



The Opioid Crisis in Maryland: Impact on Health



*Maryland Behavioral
Health Consortium*

Russell Moy, MD, MPH

Harford County Health Officer

September 27, 2018

AGENDA

- How is Maryland doing in the areas of opioid/substance use disorders?
- How is overall health impacted by substance use disorders?
- What can we do to address these issues?



How much has Maryland's overdose death rate increased over the past 7 years?

(A) 5.2%

(B) 52%

(C) 152%

(D) 252%

(E) 352%



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Drug-related deaths reach all-time high in 2017 In the U.S.

The New York Times

Bleak New Estimates in Drug Epidemic: A Record 72,000 Overdose Deaths in 2017

Fentanyl is a big culprit, but there are also encouraging signs from states that have prioritized public health campaigns and addiction treatment.

By Margot Sanger-Katz

Aug. 15, 2018

Drug overdoses killed about 72,000 Americans last year, a record number that reflects a rise of around 10 percent, according to new preliminary estimates from the Centers for Disease Control. The death toll is higher than the peak yearly death totals from H.I.V., car crashes or gun deaths.

Analysts pointed to two major reasons for the increase: A growing number of Americans are using opioids, and drugs are becoming more deadly. It is the second factor that most likely explains the bulk of the increased number of overdoses last year.

Drug-related deaths reach all-time high in 2017 In Maryland

Maryland's drug-related deaths increase for seventh straight year, reach all-time high in 2017



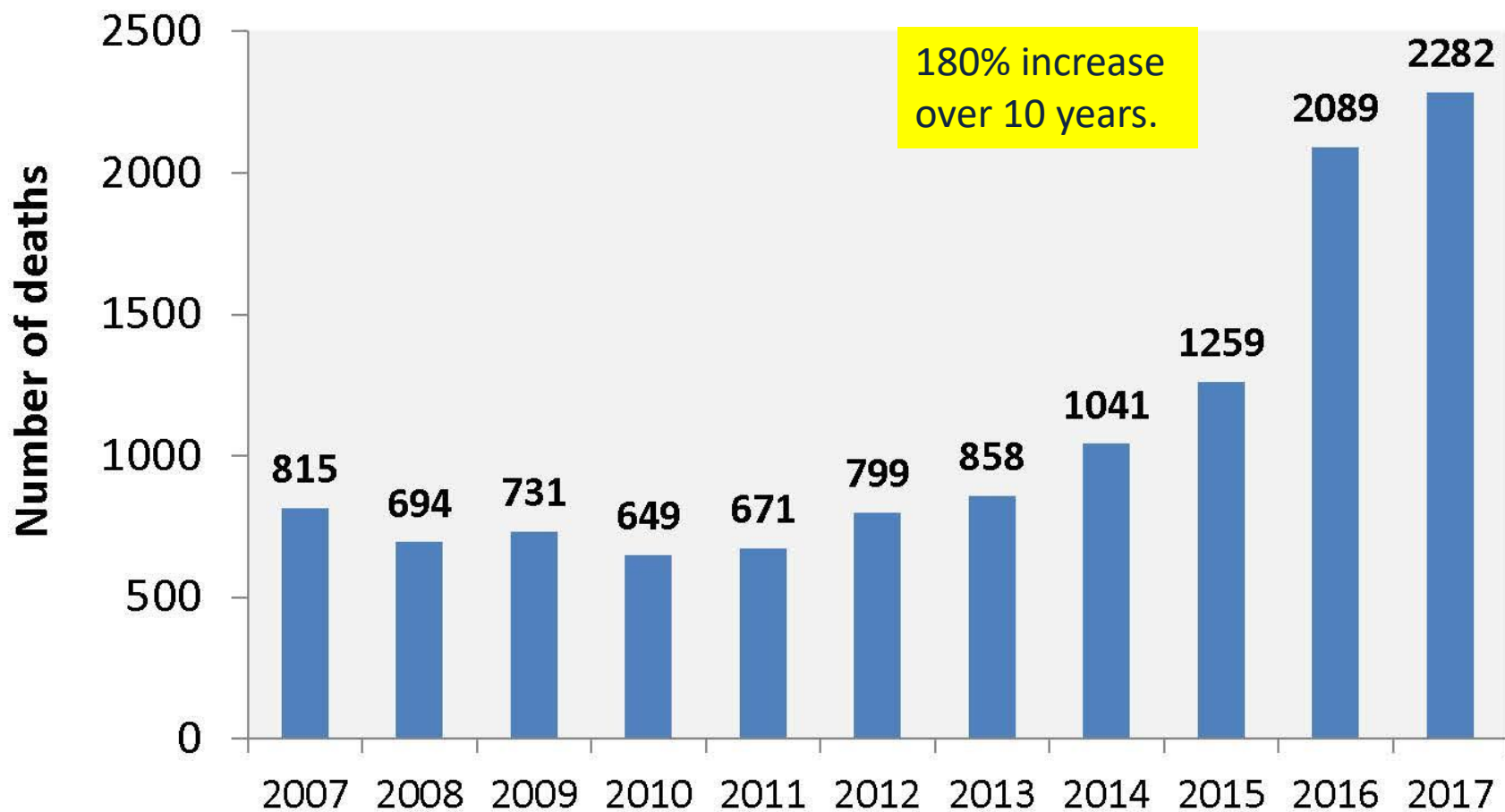
By **Andrea K. McDaniels**
The Baltimore Sun

JULY 26, 2018, 2:45 PM

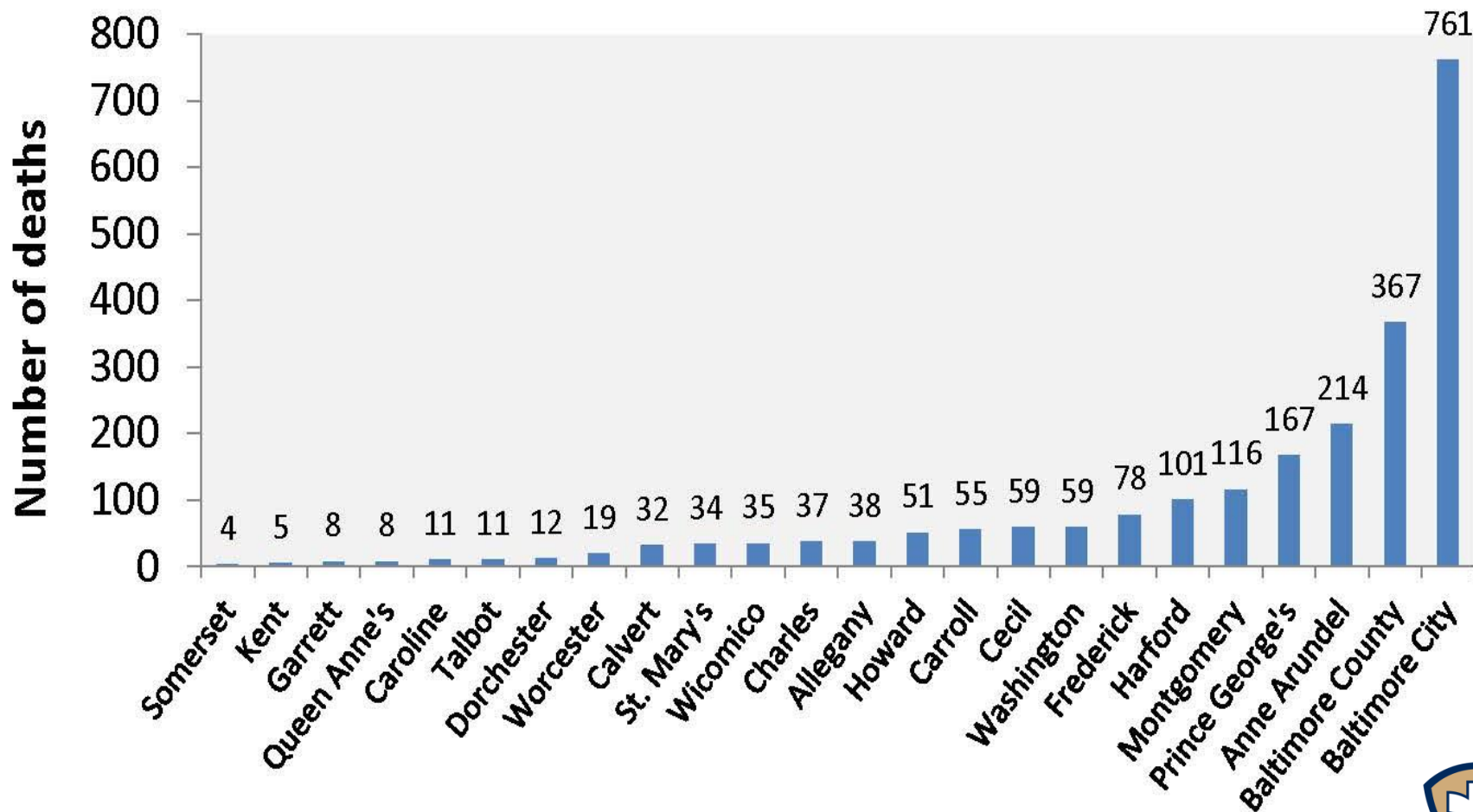
The number of drug- and alcohol-related deaths in Maryland soared to an all-time high of 2,282 last year as the state continued to struggle with an opioid addiction problem that has gripped the entire country.

Last year there were 9 percent more such overdose deaths than in 2016 and most of them — 2,009 — were opioid-related, according to data released Thursday by the Maryland Department of Health.

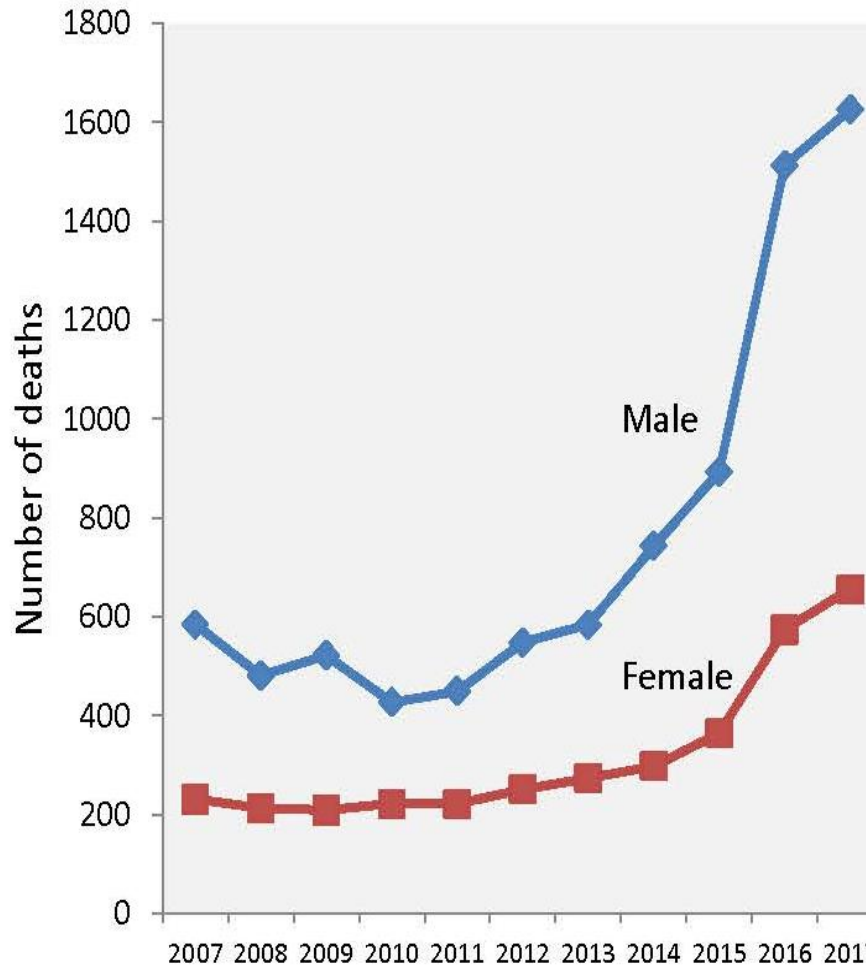
Total Number of Drug- and Alcohol-Related Intoxication Deaths Occurring in Maryland, 2007-2017.



