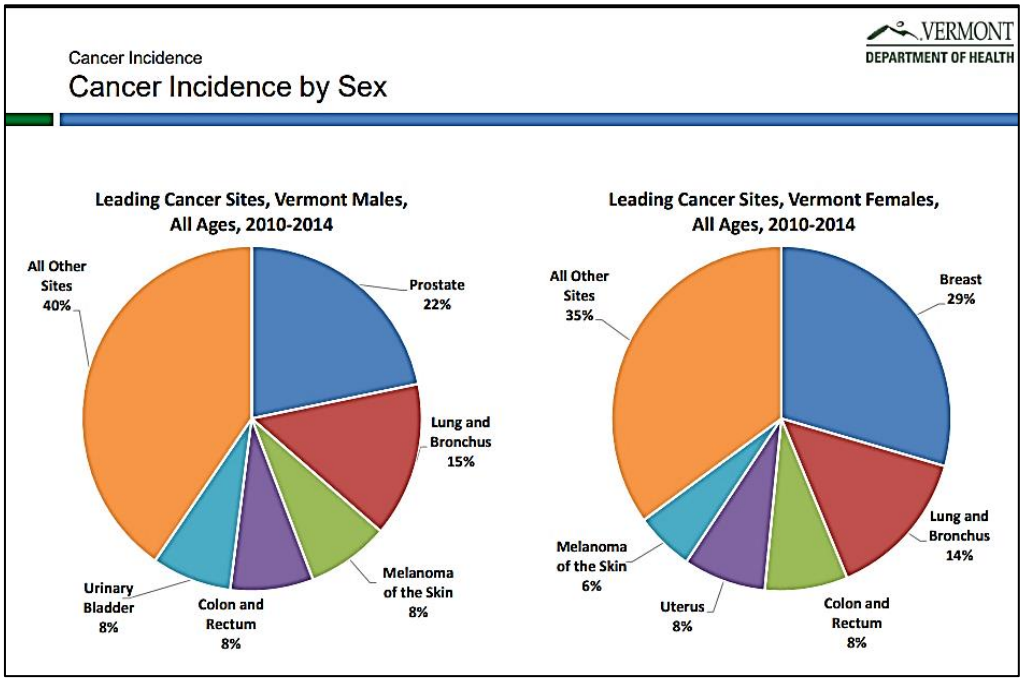
Approximately four in 10 adults in the U.S. will develop cancer in their lifetime.[56]

Genetic and demographic factors affect cancer rates. Cancer occurs in people of all ages, but risk increases significantly with age. Differences also exist between genders. Women are statistically more likely to have had cancer than men. There are no differences in cancer by education level, but income level seems to make a difference. Adults living in homes with an annual income less than $25,000 are statistically more likely to have had cancer than adults in homes with an income of $50,000 - $75,000. Cancer prevalence is statistically similar by sexual orientation and gender identity. Vermonters with a disability are nearly twice as likely to have ever had cancer than adults without a disability.[57]

[52] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf; https://www.healthvermont.gov/wellness/cancer
[53] https://www.cdc.gov/nchs/pressroom/states/vermont/vt.htm
[54] https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_cancer_Windham.pdf
[55] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf; https://www.healthvermont.gov/wellness/cancer
[56] https://www.cancer.gov/about-cancer/understanding/statistics
[57] Ibid.

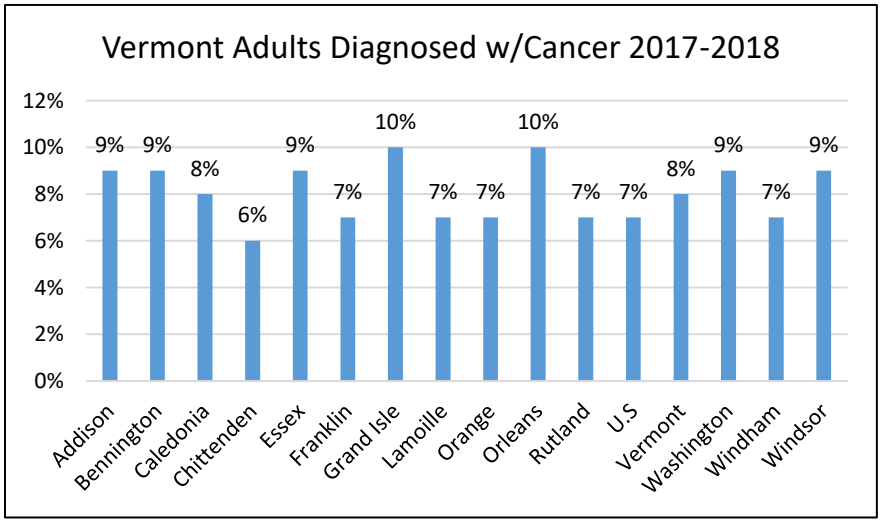
Behavioral factors also affect cancer rates. Not all cancers can be prevented, but risk for many can be reduced through a healthy lifestyle. Excess weight increases the likelihood of cancers of the breast (postmenopausal), colon and rectum, uterus, thyroid, pancreas, kidney, esophagus, gallbladder, ovary, cervix, liver, non-Hodgkin lymphoma, myeloma and prostate (advanced stage). Use of tobacco increases the likelihood of Cancers of the lung, larynx (voice box), mouth, lips, nose and sinuses, throat, esophagus, bladder, kidney, liver, stomach, pancreas, colon and rectum, cervix, ovary and acute myeloid leukemia. [58]

Five types of cancer make up the majority of new cancer diagnoses or cancer-related deaths. The leading cancer types differ for male and female bodies (see chart at right.[59]



For females, the incidence of cancers of the breast, lungs/bronchus uterus, bladder, and skin are higher in Vermont than the U.S. average. For males, cancers of the skin, bladder, esophagus, and non-Hodgkins lymphoma is higher in Vermont than in the U.S.[60]

How does Windham County compare to the rest of Vermont? The rates of cancer are relatively similar in all Vermont counties, as the chart at right shows. Approximately 2,500 of Windham County residents are now living with cancer, and 22% of Windham County deaths are due to cancer, according to VDH.[61]



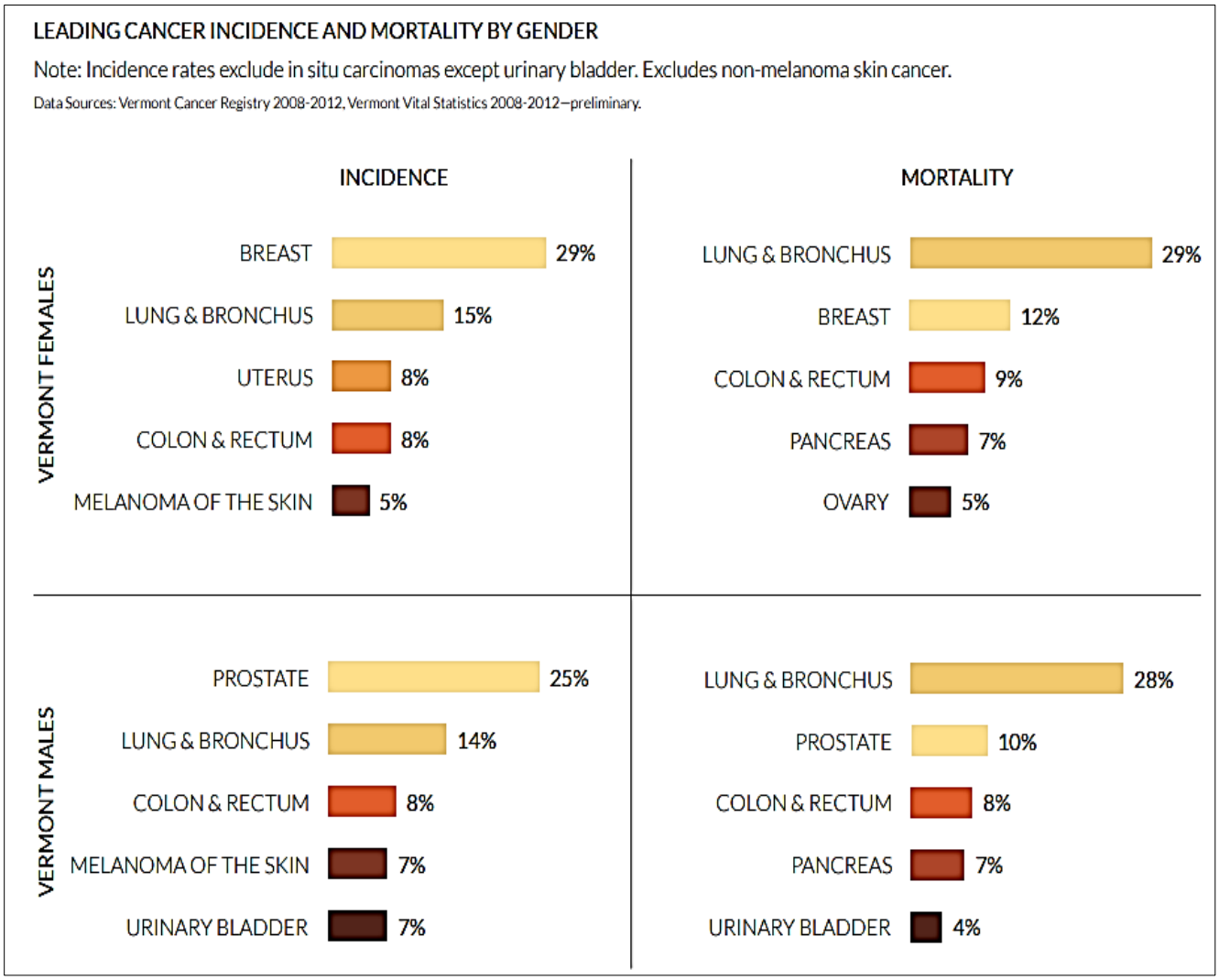
Cancer Screening Tests

The good news is that cancer is often survivable. Early detection is important. When cancer is found and treated early, before it has spread, a person's chance for survival is much

[58] https://www.healthvermont.gov/wellness/cancer/prevention
[59] https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_CancerDataPagesPDF.pdf
[60] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[61] https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_cancer_Windham_infographic.pdf

better. That's why recommended cancer screenings are so important, including those for lung, breast, cervical, and colorectal cancers.

The cancers most commonly diagnosed early are not leading causes of cancer death. Cancers such as melanoma, prostate, and female breast cancer are most often diagnosed at earlier stages. By contrast, cancers such as pancreatic cancer are less commonly diagnosed early, and much more likely to cause death.[62]



Windham County's Cancer Screening Rates

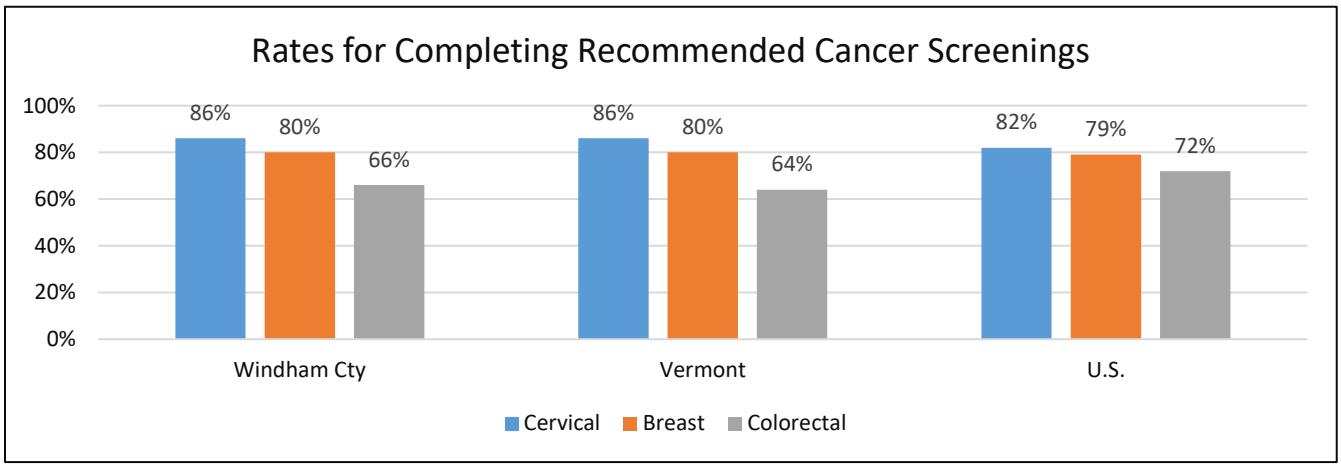
The Vermont Department of Health focuses especially on cancer screenings for breast cancer, prostate cancer, colorectal cancer, and cervical cancer.

Windham County residents are better at completing some recommended screenings than others. Cervical cancer screenings, recommended for women age 21-65, are 4% higher in Windham County and in Vermont than for the

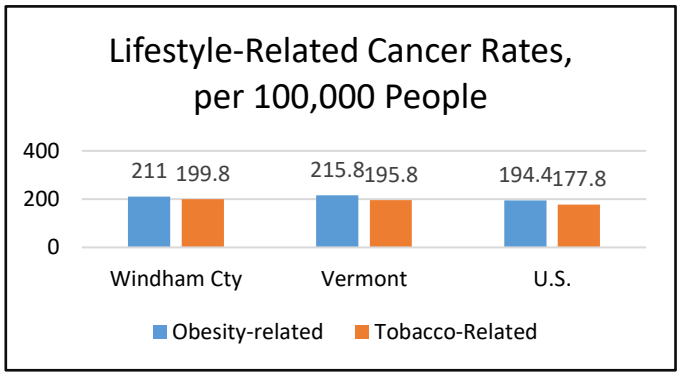
[62] https://www.healthvermont.gov/sites/default/files/documents/2016/12/2016-2020_VermontCancerPlan.pdf

U.S. as a whole. Windham County's cervical cancer rate is quite low, 3 or fewer cases/year. Vermont averages 12 cases/year; the U.S. as a whole averages 10,242 cases/year.[63]

Women in Windham County and Vermont complete breast cancer screenings (annual mammograms, recommended for women ages 50-74), at a slightly higher rate than the U.S.[64] Windham County has a higher incidence of advanced breast cancers per 100,000 residents, 106.7 versus Vermont's 91.8, despite this good rate of screenings.[65]



Windham County has a slightly better rate than Vermont, but lags behind the U.S., for colorectal cancer screenings (fecal occult blood screening and colonoscopy, for adults 50-75).[66] Windham County's rate of advanced colorectal cancer (70.7 cases per 100,000 residents) is much than Vermont's (60.6).[67]



Prostate cancer screening is generally recommended for men age 65+. Most often this is done by physical examination. A protein-antibody screening test exists, but it is not universally recommended.[68] Windham County's rate of prostate cancer is better than Vermont's and much better than the U.S., 26.2 incidences per 100,000 vs. 31.4 for Vermont and 42.5 for the U.S.[69]

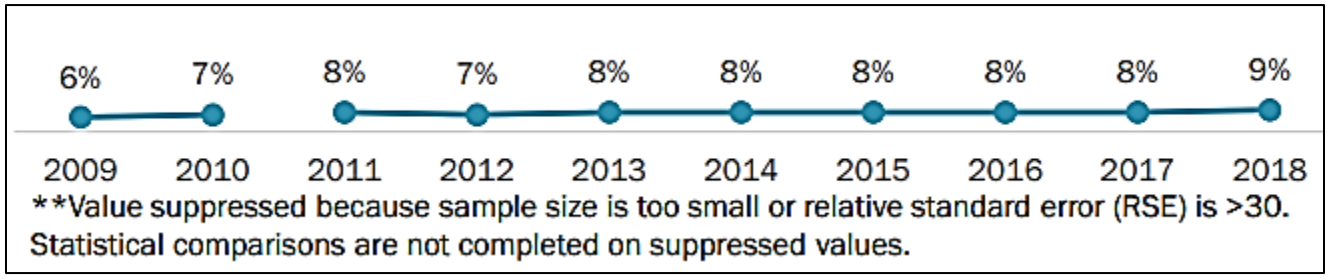
Windham County's rate for obesity-related cancers is better than Vermont's, but worse than the U.S. rate. The county's rate of tobacco-related cancer is worse than both Vermont and the U.S.[70]

[63]https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=50&areatype=county&cancer=057&race=00&sex=2&age=006&stage=999&year=0&type=incd&sortVariableName=rate&sortOrder=default&output=0#results
[64] https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_cancer_Windham.pdf
[65] Ibid.
[66] Ibid.
[67] https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_cancer_Windham.pdf
[68] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[69]https://statecancerprofiles.cancer.gov/incidencerates/index.php?stateFIPS=50&areatype=county&cancer=066&race=00&sex=1&age=006&stage=999&year=0&type=incd&sortVariableName=rate&sortOrder=default&output=0#results
[70]https://www.healthvermont.gov/sites/default/files/documents/pdf/stat_cancer_Windham.pdf

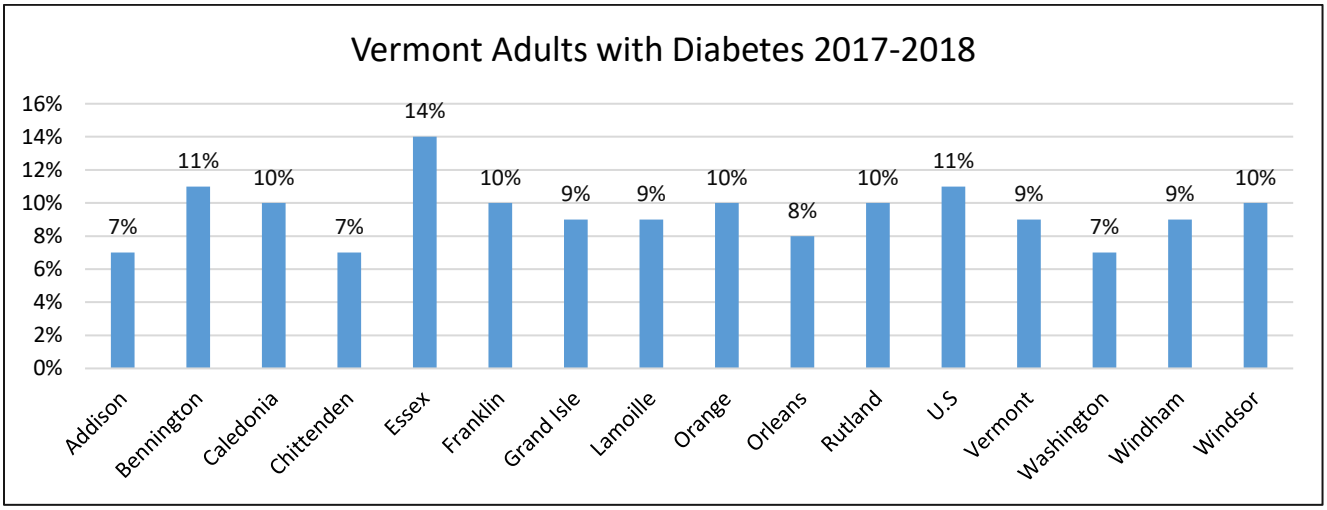
Diabetes

Diabetes is a chronic disease that disrupts blood sugar levels. There are two main types of diabetes. For Type 1 diabetics, the body is incapable of producing insulin. For Type 2 diabetics, the most common type, the body makes insulin but does not use it properly.[71]

Approximately 9% of Vermonters have diabetes, more than 55,000 people.[72] Diabetes prevalence among Vermonters has crept up slightly over the past decade.[73] It is a leading cause of death among Vermonters.[74]



Windham County's rate of diabetes among its population matches the statewide rate, both are at 9%. These rates are slightly better than the U.S. rate (11%) and better than several other Vermont counties, as shown below[75]



Even though Windham County's rate is better than the nation's, diabetes is still a major cause for concern. The population of Windham County is just over 42,000, so a rate of 9% means that 3,800 county residents have diabetes.

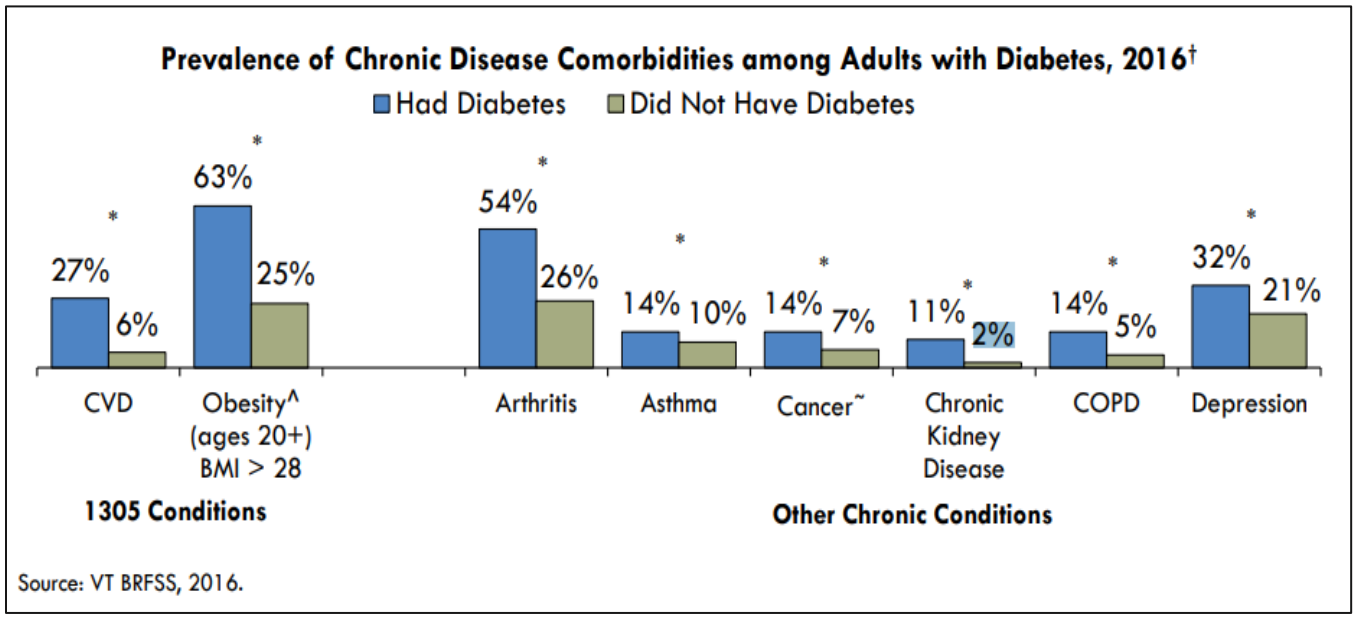
Uncontrolled blood sugar can lead to diseases in other parts of the body. Over time, build-up of glucose in the blood can damage eyes, kidneys, nerves, or the heart, leading to serious health complications. [76] Uncontrolled diabetes causes 2-3% of deaths in Vermont (12,000-18,000 deaths).[77]

[71] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[72] https://www.healthvermont.gov/wellness/diabetes/diabetes-vermont-data-and-facts
[73] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[74] https://www.cdc.gov/nchs/pressroom/states/vermont/vt.htm
[75] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[76] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[77] https://www.healthvermont.gov/sites/default/files/documents/pdf/hpdp_3-4-50_County%20Data%20Brief%20Windham_070519.pdf

Type 2 diabetes can usually be prevented with awareness, education, and lifestyle changes.

Prediabetes, a condition that often leads to diabetes, is too often undiagnosed. It has been estimated that one in three adults over the age of 18, and half of adults over the age of 65, have prediabetes. As many as 90% of these are undiagnosed.[78] Prediabetes can cause health problems even before diabetes develops, including early kinds of kidney disease, nerve damage and small blood vessel damage in organs such as the eyes. Without lifestyle changes, as many as 30 percent of those with prediabetes will develop Type 2 diabetes within five years.[79]

For those who already have Type 2 diabetes, lifestyle changes can have a big impact on how well the disease is managed.[80] Approximately two-thirds of Vermont adults who have diabetes are also obese (63%) and over a quarter (27%) also have cardiovascular disease (CVD). Vermont adults with diabetes were significantly more likely to have all of the comorbidities below when compared to adults who did not have diabetes.[81]



The VDH predicts that rates of diabetes will continue to increase -- if lifestyle changes do not occur.[82]

Education is an important key to improving diabetes statistics and health outcomes for diabetics.

Vermont offers free diabetes prevention and diabetes management workshops called My Healthy Vermont.[83] Despite this free offer, only 19% of Windham County residents have had diabetes education. Among Vermonters as a whole, the rate is much higher--46%; 55% of all Americans have had diabetes education.

Blood testing is also important. Approximately 69% of adult diabetics check their blood sugar at least 3 times/week.[84] When used, monitoring devises worn on the body can provide the most current readings.

[78] https://www.healthvermont.gov/sites/default/files/documents/2016/12/data_brief_20165_diabprev.pdf
[79] https://www.healthvermont.gov/sites/default/files/documents/pdf/3-4-50_Diabetes_%20Data%20Brief_FINALapproved_forWEB.pdf
[80] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[81] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[82] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[83] https://myhealthyvt.org/
[84] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf

Cardiovascular Disease (Heart Disease)

Heart disease is the second leading cause of death among Vermonters, after cancer. Also, two diseases associated with heart disease -- stroke and hypertension – rank sixth and ninth respectively as leading causes of death.[85]

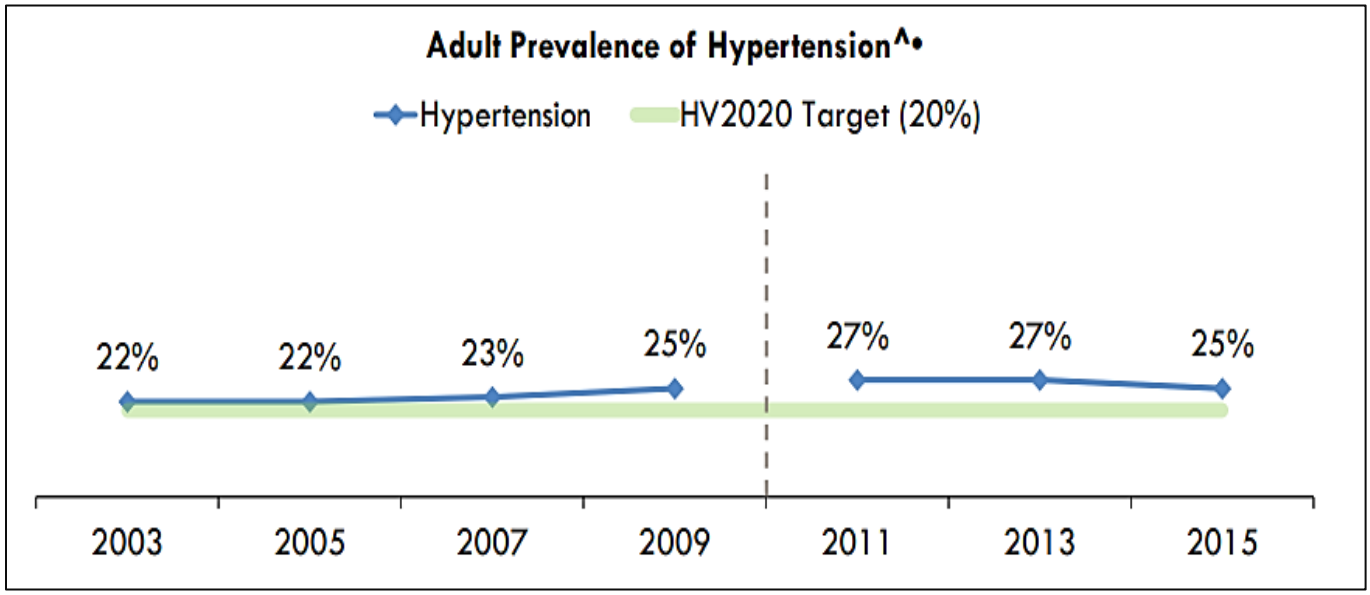
In 2018, 1,335 Vermonters died of heart disease.[86]

Windham County's rate of deaths due to coronary heart disease (98.8 per 100,000 people) was slightly better than Vermont's rate (105.4 deaths per 100,000).[87]

Cardiovascular Disease (CVD) is a broad category that includes several types of heart conditions, notably coronary heart disease, heart attack and strokes. Eight percent of Vermonters have been diagnosed with CVD, approximately 39,5000 adults. Males are more likely to have CVD than females, and the incidence increases with age.[88]

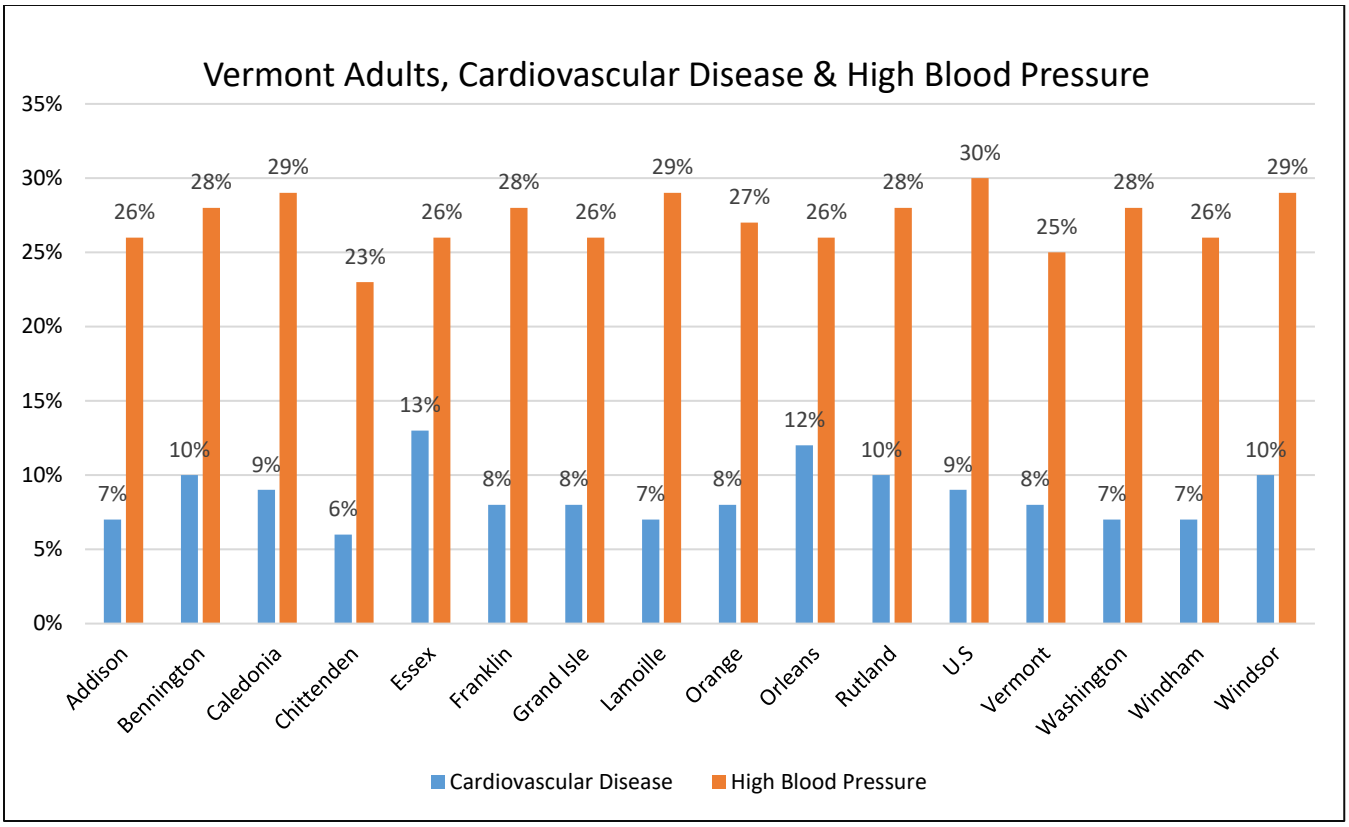
Almost half of Americans and over half of Vermonters have at least one key risk factors for CVD: high blood pressure (hypertension), high cholesterol, or a habit of smoking. Other health conditions and behaviors that can lead to CVD are diabetes, overweight and obesity, poor diet, physical inactivity, and excessive alcohol use. CVD is one of the leading causes of death in the U.S. and in Vermont.[89]

Rates of hypertension among Vermonters have consistently remained above Vermont's 20% target, as this timeline from VT's most recent *Chronic Disease Surveillance* report shows.[90]

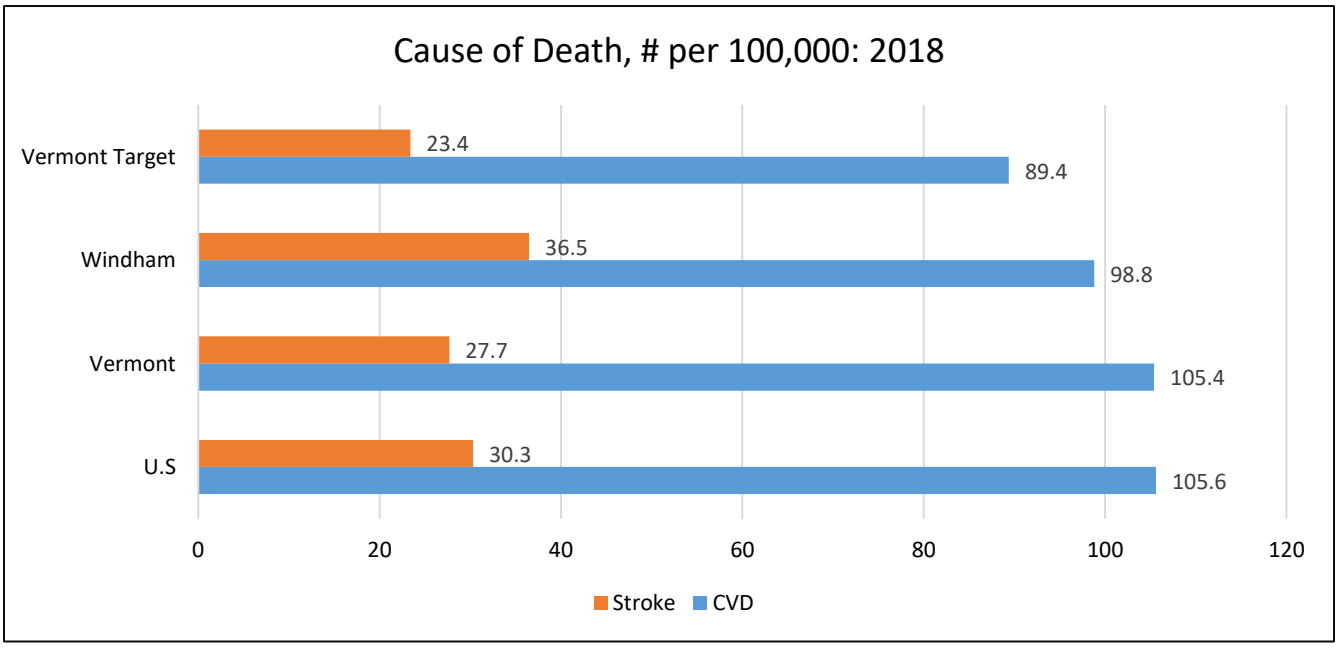


Vermont county rates for heart disease and high blood pressure are shown on the next page.[91]

[85] https://www.cdc.gov/nchs/pressroom/states/vermont/vt.htm
[86] https://www.healthvermont.gov/sites/default/files/documents/pdf/Vital%20Statistics%20Bulletin%202018.pdf
[87] https://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf
[88] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[89] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[90] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[91] https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf



It is cause for concern that hypertension and CVD disease rates remain consistent, despite efforts by medical providers to encourage patients to improve lifestyle habits. The county's healthcare organizations are continually asking what more can be done, and what new approach could be more successful. Every county in the state has work to do in order to meet the state's goal of 20%. Improvement will save lives.



Lung Health & Respiratory Diseases

The three most common lung diseases that afflict Windham County residents are asthma, chronic obstructive pulmonary disease (COPD), and lung cancer. The latter two are directly related to smoking, and the first one, while not directly caused by it, is certainly aggravated by smoking.

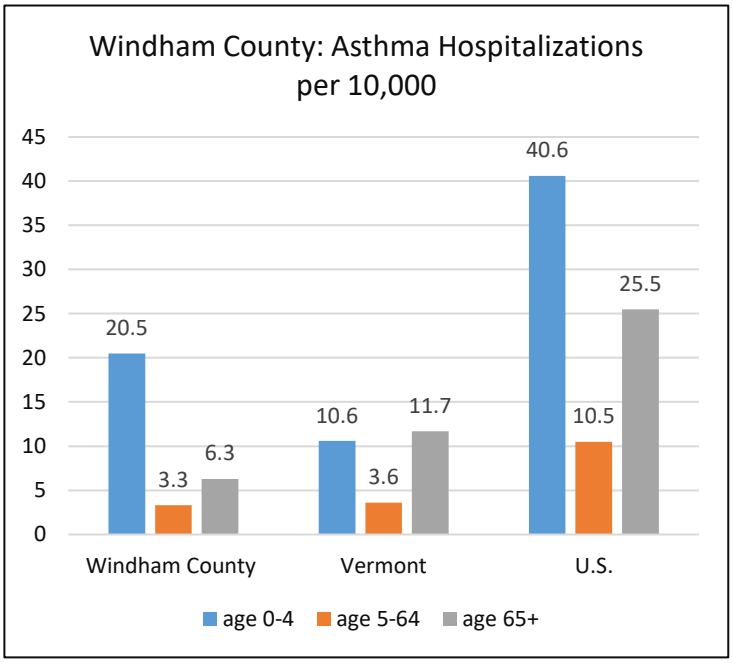
Asthma

Asthma is a serious chronic disease that inflames and narrows the airways in the lungs, and can cause recurring attacks of wheezing, chest tightness, shortness of breath and coughing.[92] A cause for asthma has not been specifically identified. Generally, asthma is caused by a complex mix of genetic and environmental factors.[93]

Asthma affects people of all ages, but it most often starts during childhood. Approximately 67,000 Vermonters have been diagnosed with asthma; nearly 9,600 of them are children."[94] Asthma prevalence in the U.S. increased by 75% between 1980 and 1994, and it has continued to rise in recent years.[95] Windham County's 11% incidence of asthma among adults is close to the state rate of 12%.[96]

Because asthma is partly influenced by genetics, it may not be possible to prevent or cure it. However, but it can be managed. The focus on the state's asthma management plan is to provide education about how to reduce or eliminate environmental factors and to work to reduce hospitalizations due to asthma attacks.

Only 17% of Windham County adults with asthma have a management plan developed with a medical provider, compared to 33% of Vermonters and 31% of Americans. For children 17 and younger, a county rate is not available, but for the state and nation, the rates are 48% and 49&, respectively.[97]



Asthma hospitalizations is another important marker for how well asthma is being managed. The state tracks data for three age groups: children age 4 and younger, people age 5 to 64, and seniors age 65+. Windham County's hospitalization rates for the older two groups are better than the state and the national rates, as shown in the chart at right. But for younger children, the situation is more dire. Windham County's asthma hospitalization rate for children age 4 or younger is double the state and national rate.[98]

[92] https://www.healthveont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[93] https://apps.health.vermont.gov/ias/querytool?topic=HealthyVermonters2020&theme1=RespiratoryDiseases
[94] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[95] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[96] https://www.healthvermont.gov/sites/default/files/documents/2016/12/HS_asthma_burden_report_2012.pdf; https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[97] http://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf
[98] http://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf

People with active asthma were estimated to be 10 times more likely to develop chronic bronchitis, and 17 times more likely to develop emphysema compared to those without asthma.[99]

Chronic Obstructive Pulmonary Disease (COPD)

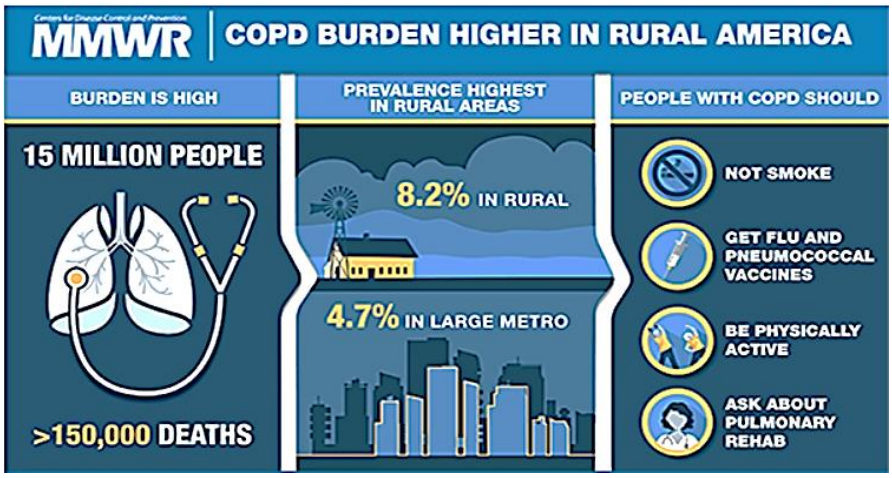
This term refers to a group of diseases, including emphysema and chronic bronchitis, that cause airflow blockage and breathing-related problems. Tobacco smoke is a key factor in the development and progression of COPD. Between 80% and 90% of COPD is due to tobacco use.[100] Therefore, the prevalence of this disease, unlike asthma, is related to lifestyle.[101]

Almost 15.7 million Americans report a diagnosis of COPD, but the actual number may be higher, as COPD is known to be underdiagnosed.[102] Both Windham County and the U.S. report a rate of 7%; Vermont's is 6%.[103]

Men and women report having COPD at the same rate. There are no statistical differences in the prevalence of COPD by race and ethnicity, or sexual orientation and gender identity.[104] The prevalence of COPD generally increases with age. An estimated 24% of all Americans 65 years and older have COPD.[105] Statistics show that COPD is more common in rural America than in urban areas.[106]

Chronic lower respiratory diseases, primarily COPD, are the third leading cause of death in the U.S.,[107] and there has been no change over time. Nearly all of these deaths occur among adults age 45+. The death rate increases with age, and is higher among white Vermonters.[108]

Although the primary cause of COPD is smoking, studies have also shown strong links between exposure to indoor and outdoor air pollution and COPD. The most common indoor exposures are smoke from tobacco, fireplaces and wood stoves, while outdoor exposures include ozone and particle pollution, and emissions from vehicles and industrial sources. Job-related exposures include fumes, gases, and dusts.[109]



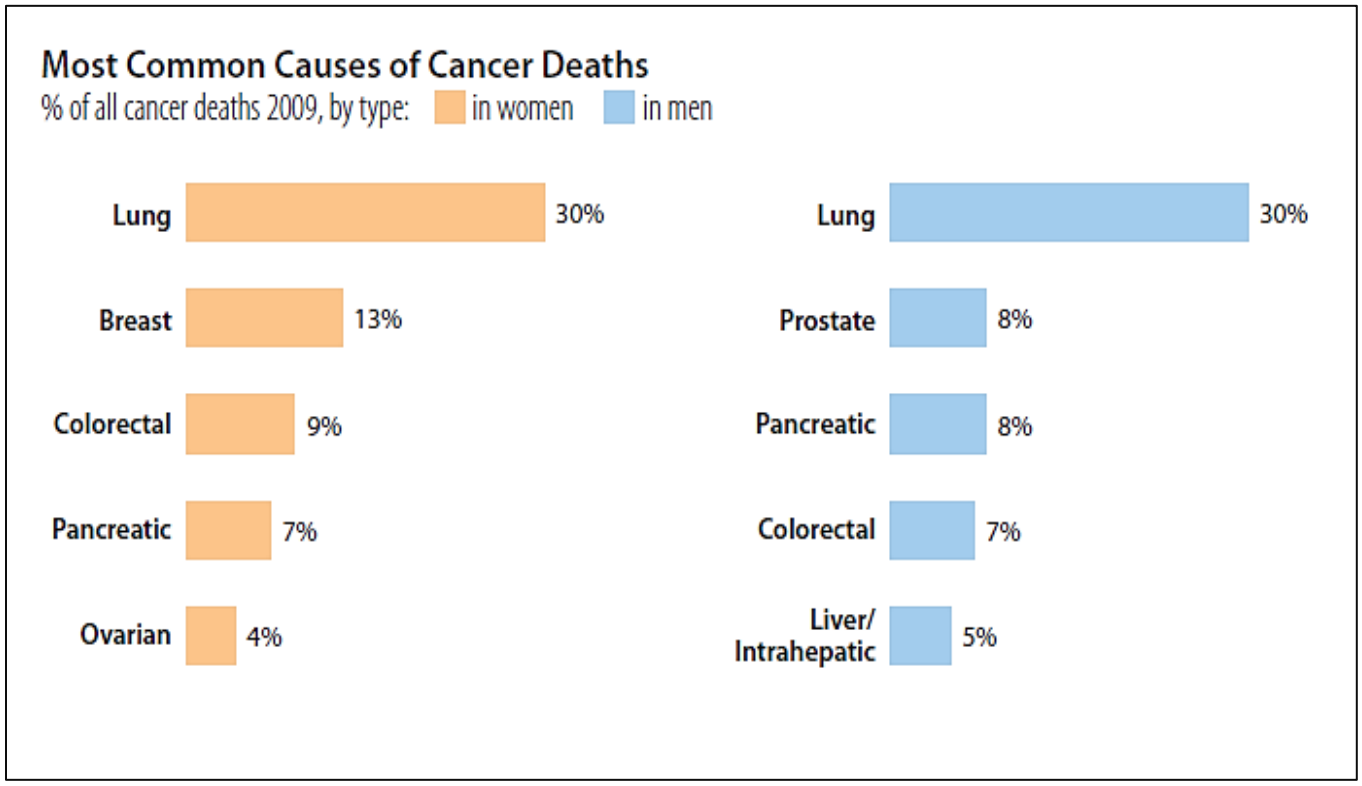
[99] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[100] https://www.healthvermont.gov/wellness/asthma/copd-chronic-obstructive-pulmonary-disease
[101] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[102] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[103] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[104] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[105] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[106] https://www.cdc.gov/mmwr/volumes/67/wr/mm6707a1.htm
[107] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[108] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease
[109] https://www.healthvermont.gov/tracking/chronic-obstructive-pulmonary-disease

Medications, managing stress, reducing exposure to pollutants and other substances that irritate the lungs, avoiding foods that cause flare ups, and engaging in the right level of healthy physical activity can all help with managing COPD. Developing a disease management plan with a medical provider is very important.[110]

Lung Cancer

One-third of cancers diagnosed in the U.S. are associated with tobacco.[111] Smoking can cause cancer almost anywhere in the body, but particularly in the lungs. Nine out of 10 cases of lung cancer are caused by smoking, and lung cancer is the number one cause of cancer death in Vermont and the U.S.[112]

The majority of lung cancers are diagnosed in late stages of the disease when treatment is mostly ineffective.[113]



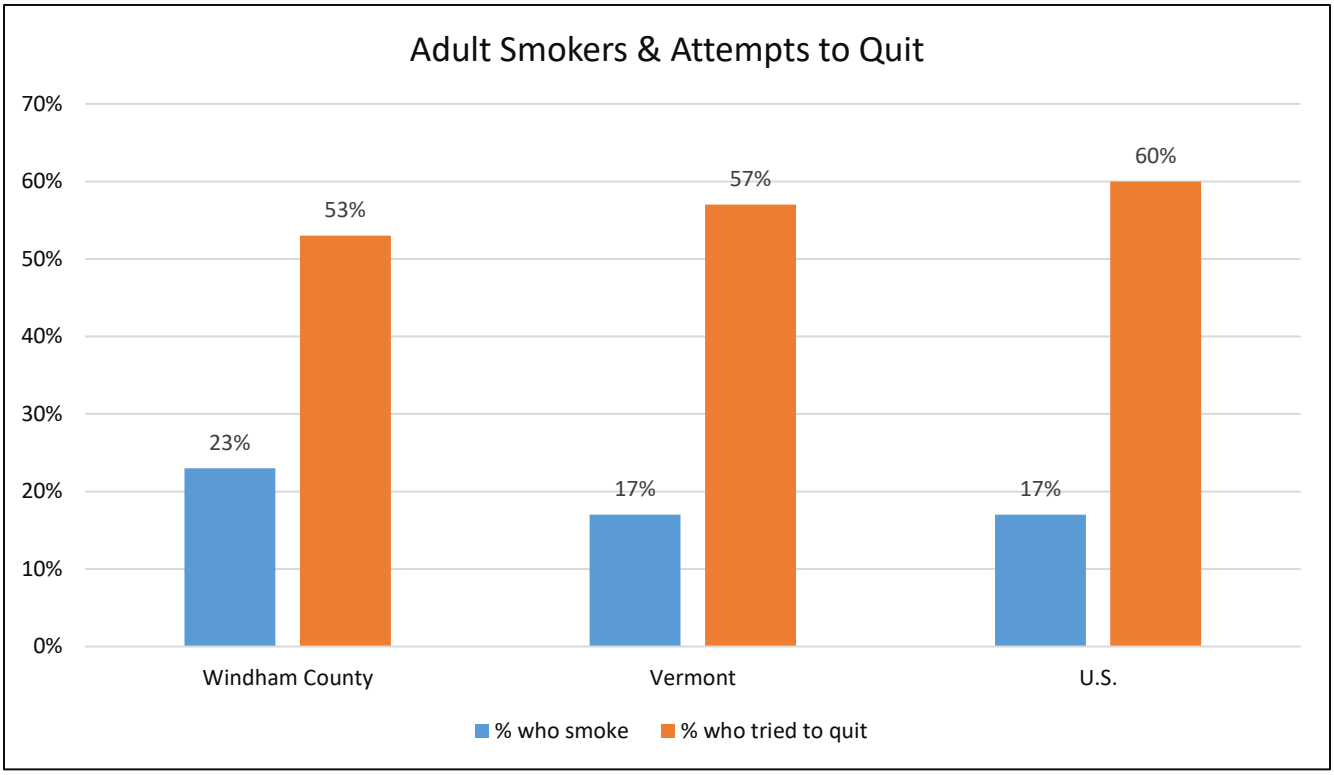
Until recently, there were no screening tests for detecting lung cancers at an early stage. In 2013, screening guidelines were developed for high-risk individuals, based on their smoking history and age (especially current and former heavy smokers, age 55-80). This screening method uses low-dose computed tomography to detect abnormalities in the lungs.[114]

[110] https://www.lung.org/lung-health-diseases/lung-disease-lookup/copd/living-with-copd/copd-management-tools
[111] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[112] https://www.healthvermont.gov/wellness/cancer/early-detection-and-screening
[113] https://www.healthvermont.gov/wellness/cancer/early-detection-and-screening
[114] https://www.healthvermont.gov/wellness/cancer/early-detection-and-screening

While lung cancer screening is important, it should not be considered a substitute for quitting smoking.

