Virginia Foundation for Healthy Youth Mission Expansion

Joint Commission on Health Care
October 5, 2016 Meeting

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Includes JCHC Member-Proposed Policy Option 6

Study Mandate

- In 2016, Delegate O'Bannon requested via House Joint Resolution 65 (HJ 65) that the JCHC study the benefits and costs of expanding the mission of the Virginia Foundation for Healthy Youth to include a focus on other health issues such as behavioral health, violence, hunger, and diabetes
- HJ 65 was tabled in the House Committee on Rules and agreed to by the Joint Commission on Health Care members at the May 26, 2016 work plan meeting

Background: Virginia Foundation for Healthy Youth

- Created as the Virginia Tobacco Settlement Foundation (Title 32.1, Ch. 14, 1999), the mission of the Virginia Foundation for Healthy Youth (VFHY) is to (§ 32.1-355):
  - Restrict the use of tobacco products by minors through such means as educational and awareness programs on the health effects of tobacco use on minors and enforc[e] laws restricting the distribution of tobacco products to minors (1999-present)
  - Reduce childhood obesity through such means as educational and awareness programs, implementing evidence-based practices, and assisting schools and communities with policies and programs (2009-present)
- Funding comes primarily through Master Settlement Agreement (MSA) allocations, originally 10% (1999-2009) and currently 8.5% (2010-present). The VFHY can additionally finance activities through extra-MSA resources (e.g., public grants/private sources).
- The Foundation is governed by a 23-member Board of Trustees: 4 members of the General Assembly; Virginia Department of Health/Department of Alcohol Beverage Control Commissioners; 17 non-legislative citizens (5 from public health organizations; 4 clinicians; and 8 citizens at large, including 2 youth)

Background: VFHY Model

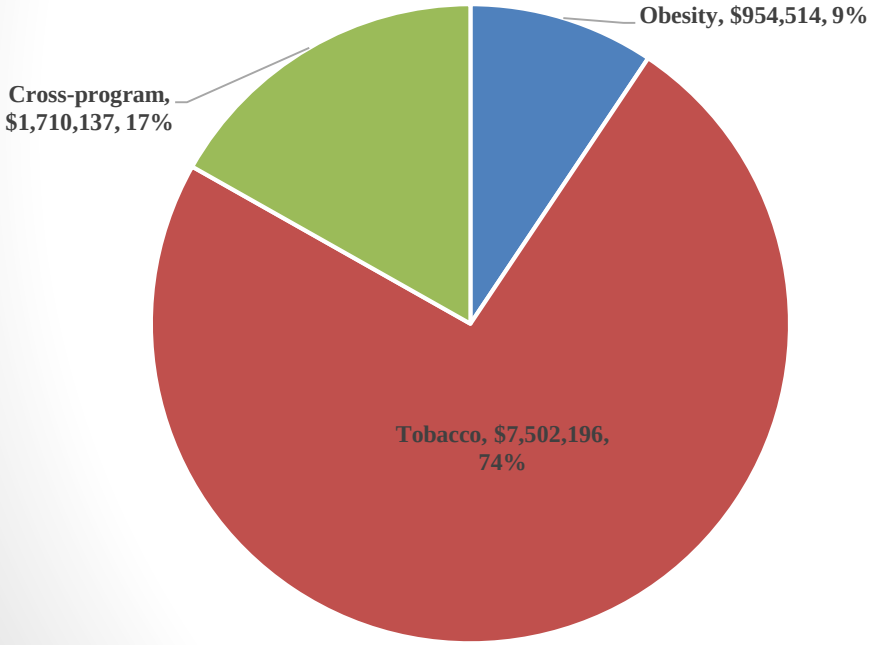
- The Foundation executes its mission primarily through three platforms:

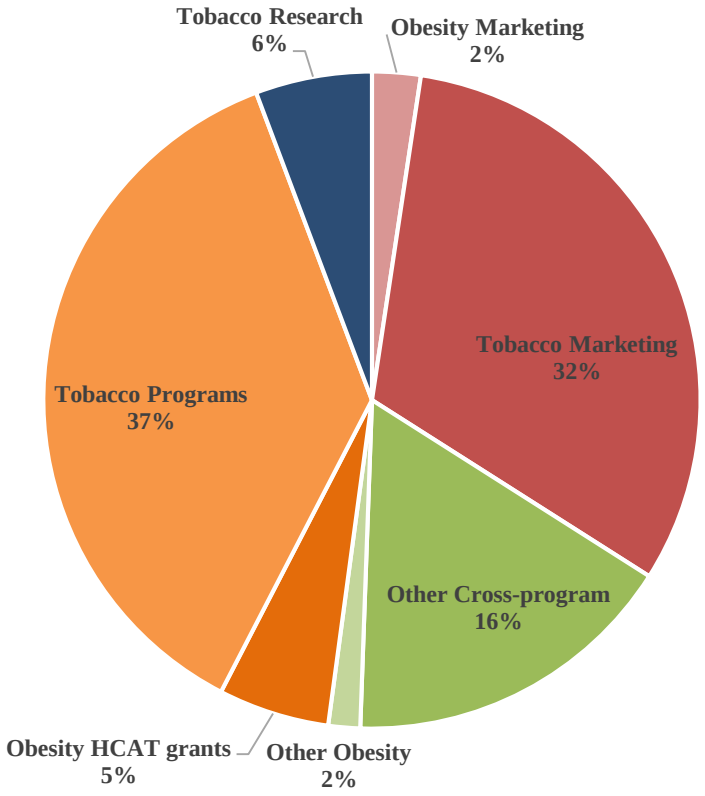
Platform	Description	Examples
Program (Grants)	▪ Tobacco: Classroom-based prevention / cessation, training programs ▪ Obesity: Healthy Communities Action Teams (HCATs)	▪ Tobacco: All Stars; Project Alert; Project Toward No Drugs ▪ Obesity: see Slide 21
Marketing / Commun-ication	▪ Mass media advertising/messaging ▪ Youth engagement (tobacco prevention only)	▪ Tobacco: "Y Street" youth leaders; Down & Dirty, Fresh Empire media campaigns ▪ Obesity: "Rev your Bev" healthy drink campaign
Research (tobacco only)	▪ Behavior-focused studies ▪ Basic science-focused studies ▪ Research coalition	▪ Behavior-focused: "Reducing Teen Tobacco Use Via Text Messaging" ▪ Basic Science-focused: "What Social and Molecular Factors Drive Nicotine Preference in Adolescent Mice?"

- Other activities include:
  - Collaboration on youth surveillance conducted by VDH (Virginia Youth Survey)
  - Convening conferences (e.g., "Reduce Tobacco Use"; "Weight of the State")

Background: VFHY Allocations

- **Average Annual VFHY expenditures, 2001 – July, 2010: $14.2M**
- **Average Annual VFHY expenditures, July, 2010 – June, 2016: $10.1M**



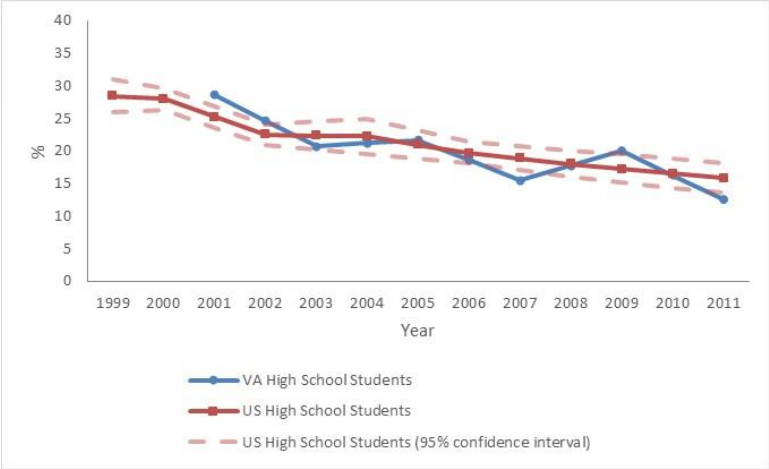


Source: VFHY

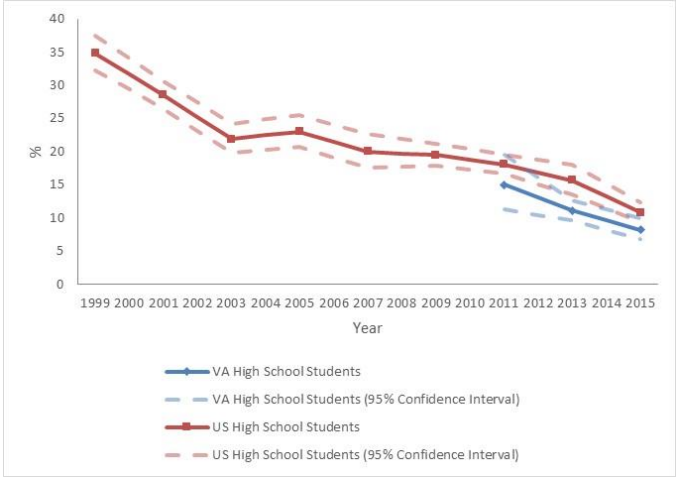
TOBACCO USE: EPIDEMIOLOGICAL TRENDS AND VFHY PROGRAMMING

Tobacco Use by Virginia Youth – Historical Trends

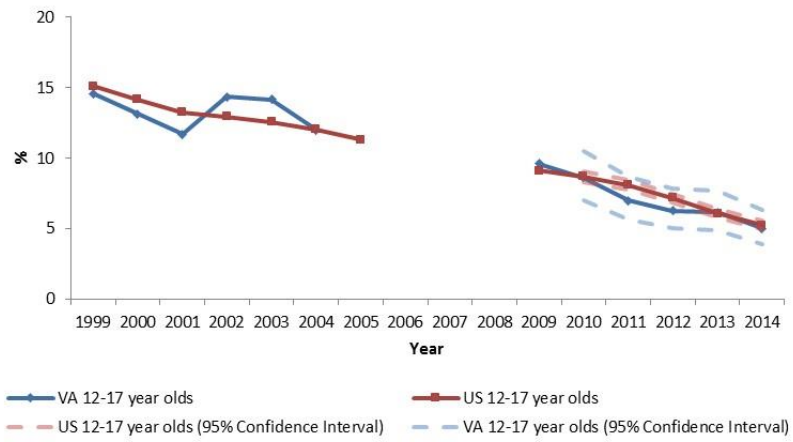
- Current Cigarette Use:



Sources: Youth Tobacco Survey, VFHY



Source: Youth Risk Behavior Surveillance System (YRBSS)



Source: National Survey of Drug Use and Health (NSDUH)

Tobacco Use by Virginia Youth – Historical Trends (con't)

- From 2011 – 2015, 10 of 11 tobacco-use related Virginia Youth Survey indicators among high school students have had statistically significant decreases

Self-Reported Tobacco Use, High School Students, 2015

Indicator	%		VA	#
	US	VA	Rank*	States
Cigarettes (current use)	16.0%	11.7%	30	33
Any tobacco (current use)	18.5%	14.1%	30	33
E-cigarettes (current use)	24.1%	16.8%	34	35

* Descending order (1st = highest percentage)

Source: Youth Risk Behavior Surveillance System (YRBSS)

Tobacco Use by Virginia Youth – Current Situation/Future Directions

- Use of Electronic Nicotine Delivery Systems (ENDS) is higher than for tobacco-based products
  - Nationally, e-cigarettes were most commonly used tobacco product among high school (16.0%) and middle school (5.3%) students in 2015. This reflects a marked increase in sales of ENDS products (e-cigarettes, starter kits, and cartridges) by between 50% to 300% between 2012 and 2103. Significant increases in use of e-cigarettes/hookahs occurred among high and middle school students from 2011 to 2015 – including a threefold increase from 2011 to 2013 in never-smoking youth who used e-cigarettes – while use of cigarettes and cigars decreased.
- Current evidence is unable to provide a definitive picture of the health consequences of ENDS or links between ENDS and use of other tobacco products:
  - E-cigarettes may be a less harmful source of nicotine than cigarettes, but product manufacturing is highly variable and long-term health effects of ingredients are unclear
  - There is mixed evidence on whether e-cigarette facilitates smoking cessation – either at all or in comparison to other nicotine replacement therapies – or whether it leads to decreased/increased smoking initiation
  - While there is evidence that never-smoking adolescents and young adults who used e-cigarettes have more than two times increased odds of intention to smoke cigarettes, the evidence base is still nascent
- ENDS will be regulated as tobacco products: In August, 2016, the FDA issued a rule extending its authority to regulate all tobacco products, including e-cigarettes. The rule heightens the FDA's ability to restrict youth access to tobacco products (e.g., in vending machines) as well as product composition (e.g., added flavorings), although manufacturers have two years to submit applications for FDA review of previously unregulated products.