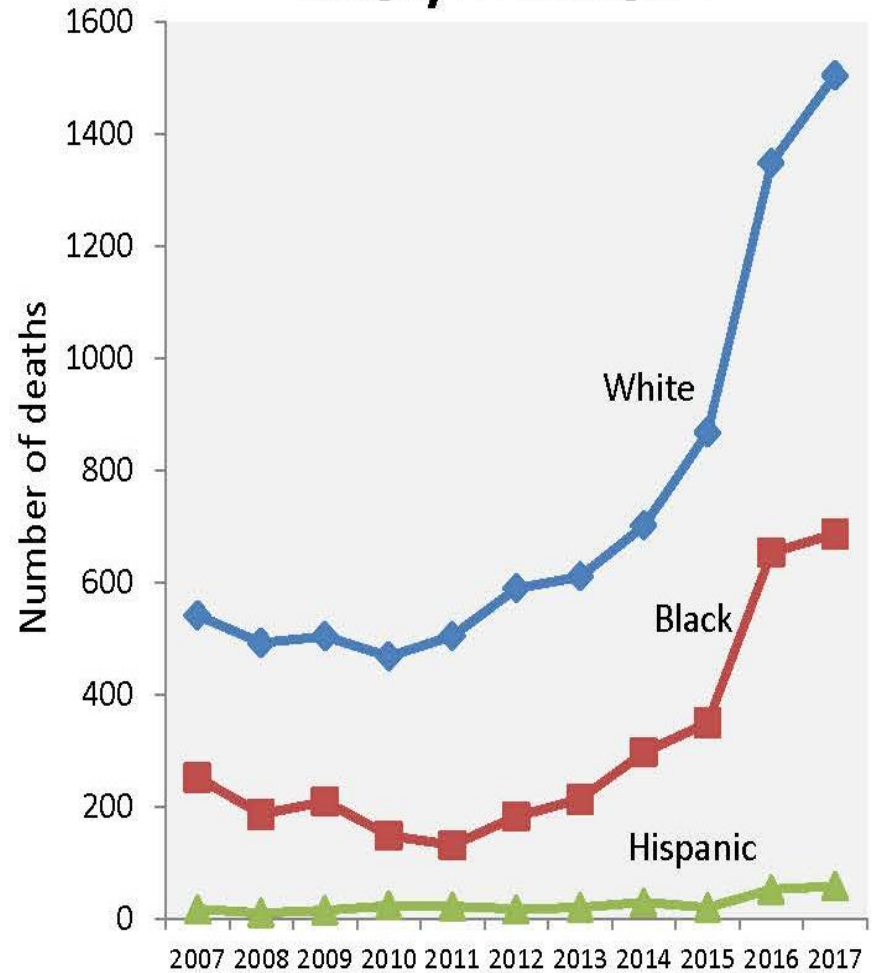
Total Number of Intoxication Deaths Occurring in Maryland by Place of Occurrence, 2017.



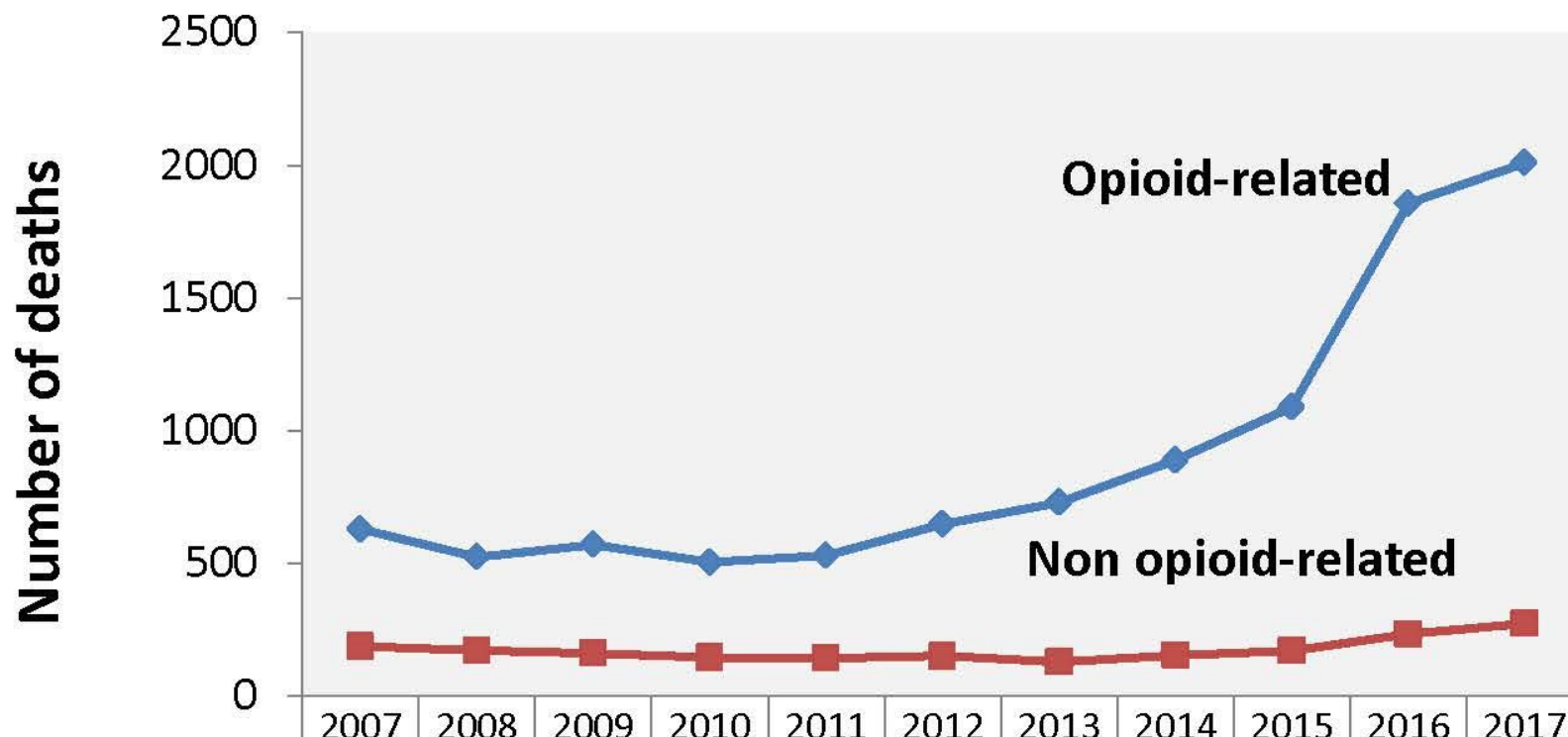
GENDER



RACE/ETHNICITY



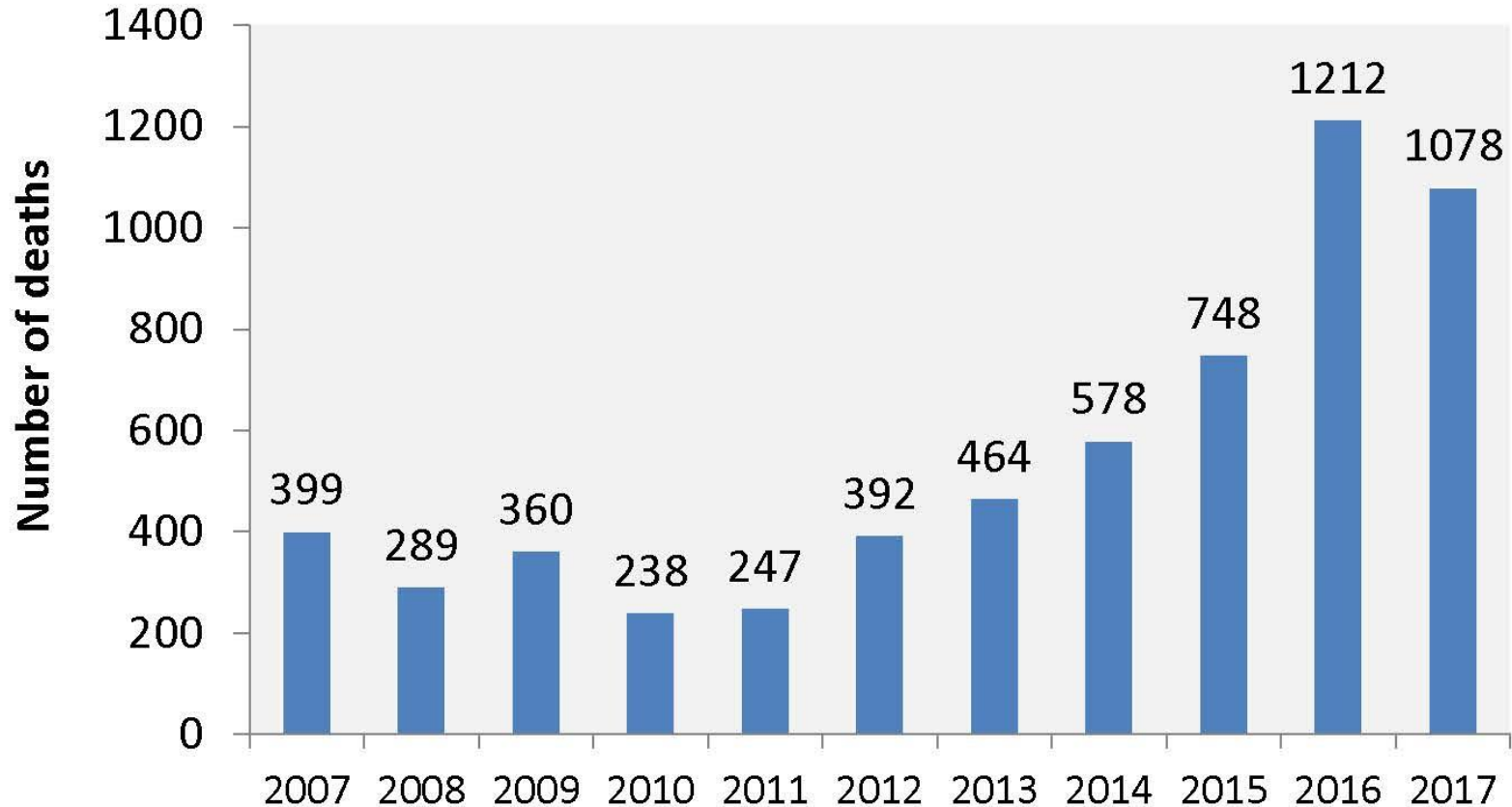
Total Number of Opioid* and Non-Opioid-Related Deaths Occurring in Maryland, 2007-2017.



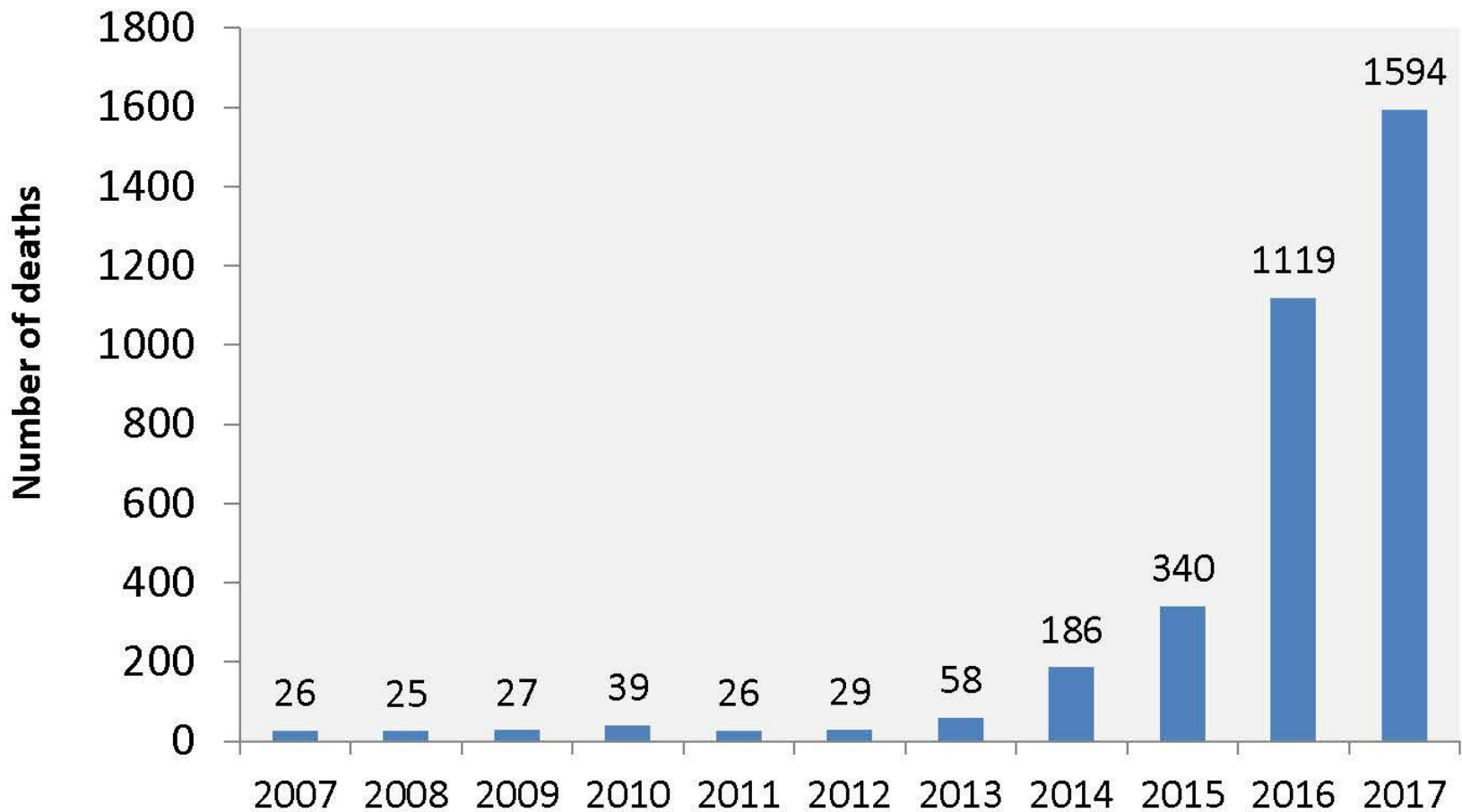
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
◆ Opioid-related	628	523	570	504	529	648	729	888	1089	1856	2009
■ Non opioid-related	187	171	161	145	142	151	128	153	170	233	273