Windham County's rate of tobacco-related cancer diagnoses is 18 points higher than Vermont's (195.8 cases per 100,000 residents, vs. 177.8 for Vermont). A higher percentage of Windham County adults smoke (23% vs. 17% for Vermont and 17% for the U.S.), and a smaller percentage report trying to quit in the past year, 53% vs. 57% in Vermont and 60% in the U.S.[115]

Rates for teens who smoke are comparable for Windham County, Vermont, and the U.S., all at 11%.[116]



[115] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf
[116] https://www.healthvermont.gov/sites/default/files/documents/2016/11/Healthy%20Vermonters%202020%20Report.pdf

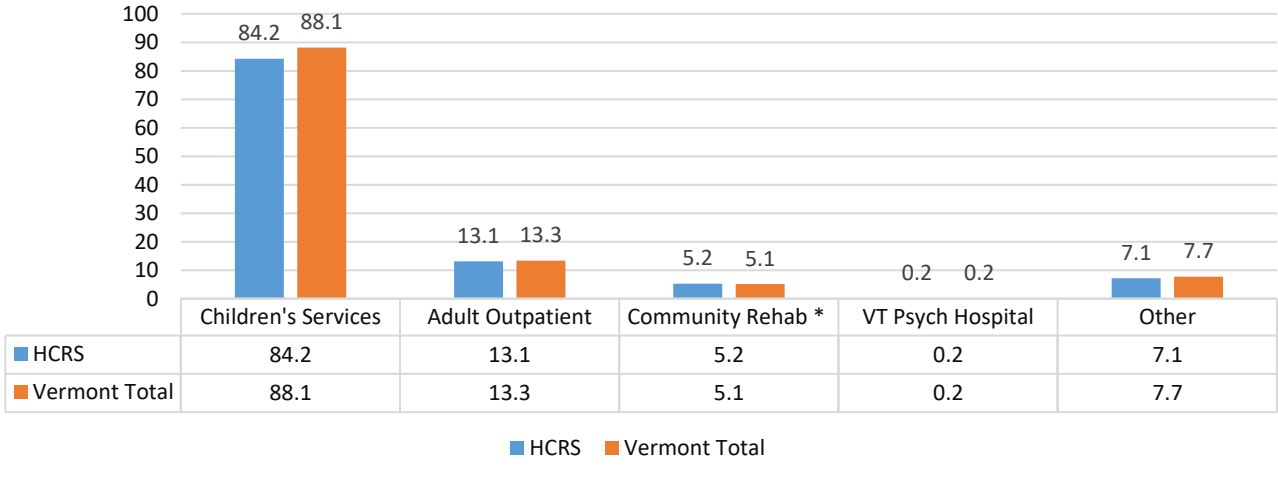
Windham County: Mental Health

Mental and emotional health are critical to general health. While some people with mental health problems are publicized in high-profile cases, mental health issues more often remain hidden. One main reason for this is the stigma attached to mental illness. People can understand diabetes or a broken leg, but depression, anxiety, and other challenges are harder to see and understand. Individuals may have symptoms, but the reasons behind those symptoms are not always clear.

Jilisa Snyder, Ph.D., is Clinical Director at the Brattleboro Retreat's Anna Marsh Clinic. She has written about the hidden aspects of mental health, including the following: "Telling someone experiencing a major depression to 'pick yourself up by your bootstraps' or, for a person struggling PTSD to 'get over it,' is like telling a runner with a broken leg to 'just rise up and finish that marathon.' We can see and appreciate the casted leg. But we often do not see or understand the signs and symptoms of a mental illness—sometimes because people feel … profuse shame, and cannot show outward signs of their suffering. Yet mental health is as real and authentic as any other aspect of one's health. ... Mental illness arises from vulnerabilities due to the interplay of genetic, biochemical, relational, and environmental factors, not personal weakness. ..."[117]

The National Institute of Mental Health states that nearly one in five US adults lives with a mental illness (51.5 million in 2019) and estimates that as many as half of these remains untreated.[118]

The VT Department of Mental Health does not collect county-specific data for mental health patient. Instead, it reports data about clients served by Health Care & Rehabilitation Services, which serves Windham and Windsor Counties. This data shows that children receive mental health services much more often than adults.[119] If the statistics are correct, this chart represent only half of those local Vermonters suffering from mental illness.



*Community Rehab refers to outpatient services for those with severe mental illness, i.e., schizophrenia, bipolar disorder, & major depression.

[117] https://www.brattlebororetreat.org/articles/stepping-forward-courage-thoughts-ending-stigma-during-mental-illness-awareness-week

[118] https://www.nimh.nih.gov/health/statistics/mental-illness

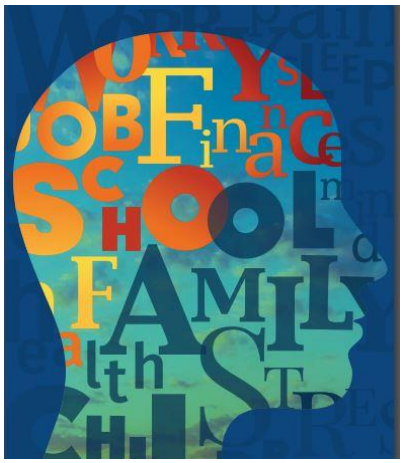
[119] https://mentalhealth.vermont.gov/sites/mhnew/files/documents/Reports/Stats/DMH-2019_Statistical_Report.pdf; https://mentalhealth.vermont.gov/services/adult-mental-health-services/services-and-supports-adults/community-rehabilitation-and

Mental illnesses include many different conditions that vary in degree of severity, ranging from mild to moderate to severe. Two of the most prevalent mental illnesses are anxiety and depression.

Anxiety Disorders

Anxiety is a natural reaction to stress. At normal levels, it may help to motivate and improve performance. But when anxiety interferes with the ability to meet personal, professional and community responsibilities, it may be at the level of a serious but treatable mental illness. Anxiety may be caused by something specific, it may occur suddenly, or it may be a generalized long-term tendency to worry.

When the length of time or intensity of anxious feelings gets out of proportion to the original stressor, it can cause physical symptoms including fatigue, insomnia, muscle aches, sweating, and nausea or diarrhea. These responses move beyond anxiety into an anxiety disorder.



There are six main types of anxiety disorders that include: generalized anxiety disorder, panic disorder, phobia, social anxiety disorder, obsessive-compulsive disorder (OCD), post-traumatic stress disorder (PTSD), and separation anxiety disorder.[120]

People with PTSD suffer from anxiety as a response to experiencing or witnessing a traumatic event, such as war, natural disasters, assault, serious accident, or an unexpected death. It can affect children as well as adults, causing sleep problems, a tendency toward angry outbursts, and other issues.[121]

According to Medical News Today, anxiety disorders affect 40 million people (18% of the population) in the U.S. It is the most common group of mental illnesses in the country. However, only 36.9% of people with the condition receive treatment. Anxiety disorders typically develop in childhood and persist into adulthood.[122]

Anxiety disorders can affect one's physical health, job performance, relationships, and overall enjoyment of life. It can also increase the risk for other mental health problems, such as depression, substance abuse, eating disorders, and thoughts about or actual attempts of suicide.

Depression

Stress is a risk to health that is difficult to quantify, but anyone who lives with great stress from day to day knows the toll it can take on one's energy, mental outlook and quality of life. Often, the result is depression.

According to the National Institute of Mental Health, depression is a common but serious mood disorder, causing severe symptoms that affect how you feel, think and handle daily life: socializing, sleeping, eating, or working. A depressive disorder is not a passing blue mood but rather persistent feelings of sadness and worthlessness. To be diagnosed with depression, a person's symptoms must be present for at least two weeks.[123]

[120] https://www.nimh.nih.gov/health/topics/anxiety-disorders/index.shtml?rf=32471;
[121] https://www.nimh.nih.gov/health/publications/post-traumatic-stress-disorder-ptsd/index.shtml
[122] https://www.medicalnewstoday.com/info/anxiety
[123] https://www.nimh.nih.gov/health/topics/depression/

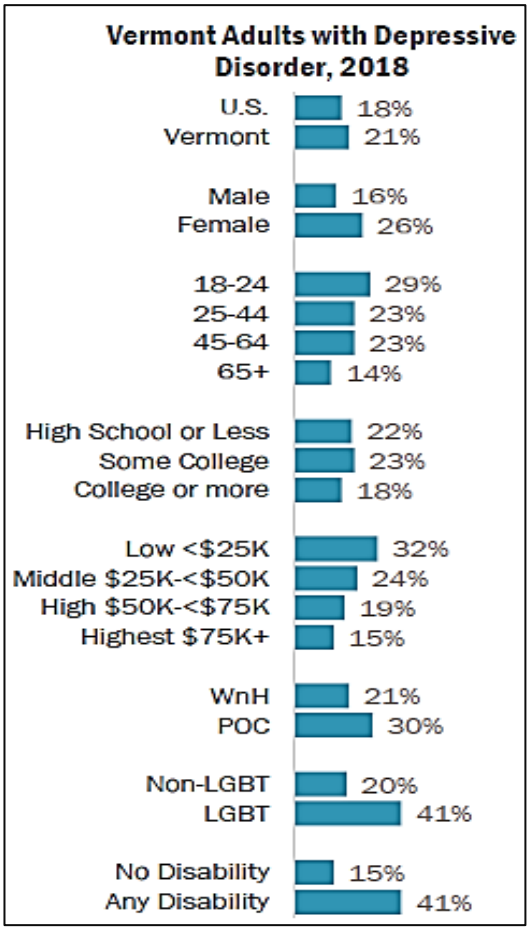
The VT Department of Health assesses the prevalence of mental health diagnoses in adult Vermonters by conducting the "Behavioral Risk Factor Surveillance System" survey and in youth by conducting the "Youth Risk Behavior Survey"; both surveys are conducted every two years. The county data below comes from those surveys.[124]

One in five Vermont adults report ever being told they have a depressive disorder, higher than the 18% among U.S. adults. Depression among Vermont adults significantly decreased from 2017 but is similar to 2011.

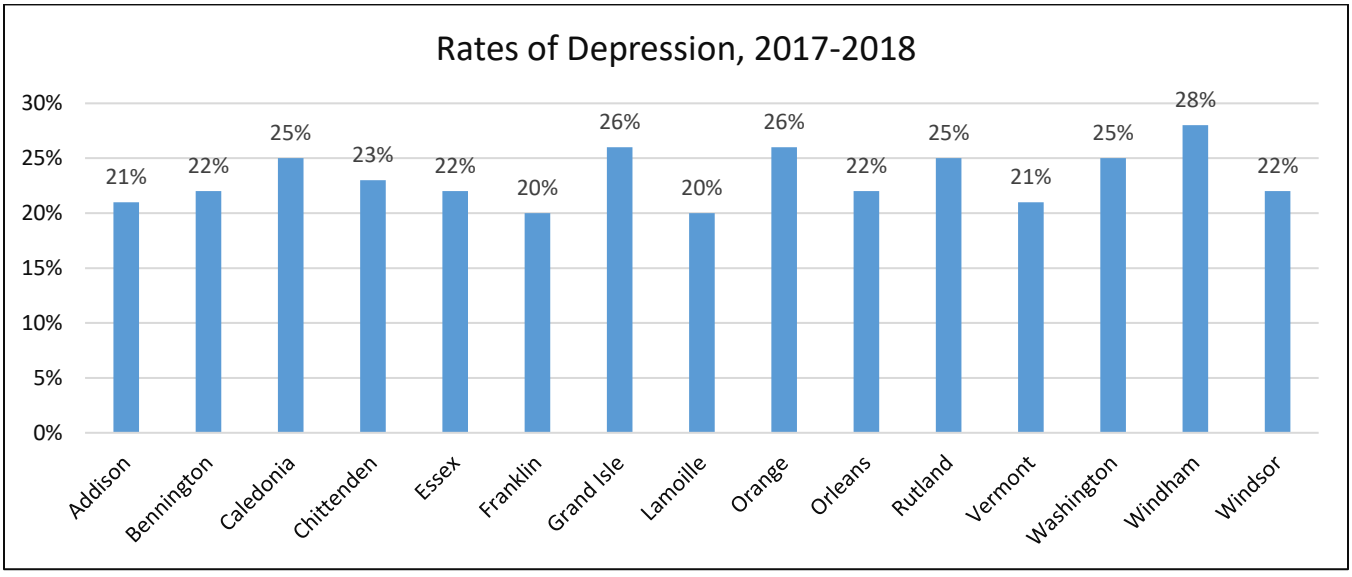
Women are statistically more likely than men to report having a depressive disorder. Adults under age 65 are statistically more likely to have been diagnosed with depression than older adults. People of color, LGBTQ+ adults and adults with a disability are significantly more likely to have depression than white, non-Hispanic adults, non-LGBTQ+ adults and adults with no disability.

Depression is reported similarly across all education levels.

Income makes a difference. Adults in homes with less than $25,000 in annual income are statistically more likely to have a depressive disorder than homes with more income. Adults in homes earning $75,000 or more are statistically less likely to have depression than homes with a middle income.



Windham County has the highest rate of depression of all counties in Vermont.[125]



[124]https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf; https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf

[125] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf

Depression is also common among Windham County youth. As many as 27% of the county's youth have been affected in recent years.[126]

Females are twice as likely to experience depression than males: 36% vs. 17%.

LGBTQ+ youth are three times as likely to experience depression than heterosexual and cisgender youth.

Statistically, Windham County youth experience depression at rates equal to their peers throughout Vermont.

FELT SO SAD OR HOPELESS ALMOST EVERY DAY FOR TWO WEEKS OR MORE IN A ROW THAT THEY STOPPED DOING SOME USUAL ACTIVITIES, PAST YEAR

		Windham	VT
Overall		27%	25%
Sex	Male	17%	16%
	Female	36%	35%
Grade	Grade 9	21%	23%
	Grade 10	32%	26%
	Grade 11	30%	26%
	Grade 12	24%	26%
Race	WnH	26%	25%
	REM	30%	28%
Sexual Orientation	Het/Cis	21%	21%
	LGBT	63%	58%

Overall Differences: State vs County
VT and County are Similar
Within County Differences
Females > Males
10 > 9
LGBT > Het/CIS

Suicide

Suicide is a leading cause of death for all ages, both nationally and in Vermont. When someone takes his/her/their own life, it also has a devastating effect on families and communities.

Risk factors for suicide include relationship problems, self-identity doubts, exposure to traumatic events, anniversaries of traumatic events, neglect and/or loss of vital resources, mental illness and a lack of mental health care, chronic health issues, social isolation, and access to lethal means (firearms and medications).[127]

According to Vermont's Department of Mental Health, suicide triggers vary based on one's personal identity:

- Stress resulting from prejudice and discrimination (family rejections, bullying, violence) is a known risk factor for suicide attempts among lesbian, gay, bisexual and transgender youth.
- For middle-aged men, unemployment, divorce and other changes that challenge traditional male roles (breadwinner, head of the household) can increase risk.
- People living in poverty, especially in rural areas, are at risk due to increased stress and lack of access to effective and affordable behavioral and mental health care.
- Older adults and youth who are alone too much or who feel isolated and lonely, are at risk.
- First responders (including EMS, fire, law enforcement, emergency dispatchers) and military veterans are exposed to death by suicide, which puts them at risk as well. People in these professions also tend to have higher rates of post-traumatic stress, which is associated with depression and anxiety. In addition,

[126] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf
[127] https://mentalhealth.vermont.gov/suicide-prevention/what-puts-us-risk-suicide-and-what-helps-protect-us

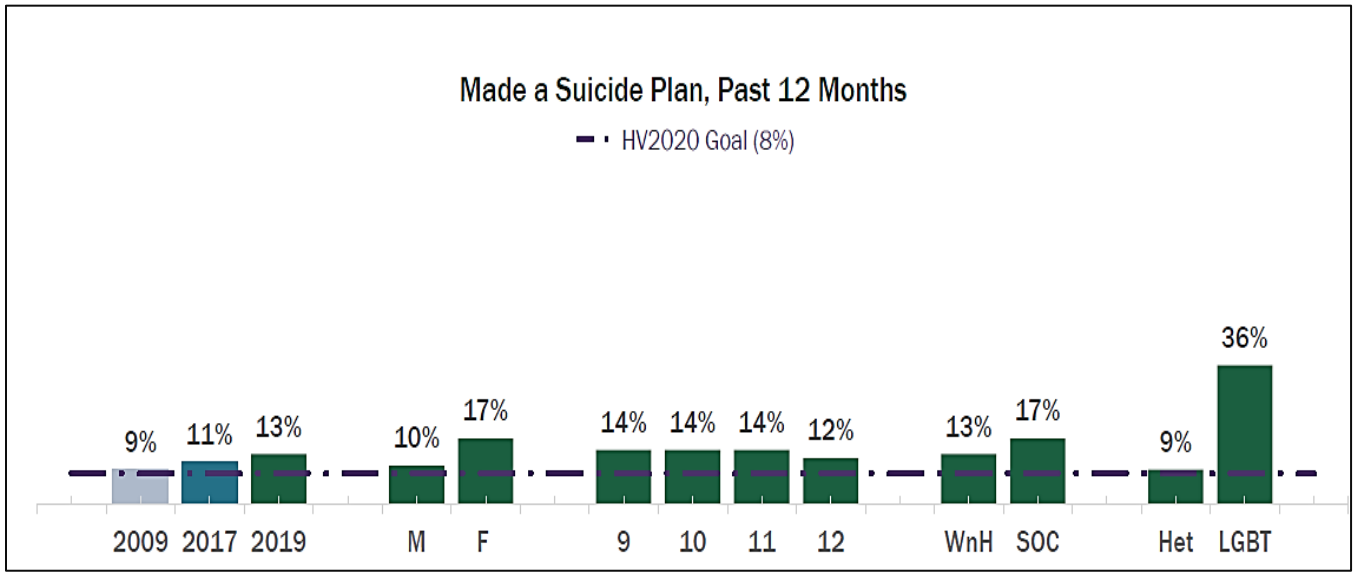
they may be exposed to beliefs that seeking help is not acceptable. Finally, these groups tend to have increased access to lethal means, such as guns and powerful medications.

Access to physical and mental health, social connections, meaningful work, support for substance abuse disorders, and coping skills can all help reduce the risk of suicide.[128]

Among Vermonters, men and women report having seriously considered suicide at similar rates. Young adults are most likely to report considering suicide in the past year. Adults 18-24 are statistically more likely to report seriously considering suicide compared to adults 45 and older. Adults 25-44 are statistically more likely to report seriously considering suicide than adults 65 and older. There are no statistical differences in suicidal thoughts by education level. Adults living in homes with lower incomes are more likely to report considering suicide.[129]

Windham County's rate of suicide has been higher than the state's rate for several years. The most recent statistic shows Windham County's rate per 100,000 individuals was 20.5, vs. 17.2 for Vermont and 13 for the U.S.[130]

The number of Vermont teens in Windham County who reported having made a suicide plan during 2017-2018 was 12-14%, and the number who actually made an attempt was 7%.[131]



WnH = White, non-Hispanic SOC = student of color Het = heterosexual LGBT = lesbian, gay, bisexual, transgender

Teen suicide is a major concern in Vermont, and many organizations, schools and mental health agencies have worked to raise awareness about this issue and to support families and friends after an event of suicide.

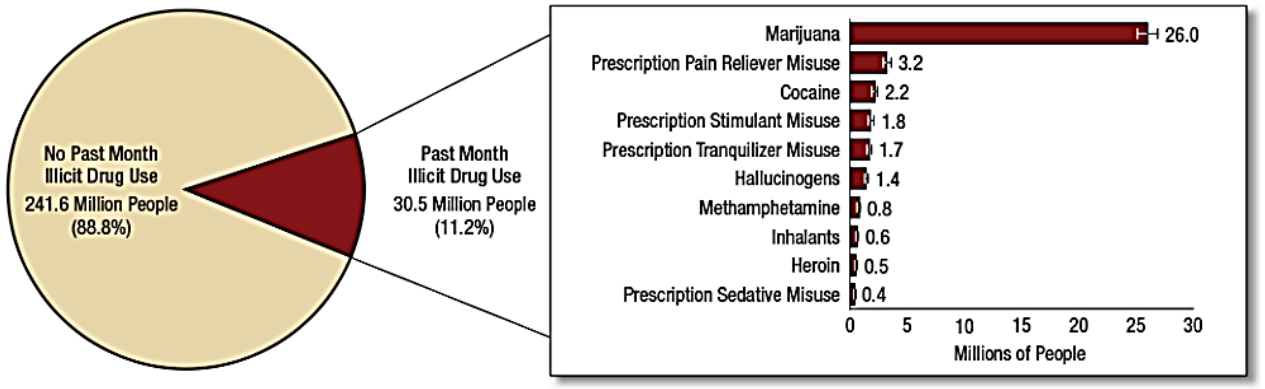
Suicide may not be predictable, but people who are considering suicide may display signs such as alcohol or drug abuse; mental health issues such as depression; physical illness such as a chronic disease; financial troubles; or problems at home, school or in the workplace. To prevent suicide, Vermonters must work together to support youth and adults who are in crisis, offering both hope and help.

[128] support for substance abuse disorders, and
[129] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[130] https://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf
[131] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf

Windham County: Substance Use Disorders

There are many reasons why people use alcohol, tobacco and other drugs: to relieve physical or psychological pain, to counter stress, to alter traumatic experiences or feelings of hopelessness. Prioritizing future health over immediate needs is especially difficult in the face of multiple daily stressors and pervasive marketing that can make it seem as if alcohol or drugs will make life easier.

Figure 11. Numbers of Past Month Illicit Drug Users among People Aged 12 or Older: 2017



D

Note: Estimated numbers of people refer to people aged 12 or older in the civilian, noninstitutionalized population in the United States. The numbers do not sum to the total population of the United States because the population for NSDUH does not include people aged 11 years or younger, people with no fixed household address (e.g., homeless or transient people not in shelters), active-duty military personnel, and residents of institutional group quarters, such as correctional facilities, nursing homes, mental institutions, and long-term care hospitals.
Note: The estimated numbers of current users of different illicit drugs are not mutually exclusive because people could have used or misused more than one type of illicit drug in the past month.

[132]

Substance Use Disorder is not a choice or a moral failing. Some people are genetically prone to substance use disorder, and this in itself is a risk factor in developing a substance use disorder. As a chronic illness, substance use disorder becomes a physiological and psychological need. Quitting or seeking treatment is never easy, and relapse is common, but many people do find a path to recovery. Adding to the stress of behavior change is the feeling of isolation that may come from avoiding friends or situations that may trigger smoking, drinking or drug use.

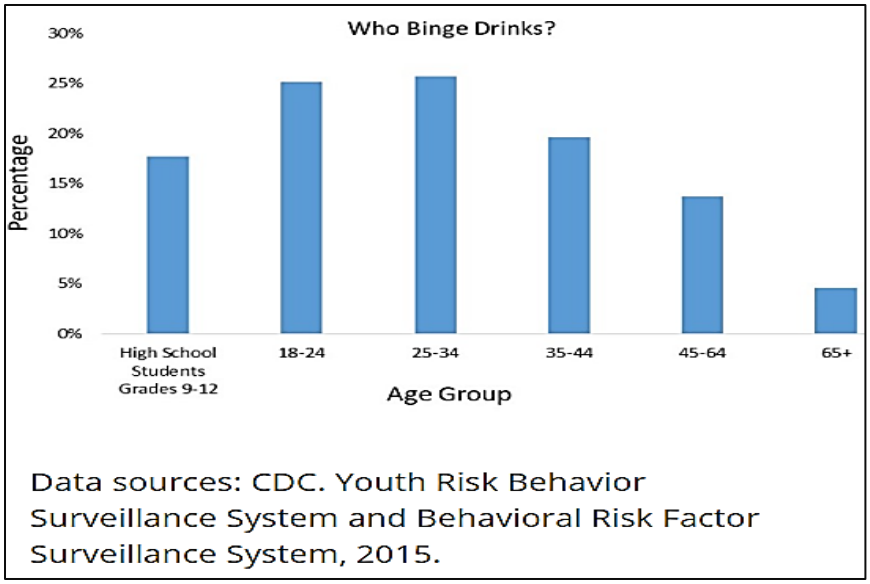
The VDH includes questions about substance use in its two biennial surveys, the Behavioral Risk Factor Surveillance System (BRFSS) for adults and the Youth Risk Behavior Survey (YRBS) for teens, in order to see trends over time. Data from these reports is used in the following sections of this report.

Alcohol Use

National data shows that Vermonters in all age categories drinking more often and more in one sitting than compared to the country overall. An estimated 7% Vermonters are in need of, but have not sought treatment for, alcohol use disorder.[133] The medical diagnosis for alcohol dependence is “alcohol use disorder,” a chronic relapsing brain disease characterized by compulsive alcohol use, loss of control regarding intake, and a negative emotional state when not using.[134] According to the 2018 BRFSS, alcohol use among all Vermonters has decreased since 2011

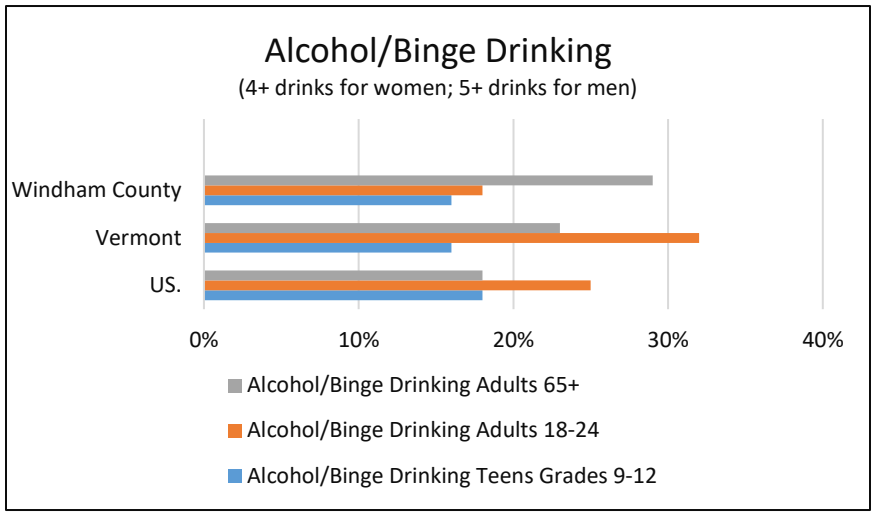
[132] https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHFFR2017/NSDUHFFR2017.htm
[133] http://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf
[134] https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/understanding-alcohol-use-disorder

(65% to 61%) but remains higher than among U.S. adults (53%). Twenty-seven percent of adults 18-24 binge drink, better than the Healthy Vermonters 2020 goal of 31%, and down from 34% in 2011.



According to the 2019 YRBS, the percentage of high school students who currently drink (one or more drinks in the past month) has decreased significantly since 2005 (when the rate was 42%), but is up slightly since 2005 (when the rate was 30%); the 2018 rate for Vermont was 31% and for the county was 32%. For middle school students, the 2018 rates were 7% for Vermont and 8% for Windham County.[135]

The CDC defines binge drinking as drinking that brings a person's blood alcohol concentration to 0.08 g/dl or above, which typically happens when men consume 5 or more drinks or women consume 4 or more drinks in about 2 hours. One in six US adults binge drinks about four times a month, consuming about seven drinks per binge. Binge drinkers are most often age 18-34, but teens and those mid-30 to mid-40 are also susceptible.[136]



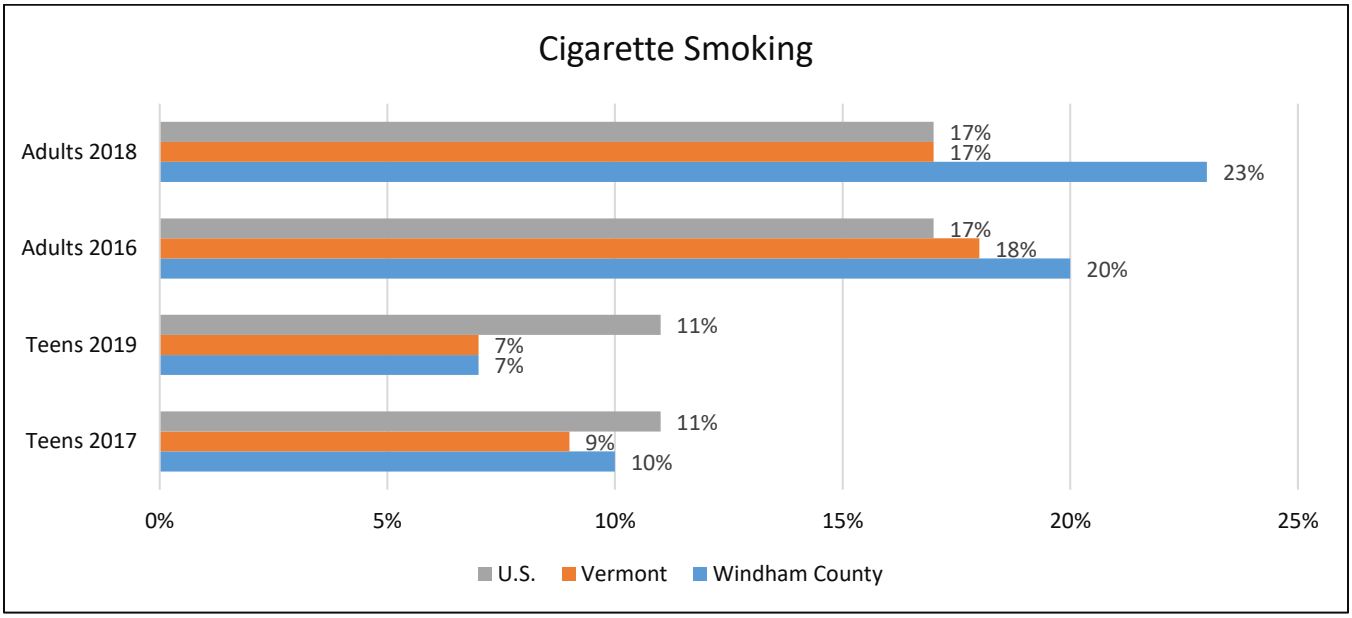
By middle school, 2% of Vermont students binge drink. By high school, 16% of them binge drink. One in three adults age 18 to 24 binge drinks, and 5% of older adults age 65+ binge drinks. According to the 2019 YBRS, females are twice as likely to binge drink as boys, and those in the LBGTQ+ community are also more likely to binge drink,[137] but the 2017 YBRS did not find these differences in rates between gender and sexual orientation.[138]

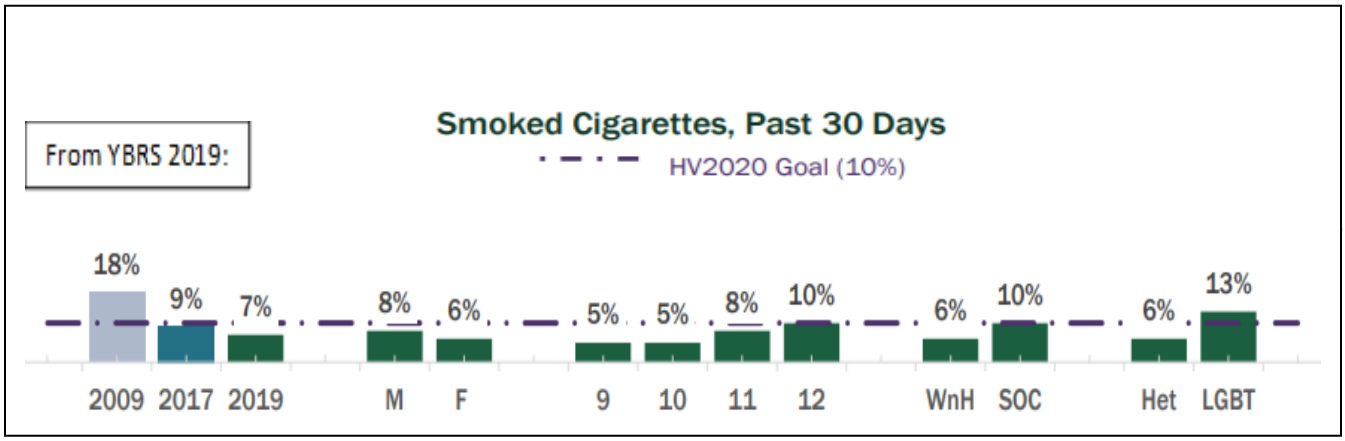
Older adults are more susceptible to the health risks of alcohol use due to physiological changes, any chronic disease they may have, or some medications they take. Excessive alcohol use can increase the risk for dementia. The rates of risky alcohol use for Vermonters and Windham County residents age 65+ are noticeably higher than the U.S. average of 18%.

[135] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf
[136] https://www.cdc.gov/alcohol/fact-sheets/binge-drinking.htm
[137] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf
[138] https://www.healthvermont.gov/sites/default/files/documents/pdf/CHS_YRBS_WindhamCounty.pdf (2017)

Cigarettes & Tobacco

Teenage cigarette smoking among Vermonters and Windham County residents has declined over the past several years as shown in the figures above and below. This is good news. But smoking among adults has increased. Perhaps that indicates in part that smoking behavior has persisted as some teens surveyed in 2017 have aged into adulthood. The percentage of adults in Vermont and Windham County has increased by several percentage points.[139]





E-Cigarettes & Vaping

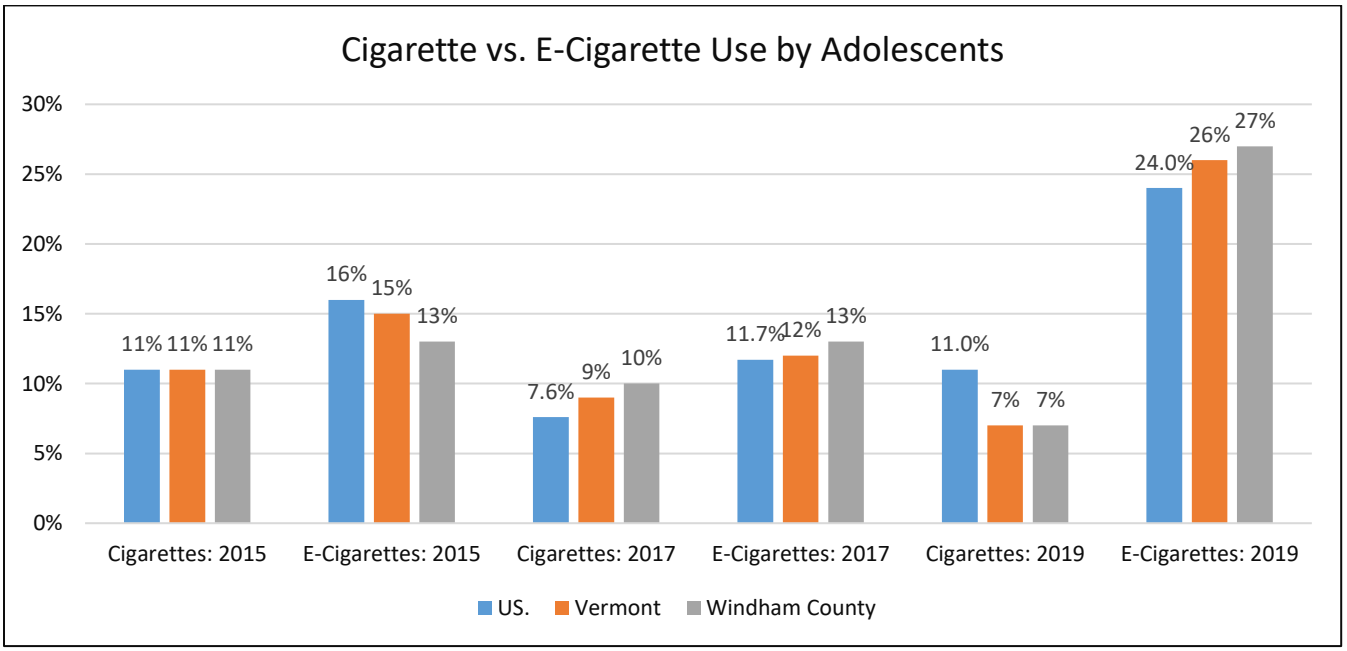
While the statistics for cigarette smoking among teens has improved, that rate of teens who vape is still high. The 2019 YBRS found that 26% of Vermont high school students vape, and 27% of Windham County high schoolers do.[140]

[139] http://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf;
https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf;
https://www.healthvermont.gov/sites/default/files/documents/pdf/CHS_YRBS_WindhamCounty.pdf (2017)
[140] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf;

Electronic cigarettes, sometimes called “e-cigarettes,” are devices with a battery inside that heats liquid into an aerosol (vapor). The user inhales the vapor in an activity that simulates smoking. Vaping is the term used for use of this device, because of the vapor that is inhaled. Vaping can be used to inhale tobacco, cannabis, and other drugs. E-cigarettes can also be used to inhale cannabis and other drugs. They are a convenient way to do this discreetly because many of them are created to look like ordinary objects like pens, computer thumb drives, and pencil sharpeners. The exhaled vapor can easily be hidden, so students are beginning to use them secretly during class.

Research shows that teens who try vaping, thinking it is harmless, are more likely to use other addictive substances, including regular cigarettes, cannabis, alcohol and drugs. Dual use (use of e-cigarettes and conventional cigarettes) by the same person is also common among youth and young adults (ages 18-25).

The use of e-cigarettes is also on the rise, particularly among teens. Data shows a dramatic increase among teens.[141]



The risks associated with the nicotine used in e-cigarettes may be less than with conventional cigarettes, but the long-term effects of vaping are as yet unknown. E-cigarettes are a new invention, on the market for only about 11 years. Nearly 20% of young adults believe e-cigarettes cause no harm, and more than half believe they are only moderately harmful, according to the U.S. Surgeon General.

Marijuana (Cannabis)

Using cannabis can negatively affect brain development and impair judgement and coordination. Different forms of cannabis can have very different levels of THC and can cause severe reactions.[142]

National data shows more Vermonters (ages 12 and up) are using cannabis compared to the country overall.[143] Complicating the situation in Vermont is the fact that the Vermont Legislature has recently legalized the use of

[141] http://www.healthvermont.gov/sites/default/files/documents/pdf/HV2020_WindhamCounty.pdf; https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf; https://www.healthvermont.gov/sites/default/files/documents/pdf/CHS_YRBS_WindhamCounty.pdf (2017)
[142] https://www.healthvermont.gov/alcohol-drugs/lets-talk-cannabis/cannabis-and-youth
[143]

cannabis, making it even easier to obtain and use without need for secrecy. Perceptions of risk and community acceptance strongly influence behavior. The number of Vermonters who try cannabis for the first time between the ages of 12 and 17 is also higher in our state than in the country overall.[144] This despite the fact that it is still illegal to obtain and use cannabis for Vermonters younger than age 21.

The YBRS includes questions about the use of cannabis. In 2017, the percentage of Windham County high school students who admitted to having tried cannabis was 44%, compared to 37% for all of Vermont. Windham County also had a higher statistic in 2019, when the rates were 45% for the county, vs 40% for VT.