VFHY Youth Tobacco Prevention Programs

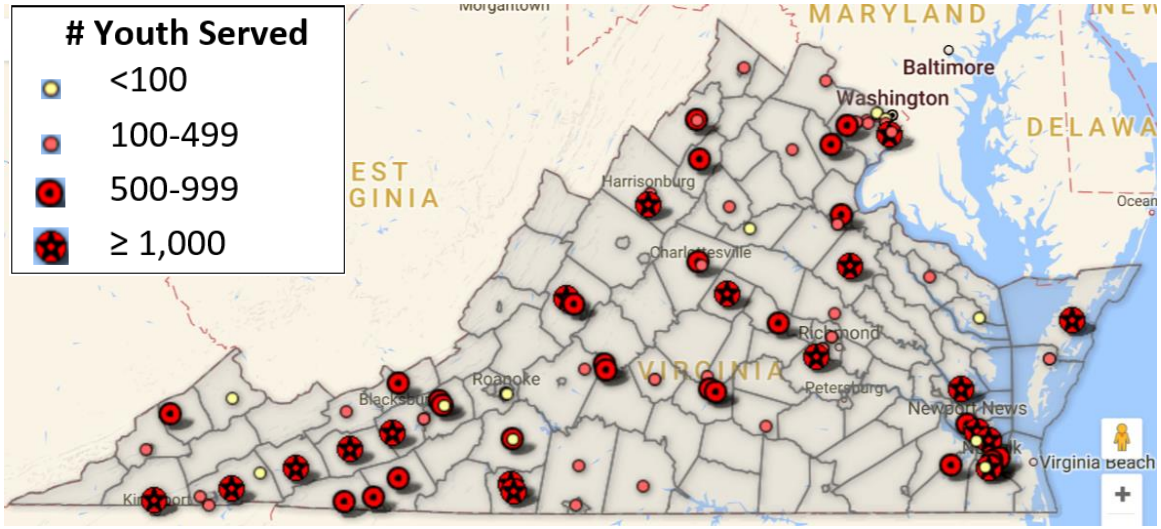
- Since 2009, VFHY has awarded 107 three-year and 59 one-year grants
- Grantees implement classroom-based curricula drawn from a compendium of 19 programs, 18 of which are listed on the Substance Abuse and Mental Health Services (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP)

Grant Year	Youth served
2009-2010	63,071
2010-2011	58,881
2011-2012	47,478
2012-2013	45,772
2013-2014	51,061
2014-2015	46,380

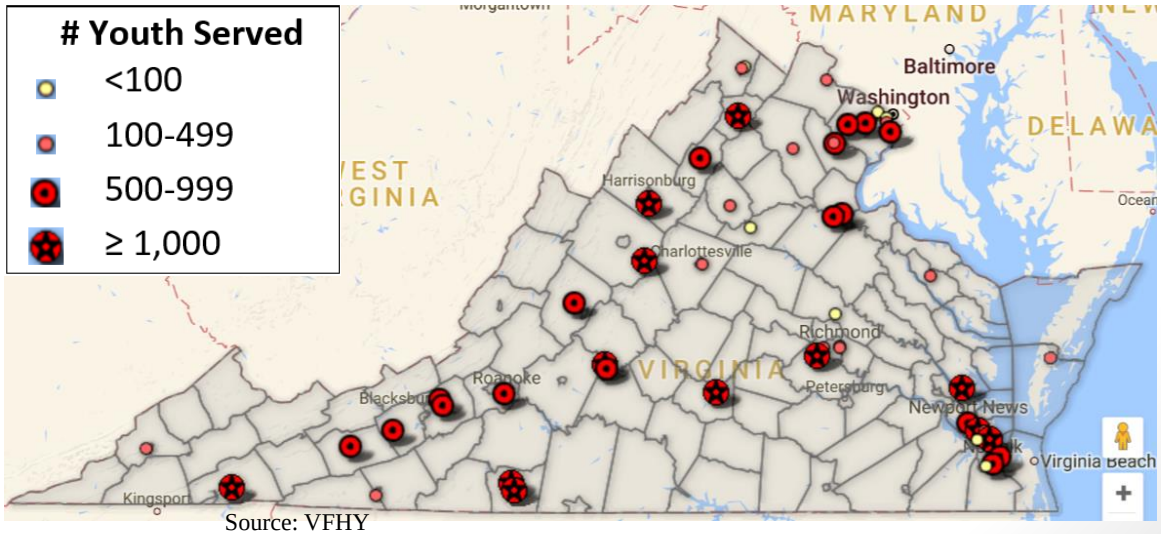
Source: VFHY

VFHY Youth Tobacco Prevention – Program Coverage

2009-2010 (111 Grantees):



2014-2015 (55 Grantees):



Source: VFHY

VFHY Youth Tobacco Prevention – Marketing

- Advertising/Communication
  - Anti-tobacco messages have been disseminated to youth through multiple media campaigns (e.g., Syke, Down & Dirty, Fresh Empire, ydouthink)
  - Campaign expenditures are evenly allocated across four regions, with estimated reach a function of youth population size

Estimated Youth Reached

Region	2015	2016	%VFHY Reach
Southwest	357,600	315,300	10%
Southeast	1,072,700	944,700	30%
Central	607,900	535,500	17%
North	1,537,300	1,353,500	43%
Statewide	3,575,500	3,149,000	100%

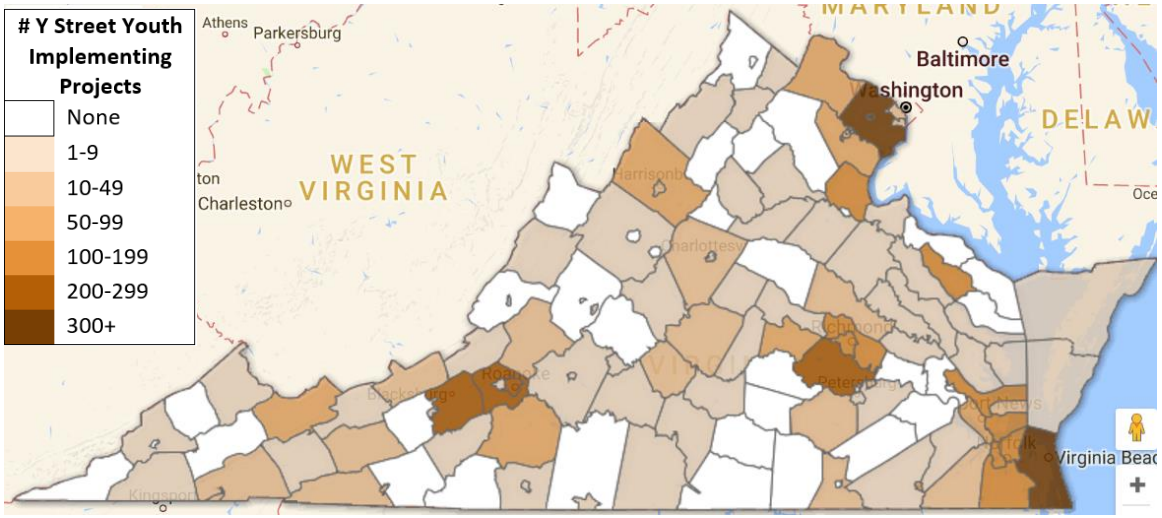
Source: VFHY

VFHY Youth Tobacco Prevention – Marketing (con't)

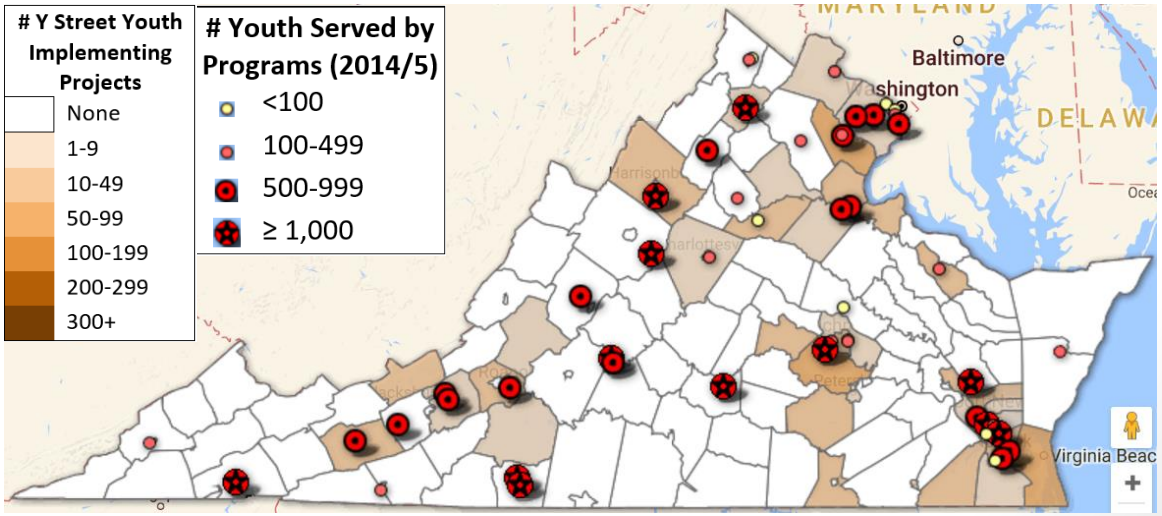
- Youth Engagement
  - The Y Street program has focused on changing tobacco-use norms (since 2004) and addressing obesity (since 2009) by training youth to organize, develop implementation plans for, advocate for and evaluate community-based campaigns
  - Over 8,000 youth have been trained since 2004, with just under one-half implementing projects tracked by the VFHY

VFHY Youth Tobacco Prevention – Marketing (con't)

2004 – 2016 (3,975 youth total):



2015-2016 (657 youth total):



Source: VFHY

VFHY Youth Tobacco Prevention – Research

- VFHY has funded 22 research grants since 2002, awarded to 6 Virginia-based Universities
- Approximately 80% of research funding since 2002 has evenly split between behavior-focused studies (11 since 2002) and basic science-focused studies (10 since 2002)
- Approximately 20% has been allocated to a Research Coalition grant which provides small grant funding to members for behavior- and basic science-focused studies. Research Coalition members have leveraged VFHY funding to bring in approximately $26 million from outside funding sources on tobacco-related research.
- The Foundation reports having used study findings in a variety of ways (e.g., disseminating information on links between ADD/ADHD and tobacco use to school nurses to target interventions; sharing information on effectiveness of texting on prevention to VDH's Quitline; extending programming to elementary-age youth based on adolescent brain development studies; see also Appendix: Examples of VFHY-funded Research Informing Programming)

