

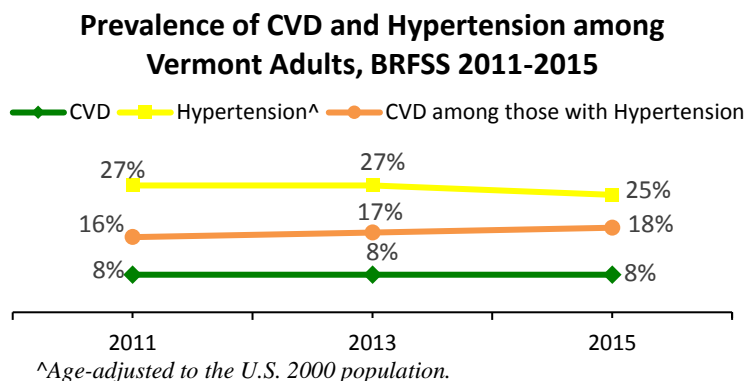
Cardiovascular Events among Adults with Diagnosed Hypertension – Data Brief

Background

Hypertension is a powerful risk factor for cardiovascular disease (CVD) among people of all ages and between both sexes.¹ CVD refers to a group of conditions including coronary heart disease (CHD), heart attack, and stroke. Hypertension is a significant source of morbidity and the main contributor to lethal cardiac events. Untreated hypertension increases the incidence of cardiovascular events two- to fourfold. Chronic conditions such as obesity, diabetes, and high cholesterol double the risk of hypertension-associated CVD.² Several health behaviors, such as tobacco use, physical inactivity, and poor nutrition, are associated with the previously mentioned chronic conditions as well as hypertension and CVD. Most people with hypertension are unaware that they have it. This data brief presents the prevalence and burden of diagnosed hypertension among Vermonters.

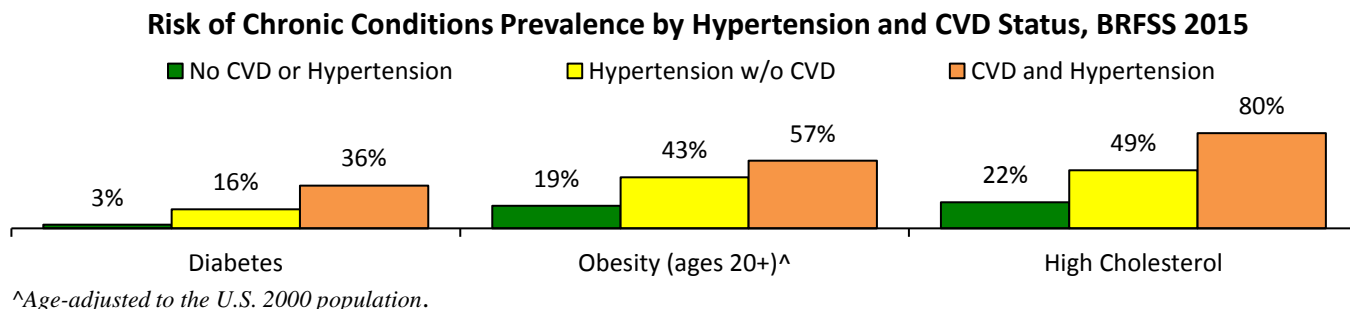
Prevalence of CVD and Hypertension

In 2015, a quarter (25%) of Vermont adults had been diagnosed with hypertension while 8% had been diagnosed with CVD; 5% had a heart attack, 4% CHD, and 3% a stroke.³ More than half of adults with hypertension (18%) also had CVD. Hypertension increased with age. Adults 60 years and older were significantly more likely to have hypertension (53%) and hypertension-associated CVD (24%) than adults 18-59 (19% and 10%, respectively).³



