A ROADMAP TO BETTER HEALTH
COMMISSIONER HARRY CHEN

VERMONT
DEPARTMENT OF HEALTH

Senate Health and Welfare, January 12, 2016

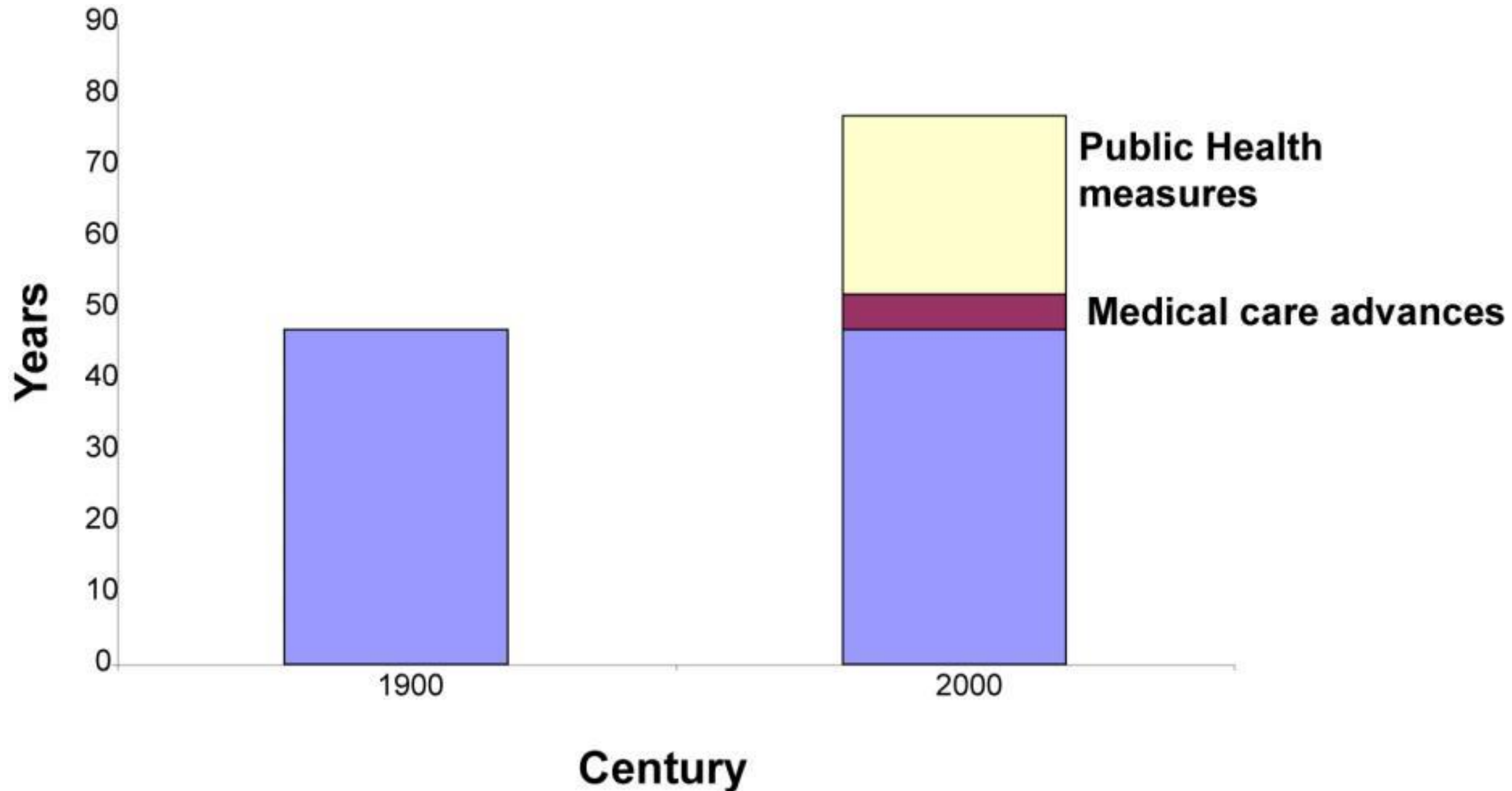
What is Public Health?

What we, as a society do to collectively assure the conditions in which people can be healthy

– Institute of Medicine, 1988

Public* Health = Healthy *Populations

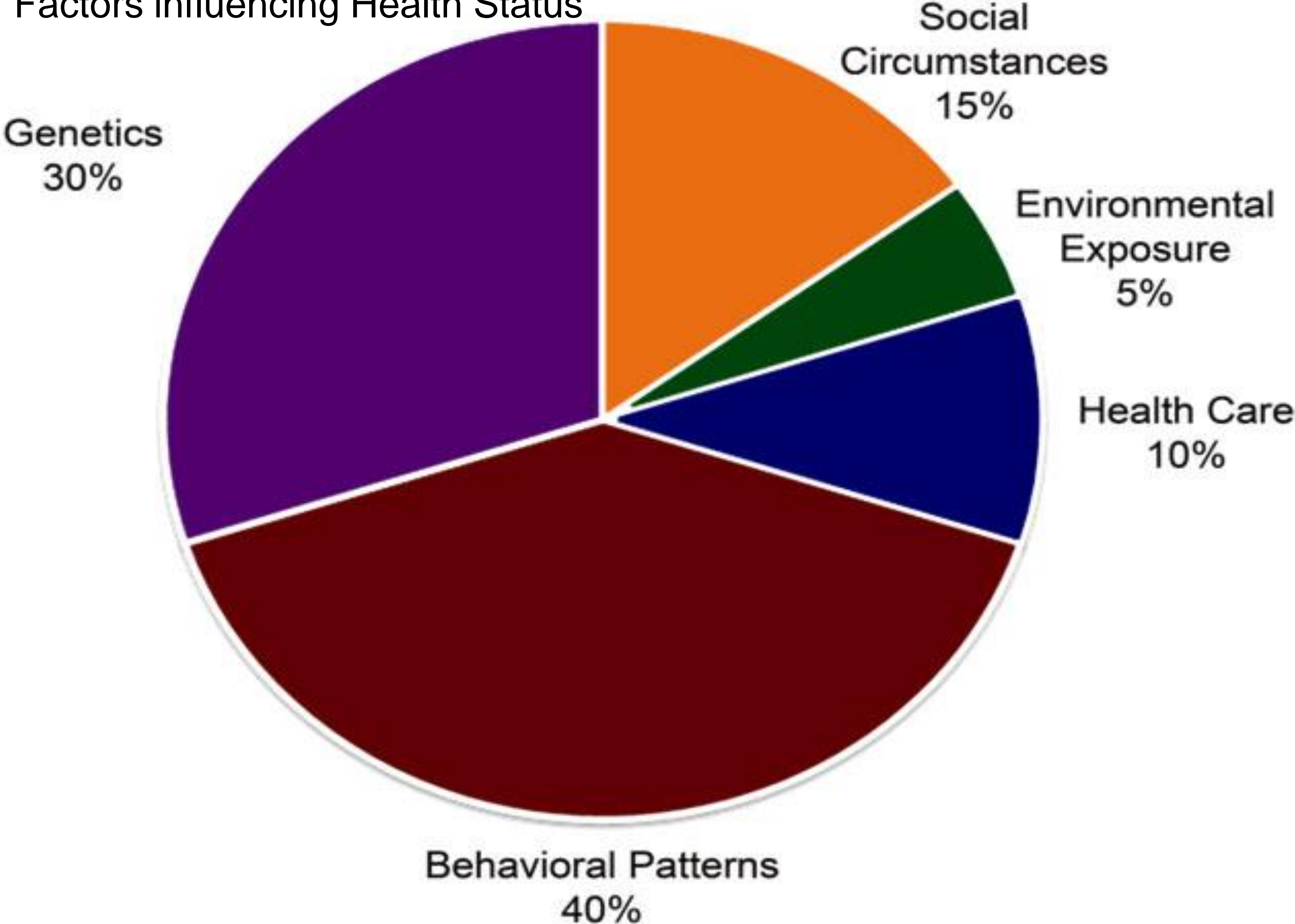
Improvements in Longevity
100 years of Progress



