

The Vermont Department of Health

The Importance of Cancer Prevention

Guidance • Support • Prevention • Protection

VTAAC Annual Meeting April 25, 2014
 Commissioner of Health: Harry Chen, MD

The Vermont Department of Health

Overview of Presentation

- Vermont Department of Health Overview
- Leading and Actual Causes of Death in VT and U.S.
- Vermont's Cancer Burden
- What Causes Cancer?
- Prevention for General Population and Survivors
 - ✓ Tobacco
 - ✓ Infections
 - ✓ Radiation
 - ✓ Physical Activity, Obesity & Diet,
 - ✓ Alcohol
 - ✓ Environmental Exposures
- Vermont Risk Factor Prevalence
- Summary: Empowering Vermonters to Live Well

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Vision

Healthy Vermonters living in healthy communities.

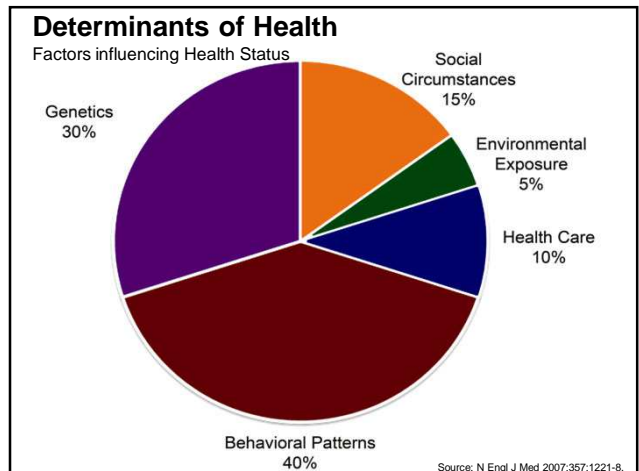
Mission

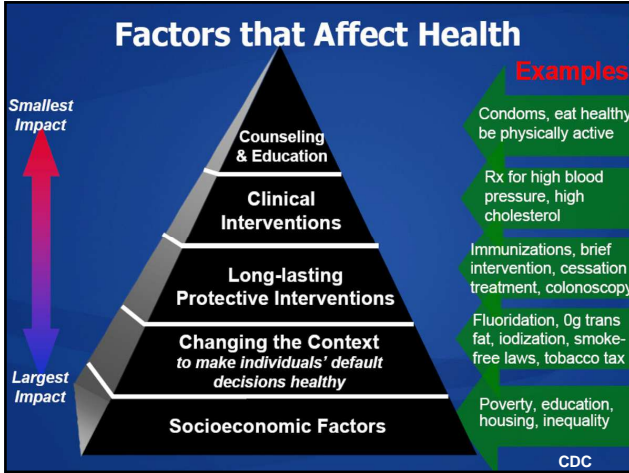
To protect and promote optimal health for all Vermonters.

Goals

1. Effective and integrated public health programs
2. Communities with the capacity to respond to public health needs
3. Internal systems that provide consistent and responsive support
4. A competent and valued workforce that is supported in promoting and protecting the public's health
5. A public health system that is understood and valued by Vermonters
6. Health equity for all Vermonters

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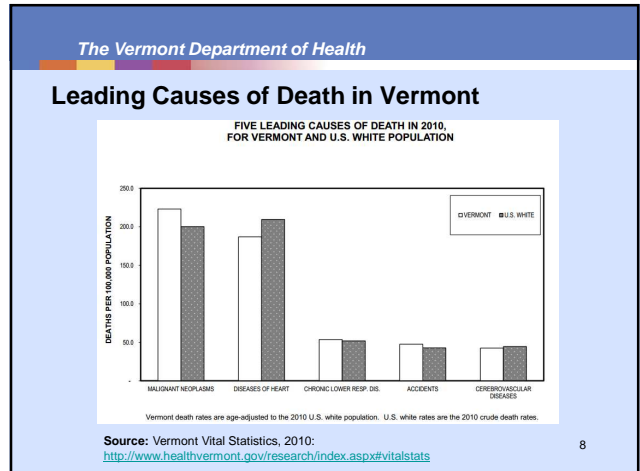
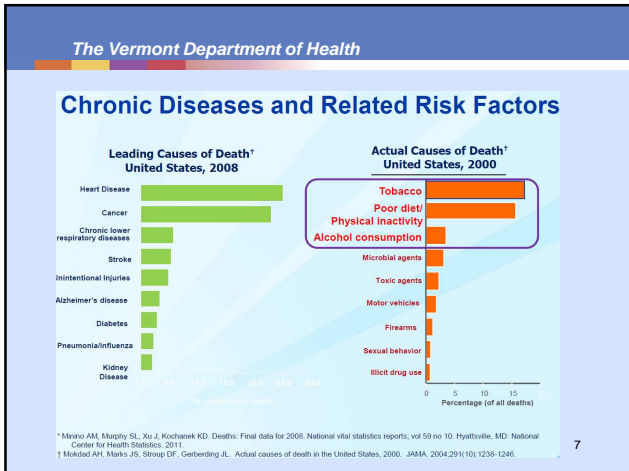