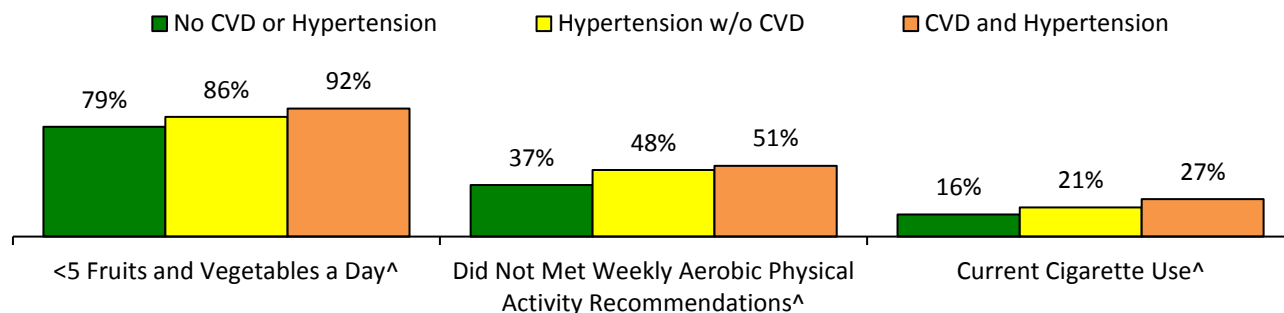
Hypertension and Associated Cardiac Risk Factors

In 2015, Vermont adults without hypertension or CVD were significantly less likely to have diabetes (3%), be obese (19%), or have high cholesterol (22%) than adults who had hypertension (16%, 43%, and 49%, respectively) or those who had both hypertension and CVD (36%, 57%, and 80%, respectively). Adults with both hypertension and CVD were significantly more likely to have diabetes or high cholesterol than adults who had only hypertension.³



Not meeting physical activity guidelines was significantly more likely among those with hypertension (48%) and CVD and hypertension (51%) than among adults who did not have hypertension and CVD (37%). Adults having consumed less than five fruits and vegetables a day was significantly more likely among those with hypertension (86%) or CVD and hypertension (92%) when compared to those who did not have hypertension and CVD (79%).³ There were no significant differences in smoking rates.

Health Behaviors by Hypertension and CVD Status, BRFSS 2015



[^]Age-adjusted to the U.S. 2000 population.

Morbidity and Mortality of Hypertension Associated CVD

In 2014, 3% of Emergency Departments (ED) visits at Vermont hospitals had a primary diagnosis of CVD.⁴ Of the 5,516 ED visits for CVD, 41% had hypertension listed as a contributing cause for their visit. One in eight (12%) hospitalizations at Vermont hospitals in 2014 had a primary diagnosis of CVD (5,412 admissions). Over half (56%) of hospitalizations with a primary diagnosis of CVD had a contributing diagnosis of hypertension. Almost a quarter (23%) of all Vermont deaths in 2014 had a primary cause of CVD. Of the 1,160 deaths due to CVD, 47% had a contributing cause of death of hypertension listed.⁵

Reduce the Impact of Hypertension

Diagnosing and controlling hypertension are essential to reduce its impact on Vermonters. Lifestyle changes can effectively lower and control hypertension and antihypertensive medications can reduce cardiovascular events attributed to hypertension.⁶ Several strategies that providers can promote and patients can use to control hypertension are:

- 1) Offer blood pressure checks, recommended for all adults.
- 2) Provide awareness, resources, and tools (<http://millionhearts.hhs.gov/tools-protocols/tools.html>) to increase patient engagement.
- 3) Use Community Health Teams available through the Vermont Blueprint for Health to promote healthy eating and physical activity through resources for health coaching, care coordination, and other team based approaches.
- 4) Encourage employers to implement policies that support physical activity and healthy eating (http://healthvermont.gov/family/fit/documents/WorksiteWellness_Resource.pdf).
- 5) Support policies which reduce cost sharing/out-of-pocket expenses for patients with hypertension for services such as medication management, behavior counseling, and behavior support (community-based weight management programs, gym memberships).

For more information, please contact Paul Meddaugh, MS, Vermont Department of Health (paul.meddaugh@vermont.gov; 802-951-0133).

¹ Franklin SS, Wong ND. Hypertension and Cardiovascular Disease: Contributions of the Framingham Heart Study. *Glob Heart*, 2013;8(1):49-57.

² Kannel WB. Hypertension as a Risk Factor for Cardiac Events-Epidemiologic Results of Long-Term Studies. *J Cardiovasc Pharmacol*, 1993;21(Suppl. 2):S27-S37.

³ Vermont Behavioral Risk Factor Surveillance System.

⁴ Vermont Uniform Hospital Discharge Data Set (VUHDDS), 2014.

⁵ Vermont Vital Statistics, 2014.

⁶ Joffres M et al. Hypertension prevalence, awareness, treatment and control in national surveys from England, the USA and Canada, and correlation with Stroke and ischemic heart disease mortality: a cross-sectional study. *BMJ Open*, 2013;3(8):e003423.