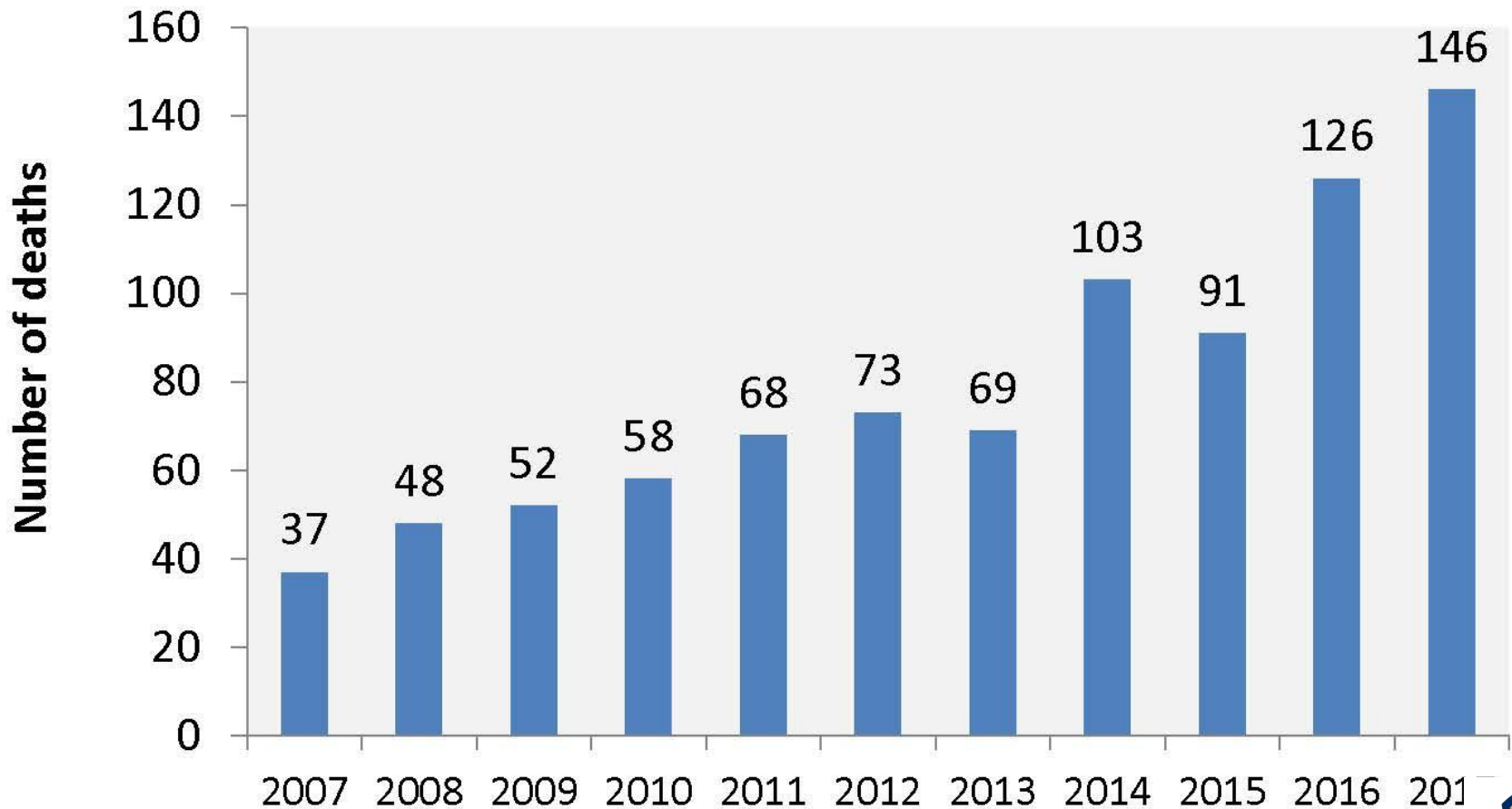
Number of Heroin-Related Deaths Occurring in Maryland, 2007-2017.



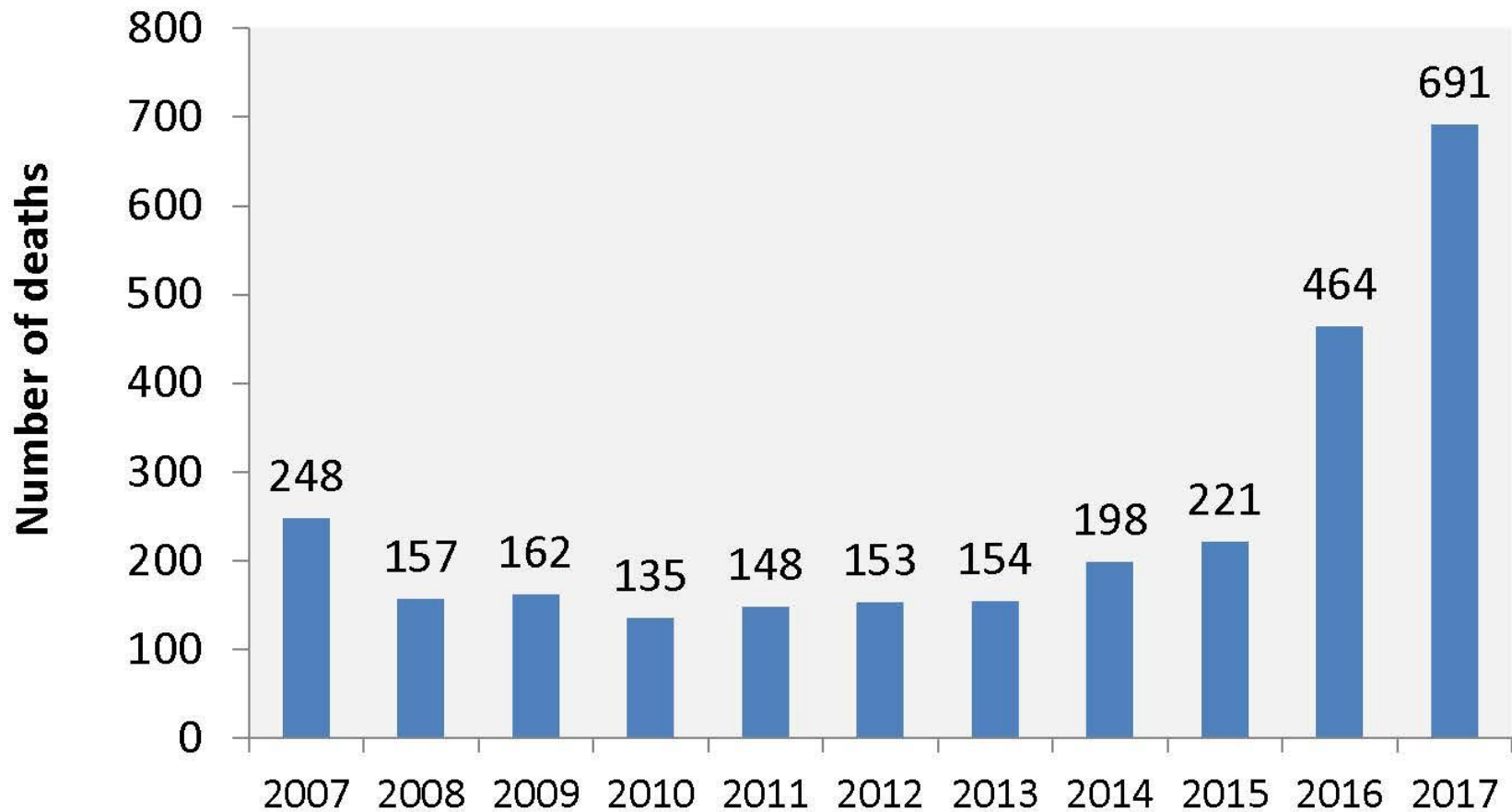
Number of Fentanyl-Related Deaths Occurring in Maryland, 2007-2017.



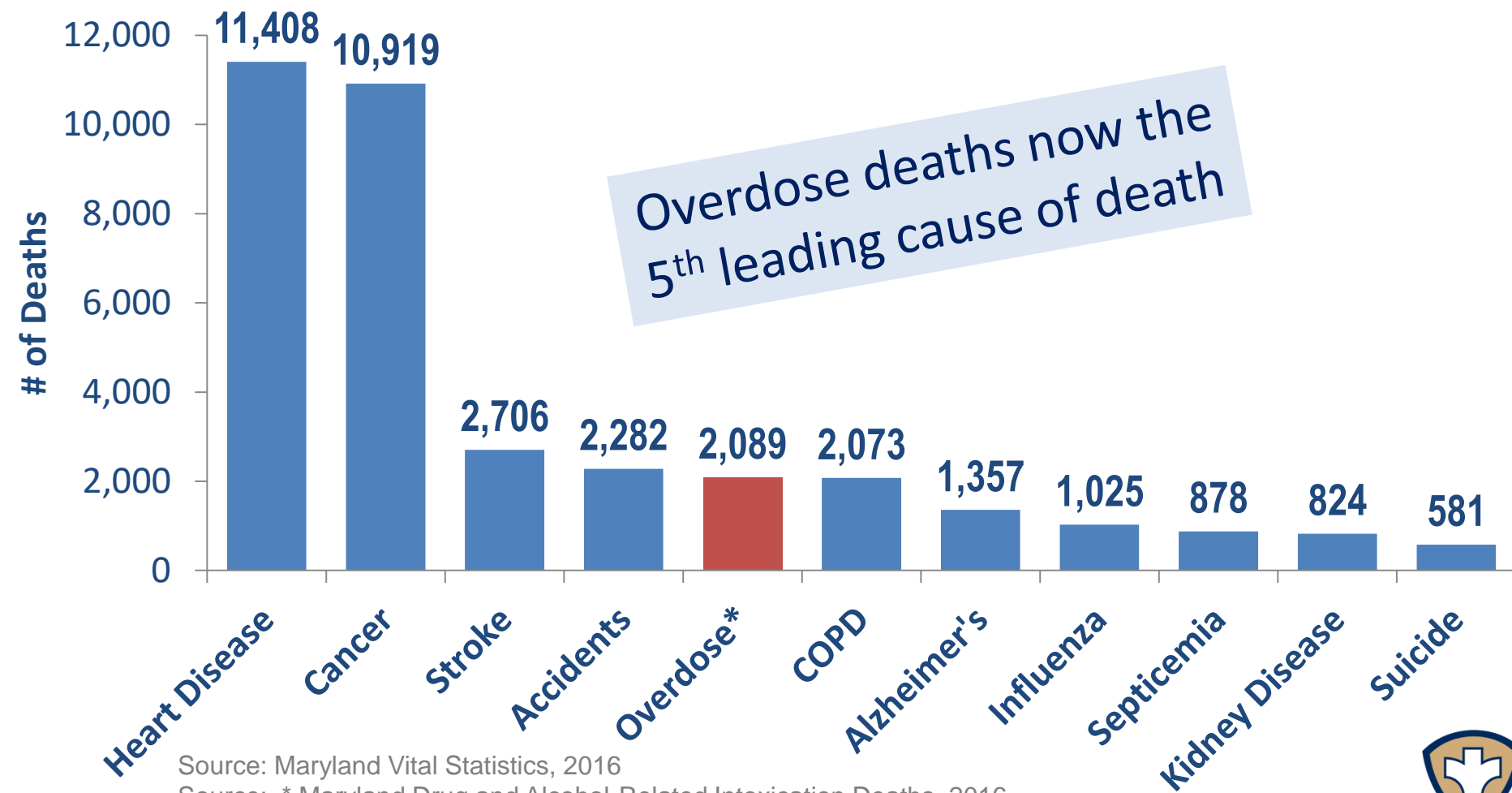
Number of Benzodiazepine-Related Deaths Occurring in Maryland, 2007-2017.



Number of Cocaine-Related Deaths Occurring in Maryland, 2007-2017.