Asked about the frequency of cannabis use, high school respondents provided the following data (blue chart shows 2017 responses; green chart is from 2019; questions asked were not identical):[145]

AMONG CURRENT USERS: FREQUENCY OF MARIJUANA USE

	Windham	VT
1 or 2 times	37%	34%
3 to 9 times	22%	25%
10 to 19 times	11%	12%
20 to 39 times	14%	10%
40 or more times	17%	20%

Frequency of Marijuana Use, Among Current Users	Windham
1 or 2 times	34
3 to 9 times	25
10 to 19 times	12
20 to 39 times	11
40 or more times	19

AMONG CURRENT USERS: USED MARIJUANA 10+ TIMES

		Windham	VT
Overall		41%	41%
Sex	Male	47%	47%
	Female	33%	35%
Grade	Grade 9	27%	37%
	Grade 10	40%	40%
	Grade 11	49%	41%
	Grade 12	44%	43%
Race	WnH	40%	53%
	REM	-	39%
Sexual Orientation	Het/Cis	42%	40%
	LGBT	41%	49%

Overall Differences: State vs County

VT and County are Similar

Within County Differences

Too few students by race

[144] https://www.healthvermont.gov/alcohol-drug-abuse/alcohol-drugs/marijuana

[145] https://www.healthvermont.gov/sites/default/files/documents/pdf/CHS_YRBS_WindhamCounty.pdf (2017)

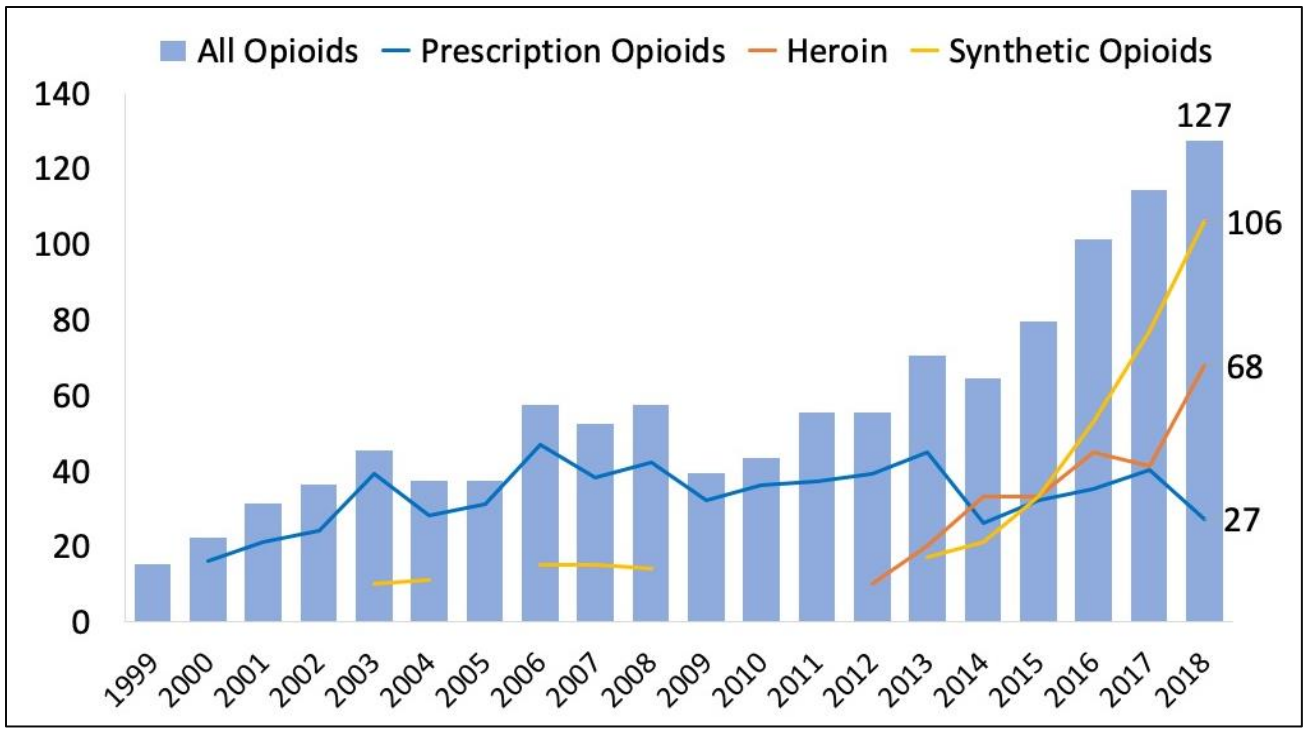
Opioids

Communities all across the state of Vermont, and across the nation, have been facing the challenge of opioid use disorder. Opioid use disorder is a lifelong chronic illness. Just like diabetes or heart disease, managing a person's substance use disorder has a multifaceted treatment approach including harm-reduction practices, recovery coaching, medication-assisted treatment, and therapy.

Vermont currently offers treatment and management for opioid use disorder through its Hub & Spoke system, a statewide partnership of clinicians and treatment centers that provide medication-assisted therapy to Vermonters addicted to opioids. The terms Hub and Spoke refer to a system of Hubs (treatment facilities) & Spokes (physician-led teams) that coordinate each patient's care. There are currently nine Hub treatment facilities – in Burlington, South Burlington, Newport, St. Johnsbury, Berlin, West Lebanon, NH, Brattleboro, Rutland and St. Albans. Windham County's Hub program is operated by Habit Opco.

Opioid use disorder can wreak havoc on one's life. Sadly, too often, it also proves fatal.

In the U.S., there were 67,367 drug overdose deaths reported in 2018, 4.1% fewer deaths than in 2017. In Vermont, drug overdose deaths involving opioids totaled 127 in 2018 (a rate of 22.8) and have remained steady since 2016. Deaths involving synthetic opioids other than methadone (mainly fentanyl and fentanyl analogs) have trended up from 33 (a rate of 5.6) in 2015 to 106 (a rate of 19.3) in 2018, as shown in the chart below. Heroin-involved deaths are also rising with 68 deaths (a rate of 12.5) in 2018. Prescription opioids have remained steady with 27 deaths (a rate of 4.4) in 2018.[146]remained steady with 27 deaths (a rate of 4.4) in 2018.[147]



[146] https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/vermont-opioid-involved-deaths-related-harms#:~:text=In%20Vermont%2C%20drug%20overdose%20deaths,in%202018%20(Figure%201).
[147] https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/vermont-opioid-involved-deaths-related-harms#:~:text=In%20Vermont%2C%20drug%20overdose%20deaths,in%202018%20(Figure%201).

Windham County: Lifestyle Choices & Health

The Vermont Department of Health and the community's health organizations sets goals for public health after gathering information about chronic health conditions that affect the community. But statistics and goals mean nothing if they do not motivate individuals to choose healthy behaviors. Each individual Vermonter's lifestyle and personal health behaviors have a major impact on the health of the population of Vermont as a whole.

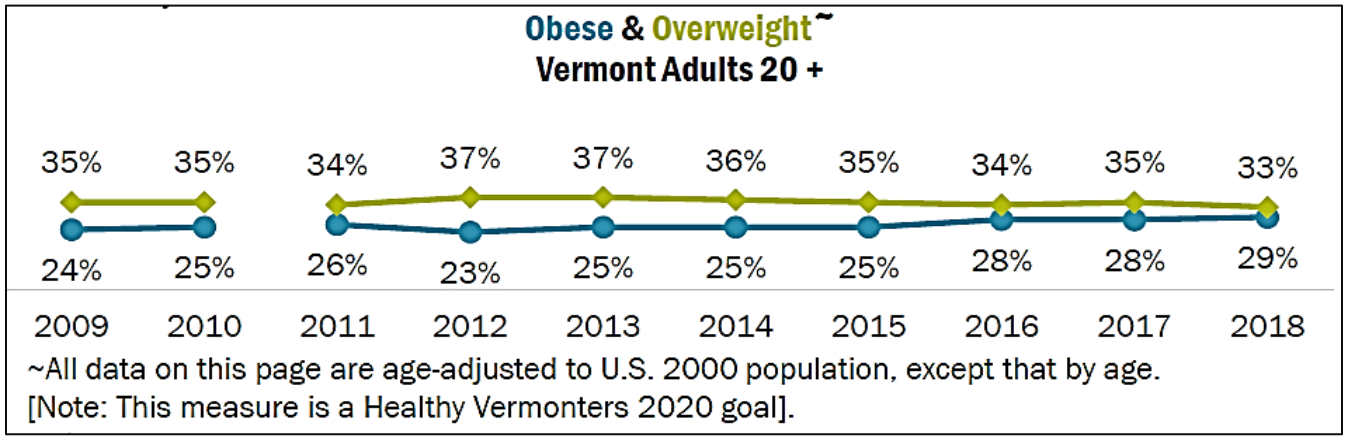
The VDH conducts its two biennial surveys, the Behavioral Risk Factor Surveillance System (BRFSS) for adults and the Youth Risk Behavior Survey (YRBS) for teens, in order to see trends over time, to see if health behaviors are improving, and if not, to consider how best to encourage and support change.

The 3-4-50 model emphasizes the importance of choice to living a healthy life. In this section of the Windham County Community Health Needs Assessment, we focus on the three behaviors that can have the biggest impact on reducing chronic disease and thus improving the lives of individuals and the health of the population.

Obesity & Overweight

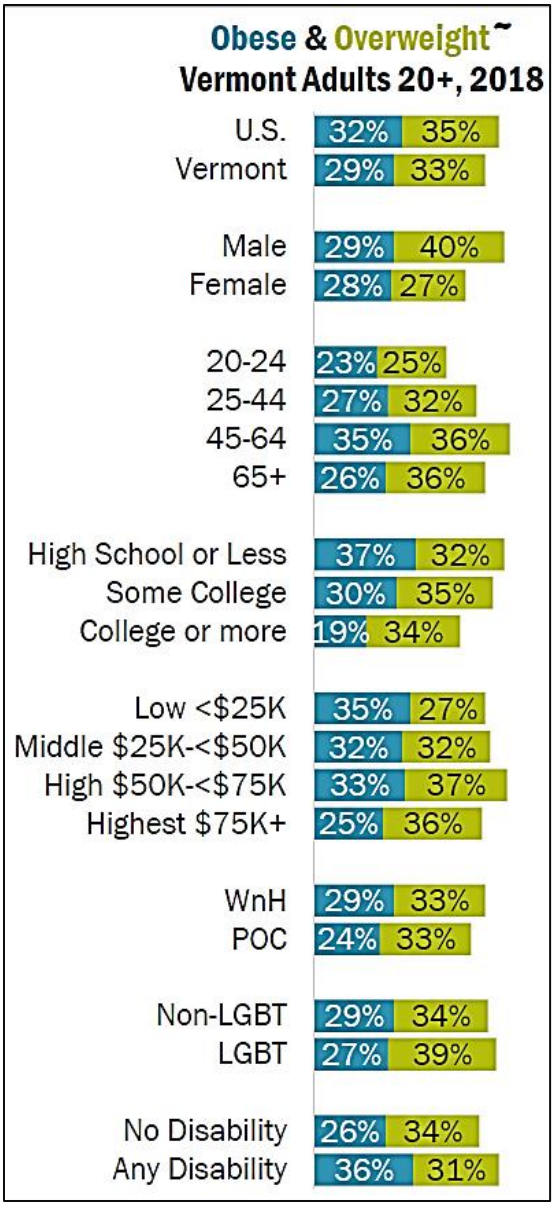
Vermonters, like other Americans, are becoming more overweight or obese. In fact, more than six in ten Vermont adults 20 and older are either overweight (33%) or obese (29%). Compared to the U.S. overall, Vermont adults have a slightly lower rate of obesity (29% compared to 32%).[148]

The terms "overweight" and "obese" describe weight ranges above what is medically considered to be healthy for a given height. Being overweight or obese can predispose a person to a variety of chronic diseases. According to the U.S. Centers for Disease Control (CDC), "A high amount of body fat can lead to weight-related diseases and other health issues."[149]



[148] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[149] https://www.cdc.gov/healthyweight/assessing/index.html

The trend toward being overweight or obese affects males and females, and people of all races, incomes and education levels– but especially Vermonters at the lower end of the socioeconomic ladder and Vermonters aged 45-64.[150]



Windham County's obesity rate for adults is 31%, midway between the highest county rate (Grand Isle, 49%) and the lowest county rates (Addison and Washington, both at 22%). The Windham County rate for those overweight is 32%[151]

For teens in grades 9-12, there is a greater perception of being overweight than reality bears out. While 13% of Windham County teens are actually classified as obese, and 14% as overweight, 31% of Windham County's teens describe themselves as "slightly or very overweight," and 43% of these teens said they were trying to lose weight.[152]

Obesity is serious because it is associated with poorer mental health outcomes and reduced quality of life. Obesity is also associated with the leading causes of death in the United States and worldwide, including diabetes, heart disease, stroke, and some types of cancer.[153]

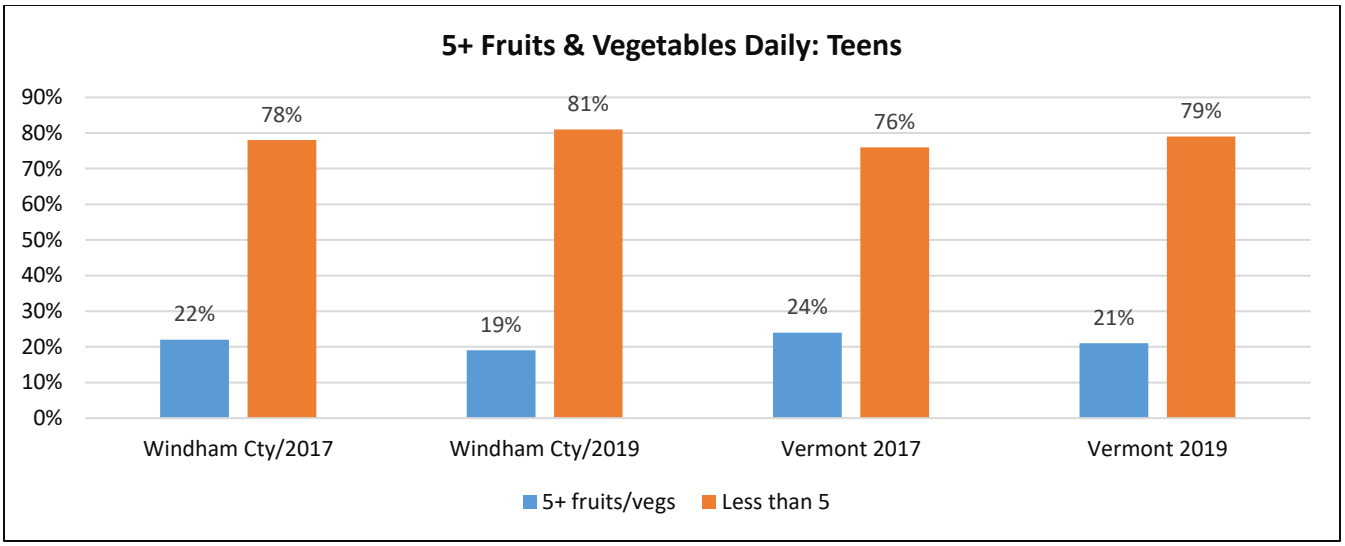
Nutrition & Exercise

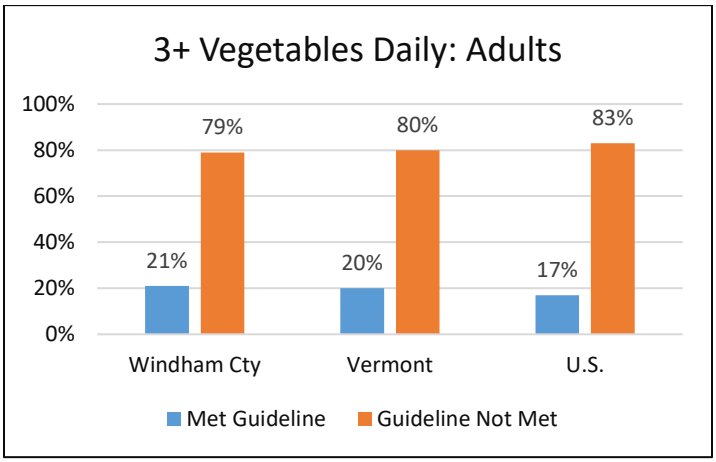
VDH also tracks nutrition and levels of exercise as measures that are important for preventing or improving weight.

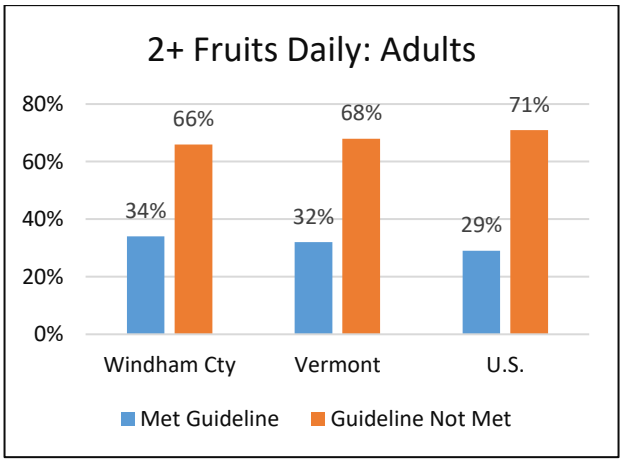
Questions about the inclusion of fruits and vegetables in the diet and regular physical activity are asked in both the adult Behavioral Risk Factor Surveillance Survey[154] and the Youth Behavior Risk Survey.[155] These populations are asked if they meet the recommendation of consuming 5+ fruits and vegetables each day, and results are reported below. Also included is information from the state's Chronic Disease Surveillance Data Report.

Clearly, most Vermonters, teens and adults alike, do NOT eat enough fruits and vegetables for optimal health. Adults are doing slightly better than their Vermont and U.S. counterparts, but teens are not (comparable U.S. data for teens is not available.) Five percent of Vermont and Windham County teens surveyed said they did not eat any vegetables in the previous week. Two percent said they often or always went hungry because of lack of food at home.

[150] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[151] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[152] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf
[153] https://www.cdc.gov/obesity/adult/causes.html
[154] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf; https://www.healthvermont.gov/sites/default/files/documents/pdf/HS_1305_Data_Pages_081816.pdf
[155] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_YRBS_WINDHAM_2019.pdf







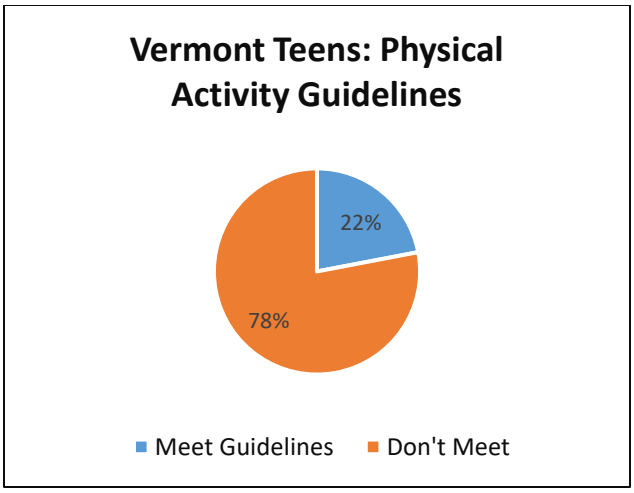
Windham County's adolescents are comparable to the state average in terms of meeting physical activity guidelines, but this is not good news. Only 20% of Windham County teens meet the recommended guideline of getting 60 minutes of physical activity per day, compared to 22% for all Vermont teens.[156] This means that 80% of Windham County teens and 78% Vermont teens are not active enough for optimal health.

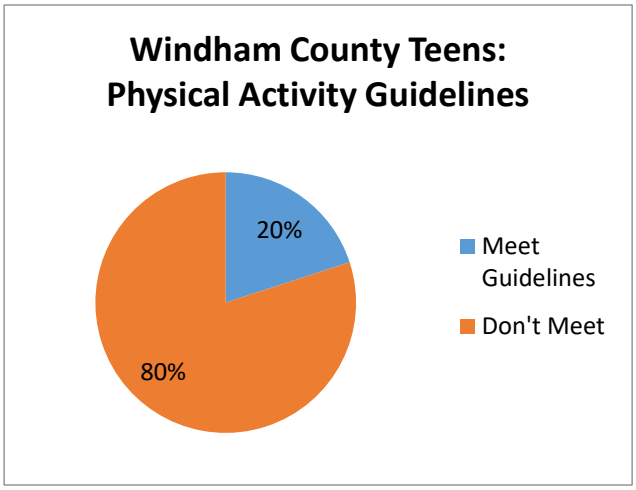
Fortunately, 46% of Vermont youth and 44% of Windham County youth did engage in 60 minutes of activity daily on 5-6 days of the week prior to the survey.

Rates for physical activity among Windham County adults are equally dismal. The recommendation for adults is to get 30-60 minutes of physical activity at least five times a week (versus 60 minutes each day for youth).

Still, despite being encouraged to have only half the activity level of youth, 18% of Vermont adults said they did not participate in any leisure time physical activity during the month before the survey, significantly lower than the 24% rate among U.S. adults. The rate for Windham County adults was identical, 18%.

[156]https://www.cdc.gov/physicalactivity/basics/children/index.htm#:~:text=Children%20and%20adolescents%20ages%206,doing%20push%2Dups)%20%E2%80%93%203

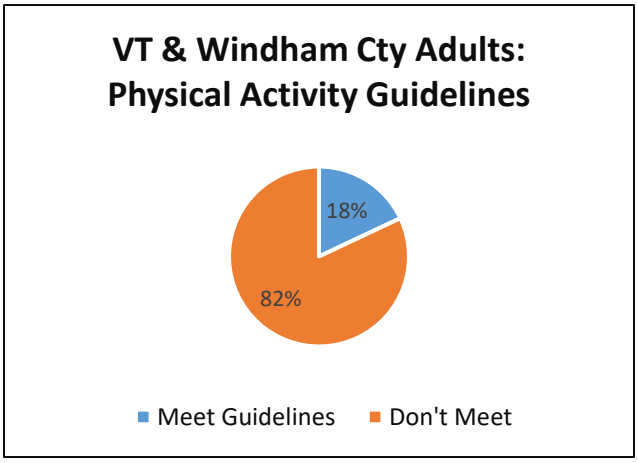


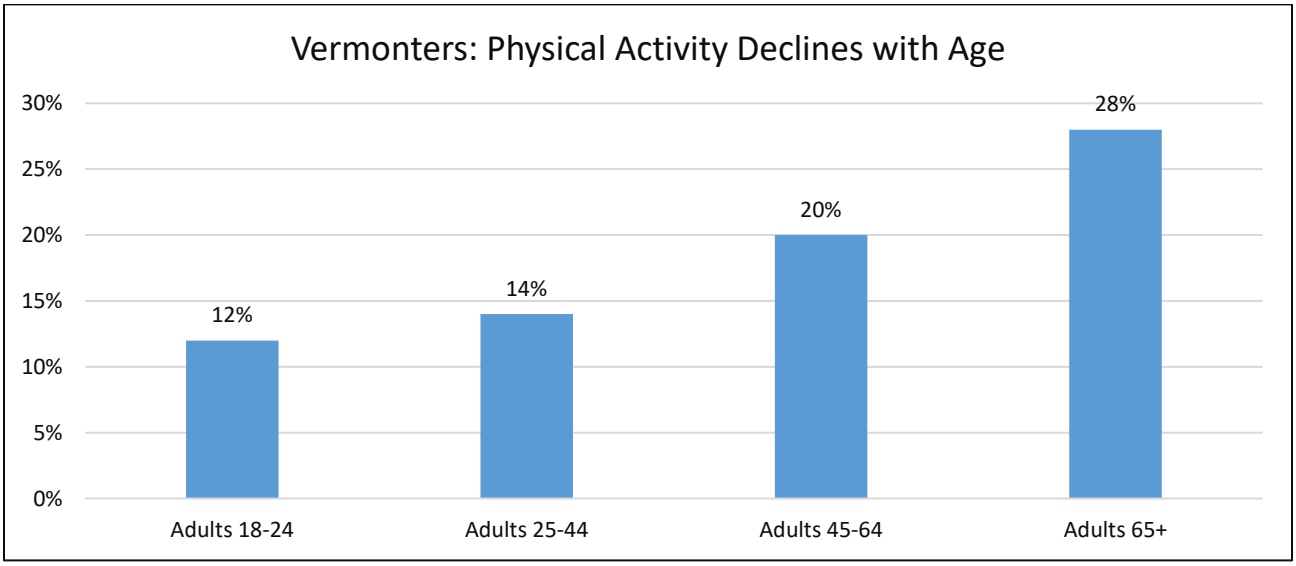


For Vermont as a whole, gender does not seem to influence the tendency to exercise. Men and women report participating in leisure time physical activity at the same rates.

Adults of color and adults with a disability are significantly more likely to report no leisure-time physical activity than white, non-Hispanic adults and those with no disability.

As Vermonters age, the proportion who report having no leisure time physical activity increases.





Disease Prevention: Vaccines

Vaccinations help protect people from the risk of disease, especially infants who are too young to be vaccinated, and children and adults with weakened immune systems. Vaccinations can protect those being vaccinated, as well as prevent those in contact with vulnerable populations from transmitting a dangerous disease.

The U.S. Department of Health & Human Services and the U.S. Centers for Disease Control develop lists of recommended vaccines for infants, children, teens, and adults, and these lists are available, along with vaccine explanations, at the website www.cdc.gov/vaccines, or by calling 1-800-CDC-INFO (800-232-4636).

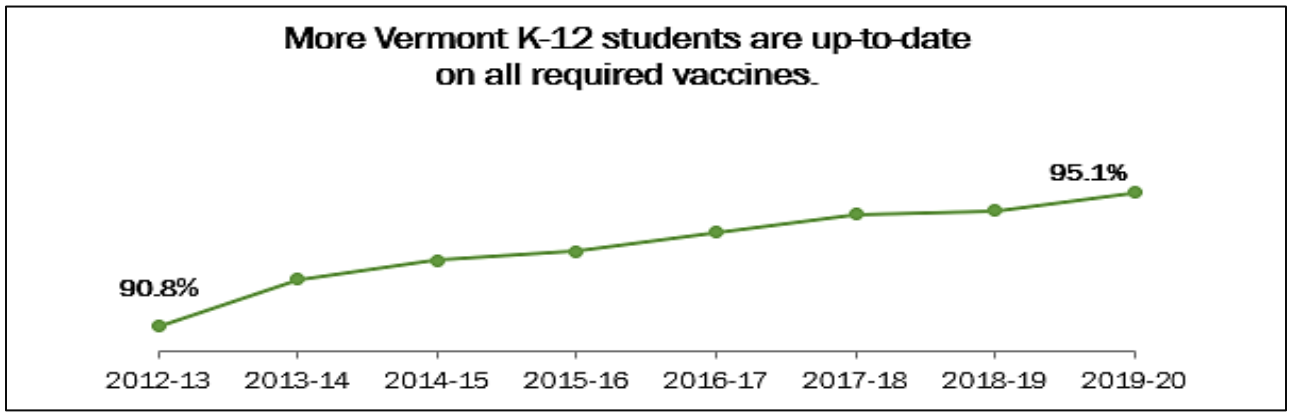
The Vermont Immunization Program provides health care providers with all pediatric and most adult vaccines at no cost through the federal Vaccines for Children and Vaccines for Adults programs.

Individuals with questions about what is best for their family should speak to their health care provider. Those without a healthcare provider can contact a nurse at the VDH local health office in Brattleboro by calling (892)257-2880 or visiting www.healthvermont.gov/disease-control/immunization.

Note: COVID-19 vaccine information appears at the end of this section of this CHNA report.

Vermont's Children: School-Age Vaccinations Rates

Congress created the federal Vaccines for Children (VFC) Program in 1993. The goal of VFC is to prevent vaccine-preventable diseases by removing or reducing cost barriers. The VFC program is funded by federal dollars guaranteed to each state for the purchase of vaccines for children who are Medicaid eligible, uninsured, underinsured, or an Alaskan native or native American. The percentage of Vermont K-12 students receiving all required vaccines remains high, increasing from 94.5% last year to 95.1%. These are the highest coverage levels reported since K-12 data collection began in 2012. Coverage at individual schools varies widely.[157]



Windham County Children: School-Age Vaccination Rates

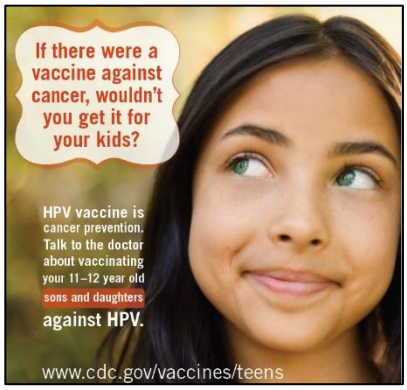
Data about vaccine coverage among Windham County students is tracked by the Vermont Department of Health. Reports showing the percentage of students who are fully vaccinated at each school were not available

[157] https://www.healthvermont.gov/disease-control/immunization/vaccination-coverage#:~:text=The%20percentage%20of%20Vermont%20public,year%2C%20when%20coverage%20dropped%20slightly

at press time. For the most current information, visit this website: at https://www.healthvermont.gov/disease-control/immunization/vaccination-coverage. (Note: these tables pre-date COVID-19 vaccination.)

Adolescents & Young Adults: HPV Vaccine

Human Papilloma Virus (HPV) is a virus that can cause six different types of cancer. It is so common that nearly all sexually active men and women get it at some point in their lives. The virus is easily spread by intimate skin-to-skin contact. There are many different types of HPV. Most HPV infections (9 out of 10) go away by themselves within two years, and most people with HPV never develop symptoms or health problems. But, sometimes, HPV infections last longer, and they can cause certain cancers and other diseases. Every year in the United States, HPV causes 32,500 cancers in men and women.



The HPV vaccine is a safe and effective vaccine that prevents most common health problems associated with the virus, including cancer. Vaccination with the HPV vaccine prior to exposure to the virus can decrease the risk of certain cancers. The vaccine is fairly new. In 2006, the first HPV vaccine was licensed for girls, and five years later it was recommended for use in boys. The HPV vaccine should be given to all adolescents at 11-12 years, when it is most effective. The HPV vaccine may be given anytime from age 9-26.

According to the Vermont Immunization Program's 2017 annual report, 44 percent of Windham County teens age 13–15 had completed the HPV vaccine series, compared to the statewide average of 46.8 percent. Windham County ranked ninth out of Vermont's 14 counties in terms of its percentage of teens immunized.

Flu Vaccines

Influenza, commonly called "the flu," is a contagious respiratory illness caused by a virus that affects the nose, throat and lungs. Influenza spreads from person to person when an infected person coughs or sneezes.

Unlike the common cold, the flu can cause serious illness and can be life-threatening. Each year in the U.S., influenza is estimated to be responsible for at least 9 million cases of disease, 140,000 hospitalizations, and 12,000 deaths.

Approximately 71-85 percent of seasonal flu-related deaths have occurred in people 65 years and older, and 54-70 percent of seasonal flu-related hospitalizations have occurred among people in that age group.[158] The CDC recommends that everyone 6 months of age and older get a seasonal flu vaccine each year by the end of October if possible. It is especially important for those with weakened immune systems.

Those at highest risk of contracting a serious or deadly case of the flu include:

- Pregnant women and breastfeeding mothers
- Adults age 50+
- Residents of nursing homes and other long-term care facilities
- Healthcare workers
- Travelers
- People with chronic medical conditions. compromised immune system, & impaired respiratory function

[158] https://www.cdc.gov/flu/about/burden/index.html

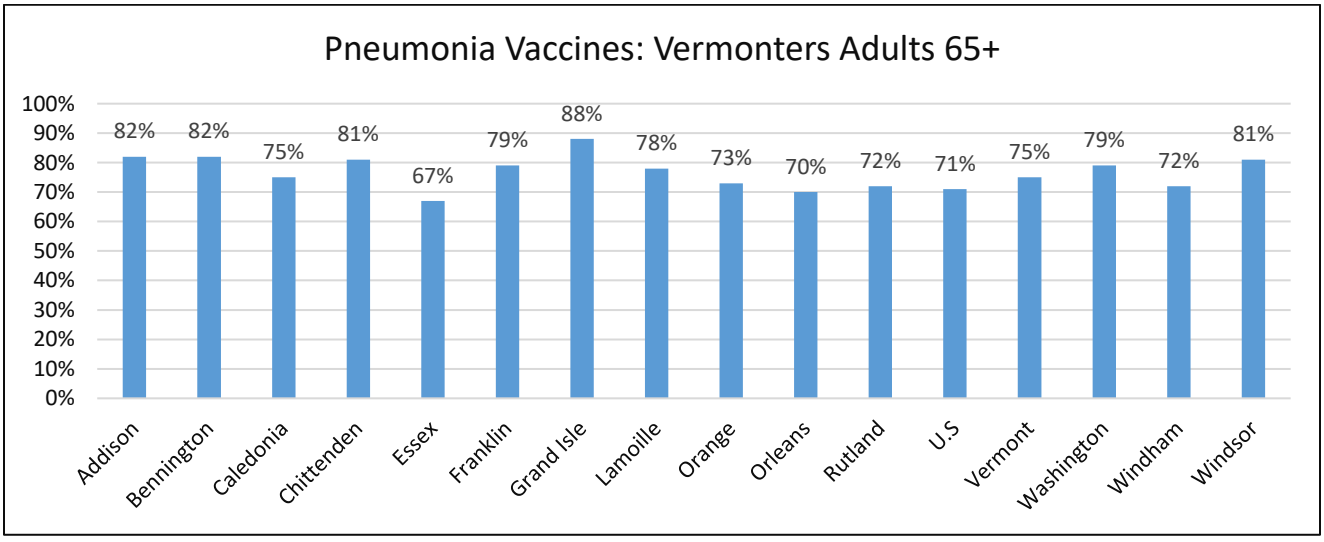
In Windham County, 51% of residents age 65+ received an annual flu vaccine, slightly lower than the state rate of 54%. The U.S. rate is also 54%. Vermont's rate for all adults was 37%, down from 42% in 2017.[159]

Pneumonia Vaccines

Pneumonia is another disease that can be deadly, especially for older Americans and those with compromised immune systems. Pneumococcal pneumonia is the most common type of pneumococcal disease in adults. It occurs in about 175,000 Americans each year. An estimate from 2011 states that pneumococcal disease was responsible for 4 million illnesses, 445,000 hospitalizations, and 22,000 deaths each year.[160]

Pneumococcal disease is caused by a bacterium known as *Streptococcus pneumoniae*, also called pneumococcus. Pneumococcus can cause a variety of infections, ranging from ear and sinus infections to bloodstream infections and pneumonia. Pneumonia is an infection of the lungs. The pneumococcus is one of the most common causes of severe pneumonia. When the bacteria invade parts of the body that are normally free from germs, the illness is usually very severe, requiring hospitalization.[161]

The best way to prevent pneumococcal disease is by getting vaccinated. Pneumococcal vaccines help protect against some of the 92 types of pneumococcal bacteria. There are two types of pneumococcal vaccines, each protecting the most common of these bacteria. A medical provider can determine which vaccine is best for which patient. In some cases, both vaccines are given to the same patient. Generally, the shots are administered every five years.[162] The VDH reports that 75% of Vermonters age 65+ have received a pneumonia vaccine (the U.S. rate is 71%). Windham County's rate is among the lowest in the state.



Men are much less likely to be vaccinated for pneumonia. For Vermont, the rate for males is 69% compared to 79% for females. There is also a big difference in pneumonia vaccination rates between white non-Hispanic people (rate = 75%) versus people of color (rate = 64%). There are no other statistical differences in pneumococcal vaccine rates by education, annual household income, sexual orientation or gender identity.[163]

[159] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf
[160] https://www.cdc.gov/flu/about/burden/index.html
[161] https://www.healthvermont.gov/immunizations-infectious-disease/other-reportable-diseases/pneumococcal-disease
[162] https://www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf
[163] https://www.healthvermont.gov/sites/default/files/documents/pdf/HSVR_2018_BRFSSReport.pdf

COVID-19 Response 2020-2021

Testing, Vaccination, and Other Efforts

The most pressing health concern during the year and a half preceding publication of this report has been the coronavirus (COVID-19) pandemic. While details of this event are top-of-mind right now, it is important to record some details of the roles that Windham County healthcare organizations have played.

In response to this highly-contagious and deadly disease, healthcare providers and policy makers had to set aside all but the most essential healthcare programs and projects. The provision of healthcare was altered in ways that were previously unimaginable. In-person visits to providers were limited at the beginning of the outbreak. Surgeries were postponed. Healthcare facilities ramped up infection control protocols. Buildings were renovated to provide separate areas to diagnose and treat actual and suspected COVID-19 cases. Supplies were stockpiled in order prepare for potential surges. Wellness centers suspended classes. Telemedicine increased, with both telephone and computer patient visits becoming the norm for several months.

Over time, two important new services were developed and provided by Windham County healthcare medical personnel: COVID-19 testing for diagnosis of the disease and, when vaccinations finally became available, administration of the vaccine. In addition, the Vermont Department of Health worked to set new policies, to conduct contact tracing in order to curb the spread of the disease, to connect medical providers to resources, and to connect the general public to the latest information.

Over the upcoming three years, until it is time to prepare the 2024 Community Health Needs Assessment report, there will be continued data analysis about the disease itself and its long-term effects on physical and mental health, as well as research into the financial impact on individuals, families, and communities. By 2024, we hope that COVID-19 will be a footnote, with other health issues identified in this report receiving their due attention.

What follows is a brief summary of how each healthcare partner represented in this reported has worked to diagnose, treat, and mitigate the effects of COVID-19.

For more information, visit healthvermont.gov/covid-19 and cdc.gov/coronavirus/

Vermont Department of Health – Brattleboro District

In March of 2020, staff from the Brattleboro Office of Local Health began deployment to the Vermont Department of Health's Health Operations Center, as VDH moved to strictly minimum-essential functions in their Continuity of Operations Plan. Out of eleven local health staff, seven were pulled from their original positions and assigned roles on various teams including: Contact Tracing, Travel Monitoring, Outbreak Prevention and Response, Facility Wide Testing, and the local Vaccination Branch, with the District Director serving as the HOC Brattleboro Division Director. Four WIC nutrition staff continued to provide teleWIC services throughout the last fifteen months.

The Brattleboro Office of Local Health has led multiple rounds of Facility Wide Testing at long-term care facilities, in-patient medical care facilities, emergency housing locations, and residential schools throughout Windham County, and have hosted pop-up testing sites at least weekly, sometimes more often.

Staff who are on the Outbreak Prevention and Response Team have worked around-the-clock to provide guidance and technical assistance to schools, childcare centers, healthcare facilities, workplaces and businesses, and community sites as positive cases and outbreaks have occurred.

As of June 2021, in coordination with the Medical Reserve Corps, the Brattleboro Office of Local Health has led 22 vaccination clinics and provided 3,042 vaccinations.

Brattleboro Memorial Hospital

With the nation and state focused on the threat of COVID-19, Brattleboro Memorial Hospital took many measures to address the health and safety of our community and staff over the past 15 months:

In early March 2020, we adopted the most up-to-date recommendations of the Center for Disease Control and Prevention (CDC), the World Health Organization (WHO), and the most relevant local recommendations from the Vermont Department of Health (VDH). We immediately educated staff members about screening for, testing, and treating COVID-19, and provided regular updates as information became available from the CDC, WHO, and VDH. We increased our cleaning and disinfection protocols in all public and clinical spaces, and posted signage for patients and visitors to alert them to the warning signs of COVID-19. Hand hygiene stations were deployed throughout the hospital, and masks were available.

Additionally, we updated our visitor policy on a regular basis to follow guidance from the Governor, including limiting visitors. We also limited access points into the Hospital. Screeners were added to each entrance and all individuals that entered BMH were screened for COVID-19 symptoms. We insured that we had adequate supplies such as Personal Protective Equipment (face masks, gowns, gloves, etc.) and a 11-bed unit was established in the event of a surge of COVID-19 positive patients. Due to only a few entrances being available to patients we had to relocate services to be more easily accessible.

By the end of March 2020, BMH had setup an outpatient testing site for individuals that were experiencing COVID-19 symptoms and postponed all elective surgeries and suspended services such as volunteers, cardia rehab, and student rotations. Telehealth became an important way to deliver care to patients who did not need to physically come to the hospital to be seen for their appointment. We also consolidated the Medical Group Practices so that Medical Group staff were available to provide additional support for hospitalized patients. In order to be transparent and keep the community informed, BMH created a real-time dashboard to monitor key indicators related to the virus.

In the fall 2020, Vermont witnessed a rise in COVID-19 infections. To increase access to COVID-19 testing for the community, BMH partnered with VDH and the Cambridge Innovation Center (CIC) to provide evening and weekend COVID-19 testing. In accordance with the Governor's Executive Order, the hospital tightened visitor restrictions to essential support persons only.

BMH received our first shipment of the COVID-19 vaccine in mid-December 2020. Following state guidelines, the hospital vaccinated those eligible via phases. The hospital established a vaccine clinic in the Brew Barry Conference Center.

Throughout May 2021, BMH established walk-in pop-up vaccine clinics to increase vaccine access for community members at various local sites, including the Brattleboro Fire Stations, Brattleboro Union High School, Brattleboro Subaru, Green Street Elementary School, and the empty Rent-A-Center storefront in the Price Chopper Plaza. As of June 2021, the hospital administered a total of 20,394 doses, averaging 800 patients per week, and vaccinated 87% of its workforce.

Brattleboro Retreat

The onset of the COVID-19 pandemic in March, 2020, presented difficult, and unprecedented challenges for the Retreat's clinical and administrative staff. Yet employees stepped up in every way possible to ensure the safety of patients, and each other, while continuing to meet the ongoing psychiatric and addiction treatment needs of Vermonters.

Early actions at the Retreat included suspending patient visitation and instituting a series of measures designed to prevent transmission of the virus on hospital grounds. These included requiring all employees to wear PPE (face masks, face shields, etc.), suspension of public food service in the cafeteria, restrictions on foot traffic

between and among departments and units, and the requirement that any employee who exhibited flu-like symptoms and/or tested positive for the coronavirus self-quarantine at home per CDC guidelines.

In the small number of instances when an employee tested positive for the coronavirus, the Retreat's Infection Prevention department conducted thorough contact tracing to ensure the health and safety of patients and staff who may have interacted with that individual.

At the same time, Retreat officials suspended admissions of out-of-state patients in order to prioritize the needs of Vermonters. In partnership with the State and infection prevention specialists at Brattleboro Memorial Hospital, the Retreat's converted its Tyler 1 unit into a space suitable for the care of patients who might contract COVID-19.

All outpatient services, including the Retreat's partial hospital and intensive outpatient programs, were converted to telehealth platforms using secure, internet-based conferencing software. Patient family visits were set up along the same lines.

Upon approval of the Pfizer and Moderna vaccines in early January 2021, the Retreat established a robust vaccination program that resulted in the full vaccination of approximately 80 percent of the Retreat's entire workforce. During the first half of 2021, the Retreat remained vigilant by continuing to require the use of face masks and requiring any employee testing positive for COVID-19 to self-quarantine.

We are proud of the many adjustments and sacrifices made by staff during ongoing months of stress and uncertainty. Together with our State and community partners, we kept transmission of the coronavirus on our campus at an impressively low level, and came through this public health crisis as a stronger and wiser organization.

Grace Cottage Family Health & Hospital

As soon as it became evident that the COVID-19 virus would reach Vermont, Grace Cottage’s medical and leadership teams took immediate action to keep our patients, community, and employees safe. A COVID-19 Task Force of key employees was assembled in March, 2020, meeting weekly to be sure that all communications within and outside of the organization were clear, concise, correct, and thorough. We began assembling PPE (personal protective equipment), and many members of the community pitched in to make homemade masks and gowns to keep Grace Cottage employees as safe as possible. Temperature screening of all patients and employees as they entered any building on our campus was implemented, and questions about symptoms and possible exposure to the virus were asked. Surfaces were thoroughly sanitized after each patient encounter, and numerous other safety precautions were taken throughout the facility.

In late March, 2020, Grace Cottage’s leadership initiated a Message to the Community from our CEO, Doug DiVello, which was e-mailed weekly to over 2,000 recipients (employees, patients, and community members) who had an affiliation with Grace Cottage. Starting in November, 2020, the Message to the Community was e-mailed monthly rather than weekly; response to this communication was overwhelmingly positive. Our goal was to provide up-to-date, accurate information, and we relied heavily on the State of Vermont Department of Health’s various forms of communication to the public and to hospitals in the state.

When Pfizer and Moderna vaccines were given Emergency Use Authorization by the Federal Drug Administration in December, 2020, we began administering them in the order outlined by the state of Vermont, and did the same when the Johnson & Johnson vaccine was approved. We worked closely with the Vermont Department of Health throughout the vaccination process, setting up clinics, converting our Community Wellness Center to a vaccination site. Between December 2020 and July 2021, we administered 6,500 vaccinations in the vaccination clinic, in our rural health clinic, and in our Emergency Department.

Rescue, Inc.

In February of 2020, we began to realize that COVID-19 could become a true threat to our community and therefore to our organization. In early March 2020, a few short weeks after this initial discussion, COVID-19 was here and the pandemic was declared. We swiftly researched and adopted all the recommendations from the Centers for Disease Control (CDC) and the Vermont Department of Health (VDH), which drastically changed our emergency response model.

Being on the frontlines, with so many unknowns, made us nervous for the well-being of our staff and our patients. We came up with strict guidelines and continually updated them based on the recommendations put out by the CDC and VDH. We closed our buildings to the public, which meant no more blood pressure checks, CPR or First Aid classes, or other EMS training for our staff. We no longer had any "off-duty" personnel in the buildings, which included all our administrative staff. Our building was sectioned off into "clean" and "dirty" zones. Sleeping areas were expanded, air purifiers were placed in every room, handwashing stations and boot cleaning stations at every entrance, and health and temperature screenings were the everyday norms.

We stocked up on all the personal protective equipment (PPE) we could get our hands-on, which luckily enough, we found to be successful. We had staff wearing gowns, N95s, and eye protection on every call. We were prepared for a significant influx of calls in relation to the virus; however, the opposite came. People were not calling 911; instead, they were staying home. However, when we did get a true COVID-19 patient they required us to be on our A-game with critical care level interfacility transfers, most times to the University of Vermont (UVM) Medical Center. These were very sick and very challenging patients.

In May 2020 we began helping with COVID-19 testing at pop-up sites not only in Brattleboro but all of southern Vermont. Approximately 25% of our staff were trained to do these tests. Not only did we work pop-up sites but also did at-home testing for those who could not leave to get to a testing site. Again, these occurred all over southern Vermont.

In December 2020 our staff began to get their COVID-19 vaccines. However, we still remained stringent on PPE usage and following the guidance of the CDC and VDH.

In January 2021 we were asked by the Vermont Department of Health to help administer vaccines, specifically to Vermont's home-bound population. We took this mission to heart and created a robust vaccination program. The program was made up of 40 team members, some of whom were from our active staff, who continued to work their full-time jobs on the road. However, the majority of them were made up of our Technical Rescue team, Londonderry Valley Ambulance personnel, and Putney Fire Department. We also teamed with home health agencies including Bayada and Visiting Nurse & Hospice for VT/NH in order to identify the homebound population in need of the vaccine. We then expanded to hosting our own Point of Distribution (POD) Sites, per VDH request. These PODs were all over the state of Vermont, from Burlington to Brattleboro and everywhere in between. The sites were chosen based on where the availability of the vaccine was limited. We've administered both Pfizer and Johnson & Johnson vaccines and are proud to say we've vaccinated approximately 6,800+ Vermonters. The program is still running today and intends to as long as needed.

Today, things are starting to go back to normal with regular operations, though we still wear masks on every call to protect ourselves and our patients. We feel lucky to have made it through the pandemic with only a single case amongst our staff and to have played a positive role in the outcome of the vaccination initiative in Vermont.