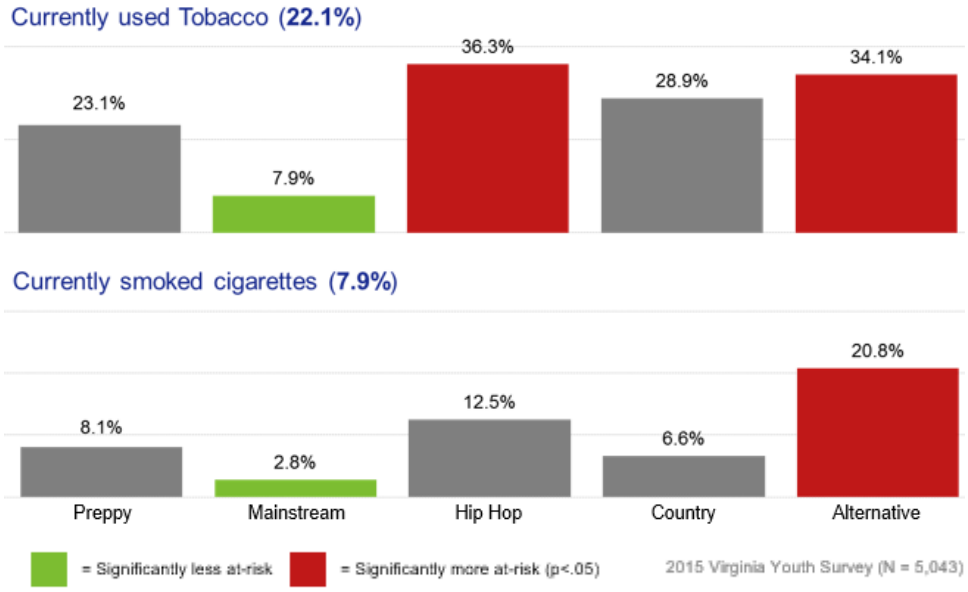
External Resources Leveraged by Research Coalition Members

Fiscal Year	Awarded Grants	
	#	Value
2008	6	$468,006
2009	11	$387,000
2010	7	$291,000
2011	10	$1,874,463
2012	2	$412,442
2013	6	$2,115,971
2014	8	$19,304,797
2015	10	$1,138,058
Total	**60**	**$25,991,737**

Source: Virginia Youth Tobacco Projects Research Coalition Core

VFHY Youth Tobacco Prevention – Surveillance

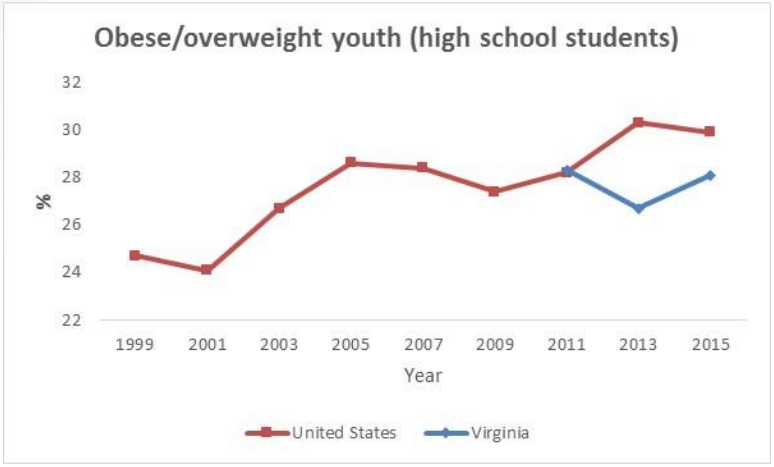
- In 2011, VFHY conducted research to identify youth "peer crowd" associations with the goal of understanding which peer crowds have higher rates of tobacco use than others and more effectively target programs/marketing. Characteristics of five peer crowds (Mainstream, Preppy, Alternative, Country, Hip Hop) were identified
- The 2015 Virginia Youth Survey included peer crowd associations in its survey



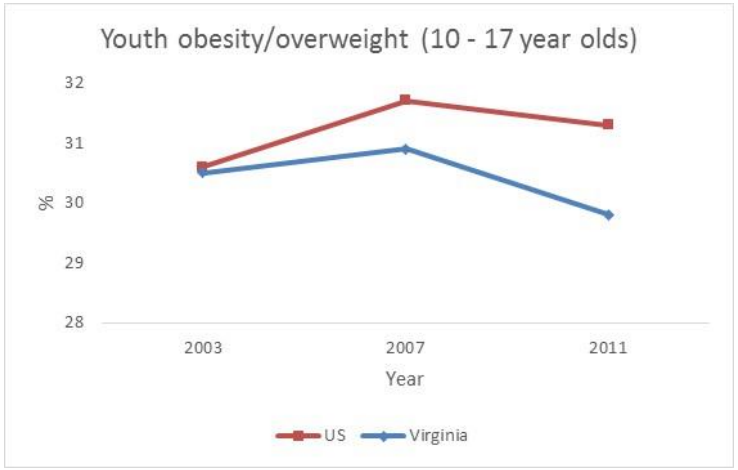
Source: VFHY (2016)

OBESITY: EPIDEMIOLOGICAL TRENDS AND VFHY PROGRAMMING

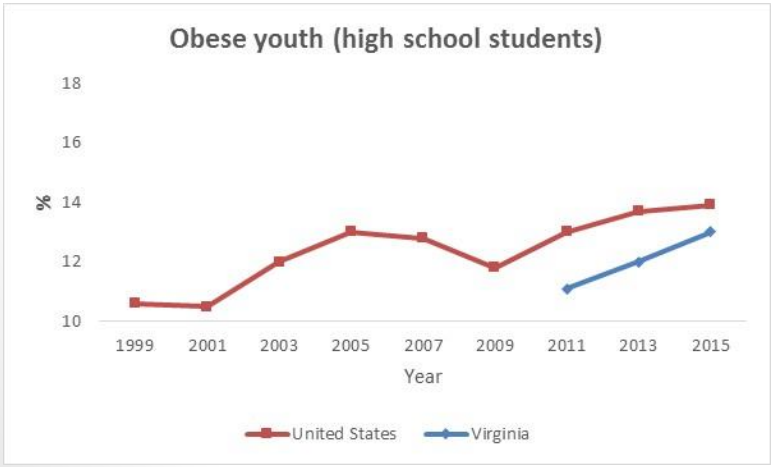
Youth Obesity in Virginia – Historical Trends



Source: Youth Risk Behavior Surveillance System (YRBSS)



Source: National Survey of Children's Health (NSCH)



Source: Youth Risk Behavior Surveillance System (YRBSS)

- Over the past three decades, rates of obesity nationally have tripled to 17% of youth 2 – 19 years of age
- Changes in percentage of overweight/obese youth between 2011 and 2015 were not statistically significant

Youth Obesity in Virginia – Historical Trends (con't)

- There have been statistically significant decreases in sugary soda drinking among Virginia youth from 2011 to 2015

Self-Reported Nutrition Behaviors, High School Students, 2015

Indicator	%		VA	#
	US	VA	Rank*	States
Drank any sugary soda in last week	73.8%	70.0%	28	36
Drank sugary soda 1+ times per day in last week	20.4%	17.0%	25	36

* Descending order (1st = highest percentage)

Source: Youth Risk Behavior Surveillance System (YRBSS)

VFHY Youth Obesity Prevention - Program Scope

- Healthy Community Action Teams (HCATS) conduct obesity prevention by serving as coordinators and conveners for local activities around improving nutrition and promoting physical activity. HCAT activities are selected from a list of local government action steps recommended by the Institutes of Medicine (IOM).
- 20 HCATS were awarded 3-year grants between 2014 – 2016

VFHY Youth Obesity Prevention - Program Scope

HCAT Physical Activity Interventions (2014 – 2016 grant cycle)

Description*	# HCATS
▪ Improve safety at bike and walking crossings	1
▪ Build and maintain off-street trails for walking and biking	1
▪ **Develop Safe Routes to School programs**	**4**
▪ Improve access to bikes	1
▪ **Build safe and accessible parks and playgrounds**	**1**
▪ Improve access to public and private creational activities	3
▪ Create aftershool activity programs	3
▪ **Utilize joint use agreements to increase safe recreational opportunities**	**2**
▪ Improve stairway access	1
▪ Media campaign to promote community wide fitness challenge	5
Total	*22*

Source: VFHY

* Activities in **bold** denote "most promising action steps"

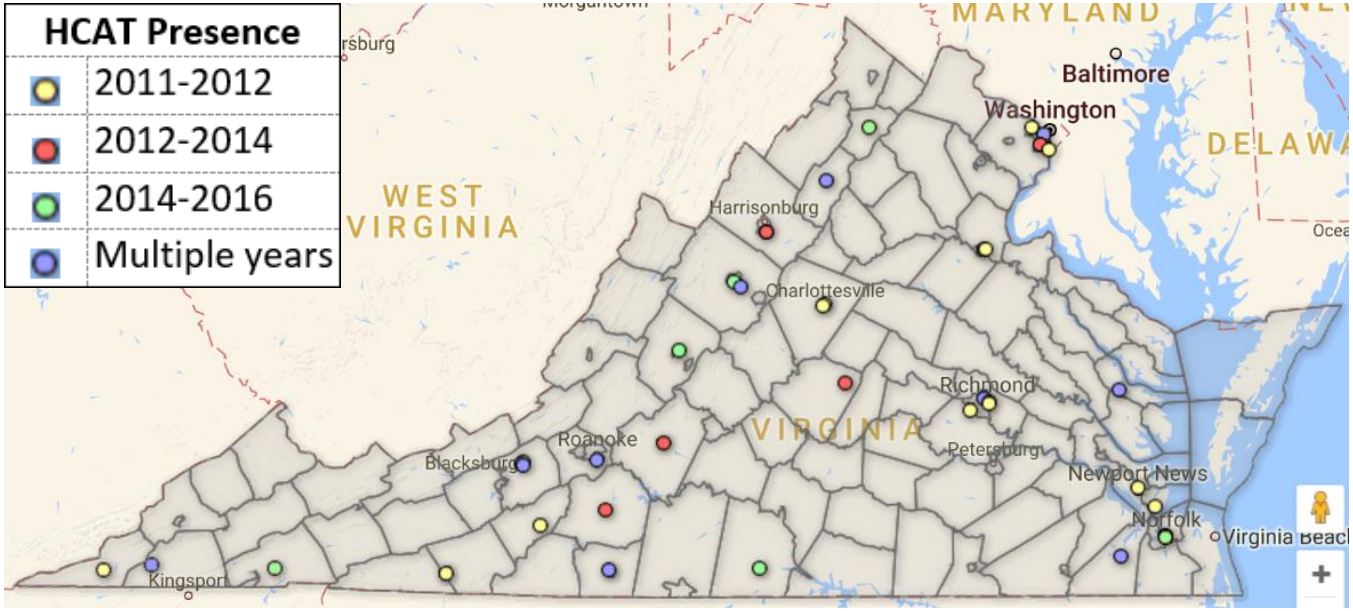
HCAT Nutrition Activity Interventions (2014 – 2016 grant cycle)

Description*	# HCATS
▪ Healthier options at grocery stores	1
▪ Encourage restaurants to promote healthier food options	1
▪ SNAP use at Farmer's Markets	4
▪ Increase outreach, education and transportation to Farmers Markets	6
▪ Develop community gardens	5
▪ Develop community-based activities linking affordable healthy food with purchasing and healthy food preparation	5
▪ Increase healthy vending choices	2
▪ Provide incentives to purchase calorie-dense, nutrient poor foods	2
▪ Improve nutrition in aftershool programs	2
▪ Increase opportunities and education about breastfeeding	1
▪ Increase breastfeeding support in public places	1
▪ Incentive programs for development of lactation room	3
▪ **Develop media campaign to raise awareness and promote healthy eating and active living**	**4**
Total	*37*

Source: VFHY

VFHY Youth Obesity Prevention - Program Scope (con't)

- HCAT coverage:



Source: VFHY

HCAT Activities Completed (2014 – 2016 Grant Cycle)

Focus	Infrastructure Development	Event/Information Dissemination	Capacity Building	Policy Improvement	Access Subsidization
Nutrition	10	15	12	3	6
Physical Activity	5	12	6	5	3
Total	15	27	18	8	9

Source: VFHY

VFHY MISSION EXPANSION

Programmatic Issues Considered

- Three main research questions informed assessment of appropriateness of VFHY expansion into additional behavioral and physical health issues:
  - What is the epidemiology of behavioral and physical health conditions under consideration and which would experience the greatest positive impact (health, economic) if prevented?
  - Which areas of behavioral and physical health would most effectively and efficiently leverage the VFHY's platforms (programs, marketing / messaging, research)?
  - How would an expanded mission scope relate to programs, activities, initiatives, etc. overseen by other stakeholders in Virginia, including State agencies, Offices and State-funded organizations?