Leading Causes of Death Maryland, 2016



Source: Maryland Vital Statistics, 2016

Source: * Maryland Drug and Alcohol-Related Intoxication Deaths, 2016

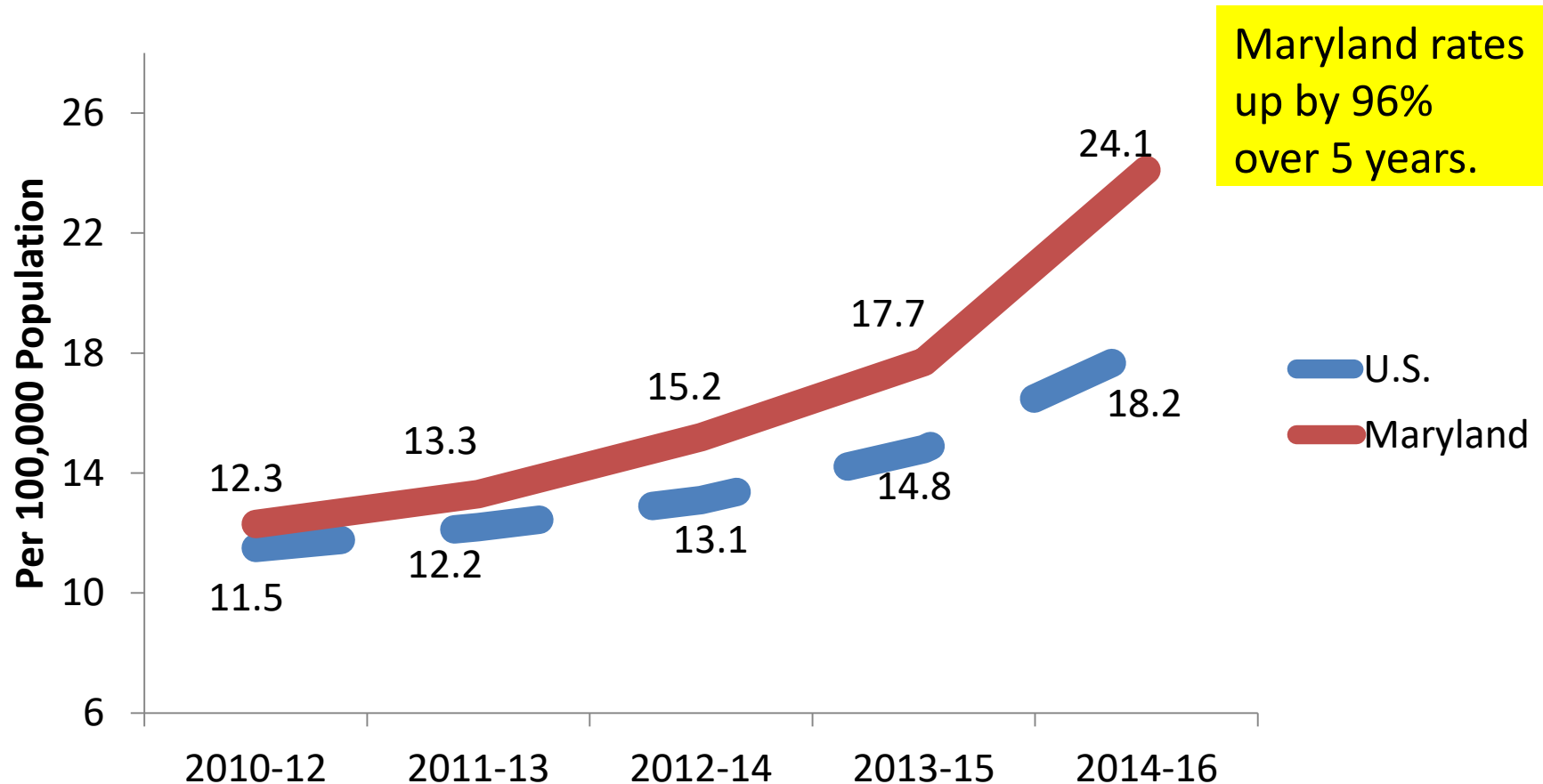


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Drug-Induced Mortality Rates

Maryland & U.S., 2012-2016



Source: Maryland Vital Statistics Reports and CDC Health, United States 2017

Note: Age-adjusted mortality rates



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How does Maryland rank in its overdose mortality rate among states?

(A) #1 (worst)

(B) #6

(C) #16

(D) #36

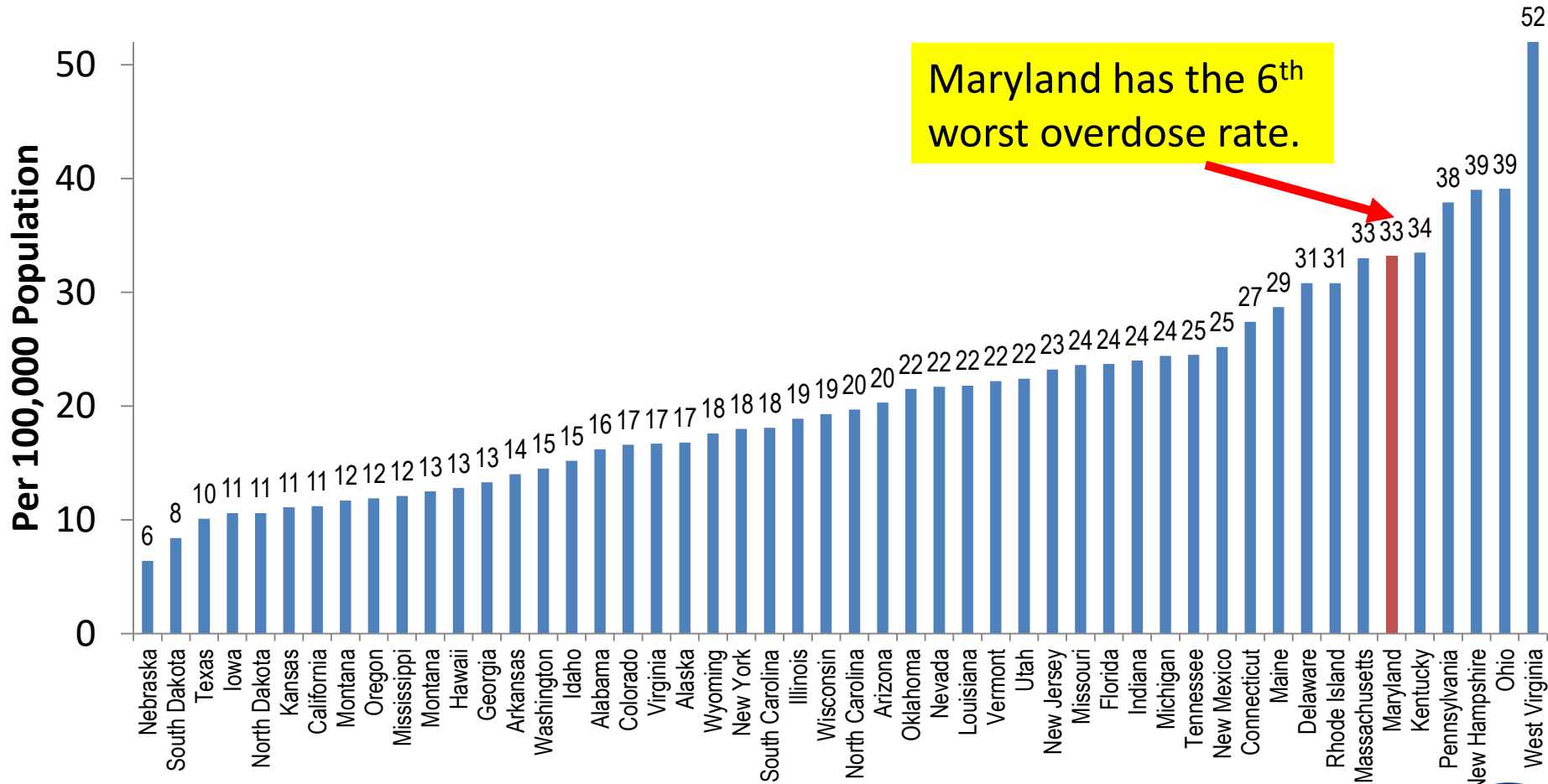
(E) #50 (best)



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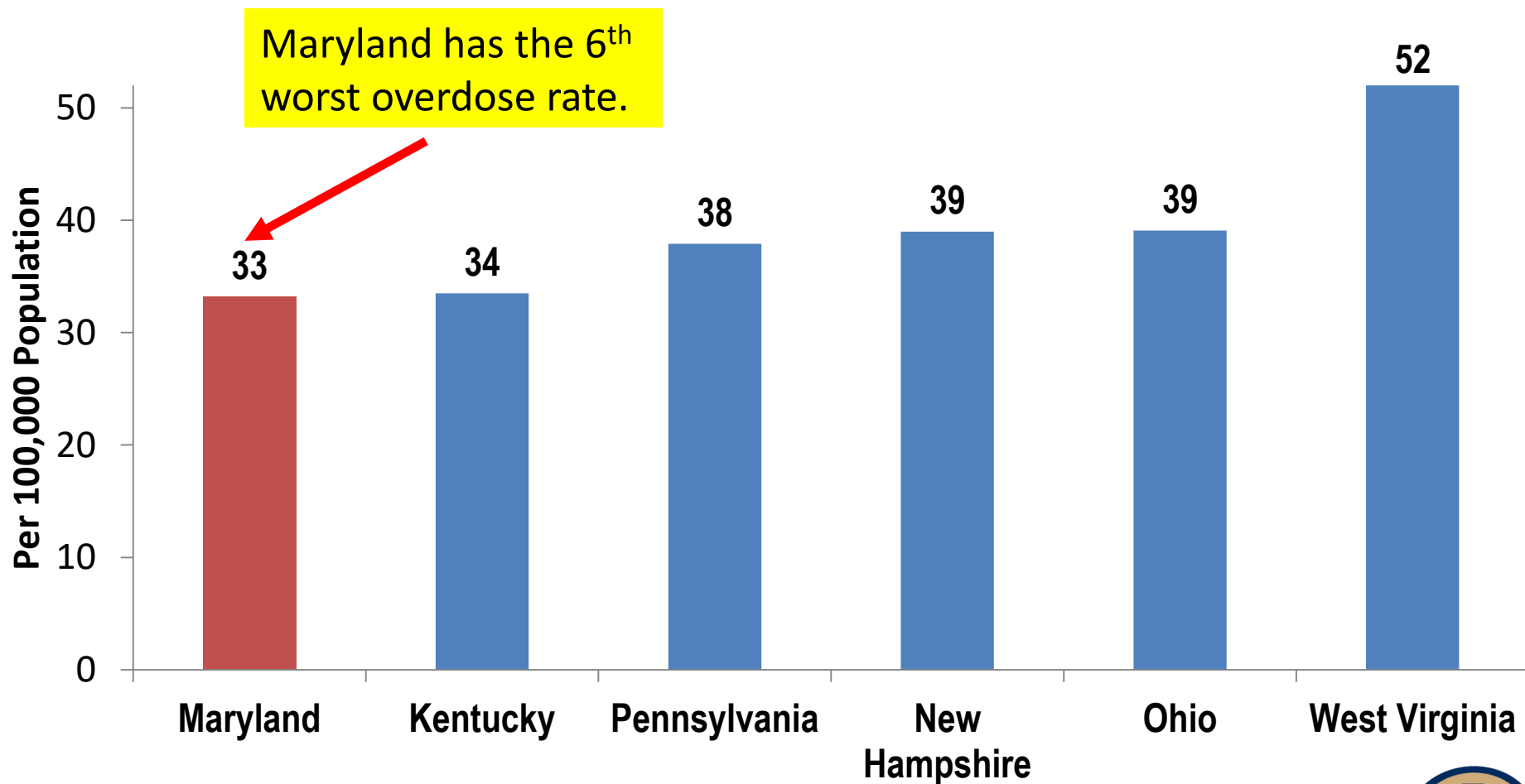
State Drug Overdose Mortality Rankings, 2016