NAACP Health Justice Committee

Working as a BIPOC-focused Health Justice Committee during the 2020-21 COVID pandemic, appointed by the Windham County NAACP and the Community Equity Collaborative of the Brattleboro Area (CEC).

About Us: This committee was founded as the Accurate Race/Ethnicity COVID-19 Data Tracking Committee in June 2020. During the time of the work outlined below, the committee's membership has included Brattleboro Memorial Hospital (BMH) administrators and practitioners, United Way of Windham County leadership, Vermont Department of Health (VDH) staff (Regional Director, Health Equity & Community Engagement, Data Analysis Team), and NAACP and CEC representatives.

In May 2021, the NAACP of Windham County invited the committee to expand its membership and transition to become the NAACP Health Justice Committee. The committee originally met twice a month, but has since cut down to once a month. Under the NAACP umbrella, the committee uses the Public Health Framework for Reducing Health Disparities experienced by our BIPOC community as a guide throughout to break down barriers to accessing health services. We aim to simplify the process and make it personal. We focus on the following:

At a County level...
We empower local community-based organizations to assess and address BIPOC health disparities. For example:

- Working closely with United Way and VDH to establish a Windham County Community Profile to monitor health outcomes utilizing Results Based Accountability and funding from the Centers for Disease Control.
- Working with Building a Positive Community and VDH to develop a tobacco cessation strategy.
- Provide community representation in the BMH Council on Racial Equity - including support for diverse workforce development.
- We aim to promote anti-racism health care education for all employees in local hospitals.
- We are ensuring that the Community Health Needs Assessment has impactful BIPOC input.

At a State level, we have pushed for...

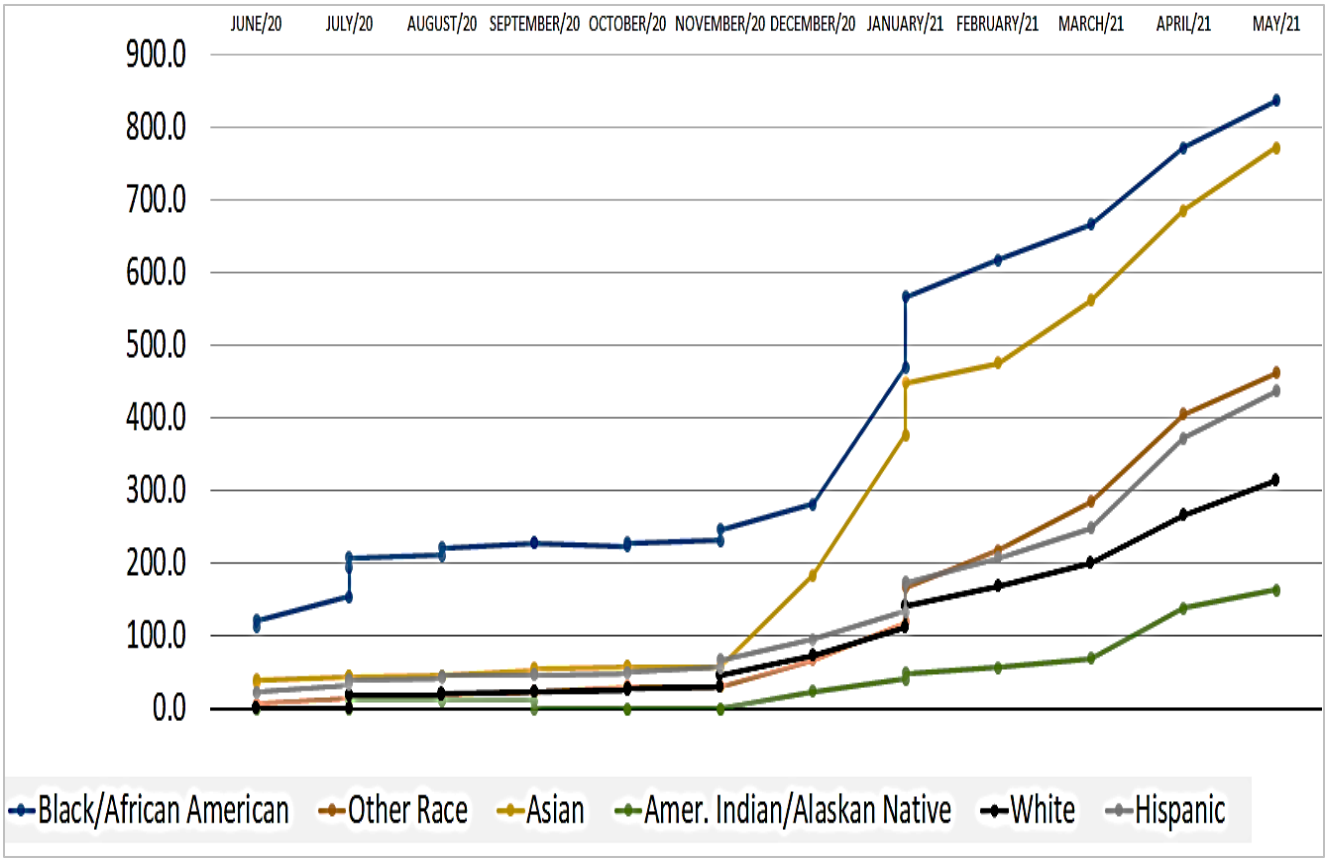
- Establishing an Office of Health Equity in the Department of Health
- Appointing Windham County representation on the Health Equity Advisory Commission
- Creating a centralized platform for race-based data collection on the State and County level
- Integrating anti-racism and cultural humility education into certification requirements through the Vermont Board of Medical Examiners

Collecting COVID BIPOC Data

In June 2020, the Accurate Race/Ethnicity COVID-19 Data Tracking Committee began working towards a more accurate and comprehensive picture of how COVID-19 has impacted our community members of color in Windham County and statewide. Our goal was to collect, analyze, and report COVID-19 data over time, disaggregated by race and ethnicity.

This data included COVID tests, cases for all ages, hospitalizations, deaths, and vaccinations using VDH Weekly Updates and BMH data analysis - tracked from June 2020 to May 2021.

Below is a graph of COVID-19 infection rates in Vermont for BIPOC and White (including White Hispanic) Vermonters. These rates are per 10,000.



Data tells us what, but we need to also know why; we promote storytelling narratives. Most notably...

- At one point, Black community members were 10x more likely to be infected. Both VDH and this committee's qualitative research has revealed the reasons for large disparities in the social determinants of health. Here are some examples:
    - A large outbreak in Addison County was due to 20+ migrant farm workers being housed in one small location
    - Lack of language access to COVID information was correlated to more outbreaks in Winooski
- BMH submits race/ethnicity information on all lab tests sent to the UVM Medical Center (UVMMC). Due to significant challenges with UVMMC receiving BMH tests via the Mayo access system (and other similar data integration issues), up to 80% of race/ethnicity was missing for our county in 2020. Our committee worked with BMH and VDH to mitigate this issue. We also brought this concern to the attention of the Vermont Racial Equity Task Force.

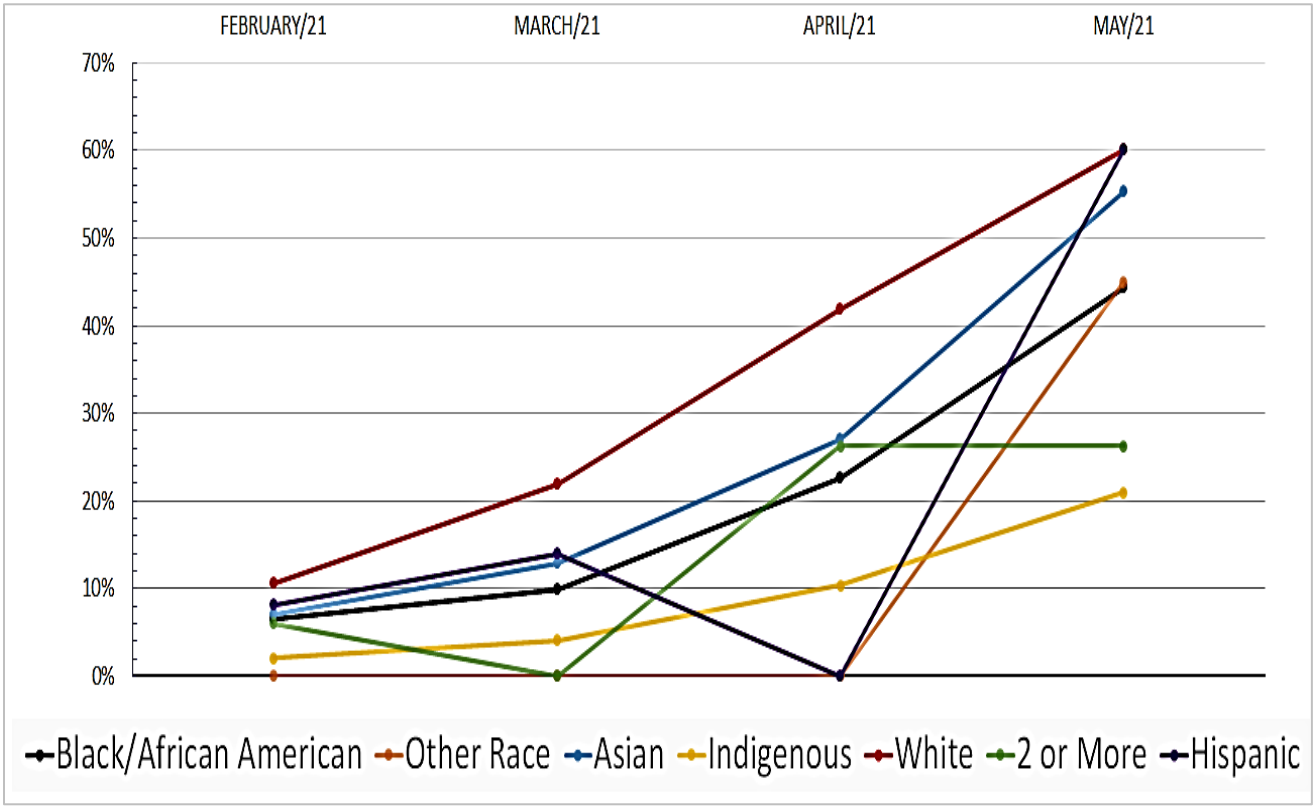
  In 2021, Windham County COVID-19 tests show 24% missing race and 46% missing ethnicity data - with many missing race data being marked as "Other" or "Unknown", which skews the data. While this is a significant improvement, the incompleteness and inaccuracy of data is still a concern. BMH improved the reporting process by beginning to report lab results electronically (in place of faxing) to VDH. There is still race/ethnicity data missing because Mayo does not presently provide race/ethnicity data in their HL7 messaging, and has no plans to do so in the future. BMH is considering switching to Dartmouth as their main reference laboratory in the future. After this transition is completed, we will be able to track race and ethnicity for laboratory results more consistently.

Addressing Health Disparities

Vaccinations

Starting in March, VDH and NAACP established five Windham County BIPOC Vaccine Clinics leading to additional clinics in Rutland and Bennington Counties. Approximately 1,200 vaccines were administered; around 85% were to BIPOC individuals and families. There were similar efforts in Burlington.

The following graph shows the decrease in vaccine access disparities after BIPOC Vaccine Clinic rollouts in March. These rollouts most notably include efforts by the NAACP of Windham and Rutland counties, the City of Burlington and the Racial Justice Alliance, and Bridges to Health.



Note: Other Race data was not available until May, and Hispanic data was not available in April.

Migrant Farm Workers

The Committee established an ongoing partnership with Bridges to Health (a Vermont health consortium serving immigrant farmworkers, 95% of whom are uninsured) to expand their services in Windham County and in the State of Vermont. We helped advocate for ongoing CARES and Rescue funding, securing $10,000 from Vermont Community Foundation for on-farm wellness checks, testing, vaccinations and urgent care referrals. Windham County migrant farm workers did not previously have access to these kinds of service.

CHNA Survey Results

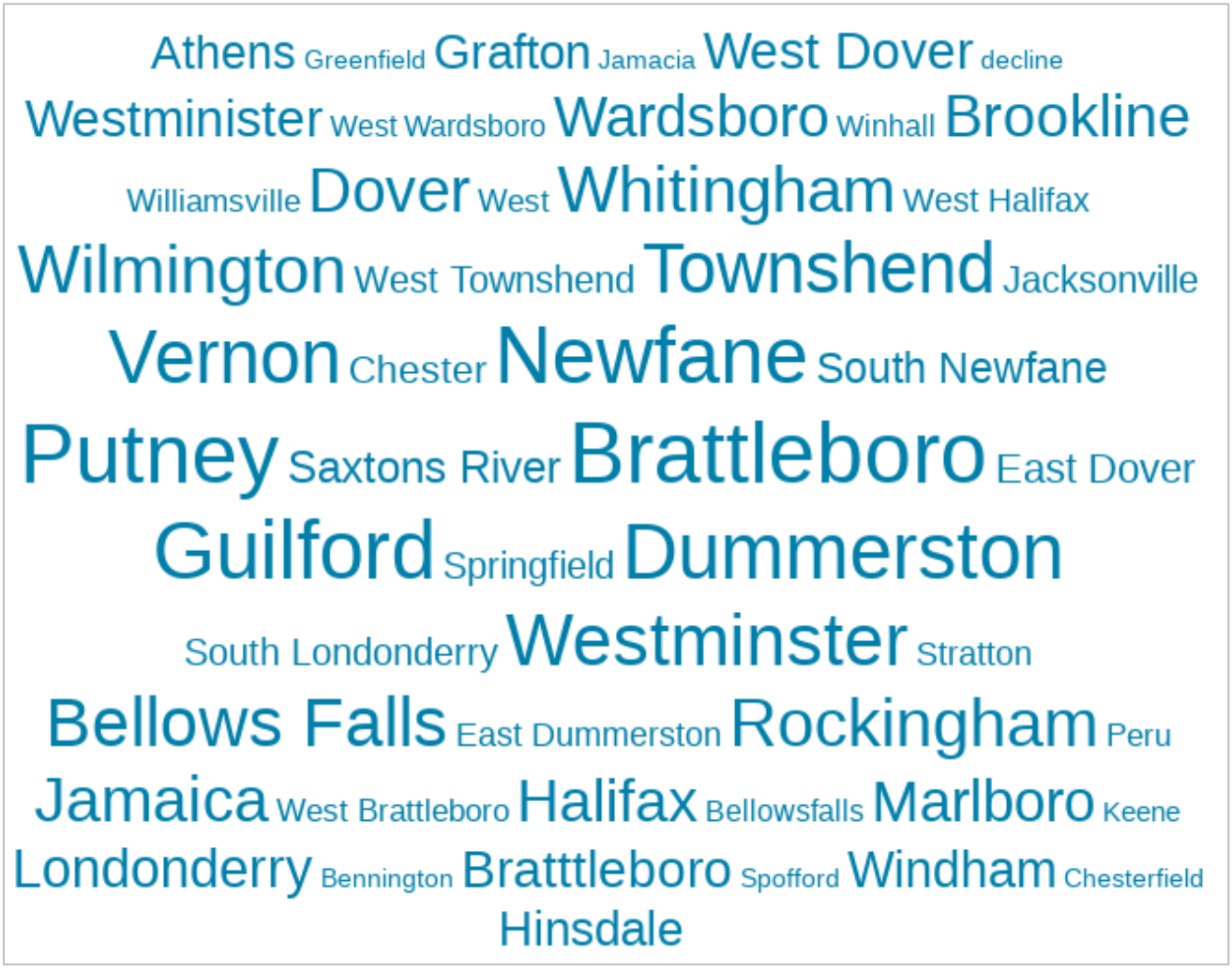
A total of 2,194 people completed the 2021 Community Health Needs Assessment (CHNA) survey. The vast majority of these are Windham County residents.

Surveys were available online via partner websites and Facebook. In addition, the surveys were made available at vaccination clinics at Brattleboro Memorial Hospital and Grace Cottage Family Health & Hospital. Also, community service organizations who submitted information for this report (see Appendix) distributed surveys to their clients.

In 2018, a total of 1,257 surveys were completed. The 2021 results represent a 74.5% increase in responses.

Survey Respondent Town of Residence

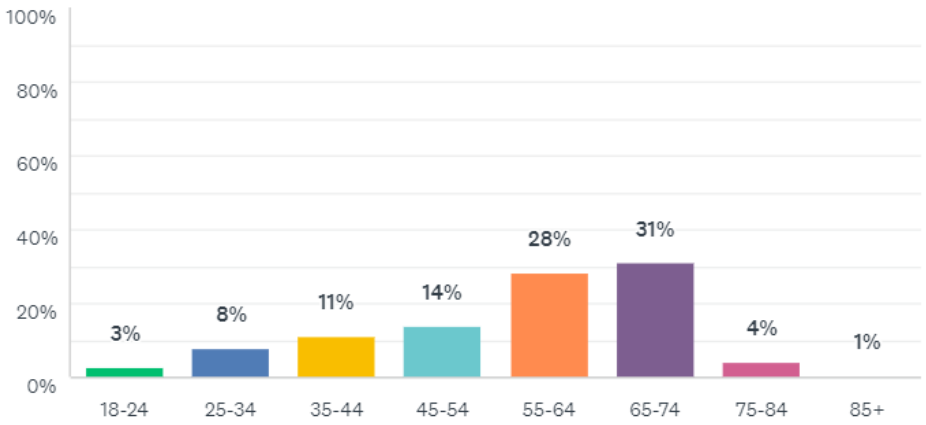
(size of typeface corresponds to number of survey respondents; largest typeface indicates largest number of respondents)



Survey Respondent Demographics

Age:

Answered: 2,048 Skipped: 146



Gender Identity: (please indicate in other if more than one or different identity)

Answered: 2,097 Skipped: 97

ANSWER CHOICES		RESPONSES	
Male		37%	780
Female		61%	1,274
Trans male/trans man		0%	5
Trans female/trans woman		0%	3
Genderqueer/gender non-conforming		1%	23
Different identity or more than one identity(please state):	Responses	1%	12
TOTAL			2,097

How would you best describe your race?

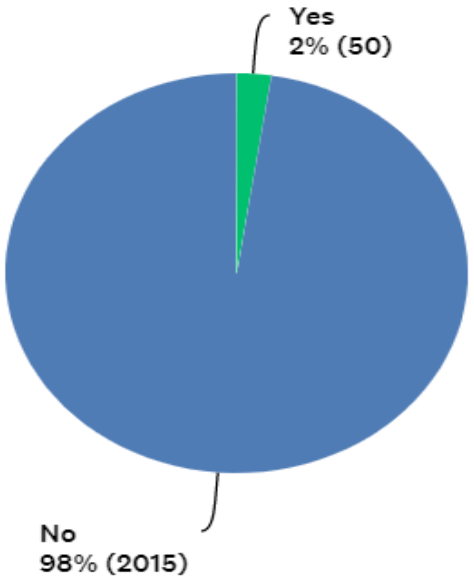
Answered: 2,070 Skipped: 124

ANSWER CHOICES		RESPONSES	
African American or Black		1.45%	30
Asian or Pacific Islander		1.21%	25
American Indian or Alaskan Native		0.68%	14
White		93.53%	1,936
Multiple races, please specify:	Responses	3.14%	65
TOTAL			2,070

Survey Respondent Demographics, Continued

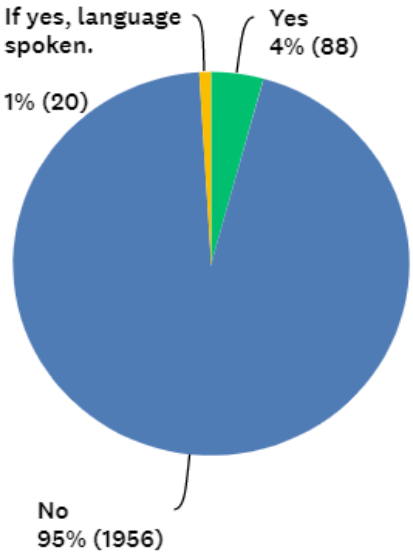
Are you Hispanic, Latino, or of Spanish origin?

Answered: 2,065 Skipped: 129



Does someone in your household speak limited English?

Answered: 2,064 Skipped: 130

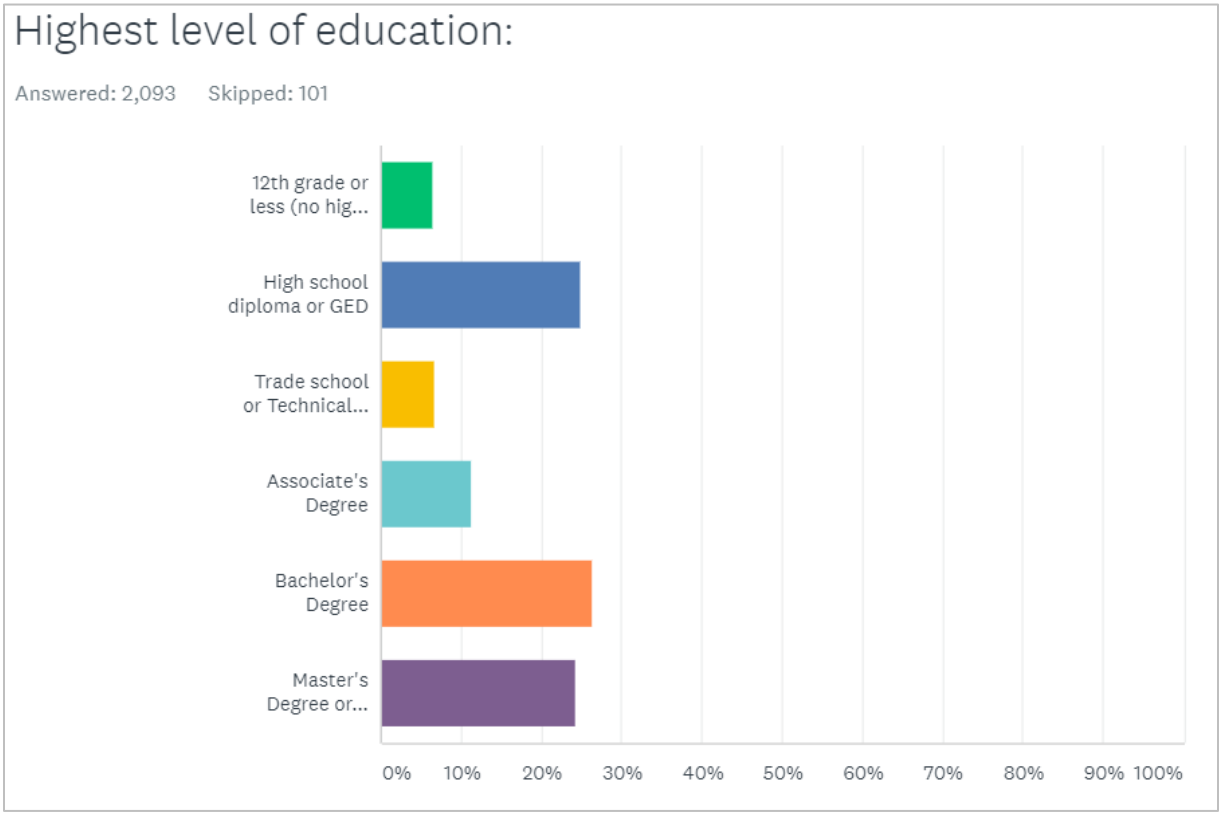


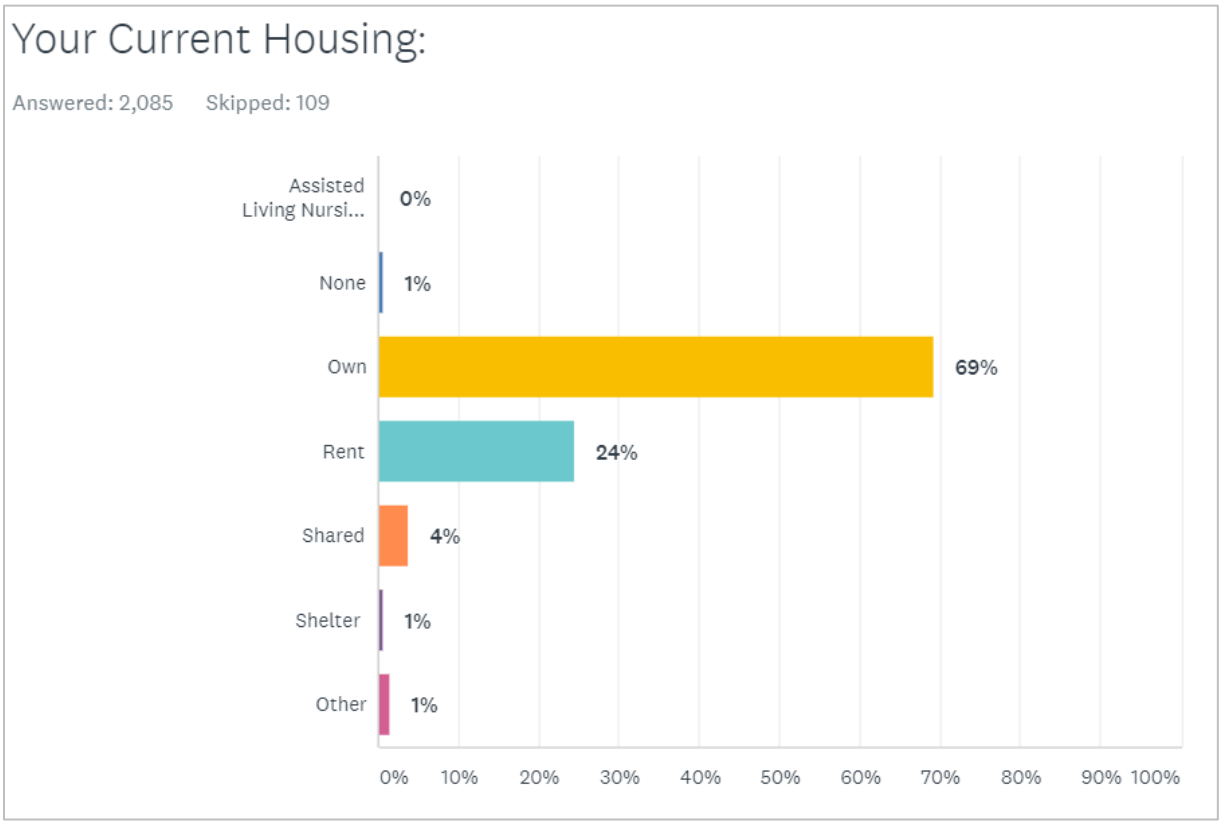
ASL = 5

French = 4

Spanish = 3

Survey Respondent Demographics, Continued

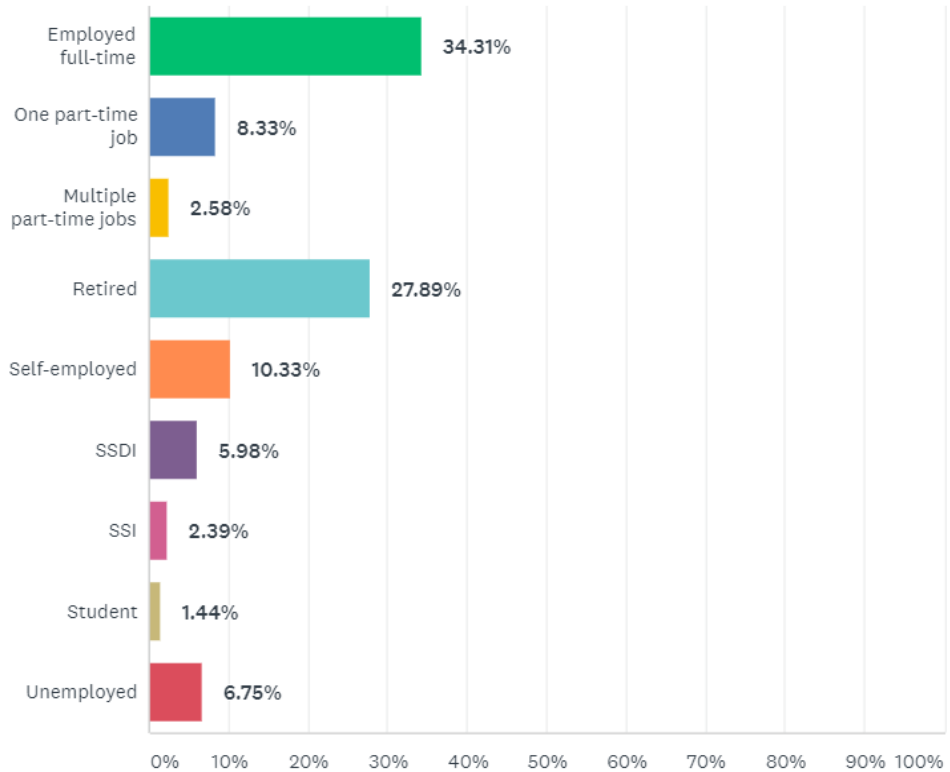




Survey Respondent Demographics, Continued

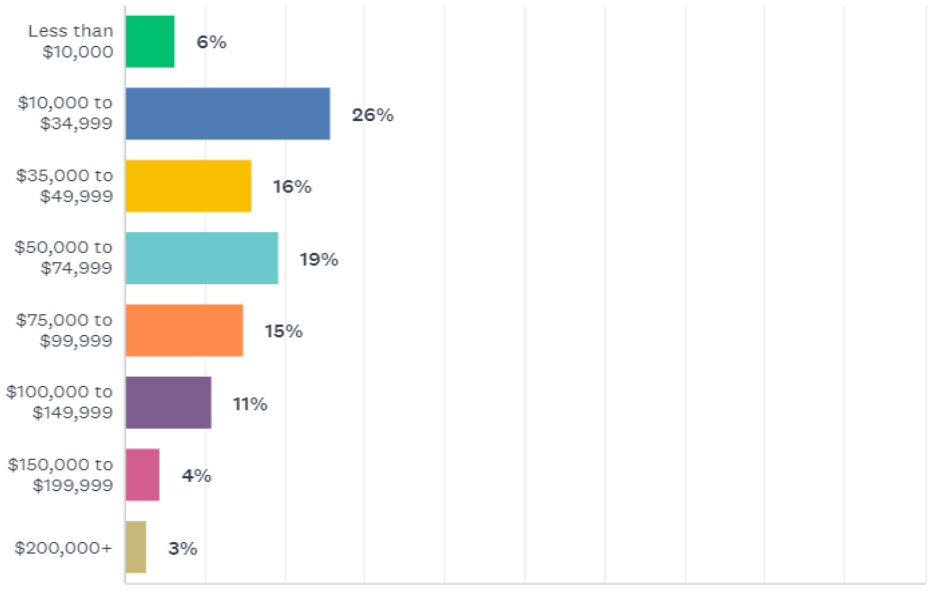
Employment Status:

Answered: 2,090 Skipped: 104

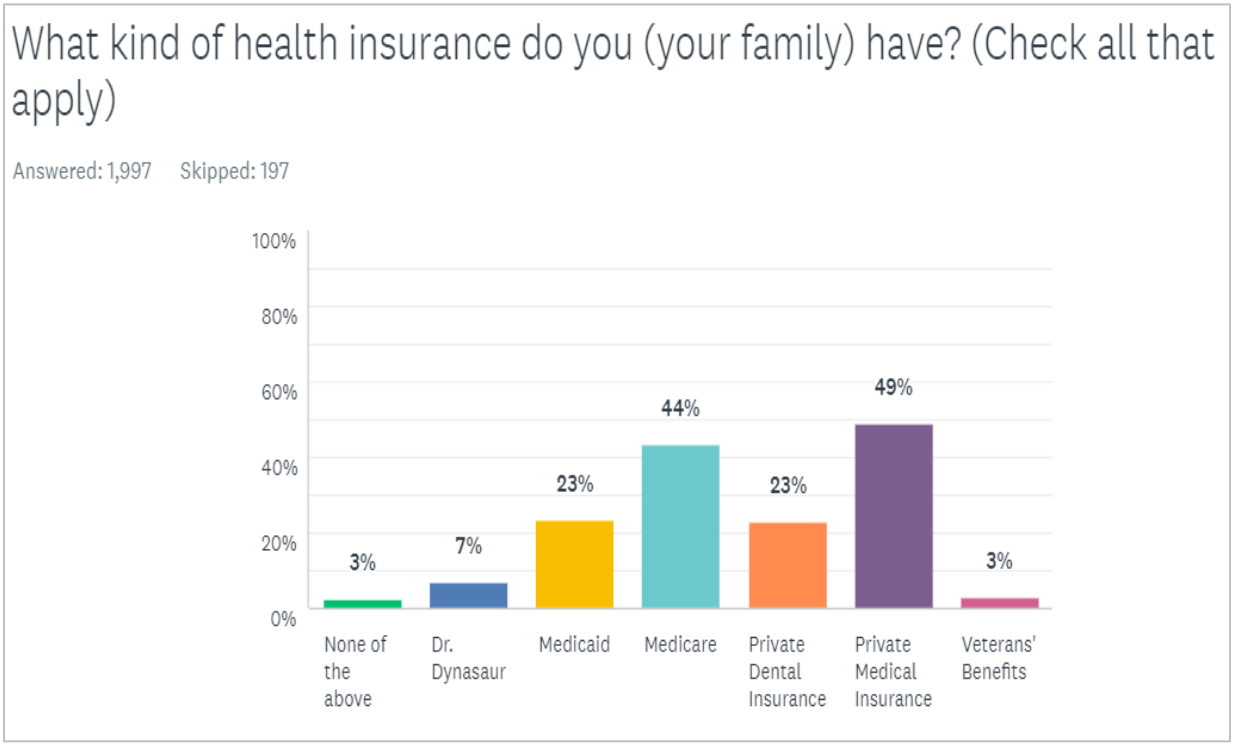


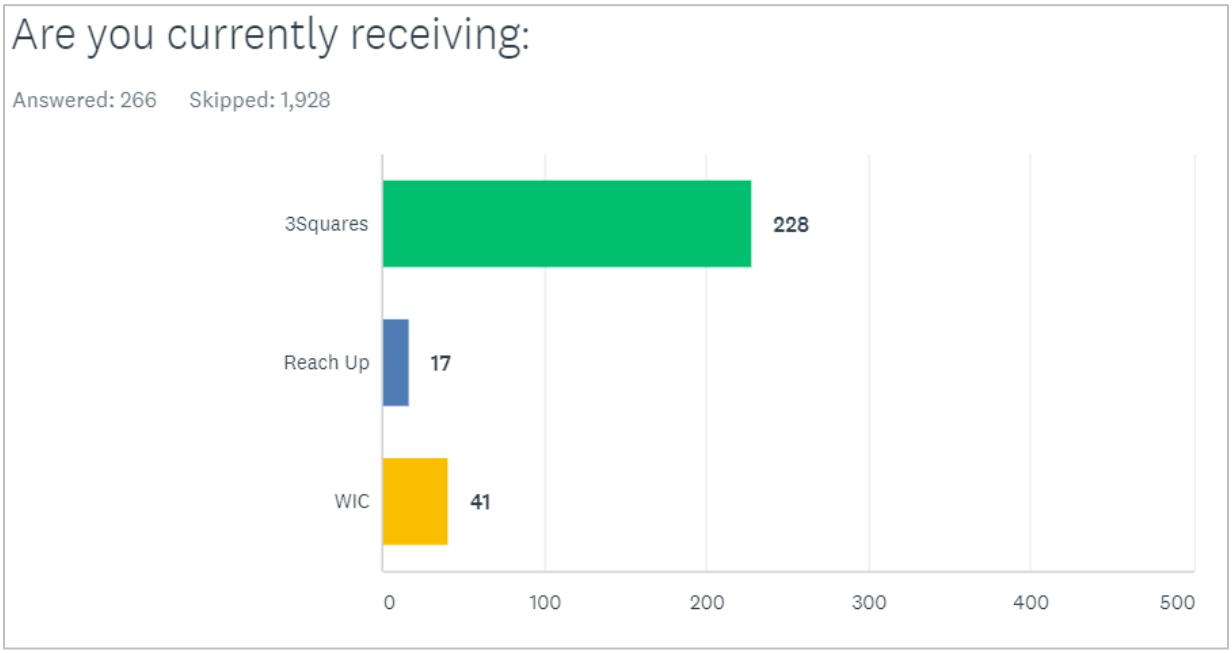
Annual household income:

Answered: 1,966 Skipped: 228

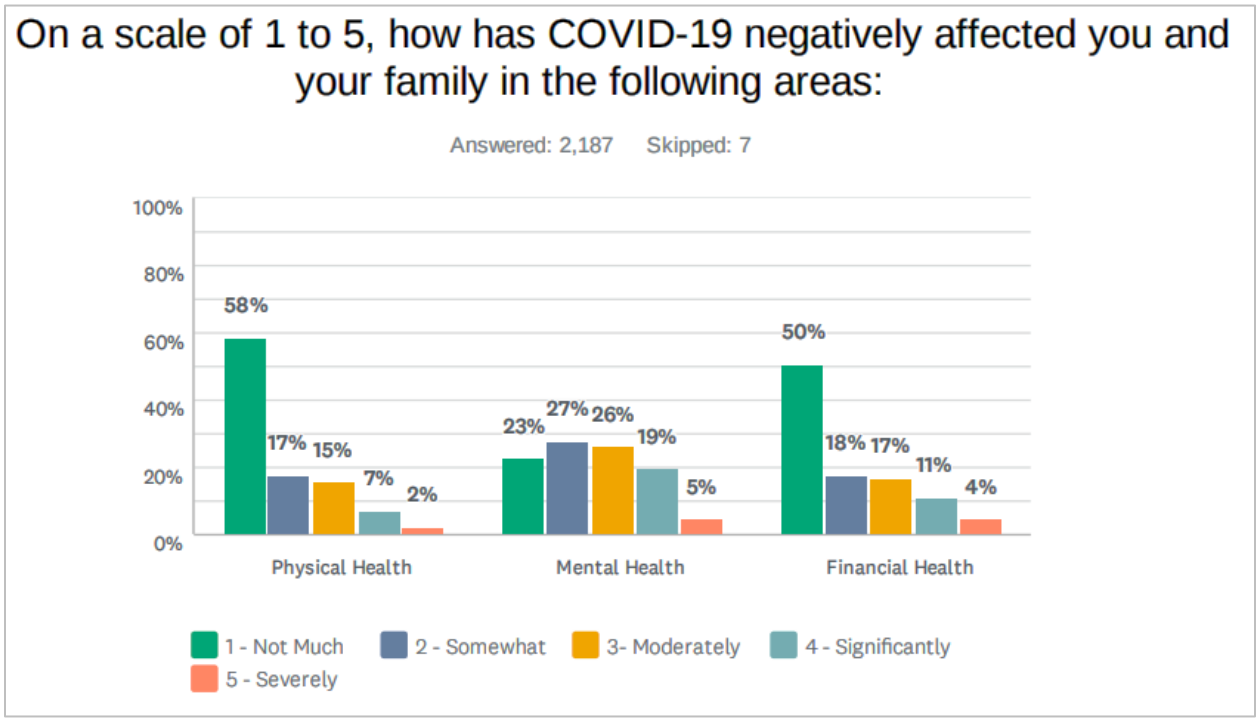


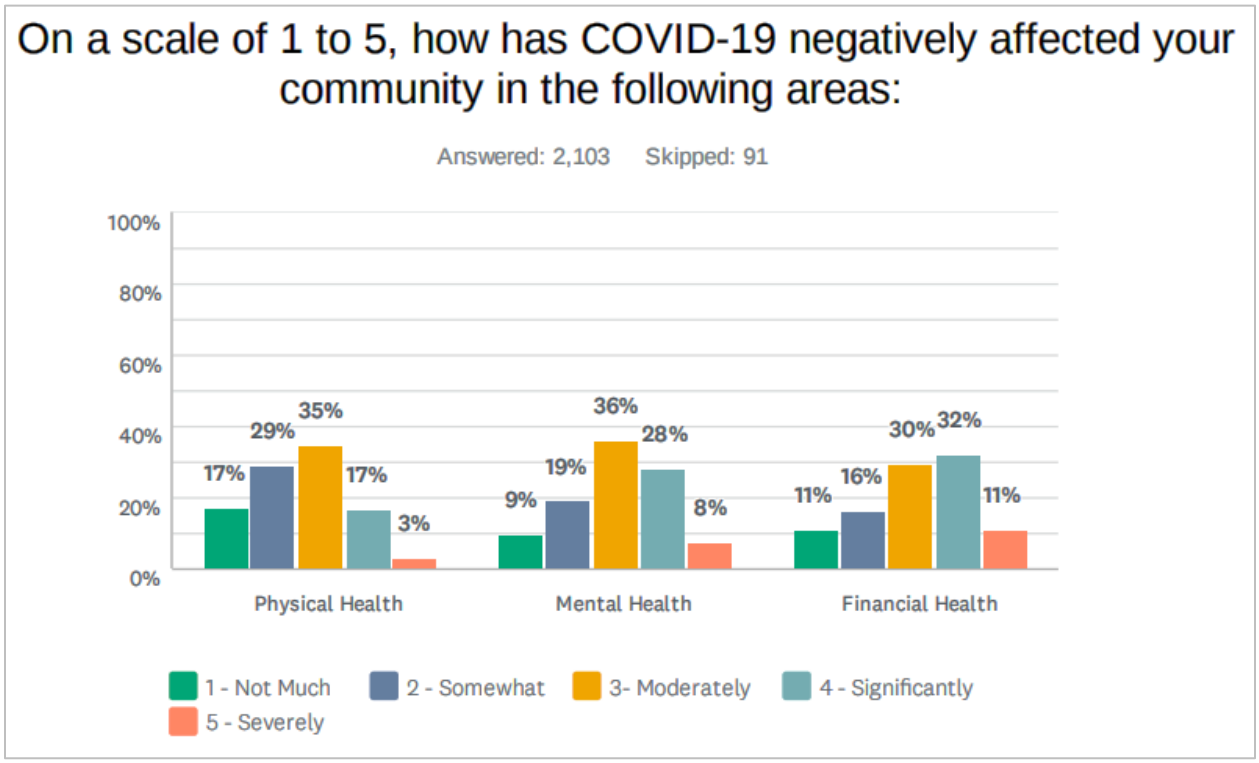
Survey Respondent Demographics, Continued