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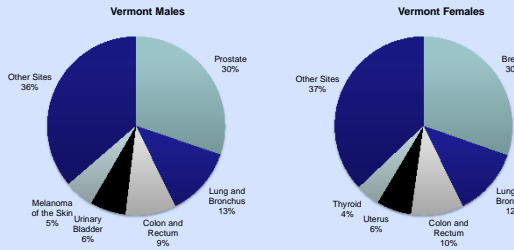
Vermont State Cancer Plan

Healthy Vermonters 2020

- Prevent Future Cancers
- Detect New Cancers Early
- Increase Access to Optimal Treatment
- Cancer Survivorship
- Improve End-of-Life Care
- Reduce overall cancer deaths
- Increase % of adults receiving cancer screening
- Increase % of survivors who report excellent to good general health and always or usually getting emotional support
- Many measures relating to cancer prevention (tobacco, nutrition, weight, physical activity, environmental health)



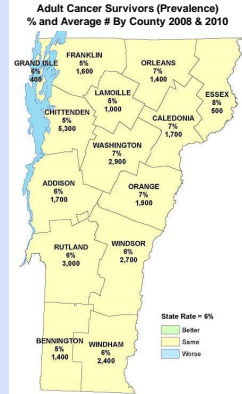
Vermont Cancer Incidence, 2006-2010



Source: Vermont Cancer Registry

Vermont Cancer Survivors

- ~ 36,000 Adult Survivors (reporting in 2012 ever been diagnosed with cancer*)
- 6% of VT Population
- County survivor rates similar compared to VT overall (2008 & 2010)



*Excludes non-melanoma skin cancer
Data Source: BRFSS, 2008, 2010, 2012

What Causes Cancer?

Factors known to increase cancer risk

- Cigarette Smoking and Tobacco Use
- Infections
- Radiation
- Immunosuppressive Medicines

Factors that may affect cancer risk

- Diet
- Physical Activity
- Obesity
- Alcohol
- Environmental Risk Factors

At least half of all cancer deaths result from preventable exposures.

50-75%

50-75% of cancer deaths in the U.S. are caused by human behaviors including tobacco use, alcohol abuse, and excess calories



Some cancers are caused by exposure to viruses (including HPV and HBV)



Source: <http://progressreport.cancer.gov/doc.aspx?ip=18&id=2009&mid=vc01&cid=91>

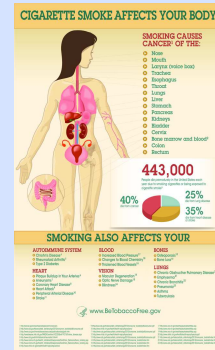
Many chronic diseases have modifiable risk factors in common.

	Cancer	Diabetes	Arthritis	Heart Disease	Depression
Regular Exercise	✓	✓	✓	✓	✓
Eating Right	✓	✓	✓	✓	✓
Obesity	✓	✓	✓	✓	✓
Tobacco Use	✓	✓	✓	✓	✓
Alcohol Use	✓	✓	✓	✓	✓

Tobacco is the leading cause of preventable death.

Cancers Caused by Smoking:

- Oropharynx
- Larynx
- Esophagus
- Trachea
- Lung and Bronchus
- Acute Myeloid Leukemia
- Stomach
- Liver
- Pancreas
- Kidney
- Ureter
- Cervix
- Bladder
- Colorectal



Cancer Survivorship and Tobacco Prevention

Smoking after diagnosis:

- Increased cancer recurrence or other types of cancers
- Increased risk of other serious illnesses, such as heart and lung diseases
- Increased odds of shorter survival
- Increased treatment-related side effects

Cessation after diagnosis:

- Studies show cancer survivors who stop smoking have significantly less risk for subsequent primary cancer than those that continue to smoke.