Source: CDC, Stats of the States
Note: Age-adjusted mortality rates



State Drug Overdose Mortality Rankings, 2016



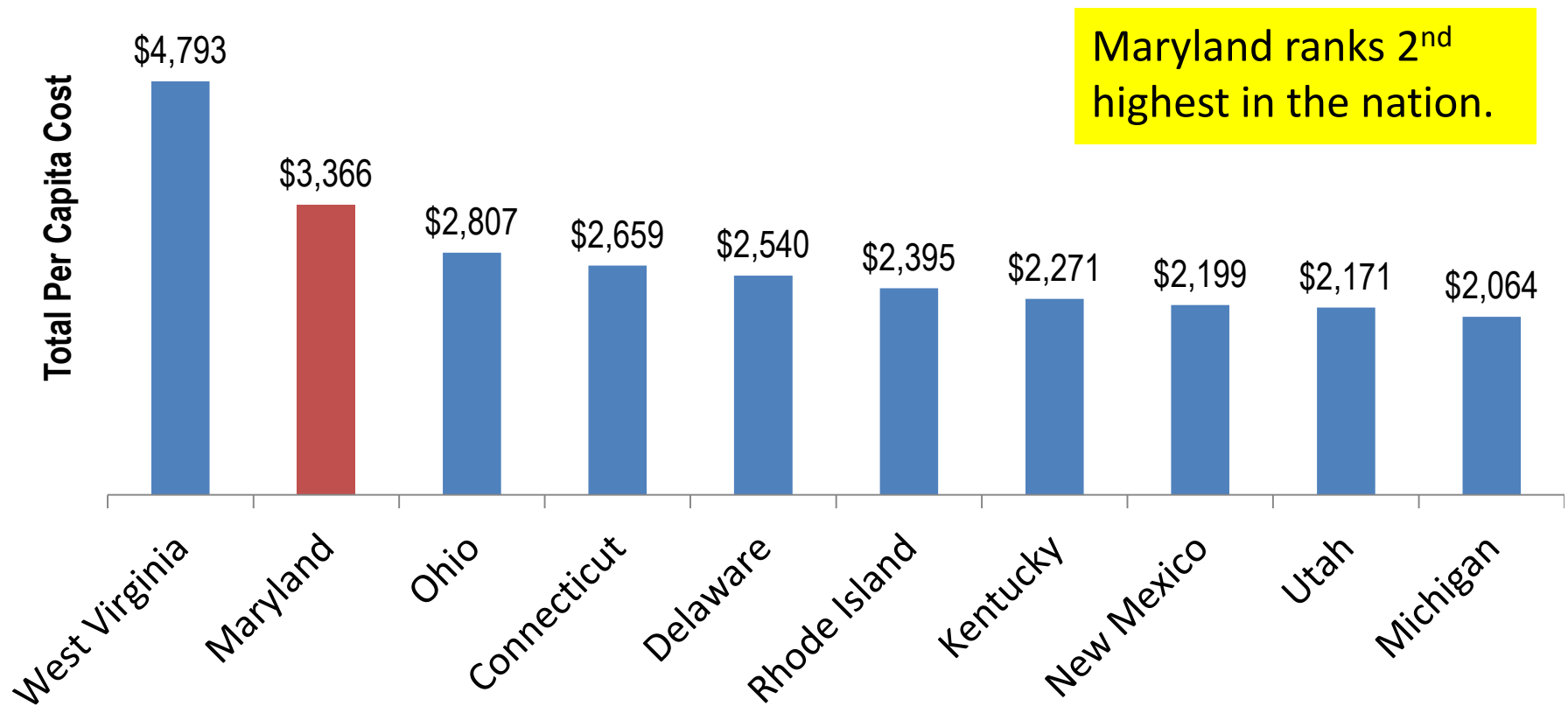
Source: CDC, Stats of the States
Note: Age-adjusted mortality rates



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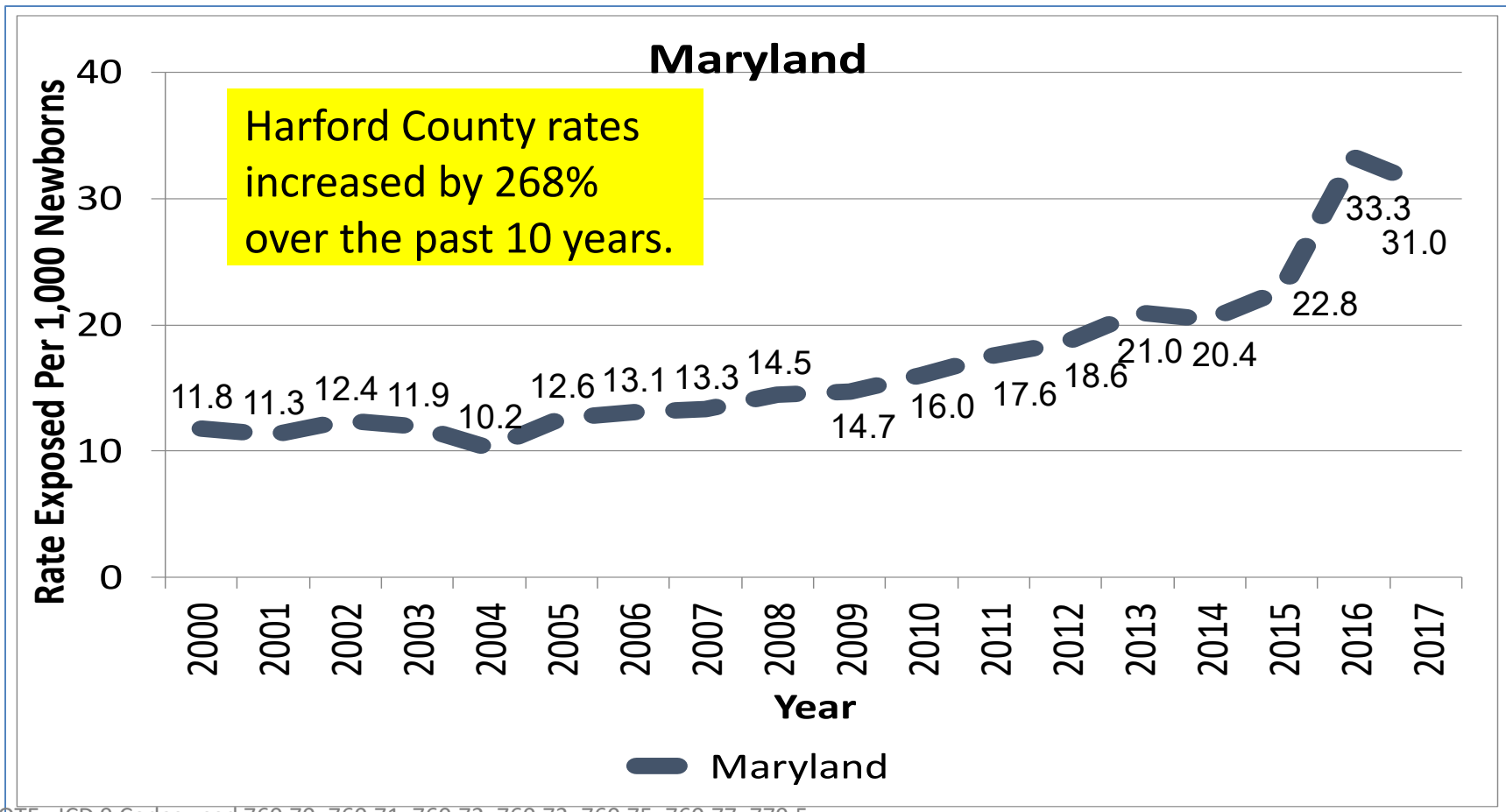
Cost of the Opioid Epidemic by State



Source: Brill, "New State-level Estimates of the Economic Burden of the Opioid Epidemic," AEI, 1/16/18



Rate of Hospital Encounters for Newborns Born with Maternal Drug/Alcohol Exposure in Maryland, 2000-2017*



NOTE: ICD 9 Codes used 760.70, 760.71, 760.72, 760.73, 760.75, 760.77, 779.5

ICD 10 Codes used P04.3, P04.4, P04.41, P04.49, P04.8, P04.9, P96.1

* 2017 DATA IS PRELIMINARY – Data compiled by MCHB/MDH. Chart prepared by HCHD.

Source: HSCRC Hospital Data, 2000-17, Maryland resident births only, does not include Maryland resident births born out of state.



Maryland has the 5th highest rate of new moms addicted to opioids

Maryland Has 5th Highest Rate Of New Moms Addicted To Opioids

The CDC says the number of pregnant women using opioids has increased exponentially, including in Maryland.

By Elizabeth Janney, Patch Staff | Aug 21, 2018 10:56 am ET | Updated Aug 21, 2018 10:59 am ET



MARYLAND — The number of pregnant women using opioids such as heroin and fentanyl has skyrocketed nationwide. Federal health officials say it now poses a "significant public health concern."

Between 1999 and 2014, the national prevalence of opioid use disorder more than quadrupled from 1.5 cases per 1,000 deliveries to 6.5, the Centers for Disease Control and Prevention (CDC) reported this month.



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The reason this epidemic is so deadly



Comparing the size of lethal doses of heroin, fentanyl, and carfentanil. The vials here contain an artificial sweetener for illustration. (New Hampshire State Police Forensic Laboratory)



Short-term, Narcan (naloxone) spray can reverse an opioid overdose and save lives



Intermediate-term, more substance use disorder medication treatment services are needed

Medication-assisted opioid addiction treatment

SUBOXONE

(Buprenorphine + Naloxone)



Approved: by FDA in 2002

Dosage: Taken daily - most commonly as a film under the tongue

Cost: \$125-\$250 for a 30-day set

Insurance: Covered by many providers

Prescription: Can be prescribed at MercyHealth Behavioral Health Services and Compass Behavioral Health Clinic

METHADONE

(Opioid pain reliever)



Approved: by FDA in 1972

Dosage: Taken daily in liquid form

Cost: Less than \$100 per month

Insurance: Covered by many providers

Prescription: Prescribed at Beloit Comprehensive Treatment Center

VIVITROL

(Extended release naltrexone)



Approved: by FDA in 2006

Dosage: Taken as an injection, lasts four weeks

Cost: About \$450 per injection

Insurance: Covered by many providers

Prescription: Can be prescribed by a medical doctor

Intermediate-term, more substance use disorder crisis and care coordination services are needed



WATCH

WELLNESS ACTION TEAMS OF CECIL & HARFORD

- Home visits including Community Health Workers, RNs, Social Workers
- Primary Care Physician referrals and collaboration
- Referrals to transportation, insurance, housing, food
- Self-care, healthful living and care plan management

Proudly serving the residents of Harford and Cecil counties.

For information, please contact 800-515-0044
healthyharford.org



HARFORD CRISIS CENTER

Behavioral Health & Addiction Services

CC

THE HARFORD CRISIS CENTER WILL BE THE FIRST OF ITS KIND
IN MARYLAND TO FOCUS ON BOTH MENTAL HEALTH AND
ADDICTION



[Click here to find out more](#)



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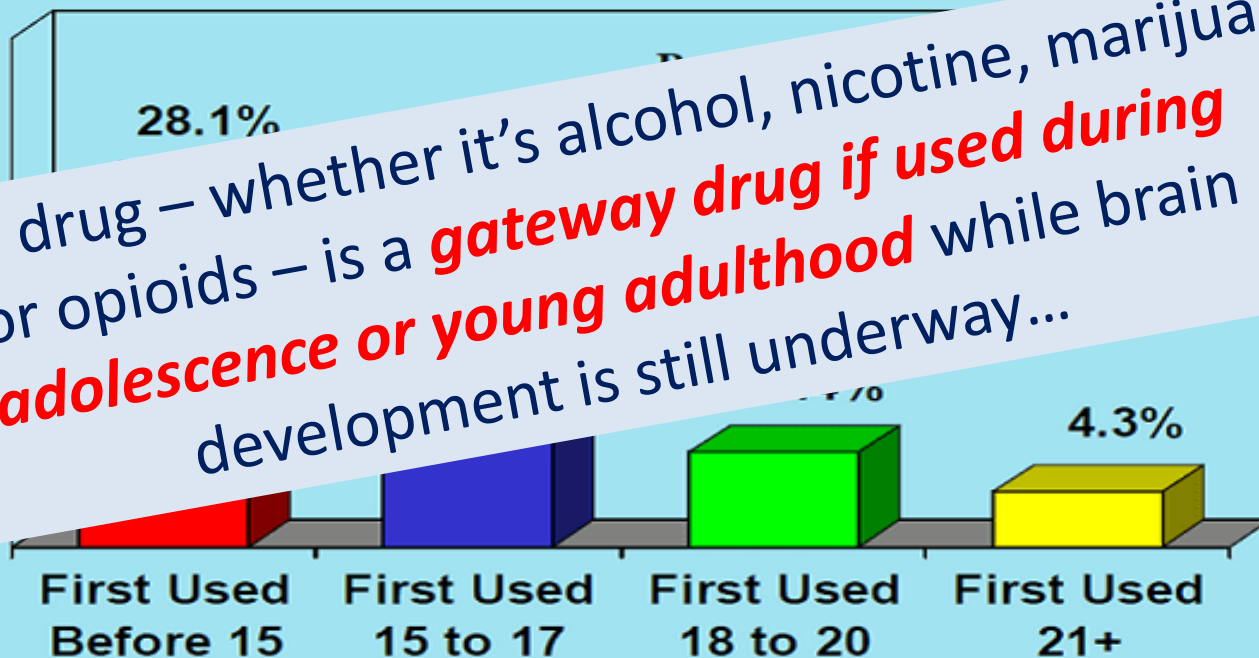
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Long-term, prevention works best