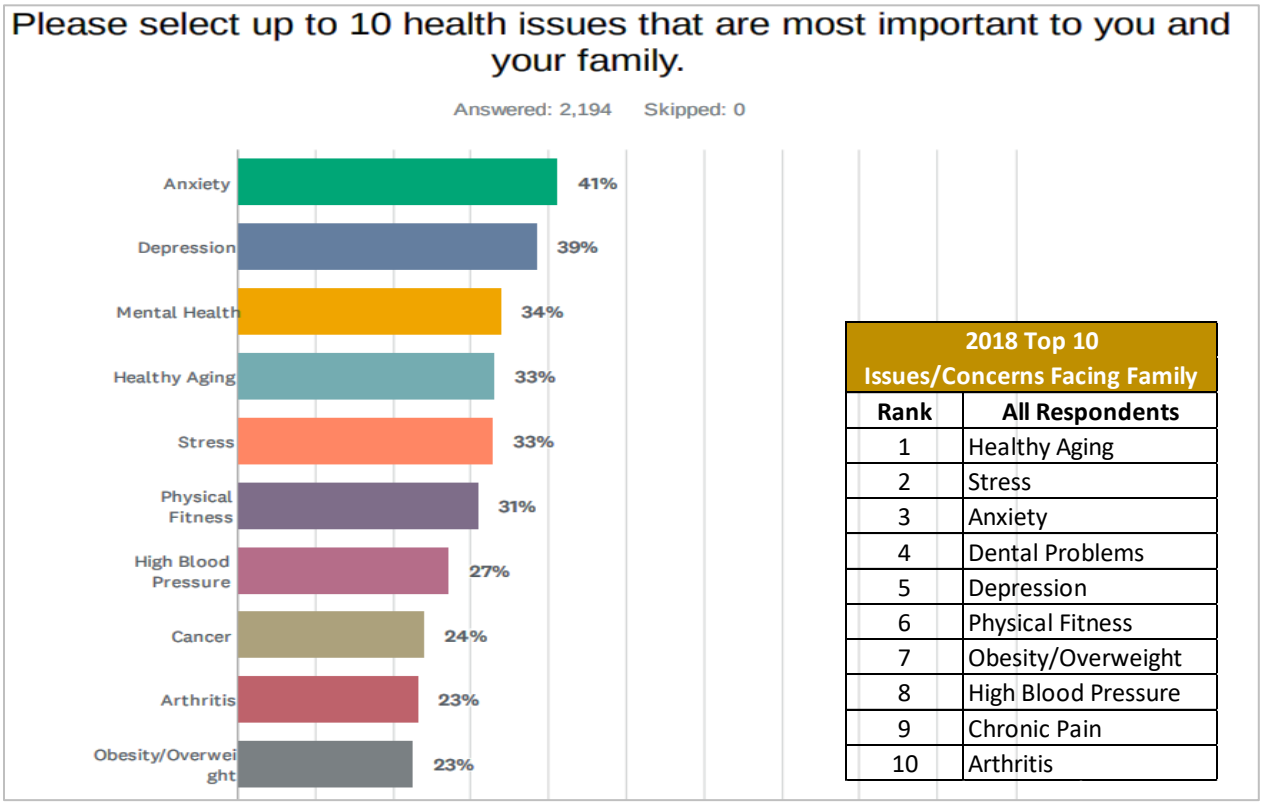


Survey Respondent Health Concerns

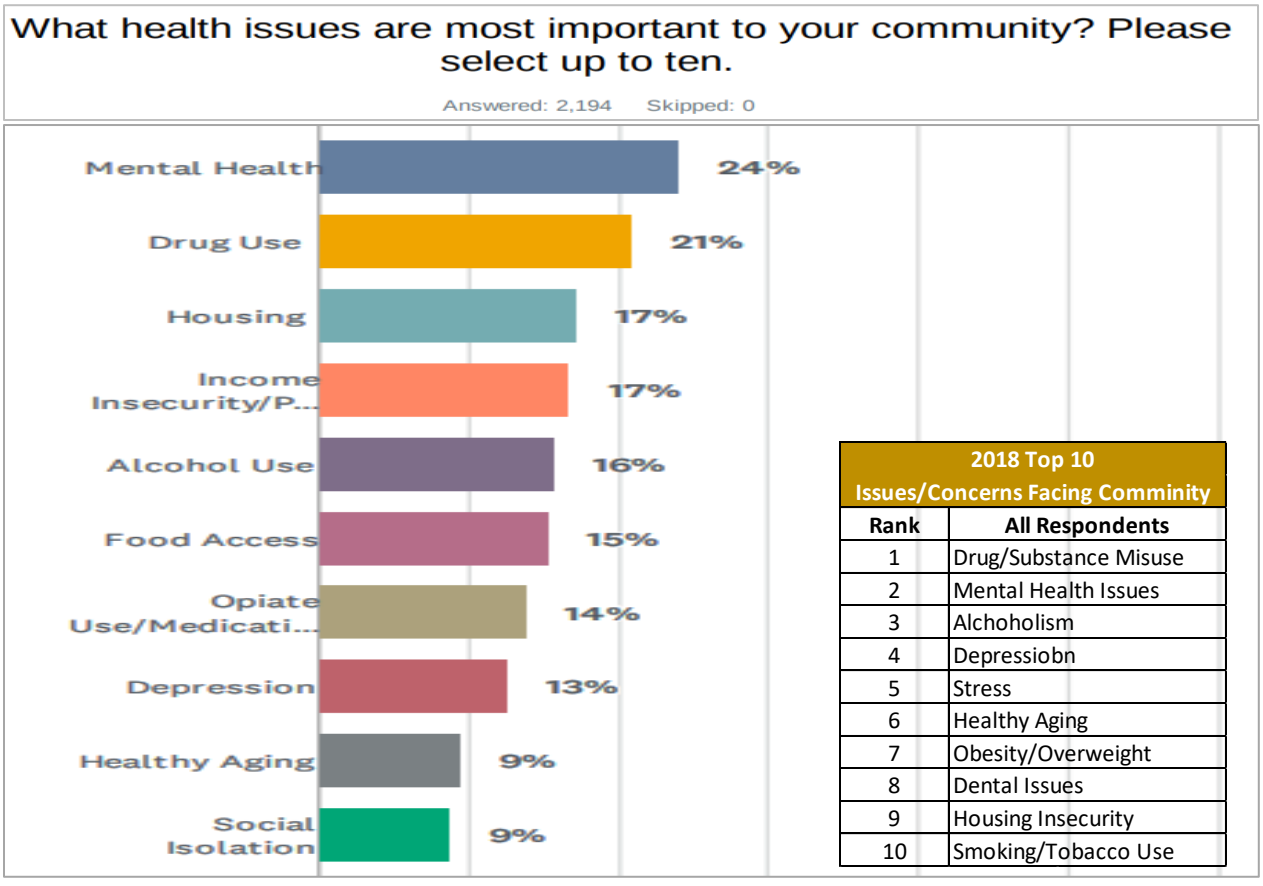




Survey Respondent Health Concerns, Continued

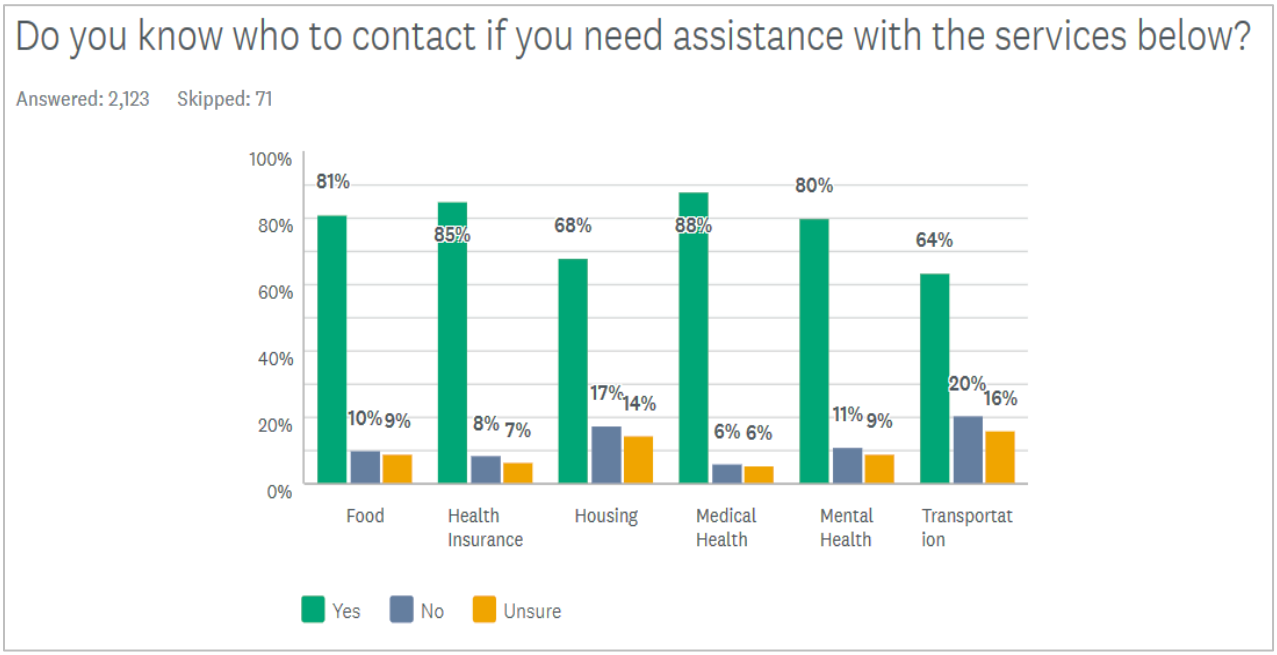


2018 Top 10 Issues/Concerns Facing Family	
Rank	**All Respondents**
1	Healthy Aging
2	Stress
3	Anxiety
4	Dental Problems
5	Depression
6	Physical Fitness
7	Obesity/Overweight
8	High Blood Pressure
9	Chronic Pain
10	Arthritis

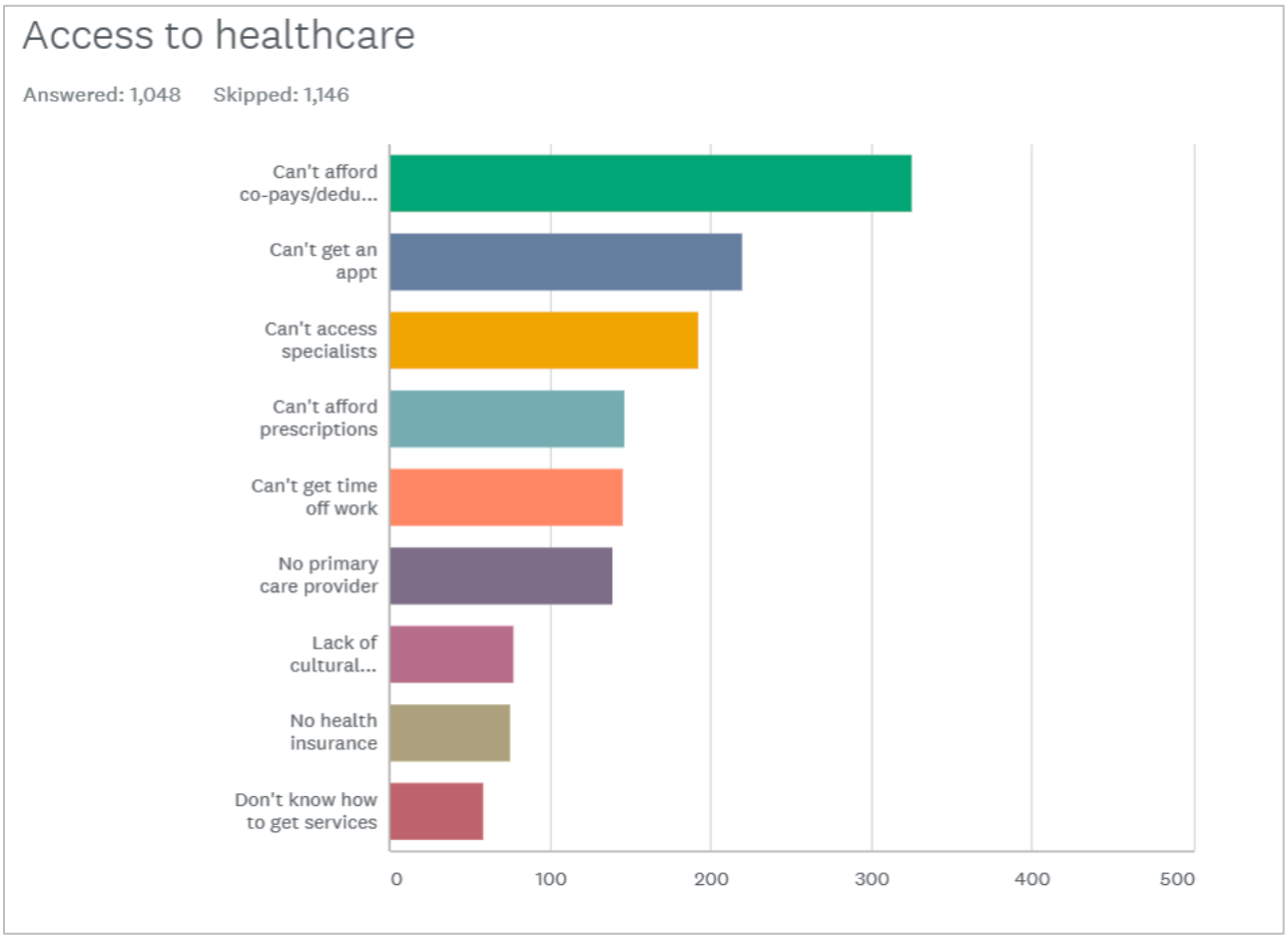


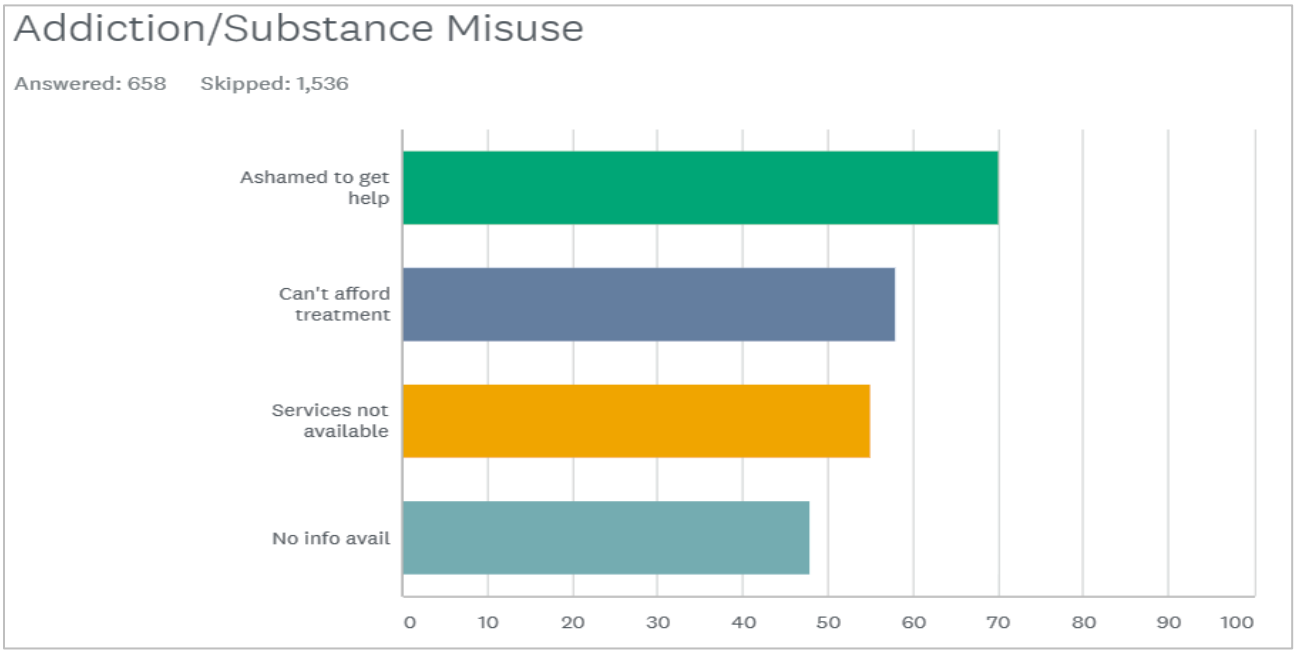
2018 Top 10 Issues/Concerns Facing Comminity	
Rank	**All Respondents**
1	Drug/Substance Misuse
2	Mental Health Issues
3	Alchoholism
4	Depressiobn
5	Stress
6	Healthy Aging
7	Obesity/Overweight
8	Dental Issues
9	Housing Insecurity
10	Smoking/Tobacco Use

Survey Respondents Awareness of Resources

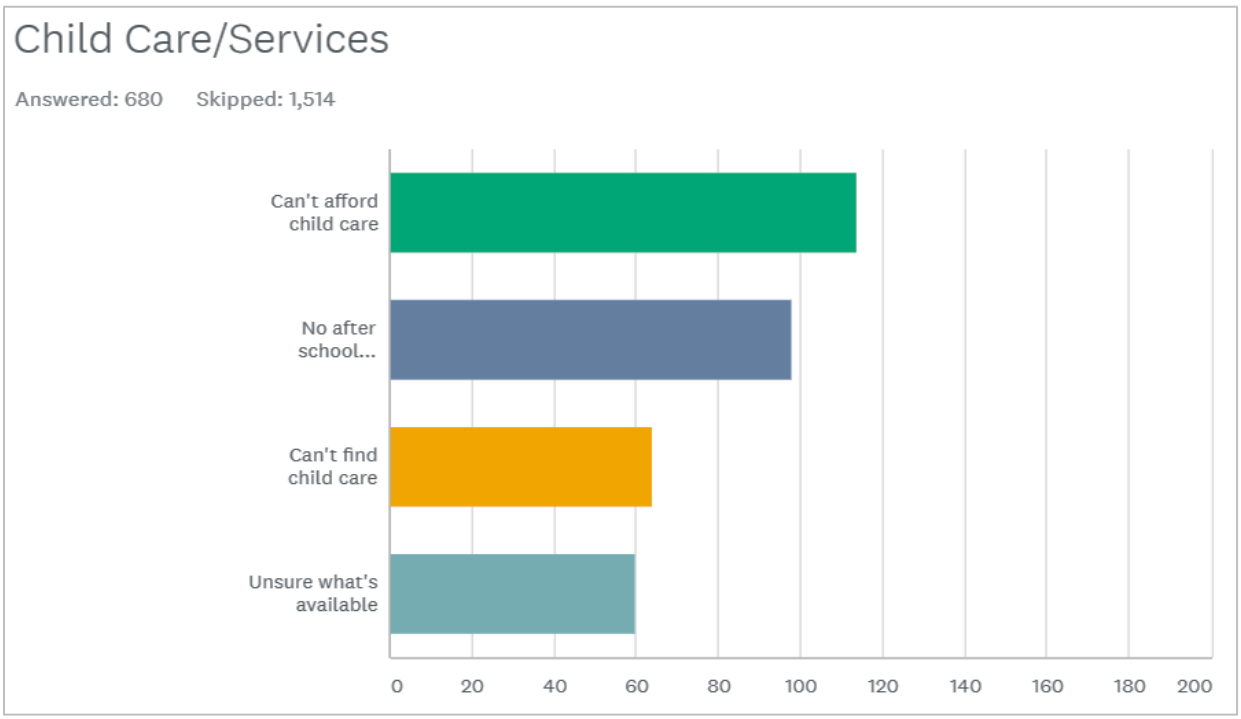


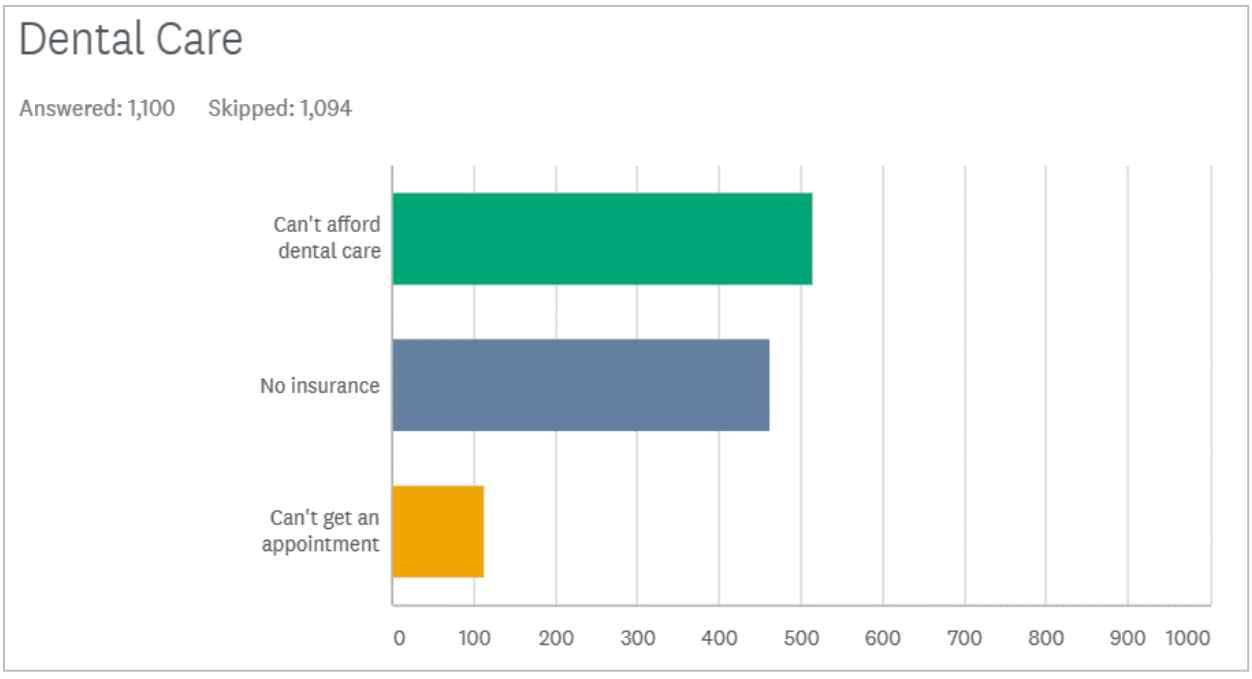
Survey Respondents Barriers to Health



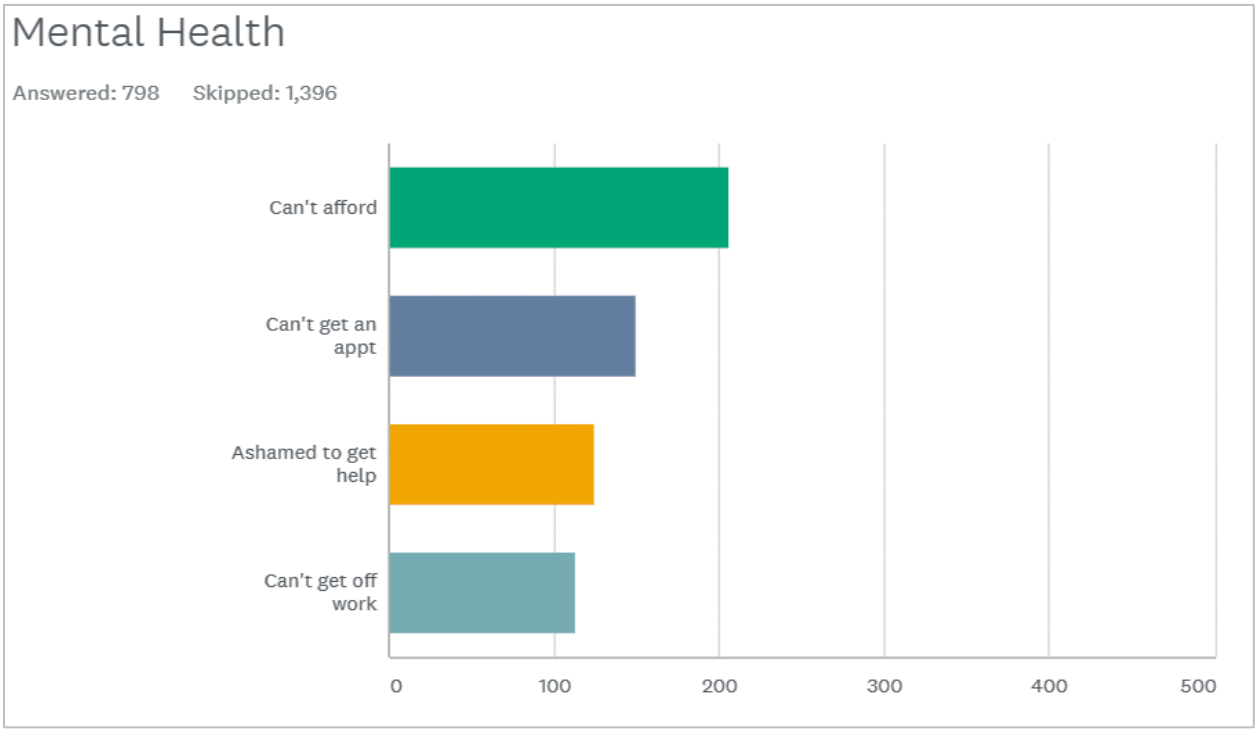


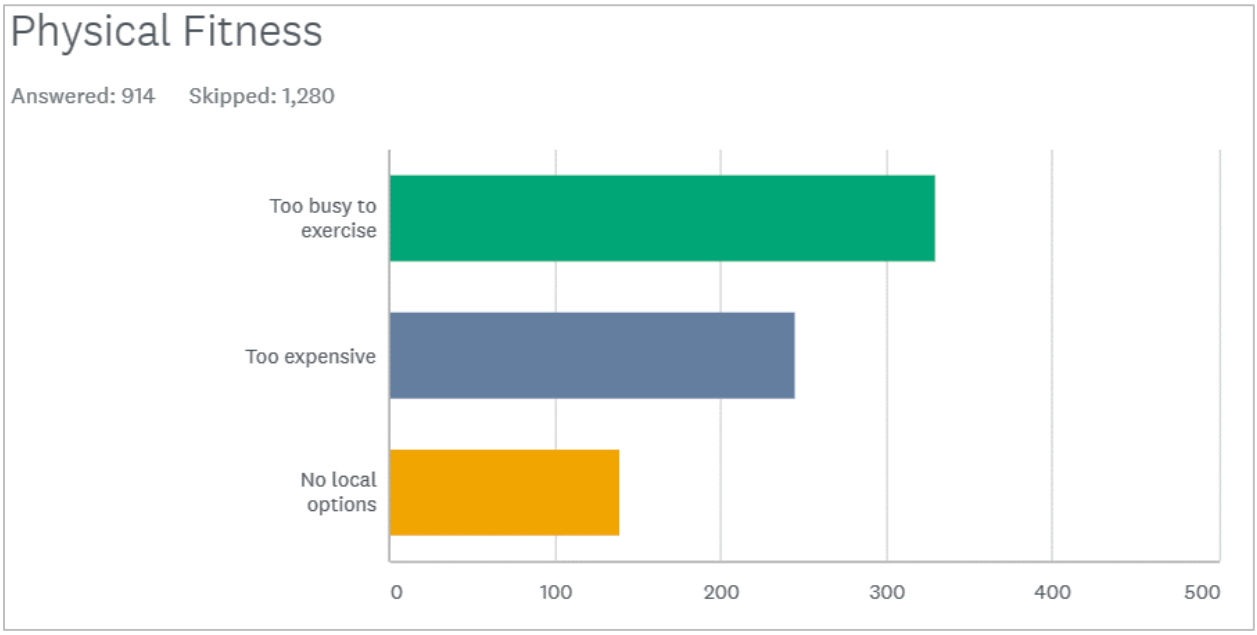
Survey Respondents Barriers to Health, Continued





Survey Respondents Barriers to Health, Continued

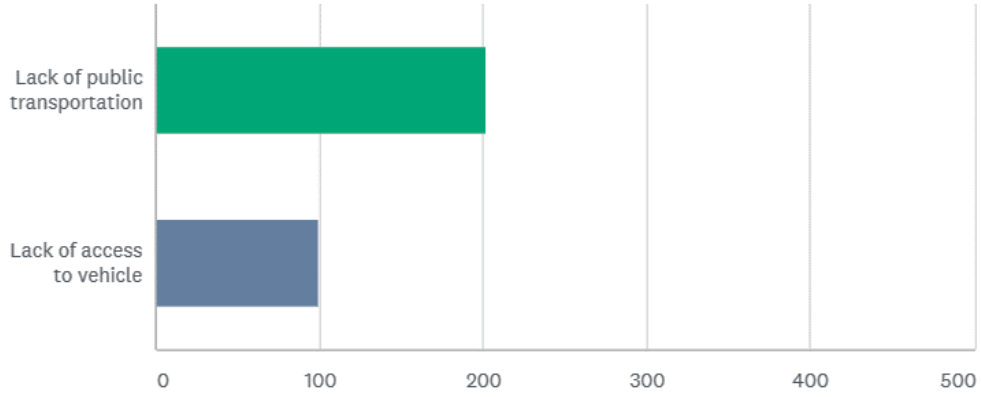




Survey Respondents Barriers to Health, Continued

Transportation

Answered: 693 Skipped: 1,501

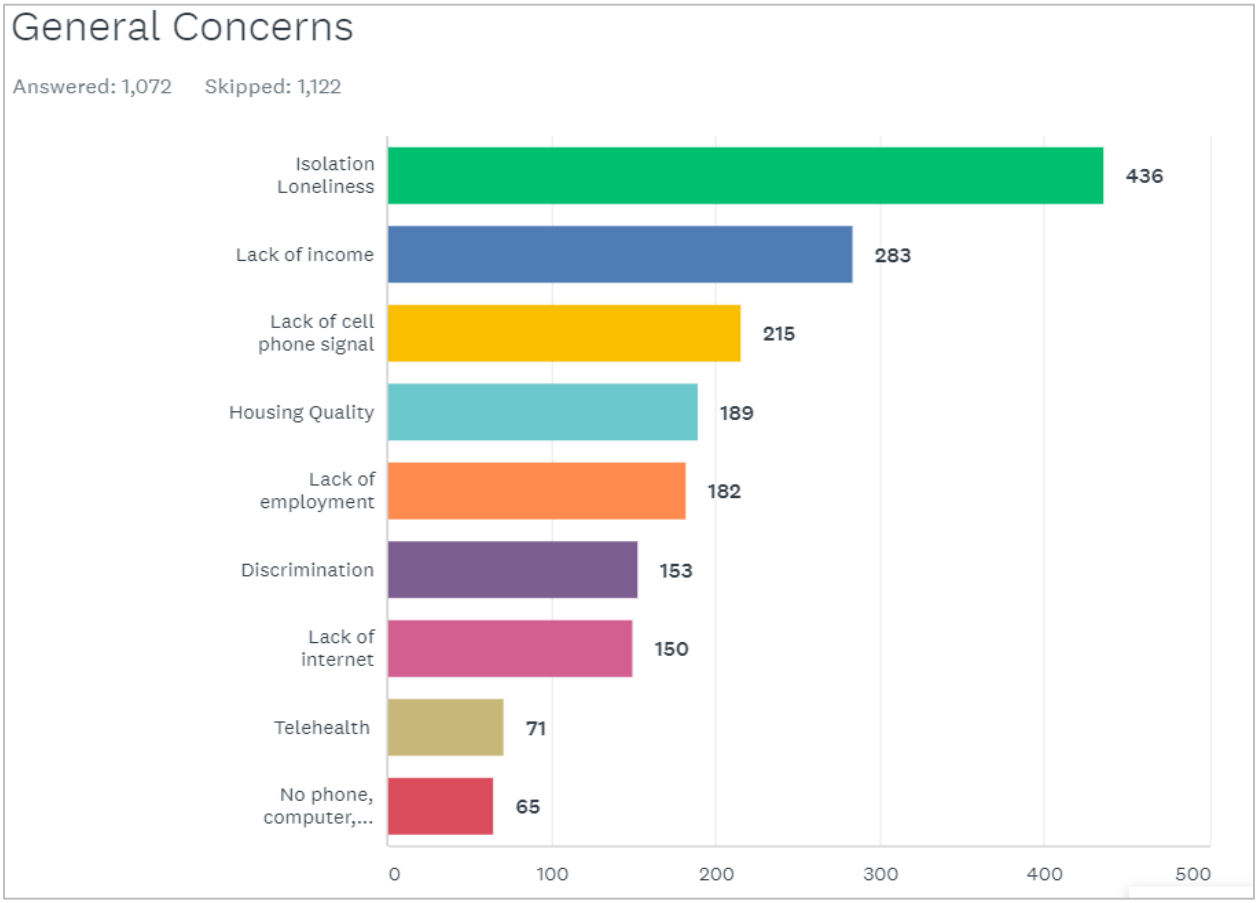


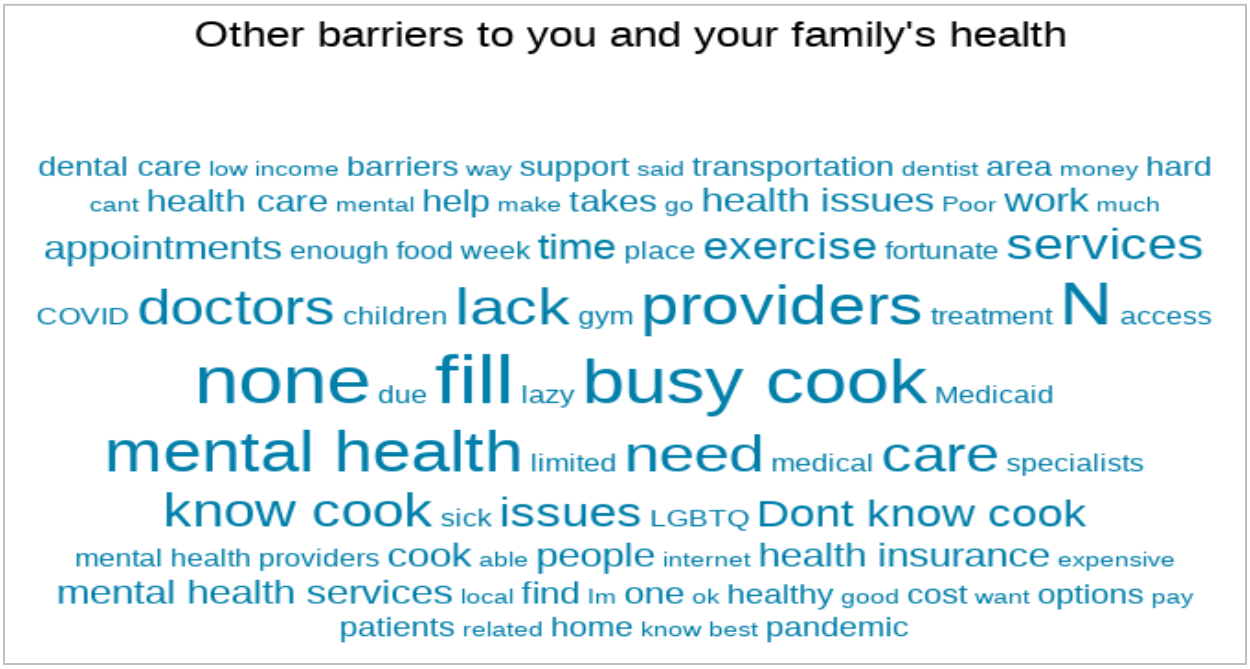
Food Access/Choices

Answered: 662 Skipped: 1,532

ANSWER CHOICES	RESPONSES
Can't afford fresh fruits and vegetables	145
Within the past 12 months we worried whether our food would run out before we got money to buy more.	74
Within the past 12 months the food we bought just didn't last and we didn't have money to get more.	45
Can't find fresh fruits and vegetables locally	36
Total Respondents: 662	

Survey Respondents Barriers to Health, Continued





APPENDIX

2021 COMMUNITY HEALTH NEEDS ASSESSMENT

If you are at least **18** years of age, please take a minute to complete the survey below.
The purpose of this survey is to get your opinions about community health issues.
All responses will remain anonymous.

On a scale of **1** to 5, how has COVID negatively affected **you and your family** in the following areas:

Physical Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely
Mental Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely
Financial Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely

Comments: _____

_____

On a scale of **1** to 5, how has COVID-**19** negatively affected **your community** in the following areas:

Physical Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely
Mental Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely
Financial Health:	1 Not Much	2 Somewhat	3 Moderately	4 Significantly	5 Severely

Comments: _____

_____

Please select **up to 10** health issues that are most important for **you and your family**.

- ☐ Alcohol Use
- ☐ Allergies
- ☐ Anxiety
- ☐ Arthritis
- ☐ Asthma
- ☐ Autoimmune Conditions
- ☐ Cancer
- ☐ Chronic Pain
- ☐ Contagious Diseases *(e.g., COVID, measles, TB)*
- ☐ Culturally Sensitive Care
- ☐ Dental/Oral Health Problems
- ☐ Depression
- ☐ Diabetes
- ☐ Domestic Violence
- ☐ Drug Use
- ☐ Eating Disorders
- ☐ Education Access
- ☐ Flu/Pneumonia
- ☐ Food Insecurity
- ☐ Gender Affirming Surgery
- ☐ Gun Safety
- ☐ Healthy Aging
- ☐ Hearing Problems
- ☐ Heart Disease
- ☐ High Blood Pressure
- ☐ High Cholesterol
- ☐ Home Health Services
- ☐ Hormone Therapy
- ☐ Housing
- ☐ Income Insecurity/Poverty
- ☐ Kidney Disease
- ☐ LGBTQ+ Affirming Care
- ☐ Lung Disease
- ☐ Mental Health
- ☐ Nutrition
- ☐ Obesity/Overweight
- ☐ Opiate Use/Medication Assisted Treatment
- ☐ Osteoporosis
- ☐ Pediatric Care
- ☐ Physical Fitness
- ☐ Pre-natal Care
- ☐ Post-natal Care
- ☐ Rehabilitation/Physical Therapy
- ☐ Reproductive Health Care
- ☐ Sexual Assault/Abuse
- ☐ Sexual Health Education
- ☐ Smoking/Tobacco Use
- ☐ Social Isolation
- ☐ Stress
- ☐ Suicide
- ☐ Tick-Borne Illness
- ☐ Vaccines
- ☐ Vision
- ☐ Others:

_____

_____

_____

_____

What health issues (see above or add your own) are most important to **your community**?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Do you know who to contact if you need assistance with the services below?

Food	□Yes	□No	□Unsure
Health Insurance	□Yes	□No	□Unsure
Housing	□Yes	□No	□Unsure
Medical Health	□Yes	□No	□Unsure
Mental Health	□Yes	□No	□Unsure
Transportation	□Yes	□No	□Unsure

During this ongoing pandemic, what organizations have been most helpful to you?

What prevents **you and your family** from being healthy? *(Check all that apply)*

Access To Healthcare
- ☐ Can't access specialists
- ☐ Can't afford co-pays/deductible
- ☐ Can't afford to fill prescriptions
- ☐ Can't get appointment with provider
- ☐ Don't know how to get services
- ☐ Don't have health insurance
- ☐ Don't have primary care provider
- ☐ Don't have time off work for appointments
- ☐ Providers lack cultural sensitivity

Addiction/Substance Misuse
- ☐ Addiction treatment services not available
- ☐ Ashamed to get help for addiction
- ☐ Can't afford treatment
- ☐ No education about addiction/substance misuse

Child Care/Services
- ☐ Can't afford child care
- ☐ Can't find child care
- ☐ No after-school activities for kids
- ☐ Unsure what services are available to children in my area

Dental Care
- ☐ Can't afford dental care
- ☐ Can't get an appointment
- ☐ Don't have dental insurance

Food Choices
- ☐ Can't afford fresh fruits and vegetables
- ☐ Can't find fresh fruits and vegetables locally
- ☐ Don't have enough food each week
- ☐ Don't know how to cook
- ☐ Too busy to cook

Mental Health
- ☐ Ashamed to get help for mental health
- ☐ Can't afford mental health care
- ☐ Can't get an appointment
- ☐ Can't get time off work for mental health concerns/appointments

Physical Fitness
- ☐ No local options for physical activity
- ☐ Options for exercise too expensive
- ☐ Too busy to exercise

Transportation
- ☐ Lack of access to vehicle/transportation
- ☐ Lack of public transportation options

General Concerns
- ☐ Discrimination
- ☐ Housing Quality
- ☐ Isolation/Loneliness
- ☐ Lack of employment
- ☐ Lack of income
- ☐ Telehealth
  - ☐ Lack of internet
  - ☐ Lack of cell phone signal
  - ☐ Lack of cell phone/computer/tablet

Other (Please describe):

_____

_____

_____

Town of residence: _____

Zip code where you live: _____

Age:
- ☐ 18 – 24
- ☐ 25 - 34
- ☐ 35 - 44
- ☐ 45 - 54
- ☐ 55 - 64
- ☐ 65 - 74
- ☐ 75 - 84
- ☐ 85+

Gender Identity: *(check all that apply)*
- ☐ Male
- ☐ Female
- ☐ Trans male/trans man
- ☐ Trans female/trans woman
- ☐ Genderqueer/gender non-conforming
- ☐ Different identity (please state): _____

# of people in your household: _____

# of people under 18 in your household? _____

Does someone in your household speak limited English?
- ☐ Yes
- ☐ No
- ☐ If yes, language spoken_____

Are you Hispanic, Latino, or of Spanish origin?
- ☐ Yes
- ☐ No

How would you best describe your race?
- ☐ African American or Black
- ☐ Asian or Pacific Islander
- ☐ American Indian or Alaskan Native
- ☐ White
- ☐ Other:_____

Highest level of education:
- ☐ 12th grade or less (no HS Diploma)
- ☐ High school diploma or GED
- ☐ Trade school or Technical degree/certificate
- ☐ Associate's Degree
- ☐ Bachelor's Degree
- ☐ Master's Degree or higher

Housing:
- ☐ Assisted Living/Nursing Home
- ☐ None
- ☐ Own
- ☐ Rent
- ☐ Shared
- ☐ Shelter
- ☐ Other: _____

Employment Status:
- ☐ Employed full-time
- ☐ Employed part-time
  - ☐ Multiple part time jobs
  - ☐ One part time job
- ☐ Retired
- ☐ Self-employed
- ☐ SSDI
- ☐ SSI
- ☐ Student
- ☐ Unemployed

Annual household income:
- ☐ Less than $10,000
- ☐ $10,000 to $34,999
- ☐ $35,000 to $49,999
- ☐ $50,000 to $74,999
- ☐ $75,000 to $99,999
- ☐ $100,000 to $149,999
- ☐ $150,000 to $199,999
- ☐ $200,000 +

What kind of health insurance do you (your family) use? (Check all that apply)
- ☐ Dr. Dynasaur
- ☐ Medicaid
- ☐ Medicare
- ☐ Private Dental Insurance
- ☐ Private Medical Insurance/VT Health Exchange
- ☐ Veterans' Benefits

Are you currently receiving:
- ☐ 3Squares
- ☐ Reach Up
- ☐ WIC

Please return this survey to:

Brattleboro Memorial Hospital
Community Health Team
17 Belmont Ave
Brattleboro, VT 05301

Qualitative Input:
Health Needs of Potentially Medically Under-Served

The information on the following pages was submitted to the Windham County CHNA Committee by Windham County social service organizations that serve the county's potentially medically under-served people.

The IRS regulations concerning CHNA requirements define this as: "Medically underserved populations include populations experiencing health disparities or that are at risk of not receiving adequate medical care because of being uninsured or underinsured, or due to geographic, language, financial, or other barriers. Populations with language barriers include those with limited English proficiency. Medically underserved populations also include those living within a hospital facility's service area but not receiving adequate medical care from the facility because of cost, transportation difficulties, stigma, or other barriers."[164]

Organization Name	AIDS Project of Southern Vermont
Contact Name	Karen Peterson and/or Samantha Arrowsmith
Description of population served	People living with HIV in Windham County
Description of health needs of population served	Scheduling and assisting with transport to appointments and lab work Adhering to medications
Description of barriers to achieving and/or maintaining good health	Affordable housing Lack of financial support
Description of what is working well for the population you serve in terms of health	Delivery of medications (by pharmacy) Case management services specifically for HIV+ individuals
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	Telehealth appointments State/Government COVID-specific assistance programs both financial and in terms of food (everybody eats, farmers to families, etc.)

[164] https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3

Organization Name	Brattleboro Area Hospice
Contact Name	Patty Dunn
Description of population served	• Terminally ill people w/ a prognosis of 2 yrs or less • People grieving the loss of a loved one • Anyone 18 years old or older who would like free assistance with advance care planning and completing and registering their Advance Directives
Description of health needs of population served	• Medical hospice services for pain and symptom management • Assistance w/ ADL's due to diminished ability and mobility • Emotional, practical and spiritual support for patients & their caregivers; companionship for elders & those who are socially isolated • Social Work support w/ psychosocial issues, including addressing unfinished business; insurance/healthcare navigation & advocacy; funeral planning; financial navigation & advocacy; assistance w/ housing
Description of barriers to achieving and/or maintaining good health	• Medicare Hospice regulation limiting services to people in their last 6 mos of life (too limiting) • The Medicare hospices and our non-medical hospice don't collaborate/communicate as effectively as they could to provide optimal hospice care • Insufficient caregiver resources for respite care, homemaker services, assistance w/ ADL's; case management for Palliative Care patients to navigate community resources • Poor care coordination—feels like the specialists and primary care providers aren't always communicating optimally • Lack of understanding of the impact of psychosocial and financial stress on patients (and their caregivers) physical, emotional, spiritual wellbeing • Aging/sick people under 65 years old who don't have access to elderly services and Medicare • Poor collaboration w/ local skilled nursing facilities—they are insular & resistant to community-based support services; their physical environments are notoriously cold, unfriendly, and lacking aesthetic appeal. They house some of the most marginalized, isolated, and lonely people in our communities, therefore, greater emotional/social support is needed, which can be in short supply when they are often short staffed. They resemble warehouses for elders. These grim circumstances impact overall health and wellbeing.
	Brattleboro Area Hospice, continued next page

	Brattleboro Area Hospice, continued from previous page
Description of what is working well for the population you serve in terms of health	• Our hospice volunteer services, though non-medical, enable people to carry some of the caregiving burdens/stressors which impacts their overall health and wellbeing • Attending regular VNH hospice meetings to address the plan of care for our shared patients • Ongoing community-based bereavement support for grieving individuals/families enables them to process their losses & integrate them in a healthy way into their lives going forward • Interdisciplinary team approach to care for Hospice patients addresses the whole person and their family: people's physical, emotional/psychosocial, spiritual, and practical needs. It's how healthcare should be delivered. • Our free-of-charge Advance Care Planning volunteer services help people understand/undertake the important task of planning their future care in the event they could not communicate their healthcare wishes. This leads to better outcomes at the end of life and easier bereavement for family members after their loved ones die.
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	• Individuals and their family caregivers receiving hospice services (medical and non-medical) experienced a continuity of care—their medical hospice teams continued to provide homebased care; their non-medical hospice volunteers continued to provide emotional and practical support. This proved especially important to those who live alone or whose family members could not visit during the pandemic. Home-based hospice care fulfilled an important social connection for these folks. This will continue.

Organization Name	Community Asylum Seekers Project
Contact Name	Kate Paarlberg-Kvam, Executive Director
Description of population served	We serve immigrants in Windham County who have in-process asylum claims. Most of the people we serve are from Latin America, with some also from Central and West Africa.
Description of health needs of population served	Many of the people we serve arrive to this country with untreated medical conditions after having traveled to this country over a lengthy journey and/or being detained in inhumane conditions for months at a time. High blood pressure is common, especially for women, and most folks also face some symptoms associated with PTSD.
Description of barriers to achieving and/or maintaining good health	The chief obstacle is that asylum seekers are not eligible for Medicaid. Some states allow asylum seekers to have access to Medicaid through a mechanism known as PRUCOL (New York is one), but Vermont does not. This means people are often uninsured, especially while they await a work permit, which can take a full year or more. Sometimes we can get people covered through VT Health Connect for a cost.
Description of what is working well for the population you serve in terms of health	We have developed a good relationship with the local hospital system, which works with us to reduce fees for asylum seekers, but that's only worked because we haven't yet had to find money for a surgery or other major cost. What does work well is that each asylum seeker is connected to a network of people who can refer them for care, but this doesn't do much to break down the obstacles presented to them by our privatized healthcare system.
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	Thanks to the advocacy of farmworkers, asylum seekers (most of the folks we serve, though not all) received a stimulus check. Just one, for $1200. They do not have access to the continuing stimulus payments now being rolled out.

Organization Name	Groundworks Collaborative
Contact Name	Laura Chapman
Description of population served	Vulnerable population living in extreme poverty and homelessness, many with chronic side effects of addiction
Description of health needs of population served	Medically underserved folks with co-occurring conditions that often untreated or undertreated for years on end. Some conditions are from the effects of living in unstable environments including outdoors, from ongoing addiction issues, and from sex work.
Description of barriers to achieving and/or maintaining good health	Transportation - though available through Medicaid/Medicare accessibility continues to be an issue for a variety of reasons ER/hospital services are often reported as stigmatizing and traumatic. Discharge planning is sometimes inadequate and often leads to readmission that might not occur otherwise. Long wait times for Primary Care Providers. Long wait times sometimes 6 months and unaffordable eye doctors and dental including denture service. Habit Opco being the predominant Medication Assisted Treatment clinic in the community is problematic for many that struggle with their system and staff.
Description of what is working well for the population you serve in terms of health	Becky Burns and our BMH/Retreat embedded providers have made significant improvements regarding access. It seems that the medical community/area agencies mainly BMH in Brattleboro work really hard to listen to our needs and meet those needs within a system that is not always ready or willing to support.
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	The motel voucher program has been an incredible asset, reducing winter illness, stresses of living outdoors seasonally, emotional trauma and creating accessibility for care. The discontinuation of this program will be a huge setback.