http://action.apha.org/site/PageNavigator/Infographic_Page_2012_10_04_Round_2.html

Determinants of Health

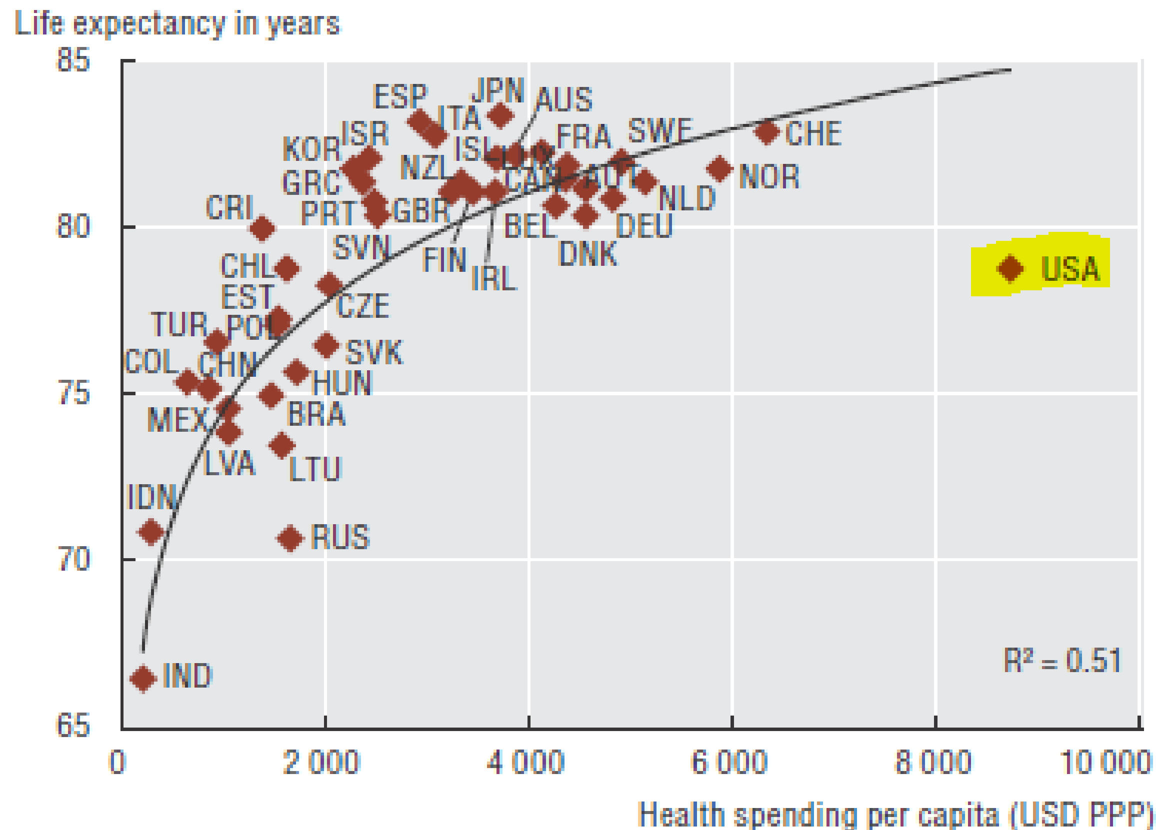
Factors influencing Health Status



Mismatch in Spending

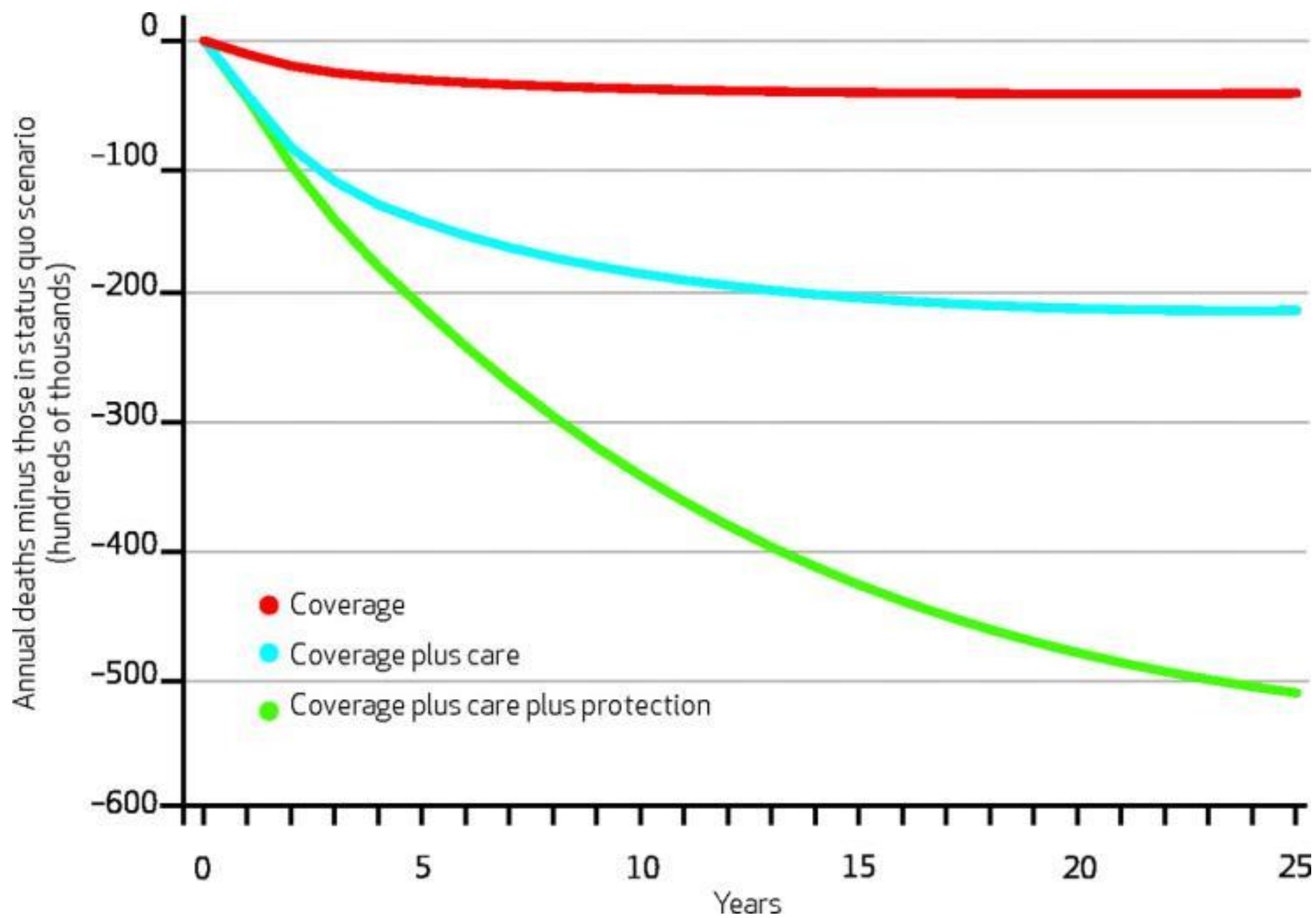
U.S. High Health Spending ≠ Excellent Health Outcomes

3.3. Life expectancy at birth and health spending per capita, 2013 (or latest year)