Adolescent Substance Abuse: America's #1 Public Health Problem

The Earlier Teens Use Any Substance, the Greater the Risk of Addiction



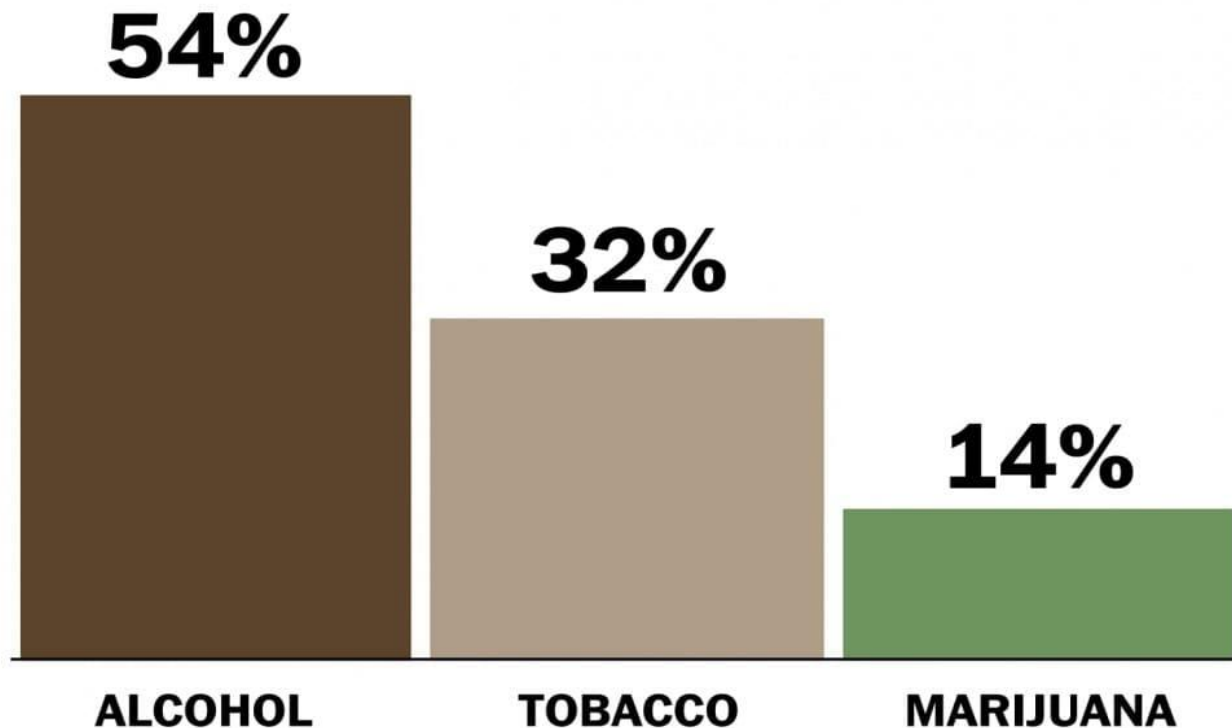
Every drug – whether it's alcohol, nicotine, marijuana or opioids – is a **gateway drug if used during adolescence or young adulthood** while brain development is still underway...

Source: CASA analysis of the *National Household Survey on Drug Use and Health (NSDUH)*, 2009.

Is there a gateway drug?

Alcohol: the true gateway drug

First drug of use, among 12th graders who had ever used alcohol, tobacco or marijuana:



What is the safest level of alcohol consumption?

THE LANCET

Articles

Alcohol use and burden for 195 countries and territories, 1990–2016: a systematic analysis for the Global Burden of Disease Study 2016

GBD 2016 Alcohol Collaborators*

Summary

Background Alcohol use is a leading risk factor for death and disability, but its overall association with health remains complex given the possible protective effects of moderate alcohol consumption on some conditions. With our comprehensive approach to health accounting within the Global Burden of Diseases, Injuries, and Risk Factors Study 2016, we generated improved estimates of alcohol use and alcohol-attributable deaths and disability-adjusted life-years (DALYs) for 195 locations from 1990 to 2016, for both sexes and for 5-year age groups between the ages of 15 years and 95 years and older.

Methods Using 694 data sources of individual and population-level alcohol consumption, along with 592 prospective and retrospective studies on the risk of alcohol use, we produced estimates of the prevalence of current drinking, abstinence, the distribution of alcohol consumption among current drinkers in standard drinks daily (defined as 10 g of pure ethyl alcohol), and alcohol-attributable deaths and DALYs. We made several methodological improvements compared with previous estimates: first, we adjusted alcohol sales estimates to take into account tourist and unrecorded consumption; second, we did a new meta-analysis of relative risks for 23 health outcomes associated with alcohol use; and third, we developed a new method to quantify the level of alcohol consumption that minimises the overall risk to individual health.



Lancet 2018; 392: 1015–35

Published Online:
August 23, 2018
[http://dx.doi.org/10.1016/S0140-6736\(18\)31310-2](http://dx.doi.org/10.1016/S0140-6736(18)31310-2)

See [Comment](#) page 987

*Collaborators listed at the end of the Article

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Safest level of alcohol consumption is none

The Washington Post

Health & Science

Safest level of alcohol consumption is none, worldwide study shows

By Joel Achenbach



Joel Achenbach

Reporter covering science and politics

Email [Bio](#)

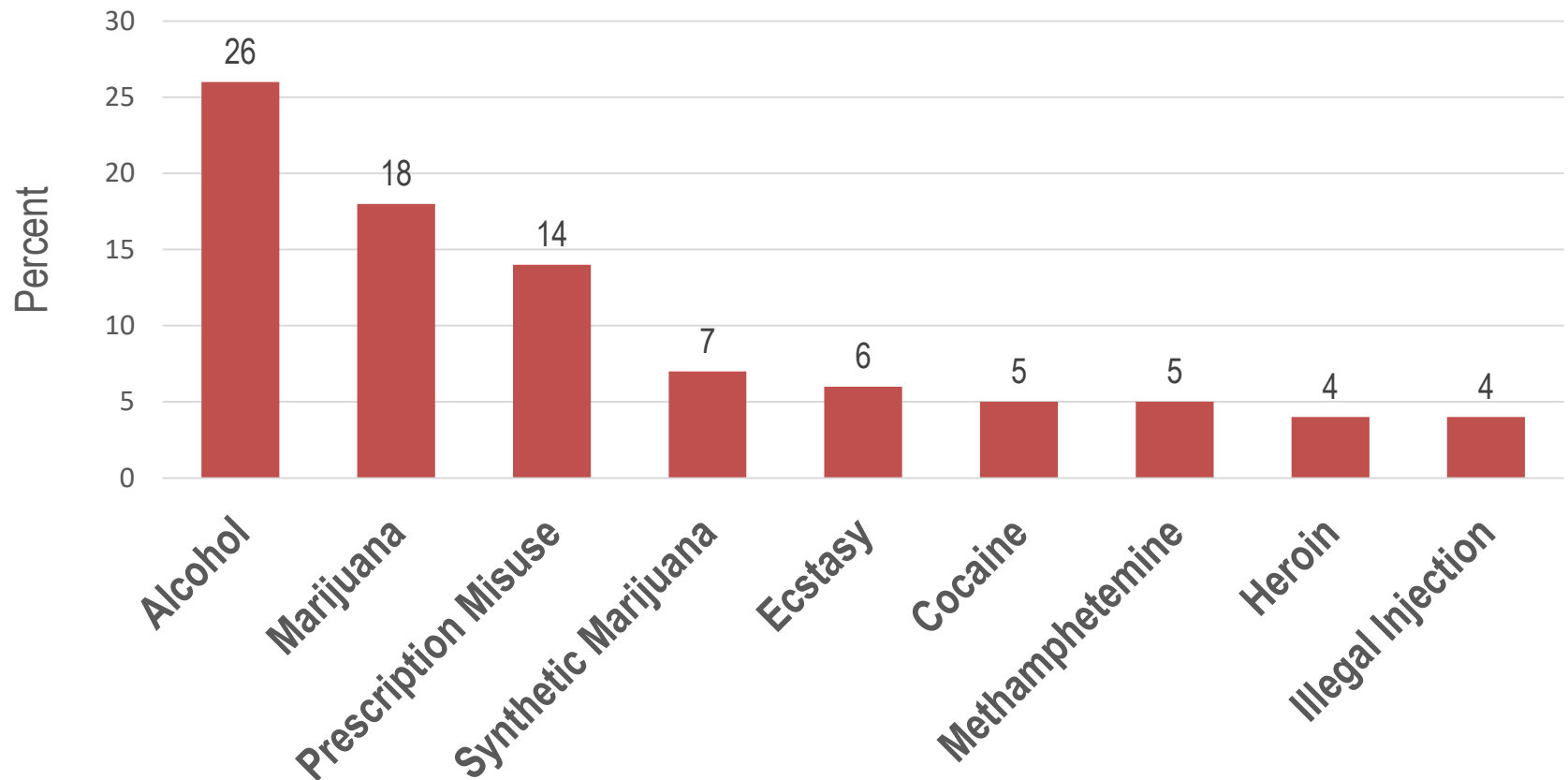
August 23



To minimize health risks, the optimal amount of alcohol someone should consume is none. That's the simple, surprising conclusion of a massive study, co-written by 512 researchers from 243 institutions, published Thursday in the prestigious journal the Lancet.