Organization Name	Migrant Justice
Contact Name	Will Lambek
Description of population served	Spanish-speaking immigrant farmworkers and their families. Primarily Mexican immigrants on dairy farms
Description of health needs of population served	Full range of needs. Lots of occupational hazards. Fractures and sprains from working with animals; burns and lung issues from exposure to chemical and biological hazards. A higher likelihood of acute health issues because of lack of access to general practitioners
Description of barriers to achieving and/or maintaining good health	No health insurance Language and cultural barriers to health providers Lack of time and transportation Retaliation from employers for reporting work-related injuries and illnesses
Description of what is working well for the population you serve in terms of health	Unaware of positive indicators in Windham. Open Door Clinic in Addison is a good model for elsewhere in the state
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	Financial resources and state recognition from Vermont's Economic Stimulus Equity program

Organization Name	Out in the Open
Contact Name	Eva Westheimer, Programs and Volunteer Coordinator, eva@weareoutintheopen.org.
Description of population served	Rural LGBTQ+ Community
Description of health needs of population served	Everything (since our LGBTQ+ are part of all communities) Of note- LGBTQ+ affirming care, gender affirming care such as HRT and surgeries, affordable healthcare/insurance, insurance that covers actual health needs, racial justice, access to affordable and healthy food, mental health care supports, aging supports, ability to determine own health needs within the community.
Description of barriers to achieving and/or maintaining good health	- Cost - Healthcare system unsupportive to community members (deadnaming and misgendering people, assuming heteronormativity, etc) - Not the right practitioners for some LGBTQ+ needs (gender affirming surgeries, etc). -
Description of what is working well for the population you serve in terms of health	- Community supports - The work of the LGBTQ Council and the work towards opening the LGBTQ+ Health Clinic. - Healthcare workers who take the time to hold our LGBTQ+ community-using people's correct names and pronouns, working with people around health needs, etc
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	- Virtual connection to those who are unable to travel to events, etc - Creating communities of care.

Organization Name	Brattleboro Housing Partnerships Support and Services at Home (SASH)
Contact Name	Shawna Jones, SASH Implementation Manager
Description of population served	SASH serves older adults and those with special needs who are 18+ living in Brattleboro Housing Partnerships housing and those 18+ with who are living in the communities of Brattleboro, Vernon, and Guilford who have Medicare.
Description of health needs of population served	The health needs for this population include meeting food insecurities, financial housing supports, transportation to medical appointments, transitions of care, mental health, care coordination, and additional referrals.
Description of barriers to achieving and/or maintaining good health	Barriers to achieve or maintain good health include mental health, transportation, education, activity and exercise, smoking/tobacco use, and low-income levels.
Description of what is working well for the population you serve in terms of health	It is working well for our participants to have the continued food supports, including the Vermont Foodbank and the additional increase in assistance through 3Squares. The renter's assistance program has been helpful in keeping many of our folks housed.
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	Throughout the pandemic, SASH has made stronger community connections with partner agencies, allowing us to better serve our folks with the referral process and getting them the assistance that they need. Tele-health and loanable iPads through a SASH grant have been very beneficial to the population we serve.

Organization Name	University of Vermont Extension – Farmworker Health
Contact Name	Naomi Wolcott-MacCausland
Description of population served	Immigrant agricultural workers and their family members. Mix of H2A (season and migrant workers in US on agricultural visa program primarily from Jamaica) and Latino dairy workers who are often undocumented
Description of health needs of population served	Agricultural workers work within an industry known for negative health impacts from farm safety to the physical toll years of manual labor has on a body. For immigrant workers, there is an added emotional toll of spending months, sometimes years far from family and friends to make a living. Working as many hours as possible to cover daily living expenses of family members back home often means this community is reluctant to utilize health care services unless they are facing a health issue that is impacting their ability to work. Delayed care can lead to more health needs in the long run. Most do not have a primary care provider for many of the reasons listed below.
Description of barriers to achieving and/or maintaining good health	Immigrant workers face myriad barriers to maintaining good health - Lack of personal transportation - Long and varied work days with limited time off - Access to care often cost-prohibitive and financial assistance programs are inconsistent in how they address immigration status and residency - Undocumented workers are ineligible for health insurance or whereas for most H2A workers comprehensive health insurance is cost prohibitive due to ineligibility for Medicaid. - Language barrier (more so for Latino dairy workers but there are also Spanish speaking H2A workers) - Lack of familiarity or trust with local health entities - Limited or no paid sick time - Congregate housing - Discrimination
Description of what is working well for the population you serve in terms of health	Most dairy workers and many H2A workers are young and do not have chronic health conditions.
	UVM Extension Farmworker Health, continued next page

	UVM Extension Farmworker Health, continued from previous page
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	The pandemic highlighted the significant disparities in access to health and social services for the BIPOC community. Immigrant farmworkers face some of the most significant health access barriers yet their livelihood as essential workers often living in congregate housing placed them at high risk for COVID. Our program received funding to help address disparities, which allowed us to expand capacity. We are completely grant funded so the expanded capacity meant ability to engage in deeper educational outreach about the public health threats and vaccination, offer on-farm testing as well as triage and health supports for COVID positive patients. This funding also supported the coordination of on-farm COVID vaccination. The increased engagement through the various contact points helped us build more trust and social capital with farmworkers and farm owners. This in turn has led to more workers reaching out for support around health care issues. At this time, we are unsure if funding will continue and if there is not continued funding our presence on farms will revert to the limited scope of work that we have attached to other grant dollars. We do have funding to continue immunization education and access to immunizations. We are hopeful we can continue building on the relationships we have to ensure all workers regardless of immigrant status are able to access local and affordable care.

Organization Name	Windham County Dental Center
Contact Name	Carmen Derby
Description of population served	Windham County resident needing dental care. 85% of our patient base is on Medicaid.
Description of health needs of population served	Most of the patients that we are seeing have not had oral care for a long period of time. The patients also present themselves with major health concerns such as diabetes, high blood pressure and many are smoker.
Description of barriers to achieving and/or maintaining good health	There is a distrust with the medical community, we feel that some of this is due to the major medical issues that the patients have faced. Most patient find it very complicated to carry out their treatment plans due to other life issues facing them.
Description of what is working well for the population you serve in terms of health	What we have found is that we need to identify what works for each patient. We have not been able to make blanket assessment of what works for the population that we are serving. We need to listen at all times, in order to see the issues through the patients belief window. Once we find that out, it makes moving forward with care a bit easier.
Description of some positive things that came out of the pandemic for the population you serve that will continue or will possibly be ending	Oral care during covid has been extremely challenging. A positive thing is that due to being closed for two months, many of the patients were eager to come back and continue their care.

Contact Information

Grace Cottage Family Health & Hospital

185 Grafton Road, PO Box 216, Townshend, VT 05353.
www.gracecottage.org

For questions or comments regarding this report, contact the office of Community Relations at 802-365-9109 or write to: info@gracecottage.org.

Brattleboro Memorial Hospital: 17 Belmont Avenue, Brattleboro, VT 05301. 802-251-8604.

Brattleboro Retreat: Anna Marsh Lane, P.O. Box 803, Brattleboro, VT 05302. 802-258-3785.

Vermont Department of Health-Brattleboro District: 232 Main St., Suite 3, Brattleboro, VT 05301. 802-257-2880.

2021 CHNA Steering Committee:

Charma Bonanno, Associate Director of Development, Marketing, and Community Relations, Grace Cottage Family Health & Hospital

Rebecca J. Burns, RN, Dir of Community Initiatives & Blueprint Project Manager, Brattleboro Memorial Hospital

Erin Fagley, (former) Digital Marketing Strategist/Community Liaison, Brattleboro Retreat

Sue Graff, Field Director, Brattleboro Health District, Vermont Agency of Human Services

Jeffrey Kelliher, Communications & Media Relations Manager, Brattleboro Retreat

C. J. King, Research & Grant Writing, Grace Cottage Family Health & Hospital

Johanna McLeod, (former) Development and Community Relations Associate and Diversity, Equity, and Inclusion Initiatives Coordinator, Brattleboro Memorial Hospital

Laura Overton, Director of Local Health Services, Brattleboro District, Vermont Department of Health

Gina Pattison, Director, Development & Marketing, Brattleboro Memorial Hospital

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Konstantin von Krusenstiern, (former) VOP, Development & Communications, Brattleboro Retreat

Appendix E

YEATON
M.E.P. Inc.

Introduction

Yeaton MEP, Inc. has been engaged by Lavallee|Brensiger Architects to provide mechanical, electrical, plumbing and fire protection design services for a new medical office building on the campus of Grace Cottage Hospital located in Townshend, Vermont. The proposed facility will be two stories totaling approximately 22,000 square feet. Building occupancy will consist of primary care practices that include exam rooms, behavioral health rooms, provider offices and team work spaces.

In addition to the new facility, the proposed work includes additional upgrades on campus that include removing a section of the existing clinic building to improve parking, improving parking across the street, and infrastructure upgrades in the hospital to renovate fire alarm systems.

Applicable Codes

All construction elements and systems will conform to the following:

- IBC 2015 (International Building Code)
- IPC 2018 (International Plumbing Code)
- 2020 Vermont Commercial Building Energy Standards
- Vermont Fire and Building Safety Code, 2015
- NFPA 70, 2017 (National Electrical Code)
- NFPA 99, 2018 (Health Care Facilities Code)
- NFPA 101, 2017 (Life Safety Code)
- NFPA Standards, including 13, 14 and 54.
- Facility Guidelines Institute (FGI) 2018, Guidelines for Hospitals
- ASHRAE 170-2017 Ventilation of Healthcare Facilities
- ASHRAE 188-2015 Legionellosis: Risk Management for Building Water Systems
- Local Authorities Having Jurisdiction (AHJ)
- Grace Cottage Hospital Construction Standards
- All Other Applicable Codes and Standards

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Division 21 - Fire Protection

❖ Automatic Sprinkler System

- The existing Hospital is currently served by a dry sprinkler system, with complete coverage throughout the building and attic spaces in keeping with NFPA 13. Water supply to the dry system is from a below grade cistern, with a diesel fire pump feeding a single dry valve located in the basement of the clinic building.
    - The existing cistern is suspected to have a volume of 20,000 gallons.
    - The fire pump is Randolph model 660H, 60HP, with a Bosch diesel engine and Patterson controller.
    - Dry valve in basement is a 4", with tags indicating a static pressure of 145 PSI and residual pressure of 120 PSI. Air pressure is held at 43 PSI.
- The new MOB will be served by a diesel fire pump. Provide a 750GPM, 60HP diesel pump capable of providing 120 PSI residual pressure to the new MOB and to back feed the existing hospital. Once installed, the existing fire pump will be decommissioned and removed.
    - Fire pump package to include 200 gallon double wall storage tank for diesel fuel.
    - Include fire pump control panel, 2 HP jockey pump, jockey pump controller.
- Install a new 50,000 gallon below grade cistern to feed the fire pump. Cistern is sized to provide 750 GPM flow to the facility for a duration of 60 minutes, plus charge the volume of dry sprinkler piping with water.
- The new system is not sized to handle an on-site hydrant. A meeting with the fire department is necessary to determine final flow duration.
- Install (1) new 4" Storz fire department connection on face of new MOB.
- Install (2) new 4" dry control valves: one serving the existing hospital and one serving the new MOB.
- A new 4" back feed line shall extend from the new fire pump room to the existing facility. The shortest route is proposed to be below grade, outside from the new fire pump room to the existing clinic basement.
- Provide new dry sprinkler coverage across the entire MOB in keeping with NFPA 13 standards. New galvanized pipe shall run through ceiling spaces and provide coverage to each and every room via ceiling concealed sprinkler heads with white flat plate covers.
- No standpipes are anticipated. The facility is two stories above grade, and is completely protected by automatic sprinkler.
- Concealed attic spaces shall be covered in keeping with NFPA 13. At this time, all concealed spaces are intended to be non-combustible and will not require sprinkler coverage.
- New overhangs will be non-combustible. The only overhang exceeding 4' will be the entry way port-cochere, which does not require sprinkler coverage.

- Sprinkler standards for the new MOB shall include:
    - Sprinkler piping shall be galvanized, with threaded or grooved (Victaulic) fittings.
    - Sprinkler heads shall be centered within ceiling tiles in all public spaces.
    - Protective guards will be installed over all sprinkler heads susceptible to accidental striking and abuse.
    - Heads shall be concealed type in all finish ceiling areas.
    - Sprinkler piping materials shall be in keeping with NFPA-13 requirements, the Owner's Insurance Carrier and current standard of installation.

IT/Data Room

- The IT/Data room on the lower level shall NOT be protected by a wet sprinkler system.
- Provide a clean agent fire suppression system by Energen, Sapphire/Simplex or approved equal to serve the IT/Data Room. System shall be a turnkey installation by the selected vendor and shall include the clean agent tank(s), control panels, valves, piping and heads.

Division 22 – Plumbing

❖ Building Plumbing Systems

Domestic Water Supply

- Domestic water is supplied by an existing, on site well. The well serves the existing Hospital and the pharmacy building across the street. The current yield is unknown.
- This well will be used to supply the new MOB. A new 2" water entrance to the building with backflow preventer is anticipated.
- Provide new well pressure tanks in keeping with the system used at the hospital.
- Provide a duplex booster pump system to provide flow to MOB fixtures. System sized to provide 45 GPM at a 35 PSI boost will be required, with each pump being redundant of the others. Pump shall include integral skid with variable frequency drives.
- Provide water storage with capacity to provide water for one (1) 10-hour day. Water storage capacity is estimated to be approximately 3,000 gallons assuming a minimum 6 GPM contribution from the well.

Domestic Hot Water Systems

- Provide two (2) 120-gallon indirect fired hot water storage tanks, equal to Lochinvar Squire or HTP SuperStor. Tanks shall be sized to provide redundant hot water storage foe the entire facility. Tanks shall be set to store water at 140F.
- Provide one (1) digital mixing valve equal to Powers Intellistation Jr. Furnish valve on a pre-piped skid. Valve shall control water distribution to 120F to all public fixtures.

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Domestic Hot, Cold & Recirc. Water Systems

- From the booster pump, provide (1) 2-1/2" cold water main to distribute water from the mechanical room through the facility. Cold water shall be run through the ceiling of the second level in a loop, dropping down to fixtures in walls.

- From the water heater, provide (1) 1-1/2" hot water main to distribute 120F water from the mechanical room through the facility. Hot water shall be run through the ceiling of the second level in a loop, dropping down to fixtures in walls.

- Provide (1) 1" 140F hot water main to deliver high temperature water to the two mop basins.
- A hot water recirculation loop shall run parallel to the hot water line throughout the facility. In keeping with Vermont Commercial Energy Code, hot water recirculation shall extend to within 2 feet of all lavatories.
- All lavatories shall be furnished with mixing valves to ensure hot water temperatures do not exceed 110F at the outlet.
- To balance flow of recirculation, provide pressure dependent "circuit solvers" at all fixtures piped with hot water recirculation.
- Insulate cold, hot and hot water recirc. water piping with 1" fiberglass insulation with ASJ.

Sanitary Drainage and Venting Systems

- Sanitary from the new facility shall gravity drain to an existing septic system.
- Anticipated drainage fixture load on the new facility is 150 DFU.
- Provide (1) 4" sanitary drain from the new facility to the existing septic tank.
- Venting shall be run as required to adhere to International Plumbing Code. Four (4) 4" vents through roof are anticipated.
- All sanitary and vent piping may be schedule 40 PVC, above and below grade.

Storm Drain Systems

- The flat room section of the facility will require piped primary and secondary storm drainage.
- Provide (4) 4" primary roof drains to address the flat roof section of the building. Piping shall gravity drain to one (1) 6" exit connecting to the site civil storm piping system.
- Provide (4) 4" secondary emergency roof drains to address overflow on the flat room. Piping shall gravity drain to (1) 6" lambs tongue outlet discharging in a conspicuous location above grade, on the west side of the building.

Plumbing Fixtures

- Plumbing fixtures shall be per Grace Cottage Hospital standards. Toilets, lavatories, and water fountains shall be ADA wherever required.

- Toilets shall be floor mounted, bottom outlet. Kohler bowl with Sloan Royal flushometer. Flushometers shall be hardwired, 1.6 GPF flow.
- Public Lavatories shall be provided with wall mounted lavatories – Kohler Greenwich or equivalent. ADA height, with wall carrier. Faucets shall be manual, with dual wristblade handles and gooseneck spout by Chicago or equal.
- Patient room sinks shall be provided with sinks integral to the countertop. Faucets shall be manual, with dual wristblade handles and gooseneck spout by Chicago or equal.
- Break rooms and soiled rooms shall be provided with drop in counter mount stainless steel sinks, ADA compliant with read offset drain. Elkay Lustertone, 18 Gauge, 22"x19" minimum size. Facucet equal to Chicago, ADA compliant with manual wristblade handles and gooseneck spouts.
- Mop basins shall be molded stone, 36"x24" minimum size. Furnish with faucet with integral checks, bucket hook and wall bracket.
- Floor drains – Sioux Chief or Zurn with trap guard.
- Fountains – Elkay, dual height fountain with integral bottle filler, ADA accessible. Integral chiller.
- Eye washes shall be provided in POC testing and soiled rooms. eye washes by Guardian shall be counter mount style, able to swing over the adjacent sink when needed.
- Roof drains shall be cast iron with 15" dome equal to Zurn.
- Emergency drains – see above.
- Emergency drain outlets shall be bronze lambs tongue style equal to Zurn Z199.

Medical Gas Systems

- No piped medical gas systems are anticipated.

Specialty Water Treatment

- No specialty water treatment systems are anticipated. There will be no de-ionized water or reverse osmosis systems.

Piping Standards

All piping shall be installed to meet the following:

- Domestic hot and cold and recirculation piping shall be Type L hard copper, with lead free solder fittings. Pro Press is acceptable as a line itemed alternate.
- Insulation on all domestic cold, hot and hot water recirculation piping shall be 1", or as required by Vermont Commercial Energy Code, whichever is more stringent.
- Sanitary waste and vent piping located above grade shall Schedule 40 PVC.
- Sanitary waste and roof leader piping below grade shall be Schedule 40 PVC.
- Roof leader piping above grade shall be Schedule 40 cast iron with no-hub fittings.
- Horizontal runs of roof drain shall be wrapped with 1 1/2" heavy density fiberglass.

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Division 23 – Mechanical

Heating Plant – Base Bid

- Building heating shall be LP gas based, with LP fired gas boilers producing hot water for heating coils and perimeter radiation.
- Provide (4) new 1,000 gallon LP gas tanks, buried on site. Tank capacity sized to ensure minimum 7 days operation without a fill up, and to maintain minimum 50% reserve capacity after 7 days.
- LP Gas distribution shall be limited to piping from the new LP field to the boiler plant.
- The building heating plant shall consist of three (3) 600 MBH input, high efficiency LP gas fired boilers equal to HTP Mod-Con or Lochinvar Knight. Boiler plant capacity selected to provide N+1 redundancy, allowing any boiler to fail and still keep pace with the building heating load.
- Boilers shall generate 140F water and circulate it through the new building to VAV heating coils, perimeter radiation and miscellaneous space heaters. Boilers shall modulate heating water temperature based on outside air temperature.
- All heating water shall be 100% water, with no glycol.
- Pumps circulating heating water shall be vertical inline style with wall mounted VFD's, equal to Taco model KV 2009, with 3HP variable speed motors.

Air Conditioning, Ventilation & Air Distribution – Base Bid

- Provide (3) 8,000 CFM packaged rooftop units equal to Trane Horizon. Units shall be furnished with integral high efficiency Dx compressors, variable speed supply fans with high static motors, power exhaust, enthalpy based economizer, spring isolated curbs and double wall construction.
- Additional features shall include integral UV lighting on the cooling coils, MERV 13 filters and modulating hot gas reheat coils.
- Three units shall serve the first and second floors.
- Units shall serve single duct VAVs on all levels, supplying air to each occupied area. Thirty (30) VAV units are anticipated.
- A fully ducted return system shall return air back to the units.
- Units are anticipated to require 25%-30% outdoor air given the current types of spaces.
- Air quantities delivered to each space shall meet or exceed the minimums set forth by international mechanical code and ASHRAE 170-2018 for outpatient facilities.

Exhaust Systems – Base Bid

- New exhaust systems will be required for expansion to address general exhaust from toilet rooms, housekeeping closets and electrical rooms. Four (4) fans are anticipated: two roof mounted fans serving levels 1 and 2, and two serving level 3.
- Exhaust systems by Greenheck or equal.

- Exhaust fans serving mechanical and electrical spaces on the bottom level will be dedicated to the space served and will run off reverse acting thermostats.

Heating Plant – ALTERNATE

- Building heating shall be 2 stage: Primary heating shall be provided by air source heat pumps. Secondary heating from a small LP boiler system.
- Boiler system shall consist of two (2) 400 MBH input LP gas fire high efficiency boilers, with 50 GPM circulator pumps moving water to perimeter heat and domestic water storage. Boilers equal to HTP ModCon or equal by Lochinvar.
- Provide (2) new 1,000 gallon LP gas tanks, buried on site.
- LP Gas distribution shall be limited to piping from the new LP field to the boiler plant.
- The building heating plant shall consist of three (3) 600 MBH input, high efficiency LP gas
- Boiler shall generate 140F water and circulate it through the new building to VAV heating coils, perimeter radiation and miscellaneous space heaters. Boilers shall modulate heating water temperature based on outside air temperature.
- All heating water shall be 100% water, with no glycol.
- Pumps circulating heating water shall be vertical inline style with wall mounted VFD's, equal to Taco model KV 1900, with 2HP variable speed motors.

Air Conditioning, Ventilation & Air Distribution – ALTERNATE

- Provide (3) 20-ton air cooled heat pumps equal to Daikin Aurora on grade, outside the building. Heat pumps shall be heat-recovery type, capable of producing 100% heating capacity down to 5F, with extended operating ranges down to -13F.
- Heat pumps shall be capable of simultaneous heating and cooling to every zone.
- Heat pumps shall serve fully ducted fan coil units above the ceilings, which shall be controlled by zone thermostats in the space. A total of 30 ducted fan coils is anticipated.
- Three units shall serve the first and second floors

- Ventilation air shall be provided by two (2) 3,750 CFM (+/-) Trane Horizon Energy Recovery units. The roof mounted units shall be furnished with integral high efficiency Dx compressors for dehumidification, variable speed supply fans and exhaust fans, a total energy wheel for sensible and latent heat transfer, spring isolated curbs and double wall construction.
- Additional features shall include integral UV lighting on the cooling coils, MERV 13 filters and modulating hot gas reheat coils.
- Air quantities delivered to each space shall meet or exceed the minimums set forth by international mechanical code and ASHRAE 170-2018 for outpatient facilities.

Exhaust Systems – ALTERNATE

- General exhaust shall be fully ducted through the roof mounted energy recovery units.
- Rooms with hazardous exhaust or temperature activated exhaust (mechanical spaces) will still be served by dedicated fans.

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Miscellaneous Mechanical Systems – Applies to Base Bid and Add Alternate

Level 1 IT/Data Room:

- IT/Data on Level 1 shall be served by a dedicated cooling system by Liebert of equal.
- Exact cooling load to be determined, currently a 5-ton system is being earmarked.
- System shall be refrigerant based and shall consist of one (1) outdoor, air cooled condensing unit installed on the flat roof and one (1) indoor AC unit installed on the floor, in the IT room.
- Humidity control - Unit will be provided with a domestic water connection for in room humidity control.
- Unit shall be provided with electric SCR reheat to prevent space sub cooling.
- Unit shall
- Server Room shall be exhausted by one (1) inline exhaust fan sized for 1 CFM/SF.

Electrical, IT & Data Room Cooling

- Electrical Rooms on Level 2, where load proves to be small enough, will be exhausted through the building general exhaust system.
- Data rooms to be furnished with 2-ton split systems with low ambient cooling. Two (2) data rooms are currently anticipated.
- Rooms furnished with a UPS shall be exhausted through the building general exhaust system.

Mechanical Room

- The mechanical room shall be heated using hydronic unit heaters which use hot water and cycle on and off.
- There shall be no air conditioning in this space.
- Provide one inline exhaust fan. Fan shall run based off a temperature sensor in the space and shall be off whenever the space is below 85F.

Snow Melt

- No snow melt is anticipated.

Humidifiers

- There are no spaces requiring humidity control. No electric humidifiers are anticipated.

Vestibules

- Vestibules shall be heated using ceiling mounted hydronic cabinet unit heaters which use hot water and cycle on and off.
- There shall be no air conditioning in this space.

Elevators

- Provide elevator venting at top of shaft per mechanical code.

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Piping Standards

All hot water heating piping is to be steel or hard copper, and shall be installed to meet the following:

- Copper tubing shall be Type L, with lead free solder fittings.
- Steel tubing shall be screwed or welded schedule 40, with 150# fittings.
- Insulation shall be as required by Vermont Commercial Energy Code.

Pro-Press and other mechanical fittings are permissible as a line item alternative. Any refrigerant piping shall be ACR hard copper with brazed fittings. Pre-insulated line sets for dedicated ductless split systems are acceptable.

Ductwork Standards

All low and medium pressure ductwork installed within the building shall be built to meet the latest SMACNA standards and ASHRAE recommendations, including the following:

- Duct shall be made of the best grade galvanized iron. Duct shall be installed and stored on site per SMACNA "Advanced Level" cleanliness guidelines.
- Exterior ductwork shall be double walled with 2" insulation.
- Volume dampers shall be provided at all runouts to individual air terminals.
- Combination smoke/fire dampers shall be provided at each shaft penetration by a duct.
- Fire dampers shall be provided wherever a 2-hour wall is penetrated by a duct, or a duct penetrates a floor not protected by a shaft.
- Smoke dampers will be required at smoke barrier penetrations by a duct.
- Ductwork shall be insulated to meet or exceed the requirements of Vermont Commercial Energy Code. All air conditioning supply ductwork shall be insulated with a minimum of R-6.2 fiberglass insulation. Exterior ductwork shall be insulated with minimum of 2" (R-11) insulation.

Division 25 – Integrated Automation

- Grace Cottage Hospital is currently served by a Johnson Controls (JCI) Energy Management System (EMS).
- The intent is to provide a stand-alone DDC system which uses a BACnet/IP protocol to connect the building front end to controllers in the building.
- System shall be viewable by remote internet access.
- In the future, connection to the existing Hospital front end may be desired. System shall be set up in a way that remote access and control is feasible from the existing Hospital front end.

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Division 26 – Electrical

❖ Normal Power, Emergency Power, Distribution and Lighting Systems

Main Electric Service(s):

Permanent electrical service for the 22,000 square foot, two level medical office building will be provided as a new utility metered service, fed from a single pad mounted transformer. Service voltage will be 120/208 volts, 3 phase, 4 wire. The actual service size required has not been fully determined, but is estimated to be 1200 amperes, at 120/208 volts, three phase, four wire.

Service location and details will be coordinated with Green Mountain Power and meet all Vermont Utilities Electric Service Requirements.

Emergency Source Power

Dedicated Emergency Generator System to support the practice and its HVAC systems. The exact generator size required has not been fully determined, but we would estimate one 120/208 volt, three phase, 250-350 KW diesel generator with two automatic transfer switches, one for emergency loads and one for optional standby loads. Generator to be supported on a concrete pad on grade at a location to be determined.

Main Distribution Equipment:

The electrical distribution system equipment for the medical office building will include 120/208 volt switchboards and panelboards to support the building load. The main electrical distribution equipment will be in dedicated rooms located on level 1. There are proposed normal and emergency electrical closets on level 2. Elevators and large HVAC equipment will be fed from the switchboard distribution on level 1. Provisions will be made within the main switchgear for interconnection of photovoltaic system.

Existing Building:

All conduit, wiring, and electrical devices in existing 6,000 square feet building to be demolished shall be disconnected and removed back to source. Refer to architectural narrative for additional details.

Lighting Systems and Controls:

- The Interior Lighting: Task/Ambient LED, volumetric 2x2 & 2x4 light fixtures for lay-in ceilings at exam, office, treatment and similar spaces. Dimmable Wall box low voltage lighting controls with ceiling mounted occupancy sensors, wired for vacancy control.
- Utility style LED strip lights with wire guard for mechanical, electrical and similar areas with unfinished ceilings.
- Interior and exterior downlights for soffits and canopies, where deemed appropriate.
- Provide switch and outlet at wall cabinets for future installation of corded under-cabinet lights.
- Time of day lighting controls for common areas and corridors, with scattered 24/7 nightlights for security.
- Local overrides for time-of-day relay controlled, common areas to accommodate after hours cleaning contractors.
- Lighting shall be an LED solution, with no fluorescent or incandescent.
- Local digital wall and/or occupancy sensor controls for all occupied rooms, time switches for mechanical and electrical.
- Night/security lighting for all spaces and perimeter building/site.
- Exterior Lighting: Pole mounted and building exterior wall mounted LED products. 1 foot-candle minimum for parking area and 10 to 15 foot-candle for under-canopy and service/delivery area lighting.
- Code required emergency egress lighting provided as line voltage products connected and controlled from the Emergency generator powered electrical branch. Egress path lighting will be provided as fixtures that may operate 24/7 as part of the normal illumination and night lights. Transfer Devices will be used where lighting is desired to be turned off after normal business hours.
- Local relay based digital lighting controls with un-switched night lighting. Controls shall include vacancy sensor and time of day (TOD) sequence of operations.
- Reference codes: NFPA 70, 101, IBC & Vermont Commercial Building Energy Standards.

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General Wiring:

- Convenience receptacles through-out the building, with no area less than 30 feet from a receptacle.
- Office space or similar occupancy provided with one duplex receptacle on each wall and GFCI receptacle at exam room counter space.
- 20 ampere dedicated receptacles and circuits for refrigerators, with quantity TBD.
- 20 ampere receptacles for Break Rooms to include counter top for microwaves, toasters and coffee pots.
- Provide GFCI outlets for single and ganged toilet locations adjacent to the sink.
- Provide tamper-proof receptacles in all waiting rooms and additionally in any Pediatric Exam Rooms.
- All receptacles within 6 feet of a sink shall be GFCI protected.
- Hospital Grade Receptacles for Patient Care Areas only, commercial spec grade for non-patient areas.
- Circuit ID on plate as P-Touch Labeling.
- Provide exterior weatherproof, GFCI receptacles for canopy area, service area and at Roof Top HVAC locations as required.
- Provide branch circuit power and wiring associated with motorized and automated entry and exit door operators.
- Provide equipment power connections for owner provided equipment, including but not limited to externally and internally illuminated signage.
- Provide power and receptacles for miscellaneous equipment, including but not limited to: Flat Screen TV's, Hand Dryers and Meds refrigerators.
- Provide electric room exhaust fan power, with reverse acting thermostat.
- Branch circuit wiring for HVAC and Plumbing equipment including but not limited to Roof Top Units, Unit Heaters, Cabinet Heaters, VAV's, Condensate Pumps, Refrigeration based ductless split air conditioning systems, and Heating and Domestic Hot Water Pumps.
- Building wiring will be provided as conductors in conduit for exposed wiring and homerun wiring from panel-board to first outlet box. Conduit shall be a minimum of 3/4".
- Concealed wiring for Exam, Treatment, and all patient care occupancies shall be installed in metal stud walls and above lay-in ceilings, as Hospital Grade, HCF-MC-AP Cable, with full sized green insulated, equipment grounding conductor with redundant armored ground path. Wiring shall be #12 minimum.
- Non-patient care areas including offices and corridors shall be installed as traditional wiring in as non-hospital grade MC cable, for concealed wiring in metal stud walls or above accessible lay-in ceilings. Any office space that can be easily converted to a future clinical space shall be wired in HCF-MC-AP cable.

- Wiring under-slab and to exterior light poles, shall be Schedule 40 PVC, 1" minimum. Schedule 80 PVC for under paved areas.
- IT Room assumptions are to provide with one 30 ampere, 125 volt twist/lock receptacle, two 20 ampere, 125 volt quad receptacles and one 20 ampere, 125 volt duplex receptacle, all wired to independent dedicated 125 volt circuits.
- Plumbing flushometers will be hardwired and powered via local receptacle circuits in the area.

Division 27 – Communications

❖ Structured Wiring & Nurse Call Systems

Structured Wiring:

- Owner will be providing a coordinated structured wiring and horizontal cable plant. Building shall be equipped with one MDF on Level one with an IDF closet for level 2. Provide 4" thru floor sleeves from floor to floor, terminating in the Level 1 MDF.
- Provide fully coordinated empty wall box, pathways and empty conduit system. System wiring, jacks plates and IT closet fit-out will be furnished and installed by the Owner.
- (2) 2" conduits from MDF on level one to existing data center.
- 4" conduit from pole to MDF for new ISP service
- 3" high cable baskets for corridors
- 20 ampere, 125 volt twist-lock receptacles for UPS power.
- Active equipment and UPS by owner.
- The actual design will be coordinated and specified in close coordination with the Grace Cottage IT Department.

Nurse Call System:

- Single occupancy toilets and select spaces will be equipped with locally powered and controlled Emergency Call for Assistance Systems with pull cord switches for toilets and mushroom wall pushbuttons for the other rooms. Notification shall be and Audio/Visual Device outside the rooms, ceiling mounted. System requires a low voltage transformer and system wiring, powered by the nearest 120 volt receptacle circuit.
- Actual design to be determined but will be as directed by the practice and occupancy.
- The actual design will be coordinated and specified in close coordination with the Grace Cottage IT Department.

YEATON
M.E.P. Inc.

Division 28 – Electronic Safety and Security

❖ Fire Alarm, Surveillance, Intrusion and Card Access Systems

Fire Alarm System:

- Provide addressable Fire Alarm System with future provisions for expansion. Fire Alarm System shall be by Mircom and shall be connected to the Grace Cottage Fire Alarm Network.
- Notification Appliances shall consist of ceiling and/or wall mounted speaker strobes and strobe only devices located to provide full coverage visual and intelligible audio signaling.
- Spot Smoke Sensors for corridors, stairwells, electric rooms, IT closets and similar occupancies. Duct smoke sensors for air handling units 2000 CFM and larger.
- Wiring will be installed as conductors and cabling in conduit, EMT minimum, with Fire Alarm MC cabling permitted for wiring concealed in walls and above accessible lay-in ceilings.

Card Access System:

- Owner shall provide wiring and equipment associated with a fully operational card access system. System shall be based on equipment and wiring presently being utilized at Grace Cottage
- System shall consist of Card Readers, electric strikes and request to exit devices. Electric strikes will be provided as part of the door hardware systems package.
- Provide empty wall box and empty conduit system to support Card Access System locations.
- Provide 120 volt power supply wiring to support required Card Access Panels at each of the IT closets.
- The actual design will be coordinated and specified in close coordination with the Grace Cottage IT Department.

Video Surveillance and Intrusion Systems:

- Owner shall provide wiring and equipment associated with a fully operational video surveillance system. System shall be based on equipment and wiring presently being utilized at Grace Cottage.
- Provide empty wall box and empty conduit system to support camera locations.
- Provide 120 volt power supply wiring to support required camera power.
- The actual design will be coordinated and specified in close coordination with the Grace Cottage IT Department.

Appendix F

Three Lakes Drive, Northfield, IL 60093 | 1.800.MEDLINE (633.5463) | medline.com

Customer: 0001084435
GRACE COTTAGE HOSPITAL
185 GRAFTON RD
TOWNSHEND, VT 05353-8820

Quoted on: 12/16/2022
Quote #: 3468NC

This pricing is valid until 01/15/2023 unless otherwise specified or based on contract tier eligibility and effective dates. Exact freight and tax will be added at the time of invoice.

Line No.	Product Image	Product #	Internal Description	Pkg / Order UoM	Price	Estimated Qty	Extended Price
1		UME3502	UMF MEDICAL FUSIONONE+_ADA MODEL 3502-POWER HI-LO EXAM TABLE WITH POWER BACKREST, AVAILABLE IN 16 COLORS, FEATURES: POWER HI LO AND POWER BACK REST, TWO FUNCTION FOOT CONTROL, 18-21" PAPER ROLL HOLDER, 500LB WEIGHT CAPACITY, LOW ACCESS ADA HEIGHT: 17"-19", LARGE, REVERSIBLE SIDE DRAWER AND LARGE FRONT DRAWER, DRAIN PAIN, REMOVABLE, SEAMLESS UPHOLESTERED TOP WITH PREFIXX PROTECTIVE FINISH, DURABLE STEEL CONSTRUCTION, HEAVY GAUGE STEEL CONSTRUCTION, PULL OUT LEG REST, FOLDAWAR STIRRUPS WITH FOUR LATERAL POSITIONS AND ADJUSTABLE LENGTH, EASY CLEAN POWDER COAT ENAMEL SURFACES, 3 YEAR WARRANTY. PLEASE SPECIFY COLOR OPTION IN ORDER TEXT.	1 EA / EA	$5,390.00	19	$102,410.00
2		MDR77820	PEDIATRIC TREATMENT TABLE WITH SCALE AND TWO DOORS. TABLE FEATURES: COMFORTABLE WORK HEIGHT OF 36 . TOP IS RIMMED ON THREE SIDES FOR SAFETY. TOP'S FRONT AND BACK RIM EDGES ARE BEVELED AND THE CORNERS ROUNDED FOR SAFETY. EASY-CLEAN, REPLACEABLE CENTER PAD. BUILT-IN INFANTOMETER WITH FOLDING ENDS FOR MEASURING HEIGHT. EASY ACCESS TO WEIGHT, MEASUREMENT AND STORAGE. BUILT-IN CONCEALED PAPER DISPENSER AND CUTTER. RECESSED FRONT TOE KICK. EASY-CLEAN ALL LAMINATE BASE. SCALE FEATURES: DEPENDABLE, ACCURATE DORAN SCALE. EASY-READ DIGITAL DISPLAY. AUTO CALIBRATION ON START-UP. AUTO SHUT-OFF. ELECTRIC OR BATTERY OPERATION (6 AA BATTERIES REQUIRED). WEIGHTS IN INCREMENTS OF LBS., OZS. OR KILOS. MINIMUM REGISTERED WEIGHT IS 5 LBS. MAXIMUM WEIGHT FOR SCALE IS 40 LBS. SPECIFY COLOR CHOICE IN ORDER TEXT.	1 EA / EA	$2,934.58	2	$5,869.16
3		SAABDH7242LMA	HEIGHT ADJUSTABLE DESK:ABERDEEN SERIES. ADJUSTS FROM 29-1/2" TO 49-1/4". 1-5/8" THICK WORK SURFACE. WORK SURFACE IS 72"W. MAPLE	1 EA / EA	$1,978.38	32	$63,308.16
4		BOSB9501CS	OUR STACKABLE CHAIR MAKES A PERFECT ADDITION TO ANY OFFICE, CONFERENCE ROOM, LOBBY, OR STUDY. ITS CONTEMPORARY STYLE, POWDER COATED STEEL FRAME, AND MOLDED ARM CAPS PROMOTE COMFORTABLE AND ERGONOMIC SEATING, WHILE ITS 18 POUND WEIGHT FACILITATES EASY STACKING FOR SPACE-SAVING STORAGE WHEN NECESSARY. UP TO FOUR CHAIRS CAN BE STACKED AT ONCE. THIS MODEL FEATURES BLACK CARESSOFT FABRIC THAT IS EXTREMELY EASY TO CLEAN, AS WELL AS A WATERFALL SEAT THAT HELPS MINIMIZES LEG STRESS.	1 EA / EA	$74.34	23	$1,709.82

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Line No.	Product Image	Product #	Internal Description	Pkg / Order UoM	Price	Estimated Qty	Extended Price
5		EVSTCTHIN23GY	TRASH CAN,RECTANGULAR,23GAL,GRAY	1 EA / EA	$43.50	21	$913.50
6		EVSTLTHIN23GY	LID,TRASH CAN,23GAL,GRAY,F/EVSTCTHIN23GY	1 EA / EA	$28.90	21	$606.90
7		MDR721110	SUPER BRIGHT SPOT FLOORSTAND EXAM LIGHT. PRE-FOCUSED SPOT 120V MODEL. 56,000 LUX AT 18". 3400 K COLOR TEMPERATURE. 20-WATT HALOGEN BULB WITH 2000-HOUR AVERAGE BULB LIFE. 4-5" SPOT SIZE. AVAILABLE IN USA.	1 EA / EA	$975.86	21	$20,493.06
8		W-A777PM2WXX	GS777 INTWALLSYS PO MV DISPENSER	1 EA / EA	$959.78	21	$20,155.38
9		SCA7771821004	EYE-LEVEL DISPLAY, MEDICAL-GRADE, ROBUST SCALE DESIGNED FOR YEARS OF USE WITH HIGH PATIENT VOLUME. BUILT-IN MEASURING ROD WITH 4-90" MEASURING RANGE. USB INTERFACE FOR EMR INTEGRATION SOLUTIONS OR PC CONNECTIVITY. LARGE RUBBER COATED CASTORS FOR EXCELLENT MOVABILITY. ROBUST TILT PROOF FULL METAL PLATFORM, NO PLASTIC. GRADUATION IS 0.2LBS OR 100G. CAPACITY OF 550LBS. PRODUCT HEIGHT IS 53.4 INCHES. SCALE HAS PRE-DRILLED HOLES TO ALLOW THE OPTIONAL HANDRAIL TO BE ADDED. OPTIONAL HANDRAIL ACCESSORY: SCA4770000009.	1 EA / EA	$311.73	1	$311.73

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Quote #: 3468NC

This pricing is valid until 01/15/2023 unless otherwise specified or based on contract tier eligibility and effective dates. Exact freight and tax will be added at the time of invoice.

Line No.	Product Image	Product #	Internal Description	Pkg / Order UoM	Price	Estimated Qty	Extended Price
10		MPH07SW3	WHEELCHAIR SCALE, DIGITAL, PLATFORM DIMS: 31.5"W X 2.2"H X 38"D, 2 RAMPS, CAPACITY: 800LBS, AUTO CLEAR, RAILING PROVIDES A STABLE STANDING AID, FOLDABLE & MOBILE, PRE-TARE FUNCTION W/ 3 MEMORY CELLS, EMR READY	1 EA / EA	$2,382.10	1	$2,382.10
11		MDRAT333369KG	TALL ALUMINUM UNICART WITH 6 DRAWERS AND KEY LOCK. DRAWER CONFIGURATION 4-3", 1-6", 1-9". LIGHT GRAY SHELL AND LIGHT GRAY DRAWER FRONTS. 5" CASTERS. CART COMES STANDARD WITH 1 PULL OUT SHELF. DRILL HOLES FOR EASY ACCESSORY ASSEMBLY. SPECIFY DELIVERY INSTRUCTIONS UPON ORDER PLACEMENT. LEAD TIME 4-6 WEEKS. OVERALL DIMENSIONS 29"W X 24.5"D X 42"H.	1 EA / EA	$1,663.81	1	$1,663.81
12		HSBPHABTS33G	33 CU. FT. STANDARD PHARMACY STANDARD GLASS DOOR REFRIGERATOR; DOUBLE SLIDE GLASS DOOR	1 EA / EA	$4,792.60	1	$4,792.60

Estimated Subtotal: $224,616.22
Estimated Freight: TBD
Estimated Grand Total: $224,616.22

In some cases, images may be stock and not representative of final product.

Appendix G

GRACE COTTAGE FAMILY HEALTH & HOSPITAL	POLICY #25.0001
SUBJECT/TITLE: INFECTION CONTROL PROGRAM	PAGE: 1 OF: 6
	EFFECTIVE: 6/2014
DEPARTMENT: INFECTION PREVENTION & CONTROL	

POLICY:

The Infection Control Program is a quality improvement and patient safety program that focuses on improving the care and safety of the patients and protecting the health of hospital personnel (all employees including contractual employees, volunteers) and medical staff. With the prevention and control of infections, the risk of harm to patients, staff and visitors is reduced, therefore reducing the risk of cost and liability to the hospital, improving patient satisfaction and conserving resources. Grace Cottage Family Health & Hospital provides the resources and staff to assure an active, hospital-wide program which includes all departments, units and locations connected to the hospital.

The program consists of specific measures for prevention, early detection and control of infections, hospital personnel education, investigation of infections and communicable diseases in the hospital. Evidence based, nationally recognized infection control guidelines are considered and implemented when appropriate.

BACKGROUND / RISK ASSESSMENT:

Grace Cottage Family Health & Hospital is a small community hospital situated in the West River Valley. Foreign travel is not uncommon among the local population. GCFHH and its employees are likely to have more exposures to communicable disease due to location, the traffic passing through the area, local institutions and the clients they serve.

Grace Cottage Family Health & Hospital is licensed for 19 beds. Inpatient departments include: acute and Swing/Level I patients. Outpatient care areas include an Emergency Department, Radiology, Laboratory, Rehabilitation Services. It also includes the Physician Clinic and Pharmacy Services.

The Laboratory is CLIA approved. The majority of testing performed onsite (including microbiology). Reference laboratories are available for testing not performed at GCFHH with a courier service which ensures specimen integrity and expedites testing. The Vermont Department of Health (VDH) is also utilized as a reference laboratory and as a resource for the hospital and the medical staff. The VDH keeps Infection Control Practitioners and primary care providers updated on emerging threats through the Health Alert Network. The Emergency Planning Coordinator is a member of the Local Emergency Planning Committee and the Bioterrorism Hospital Preparedness Program administered by the Vermont Department of Health. The hospital participates in community and state-wide drills.

The patient /visitor population and types of infectious diseases that present to GCFHH are continually monitored to assess whether the infection control program in place can adequately

GRACE COTTAGE FAMILY HEALTH & HOSPITAL	POLICY #25.0001
SUBJECT/TITLE: INFECTION CONTROL PROGRAM	PAGE: 2 OF: 6
	EFFECTIVE: 6/2014
DEPARTMENT: INFECTION PREVENTION & CONTROL	

protect, and prevent the spread of infections among patients and hospital personnel. The sharing of information through the Health Alert Network, the state network of Infection control practitioners and VDH and regional meetings allows for increased awareness of types of infections and problems that other hospitals are experiencing.