Source: OECD Health Statistics 2015, http://dx.doi.org/10.1787/health-data-en.

Annual Deaths,
Three Layered Intervention Scenarios, Year 0 To Year 25.



Milstein B et al. Health Aff 2011;30:823-832

Health Affairs

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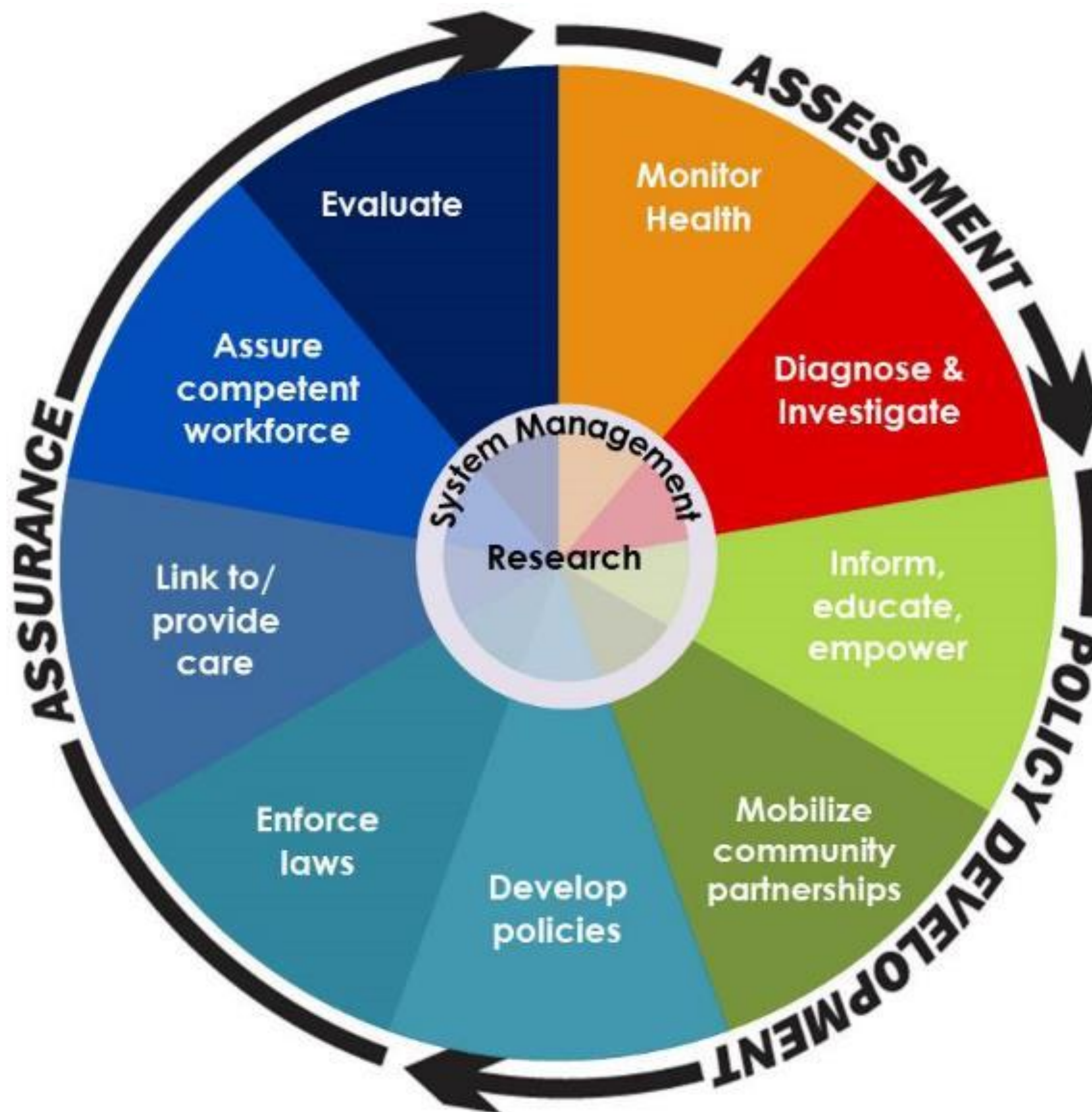
Public Health Practice

