2018 Vaping Trends & Prevention Info for Middle School Faculty

April 13, 2018

Erica McNamara, MPH
RCASA Director
OUR COALITION VISION IS...

A SAFE, VIBRANT, AND HEALTHY READING IN WHICH ALL MEMBERS—YOUNG TO OLD—ENGAGE IN MAKING HEALTHY DECISIONS AND ACTIVELY WORK TOGETHER TO ENSURE THAT TODAY'S RESOURCES SHAPE TOMORROW'S STRENGTHS.
RCASA Collaborations

- Reading Public Schools is part of our monthly RCASA Board of Directors meeting
- RCASA staff and board members meet across the region including
  - Mystic Valley Public Health Coalition on opioid issues
  - Middlesex District Attorney’s Eastern Region Opioid Task Force
  - Regional Police Risk Assessment Team
School Resource Officer

- Brian Lewis, Reading SRO
- NEMLEC (Northeastern Mass Law Enforcement Council), a consortium of police departments in Middlesex & Essex counties.
  - K-9 support
  - S.T.A.R.S. (School Threat Assessment & Response System)
2017 Reading Middle Schools Survey Data Pool

- Gr. 6-8 enrollment 2016-2017
- Students surveyed & sent for analysis
- 81% of Surveys included in Final Sample (response rate)
- Surveys excluded during data cleaning

- Enrolled: 1038
- Analyzed: 896
- Included: 837
- Excluded: 59

81% of Surveys included in Final Sample (response rate)

2017 Reading YRBS Results produced by Rothenbach Research and Consulting for Reading Public Schools
Presentation by Erica McNamara (RCASA) US and Massachusetts data includes weighted results
Reading MIDDLE Schools
Long-Term Prevention Outcome

2005

I am alcohol & drug free

Yes 77%

2017

Yes 89%

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Reading MIDDLE Schools
Long-Term Prevention Outcome

2011
10%

Less teens reported Alcohol Use in Past 30 days

2017
4%

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Reading MIDDLE Schools
Long-Term Prevention Outcome

2011 | 2017

Less teens reported Rx Misuse in 30 days prior to survey

4% | 1%
Current Laws Impacting Teens

Must to be 21 to purchase nicotine products in Reading

Must be 21 to buy or possess alcohol in Massachusetts (parents may provide to their child in their own home)

Must be 21 to buy or possess marijuana in Massachusetts

It's illegal for anyone to share or give someone else Rx or illegal drugs (except for parents dispensing as prescribed)
What We Know...

In the past 20 years, cigarette use among Massachusetts youth has declined by more than 60%.

Yet, Massachusetts, like many states has seen an increase in other types of nicotine use including vaping.

Some teens & adults perceive vaping nicotine as less risky than smoking, which has increased its popularity.

There are serious health risks to consider with vaping, including lung disease.
4 A’S OF VAPING

ACCESSIBLE
AFFORDABLE
ATTRACTIVE
ADDICTIVE
ACCESS
TO NICOTINE/VAPES

Most teens use a VISA Gift Card purchased at CVS

169 towns have 21+ ordinance for nicotine and remainder have 18+


TOBACCO 21

“A 2015 Institute of Medicine report predicted that raising the age to 21 would reduce smoking by 12% by the time today’s teenagers are adults. It also would result in about 223,000 fewer premature deaths.”

MA Bill#1218 increase minimum age from 18 to 21

5 states have minimum age of 21 - ME, NJ, CA, OR, HI
What can you buy?

Confiscated at RMHS

Nicotine Devices & Accessories - 2016-2017

Confiscated or found at Reading Memorial High School

July 2017
Caution
1. It is intended for usage by people over 18, NOT by non-smokers, children, pregnant or breastfeeding women, people with or at risk of heart disease, or people taking medication for depression or asthma. The electronic cigarette is not a smoking cessation device.

Vape + Nicotine Cartridges

4 JUULpod cartridges
creme brulee
5% strength

*1 JUULpod contains - 0.7mL with 5% nicotine by weight // approximately equivalent to about 1 pack of cigarettes
Nicotine “juice” for vaping 2016-2017
E-cigarettes contain a battery-powered heating element that vaporizes liquid contain nicotine.

Marijuana (in the form of liquid, wax or finely ground powder) can be “vaped” using modified e-cigarettes or specialized devices.

Marijuana vaping pens work in a similar way, but the devices are optimized to efficiently vaporize the active molecules in concentrated marijuana oils.