GOALS:

- To protect the patient, healthcare worker, visitors and others in the healthcare environment from infection.
- To provide infection control education through orientation, annual retraining, formal and informal sessions.
- To monitor for and limit the emergence of multi-drug resistant organisms (MDRO's).
- To reduce the risk of acquisition of healthcare-associated infections by prevention techniques (hand hygiene compliance, precaution measures, and evidence-based strategies).
- To help develop emergency management plans for bioterrorism and to respond to infections that may potentially overwhelm resources.

DEFINITIONS:

Infection control practitioner/professional (ICP): a professional who has been trained in microbiology, surveillance techniques (infection detection, data collection and analysis, monitoring and evaluation), infection risk assessment, prevention, and control strategies and epidemiological principles and activities directed at improving patient outcomes. The Quality Manager at GCFHH is the ICP.

Multi-drug Resistant Organisms: organisms that have developed resistance to antibiotics commonly used to treat patients infected with that organism. Examples: Methicillin Resistant S. aureus, Vancomycin Resistant Enterococci.

HEALTH CARE ASSOCIATED INFECTIONS (HAI): a localized or systemic condition resulting from an adverse reaction to the presence of an infectious agent(s) or its toxin that a. occurs in a patient in a healthcare setting, b. was not found to be present or incubating at the time of admission (unless the infection was related to a previous admission to the same setting).

GRACE COTTAGE FAMILY HEALTH & HOSPITAL	POLICY #25.0001
SUBJECT/TITLE: INFECTION CONTROL PROGRAM	PAGE: 3 OF: 6
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ORGANIZATION:

A. The Infection Control Committee is a multidisciplinary hospital and medical staff team whose purpose is to maintain an effective infection control and prevention program.

1. The ICP reports to the Vice President of Quality/Patient Safety and the Quality Improvement Committee. Senior Leadership is directly involved in supporting the aims and scope of the program and allocating necessary resources needed. The Board of Directors is informed via the Quality Improvement Committee.
2. The ICP collaborates with the team members as needed to develop and implement infection control strategies.
3. Members may include, but are not limited to, the directors from pharmacy, laboratory, employee health, nursing and housekeeping. When issues occur regarding central supply, nutrition services, plant services, or other departments someone with appropriate expertise will be consulted before the strategy is developed.
4. The Committee meets as necessary.
5. Functions of the Committee include:
   a. Determining surveillance priorities and methodologies, procedures for insuring accuracy of data, assignment of responsibility, method for reporting and follow-up based on the evaluation of effectiveness of the surveillance program, the quality of the data collected and information needs.

   b. Reviewing surveillance data. Identifying practices that may contribute to the risk of HAI and recommending corrective action to improve patient care and safety.

   c. Evaluating the effectiveness of the Infection Control Program at least annually by reviewing rates, susceptibility trends, results of studies and other quality assurance activities. Redesigns the infection control interventions as necessary and when the risks have significantly changed.

   d. The Infection Control Committee reports any findings to the Quality Improvement Committee.

   e. Assists with the development and implementation of policies and procedures and monitors for compliance. Maintains the Infection Control/Safety Manual.

   f. Updates staff, the Leadership Team, Medical Staff, Senior Leadership and the Board of issues or special problems.

   g. Maintains records and incidents related to infections.

   h. Monitors compliance with regulatory requirements.

   i. Actively participates in statewide and national initiatives, and facilitates the

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implementation and spread within the hospital.

SURVEILLANCE/ QUALITY ASSESSMENT AND PREFORMANCE IMPROVEMENT:

A. The Infection Control Committee collects data from all departments to identify infectious risks or communicable disease problems. This allows for a mechanism to identify and monitor HAI, communicable diseases that are reportable and MDRO's in-house. Analysis of the data allows for the team to develop and implement adequate interventions to address identified issues, and monitor the effectiveness of the interventions.
B. National Health Safety Network (NHSN/CDC) definitions are used to identify HAI. Information required in determining rates is available from multiple sources (Information systems) and manual collection. Rates are used whenever possible over absolute numbers so that comparisons and benchmarking can be included in the analysis.
C. Care Plan Meeting allows for the sharing of patient information and monitoring of patients status, treatment plan and communication with the healthcare team concerning infections and prevention.
D. Surveillance data is used for determining policies and procedures, and in identifying education needs.

CONTROL AND PREVENTION

A. A dedicated provider oversees the Employee Health program in collaboration with the Infection Control Committee and the Director of Human Resources.
B. Standard and Transmission Precautions as defined by the Centers for Disease Control and Prevention are followed to reduce the transmission of infection.
C. Infection Control and Safety Policies define environmental infection control measures.
D. There is infection control education and training programs to prevent and control of HAI
    1. New employees, medical staff and volunteers are oriented to their roles in the infection control program, and are given information about hand hygiene, blood borne pathogens, isolation precautions, the TB program and respiratory protection. Clinical staff is also oriented to needle stick prevention practices.
    2. Departmental education is provided as needed for job-specific skills.
    3. Infection control and exposure to blood borne pathogens is included in the Mandatory Annual Education Program.
    4. Continuing education is provided about topics needed or of interest.
E. The Infection Control Team assists with the evaluation and implementation of new products and equipment.
F. Environment of Care rounds are conducted with Safety Committee members on a routine schedule so all areas of the hospital are inspected regularly. Areas inspected include both clinical inpatient and outpatient areas and non-clinical departments.
G. The Infection Control Team works with Maintenance to do risk assessments on

GRACE COTTAGE FAMILY HEALTH & HOSPITAL	POLICY #25.0001
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construction and renovation projects at GCFHH to help determine if infection control procedures are necessary.

REPORTING AND COMMUNICATION

A. There is a system in place to report infections, exposures and communicable disease to the appropriate regulatory agencies to facilitate early intervention and prevent outbreaks.
    1. The Infection Control Team and the Laboratory comply with the Vermont Department of Health Reportable Disease Regulations.
    2. Occupationally acquired infections and exposures are reported to the Vermont Occupational Safety and Health Administration as required.
    3. Grace Cottage Family Health & Hospital complies with governmental requirements to report infections and cooperates with quality assurance initiatives.
B. There is an internal system of reporting that allows communication at all levels of the organization.
    1. Infection Control Reports contain the rates of HAI that are being monitored, reportables and MDRO incidence, interventions and Infection Control Activities. The rates are included in the hospital wide Quality Improvement reports that are presented at Quality Improvement Committee.
    2. Referring hospitals are notified of healthcare acquired infections that were incubating or may have occurred at their facility.
    3. Reports are made to the medical staff either directly, through committee meetings or at the Medical Staff Meeting.
C. Sentinel events, resulting from HAI are reported to the Infection Control Team for review and root cause analysis are performed to identify opportunities for improvement and then reported to the Quality Improvement Committee.

INTERVENTION

A. The Infection Control Team investigates clusters of infection above the expected level and unusual single cases
B. Strategies are developed to reduce the risk of transmission to patients, staff and other customers.
C. Exposure to blood borne pathogens are reported to and analyzed by the Infection Control Committee and the Safety Committee.

BIOTERRORISM:

A. The Infection Control committee coordinates with the Vermont Department of Health and the Emergency Planning Coordinator in planning for bioterrorist activity and in responding

GRACE COTTAGE FAMILY HEALTH & HOSPITAL	POLICY #25.0001
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to an increase in admissions due to an infectious agent (e.g. Pandemic Flu).

B. There has been education to help medical staff and hospital personnel identify an attack.

C. Emergency Preparedness Plans are based on the Vermont Department of Health's guidelines for Emergency Response Plans.

RESPONSIBILITY:

Healthcare workers (medical staff, employees, volunteers) – adhere to the infection control policies, and support compliance by speaking up, reminding and reinforcing proper procedures to others. Engage patients to take an active role in infection prevention and their care. Report HAI to the ICP and Clinical Nurse Manager.

Infection Control Team - Reviews cases referred to them by the ICP, Clinical Nurse Manager and/or physicians involving HAI.

Safety Committee - monitors performance standards and policies related to the environment of care.

REFERENCES:

Association for Professionals in Infection Control and Epidemiology, 2nd Edition, January 2005

Conditions of Participation: Infection Control, Revisions 01/05/2006

Appendix H

Efficiency Vermont

www.efficiencyvermont.com
888-921-5990 | 802-860-4095

Douglas DiVello, CEO
Grace Cottage Family Health & Hospital
185 Grafton Road
Townshend, VT 05353

Dear Douglas DiVello,

Please let this letter confirm that your project has been enrolled with Efficiency Vermont and that I am the Senior Engineering Consultant that will work with you and your design team.

Thank you for the opportunity to meet with the project team on January 19, 2023. During that meeting we discussed efficiency opportunities to improve beyond the 2020 CBES requirements with respect to the building's envelope, lighting and electrical systems design, ventilation, and mechanical systems.

Efficiency Vermont will be working with you and your design team to provide drawing review, savings calculations, cost benefit analyses, and identification of cost-effective, proven, and efficient technologies in the marketplace. Our goal is to work with your design team to ensure the building will meet your energy goals. Where there are greater-efficiency investment opportunities, we aim to help identify the opportunities and provide cost-benefit information to aid in your decision making.

Thank you for including Efficiency Vermont in your project. I look forward to working closely with you and your design team as the project moves forward. Please keep me informed as the certificate of need process progresses and do let me know if you have any questions.

Respectfully,

Matthew R. Deslauriers
Senior Engineering Consultant

Appendix I

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
2.2-1.1 Application		
2.2-1.1.1 The spaces needed and design requirements for each general or specialty medical services facility shall be determined by the services provided in the facility and the acuity level of the patients served.		Services to be provided are, Primary care, Out-Patient Psychiatric Counseling, Community Health Counseling, and Point of Care specimen collection and processing.
General and specialty medical services facility types. Facilities where general and specialty medical services are provided come in a wide variety of types and sizes, some extremely simple and small and others fairly complex and large. The care provider can be a single tenant in a multi-tenant building or a sole tenant, occupying the entire building. A new project for this type of facility might be simple tenant improvement work or could be the design and construction of a new building. The medical services offered might be confined to patient care or diagnosis or include both.		
Typical facility types in this category may include, but are not limited to, the following:		
a. Micro-clinics	N/A	
b. Neighborhood/storefront clinics	N/A	
c. Retail clinics	N/A	
d. Sole practitioner clinics	N/A	
e. Primary care centers	Yes	
f. Community-based clinics	Yes	
g. Physician practices	N/A	
h. Multi-specialty medical clinics/office buildings	N/A	
i. Single-specialty medical clinics/office buildings	N/A	
2.2-1.1.2 General or specialty medical services facilities shall meet the standards described in this chapter and the standards in Part 1 of these Guidelines.	Yes	
2.2-1.1.3 Requirements in Chapter 2.1, Common Elements for Outpatient Facilities, shall apply to general or specialty medical services facilities when cross-referenced in this chapter.	Yes	
2.2-2 Accommodations for Care of individuals of size		Needs to be addressed
Where accommodations for care of individuals of size are provided, see Section 2.1-2 (Accommodations for Care of individuals of size) for requirements.		
2.1-2 Accommodations for Care of individuals of size		
Patient lift system. Accommodations for patient handling, movement, and mobilization can be provided by either an overhead lift system or a floor-based full-body sling lift and standing assist lifts. Lifts chosen should be capable of accommodating the threshold weight capacity of individuals of size identified in the planning phase. See sections 1.2-4.3 (Patient Handling and Movement Assessment) and 1.2-6.4.1.1 (Projected weight capacities for individuals of size in population to be served).		
2.1-2.1.2 Location		
Spaces designated for care of or use by individuals of size shall be provided in locations to accommodate the population expected to be served by the facility.		
2.1-2.2 – 2.1-2.4 Reserved		
2.1-2.5 Hand-Washing Station		
2.1-2.5.1 Hand-washing stations in toilet rooms designated for use by individuals of size shall meet the requirements in Section 2.1-3.8.7 (Hand-Washing Station) as amended in this section.		
2.1-2.5.2 The downward static force required for hand-washing stations designated for individuals of size shall be identified during the planning phase and accommodate the maximum patient weight of the patient population.		
2.1-2.6 Patient Toilet Room		
Toilet rooms designated for use by individuals of size shall meet the requirements in this section.		
2.1-2.6.1 Where an expanded-capacity toilet is used, it shall be mounted a minimum of 36 inches (91.44 centimeters) from the finished wall to the centerline of the toilet on both sides where a ceiling-based or floor-based lift is provided (for caregiver assistance).		
2.1-2.6.2 Where a regular toilet is used, the toilet shall be mounted a minimum of 44 inches (111.76 centimeters) from the centerline of the toilet on both sides to finished walls to allow for positioning of an expanded-capacity commode over the toilet when the weight capacity of the existing toilet will not accommodate the necessary patient		
2.1-2.6.3 A rectangular clear floor area that is 46 inches (116.84 centimeters) wide shall extend 72 inches (182.88 centimeters) from the front of the toilet.		
2.1-2.6.4 Grab Bars		
See Section 2.1-7.2.2.9 (Grab bars) for grab bar requirements.		
2.1-7.2.2.9 Grab bars		
a. Grab bars should have a finish that contrasts with the adjacent wall surface and provides slip resistance.	Yes	
b. Grab bars in patient toilet rooms should allow patients to be as safe and independent as possible. This includes using drop-down grab bars when needed, with or without integral toilet paper holder.	Yes	
c. Grab bars in patient toilet rooms should allow staff to complete a double transfer. To make this possible, the relationship between the toilet, wall, and grab bars should be evaluated. Clearance on both sides of the toilet is needed for a double transfer. Wall-mounted bars that fold up are the preferred solution because they leave space to facilitate cleaning and patient transfer. Floor-mounted grab bars can be used but are not preferred because of increased difficulty in cleaning and patient transfer. Seat-mounted grab bars are not recommended.	No	
(1) Grab bars shall be anchored to sustain a concentrated load of 250 pounds (113.40 kilograms).	Yes	
(2) Grab bars in toilet rooms intended for use by persons of size shall be anchored to sustain a concentrated load of 800 pounds (362.87 kilograms).	?	
(3) Ends of grab bars shall be constructed to prevent snagging the clothes of patients, staff, and visitors.	Yes	
2.1-2.7 Single-Patient Examination/Observation Room		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
An exam room designated for care of individuals of size shall meet requirements in Section 2.1-3.2.1 (Examination Rooms) as amended in this section. (see below)		
2.1-2.7.1 Space Requirements		
2.1-2.7.1.1 Clearances. Rooms shall be sized to permit the clearances in this section:		
(1) At the foot of the expanded-capacity exam table: 5 feet (1.52 meters)	No	
(2) On the non-transfer side of the expanded-capacity exam table: 3 feet (91.44 centimeters)	Yes	
(3) On the transfer side of the expanded-capacity exam table:	Yes	
Floor space for using patient lifts. The transfer side clearance for an exam room with a ceiling- or wall-mounted lift is specified to accommodate a patient who is upright for transfer. In rooms where mobile lifts will be used, more floor space is required to accommodate the lift footprint and the staff needed to help a patient of size transfer from a wheelchair to an exam table.		
(a) Where a ceiling- or wall-mounted lift is provided: 5 feet (1.52 meters) from the edge of the table	N/A	
(b) In rooms without a ceiling- or wall-mounted lift: 7 feet (2.13 meters) from the edge of the table	No	
2.1-2.7.1.2 When not in use for a patient of size, this examination room shall be permitted to be subdivided with cubicle curtains or movable partitions to accommodate two patients if each resulting bay or cubicle:	N/A	
2.2-3 Patient Care and Diagnostic Areas		
2.2-3.1 General		
Where the patient care and diagnostic areas and their support areas in Section 2.1-3 (Patient Care and Diagnostic Areas) are provided in a general or specialty medical services facility, they shall meet the requirements in Section 2.1-3 as amended in this section.		
2.1-3 Patient Care and Diagnostic Areas		
2.1-3.1.2 Patient Privacy		
Each facility design shall ensure appropriate levels of patient speech and visual privacy and dignity throughout the care process.	Yes	
a. Visual privacy can be achieved using various means, including cubicle curtains, blinds, and electronically controlled vision panels. In single-patient rooms, the entry room door can be used to achieve visual privacy provided the door is solid or has non-transparent glass. Where doors with vision panels or transparent glass are used, provisions for visual privacy should be made. Consideration should be given to designing the room so the foot of the table does not face the door, using door orientation, privacy hinges, or a cubicle curtain to provide visual privacy.		
b. Speech privacy can be enhanced through use of full-height partitions and/or sound-masking. As well, speech privacy for patients in bays and cubicles can be achieved by using an exam or consultation room for patient communication.	Yes	
2.2-3.2 Clinical Service Rooms		
2.2-3.2.1 Examination Room		
2.2-3.2. At least one examination room shall be provided.		
2.2-3.2. Examination rooms shall be permitted to serve as both examination and treatment spaces; see Section 2.1-3.2.1 (Examination Rooms).		
2.1-3.2.1 Examination Rooms		
2.1-3.2.1.2 Single-patient examination/observation room		
(1) General		
(a) Where an examination room is used as an observation room, it shall be immediately accessible to the nurse or control station and a toilet room.	N/A	
(b) A room arrangement in which an examination table, recliner, or chair is placed at an angle, closer to one wall than another, or against a wall to accommodate the type of patient being served shall be permitted.		
(2) Space requirements		
(a) Single-patient exam/observation room		
(i) Area. Each single-patient examination/observation room shall have a minimum clear floor area of 80 square feet (7.43 square meters) as long as the clearances below can be met with the exam table or recliner that will be used.	Yes	
(ii) Clearances. Room size shall accommodate a minimum clearance of 2 feet 8 inches (81.28 centimeters) at each side and at the foot of the examination table or recliner.	Yes	
(3) Room features. The exam room shall contain the following:		
(a) Portable or fixed examination light as indicated in Section 2.1-8.3.4.3 (1) (Lighting for specific locations in outpatient facilities—Exam/treatment/trauma rooms)	Yes	To be documented during Design Development Phase
(b) Storage for supplies	Yes	
(c) Accommodations for written and/or electronic documentation	Yes	
(d) Space for a visitor's chair	Yes	
(e) Hand-washing station that complies with Section 2.1-3.8.7.2 (Hand-Washing Station—Design requirements)	Yes	
2.2-3.3 – 2.2-3.4 Reserved		
2.2-3.5 Imaging Facilities	N/A	
2.2-3.6 – 2.2-3.7 Reserved		
2.2-3.8 Support Areas for General and Specialty Medical Services Facilities		
2.2-3.8.1 – 2.2-3.8.10 Reserved		
2.2-3.8.11 Clean Workroom or Work Area or Clean Supply Room or Area		Providing a Clean Supply Room
A clean workroom or a clean supply room shall be provided. Provision of a clean work area or a clean supply area shall be permitted to meet this requirement.		
Clean supply area. In a small facility, a closet would be acceptable for this purpose.		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
2.2-3.8.11.1 Where this space is provided for preparing patient care items, the clean workroom or clean work area shall meet the requirements in Section 2.1-3.8.11.2 (Clean workroom).	N/A	
2.2-3.8.11.2 Where this space is provided only for storage and holding as part of a system for distribution of clean supplies, the clean supply room or clean supply area shall meet the requirements in Section 2.1-3.8.11.3 (Clean supply room).		
2.1-3.8.11.3 Clean supply room. A room used only for storage and holding as part of a system for distribution of clean and sterile materials does not require a work counter or a hand-washing station.		
2.2-3.8.11.3 A clean workroom shall be permitted to be shared with other clinical services in the same building.		
2.2-3.8.12 Soiled Holding Room		
A soiled holding room that meets the requirements in Section 2.1-3.8.12.3 (Soiled holding room) shall be provided.	Yes	
2.1-3.8.12.3 Soiled holding room. Where a soiled holding room is provided, it shall contain the following:		
(1) Hand-washing station or hand sanitation dispenser	Yes	
(2) Space for separate covered containers for waste and soiled linen	Yes	
2.2-3.8.13 Equipment and Supply Storage		
Storage for equipment and supplies shall be provided.	Yes	Multipule Equipment alcoves are provided
Operational needs and work flows should be considered in sizing and locating storage rooms or areas.		
2.2-3.9 Reserved		
2.2-3.10 Support Areas for Patients		
2.2-3.10.1 Reserved		
2.2-3.10.2 Patient Toilet Room	Yes	
2.2-3.10.2.1 A patient toilet room(s) that meets the requirements in Section 2.1-3.10.2 (Patient Toilet Room) shall be readily accessible from examination rooms.		
2.1-3.10.2 Patient Toilet Room(s)		
2.1-3.10.2.1 Patient toilet room(s) shall be provided separate from public use toilet room(s) and located to permit access from patient care areas without passing through publicly accessible areas.	Yes	
2.1-3.10.2.2 Patient toilet rooms shall be equipped with a toilet(s) and a hand-washing station(s).	Yes	
2.2-3.10.2.2 This patient toilet room shall be permitted to serve waiting areas.		
2.2-4 Patient Support Facilities		
2.2-4.1 Laboratory Services	Yes	Lab services are limited to Point of Care specimen cathering and processing.
2.2-4.1.1 General		
Facilities to support laboratory procedures performed on-site shall be provided as described in Section 2.1-4.1 (Laboratory Services) and amended in this section.		
2.1-4.1 Laboratory Services		
2.1-4.1.1 General		
2.1-4.1.1.1 Facilities for laboratory services provided on-site shall be located in or immediately accessible to the outpatient facility and shall meet the requirements in this section.		
Certain tests may be performed on-site or provided through a contractual arrangement with a laboratory service. When testing is performed on-site, space and facilities will be needed to accommodate these services. Testing may include hematology, clinical chemistry, urinalysis, coagulation, genetic testing, molecular diagnostics, toxicology, microbiology, anatomic pathology (including cytology and histology), and blood banking as well as tests for blood glucose, arterial blood gases, and electrolytes.		**Need to ID what is being done in the POC**
2.1-4.1.1.2 All laboratory equipment requiring permanent connections to power, water, ventilation, or other utility systems shall be identified in the equipment plan included in the contract documents.		
2.1-4.1.2 Laboratory Work Area(s)	Yes	To be documented during Design Development Phase
2.1-4.1.2.1 Where lab tests are performed on-site, a separate, dedicated room shall be provided. However, tests that are waived by the Food and Drug Administration (FDA) under the Clinical Laboratory Improvement Amendments (CLIA) shall be permitted to be performed in areas open to other spaces.	Yes	
Lists of currently waived CLIA tests can be accessed from the Centers for Medicare & Medicaid (CMS) website: https://www.cms.gov/Regulations-and-Guidance/Legislation/CLIA/Categorization_of_Tests.html.		
2.1-4.1.2.2 Laboratory workstation(s)		
(1) Workstations shall be sized to accommodate the equipment used and, at minimum, shall include the following:	Yes	
(a) Work counter	Yes	
(b) Sink(s)	Yes	
(2) Access to the following shall be provided as required:		
(a) Vacuum and gases	TBD	To be documented during Design Development Phase
(b) Tele/data service	TBD	To be documented during Design Development Phase
(c) Computer/printer	TBD	To be documented during Design Development Phase

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
2.1-4.1.2.3 Hand-washing station(s)		
(1) At least one hand-washing station shall be provided.	Yes	2 are provided
(2) Additional hand-washing stations shall be provided based on the safety risk assessment.		
2.1-4.1.2.4 Special design elements. All work counter(s) in areas used for specimen handling, preparation of specimens or reagents, and laboratory testing shall be constructed of non-porous materials.	Yes	To be documented during Design Development Phase
2.1-4.1.2.5 Safety and security provisions		
a. Additional security information can be found in Section 02.09 Biological, Chemical and Radiation Areas, in the Security Design Guidelines for Healthcare Facilities, published by the International Association for Healthcare Security & Safety (IAHSS).		
b. **Eyewash and emergency showers.** The number and location of eyewash and emergency showers needed is based on requirements from different occupational safety organizations at local, state, and federal levels. The application of these requirements depends on the types and volumes of chemicals used in a lab. Health care organizations should consult with the local authority having jurisdiction to determine these requirements.	Yes	To be documented during Design Development Phase
(1) Terminal sterilization provisions. Facilities and equipment (autoclave or electric oven) shall be provided for terminal sterilization of bio-hazardous waste before transport.	N/A	
(2) Radioactive material-handling provisions. If radioactive materials are employed, facilities for long-term storage and disposal of these materials shall be provided in accordance with the requirements of authorities having jurisdiction.	N/A	
2.2-4.1.2 – 2.2-4.1.7 Reserved		
2.2-4.1.8 Support Areas for Laboratory Services		
At minimum, laboratory facilities provided on-site shall include space for the following:		
2.2-4.1.8.1 Specimen collection	Yes	To be documented during Design Development Phase
2.2-4.1.8.2 Specimen storage	Yes	To be documented during Design Development Phase
Storage for extended periods may require a specimen storage refrigerator for holding samples in advance of courier or testing service collection.		
Blood storage facilities shall meet the requirements of the Clinical Laboratory Improvements Act (CLIA) standards for blood banks.		
2.2-4.2 Pharmacy Services		Pharmacy is limited to Medication Stations
Where a pharmacy is included in the project, see Section 2.1-4.2 (Pharmacy Services); otherwise, see Section 2.1-3.8.8 (Medication Safety Zones) for requirements.		
2.1-3.8.8 Medication Safety Zones		
2.1-3.8.8.1 General		
(1) Application. Where medication is prepared or dispensed, medication safety zones shall be provided as defined in this section for preparing, dispensing, storing, and administering medications.		
(a) The number and location of medication safety zones shall be as determined in the medication safety risk assessment. See Section 1.2-4.5 (Medication Safety Assessment).		
(b) A medication preparation room or area, self-contained medication dispensing unit, automated medication-dispensing station, or other system approved by the authority having jurisdiction (AHJ) shall be permitted to serve as a medication safety zone.		
(2) Design requirements. Medication safety zones shall meet the following physical environment requirements that promote safe medication use:		
Medication safety zone design requirements. The physical environment requirements listed in Section 2.1-3.8.8.1 (2) are found in General Chapter <1066> “Physical Environments that Promote Safe Medication Use” of the U.S. Pharmacopeia-National Formulary (USP-NF).		
(a) Medication safety zones shall be located out of circulation paths.	Yes	
Locating medication safety zones out of circulation paths minimizes the potential for distractions and interruptions that interfere with staff concentration and attentiveness to medication therapy activities.		
(b) Work space for medication safety zones shall be designed so that staff can access information and perform required tasks. See Section 1.2-4.5 (Medication Safety Assessment).	Yes	
Work space organization		
a. Work space elements should be described in the functional program to assure medication safety zones can support effective use of medication-related information and accurate performance of tasks. Elements to consider include:	Yes	To be documented during Design Development Phase
—Number of staff working in the medication safety zone		
—Key tasks being performed		
—Amount of space needed to support tasks being performed		
—Types of products that should be clearly visible, enabled by the use of adjustable fixtures, drawer and storage design and counter height		
—Designs to minimize work surface clutter		
b. Space, power, and data requirements for medication-associated equipment and safety technology should be detailed in the functional program so the facility design will be able to accommodate the equipment and technology to be used in the medication safety zone.	Yes	To be documented during Design Development Phase
(c) Work counters shall provide space to perform the tasks described in paragraph (b).	Yes	
(d) Lighting. Task-specific lighting levels for health care settings recommended in the U.S. Pharmacopeia-National Formulary shall be used to design lighting.	Yes	To be documented during Design Development Phase

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
Lighting for medication safety zone work areas. Detailed lighting recommendations for medication safety zone work areas can be found in USP-NF General Chapter <1066> "Physical Environments that Promote Safe Medication Use."		
(e) Where sharps containers are provided, they shall be placed at a height that allows users to see the top of the container.	Yes	To be documented during Design Development Phase
Height of sharps containers. NIOSH provides an ergonomically ideal formula for determining the height of sharps containers by establishing the eye-level height and maximum thumb tip reach of the worker population and then adding a drop angle of 15 degrees. For a standing work station, the sharps container height should be 52		
2.1-3.8.8.2 Work areas for preparing, dispensing, and administering medications		
Security controls. Medication work areas may require physical environment components such as electronic surveillance, password-controlled access, and view panels in doors for security.	Yes	To be documented during Design Development Phase
(1) Medication preparation room		
(a) The medication preparation room shall contain the following:		
(i) Work counter	Yes	
(ii) Hand-washing station	Yes	
(iii) Lockable refrigerator	Yes	
(iv) Locked storage for controlled drugs	Yes	
(v) Sharps containers, where sharps are used	Yes	
(b) Where a medication preparation room is used to store one or more self-contained medication dispensing units, the room shall be designed with space to prepare medication when the self-contained medication-dispensing unit(s) is present.	Yes	
(c) Where a medication preparation room is used to compound sterile preparations, it shall meet the requirements in USP-NF General Chapter <797> "Pharmaceutical Compounding—Sterile Preparations."	N/A	
2.2-4.3 Sterile Processing	N/A	
2.2-4.3.1 Reserved		
2.2-4.3.2 Facilities for On-Site Sterile Processing		
2.2-4.3.3 Support Areas for Facilities Using Off-Site Sterile Processing		
Where sterile processing is performed off-site, the support areas in Section 2.1-4.3.3 (Support Areas for Outpatient Facilities Using Off-Site Sterile Processing) shall be provided as amended in this section.		
2.1-4.3.3 Support Areas for Outpatient Facilities Using Off-Site Sterile Processing		
Where sterile processing services are provided off-site, the following on-site support spaces shall be provided:		
2.1-4.3.3.2 A room for on-site storage of clean and sterile supplies. See Section 2.1-4.3.2.4 (1) (Instrument and supply storage) for requirements.	Yes	
2.1-4.3.2.4 Equipment and supply storage		
(1) Instrument and supply storage. Storage shall be provided for sterile and clean instruments and supplies.		
(a) This storage shall be permitted to be a separate room or a portion of the clean workroom.		
(b) Space for case cart storage shall be provided where case carts are used.	N/A	
(c) Storage for clean/sterile packs shall include provisions to maintain humidity and temperature levels specified by the manufacturer(s) of the materials being stored.	Yes	To be documented during Design Development Phase
2.1-4.3.3.3 A room with a flush-type device for gross decontamination and holding of instruments. The soiled workroom described in Section 2.1-3.8.12 (Soiled Workroom or Soiled Holding Room) shall be permitted to serve this purpose.	Yes	
A2.1-3.8.12 Functions for soiled workroom and soiled holding room		
a. Soiled workroom. Soiled items may be handled in a soiled workroom to prepare them for subsequent cleaning, disposal, or reuse (e.g., emptying and rinsing bedpans or emesis basins, emptying or solidifying suction canisters, rinsing and gross cleaning of medical instruments). As well, this room provides temporary storage for soiled items prior to their removal from the unit.	Yes	
b. Soiled holding room. This location is used for temporary storage of soiled materials and/or supplies prior to their removal from the facility.	N/A	
2.2-4.3.3.1 Provision of an area instead of a room shall be permitted to meet the requirements in sections 2.1-4.3.3.1 (A room for breakdown...) and 2.1-4.3.3.2 (A room for on-site storage...).	N/A	
See above		
2.2-4.3.3.2 Where services provided require decontamination of instruments, a room with a clinical sink or flush-type device for gross decontamination and holding of instruments shall be provided.	Yes	
(1) Use of a hand-washing station shall not be permitted for this function.		
(2) The room described in Section 2.1-3.8.12 (Soiled Workroom or Soiled Holding Room) shall be permitted to serve this purpose.	Yes	Soiled workroom
2.2-4.4 Linen Services		Provided through the hospital
2.2-5 Building Support Facilities		
2.2-5.1 Materials Management	Yes	Space with in the MOB and also a service provided through the hospital
For facilities that receive shared or purchased materials, see Section 2.1-5.1 (Materials Management) for requirements.		
2.1-5.1 Materials Management		
2.1-5.1.1 Support Areas for Shared/Purchased Services		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
Use of shared or purchased materials management services shall be permitted as long as on-site handling and storage areas are provided to meet the facility's needs.		
2.1-5.1.2 Receiving Facilities	Yes	
An unpacking or box breakdown area shall be accessible from the designated delivery door.		
2.1-5.1.3 Service Entrance	Yes	
Where a service entrance is provided for loading and unloading of supplies, it shall be protected from inclement weather.	Yes	
2.2-5.2 Waste Management		
2.2-5.2.1 See Section 2.1-5.2 (Waste Management) for requirements as amended in this section.		
2.1-5.2 Waste Management		
A2.1-5.2 Nuclear waste disposal. For information about handling and disposing of nuclear materials in health care facilities, see Code of Federal Regulations, Title 10, Part 20 (Standards for Protection Against Radiation) and Part 35 (Medical Use of Byproduct Material).	N/A	
2.1-5.2.1 Waste Collection and Storage Facilities		
2.1-5.2.1.1 General. Locations shall be provided for waste collection and storage as identified during project planning.	Yes	EVS Closet and Biohazard storage
(1) Locations for waste collection and storage shall meet local, state, and federal regulations.		
(2) Where the following are provided in a facility, their locations shall be indicated in the design documents:		
(a) Sharps disposal containers	Yes	Exam R., Treatment Rm., Med. Rm.
(b) Compactor units (for municipal solid waste and recycling)	Yes	Shared with the hospital
(c) Balers	?	
(d) Recycling containers	Yes	
(3) Waste collection and storage spaces for each of the following produced by the facility shall be indicated in the design documents:		
(a) Municipal solid waste	N/A	
(b) Regulated medical waste (RMW)		
(i) Pharmaceutical waste (RCRA and non-RCRA)	Yes	
(ii) Anatomical remains	Yes	Biohazard storage
(iii) Hazardous wastes	N/A	
(iv) Chemotherapy wastes (bulk and trace)	N/A	
(v) Universal wastes	Yes	
(vi) Radiologic wastes	N/A	
2.1-5.2.1.2 Space requirements. Size of spaces provided for waste collection and storage shall be based on the following:		
A2.1-5.2.1.2 The waste categories, handling and disposing methods, and length of storage should be identified during project planning.		
2.1-5.2.1.3 Regulated waste holding spaces		
(1) Secured space shall be provided for regulated medical waste and other regulated waste types.	Yes	To be documented during Design Development Phase
(a) Where provided as interior spaces, areas for temporary holding of regulated waste shall have cleanable floor and wall surfaces.	Yes	To be documented during Design Development Phase
Regulated waste includes medical waste, chemical hazardous waste (including universal wastes such as mercury-containing fluorescent light tubes), nuclear reagent waste, and other regulated waste types.		
(b) Where an **exterior holding space** is provided, it shall have the following:		
(i) Cleanable floor (and wall, where provided) surfaces		
(ii) Protection from weather		
(iii) Protection from animals		
(iv) Protection from vermin infestation		
(2) Such holding spaces shall provide:		
(a) Illumination to a minimum of 50 foot-candles		
(b) Protection from unauthorized entry		
(3) Refrigeration requirements for such holding facilities, if provided, shall comply with local and/or state regulations.		
2.2-5.2.2 Location of space for a covered hamper holding non-hazardous waste and used, unsoiled linen in an alcove shall be permitted provided the stored waste does not block an egress route.		
2.2-5.2.3 Location of storage for hazardous waste (red bag trash) and sharps shall be behind a closed door. Location of this storage in an exam room shall be permitted.		
2.2-5.3 Environmental Services		
An environmental services room shall be provided in accordance with Section 2.1-5.3.1 (Environmental Services Room).		
2.1-5.3.1 Environmental Services Room		
2.1-5.3.1.1 Number		
Environmental services room. Some areas may need individually assigned environmental services rooms. Examples are listed here:		
a. Clinical areas: Pre-procedure areas, **examination rooms**, blood draw areas, PACUs, dialysis treatment areas, infusion areas, endoscopy procedure rooms, or other areas likely to come into contact with blood or body fluids	Yes	
b. Sterile areas: Operating rooms, corridors in the restricted area of the surgery facility, sterile labs, and sterile storage	N/A	

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
c. Processing rooms: Endoscope processing room (If these areas are in a sterile area, sanitation needs can be addressed procedurally, for example, by cleaning them last.)	N/A	
d. Public and administrative areas: Waiting areas, offices, and hallways	Yes	
(1) A minimum of one environmental services room per floor shall be provided.	Yes	
(2) Additional environmental services room(s) shall be provided on a floor according to the needs of the areas served.		
(3) An environmental services room shall be permitted to serve more than one clinical service area on the same floor.		
2.1-5.3.1.2 Environmental services room(s) for facility-based environmental services. Each environmental services room shall be provided with the following:		
Environmental services room features. Environmental services rooms should be planned to accommodate carts where carts are used in the housekeeping process.		
(1) Service sink or floor-mounted mop sink	Yes	
(2) Provisions for storage of supplies and housekeeping equipment	Yes	
If further storage areas for housekeeping supplies and equipment are needed, storage locations outside the environmental services room may be used.		
(3) Hand-washing station or hand sanitation dispenser	Yes	To be documented during Design Development Phase
2.2-5.4 Engineering and Maintenance Services		
2.2-5.4.1 See Section 2.1-5.4 (Engineering and Maintenance Services) for requirements.		
2.1-5.4 Engineering and Maintenance Services		
2.1-5.4.1 General		
Shared engineering services and maintenance facilities shall be permitted.		
2.1-5.4.2 Equipment Rooms		
2.1-5.4.2.1 Equipment room(s) for HVAC equipment, telecommunications equipment, and electrical equipment shall be provided for the equipment included.	Yes	Located on the lower level
2.1-5.4.2.2 Security. Mechanical and electrical equipment rooms shall be secured with controlled access.	Yes	To be documented during Design Development Phase
Additional information can be found in Security Design Guidelines for Healthcare Facilities, Section 02.08: Utility, Mechanical and Infrastructure Areas, published by the International Association for Healthcare Security & Safety (IAHSS).		
2.2-5.4.2 Storage room(s) for building maintenance supplies and equipment shall be permitted to be shared.	Yes	Building Storage on the upper level
2.2-6 Public and Administrative Areas		
2.2-6.1 Reserved		
2.2-6.2 Public Areas		
Public areas shall be provided in accordance with Section 2.1-6.2 (Public Areas).		
2.1-6.2 Public Areas		
The following shall be provided:		
2.1-6.2.1 Vehicular Drop-Off and Pedestrian Entrance		
Roof overhang or canopy. Climate, patient acuity, and community standards may influence whether a covered or canopied entrance is desired. Where a roof overhang or canopy is provided, it should extend as far as practicable to the face of the driveway or curb of the passenger access door of the transport vehicle. Vehicles in the loading area should not block or restrict movement of other vehicles in the drive or parking areas immediately adjacent to the facility.	Yes	Located on the lower level
2.1-6.2.1.1 A minimum of one building entrance shall be reachable from grade level.	Yes	
2.1-6.2.1.2 Building entrances used to reach outpatient services shall be clearly marked.	Yes	
2.1-6.2.1.3 Building entrances used to reach outpatient services shall be located so patients need not go through other activity areas. (Shared lobbies shall be permitted in multi-occupancy buildings.)	Yes	
2.1-6.2.2 Reception		
A reception and information counter, desk, or **kiosk** shall be provided either at the main entry or at each clinical service.	Yes	Lower level lobby
2.1-6.2.3 Waiting Area or Room	Yes	Upper level
a. Consideration should be given to the special needs of specific patient groups in a shared/general waiting area. This may result in provision of separate accommodations for elderly patients or other patients such as those with PTSD, pediatric designated areas, or sick or well rooms.		
b. Special attention should be paid to the path of travel to waiting areas or rooms for expanded-capacity wheelchairs. Further accommodations for persons of size are defined in Section 2.1-2 (Accommodations for Care of individuals of size).		
c. Provision of wi-fi access for public use, including infrastructure to support it, should be considered.		
Seating capacity for waiting area or room. Waiting areas or rooms in general and specialty medical services facilities may require greater seating capacity than that recommended in appendix section 2.1-6.2.3.1 (Seating capacity for waiting areas or rooms) based on projected use, operational models, distance patients travel to the facility, and demographics.		
2.1-6.2.3.1 The number and location of waiting area(s) or room(s) and associated seating needed to support the operational model of the health care organization shall be determined and designated in the project planning documents.		
Seating capacity for waiting areas or rooms. See appendix table A2.1-a (Waiting Area Seating Capacity) for recommendations. New operational models may require less seating or fewer waiting spaces in non-typical locations.		
Appendix Table A2.1-a: Waiting Area Seating Capacity		
2.2 Primary care center and small neighborhood clinic, 1.5 per patient care room, 1 Wheelchair space		20 exam rooms/30 seats