- **Data Driven –** What we know about the distribution of disease and disability
- **Evidence Based –** What we know works to improve health and well-being
- **Strategic Prevention –** Where we focus our action to address preventable disease and disability

10 Essential Public Health Services



Data to Drive Decisions

Data to Drive Decisions

Measure characteristics of:

- People
- Places
- Over time

- Data to understand causal and non-causal relationships
- Data to plan and evaluate interventions for improvement
  - Prevention improvements
  - Access and systems improvements

Access to Health Services

INDICATORS/GOALS

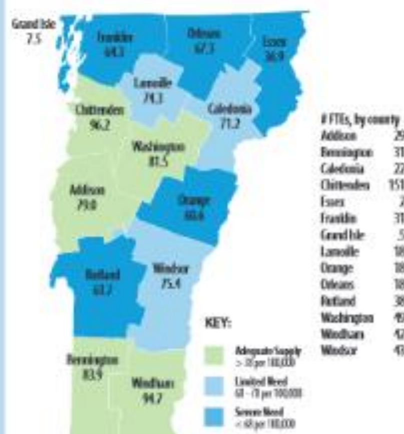
statistically better than US / statistically worse than US

Indicator		
Increase # of practicing primary care providers # Full Time Equivalents (FTEs) – US data not available		
- MDs and DOs	2020 Goal	541
	VT 2010	492
- Physician Assistants	2020 Goal	80
	VT 2010	67
- Nurse Practitioners	2020 Goal	100
	VT 2010	83
Increase % of people who have health insurance	2020 Goal	100%
- adults age 18+	VT 2010	89%
	US 2010	82%
- younger than 18	VT 2010	96%
	US 2010	90%
- all ages	VT 2010	91%
	US 2010	84%
Increase % of adults who have a usual primary care provider	2020 Goal	100%
	VT 2010	90%
	US 2010	82%
Reduce % of people who cannot obtain care, or delay medical or dental care or prescriptions	2020 Goal	5%
	VT 2010	9%
	US 2010	15%
Increase % of people who have a specific source of ongoing health care		* * *
Increase % of people with insurance coverage for clinical preventive services		* * *

Supply of Primary Care Physicians

Full-Time Equivalent (FTE) physicians per 100,000 people, by county – 2010

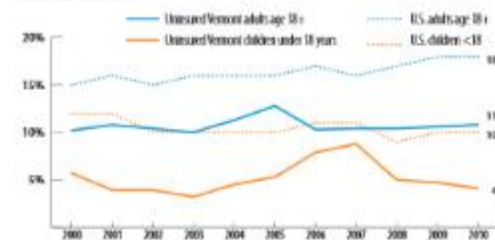
Includes Medical Doctors (MDs) and Doctors of Osteopathic Medicine (DOs)



Statewide: 78.6 FTEs per 100,000 people

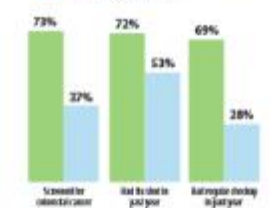
*** comparable Vermont /U.S. data not available and goal to be developed

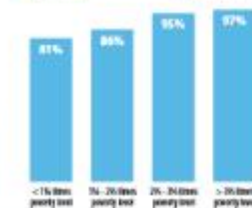
No Health Insurance



Access to Routine Health Care

Health Insurance & Income





Health Insurance for All

Having good health insurance is the starting point for a person's access to quality health care. Compared to the U.S., Vermonters, especially children, have had higher rates of insurance coverage. The goal of universal health insurance coverage is well within reach.

Importance of a Medical Home

Having good access to health care means more than simply having insurance. A medical home is a consistent health care setting with a regular primary care provider or team that ensures quality and appropriate care that includes clinical preventive services such as vaccinations, blood pressure and cholesterol checks, cancer screenings, etc.

Unequal Access to Quality Care

Health insurance coverage is not equal across all groups in the state: eight out of 10 adults of racial or ethnic minority groups have health insurance coverage and a primary care provider, compared to nine of 10 white non-Hispanics. Insurance coverage is nearly universal among people with the highest incomes, while two of 10 adults at the lowest income levels have no health insurance.

Physicians Accepting New Patients

% of primary care physicians who accepted —

	2000	2006	2010
any new patients	80%	82%	85%
new Medicaid patients	77%	68%	77%
new Medicare patients	71%	72%	69%

Core Measures

Health Outcomes

Behaviors
- Smoking
- Excessive Drinking
- Drug Deaths
- Obesity
- Physical Inactivity
- High School Graduation

Community & Environment
- Violent Crime
- Occupational Fatalities
- Children in Poverty
- Air Pollution
- Infectious Disease

Policies
- Lack of Health Insurance
- Public Health Funding
- Immunization Coverage

Clinical Care
- Low Birthweight Infants
- Primary Care Physicians
- Dentists
- Preventable Hospitalizations

Health Outcomes
- Diabetes
- Poor Mental Health Days
- Poor Physical Health Days
- Disparities in Health Status
- Infant Mortality
- Cardiovascular Deaths
- Cancer Deaths
- Premature Death

AMERICA'S ANNUAL REPORT HEALTH RANKINGS
UNITED HEALTH FOUNDATION

Vermont is ~~still~~ the ~~2nd~~ 5th **healthiest** state.

Strengths

- Low prevalence of obesity
- Low violent crime rate
- Low percentage of population without insurance

Challenges

- High prevalence of excessive drinking
- High rate of cancer deaths
- Large disparity in health status by educational attainment