Adolescent Alcohol and Drug Use Rates

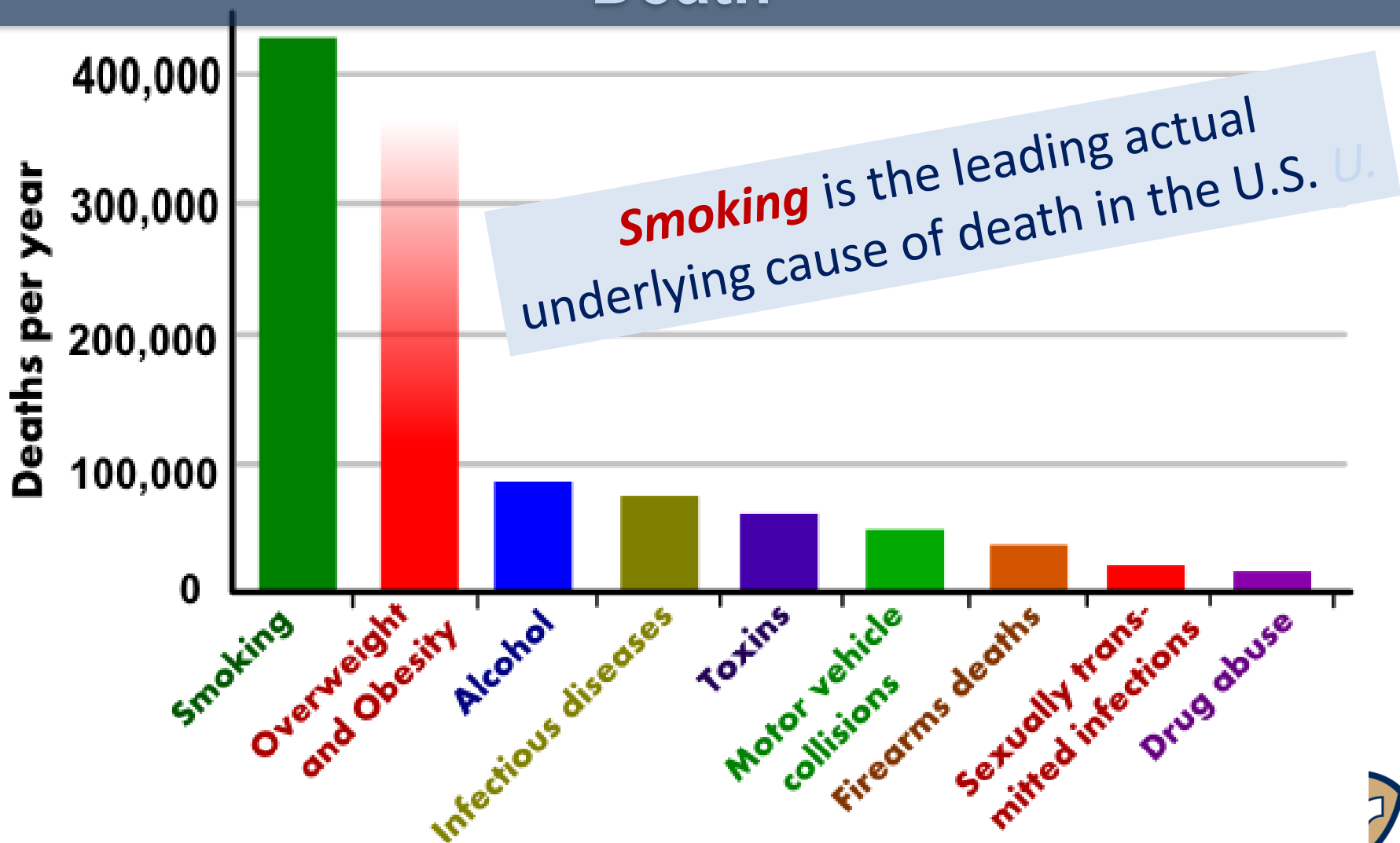
Maryland, 2016



Source: Maryland Youth Risk Behavior Survey (YRBS), 2016, Students, Grades 9-12



The Leading Actual Underlying Causes of Death



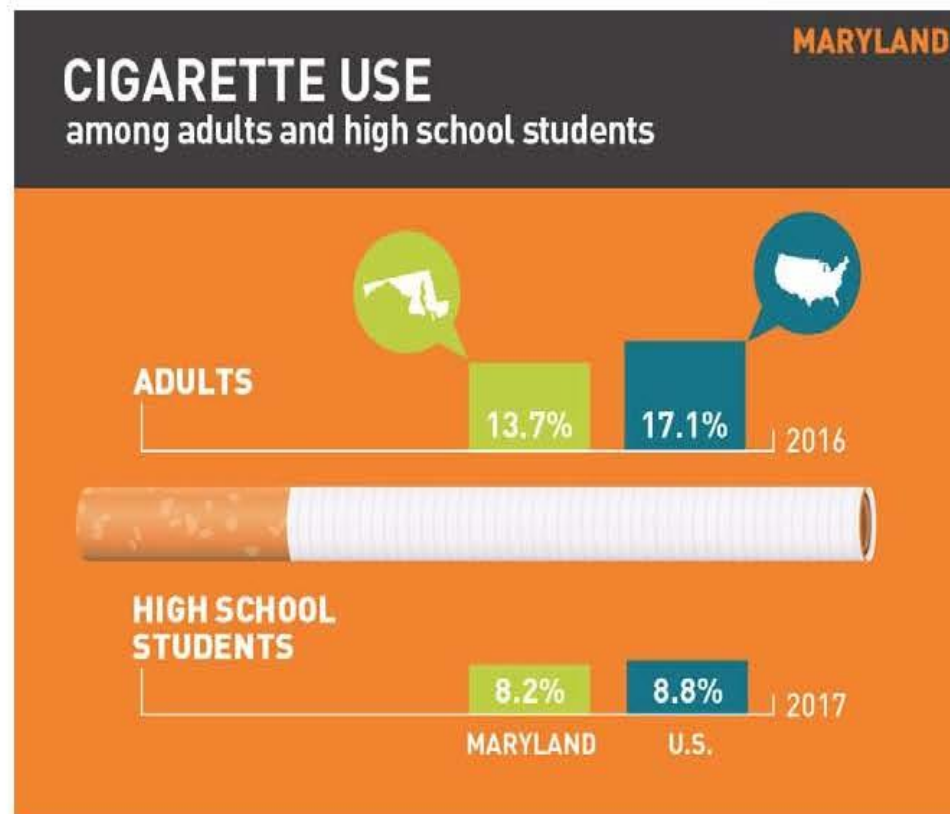
Source: Mokdad et al, "Actual Causes of Death in the U.S., 2000" JAMA, 3/19/2004

Maryland ranks 7th in adult smoking rates, 22nd in adolescent tobacco use rates

tobacco use in maryland

Cigarette use: Maryland*

- In 2016, 13.7 percent of adults smoked. Nationally, the rate was 17.1 percent.¹
- In 2017, 8.2 percent of high school students smoked on at least one day in the past 30 days. Nationally, the rate was 8.8 percent.²



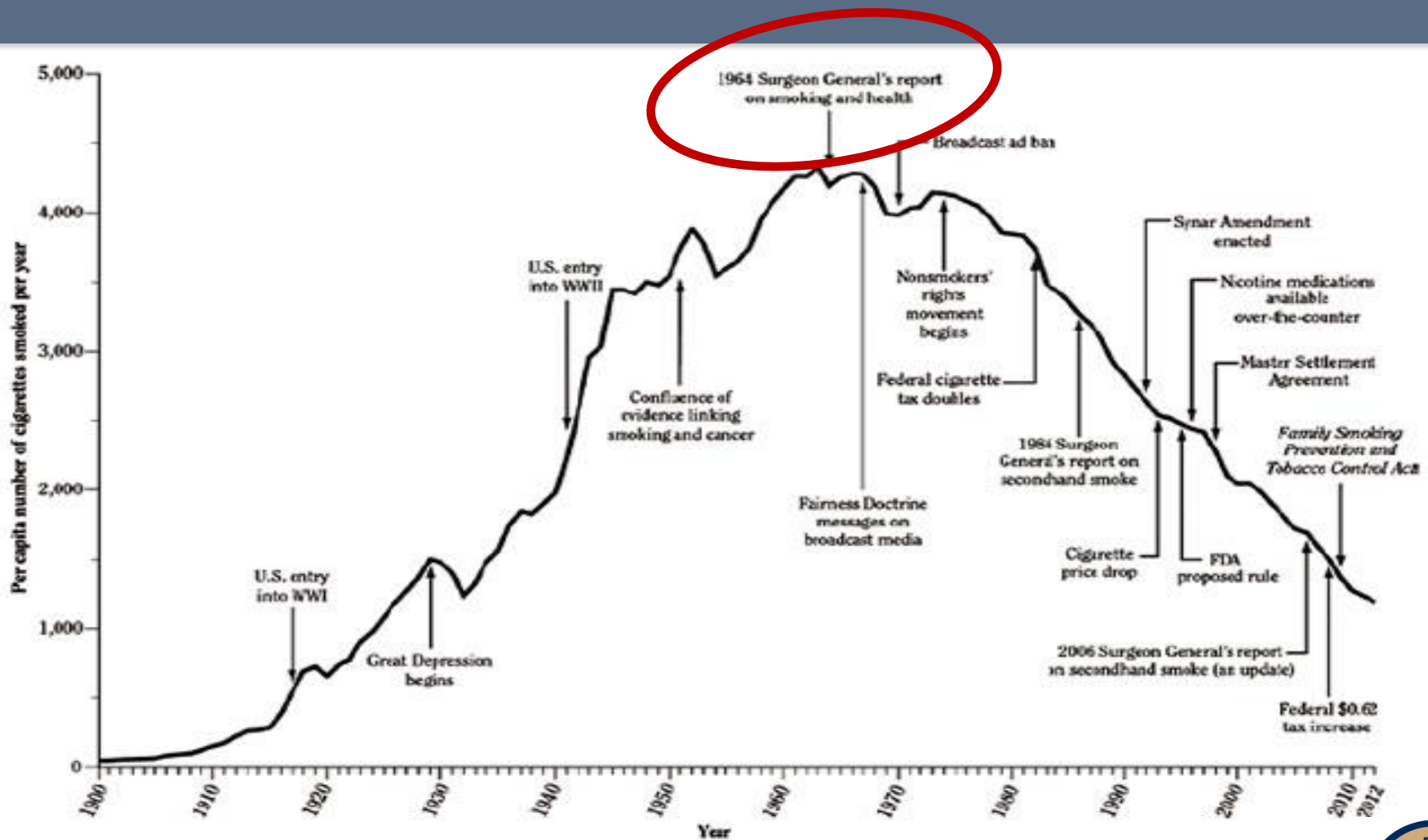
Source: CDC BRFSS Website 2016



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The Rise and Decline of Cigarette Smoking



Source: AHRQ.gov



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A large advertisement for Marlboro cigarettes. The background is a close-up of a man's face wearing a cowboy hat and smoking a cigarette. In the lower right, a smaller scene shows a cowboy on horseback herding a group of horses in a field. The word 'Marlboro' is written in large white letters across the middle. A dark blue box at the top contains yellow text.

Community Norms Have Changed Over the Past 50 Years

Marlboro

100's & Menthol Lights Kings: 11 mg "tar," 0.8 mg nicotine—av. per cigarette by FTC method.
100's Kings: 17 mg "tar," 1.1 mg nicotine—100's: 17 mg "tar," 1.1 mg nicotine—Kings Box: 16 mg "tar," 1.1 mg nicotine—100's Box: 10 mg "tar," 0.8 mg nicotine—Menthol Lights: 11 mg "tar," 0.8 mg nicotine—av. per cigarette by FTC method.

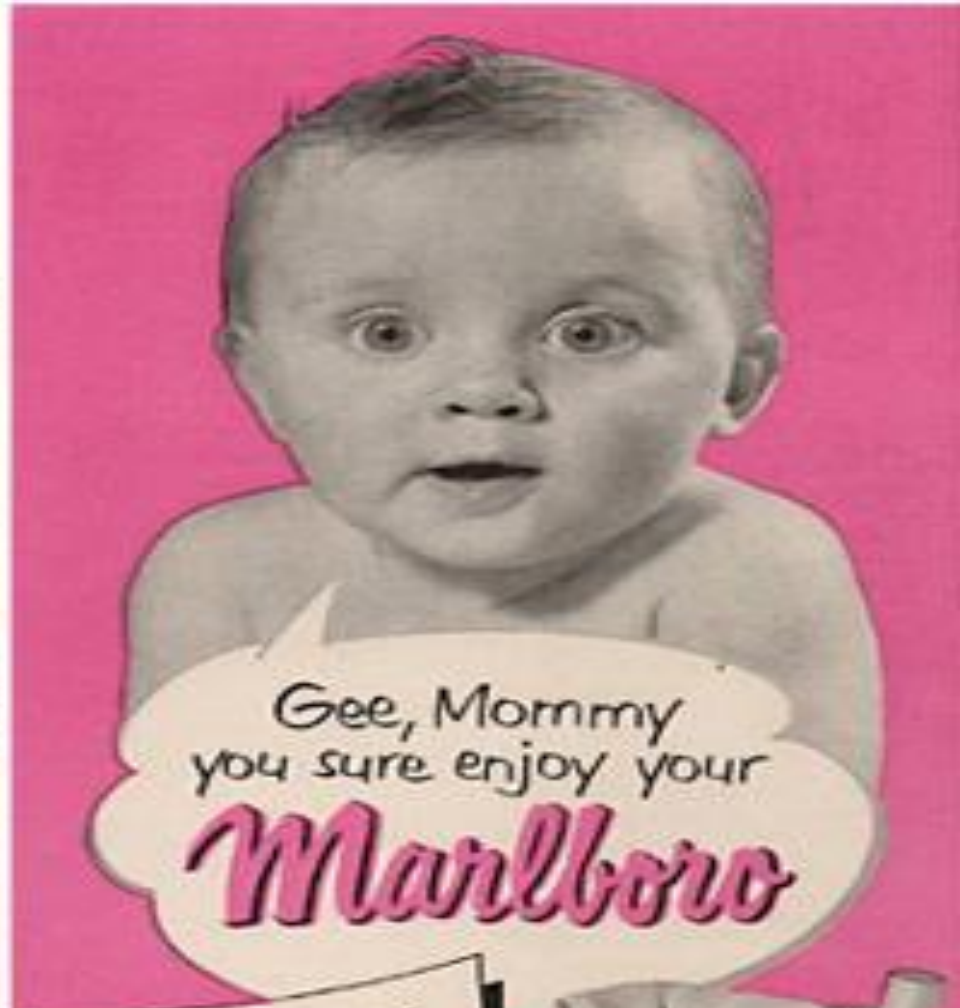
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
FEDERAL SMOKING SURVEILLANCE BOARD
SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, And May Complicate Pregnancy.
Smoking by Pregnant Women May Result in Fetal Injury, Premature Birth, And Low Birth Weight.

Before you scold me, Mom ...
maybe you'd better light up a

Marlboro



Yes, you need
never feel
over-smoked
... that's the
Miracle of
Marlboro!



Gee, Mommy
you sure enjoy your
Marlboro

*There was a time when it
seemed OK for babies ...*



*I Remember
Momma and
Poppa!*



Lo ... and OK for kids ...



**FOR
MOTHER'S DAY
FATHER'S DAY - ANY DAY**

I'M SENDING CHESTERFIELDS to all my friends.
That's the merriest Christmas any smoker can have —
Chesterfield mildness plus no unpleasant after-taste

Ronald Reagan

see RONALD REAGAN

starring in "HONG KONG" a First-

Threat Paramount Production

Color by Technicolor

OK for future presidents ...





20,679* Physicians

say "LUCKIES are
less irritating"

"It's toasted"

Your Throat Protection
against irritation against cough

OK for doctors who preferred
the toasted taste ...

quotations have been
verified to be
from BUCHS, AND
DRY, ACCIDENTS



OK for the Flintstones to light up in front of the kids ...