Tabuchi, Y, Ito, A, Ioka, T, Nakayama, I, Myashiro, and H, Tsukuma. Tobacco smoking and the risk of subsequent primary cancer among cancer survivors: a retrospective cohort study. Ann Oncol first published online July 25, 2013

Vermont Tobacco Use & Initiatives

VT Tobacco Use

- Smoking rates similar between adult cancer survivors and adults without a cancer diagnosis (17%, BRFSS 2012)

VT Tobacco Control Program:

- Youth Prevention
 - Second Hand Smoke Reduction
 - Adult Cessation
- 802 Quits** offers 3 ways to quit: By Phone—Online—In Person



Future Efforts

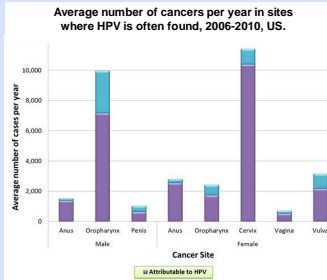
- Cessation initiatives for people diagnosed with cancer
- Focus on lung cancer screening for heavy current/past smokers

Data Source: BRFSS, 2010 and 2012

Infections – Human Papilloma Virus (HPV)

Cancers Associated with HPV

- Cervix, Vulva, Vagina, Penis, Anus, and Oropharynx
- By 2020 it is estimated that HPV will cause more mouth and throat cancers in men than cervical cancers in women.



How many cancers are linked with HPV each year?, Centers for Disease Control and Prevention, www.cdc.gov accessed 4/16/14.

The HPV vaccine is an anti-cancer vaccine!

Vermont HPV Immunization & Initiatives

Vermont Teens	≥ One Dose	≥ 3 Doses	Year
Females (age 13-17)	66%	46%	2012
Males (age 13-17)	35%	11%	2012

How do we compare?

- VT's rates are better than U.S. overall.
- US rates are low compared to many other countries (Australia, U.K., Canada, Netherlands).

Focus Areas for Improving HPV Vaccination rates in Vermont:

- Mobilize partners and stakeholders
- Strengthen providers' commitment and recommendation
- Increase public awareness of HPV vaccine as cancer prevention
- Address vaccine safety concerns at every opportunity
- Use systems approaches to improve vaccine coverage

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Data Source: National Immunization Survey, 2012

Radiation—Ultraviolet Light

Vermont Facts:

- Consistently ranks in **top 5** melanoma rates in the U.S.
- Melanoma is the **5th** most common cancer diagnosed in men & women.
- In 2004, **45%** of adults said they had ≥ 1 sunburn in the last year.
- In 2013, **60%** of high school & **45%** of middle school students reported never or rarely using sun protection when in the sun for ≥ 1 hours.

Vermont Activities:

- 2012 legislation prohibits use of tanning devices by youth < age 18
 - ✓ *Tanning facilities must prohibit use by youth and post a VDH warning sign*
- VDH and VTAAC Sun Safety Task Force to assess use of evidence-based approaches to address melanoma prevention
 - ✓ *Explore use of sun-safety programs in Vermont schools*



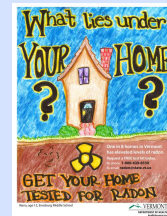
Data Source: VCR (2006-20010), BRFS 2004, YRBS 2013

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Radiation—Radon

Vermont Facts:

- 1 out of 8 homes has elevated radon
- Radon is the **2nd** leading cause of lung cancer after smoking
- Smoking and exposure to radon gas = a **greater** risk of lung cancer



Vermont Activities:

- Promote free radon test kits (VDH Radon program)
- Radon mitigation in homes with high radon- reduce financial barriers
- Promote Radon Resistant New Construction (RRNC)

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Physical Activity, Obesity and Diet

Physical Activity Linked to Lower Risk

- Colorectal cancer
- Postmenopausal breast cancer
- Endometrial cancer

Obesity Linked to Higher Risk

- Postmenopausal breast cancer
- Colorectal cancer
- Endometrial cancer
- Esophageal cancer
- Kidney cancer
- Pancreatic cancer

Diet and Cancer Risk

- Hard to study the effects of diet on cancer
- Fruits & vegetables *may* protect against mouth, esophagus & stomach cancers
- Conflicting evidence on whether diet high in fat, proteins & red meat increases colorectal cancer risk



Cancer Survivorship and Obesity Prevention

Physical Activity

- Increased physical activity after diagnosis may result in decrease in total death and cancer recurrence for breast and colorectal cancers.
- Prostate, lung & endometrial cancers: possible lower morbidity & mortality with increased physical activity after diagnosis.

Obesity

- Link between obesity and risk of recurrence, progression, and death for breast, prostate, endometrial and colon cancers.

Diet

- Hard to study effects of diet on survival – studies are ongoing
- Some studies showing possible link between diet and breast, prostate, and colorectal cancer recurrence.

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Bernstein L. AACR Education Book 2008:225-231. Meyerhardt JA, et al. J Clin Oncol 2006; 24:3535-41. Friedenreich CM, et al. J Nutr 132:3456-3464, 2002.