Behavioral Health: Substance Use

- Self-Reported Substance Use, **High School Students**, 2015**:**

Indicator	%		VA Rank*	# States
	US	VA		
Alcohol**	33%	23%	34	36
Alcohol†	18%	11%	36	36
Ecstasy††	3.0%	2.5%	24	28

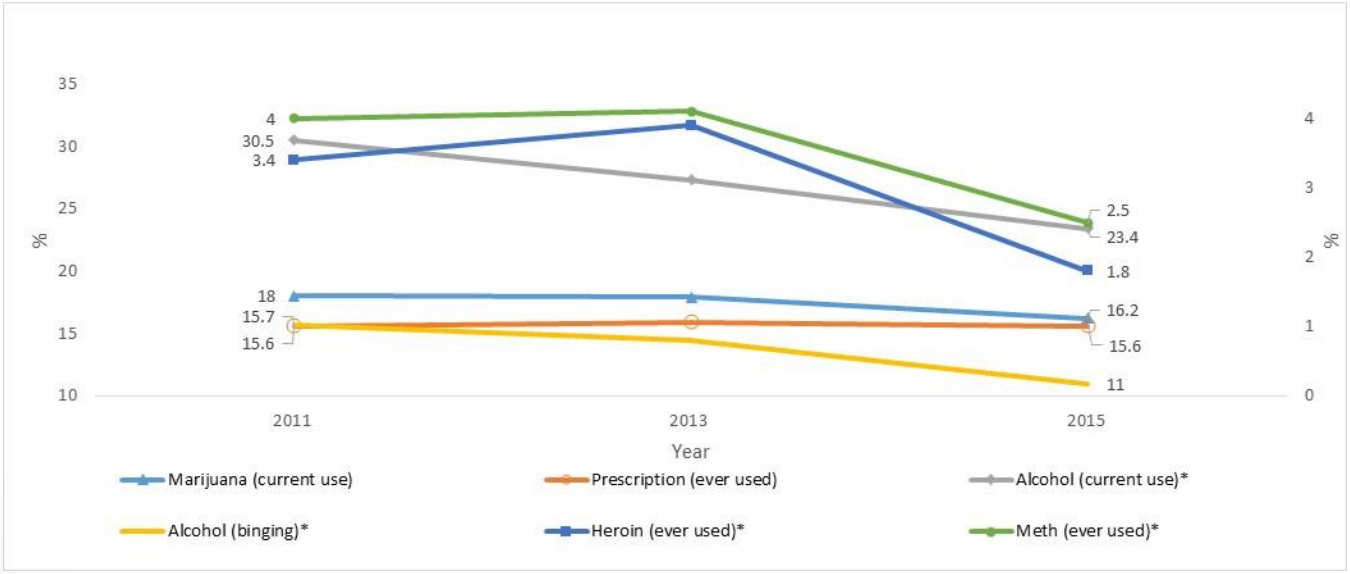
* Descending order (1st = highest percentage)

** Current Use † Binge Drinking †† Ever Used

Indicator	%		VA Rank*	# States
	US	VA		
Heroin††	2.1%	1.8%	27	32
Marijuana**	22%	16%	33	36
Prescription Drugs††	17%	16%	12	32

* Descending order (1st = highest percentage)

** Current Use †† Ever Used



* Statistically significant decrease from 2011 to 2015

Source for all tables/chart: Youth Risk Behavior Surveillance System (YRBSS)

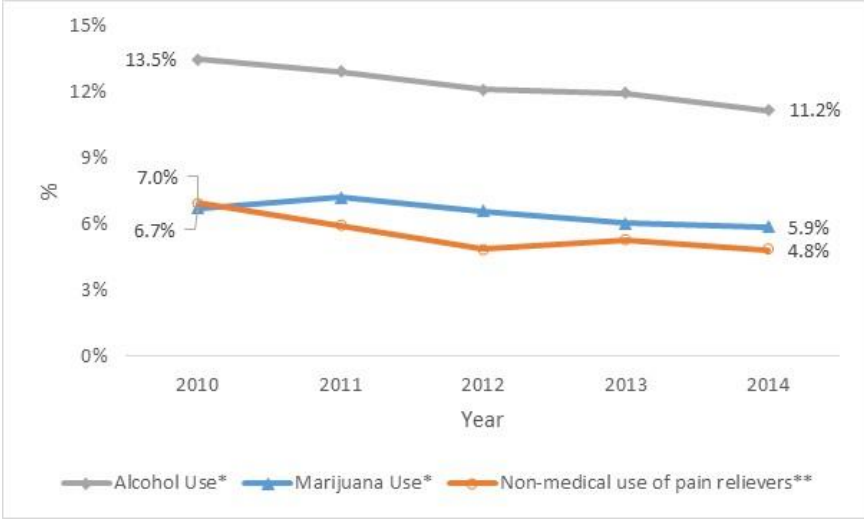
Behavioral Health: Substance Use (con't)

- Self-Reported Substance Use, **12 – 17 year olds**, 2014**:**
  - While trends are similar to YRBSS data, differences in levels/relative rank of Virginia compared to other States may be due to differences in populations surveyed and survey effects (e.g., question wording; setting in which survey was administered)

Indicator	%		VA Rank*	# States
	US	VA		
Alcohol**	11.5%	11.2%	22	51
Marijuana**	7.2%	5.9%	37	51
Non-Medical Use of Pain Relievers†	4.7%	4.8%	19	51

* Descending order (1st = highest percentage)

** Current Use † In last 12 months



Source for table/chart: National Survey on Drug Use and Health (NSDUH)

Behavioral Health: Bullying/Violence

- Nationally, bullying* of youth at school ranges from 18% to 31%, with cyberbullying ranging from 7% to 15%. Trends in bullying over time are unclear, with some data sources indicating decreases over time, while others suggest little change or increases (in cyberbullying).
- Consistent with national trends, higher percentages of middle school students in Virginia report bullying than high school students
- Of 18 violence-/injury prevention-related indicators tracked by the Virginia Youth Survey, 45% have decreased significantly between 2011 and 2015 and 55% have had no statistically significant change.

Self-reported **Bullying**, **High School Students**, 2015**:**

Indicator	%		VA Rank*	# States
	US	VA		
Bullied (in person)	20.2%	19.5%	28	36
Bullied (electronic)	15.5%	13.8%	22	35

Self-reported **Bullying, Middle School Students**, 2015**:**

Indicator	%		VA Rank*	# States
	US	VA		
Bullied (in person)	38% - 52.4%	42.1%	8	11
Bullied (electronic)	18.2% - 29.2%	18.5%	10	11

Self-reported **Fighting, High School Students**, 2015**:**

Indicator	%		VA Rank*	# States
	US	VA		
Involved in Any Fight	22.6%	20.6%	16	31
Involved in Fight at School	7.8%	7.7%	12	33

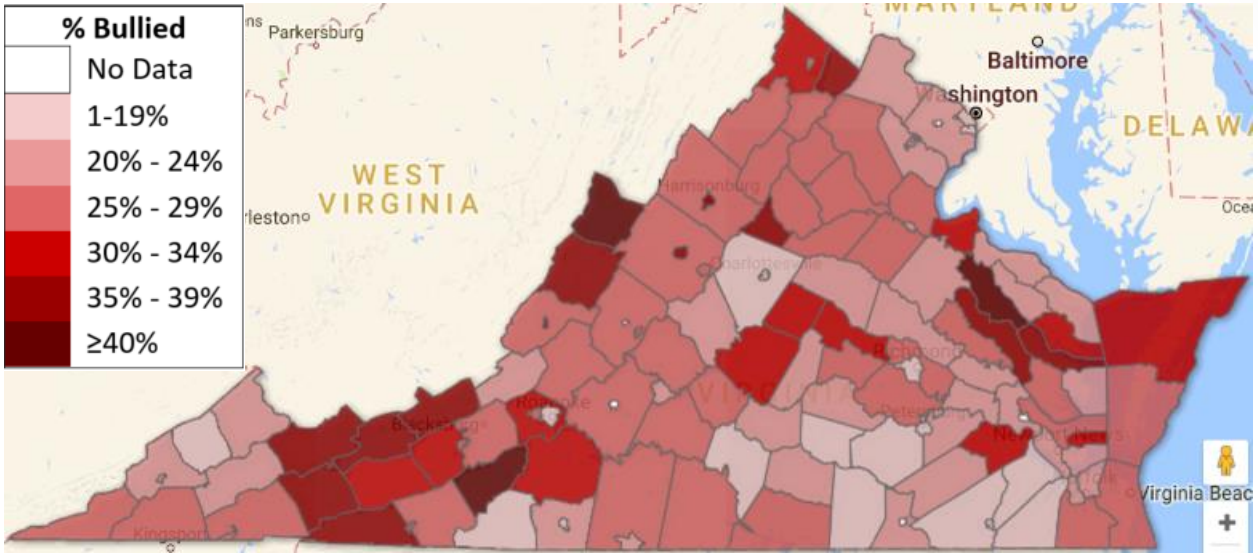
* Descending order (1st = highest percentage)

Source: Youth Risk Behavior Surveillance System (YRBSS)

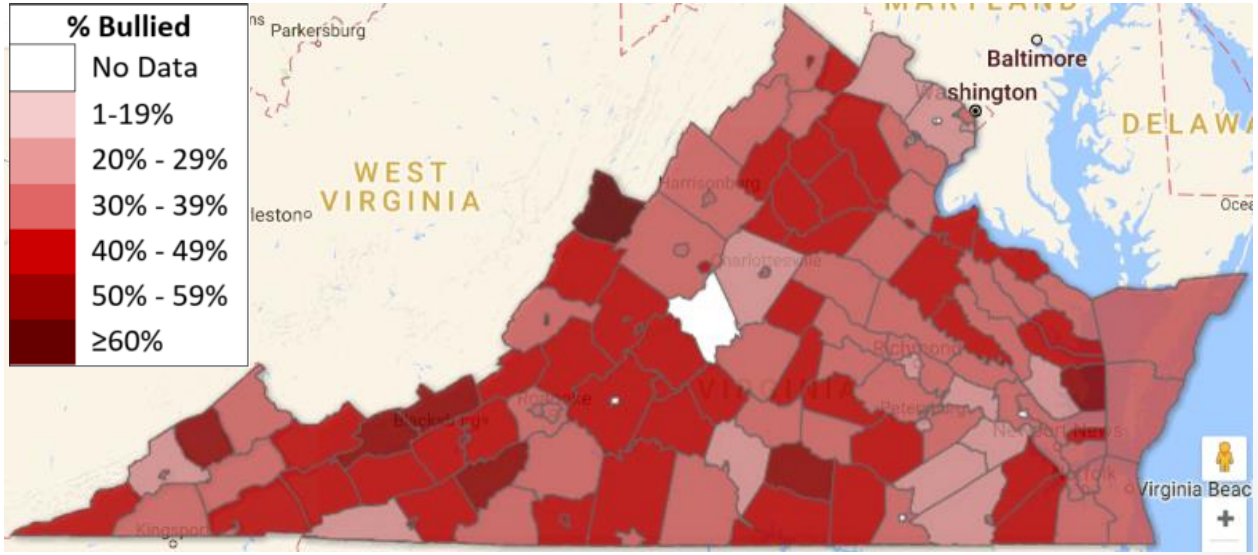
* Definition: any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm.