Source: Human Relations Media, Vaping: More Dangerous Than You Think
Marijuana

Tetrahydrocannabinol (THC) is psychoactive ingredient

For comparison, the national average of marijuana's THC content in 1978 (1.37%), 1988 (3.59%), (1998 4.43%) and in 2008 (8.49%) to 15% in 2015

THC stays in brain (primarily fat) for a very long time. Half life of 50% every 7 years

Partial slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
ACCESS TO THC AND MARIJUANA

Order online

Buy illegally

Synthetics like K2 Spice, Kush sold as non-edible products or teens may produce their own BHO from illegal marijuana

MARIJUANA 21
RECREATIONAL USE
9 states have minimum age of 21-MA, ME, VT, WA, OR, NV, CA, CO, AK

MARIJUANA 18

MEDICINAL USE
29 states have minimum age of 18

Reading Coalition Against Substance Abuse
“Dabbing” THC concentrates/Earwax

Marijuana concentrates are the extracted resins from green leafy marijuana. While pot contains roughly 10-20% THC, earwax – BTO– can contain up to 80% of it. Wax is a cannabis concentrate w/consistency of ear wax, made from a butane extraction—Butane Hash Oil/BHO.

some non-traditional symptoms i.e. hallucinations, passing out, extreme highs (even from small portions) & high levels of impairment.

http://www.campussafetymagazine.com/article/drug_trend_alert_marijuana_wax_oil_or_concentrates

BHO can also be made into “shatter”.
Butane Hash Oil (BHO) Aka Honey Oil

How To
- 170,000 hits on google to make your own
- Thousands of short videos on YouTube

Home Processing
- butane
- marijuana
- coffee filter
- storage container
- pyrex baking dish
- tube and end caps
- blade
- 90% plus isopropyl alcohol

Tools of the Trade
- Hair straightener (to soften earwax)
Marijuana vape tips
Edibles containing marijuana & THC from 2017-2018

Confiscated by Reading Police

THC Lollipops

2017

THC Gummies

2018

Edibles THC & Marijuana

THC Pills
Edibles from 2018
AFFORDABLE

Starter Kit $49.99


JUUL Labs’ mission is to eliminate cigarettes. JUUL is intended for adult smokers who want to switch from combustible cigarettes.

You must be at least 21 years old to purchase products on JUUL.com.
Big Tobacco still after our kids

- Vaping device makers use the same tactics that were used to market tobacco products in past decades.
- E-cigs = $80 billion-a-year business
- Major tobacco companies have purchased vape brands or created their own including
  - NEWPORT, CAMEL, & MARLBORO
- E-cigarette “vaping” products are marketed in 8,000 different flavors by 466 different brands around the world including RJ REYNOLDS & PHILIP MORRIS

Partial slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
For decades, cigarettes cornered the market on nicotine.

People who decided to take up smoking chose the cigarette over any other nicotine delivery system available, including pipes and chewing tobacco.

This trend held true for generations of smokers, but in the past 10 years the cigarette industry has seen a small but significant sea change.

Electronic cigarettes are catching fire with an entirely new generation of smokers.

And tobacco companies have taken notice.

"It’s the most disruptive change in the tobacco market," Jeff Drope, PhD, vice president of economic and health policy research for the American Cancer Society (ACS), told Healthline. “There is no parallel.”
ATTRACTION

- Visually appealing
- Tastes good
- More socially acceptable
- Celebrity endorsements
- Feels good fast
- Seems less dangerous

Leonardo DiCaprio
Bruno Mars
Katy Perry
Vaping Slang

Analog = traditional cigarette

Juice = solution that's vaporized to create vapor. Contains propylene glycol (PG), vegetable glycerine (VG), flavoring, & nicotine

Mod = advanced personal vaporizer (larger)

Dripping = To refill an atomizer via drops of e-juice straight onto the coil of an atomizer.

Atty = Atomizer part of an e-cig that houses the coil and wick that is heated to produce vapor from e-liquid.
Part of the culture…
a few memes

I BOUGHT A NEW MOD
AND THEN SHE ASKS.

“ARE YOU GONNA SELL
THE OLD ONE?”

THAT MOMENT WHEN
YOU TAKE A DRY HIT

YOU LEARNED MORE
ABOUT ELECTRICITY FROM VAPING

THAN YOU EVER
DID IN SCHOOL
PAX 2 web ad “A BETTER COMPACT VAPORIZER IN EVERY WAY. STREAMLINED WITH A SLIMMER PROFILE AND SIMPLIFIED USER INTERFACE.”

More powerful, but remarkably power efficient. A deeper oven allowing a satisfyingly consistent draw. An elegant, ergonomically redesigned mouthpiece that senses the presence of your lips. A more efficient battery, and intelligent heating and cooling systems to optimize usage. An elegant anodized aluminum surface and integrated LED indicator”. Retail is $279

“PAX 2 is designed specifically for use with loose-leaf plant material”
### ADDICTIVE

<table>
<thead>
<tr>
<th>1 JUUL Pod = 20 CIGARETTES</th>
<th>• TOO MUCH NICOTINE TOO FAST</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you smoked 20 cigarettes in a short amount of time, your body would react</td>
<td>• VAPING = FEW IMMEDIATE SIDE EFFECTS</td>
</tr>
<tr>
<td>Research has shown E-cigarettes don’t help a person quit smoking;</td>
<td>• THEY JUST transfer the nicotine addiction to an electronic device.</td>
</tr>
</tbody>
</table>
"Harmless Vapor"

- Traces of metals like iron and copper are often detected—as well as the carcinogen diethylene glycol.
- Once inhaled, vapor turns to liquid and settles into the lungs. This can lead to pneumonia & lung infection.