Highlights

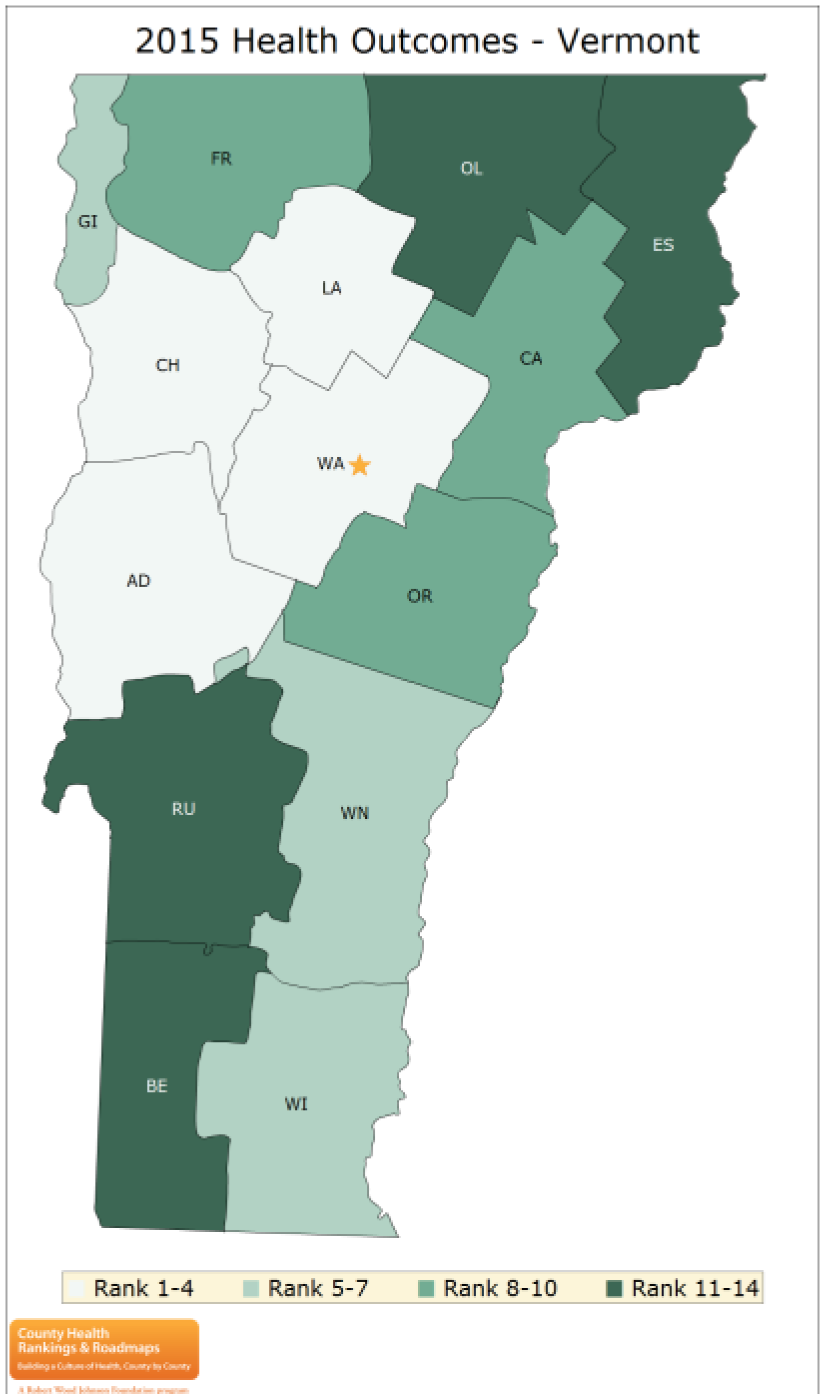
- In the past year, **physical inactivity increased** 17% from 19.0% to 22.2% of adults.
- In the past year, **children in poverty increased** 50% from 11.5% to 17.3% of children.
- In the past 10 years, the percentage of the **population without health insurance decreased** 60% from 11.1% to 4.4%.
- In the past two years, **low birthweight increased** 15% from 6.2% to 7.1% of live births.
- In the past year, **preventable hospitalizations decreased** 10% from 43.2 to 38.8 discharges per 1,000 Medicare enrollees.

Vermonters are not equally healthy

The overall rankings in health outcomes represent how healthy counties are within the state. The healthiest county in the state is ranked #1.

The ranks are based on 2 types of measures:

- how long people live
- how healthy people feel while alive



http://www.countyhealthrankings.org/sites/default/files/state/downloads/2015%20Health%20Outcomes%20-%20Vermont.png

EQUALITY VERSUS EQUITY

In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.

In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.

In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.

Evidence Base to Inform Action

State Health Improvement Plan • 2013-2017

VERMONT
DEPARTMENT OF HEALTH

January 2013

State Health Improvement Plan (SHIP)

The Health Department's priorities:

GOAL 1: Reduce prevalence of smoking & obesity

GOAL 2: Reduce the prevalence of substance abuse and mental illness

GOAL 3: Improve childhood immunization rates

Factors that Affect Health

Smallest Impact

Largest Impact

Pyramid level	Examples
Counseling & Education	Condoms, eat healthy be physically active
Clinical Interventions	Rx for high blood pressure, high cholesterol
Long-lasting Protective Interventions	Immunizations, brief intervention, cessation treatment, colonoscopy
Changing the Context *to make individuals' default decisions healthy*	Fluoridation, 0g trans fat, iodization, smoke-free laws, tobacco tax
Socioeconomic Factors	Poverty, education, housing, inequality

Interventions Changing the Context

- School-Based Programs to Increase Physical Activity
- School-Based Violence Prevention
- Safe Routes to School
- Motorcycle Injury Prevention
- Tobacco Control Interventions
- Access to Clean Syringes
- Pricing Strategies for Alcohol Products
- Multi-Component Worksite Obesity Prevention

Interventions Addressing the Social Determinants of Health

- Early Childhood Education
- Clean Diesel Bus Fleets
- Public Transportation: System Introduction or Expansion
- Home Improvement Loans and Grants
- Earned Income Tax Credits
- Water Fluoridation

How do we put this into practice?

- **Culture of Health:**
  What we do as a society

- **Health in All Policies** (HiAP):
  What we do through governmental action

- **Health Impact Assessments** (HIA):
  A tool for assessing impact
- Broad range of **Public Health Strategies**

Building A Culture of Health in Vermont

What is Health in All Policies?

- Collaborative approach to improving the health of all by incorporating health considerations into decision making across sectors and policy areas
- Ensures that decision-makers are informed about health consequences of various policy options during the decision making process

Executive Order No. 7-15

The Health in All Policies (HiAP) Task Force will identify strategies to more fully integrate health considerations into all state programs and policies, and promote better health outcomes through interagency collaboration and partnership.

Opportunities for System-wide Change

- Institutionalize the vision for sustainability and health
  - Criteria and analytic tools to be used by all gov't branches
  - Interagency Task Force
- Use existing administrative authority
  - Healthy food procurement
  - Staff wellness programs
  - Contract and grant guidance
- Evaluate public policy proposals
- State-wide and Municipal Planning (PSB, Act 250, DRBs)

Vermont Examples

- Health & Community Planning
  - Barre Town Plan
  - ECOS sustainability project
- Health & Housing
  - Support and Services at Home (SASH)
  - Indoor Air Quality and Lead Abatement
- Health & Agriculture & Food
  - Community Supported Agriculture (CSA)
  - Farm to School and Farm to Plate
- Health & Transportation
  - Complete Streets
  - Health Impact Assessment
- Health & State Parks
  - Prescriptions for health

Act 48 Sec. 11. **HEALTH SYSTEM PLANNING, REGULATION, AND PUBLIC HEALTH**

Charges the state with "recommending a plan to institute a public health impact assessment process to ensure appropriate consideration of the impacts on public health resulting from major policy or planning decisions made by municipalities, local entities, and state agencies."