Behavioral Health: Bullying/Violence

Self-reported Bullying, **High School Students,** 2014 (mean = 25%)**:**



Self-reported Bullying, **Middle School Students,** 2015 (mean = 35%)**:**



Source: Virginia Secondary School Climate Survey (2014, 2015)

Behavioral Health: Suicide / Depression

- In 2014, suicide was the 2nd leading cause of death nationally among youth 10-18 year olds

Self-Reported Sadness / Suicide Behaviors, High School Students, 2015

Indicator	%		VA Rank*	# States
	US	VA		
Felt sad/hopeless	29.9%	26.9%	27	37
Made suicide plan	14.6%	11.7%	32	34
Suicide attempted	8.6%	6.7%	34	35

* Descending order (1st = highest percentage)

Source: Youth Risk Behavior Surveillance System (YRBSS)

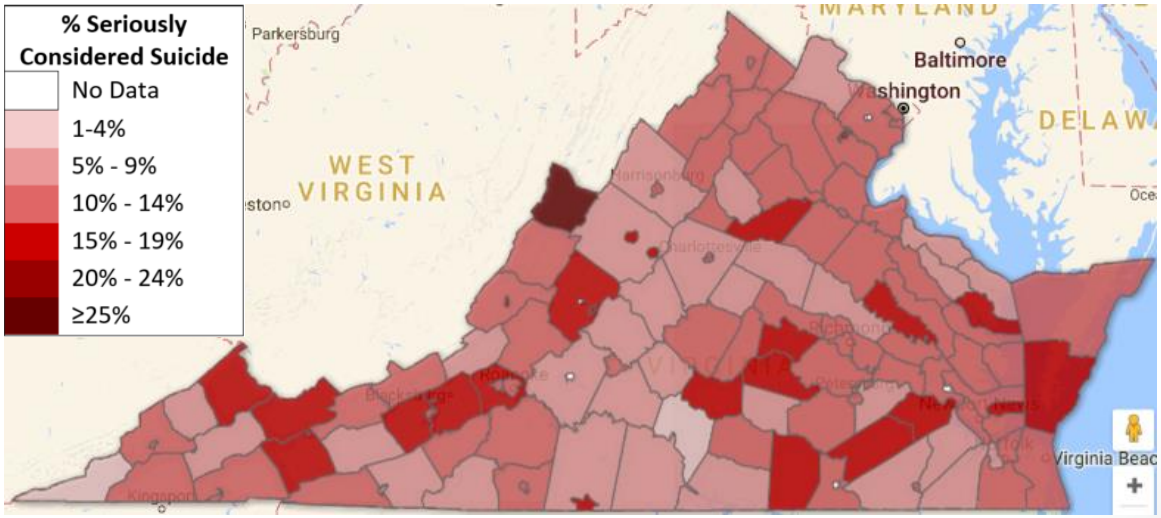
Major Depressive Episode in Last Year, 12-17 year olds, 2013-2014

%		VA Rank*	# States
US	VA		
11%	10%	7	51

* Descending order (1st = highest percentage)

Source: National Survey on Drug Use and Health (NSDUH)

Self-Reported Suicide Behaviors, High School Students, 2014 (mean = 12%):



Source: Virginia Secondary School Climate Survey (2014)

Behavioral Health: Inter-Relationships Between Substances

- There is strong evidence that use of one substance is associated with use of others
- Most VFHY tobacco prevention programs have an evidence base related to prevention of tobacco, other substances, and/or problem behaviors more broadly

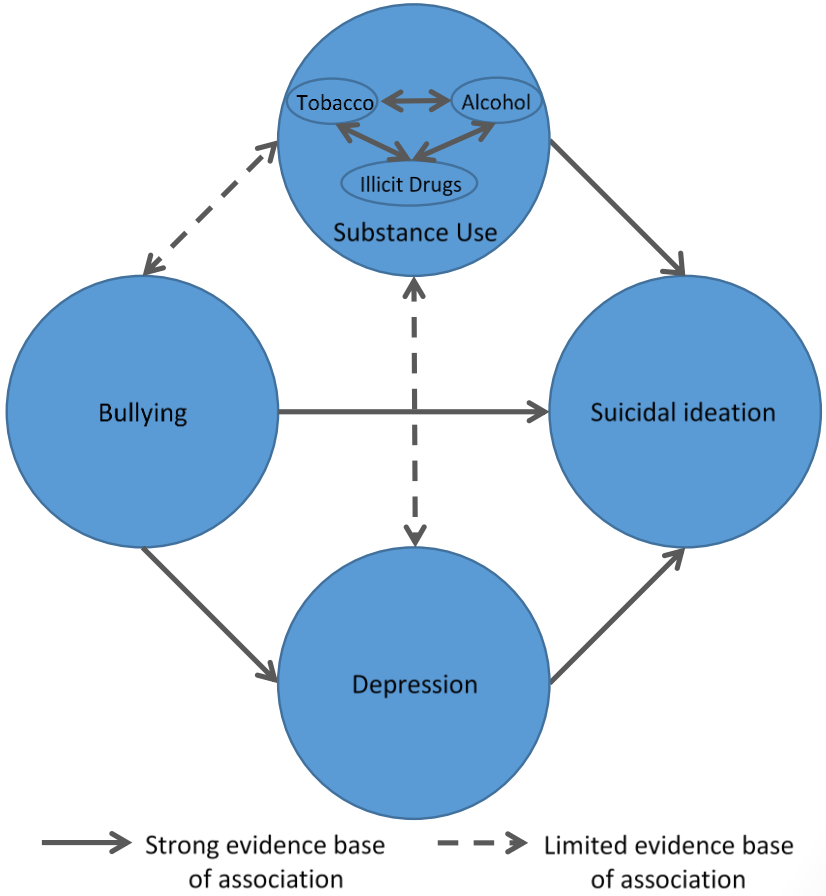
VFHY-Endorsed Programs

Target Substance/Behavior	#
Substances awareness/intent to use	6
Tobacco	11
Alcohol	9
Marijuana	7
Other drugs	5
Problem behaviors	5

Sources: SAMHSA, VFHY

Behavioral Health: Inter-Relationships Between all Issues

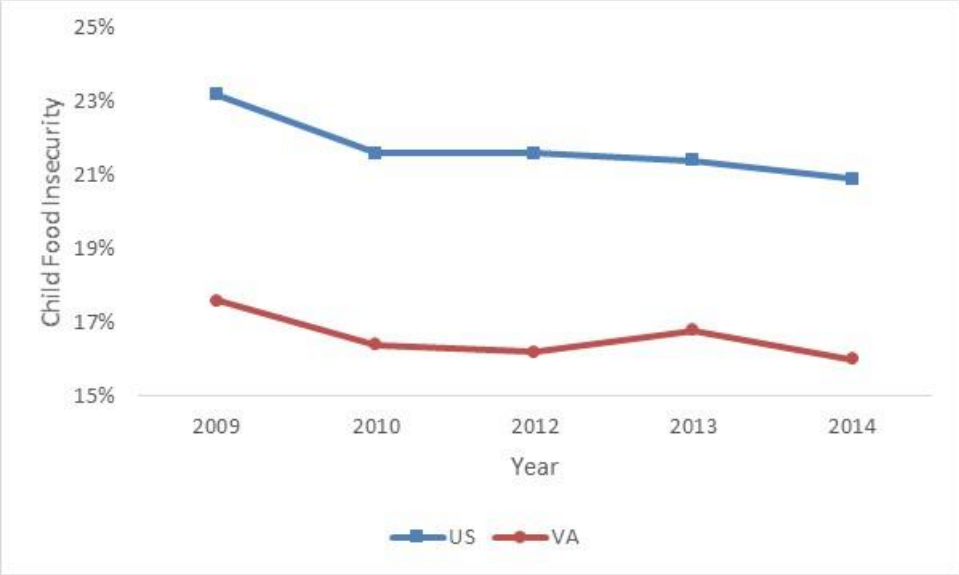
- Major suicide risk factors include history of mental disorders, particularly clinical depression; isolation, a feeling of being cut off from other people
- A large body of research indicates that bullying victims are at increased risk of subsequent mental, emotional and behavioral problems (e.g., feeling depressed, anxious, lonely). Individuals involved in bullying (as perpetrators, victims, or both) are significantly more likely to contemplate/attempt suicide than those not involved in bullying, although there is not enough evidence to determine that bullying is a causal factor for youth suicides.
- Less consistent evidence in youth exists between substance use and other health areas



Physical Health: Childhood Hunger / Food Insecurity

Prevalence of childhood food insecurity* in Virginia in 2014 was 16% (5th lowest in US)

Child Food Insecurity, 2014:



Source: Feeding America

Self-Reported Breakfast Eating, 2015:

Indicator	%		VA Rank*	# States
	US	VA		
Did not eat breakfast one or more times in last week (High School)	13.8%	14.1%	21	33
Did not eat breakfast one or more times in last week (Middle School)	6.6% - 12.6%	6.6%	11	11

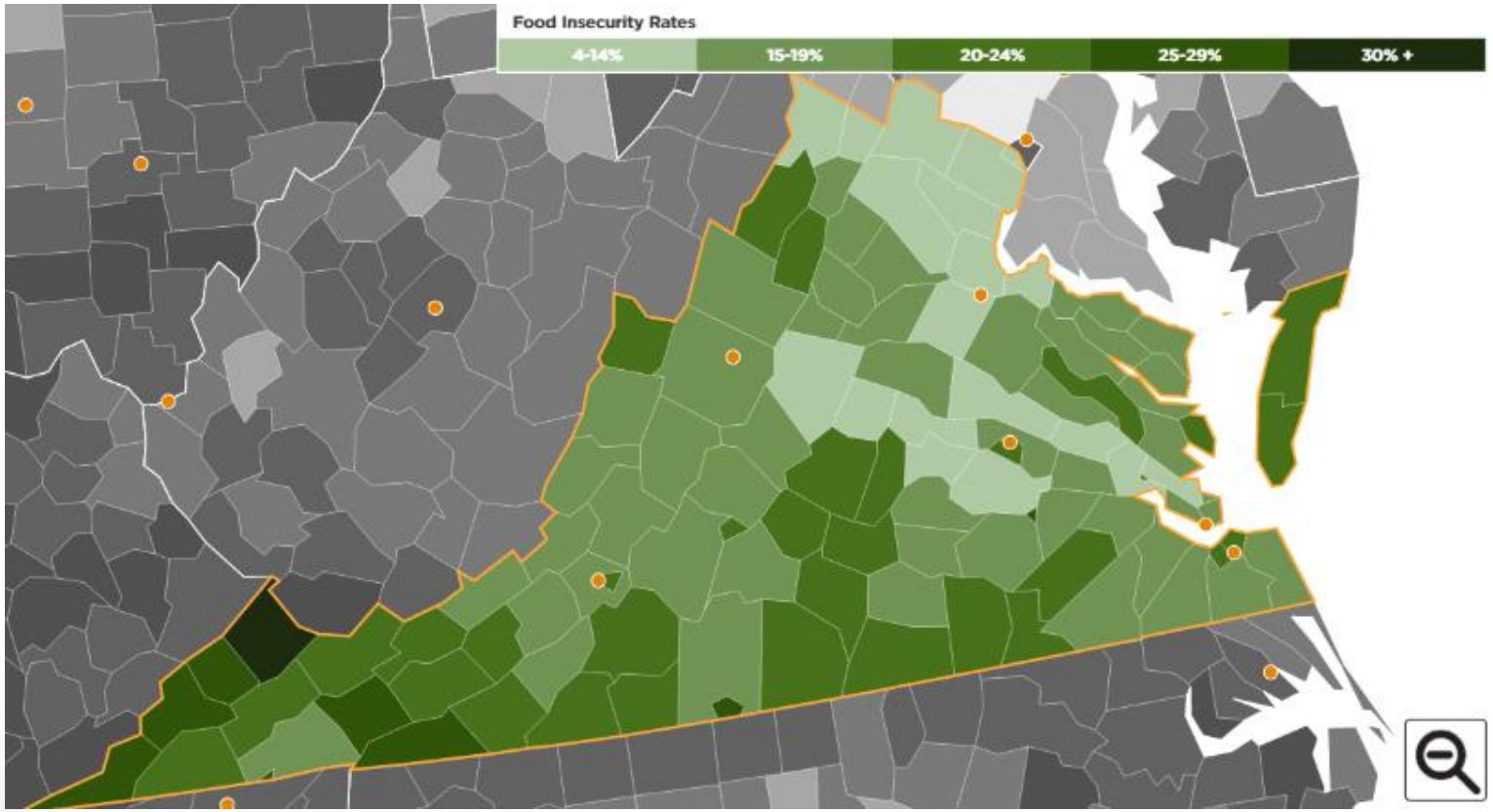
* Descending order (1st = highest percentage)

Source: Youth Risk Behavior Surveillance System (YRBSS)

* Definition: Households reporting low or very low food security as calculated from the 18-question Core Food Security Module survey, administered annually by the U.S. Census Bureau (IOM, 2013)