Source: Human Relations Media, Vaping: More Dangerous Than You Think
“Healthy Alternative”

- E-cigarettes including vape products contain carcinogens (cancer-causing ingredients)
- Vapers may experience throat soreness & coughing
- Inhaling nicotine through a vaping device profoundly increases your chance of esophageal, throat and stomach cancer

Partial slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
“Popcorn Lung”

Diacetyl, a chemical used to flavor some vape “juice,” has been linked to so-called popcorn lung, the scarring and obstruction of the lungs’ smallest airways.
Effective Substance Abuse Prevention

INCREASING PROTECTIVE FACTORS

&

DECREASING RISK FACTORS

Slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
Protective Factors

Strong bonds with parents. Parental involvement in the child’s life

High self image & self esteem

Trusted Adults at School. Academic Success

Clear limits & consistent enforcement of discipline

Clear & consistent messages that substance use is NOT tolerated


Slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
Risk Factors

Trauma. Undiagnosed & untreated mental health problems/emotional difficulties

Adolescent development stressors. School difficulties (academic, social, and behavioral).

Lack of attachment to caregivers. Family-related problems

Caregivers who abuses substances. Peer group that uses substances.

Onset (YOUTH who use before age 14 are 4X more likely to develop an alcohol or drug related disorder in their lifetime)


Slide content courtesy of Catherine Dhingra, Wake Up, Wakefield, MA
LOCAL NORMS THAT IMPACT SUBSTANCE ABUSE

+ PROTECTIVE

OPPORTUNITY
MOST
CONNECTED
PAUSE

- RISK
ACCESS
GENERATIONAL AMNESIA
FALSE SENSE OF PROTECTION
STYLE OF USE
Challenges

Alcohol, nicotine, marijuana and pills are still attractive to teens.

Early use affects brain development.

Lot of misinformation coming at teens about “less harmful substances”
PREVALENCE
E-vapor Lifetime & Current Use: Youth Risk Behavior Survey - high school

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Substance Misuse Overview
Reading Middle Schools, 2017 YRBS

Current marijuana use
- Reading 2017: 2%
- Mass 2015: 2%

Ever used marijuana
- Reading 2017: 3%
- Mass 2015: 6%

Current binge drinking
- Reading 2017: 1%
- Mass 2015: 2%

Current alcohol use
- Reading 2017: 4%
- Mass 2015: 4%

Ever tried alcohol
- Reading 2017: 11%
- Mass 2015: 13%

2017 Reading YRBS Results produced by Rothenbach Research and Consulting for Reading Public Schools
Presentation by Erica McNamara (RCASA) US and Massachusetts data includes weighted results
Nicotine Misuse Overview: Reading Middle Schools, 2017 YRBS

- Current e-vapor use: 4%
- Ever tried e-vapor: 7%
- Current cigarette use: 2%
- Ever tried cigarettes: 4%

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Talking with Students

VAPING IS NOT HARMLESS – 4 A’S

BE CLEAR ABOUT SCHOOL RULES

Nicotine use of any kind & paraphernalia is not allowed at school or on school grounds.
Reading, MA

100 Reading residents have used the service as of 12/31/17.

Other participating communities for INTERFACE

Acton-Boxborough
Ayer-Shirley
Chelmsford
Cohasset
Concord-Carlisle
Dedham
Framingham
Groton-Dunstable
Leominster
Lincoln-Sudbury
Littleton
Marshfield
Medfield
Medway
Melrose
Middleborough
Natick
Needham
Newton
North Middlesex
Reading
Scituate
South Shore
Wakefield
Waltham
Westford
Westwood
Woburn

Free to the town of Reading, MA

Resource Information Provider Referrals

Where can you learn about Mental Health Resources in or near your community?

How can you access Mental Health Services?

Find answers at the William James College INTERFACE Referral Service website: interface.williamjames.edu

Or call the INTERFACE® Helpline at 1-888-244-6843 Monday–Friday 9:00 am–5:00 pm.
Rx Round Up Progress

# Rx bottles collected by year 2009-2017

Get those unused pills out of the house

<table>
<thead>
<tr>
<th>Year</th>
<th>Rx Bottles</th>
</tr>
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<tbody>
<tr>
<td>2017</td>
<td>8,211</td>
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<tr>
<td>2016</td>
<td>7,153</td>
</tr>
<tr>
<td>2015</td>
<td>5,072</td>
</tr>
<tr>
<td>2014</td>
<td>4,900</td>
</tr>
<tr>
<td>2013</td>
<td>3,915</td>
</tr>
<tr>
<td>2012</td>
<td>2,681</td>
</tr>
<tr>
<td>2011</td>
<td>1,997</td>
</tr>
<tr>
<td>2010</td>
<td>1,778</td>
</tr>
<tr>
<td>2009</td>
<td>29</td>
</tr>
</tbody>
</table>
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