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
The total seating capacity should include 10 percent seating to accommodate persons of size (patients and those who accompany them). See Section 2.1-2 (Accommodations for Care of individuals of size) for more information.		
Seating capacity should be rounded up to the next whole number when calculating the total number of seats required.		
Open spaces should be included for patients in wheelchairs who are waiting for care; these spaces may be counted as part of the total number of seats provided.		
2.1-6.2.3.2 The waiting area shall be visible from a staff area, either by camera or direct staff sight line.	Yes	
Visual observation of waiting areas or rooms supports patient and staff safety.		
2.1-6.2.4 Public Toilet Room	Yes	
2.1-6.2.4.1 Toilet room(s) for public use shall be readily accessible from the waiting area without passing through patient care or staff work areas.		
2.1-6.2.4.2 Placement of public toilet room(s) off a public corridor in a multi-tenant building shall be permitted.		
2.1-6.2.5 Provisions for Telephone Access		
Access to make local phone calls shall be provided.	Yes	To be documented during Design Development
2.1-6.2.6 Provisions for Drinking Water	Yes	
Access to drinking water shall be provided.		
2.1-6.2.7 Wheelchair Storage and Parking Space	Yes	Lower level lobby
2.1-6.2.7.1 Storage. Where a wheelchair(s) owned by the health care organization is made available for patient use, a designated area located out of the required corridor width and directly accessible to the entrance shall be provided for at least one wheelchair.		
2.1-6.2.7.2 Parking. If the facility provides services that require patients to transfer to a facility chair, wheelchair, recliner, examination table, or stretcher, a designated area shall be provided for parking at least one patient-owned wheelchair in a non-public area located out of any required egress width or other required clearance.		
Wheelchair parking. Facilities that provide a significant quantity of services to aging and disabled populations that use wheelchairs (e.g., dialysis patients) should provide more than one wheelchair parking space. Other facilities may be able to address the issue with scheduling and transportation procedures. Check with the authority having jurisdiction to determine if this is an acceptable alternative.		
2.2-6.3 Administrative Areas		
Each general or specialty medical services facility shall make provisions to support administrative activities, filing, and clerical work. See Section 2.1-6.3 (Administrative Areas) for requirements.		
Conference/meeting space. Provision of space or means for conducting conferences, meetings, and health education with privacy should be considered. This space might be shared with an office, staff lounge, or exam room.		
2.1-6.3 Administrative Areas		
Multipurpose room(s) should be provided for private interviews, conferences, meetings, and health education purposes. Where health education is accommodated, the room(s) should be equipped for audiovisual aids.		With in the hospital
2.1-6.3.1 Reserved		
2.1-6.3.2 Interview Space		With in the hospital
2.1-6.3.3 General or Individual Office Space		
Office space for business, administrative, and professional staffs shall be provided to support the services provided.		
The following types of employees/services are among those to be considered when determining the amount of office space needed:		
a. Owner/director	Yes	
b. Other supervisors	Yes	
c. Business office personnel	Yes	
d. Each type of health care professional employed by the facility	Yes	
e. Physicians (unique confidentiality duties may make private office space critical)	Yes	
f. Social work	Yes	
g. Maintenance		With in the hospital
2.1-6.3.4 Reserved		
2.1-6.3.5 Medical Records	Yes	With in the hospital
Provisions shall be made for securing medical records of all media types used by the facility.	Yes	
2.1-6.3.5.1 Location. To maintain confidentiality of records, the medical records area shall be restricted to staff access.	Yes	
2.1-6.3.5.2 Space requirements		
(1) Space shall be provided for medical records management.	Yes	
(2) Physical space requirements for electronic storage of forms or documents shall be coordinated with electronic medical records personnel from the facility.	Yes	
2.1-6.3.6 Equipment and Supply Storage	Yes	Workroom (front office area)
Storage for office equipment and supplies shall be provided.		
Storage areas for the following should be identified:		
a. Non-clinical records, documents, and reports	Yes	Workroom (front office area)
b. Office supplies	Yes	Workroom (front office area)
c. Decorations and furnishings	Yes	Workroom (front office area)
2.2-6.4 Support Areas for Staff		
Support areas for staff shall be provided in accordance with Section 2.1-6.4 (Support Areas for Staff).		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
2.1-6.4 Support Areas for Staff		
2.1-6.4.1 Staff Lounge	Yes	
Where a staff lounge is provided, it shall include a hand-washing station.	Yes	
2.1-6.4.2 Storage for Staff		
Storage for staff personal effects (locking drawers, cabinets, or lockers) shall be readily accessible to individual work areas.	Yes	"Coats" located in each Team Room
a. Staff storage. Provisions for storing valuables may be as simple as providing a locked drawer.	Yes	At each woek station
b. Staff toilet room. Provision of a staff toilet room in addition to and separate from public and patient facilities may offer some operational efficiencies that should be considered.	Yes	
2.2-7 Design and Construction Requirements		
See Section 2.1-7 (Design and Construction Requirements) for requirements.		
2.1-7 Design and Construction Requirements		
Building design and construction shall comply with local, state, and federal requirements.	Yes	
2.1-7.1 Outpatient occupancy classification. The outpatient facilities described in this document may be an outpatient unit in a hospital, a freestanding facility, or an outpatient facility in a multiple-use building. Occasional facility use by patients on stretchers should not be used as a basis for more restrictive institutional occupancy classifications.		
2.1-7.2 Architectural Details, Surfaces, and Furnishings		
2.1-7.2.1 Reserved		
2.1-7.2.2 Architectural Details		
2.1-7.2.2.1 Corridor width		
Corridor width. In areas where patient ambulation is encouraged or necessary for recovery, rest areas should be provided.		
(1) Corridor widths shall meet applicable life safety and building code requirements.	Yes	5'-6" clear
(2) Corridors used for stretcher and gurney transport shall have a minimum corridor or aisle width of 6 feet (1.83 meters).		Stretcher/gurney transport is not typical.
2.1-7.2.2.2 Ceiling height. The minimum ceiling height shall be 7 feet 10 inches (2.39 meters), with the following exceptions:	Yes	Min. ceiling hgt. will be 8 feet.
(1) The minimum ceiling height in corridors and in normally unoccupied spaces shall not be less than 7 feet 6 inches (2.29 meters).		
(2) The minimum height above the floor of suspended tracks, rails, and pipes located in the traffic path shall be 7 feet 6 inches (2.29 meters).		
2.1-7.2.2.3 Doors and door hardware		
Doors and door hardware. High-touch components of doors and hardware should be selected to suit the use of the space and the organization's cleaning protocols.		
(1) Door type		
(a) All doors between corridors, rooms, or spaces subject to occupancy shall be of the swing type or shall be sliding doors.	Yes	All doors are swing type
(b) Sliding doors		Building entrance is sliding
Sliding doors. Use of sliding doors rather than swing doors is highly recommended for airborne infection isolation rooms and other spaces for which an ICRA has identified infection control as an issue. Research has shown that swinging door motion induces up to six times more possible contaminate than sliding door motion and can significantly affect contaminant control.		
(i) Use of manual or automatic sliding doors shall be permitted where fire and other emergency exiting requirements are not compromised.		Complies
(ii) Sliding doors with emergency breakaway features in the full open position shall be permitted to temporarily restrict the minimum corridor width required by applicable building codes where approved by the authority having jurisdiction.		Complies
(iii) Sliding doors in patient care areas shall not have floor tracks.		Complies
Eliminating floor tracks and using breakaway door hardware minimizes the possibility of jamming.		Complies
(2) Door openings		Complies
a. The door opening sizes given are the minimum clear width and height.		
b. The clear width needed to accommodate access by patients and patient equipment has been taken into consideration in calculating the door opening dimensions given.		
c. Where patients are served who require patient handling and moving equipment and/or assistance, door openings should be sized for the equipment that will be used and the number of staff required to support patient safety.		All doors to be used by patient s are 42" wide. Doors used by staff are 36" wide.
(a) Door openings serving occupiable spaces shall have a minimum clear width of 34 inches (86.36 centimeters).		
(b) The minimum clear door opening for rooms where gurneys will be used shall have these dimensions:		
(i) 41.5 inches (1,054 millimeters) in width		
The door opening specified here is intended for use with a gurney that is 30 – 32-inches (762 – 813 millimeters) wide. If wider gurneys are used, the clear door opening should be 45.5 inches (116 centimeters).		
(ii) 79.5 inches (2,019 millimeters) in height	Yes	Complies
(3) Door swing		Complies
(a) Doors shall not be permitted to swing into corridors except doors in behavioral health facilities and doors to non-occupiable spaces (e.g., environmental services rooms, electrical closets) and doors with emergency breakaway hardware.	Yes	
The intent of this requirement is to avoid injury caused by outward-swinging doors.		
(b) Doors shall be permitted to swing outward into an alcove that is deeper than the width of the door.		
(c) A 180-degree door swing shall not be exempt from this requirement.		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
(4) Door hardware. Lever hardware or push/pull latch hardware shall be provided.	Yes	
Door protection should be provided where a door is subject to impact.	Yes	
(5) Doors for patient toilet rooms		
(a) Door type. Rooms that contain a toilet for patient use shall have one of the following:		
(i) A door that swings outward	Yes	Pivot swing with emergency access.
(ii) A door equipped with emergency rescue hardware		
Emergency rescue hardware. Emergency rescue hardware for toilet room doors permits easy access from outside the room to prevent blockage of the door.	Yes	
(iii) A sliding door other than a pocket door		None used
Use of sliding doors. Sliding doors are permitted for toilet rooms if they do not conflict with other requirements, such as handicapped accessibility, and cannot be blocked from the inside. A pocket type of sliding door would not meet this requirement because weight pushed up against this type of door prevents the		
(b) Door opening. Where a toilet room opens onto a public area or corridor, visual privacy shall be maintained.	Yes	
2.1-7.2.2.4 – 2.1-7.2.2.7 Reserved		
2.1-7.2.2.8 Hand-washing stations		
Consideration should be given to placement of electrical devices (space needed for work flow and placement away from the sink).		
To avoid confusion between soap and alcohol-based hand rubs, alcohol-based hand-rub dispensers should not be placed adjacent to sinks and soap dispensers.	Yes	
(a) Hand sanitation dispensers and hand-washing stations shall be provided.	Yes	Location determined during the next phase of design
(b) The number and placement of both hand-washing stations and hand sanitation dispensers shall be determined by an ICRA.	Yes	
(c) See Section 2.1-3.8.7 (Hand-Washing Station) and the facility chapters in Part 2 for information about locations where hand-washing stations are required.		
(2) Sinks. For basin, fitting, and anchoring requirements, see Section 2.1-8.4.3.2 (Hand-washing station sinks).		
(3) Hand-washing station countertops		
(a) Hand-washing station countertops shall be made of porcelain, stainless steel, solid-surface materials, or plastic laminate assembly.	Yes	Solid surface
(b) For countertops that require a substrate, marine-grade plywood (or an equivalent material) with an impervious seal shall be required.	Yes	
Under-mount basins are difficult to clean, and their use is discouraged.		
(4) Where a hand-washing station includes casework, it shall be designed to prevent storage beneath the sink.	Yes	
(5) Provisions for drying hands. Single-use or disposable provisions for hand drying shall be required at all hand-washing stations except hand scrub facilities.	Yes	
(a) Hand-washing stations shall include a hand-drying device that does not require hands to contact the dispenser.	Yes	
(b) These provisions shall be enclosed to protect against dust or soil.	Yes	
(c) Hot air dryers shall be permitted.		
(d) Where provided, single-use towels shall be directly accessible to sinks.	Yes	
(6) Cleansing agents. Hand-washing stations shall include liquid or foam soap dispensers.	Yes	
(7) Mirror. Mirrors shall be permitted at hand-washing sinks in public toilet rooms and in shower rooms.		
Mirrors should not be used at clinical hand-washing stations to avoid personal grooming that can impact proper hand hygiene.	Yes	
2.1-7.2.2.9 Grab bars		
Grab bars should have a finish that contrasts with the adjacent wall surface and provides slip resistance.	Yes	
Grab bars in patient toilet rooms should allow patients to be as safe and independent as possible. This includes using drop-down grab bars when needed, with or without integral toilet paper holder.		
Grab bars in patient toilet rooms should allow staff to complete a double transfer. To make this possible, the relationship between the toilet, wall, and grab bars should be evaluated. Clearance on both sides of the toilet is needed for a double transfer. Wall-mounted bars that fold up are the preferred solution because they leave space to		
(1) Grab bars shall be anchored to sustain a concentrated load of 250 pounds (113.40 kilograms).	Yes	
(2) Grab bars in toilet rooms intended for use by persons of size shall be anchored to sustain a concentrated load of 800 pounds (362.87 kilograms).	Yes	
(3) Ends of grab bars shall be constructed to prevent snagging the clothes of patients, staff, and visitors.	Yes	
2.1-7.2.2.10 Handrails		
Handrails should be provided to assist mobility-impaired persons.		Will be determined during the next design phase
(1) Where provided, handrails shall comply with local, state, and federal requirements referenced in Section 1.1-4.1 (Design Standards for Accessibility) as amended in this section.		
(2) Rail ends shall return to the wall or floor.		
(3) Handrail gripping surfaces and fasteners shall be smooth (free of sharp or abrasive elements) with a 1/8-in. (3.18-millimeter) minimum radius.		
(4) Handrails shall have eased edges and corners.		
(5) Handrail finishes shall be cleanable.		
2.1-7.2.2.11 Radiation protection. Radiation protection for x-ray and gamma ray installations shall conform with the following National Council on Radiation Protection & Measurements (NCRP) reports and local, state, and federal codes and standards.	N/A	Radiology services will not be provided in this building.
2.1-7.2.2.12 Reserved		
2.1-7.2.2.13 Protection from heat-producing equipment. Rooms containing heat-producing equipment (e.g., boilers, heaters) shall be insulated to prevent the temperature in adjacent rooms from falling outside the intended design parameters for those room types.	Yes	
2.1-7.2.2.14 Decorative water features		None are planned for

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
Fountains and other open decorative water features can represent a reservoir for opportunistic human pathogens.		
(1) Installation of indoor, unsealed (open) water features shall not be permitted in the confines of the licensed outpatient health care occupancy area.		
(2) Covered fish tanks shall be permitted in public areas of the licensed outpatient health care occupancy area.		
2.1-7.2.3 Surfaces		
2.1-7.2.3.1 Flooring and wall bases		
a. The patient handling and movement assessment and the fall prevention assessment portions of the safety risk assessment should be consulted when choosing flooring materials; see sections 1.2-4.3 (Patient Handling and Movement Assessment) and 1.2-4.4 (Fall Prevention Assessment).		
b. The evidence associated with identification of single environmental variables and their importance in preventing, attenuating, or exacerbating patient falls is still emerging. A number of studies in which multiple variables were studied have suggested an association between falls and the following flooring materials and characteristics:		
c. Floor resistance. Floor surfaces should allow easy movement of all wheeled equipment to be used in the facility. Portable lifting equipment without powered wheels may require more exertion by staff than ceiling-mounted equipment to move an elevated patient around and through a space. The exertion required by staff may increase with the use of carpet; however, different types and brands of carpet may have significantly different levels of resistance to wheeled devices. Installation of a mock-up to test flooring materials in relationship to wheeled equipment and devices used in a facility is recommended. Carpet should not be automatically discounted as inappropriate due to this challenge as it has major advantages over hard-surface flooring in terms of acoustic properties.		
(1) Flooring surfaces shall be cleanable and wear-resistant for the location.	Yes	
(2) The use of carpeting in patient care areas and clinical support areas (e.g., labs and pharmacies) shall be permitted when approved as part of the infection control risk assessment (ICRA) process.		Carpet is not anticipated in these areas.
(3) Smooth transitions shall be provided between different flooring materials.	Yes	
Flush thresholds should be used to reduce tripping hazards.		
(4) Flooring surfaces, including those on stairways, shall be stable, firm, and slip-resistant.	Yes	
(a) The slip-resistance ratings of flooring surfaces shall be appropriate for the area of use—for dry or wet conditions and for use on ramps and slopes.	Yes	
Wet conditions are common in areas such as kitchens and bathing areas, entries from exterior to interior space, and areas where water is used for patient services. Slip resistance is also an important consideration for ramps and stairways. In dry areas, soft flooring (e.g., carpet, cushioned flooring, etc.) can be used to reduce the risk of falls and the impact of associated injuries.		
(b) Carpet with or without padding shall be installed so it provides a stable and firm surface.		The use of carpet to be determined in the next phase of design.
(5) The floors and wall bases of all areas subject to frequent wet cleaning shall be constructed of materials that are not physically affected by germicidal or other types of cleaning solutions.	Yes	
(6) Floor and wall base assemblies		
(a) The room types listed in this section shall have floor and wall base assemblies that are monolithic and have an integral coved wall base that is carried up the wall a minimum of 6 inches (150 mm) and is tightly sealed to the wall.		
(i) Operating room	N/A	
(ii) Class 2 and Class 3 imaging rooms	N/A	
(iii) Procedure rooms where cystoscopy, urology, and endoscopy procedures are performed	N/A	
(iv) Endoscope processing room	N/A	
(v) IV and chemotherapy preparation rooms	N/A	
(vi) Airborne infection isolation (AII) room	N/A	
(vii) Anteroom to AII room, where provided	N/A	
(viii) Sterile processing facility	N/A	
(b) Equipment shall be permitted to penetrate these monolithic floors provided joints are sealed and do not represent a tripping hazard.		
Equipment that is fastened to the monolithic floor requires sealed joints at the fastening points to prevent fluids from penetrating the subfloor. Where infrastructure items such as floor ducts to accommodate electrical cabling are installed, the duct cover needs to be sealed to prevent fluids from entering the floor duct.		
(7) Floor openings for pipes, ducts, and conduits as well as joints at structural elements shall be tightly sealed.		
2.1-7.2.3.2 Walls and wall protection		
(1) Wall finishes		
(a) Wall finishes shall be washable.	Yes	
(b) Wall finishes in the vicinity of plumbing fixtures shall be:		
(i) Smooth	Yes	
(ii) Scrubbable	Yes	
(iii) Water-resistant	Yes	
(c) Wall finishes in the room types listed shall be free of fissures, open joints, or crevices that may retain or permit passage of dirt particles:		
(i) Operating and procedure rooms	N/A	
(ii) Class 2 and Class 3 imaging rooms	N/A	
(iii) Endoscopy procedure room	N/A	

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
(iv) Endoscope processing room	N/A	
(v) IV and chemotherapy preparation room	N/A	
(vi) Airborne infection isolation (AII) room	N/A	
(vii) Anteroom to AII room, where provided	N/A	
(viii) Sterile processing facility	N/A	
(2) Wall surfaces in areas routinely subjected to wet spray or splatter (e.g., kitchens, environmental services rooms, etc.) shall be monolithic or have sealed seams that are tight and smooth.	Yes	
(3) Wall openings for pipes, ducts, and conduits as well as joints at structural elements shall be tightly sealed.	Yes	
(4) Wall protection devices and corner guards shall be durable and scrubbable.	Yes	
2.1-7.2.3.3 Ceilings		
(1) Ceilings shall be provided in all areas except as noted in Section 2.1-7.2.3.3 (4) (Mechanical, electrical, and communications equipment rooms).	Yes	
(a) Ceilings shall be cleanable with routine housekeeping equipment.	Yes	
(b) Acoustic and lay-in ceilings, where used, shall not create ledges or crevices.	Yes	
(4) Mechanical, electrical, and communications equipment rooms. Omission of suspended ceilings in these rooms or spaces shall be permitted unless required for fire safety purposes.		
2.1-7.2.4 Furnishings		
Work areas. Where a work space, work area, work counter, or work surface is provided, it should have a minimum of 4 square feet (.37 square meter) of contiguous clear surface for each person programmed to work in the space at the same time.	Yes	
2.1-7.2.4.1 Reserved		
2.1-7.2.4.2 Window treatments in patient care areas		To be determined during the next phase of design.
(1) Blinds, sheers, or other window treatments shall be provided to allow for patient privacy and control light levels and glare in patient care areas.		
(2) Window treatments shall not compromise patient safety and shall be easy for patients, visitors, and staff to operate.		
(3) Window treatments shall be selected for ease of cleaning, disinfection, or sanitization.		
(4) Use of fabric drapes and curtains for window treatments shall be permitted if the fabric is washable.		
2.1-7.2.4.3 Privacy curtains. Use of fabric privacy curtains shall be permit-ted if the fabric is washable.		
2.2-8 Building Systems		
2.2-8.1 Reserved		
2.2-8.2 Heating, Ventilation, and Air-Conditioning (HVAC) Systems		
See Section 2.1-8.2 (HVAC Systems) for requirements.		
2.1-8.2 Heating, Ventilation, and Air-Conditioning (HVAC) Systems		
2.1-8.2.1 General		
2.1-8.2.1.1 The following facility types shall comply with Part 3 (ANSI/ASHRAE/ASHE Standard 170: Ventilation of Health Care Facilities):	N/A	
(1) Outpatient surgery facilities	N/A	
(2) Endoscopy facilities	N/A	
2.1-8.2.1.2 For the following facility types, room types listed in Table 8.1 of ANSI/ASHRAE/ASHE Standard 170 shall meet the requirements of Standard 170:	N/A	
Individual spaces used for imaging, infusion, and dialysis services that are listed in Table 8.1 in Standard 170 are treated the same as a space in a licensed facility and have the same HVAC requirements. Spaces with space names not listed in Table 8.1 need not comply with Standard 170.	N/A	
(1) Imaging facilities with Class 2 and 3 imaging rooms	N/A	
(2) Infusion centers	N/A	
(3) Renal dialysis centers	N/A	
2.1-8.2.1.3 For other outpatient facility types, HVAC systems shall meet state and local building code requirements.	Yes	
2.1-8.2.2 Additional Requirements		
See Section 8.2 in the following chapters for additional HVAC information:		
2.1-8.2.2.1 Chapter 2.12, Specific Requirements for Outpatient Rehabilitation Facilities	N/A	
2.1-8.2.2.2 Chapter 2.13, Specific Requirements for Mobile/Transportable Medical Units	N/A	
2.2-8.3 Electrical Systems		
2.2-8.3.1.1 Electrical system requirements in NFPA 99: Health Care Facilities Code according to the NFPA risk category (1–4) that applies to the facility type.	Yes	
2.2-8.3.1.2 Requirements in NFPA 70: National Electrical Code®	Yes	
2.2-8.3.2 – 2.2-8.3.3 Reserved		
2.2-8.3.4 Emergency Egress Lighting		
Automatic emergency lighting shall be provided in every facility that has a total floor area of more than 1,000 square feet (92.9 square meters) and in every facility requiring a stairway exit.	Yes	
2.2-8.3.5 Reserved		
2.2-8.3.6 Electrical Receptacles		
2.2-8.3.6.1 Duplex receptacles shall be available for all equipment to be used in the space.	Yes	

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
2.2-8.3.6.2 Each examination and work table area shall be served by at least one duplex receptacle.	Yes	
2.2-8.4 Plumbing Systems		
2.2-8.4.1 General		
2.2-8.4.1.1 Plumbing and other piping systems shall meet the requirements in this section.		
2.2-8.4.1.2 Systems shall comply with applicable codes and be designed to supply water at the pressure required to operate all fixtures and equipment during maximum demand.	Yes	
2.2-8.4.2 Plumbing and Other Piping Systems		
2.2-8.4.2.1 Backflow preventers (vacuum breakers) shall be installed on water supply outlets to which hoses or tubing can be attached where required by local codes or medical equipment manufacturers.	Yes	
2.2-8.4.2.2 Water temperature at hand-washing stations shall meet the requirements in Section 2.1-8.4.2.5 (4) (Water temperature).		
A2.1-8.4.2.5 (4) Water temperature is measured at the point of use or inlet to the equipment.		
(a) The water-heating system shall supply water at the following range of temperatures: 105–120oF (41–49oC). Storage of water at higher temperatures shall be permitted.	Yes	
To prevent scalding, it is recommended that water temperature at hand-washing stations and showers be limited by an ASSE 1070: Performance Requirements for Water Temperature Limiting Devices or equivalent device.		
(b) For hand-washing stations, water shall be permitted to be supplied at a constant temperature between 70°F and 80°F using a single-pipe supply. For showers and other end-use devices requiring heated water, water shall be permitted to be supplied by this low-temperature circulation system and heated with point-of-use heaters.	Yes	
2.2-8.5 Communications Systems		
For nurse call system requirements, see Table 2.1-3 (Locations for Nurse Call Devices in Outpatient Facilities).		Patient toilets will have Patient Assist call.
FGI does not require a nurse call devise in any of the program spaces for this MOB		
2.2-8.6 Fire Alarm System		
See Section 2.1-8.6 (Fire Alarm System) for requirements.		
2.1-8.6 Fire Alarm System		
All health care facilities shall be provided with a fire alarm system in accordance with NFPA 101: Life Safety Code and NFPA 72: National Fire Alarm and Signaling Code.	Yes	
Part 3: Ventilation of Health Care Facilities		
ANSI/ASHRAE/ASHE Standard 170-2017 Ventilation of Health Care Facilities		
4. COMPLIANCE		
4.1.1 New Buildings. New buildings shall comply with the provisions of this standard.	Yes	
4.1.2 Existing Buildings	N/A	
4.3.1 General. Compliance documents are those plans, specifications, engineering calculations, diagrams, reports, and other data that are approved as part of the permit by the AHJ. The compliance documents shall include all specific construction-related requirements of the owner's infection control risk assessment.		
4.3.2 Construction Details. Compliance documents shall contain all pertinent data and features of the building, equipment, and systems in sufficient detail to allow a determination of compliance by the AHJ and to indicate compliance with the requirements of this standard.		
4.3.3 Supplemental Information. Supplemental information necessary to verify compliance with this standard, such as calculations, worksheets, compliance forms, vendor literature, or other data, shall be made available when required by the AHJ.		
4.4 Alternate Materials, Methods of Construction, or Design. The provisions of this standard are not intended to prevent the use of any material, method of construction, design, or building system not specifically prescribed herein, provided that such construction, design, or building system has been approved by the AHJ as meeting the intent of this standard.		
4.5 Informative Appendices. The informative appendices to this standard and informative notes located within this standard contain recommendations, explanations, and other non-mandatory information and are not part of this standard.		
4.6 Criteria Ranges. This standard often specifies a range of values that will comply with a specific requirement of the standard. If it is permitted by the AHJ, compliance with this requirement may be achieved by the presentation of compliance documents that demonstrate a system's ability to perform within the specified range.		
5. PLANNING		
Owners/managers of health care facilities shall prepare a detailed program that shall include the clinical service expected in each space, the specific user equipment expected to be used in each space, and any special clinical needs for temperature, humidity, and pressure control. This program shall be prepared in the planning phase of design.	Yes	
6. SYSTEMS AND EQUIPMENT		
Air-handling and distribution systems are required to provide health care facilities not only with a comfortable environment but also with ventilation to dilute and remove contaminants, provide conditioned air, and assist in controlling the transmission of airborne infection. In order to meet these requirements, air-handling and distribution systems shall be designed according to the requirements of this standard.	Yes	
6.1.1 Ventilation Upon Loss of Electrical Power. The space ventilation and pressure relationship requirements of Tables 7.1, 8.1, and 9.1 shall be maintained for the following spaces, even in the event of loss of normal electrical power:		
a.All rooms	N/A	
b.PE rooms	N/A	
c.Operating rooms (ORs), including delivery rooms (Caesarean)	N/A	
Informative Note: For further information, see NFPA (2015) in Appendix B.		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
6.1.2 Heating and Cooling Sources		
6.1.2.1 Provide heat sources and essential accessories in number and arrangement sufficient to accommodate the facility needs (reserve capacity), even when any one of the heat sources or essential accessories is not operating due to a breakdown or routine maintenance. The capacity of the remaining source or sources shall be sufficient to provide for domestic hot water, sterilization, and dietary purposes and to provide heating for operating, delivery, birthing, labor, recovery, emergency, intensive care, nursery, and inpatient rooms. Fuel sufficient to support the owner's facility operation plan upon loss of fuel service shall be provided on site.	Yes	This will pertain to the Primary Care services offered in the new MOB. Other services noted to be provided elswhere.
Exception to 6.1.2.1: Reserve capacity is not required if the ASHRAE 99% heating dry-bulb temperature for the facility is greater than or equal to 25°F (–4°C).		
6.1.2.2 For central cooling systems greater than 400 tons (1407 kW) peak cooling load, the number and arrangement of cooling sources and essential accessories shall be sufficient to support the owner's facility operation plan upon a breakdown or routine maintenance of any one of the cooling sources.		
6.2 Air-Handling Unit (AHU) Design		
6.2.1 AHU Casing. The casing of the AHU shall be designed to prevent water intrusion, resist corrosion, and permit access for inspection and maintenance. All airstream surfaces of AHUs shall comply with ANSI/ASHRAE Standard 62.1, Section 5.4 1.	Yes	
6.3 Outdoor Air Intakes and Exhaust Discharges		
6.3.1 Outdoor Air Intakes		
6.3.1.1 General. Outdoor air intakes for AHUs shall be located a minimum of 25 ft (8 m) from cooling towers and all exhaust and vent discharges. Outdoor air intakes shall be located such that the bottom of the air intake is at least 6 ft (2 m) above grade. New facilities with moderate-to-high risk of natural or man-made extraordinary incidents shall locate air intakes away from public access. All intakes shall be designed to prevent the entrainment of wind-driven rain, shall contain features for draining away precipitation, and shall be equipped with a birdscreen of mesh no smaller than 0.5 in. (13 mm).	Yes	
Exception to 6.3.1.1: For gas-fired, packaged rooftop units, the separation distance of the unit's outdoor air intake from its flue may be less than 25 ft (8 m). The separation distance shall be greater than or equal to the distance prescribed in ANSI/ASHRAE Standard 62.1, Table 5-1, "Air Intake Minimum Separation Distance 1.		
6.3.1.2 Relief Air. Relief air is exempt from the 25 ft (8 m) separation requirement. Relief air is defined as the Class 1 air that could be returned to the air-handling unit from the occupied spaces but is being discharged to the outdoors to maintain building pressurization (such as during air-side economizer operation).		
Informative Note: For more information, see ASHRAE Standard 62.1 (ASHRAE 2016a) in Appendix B.		
6.3.1.3 Roof Locations. Intakes on top of buildings shall be located with the bottom of the air intake a minimum of 3 ft (1 m) above roof level.	Yes	
6.3.1.4 Areaways. In the case of an areaway, the bottom of the air intake opening shall be at least 6 ft (2 m) above grade. The bottom of the air intake opening from the areaway into the building shall be at least 3 ft (1 m) above the bottom of the areaway.	N/A	
Informative Note: See Appendix A, Figure A3.		
6.3.2 Exhaust Discharges		
6.3.2.1 General. Exhaust discharge outlets that discharge air from AII rooms, bronchoscopy and sputum collection and pentamidine administration rooms, emergency department public waiting areas, nuclear medicine hot labs, radiology waiting rooms programmed to hold patients who are waiting for chest x-rays for diagnosis of respiratory disease, pharmacy hazardous-drug exhausted enclosures, and laboratory work area chemical fume hoods shall;	N/A	
a.be designed so that all ductwork within the building is under negative pressure;		
Exception to 6.3.2.1(a): Ductwork located within mechanical equipment rooms. Positive-pressure exhaust ductwork located within mechanical equipment rooms shall be sealed in accordance with SMACNA duct leakage Seal Class A 2.		
b.be located such that they reduce the potential for the recirculation of exhausted air back into the building.		
6.3.2.2 Additional Requirements		
a.Exhaust discharge outlets from AII rooms, bronchoscopy and sputum collection exhaust, pharmacy hazardous-drug exhausted enclosures, and laboratory work area chemical fume hoods shall additionally be arranged to discharge to the atmosphere in a vertical direction (with no rain cap or other device to impede the vertical momentum) and at least 10 ft (3 m) above the adjoining roof level.	N/A	
b.Exhaust discharge outlets from laboratory work area chemical fume hoods shall discharge with a stack velocity of at least 2500 fpm (1180 L/s).	N/A	
c.Exhaust discharge outlets from AII rooms, bronchoscopy and sputum collection exhaust, and laboratory work area chemical fume hoods shall be located not less than 25 ft (8 m) horizontally from outdoor air intakes, openable windows/doors, and areas that are normally accessible to the public.	N/A	
Exception to 6.3.2.2(c): If permitted by the AHJ, an alternate location (Informative Note: e.g., located adjacent to an air intake but with the exhaust discharge point above the top of the air intake) may be used. The submitted reentrainment analysis shall demonstrate that an exhaust discharge outlet located at a distance less than 25 ft (8 m)		
6.4 Filtration. Filter banks shall be provided in accordance with Table 6.4. Each filter bank with an efficiency of greater than MERV 12 shall be provided with an installed manometer or differential pressure measuring device that is readily accessible and provides a reading of differential static pressure across the filter to indicate when the filter needs to be changed. All of the air provided to a space shall be filtered in accordance with Table 6.4, except as otherwise indicated in Sections 7.1, 8.1, and 9.1 for spaces that allow recirculating HVAC room units.	Yes	
Informative Note: For more information, see CDC (2003) in Appendix B.		

Table 6.4 Minimum Filter Efficiencies

	Filter Bank No. 1 (MERV)(a)	Filter Bank No. 2 (MERV)(a)
Protective environment (PE) rooms	7	HEPA (c,d)
Laboratory work areas, procedure rooms, and associated semirestricted spaces	13 (b)	NR
Administrative; bulk storage; soiled holding spaces; food preparation spaces; and laundries	7	NR
All other outpatient spaces	7	NR
NR = not required		

2.2 Specific Requirements for General and Specialty Medical Services Facilities		Compliant	Notes
a. Informative Note: The minimum efficiency reporting value (MERV) is based on the method of testing described in ANSI/ASHRAE Standard 52.2 (ASHRAE [2017a]).			
b. Additional prefilters may be used to reduce maintenance for filters with efficiencies higher than MERV 7.			
c. As an alternative, MERV-14 rated filters may be used in Filter Bank No. 2 if a tertiary terminal HEPA filter is provided for these spaces.			
d. Informative Note: High-efficiency particulate air (HEPA) filters are those filters that remove at least 99.97% of 0.3 micron-sized particles at the rated flow in accordance with the testing methods of IEST RP-CC001.6 (IEST [2016]).			
6.4.1 First Filtration Bank. Filter Bank No. 1 shall be placed upstream of the heating and cooling coils such that all mixed air is filtered.			
6.4.2 Second Filtration Bank. Filter Bank No. 2 shall be installed downstream of all wet-air cooling coils and the supply fan. All second filter banks shall have sealing interface surfaces.			
6.4.3 Filter-Bank Blank-Off Panels. Filter-bank blank-off panels shall be permanently attached to the filter-bank frame, constructed of rigid materials, and have sealing surfaces equal to or greater than the filter media installed within the filter-bank frame.			
6.4.4 Filter Frames. Filter frames shall be durable and proportioned to provide an airtight fit with the enclosing ductwork. All joints between filter segments and enclosing ductwork shall have gaskets or seals to provide a positive seal against air leakage.			
6.5 Heating and Cooling Systems			
6.5.1 Cooling Coils and Drain Pans. Cooling coils and drain pans shall comply with the requirements of ANSI/ASHRAE Standard 62.1 1.		Yes	
6.5.2 Radiant Cooling Systems. If radiant cooling panels are used, the chilled-water temperature shall always remain above the dew-point temperature of the space.		N/A	
6.5.3 Radiant Heating Systems. If radiant heating is provided for an All room, a protective environment room, a wound intensive care unit (burn unit), an OR, or a procedure room, either flat and smooth radiant ceiling or wall panels with exposed cleanable surfaces or radiant floor heating shall be used. Gravity-type heating or cooling units, such as radiators or convectors, shall not be used in ORs and other special care areas.		N/A	
6.5.4 Cooling Towers. Cooling towers shall be located so that drift is directed away from AHU intakes. They shall meet the requirements of Section 6.3.2.		Yes	
6.6 Humidifiers. When outdoor humidity and internal moisture sources are not sufficient to meet the requirements of Tables 7.1, 8.1, or 9.1, humidification shall be provided by means of the facility air-handling systems. Steam or adiabatic high-pressure water-atomizing humidifiers shall be used.			
6.6.1 General Requirements			
a.Locate humidifiers within AHUs or ductwork to avoid moisture accumulation in downstream components, including filters and insulation.			
b.A humidity sensor shall be provided, located at a suitable distance downstream from the injection source.			
c.Controls shall be provided to limit duct humidity to a maximum value of 90% rh when the humidifier is operating.			
d.Duct takeoffs shall not be located within the humidifier's absorption distance.			
e.Humidifier control valves shall be designed so that they remain off whenever the AHU unit is not in operation.			
6.6.2 Steam Humidifier Requirements. Chemical additives used in the steam systems that serve humidifiers shall comply with FDA requirements 3.			
6.6.3 Adiabatic Atomizing Humidifier Requirements			
a.Humidifier water shall be treated with a reverse osmosis process, a UV-C sterilization light source, and a submicron filter.			
Informative Note: For more information, see ASTM (2011) in Appendix B.			
b.Treated humidifier water shall be continuously circulated from the source to the humidifier valves. All valves, headers, and piping not part of the recirculation loop shall drain completely when not in use.			
c.Ports suitable for testing water quality shall be provided in the treated humidifier water piping system.			
d.Moisture eliminators shall be provided as required to prevent moisture accumulation in ductwork.			
6.7 Air Distribution Systems			
6.7.1 General. Maintain the pressure relationships required in Tables 7.1, 8.1, and 9.1 in all modes of HVAC system operation, except as noted in the tables. Spaces that have required pressure relationships shall be served by fully ducted return systems or fully ducted exhaust systems. The following additional surgery and critical-care patient care areas that do not require a pressure relationship to adjacent areas shall also be served by fully ducted return or exhaust systems: recovery rooms, critical and intensive care areas, intermediate care areas, and wound intensive care units (burn units). In inpatient facilities, patient care areas shall use ducted systems for return and exhaust air. Where space pressure relationships are required, the air distribution system design shall maintain them, taking into account recommended maximum filter loading, heating-season lower airflow operation, and cooling-season higher airflow operation. Airstream surfaces of the air distribution system downstream of Filter Bank No. 2, shall comply with ANSI/ASHRAE Standard 62.1, Section 5.4 1. The air distribution system shall be provided with access doors, panels, or other means to allow convenient access for inspection and cleaning		Yes	
6.7.2 Air Distribution Devices. All air distribution devices shall meet the following requirements:			
a.Surfaces of air distribution devices shall be suitable for cleaning. Supply air outlets in accordance with Table 6.7.2 shall be used.		Yes	
b.The supply diffusers in ORs shall be designed and installed to allow for internal cleaning.		Yes	
c.Psychiatric, seclusion, and holding patient rooms shall be designed with security diffusers, grilles, and registers.		N/A	
Table 6.7.2 Supply Air Outlets			
Space Designation (According to Function)	**Supply Air Outlet Classificationa**		
Operating rooms (ORs) b, procedure rooms	Supply diffusers within the primary supply diffuser array: Group E, nonaspirating	N/A	
	Additional supply diffusers within the room: Group E	N/A	
Protective environment (PE) rooms	Group E, nonaspirating	N/A	
Wound intensive care units (burn units)	Group E, nonaspirating	N/A	
Trauma rooms (crisis or shock)	Group E, nonaspirating	N/A	
All rooms	Group A or Group E	N/A	

2.2 Specific Requirements for General and Specialty Medical Services Facilities		Compliant	Notes
Single-bed patient or resident rooms	Group A, Group D, or Group E	N/A	
All other patient care or resident care spaces	Group A or Group E	TBD	
All other spaces	No requirement		
a. Informative Note: Refer to the 2017 ASHRAE Handbook—Fundamentals, Chapter 20 (ASHRAE [2017c]), for definitions related to outlet classification and performance.			
b. Surgeons may require alternate air distribution systems for some specialized surgeries. Such systems shall be considered acceptable if they meet or exceed the requirements of this standard.			
c. Air distribution systems using Group D diffusers shall meet the following requirements:			
1. The system shall be designed according to "Design Guidelines" in System Performance Evaluation and Design Guidelines for Displacement Ventilation, Chapter 7 4.		Yes	
2. The supply diffuser shall be located where it cannot be permanently blocked (Informative Note: e.g., opposite the foot of the bed).		Yes	
3. The room return/exhaust grille shall be located in the ceiling, approximately above the head of the patient bed.		Yes	
4. The transfer grille to the toilet room shall be located above the occupied zone.			
6.7.3 Smoke Barriers. Where smoke barriers are required, heating, ventilating, and air-conditioning zones shall be coordinated with compartmentation to minimize ductwork penetrations of fire and smoke barriers.		Yes	
6.7.4 Smoke and Fire Dampers			
a.Maintenance access shall be provided at all dampers.		Yes	
b.All damper locations shall be shown on design drawings.		Yes	
c.Air-handling systems shall be arranged such that damper activation will not damage ducts.		Yes	
6.7.5 Duct Penetrations. Ducts that penetrate construction intended to protect against x-ray, magnetic, radio frequency interference (RFI), or other radiation shall not impair the effectiveness of the protection, nor shall the treatment of these penetrations impair the ventilation of the space served.		N/A	
6.8 Energy Recovery Systems			
6.8.1 General. Energy recovery systems shall be located upstream of Filter Bank No. 2. If energy recovery systems are used, the systems shall not allow for any amount of cross-contamination of exhaust air back to the supply airstream via purge, leakage, carryover, or transfer except as allowed in Section 6.8.3.		Yes	
6.8.2 Airborne Infectious Isolation Room Exhaust Systems. Airborne infectious isolation room exhaust systems serving AII rooms or combination AII/PE rooms shall not be used for energy recovery.		N/A	
Exception to 6.8.2: Airborne infectious isolation room exhaust systems serving AII rooms or combination AII/PE rooms may be served by an energy recovery system where the supply airstream components and the exhaust airstream components are fully separated by an air gap of adequate distance to prevent cross-contamination that is open to the atmosphere (e.g., run-around pumped coils).		N/A	
6.8.3 Energy Recovery Systems with Leakage Potential. If energy recovery systems with leakage potential are used, they shall be arranged to minimize the potential to transfer exhaust air directly back into the supply airstream. Energy recovery systems with leakage potential shall be designed to have no more than 5% of the total supply airstream consisting of exhaust air. Energy recovery systems with leakage potential shall not be used from these exhaust airstream sources: emergency department waiting rooms, triage, emergency department decontamination, radiology waiting rooms, darkroom, bronchoscopy sputum collection and pentamidine administration, laboratory fume hood and other directly ducted laboratory equipment exhaust, waste anesthesia gas disposal, autopsy, nonrefrigerated body holding, endoscope cleaning, central medical and surgical supply soiled or decontamination room, laundry general, hazardous material storage, dialyzer reprocessing room, nuclear medicine hot lab, nuclear medicine treatment room, and any other space identified by the AHJ or the infection control risk assessment (ICRA) team.		N/A	
6.9 Insulation and Duct Lining			
a.An exterior vapor barrier shall be provided for insulation on cold surfaces. A vapor barrier is not required for insulation materials that do not absorb or transmit moisture.		Yes	
b.Existing insulation and duct lining accessible during a renovation project shall be inspected, repaired, and/or replaced as appropriate.		N/A	
c.Duct lining shall not be used in ductwork located downstream of Filter Bank No. 2. Duct lining with an impervious cover may be allowed in terminal units, sound attenuators, and air distribution devices downstream of Filter Bank No. 2. This lining and cover shall be factory installed.		Yes	
d.Duct lining shall not be installed within 15 ft (4.57 m) downstream of humidifiers.		Yes	
7. SPACE VENTILATION—HOSPITAL SPACES			
8. SPACE VENTILATION—OUTPATIENT SPACES			
The ventilation requirements of this standard are minimums that provide control of environmental comfort, asepsis, and odor in outpatient health care facilities. However, because they are minimum requirements and because of the diversity of the population and variations in susceptibility and sensitivity, these requirements do not provide assured protection from discomfort, airborne transmission of contagions, and odors.			
8.1 General Requirements. The following general requirements shall apply for space ventilation:			
a.Spaces shall be ventilated according to Table 8.1.			
1.Design of the ventilation system shall provide air movement that is generally from clean to less-clean areas. If any form of variable-air-volume or load-shedding system is used for energy conservation, it shall not compromise the pressure balancing relationships or the minimum air changes required by the table.		Yes	
2.The ventilation rates in this table are intended to provide for comfort as well as for asepsis and odor control in spaces of a health care facility that directly affect patient care. Ventilation rates for spaces not specified here shall be obtained from ANSI/ASHRAE Standard 62.1 1. Where spaces with prescribed rates in both Standard 62.1 and Table 8.1 of this standard exist, the higher of the two air change rates shall be used.		Yes	

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
3.For design purposes, the minimum number of total air changes indicated shall be either supplied for positive pressure rooms or exhausted for negative pressure rooms. Spaces that are required in Table 8.1 to be at a negative pressure relationship and that are not required to be exhausted shall use the supply airflow rate to compute the minimum total air changes per hour required. For spaces that require a positive or negative pressure relationship, the number of air changes can be reduced when the space is unoccupied, provided that the required pressure relationship to adjoining spaces is maintained while the space is unoccupied and that the minimum number of air changes indicated is reestablished anytime the space becomes occupied. Controls intended to switch the required pressure relationships between spaces from positive to negative, and vice versa, shall not be permitted. Air change rates in excess of the minimum values are expected in some cases in order to maintain room temperature and humidity conditions based on the space cooling or heating load.		
4.The entire minimum outdoor air changes per hour required by Table 8.1 for the space shall meet the filtration requirements of Section 6.4.	Yes	
5.For spaces where Table 8.1 permits air to be recirculated by room units, the portion of the minimum total air changes per hour required for a space that is greater than the minimum outdoor air changes per hour required component may be provided by recirculating room HVAC units. Such recirculating room HVAC units shall		
i.not receive nonfiltered, nonconditioned outdoor air;	Yes	
ii.serve only a single space; and	Yes	
iii.provide a minimum MERV 6 filter for airflow passing over any surface that is designed to condense water. This filter shall be located upstream of any such cold surface, so that all of the air passing over the cold surface is filtered.	Yes	
6.For air-handling systems serving multiple spaces, system minimum outdoor air quantity shall be calculated using one of the following methods:		
i.System minimum outdoor air quantity for an air-handling system shall be calculated as the sum of the individual space requirements as defined by this standard.		
ii.System minimum outdoor air quantity shall be calculated by the Ventilation Rate Procedure (multiple zone formula) of ASHRAE Standard 62.1 1. The minimum outdoor air change rate listed in this standard shall be interpreted as the Voz (zone outdoor airflow) for purposes of this calculation.		
b.Air filtration for spaces shall comply with Table 6.4.		
c.Supply air outlets for spaces shall comply with Table 6.7.2.		
d.In All rooms, protective environment rooms, wound intensive care units (burn units), and operating and procedure rooms, heating with supply air or radiant panels that meet the requirements of Section 6.5.3 shall be provided.		

Table 8.1 Design Parameters—Outpatient Spaces

Function of Space	Pressure Relation	Minimum Outdoor ach	Minimum Total ach	All Room Air	Air Recirculated by Means of Room Units (a)	Design Relative Humidity (k), %	Design Temperature (l), °F/°C		
Medical/ anesthesia	Negative	NR	8	Yes	NR	NR	NR	N/A	
Treatment room	NR	2	6	NR	NR	Max 60	70–75/21–24	Yes	
Toilet room	Negative	NR	10	Yes	No	NR	NR	Yes	
General examination room	NR	2	4	NR	NR	Max 60	70–75/21–24	Yes	
Laboratory work area,	Negative	2	6	NR	NR	NR	70–75/21–24	Yes	
Medication room	NR	2	4	NR	NR	Max 60	70–75/21–24	Yes	
Janitor's closet	Negative	NR	10	Yes	No	NR	NR	Yes	
Clean workroom or	Positive	2	4	NR	NR	NR	NR	Yes	
Hazardous material storage	Negative	2	10	Yes	No	NR	NR	Yes	
Soiled workroom or	Negative	2	10	Yes	No	NR	NR	Yes	
Note: NR = no requirement									
Normative Notes for Table 8.1:									

a.Except where indicated by a "No" in this column, recirculating room HVAC units (with heating or cooling coils) are acceptable for providing that portion of the minimum total air changes per hour that is permitted by Section 8.1 (subparagraph [a][5]). Because of the cleaning difficulty and potential for buildup of contamination, recirculating room units shall not be used in areas marked "No." Recirculating devices with high-efficiency particulate air (HEPA) filters shall be permitted in existing facilities as interim, supplemental environmental controls to meet requirements for the control of airborne infectious agents. The design of either portable or fixed systems should prevent stagnation and short circuiting of airflow. The design of such systems shall also allow for easy access for scheduled preventative maintenance and cleaning.		
f.Higher ventilation rates above the total ach listed shall be used when dictated by the laboratory program requirements and the hazard level of the potential contaminants in each laboratory work area. Lower total ach ventilation rates shall be permitted when a Hazard Assessment performed as part of an effective Laboratory Ventilation Management Plan per ANSI/AIHA/ASSE Z9.5, American National Standard for Laboratory Ventilation13 determines that either (a) acceptable exposure concentrations in the laboratory work area can be achieved with a lower minimum total ach ventilation rate than is listed in Table 8.1 or (b) a demand control approach with active sensing of contaminants or appropriate surrogates is used as described in ASHRAE Handbook—HVAC Applications, Chapter 16, "Laboratories" (Informative Note: See ASHRAE [2015] in Informative Appendix B).		
p.Treatment rooms used for bronchoscopy shall be treated as bronchoscopy rooms. Treatment rooms used for procedures with nitrous oxide shall contain provisions for exhausting anesthetic waste gases.		
r.See NFPA 99 10 for further requirements.		
v.Room temperature ranges that exceed the minimum indicated range shall be permitted if required by the laboratory program or laboratory equipment.		
aa.Examination rooms programmed for use by patients with undiagnosed gastrointestinal symptoms, undiagnosed respiratory symptoms, or undiagnosed skin symptoms.		

2.2 Specific Requirements for General and Specialty Medical Services Facilities	Compliant	Notes
8.2 Additional Room-Specific Requirements		
8.2.1 Airborne Infection Isolation (AII) Rooms. Ventilation for AII rooms shall meet the following requirements whenever an infectious patient occupies the room:	N/A	
8.2.2 Protective Environment (PE) Rooms. Ventilation for PE rooms shall meet the following requirements:	N/A	
8.2.3 Combination Airborne Infectious Isolation/Protective Environment (AII/PE) Rooms. Ventilation for AII/PE rooms shall meet the following requirements:	N/A	
8.3 Critical Care Units	N/A	
8.4 Surgery Rooms	N/A	
8.5 Support Spaces	N/A	
8.6 Psychiatric Patient Areas. All exposed equipment located with these spaces shall have enclosures with rounded corners and tamper-resistant fasteners. With the exception of HVAC room recirculating units, equipment shall be arranged such that maintenance personnel are not required to enter patient care spaces for service.	N/A	
END OF FGI COMPLIANCE REPORT		