HIA: Essential Questions

- How will the proposed change impact health – positively or negatively?
- Are potential health benefits and risks distributed equitably?
- Are there ways in which the proposal can be modified to maximize beneficial impacts and minimize harmful ones?

Health Impact Assessment — HIA

planBTV South End

- Topic: Development of a master plan for the South End of Burlington
- Health Impacts studied:
  1. Physical activity as it relates to chronic disease
  2. Mental health as it relates to depression, social isolation, and stress

Health Impact Assessment — HIA

Paid Sick Leave Policy

- **Topic:** Effect of a statewide paid sick leave policy
- **Health Impacts studied:**
  1. spread of infectious disease especially in child care and food service settings
  2. access of domestic violence victims to health and social services and maintain employment.
  3. preventable hospitalizations and associated health care costs

Strategic Action for Prevention

3 BEHAVIORS

- No Physical Activity
- Poor Diet
- Tobacco Use

LEAD TO

4 DISEASES

- Cancer
- Heart Disease & Stroke
- Type 2 Diabetes
- Lung Disease

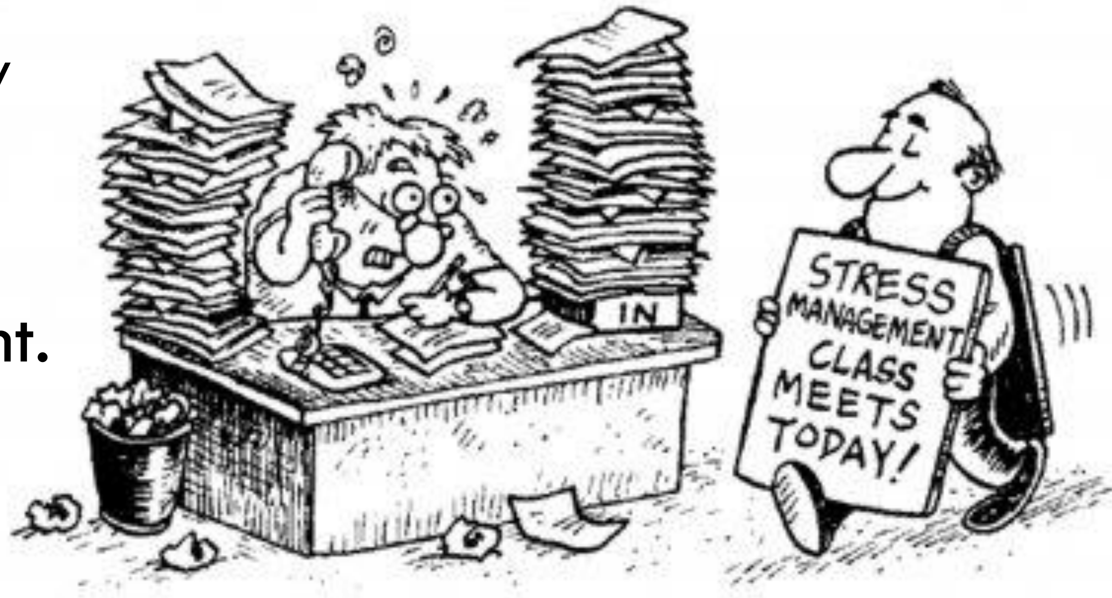
RESULT IN

MORE THAN **50 PERCENT OF DEATHS IN VERMONT**

What if we acted as if disease was **not** inevitable?

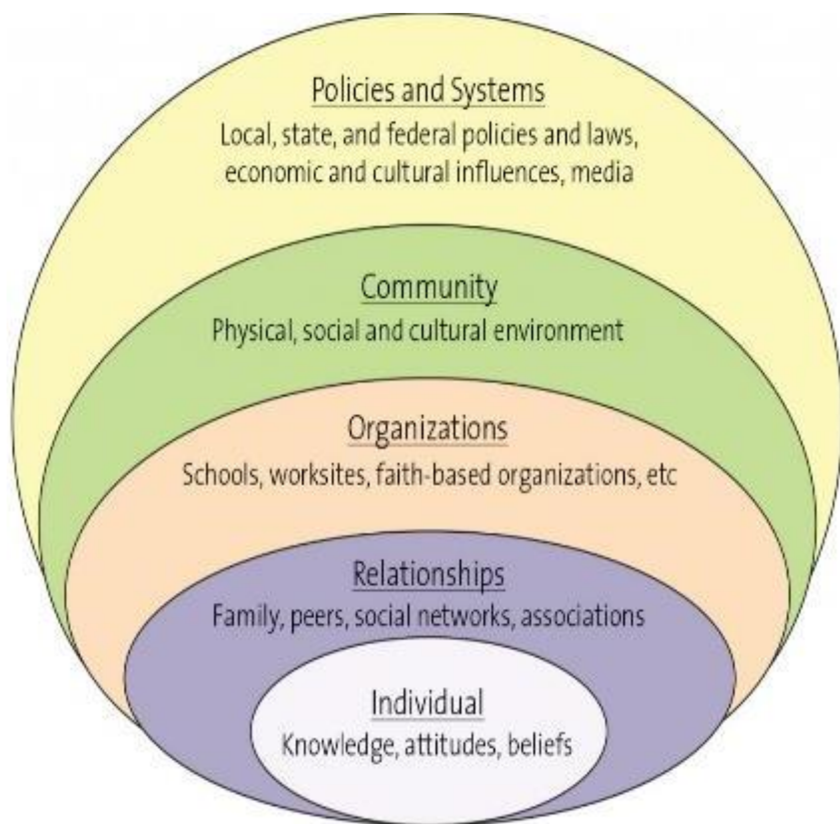
Information is not enough

Just telling people how to be healthy doesn't work, we need to change the environment.