Physical Health: Childhood Hunger / Food Insecurity (con't)

Geographic variation in child food insecurity, 2014:

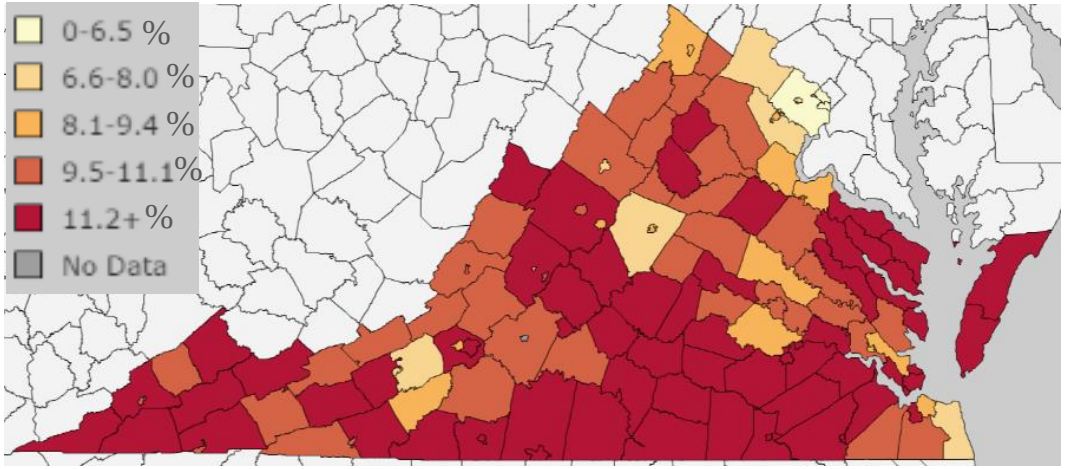


Source: Feeding America (2016)

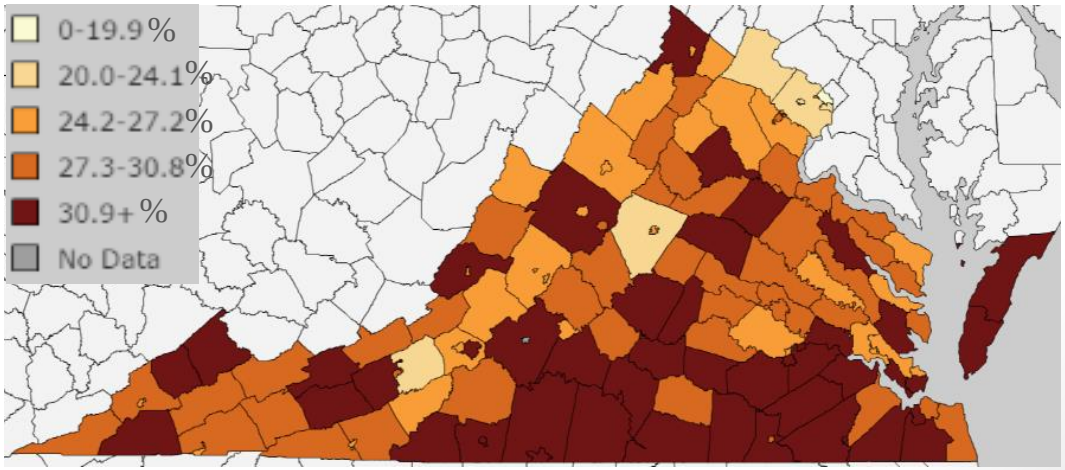
Physical Health: Diabetes

Limited data are available on prevalence of Type II diabetes among youth (0-17 years old)

Geographic variation in diagnosed **diabetes**, 2013 (**all ages**)**:**



Geographic variation in diagnosed **obesity,** 2013 **(all ages):**



Source: CDC

Costs of Behavioral/Physical Health Issues

Health Area	Costs	
	Health Care	Overall
Tobacco	▪ $130 billion	▪ $295 billion
Alcohol	▪ $25 billion	▪ $224 billion ($77 billion for 0-24 year olds)
Other Illicit Drugs	▪ $11 billion	▪ $193 billion ($71 billion for 0-24 year olds)
All Mental, Emotional, Behavioral Disorders among 0-24 year olds	▪ $45 billion	▪ $202 billion
Suicide		▪ $45 - $94 billion
Bullying	▪ No Data	▪ No Data
Obesity	▪ $190 billion (Children: $14.1 billion)	
Diabetes	▪ $176 billion	▪ $245 billion
Food insecurity	▪ $160 billion	▪ $179 billion

Sources: See Appendix

Evidence on Effective Program-Based Prevention Strategies: Key Themes

- Implementation matters: many programs or interventions have been shown to effectively change behaviors in some contexts and/or populations, with similar interventions showing different results in other contexts/populations. Variations in implementation – such as fidelity to program model, allocated resources, characteristics of the youth population targeted – often lead to different results.
- Effective interventions are rarely implemented in isolation: Influencing health behaviors under study can rarely be achieved through one behavioral-change platform alone (e.g., curriculum-based programs vs. marketing), or through youth-focused behavioral-change platforms without changes at other levels (e.g., reaching parents; changes to the environment; policy-level changes affecting access or norms)
- Data points can be scarce:
  - While interventions in some health areas have a well-developed body of evidence assessing program effectiveness among youth (e.g., program-based substance use interventions), the evidence base for other areas/interventions focused on youth is less well-researched (e.g., tobacco prevention marketing)
  - "Mixed"/"insufficient" evidence of effectiveness or interventions "not being shown" to affect behaviors ≠ ineffectiveness

Behavioral Health: Evidence on Effective Program-Based Prevention Strategies

- Substance Use
  - Intensive programs focused on building life/social skills among middle schoolers have most consistently been found to positively affect behaviors, especially for tobacco use and among high-risk youth, with evidence that use of peer leaders is a positive moderator of program effectiveness
  - However, effects tend to be small to modest, with greater effects generally found in addressing social functioning/antisocial behavior rather than substance abuse alone
- Bullying/Violence
  - Effective models of school-based prevention programs have been shown to be most effective in reducing bullying when implemented in homogenous cultural settings
  - Positive effects of bullying prevention programs have been most routinely found on attitudes, knowledge, and perceptions rather than effects on bullying behavior
  - Challenges with implementation fidelity can attenuate real-world reductions in bullying (e.g., competing priorities, resource requirements, involvement of all necessary stakeholders such as students, teachers and parents). A recent systematic review found that up to 45% of studies showed no program effects on bullying perpetration and 30% showed no program effects on victimization.
  - There is greater evidence of effectiveness of school-based prevention programs targeting aggressive behavior and violence more broadly – particularly among preschool and elementary age students – with effects for either bullying prevention or violence prevention tending to be greatest for the highest-risk youth, even for elementary-age interventions.
- Depression
  - Evidence indicates that prevention programs can significantly reduce depression symptoms/incidence
- Suicide
  - School-based suicide prevention programs have been shown to improve suicide-related knowledge and attitudes. However, suicide prevention programs have not been shown to have an effect on actual suicidal behavior.

Physical Health: Evidence on Effective Obesity Prevention Strategies

US Health and Human Services Recommendations on Obesity-Focused Interventions

Intervention	Recommended Interventions	Interventions Not Recommended
Physical Activity	▪ Built environment (e.g., community/street design; park availability) ▪ Point of Decision prompts to use stairs ▪ Enhanced school physical education	▪ Safe Routes to School
Nutrition / Diet	▪ None	▪ School food / beverage policies and environments ▪ School Wellness policies ▪ Free / subscription fruits and vegetables at schools ▪ Government nutrition assistance ▪ Neighborhood availability of food stores / restaurants

Source: The Community Guide (2013)

Evidence on Effectiveness of Obesity-Related Programs in Reducing Weight

Setting	Diet alone	Physical activity alone	Diet & Physical activity
School-based:			
▪ Alone	**Moderate**	**Moderate**	Insufficient
▪ With Community Component	Insufficient	Insufficient	**Moderate**
▪ With Home Component	Insufficient	**Strong**	**Moderate**
▪ With Community / Home Component	No data	Insufficient	**Strong**
Community-based:			
▪ Alone	No data	Insufficient	No data
▪ With School Component	No data	No data	**Moderate**
▪ With Home Component	No data	No data	Insufficient
▪ With School/Home Component	No data	No data	Insufficient

Source: Wang et al (2015)

Physical Health: Evidence on Effective Obesity Prevention Strategies (con't)

- There is comparatively stronger evidence of the effectiveness of interventions focused on increasing physical activity – or increased physical activity in conjunction with improved nutrition – than those targeting diet alone. This evidence is strongest/most widely studied in the context of school-based interventions
- There is a scarcity of studies conducted and evidence on effectiveness of policy/environmental strategies to reduce obesity, and the evidence that exists provides stronger evidence for interventions focused on increasing physical activity than those focused on improved nutrition.

Physical Health: Evidence on Effective Food Insecurity Prevention Strategies

- Improved quantity of food
  - Student participation in the federal School Breakfast Program (SBP) is associated with increased academic grades and standardized test scores, reduced absenteeism, and improved cognitive performance
  - Some studies have found that Supplemental Nutrition Assistance Program (SNAP) participation is associated with reduced food insecurity once inherent differences between SNAP beneficiaries and non-SNAP eligible are taken into consideration
- Improved quality of food
  - There is a lack of evidence that school-based programs promoting nutrition improve nutritional attitudes, knowledge or behaviors (see previous Slide)

Evidence on Effectiveness of Marketing / Mass Media

- Key themes:
  - Mass media is most effective when targeting one-off/episodic behaviors rather than those that are habitual/ongoing (e.g., screening/vaccination vs. food choices/physical activity)
  - Sustaining behavior change over time through media campaigns is difficult
  - It is difficult to identify/isolate effects of mass media campaigns as multiple program components (e.g., other community, school, and worksite interventions) are usually concurrently implemented.
  - Data points can be scarce (see Slide 37)

Evidence on Effectiveness of Marketing / Mass Media – Behavioral Health

- Tobacco:
  - Evidence of effectiveness on smoking behaviors/prevention among youth is not strong despite a large body of evidence that media campaigns can be effective in influencing smoking behaviors/cessation among adults (e.g. fewer than 50% of youth-focused media campaigns are effective in influencing youth smoking behaviors, such as smoking uptake)
  - However, effectively implemented mass-reach health communication interventions have been found to be associated with decreased youth initiation of tobacco use (6.7%) and use prevalence (3.4%). Common features of successful youth-focused campaigns include multiple channels for media delivery, combined school and media components, repeated exposure to campaign messages consecutively delivered over multiple years, and being implemented as part of a comprehensive tobacco control program.
- Alcohol: Campaigns to lessen alcohol consumption have had little success, with exception of campaigns to reduce drunk driving
- Illicit drugs: Evidence is inconsistent. Recent meta-analyses have not found clear support for effectiveness of media campaigns in preventing illicit drug use among youth (2013) or among the general population (2015).
- Depression/Bullying/Suicide: There are limited data on effects of media-focused campaigns/social norms–based interventions in these areas

Evidence on Effectiveness of Marketing / Mass Media – Physical Health

- Physical activity (obesity)
  - The preponderance of evidence has not found mass media campaigns successful in increasing physical activity, particularly if implemented in isolation without supporting policy, programs and environmental interventions.
  - However, there is some evidence that one of the first media campaigns to increase physical activity among youth achieved desired results (CDC's VERB campaign)
- Nutrition (hunger/obesity)
  - There is little literature on mass media/marketing to improve nutrition

Evidence on Cost-Effectiveness of Prevention Strategies

- There are limited data on cost-effectiveness of prevention across several health issues under consideration and uncertainties about estimates found in literature. However, available evidence suggests that:
  - Behavioral health:
    - The most favorable cost-effectiveness ratios related to behavioral health broadly are associated with interventions targeting highest-risk youth
    - Multiple curriculum-based interventions targeting substance use/youth behaviors can be cost-effective
  - Physical health: Structural strategies to prevent childhood obesity may be substantially more cost-effective than behavioral interventions (e.g., sugary drink tax increase versus state-level policy change to promote physical education in schools)