Physical Activity, Obesity & Diet Initiatives



Studies show that a sedentary lifestyle is more prevalent among cancer survivors than the general population

VDH Physical Activity and Nutrition Program

- Evidence based strategies in schools, communities & worksites
- *Make Your Moment Now* media campaign

Vermont Survivor Efforts

- Several survivor programs focus on physical activity and nutrition
- VTAAC Quality of Life Workgroup working on creating a survivor wellness resource

Data Source: BRFSS, 2010 and 2012

Alcohol Use

Cancers Linked to Alcohol:

- Oral
- Esophageal
- Breast
- Colorectal (in men)
- **May** increase liver cancer & female colorectal cancer risk

Vermont Data

- Adult cancer survivors less likely to binge drink than adults without a cancer diagnosis (7% vs. 18%, BRFSS 2010)

Vermont Initiatives

- VDH Alcohol and Drug Abuse Program works with partners to plan, support, and evaluate a comprehensive system of prevention services
- Survivorship-focused alcohol prevention efforts are not currently being carried out statewide.



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Environmental Exposures

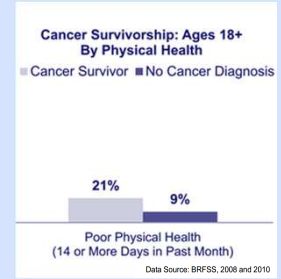
- Links between secondhand tobacco smoke, outdoor air pollution, asbestos and risk for lung cancer.
- High levels of arsenic in drinking water linked to skin, bladder and lung cancers.
- Unclear results looking at cancer link between pesticides & other pollutants.
- Difficult to study environmental exposure risk on cancer.

Vermont Initiatives

- Environmental Public Health Tracking program implemented jointly by the Departments of Health and Environmental Conservation.
- VT monitors cancer incidence and mortality. Data are used to study trends and to research causes.

Vermont Adult Survivor Health

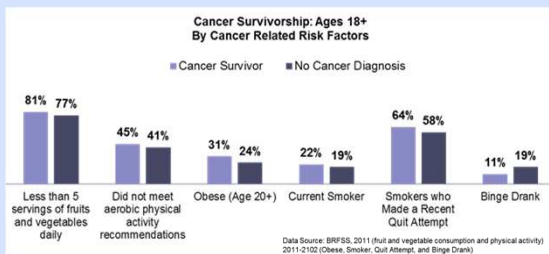
- More than twice as many cancer survivors reported poor physical health vs those never diagnosed with cancer
- Similar % of survivors and those never diagnosed with cancer reporting having anxiety, depression, and poor mental health (chart not shown)



Prevalence of Cancer-Related Risk Factors in Vermont

Adult survivors versus those never diagnosed with cancer:

- Equally likely to have modifiable risk factors, except for binge drinking behavior.



Notes: All rates (except binge drinking) are age adjusted to the 2000 U.S. standard population. Obesity rates include adults, age 20 and over, with a Body Mass Index (BMI) classified as obese (BMI of 30+).

Promote Cancer Prevention!

As experts, we must inspire populations & individuals to:

Understand the link between modifiable risk factors and cancer and other chronic diseases

- ✓ Stay away from tobacco.
- ✓ Stay at a healthy weight.
- ✓ Get moving with regular physical activity.
- ✓ Eat healthy with plenty of fruits and vegetables.
- ✓ Limit consumption of alcoholic beverages.
- ✓ Protect their skin from the sun.
- ✓ Know themselves, their family history, and their risks.
- ✓ Have regular check-ups, immunizations & cancer screening tests.
- ✓ Test their homes for radon gas

Survivor-Specific Prevention

Improvements in screening rates & treatment = more survivors!

Survivors should:

- Be educated on link between risk factors & cancer recurrence/mortality
- Follow general cancer prevention guidelines
- Begin normal exercise activity as soon as possible after diagnosis.
Exercise during treatment is proven* to:
 - ✓ Be safe & feasible
 - ✓ Improve quality of life
 - ✓ Reduce fatigue
- Stay connected with friends, family and other survivors
- Know their risk of secondary cancers related to treatment
- Follow Provider (cancer specialists & primary care provider) guidance on screening tests and check-ups

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*Schmitz, et al. Med Sci Sports Exerc. 2010

Questions?



"How many times should I push the elevator buttons to equal the same calories as taking the stairs?"

Commissioner of Health:
Harry Chen, MD
802-863-7280
Harry.Chen@state.vt.us

Comprehensive Cancer Control Program
Sharon Mallory, MPH
802-951-4001
Sharon.Mallory@state.vt.us

Cancer Registry Chief
Ali Johnson, MBA
802-651-1612
Alison.Johnson@state.vt.us