HEALTHY, WEALTHY & WISE 105

Prevention strategies at multiple levels



- Work with state agencies on healthy food procurement and guidelines
- Work with cities and towns on healthy community design
- Work with community organizations to promote second-hand smoke protections
- Support businesses to make workplaces healthier
- Support health care providers to help their patients make healthy changes
- Support Vermonters to take control

Behavioral vs. Standard Economics

Standard Economics	Behavioral Economics
Make rational decisions to maximize happiness	Experience "bounded rationality"
Have all needed information	Impossible to have all needed information ▪ Have limited information-processing abilities anyway
Market forces correct mistakes	Make repeated systematic decision errors

(Ariely, 2008)

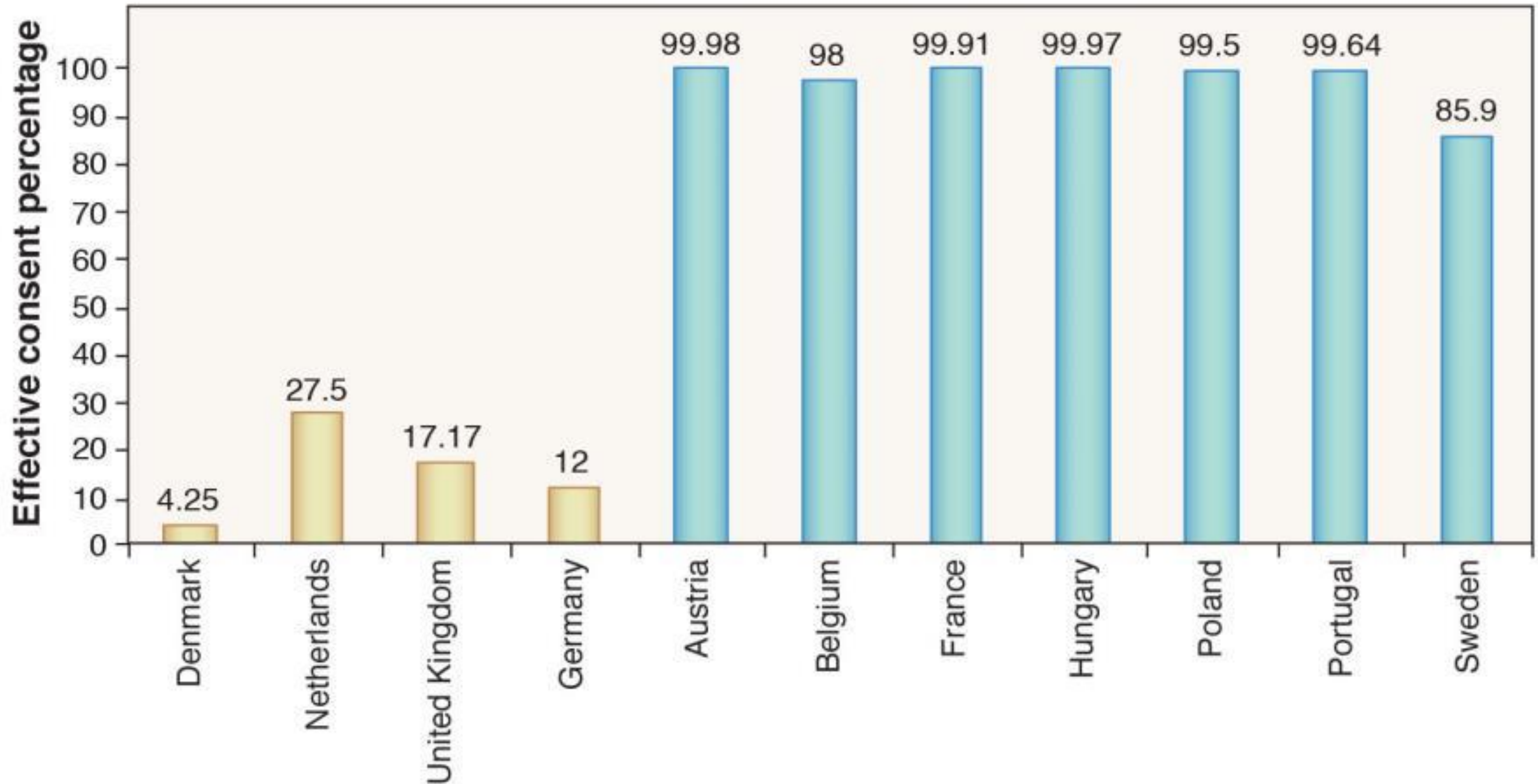
Bad popcorn in big buckets:

portion size can influence intake as much as taste

- Moviegoers in Philadelphia
- Popcorn in medium and large buckets
- Fresh and 14 day old popcorn
- Large buckets + fresh popcorn – **+45%**
- Large buckets + stale popcorn – **+34%**

Wansink and Kim, 2005

Opt-in, Opt-out?



Effective consent rates, by country. Explicit consent (opt-in, gold) and presumed consent (opt-out, blue).

https://www8.gsb.columbia.edu/sites/decisionsciences/files/files/Johnson_Defaults.pdf

Choice Architecture in Action

Photo: Whole Foods

Eat Well • Move More • Learn Better • Live Longer

Working together to eliminate substance abuse in Vermont

ParentUpVT
Parent hears social media message on Pandora and links to ParentUp tips on how to talk with their kids about substance abuse.

School-based Substance Abuse Services
High school student does presentation to school board on Youth Risk Behavior Survey.

Vermont's Most Dangerous Leftovers
Patient sees "Most Dangerous Leftovers" poster in doctor's office; decides to bring unwanted medication to a local drug take-back program.

Recovery Centers
Family member gets recovery coaching at local Turning Point Center.

Community Coalitions
Local partners find most residents support reduced alcohol and tobacco ads in their community.

SBIRT
A relative falls and goes to the emergency department; receives a screening and has access to brief intervention and referral to treatment.

Care Alliance for Opioid Addiction (Hub & Spoke)
Concern about a family member's opiate use leads to referral to treatment programs.

Impaired Driver Rehabilitation Program (Project CRASH)
Family member gets DUI, receives education & assessment.

AHS Districts
Parent applies for Supplemental Nutrition Assistance Program, gets free substance abuse screening.