Cost-Effective Curriculum-Based Prevention Programs:

Source: SAMHSA (2008)

Note: Programs circled in red are on the VFHY's compendium of recommended programs

Youth Prevention Efforts in Virginia – Behavioral Health

- Substance Use
  - Virginia's Office for Substance Abuse Prevention (VOSAP) – convened by the Department of Alcohol Beverage Control (ABC) – and Substances Abuse Services Council (SASC) – convened by the Department of Behavioral Health and Development Services (DBHDS) provide coordination function for substance use prevention and treatment
  - ABC, DBHDS and the Department of Health (VDH) oversee local-level youth substance use prevention programs and activities, with DOE and VDH also providing technical support to school nurses for broader youth treatment services.
  - The Department of Criminal Justice Services (DCJS) provides Title II funds for small grants, with some focusing on youth substance abuse
  - Of 31 Community Service Boards (CSBs) surveyed for this study, almost all reported implementing substance use prevention outreach.
  - An estimated $10.5M in categorical/earmarked non-State funds is allocated to substance use prevention (ABC, DBHDS, DCJS)

Youth Prevention Efforts in Virginia – Behavioral Health (con't)

- Bullying
  - In 2013, the Virginia Department of Education (VDOE) issued a model bullying prevention and intervention policy to assist local school boards in formulating policies to help prevent bullying and procedures to report, investigate and intervene when bullying behavior occurs. While data are not available on how schools have used the model policy, in 2014, around 90% of schools reported taking intentional/sustained action to address bullying, with most schools (74%) implementing one or more bullying prevention programs. Programs are more heavily focused among elementary/middle schools than high schools, and school-wide curricula on bullying are used in around 50% of elementary/middle schools, compared to 20% of high schools.
  - 27 school divisions (covering approximately 60 middle and high schools) are supported to develop and implement data-driven academic, behavioral and social-emotional programs based on the Virginia Tiered System of Support (VTSS) methodology (supported by $900,000 in State funds and additional federal resources)
  - Of 31 CSBs surveyed for this study, two-thirds reported implementing bullying prevention outreach

Youth Prevention Efforts in Virginia – Behavioral Health (con't)

- Suicide Prevention/Depression
  - Programs overseen by DBHDS (ASIST Suicide Prevention Training; Mental Health First Aid; $1.1M annually) and VDH provide support for prevention of suicide among youth
  - Of 31 CSBs surveyed for this study, almost all reported implementing suicide prevention outreach, and over three-quarters reported implementing outreach to address depression

Youth Prevention Efforts in Virginia – Physical Health

- Hunger
  - The Commonwealth Council on Bridging the Nutritional Divide – founded by Executive Order in 2014 and chaired by the First Lady's Office – seeks to reduce childhood hunger in Virginia. VFHY is a Council member and has used its platforms to address childhood hunger (e.g., using Y Street Volunteers to collect data on drivers of school breakfast participation).
  - In 2014/2015, around 436,000 students received free or reduced price school lunches. While almost all schools in Virginia participate in school lunch/breakfast programs, the percentage of students receiving lunch who also participated in school breakfast (school breakfast "penetration") was below the national average. However, school breakfast penetration increased to around 59% in the 2015/2016 academic year.
  - In 2016, the Governor's introduced budget instructed agencies implementing feeding programs to develop a plan to consolidate services under one agency, with the Virginia Department of Agriculture and Consumer Services (VDACS) scheduled to issue its report in November
  - An estimated $390M in categorical/earmarked funding (98.5% federal) is allocated to feeding programs (VDOE, VDACS, VDH)

Youth Prevention Efforts in Virginia – Physical Health (con't)

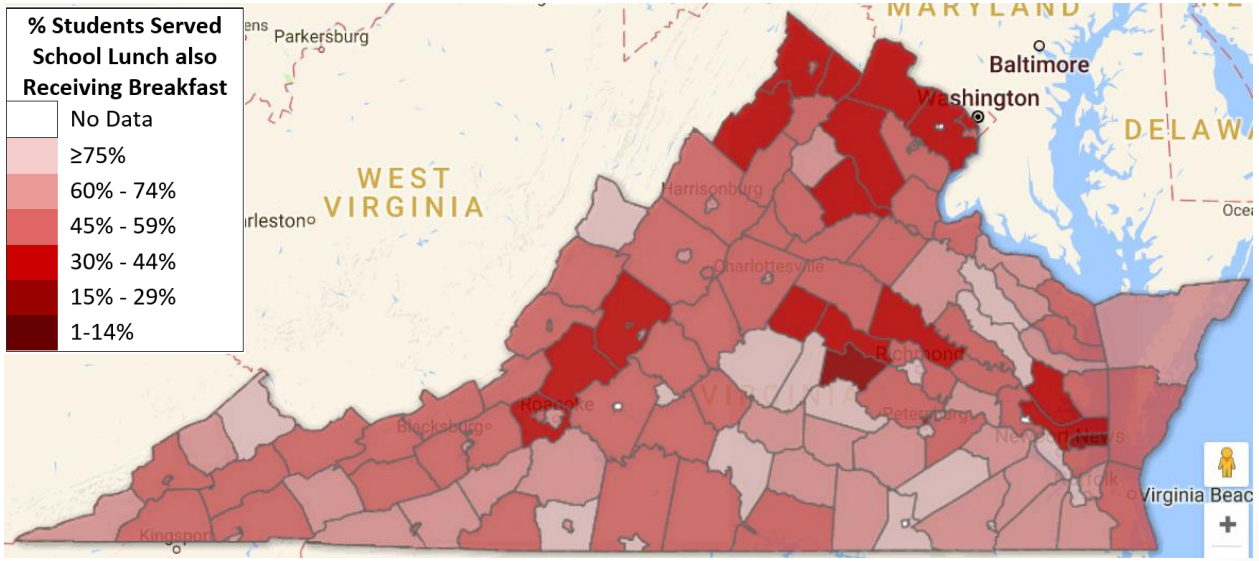
Participation in School Feeding Programs, 2014/2015:

Participation in School Lunch / Breakfast Programs	%		VA	#
	US	VA	Rank*	States
Schools	91.2%	99.7%	48	51
Students	54.3%	52.5%	26	51

* Descending order (1st = highest percentage)

Source: FRAC (2016)

Student School Free/Reduced Price Breakfast Penetration, 2015/2016 (mean = 59%):



Source: VDOE

RECOMMENDATIONS AND POLICY OPTIONS

Recommendation #1

- Maintain current VFHY funding levels allocated to youth tobacco prevention and obesity
  - Tobacco
    - Reductions to VFHY's budget in tobacco could jeopardize gains made in reducing tobacco use
    - While youth tobacco product use continues to decline in Virginia, certain peer groups use tobacco products at high rates, and use of ENDS appears to be increasing. As more data are collected to quantify ENDS' health effects as well as role in promoting/preventing tobacco use, maintaining current levels of funding may prevent further increases in ENDS' use.
    - Literature on anti-tobacco marketing/mass media suggest campaigns require longevity to sustain impact
  - Obesity
    - Reducing obesity and associated health conditions is a long-term process. Given that the evidence on impact of VFHY-supported interventions is limited in the literature and as implemented in Virginia, time will be required to determine the success of current investments.
    - Given the lack of evidence of effective prevention strategies, the VFHY could consider strategically focusing the expected impact of obesity prevention efforts, such as in reducing rates of youth diabetes/pre-diabetes.

Recommendation #2

- Develop a tobacco research strategy designed to maximize linkages between research and impact of VFHY tobacco programs and marketing investments
  - While research findings have been used to inform VFHY programming and disseminated to other stakeholders, a research strategy would systematically ensure that VFHY-funded programs/marketing are achieving highest impact at lowest cost
  - Examples of targeted research informed by a research strategy could include:
    - Prospective studies on the (cost)-effectiveness of VFHY programs/marketing on youth behaviors
    - Studies on changes to Virginia's comprehensive tobacco control program that could positively complement VFHY interventions (e.g., impact of policy-level changes on youth smoking, such as a higher cigarette tax)

Recommendation #3

- Expand the scope of the VFHY's tobacco prevention mandate to include all controlled substances
  - Substance use behaviors run together, increasing the likelihood that the VFHY can efficiently and effectively use its existing tobacco programs to positively impact youth use of other substances
  - VFHY's work on segmentation of youth into "peer crowds" could help target programs/marketing on high-risk groups, where the strongest evidence of effectiveness of prevention strategies exists
  - Ensure alignment of VFHY programs focused on substance use with methodologies used by other State agency stakeholders to prioritize interventions, such as the Strategic Prevention Framework (SPF) used to target DBHDS-funded activities and the VTSS used by school divisions
- Based on VFHY's current program/marketing models, VFHY estimates the following costs to effectively expand into prevention of other substances use:

VFHY Estimates of Costs For/Youth Reached By Expansion Into Use of Other Substances

Required Budget	# Youth Reached	
	Programs	Marketing
$2,000,000	15,000	362,500

Recommendation #4

- Consider expansion of the scope of the VFHY's mission to include up to two additional behavioral/physical health issues:
  - Childhood hunger/food insecurity prevention
    - Current VFHY platforms to address youth obesity through improved quality of nutrition are likely applicable to hunger (e.g., increased use of SNAP benefits at Farmer's Markets)
    - A focus on increasing school breakfast participation would address a current challenge in Virginia
    - Given the lack of evidence of effective prevention strategies in either childhood hunger or obesity, a rigorous impact evaluation plan should accompany expansion into this area
  - Depression/suicide prevention and/or bullying/violence prevention
    - Evidence indicates that program-based prevention can be effective
    - Would require extensive coordination with stakeholders (e.g. DOE and VTSS)
  - VFHY estimates that each new health issue would incur the same costs and reach the same number of youth as with expansion into use of other substances

Policy Options

Policy Option 1: Take No Action

Policy Option 2: Expand VFHY mission to include preventing use of additional substances by youth:

a. Introduce legislation to amend the Code of Virginia to expand the VFHY mission to include prevention of other controlled substance use by youth; OR

b. Introduce budget amendment (language and funding) to increase the VFHY budget by $2,000,000 to expand the VFHY mission to include prevention of other controlled substance use by youth

Policy Option 3: Expand VFHY mission to other youth nutrition issues beyond obesity:

a. Introduce legislation to amend the Code of Virginia to expand the VFHY mission to include prevention of other nutrition-related conditions for youth, such as hunger and food insecurity; OR

b. Introduce budget amendment (language and funding) to increase the VFHY budget by $2,000,000 to expand the VFHY mission to include prevention of other nutrition-related conditions for youth, such as hunger and food insecurity

Policy Option 4: Expand VFHY mission to include other youth behavioral health issues:

a. Introduce legislation to amend the Code of Virginia to expand the VFHY mission to include prevention of behavioral health issues among youth, including suicide and depression; OR

b. Introduce budget amendment (language and funding) to increase the VFHY budget by $2,000,000 to expand the VFHY mission to include prevention of behavioral health issues among youth, including suicide and depression

Policy Option 5: Expand VFHY mission to include preventing youth violence:

a. Introduce legislation to amend the Code of Virginia to expand the VFHY mission to include prevention of violence among youth, including bullying; OR

b. Introduce budget amendment (language and funding) to increase the VFHY budget by $2,000,000 to expand the VFHY mission to include prevention of violence among youth, including bullying

Additional Member-Proposed Policy Option 6: Eliminate youth obesity prevention from VFHY mission

Public Comments

Written public comments on the proposed options may be submitted to JCHC by close of business on November 2, 2016.

Comments may be submitted via:

- E-mail: jchcpubliccomments@jchc.virginia.gov
- Fax: 804-786-5538
- Mail: Joint Commission on Health Care
  P.O. Box 1322
  Richmond, Virginia 23218

Comments will be provided to Commission members and summarized and presented during JCHC's November 9th meeting.