Division of Alcohol & Drug Abuse Programs
108 Cherry Street • Burlington, VT 05401
800-464-4343 • 802-651-1550

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healthvermont.gov

Actions to Address Opioid Drug Abuse

Education

- Prescriber education
- Community education
- Naloxone distribution

Tracking and Monitoring

- Vermont Prescription Drug Monitoring System (VPMS)

Regulation/Enforcement

- Identification verification at pharmacies
- Law enforcement training on prescription drug misuse and diversion
- Unified Pain Management Regulation

Proper Medication Disposal

- Keeping medications safe at home
- Proper medication disposal guidelines consistent with FDA standards
- Community take-back programs
- "Most Dangerous Leftovers" Campaign

Treatment Options

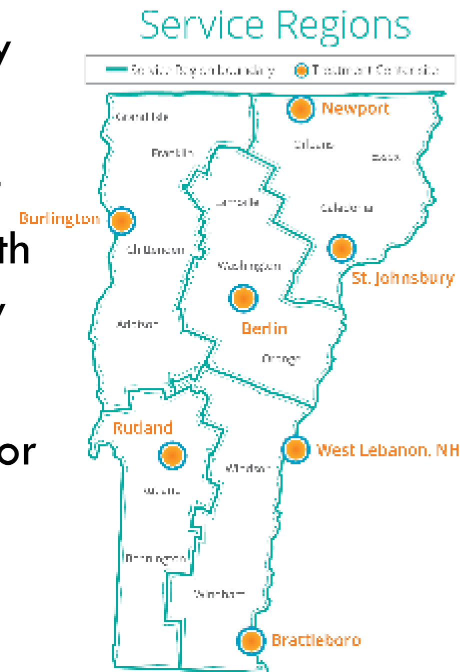
- Care Alliance for Opioid Addiction Regional Treatment Centers
- Outpatient and residential treatment at state-funded treatment providers
- Harm Reduction

The Care Alliance for Opioid Addiction

A regional approach for delivering Medication Assisted Therapy to Vermonters who suffer from opioid drug addiction.

The Care Alliance is designed to coordinate addiction treatment with medical care and counseling, supported by community health teams and services, to effectively treat the whole person as they make their way along the path to recovery.

Medication Assisted Therapy (MAT) is an effective treatment for opioid addiction that involves prescribing medication — methadone, buprenorphine or naltrexone — in combination with counseling. Outcomes from this approach include:



- reduced drug use
- retention in treatment
- better social functioning
- better health
- reduced criminal activity
- reduced disease transmission
- reduced drug overdoses

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Hub Census and Waitlist: November 29, 2016

Region	# Clients	# Buprenorphine	# Methadone	# Vivitrol	# Receiving Treatment but Not Yet Dosed	# Waiting
Chittenden, Franklin, Grand Isle & Addison	939	272	657	1	9	154
Washington, Lamoille, Orange	472	207	265	0	0	0
Windsor, Windham	628	168	460	0	0	0
Rutland, Bennington	400	100	270	3	27	29
Essex, Orleans, Caledonia	739	189	544	6	0	17
Total	3178	936	2196	10	36	200

Source: Alcohol and Drug Abuse Treatment Programs

Opioid Prescribing for Pain: Final Rule (effective 7/1/2017)

- Universal Precautions
  - Requires prescribers to discuss risks, provide a patient education sheet, and receive an informed consent for all first opioid prescriptions
  - Requires co-prescription of naloxone for all prescriptions over 90 MME as well as opioids co-prescribed with benzodiazepines
  - Requires checking the prescription monitoring system the first time a prescriber writes a prescription opioid (over 10 pills) or benzodiazepine
- Acute Pain section for first prescription to opioid naïve patients
  - Requires consideration of non-opioid treatment for minor injuries and procedures
  - Sets MME limits for acute prescriptions based on severity of pain and anticipated duration
  - Limits the first prescription to no more than 350 MME (50 MME per day for 7 days)
  - Requires specialty providers to transfer care of patients to primary care providers should they expect the patient may need additional treatment
  - Prohibits use of long-acting opioids

MME Limits for First Prescription for Opioid Naïve Patients Ages 18+

Pain	Average Daily MME *(allowing for tapering)*	Prescription TOTAL MME based on expected duration of pain	Common average DAILY pill counts	Commonly associated injuries, conditions and surgeries
Minor pain	No Opioids	0 total MME	0 hydrocodone 0 oxycodone 0 hydromorphone	molar removal, sprains, non-specific low back pain, headaches, fibromyalgia, un-diagnosed dental pain
Moderate pain	24 MME/day	0-3 days: **72 MME** 1-5 days: **120 MME**	4 hydrocodone 5mg or 3 oxycodone 5mg or 3 hydromorphone 2mg	non-compound bone fractures, most soft tissue surgeries, most outpatient laparoscopic surgeries, shoulder arthroscopy
Severe pain	32 MME/day	0-3 days: **96 MME** 1-5 days: **160 MME**	6 hydrocodone 5mg or 4 oxycodone 5mg or 4 hydromorphone 2mg	many non-laparoscopic surgeries, maxillofacial surgery, total joint replacement, compound fracture repair
For patients with severe pain and extreme circumstance, the provider can make a clinical judgement to prescribe up to 7 days so long as the reason is documented in the medical record.				
Extreme Pain	50 MME/day	7 day MAX: 350 MME	10 hydrocodone 5mg or 6 oxycodone 5mg or 6 hydromorphone 2mg	similar to the severe pain category but with complications or other special circumstances

Exemptions: palliative care, end-of-life and hospice care, patients in skilled and intermediate care nursing facilities, pain associated with significant or severe trauma, pain associated with complex surgical interventions, such as spinal surgery, pain associated with prolonged inpatient care due to post-operative complications, medication-assisted treatment for substance use disorders, patients who are not opioid naïve, other circumstances as determined by the Commissioner of Health.

Opioid Prescribing for Pain: Final Rule for Minors

- Prescribing to Minors (in addition to universal precautions)

Teens who used opioids for legitimate reasons in high school had a 33% increased risk for future misuse compared to their peers.[1]

  - Requires a prescriber to seek consultation with the pediatrician or primary care doctor prior to prescribing an opioid in an urgent care or emergency department setting
  - Limits opioids for minor injuries, including uncomplicated wisdom tooth extraction and sprains or uncomplicated fractures
  - Limits the first prescription to a total of 72 MME (24 MME for 3 days)

[1] Miech R, Johnston L, O'Malley PM, Keyes KM, Heard K. Prescription Opioids in Adolescence and Future Opioid Misuse. Pediatrics. 2015;136(5):e1169-e1177.

HEALTHY VERMONTERS 2020

Public Health in Vermont

http://healthvermont.gov/about

After a presentation on alcohol and other drug information in a 9th grade health class, two students sought out the counselor for support related to substance abuse at home. These students are learning coping skills that will help them improve in attendance and academics.

— School-Based Substance Abuse Services Grantee

I had become addicted to heroin and opioids at a very young age . . . . I've been clean for 23 months now. Turning Point has been a blessing and a safe place for me. I'm honestly, truly grateful for this space and these wonderful people.

— Age 33, Burlington

Alcohol and Drug Abuse Programs
Annual Overview December 2016

[Alcohol and Drug Abuse Programs Overview]