Appendix: Summary of US/Virginia behavioral health indicators, 2014/2015

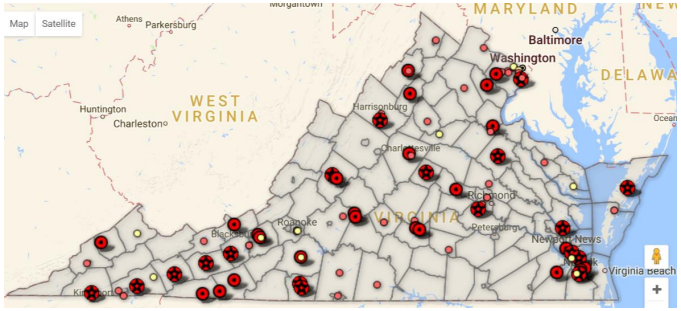
Health Issue	Population			Indicator	%		VA Rank*	# States	Source
	High School	Middle School	12-17 year olds		US	VA			
Substance Use	X			Cigarettes (current use)	16.0%	11.7%	30	33	YRBSS
	X			Any tobacco (current use)	18.5%	14.1%	30	33	YRBSS
	X			E-cigarettes (current use)	24.1%	16.8%	34	35	YRBSS
	X			Alcohol (current use)	33%	23%	34	36	YRBSS
			X	Alcohol (current use)	11.5%	11.2%	22	51	NSDUH
	X			Alcohol (binge drinking)	18%	11%	36	36	YRBSS
	X			Ecstasy (ever used)	3.0%	2.5%	24	28	YRBSS
	X			Heroin (ever used)	2.1%	1.8%	27	32	YRBSS
	X			Marijuana (current use)	22%	16%	33	36	YRBSS
			X	Marijuana (current use)	7.2%	5.9%	37	51	NSDUH
	X			Prescription Drugs (ever used)	17%	16%	12	32	YRBSS
			X	Use of Pain Relievers (last 12 months)	4.7%	4.8%	19	51	NSDUH
Bullying / violence	X			Bullied (in person)	20.2%	19.5%	28	36	YRBSS
	X			Bullied (electronic)	15.5%	13.8%	22	35	YRBSS
		X		Bullied (in person)	38% - 52.4%	42.1%	8	11	YRBSS
		X		Bullied (electronic)	18.2% - 29.2%	18.5%	10	11	YRBSS
	X			Involved in Any Fight	22.6%	20.6%	16	31	YRBSS
	X			Involved in Fight at School	7.8%	7.7%	12	33	YRBSS
Depression / suicide	X			Felt sad/hopeless	29.9%	26.9%	27	37	YRBSS
	X			Made suicide plan	14.6%	11.7%	32	34	YRBSS
	X			Suicide attempted	8.6%	6.7%	34	35	YRBSS
			X	Major depressive episode (last 12 months)	11%	10%	7	51	NSDUH

Appendix: Summary of US/Virginia behavioral health indicators, 2014/2015

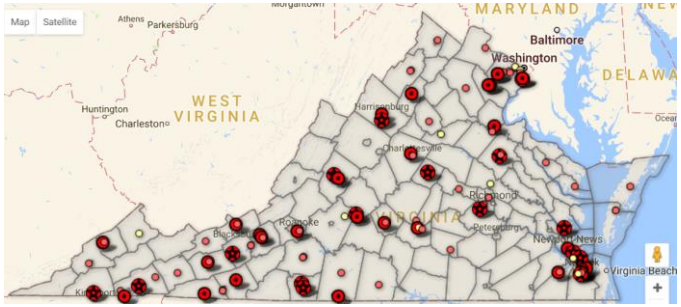
Health Issue	Population		Indicator	%		VA Rank*	# States	Source
	High School	Middle School		US	VA			
Obesity	X		Drank any sugary soda in last week	73.8%	70.0%	28	36	YRBSS
	X		Drank sugary soda 1+ times per day in last week	20.4%	17.0%	25	36	YRBSS
Food Insecurity	X		Did not eat breakfast one or more times in last week	13.8%	14.1%	21	33	YRBSS
		X	Did not eat breakfast one or more times in last week	6.6% - 12.6%	6.6%	11	11	YRBSS

Appendix: VFHY Tobacco Program Coverage Over Time

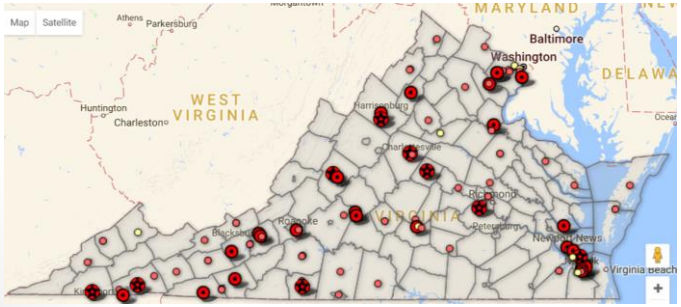
2009-2010:



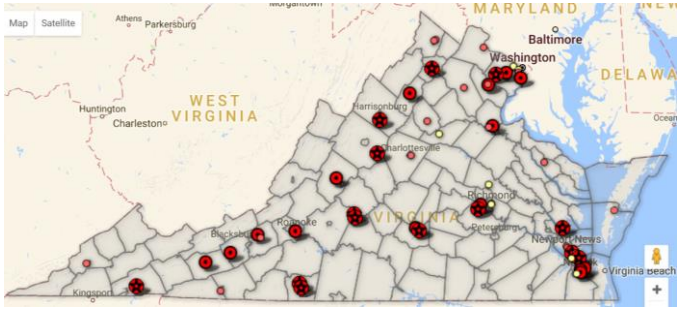
2010-2011:



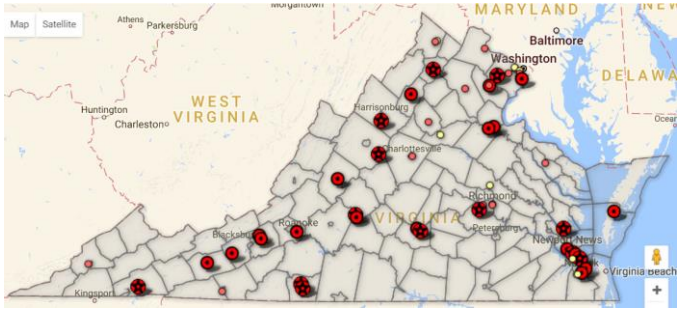
2011-2012:



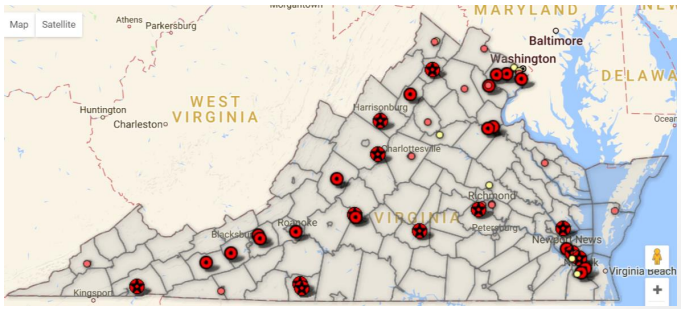
2012-2013:



2013-2014:



2014-2015:



Appendix: Examples of VFHY-funded Research Informing Programming

- Analyses of effects of nicotine exposure on the adolescent brain from due to lengthening of signaling pathways in the brain supported use of prevention programs targeting early childhood and elementary-aged children even though programs for younger ages, especially those targeted for pre-school and families, tend to be more costly on a per-child basis.
- Based on studying school-based methods to address smoking in youth with ADD/ADHD – who smoke at higher rates than other youth – VFHY was able to share information with school nurses and others target their in prevention work for this population
- Several studies reviewed methods for targeted smoking prevention/cessation interventions for youth receiving publicly-funded behavioral health services. Based on findings that behavioral health providers may not see tobacco use as a significant problem, VFHY became an approved provider of continuing education for professionals to earn credits related to tobacco use prevention training.
- A study investigating development of a decision aid to help youth with asthma assess reasons for smoking was used by the VFHY to inform technical assistance provided to grantees implementing community-based youth cessation programs
- Study findings that exercise and better nutrition were inversely correlated with tobacco use among youth led the VFHY to integrate some activities, such as in the annual Healthy Youth Day and involving Y Street Volunteers in obesity prevention
- Study findings that texting as a means for prevention and cessation was effective was communicated to the Virginia Department of Health to inform tobacco quitline activities

Appendix: References

Slide 7 (Tobacco Use by Virginia Youth – Historical Trends)

- Centers for Disease Control and Prevention (CDC). 1991-2015 High School Youth Risk Behavior Survey Data. (http://nccd.cdc.gov/youthonline/)
- Centers for Disease Control and Prevention (CDC). National Youth Tobacco Survey Data. (http://www.cdc.gov/tobacco/data_statistics/surveys/nyts/index.htm)
- IOM (Institute of Medicine). (2015). *Public health implications of raising the minimum age of legal access to tobacco products.* Washington, DC: The National Academies Press.
- Substance Abuse and Mental Health Services Administration (SAMHSA). National Survey on Drug Use and Health. (http://www.samhsa.gov/data/population-data-nsduh)

Slide 8 (Tobacco Use by Virginia Youth – Historical Trends (con't))

- Centers for Disease Control and Prevention (CDC). 1991-2015 High School Youth Risk Behavior Survey Data. (http://nccd.cdc.gov/youthonline/)

Slide 9 (Tobacco Use by Virginia Youth – Current Situation/Future D...)

- Bunnell et al. (2015). "Intentions to smoke cigarettes among never-smoking U.S. middle and high school electronic cigarette users, National Youth Tobacco Survey, 2011-2013." *Nicotine & Tobacco Research*. 17(2):228-235.
- Brose et al. (2015). "Is the use of electronic cigarettes while smoking associate with smoking cessation attempts, cessation and reduced cigarette consumption? A survey with a –year follow up." *Addiction*. 110:1160-1168.
- Callahan-Lyon, P. (2014). "Electronic cigarettes: Human health effects." *Tobacco Control*. 23:ii36-ii40.
- Food and Drug Administration (FDA). (2016). Final Rule: Deeming Tobacco Products To Be Subject to the Federal Food, Drug, and Cosmetic Act, as Amended by the Family Smoking Prevention and Tobacco Control Act; Restrictions on the Sale and Distribution of Tobacco Products and Required Warning Statements for Tobacco Products. (https://www.federalregister.gov/documents/2016/05/10/2016-10685/deeming-tobacco-products-to-be-subject-to-the-federal-food-drug-and-cosmetic-act-as-amended-by-the)
- Loomis et al. (2015). "National and State-Specific Sales and Prices for Electronic Cigarettes – US, 2012-2013." *American Journal of Preventive Medicine*. 50(1): 18-29.
- Park et al. (2016). "E-cigarette use and intention to initiate or quit smoking among youths." *American Journal of Public Health*. 106(4): 672-678.

Appendix: References

Slide 10 (VFHY Youth Tobacco Prevention Programs)

- Substance Abuse and Mental Health Services Administration (SAMHSA). National Registry of Evidence-based Programs and Practices (NREPP). (http://www.samhsa.gov/nrepp)

Slide 15 (VFHY Youth Tobacco Prevention – Research)`

- Virginia Youth Tobacco Projects Research Coalition Core. 2016. *VYTP Faculty Accomplishments: FY 2007 to FY 2015*. (unpublished)

Slide 16 (VFHY Youth Tobacco Prevention – Surveillance)

- VFHY. (2016). *All Teens Are Not the Same*. Presentation given at VFHY Board Meeting, September 21, 2016.

Slide 18 (Youth Obesity in Virginia – Historical Trends)

- Brennan et al. (2014). "Childhood Obesity Policy Research and Practice Evidence for Policy and Environmental Strategies." *American Journal of Preventive Medicine*. 46(1): e1–16.
- Centers for Disease Control and Prevention (CDC). 1991-2015 High School Youth Risk Behavior Survey Data. (http://nccd.cdc.gov/youthonline/)
- National Survey of Children's Health (NSCH). (http://childhealthdata.org/learn/NSCH)

Slide 19 (Youth Obesity in Virginia – Historical Trends (con't))

- Centers for Disease Control and Prevention (CDC). 1991-2015 High School Youth Risk Behavior Survey Data. (http://nccd.cdc.gov/youthonline/)

Slide 20 (VFHY Youth Obesity Prevention - Program Scope)

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