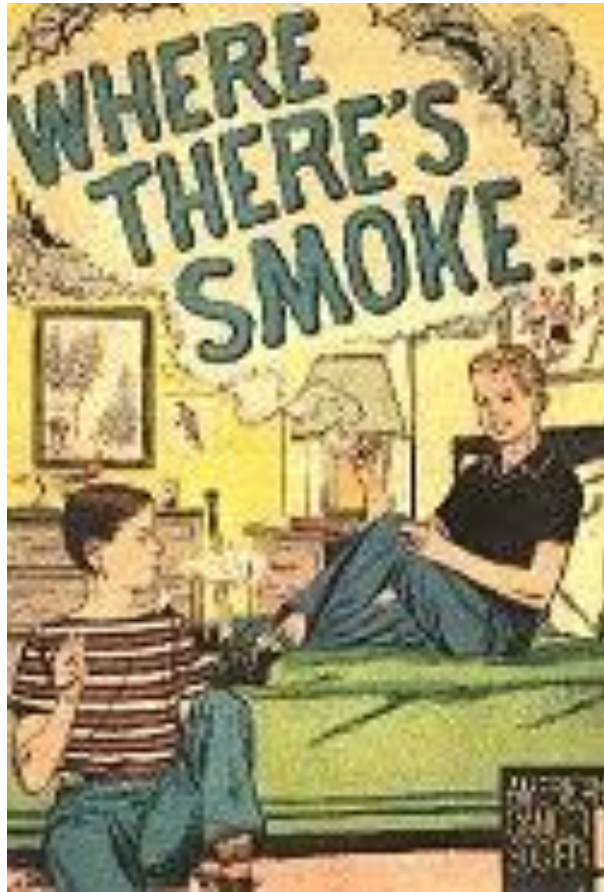
A vintage-style photograph of a man and a woman. The man, on the left, is wearing a dark tuxedo jacket, a white dress shirt, and a black bow tie. He has a cigarette in his mouth and is looking towards the woman with a slight smile. The woman, on the right, is wearing a white, possibly halter-neck, dress. She has dark, curly hair styled in a classic 1940s fashion and is looking back at the man. The background is a plain, light-colored wall.

"Mind if I smoke?"

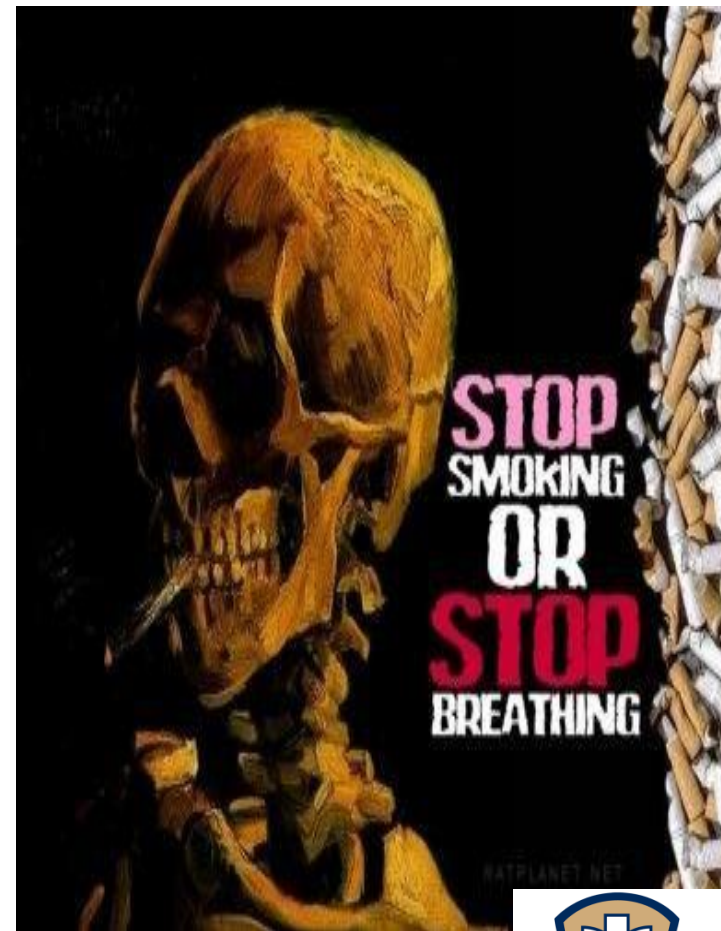
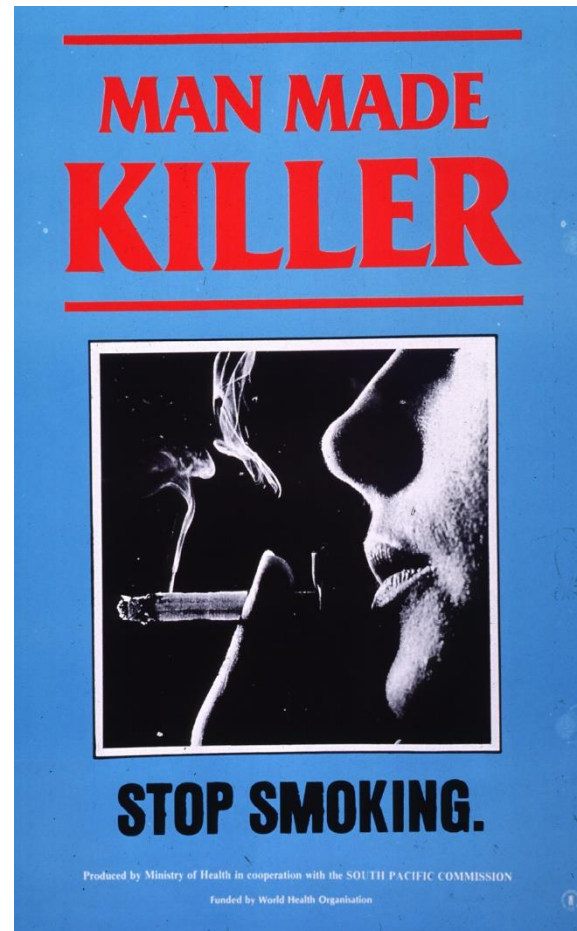
"Care if I die?"

... but finally a culture change

1950s-1970s Anti-Smoking Ads: Moralistic, Logical



1980s-1990s Anti-Smoking Ads: Sharper Tone, More Emotional



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1990s-Present Anti-Smoking Ads: Shock value to “break through the fog” of denial


A TIP FROM A FORMER SMOKER

RECORD YOUR VOICE FOR LOVED ONES WHILE YOU STILL CAN.

Terrie, Age 52
North Carolina



Smoking causes immediate damage to your body. For Terrie, it gave her throat cancer. You can quit. For free help, call 1-800-QUIT-NOW.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

A TIP FROM A FORMER SMOKER

ALLOW EXTRA TIME TO PUT ON YOUR LEGS.

Brandon, Age 31, Diagnosed at 18
North Dakota



Smoking causes immediate damage to your body. For Brandon, it caused Buerger's disease, which cut off blood flow and led to amputation. You can quit. For free help, call 1-800-QUIT-NOW.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention
www.smokefree.gov



Smoking isn't just suicide. It's murder.






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TEEN SMOKING AT ALL TIME LOWS WHILE VAPING INCREASES

Current cigarette smoking among
U.S. high school students **lowest in 22 years**



Flash Drive or Vape Pen?



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Teen smoking may be replaced with teen vaping one day



From Varvel, G, Indianapolis Star, 9.14.18



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FDA chief calls youth use of Juul, other e-cigarettes an 'epidemic'

By **Laurie McGinley**

Laurie McGinley

Reporter covering health and medicine

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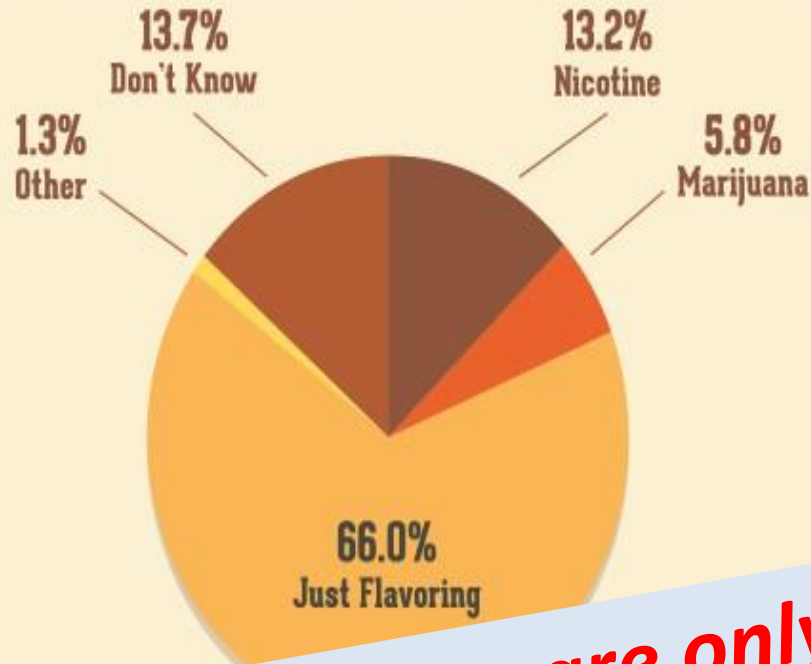
September 12 at 10:56 AM



Youth e-cigarette use an "epidemic" – a 75% increase in use among high school students this year compared to 2017

Food and Drug Administration Commissioner Scott Gottlieb said on Tuesday that the agency has identified an "epidemic" of teenage vaping, and that it is taking steps to address the problem. He said the agency is working with retailers for more information on the products being sold. On Tuesday, the FDA announced that it has initiated enforcement actions against several retailers that are selling e-cigarettes to minors. The agency said that it has identified a 75 percent increase in e-cigarette use among high school students this year compared to 2017. The FDA declined to publicly release the numbers, but people familiar with them said they were preliminary data from the National Youth Tobacco Survey, on which

WHAT DO TEENS SAY IS IN THEIR E-CIG?³



Most teens think they are only vaping flavoring

WWW.DRUGABUSE.GOV



Dangers of Synthetic Cannabinoids

Spike In Synthetic Marijuana Overdoses In Washington, D.C. : NPR

NPR's Michel Martin speaks with Washington, D.C., Fire and EMS Chief Gregory Dean about a recent spate of overdoses involving a synthetic drug known as K2.

MICHEL MARTIN, HOST:

By now, the flooding and other dangers you've heard about. Now, here's a crisis you may not believe to have been caused by the synthetic drug. In Washington, D.C., officials say medics evaluated 15 people on Friday for suspected overdoses. And, according to reports, they think may be related to Washington, D.C.

But this isn't a one-time thing. In a month, 70 people have overdosed, says Chief Gregory Dean. We'll speak with us.

Pot Smoke And Mirrors: Vaporizer Pens Hide Marijuana Use : Shots



...these devices are... THC. Courtesy

...these devices are... THC.



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Synthetic Cannabinoid is Not Marijuana

SYNTHETIC CANNABINOIDS (K2/SPICE)

UNPREDICTABLE DANGER

K2/SPICE IS **NOT** MARIJUANA

It's often called *synthetic marijuana* or *fake weed* because some of its chemicals are like those in marijuana. The effects can be unpredictable and in some cases, severe or even life-threatening.



Shredded plant material



SYNTHETIC CANNABINOIDS (K2/SPICE)

UNPREDICTABLE DANGER

HEALTH EFFECTS OF K2/SPICE ARE

UNPREDICTABLE

These drugs can act on many different brain cell receptors, including the receptors that bind to THC (found in marijuana).

They produce:



BRAIN

- ✗ Suicidal thoughts
- ✗ Exuberant behavior
- ✗ Paranoia
- ✗ Hallucinations



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What effect does quitting smoking / smoking cessation intervention have on SUD treatment outcomes?

- (A) Negatively impacts substance use treatment outcomes
- (B) Has no impact on substance use treatment outcomes
- (C) Positively impacts substance use treatment outcomes



What effect does quitting smoking / smoking cessation intervention have on SUD treatment outcomes?

- (A) Negatively impacts substance use treatment outcomes
- (B) Has no impact on substance use treatment outcomes
- (C) Positively impacts substance use treatment outcomes**



What effect does quitting smoking / smoking cessation intervention have at time of SUD treatment outcomes?

A literature review of 24 studies published between 2006 and 2016 concluded that:

- Quitting smoking/smoking cessation has a **positive effect on substance use outcomes.**
- **Improvement in a range of alcohol and drug use outcomes was reported.**
- **Neither smoke-free policy nor cessation intervention worsened SUD treatment outcomes.**
- **Not offering smoking cessation in SUD treatment is tantamount to increased harm.**

Addictive Pat



Imp
subs

Karma
^a Center for
^b Departmen

HIGHLI

- Quitting smc
- Improvemen
- Smoke-free p
- Smoking cessa
- Not offering str

...ment outcomes.
...individual who reports substance use.
... SUD treatment is tantamount to increased harm.

Mark

Since 1999, all of the following population groups in Harford County have reduced their death rates, EXCEPT:

(A) White males: 12 % decrease

(B) White females: 9% increase

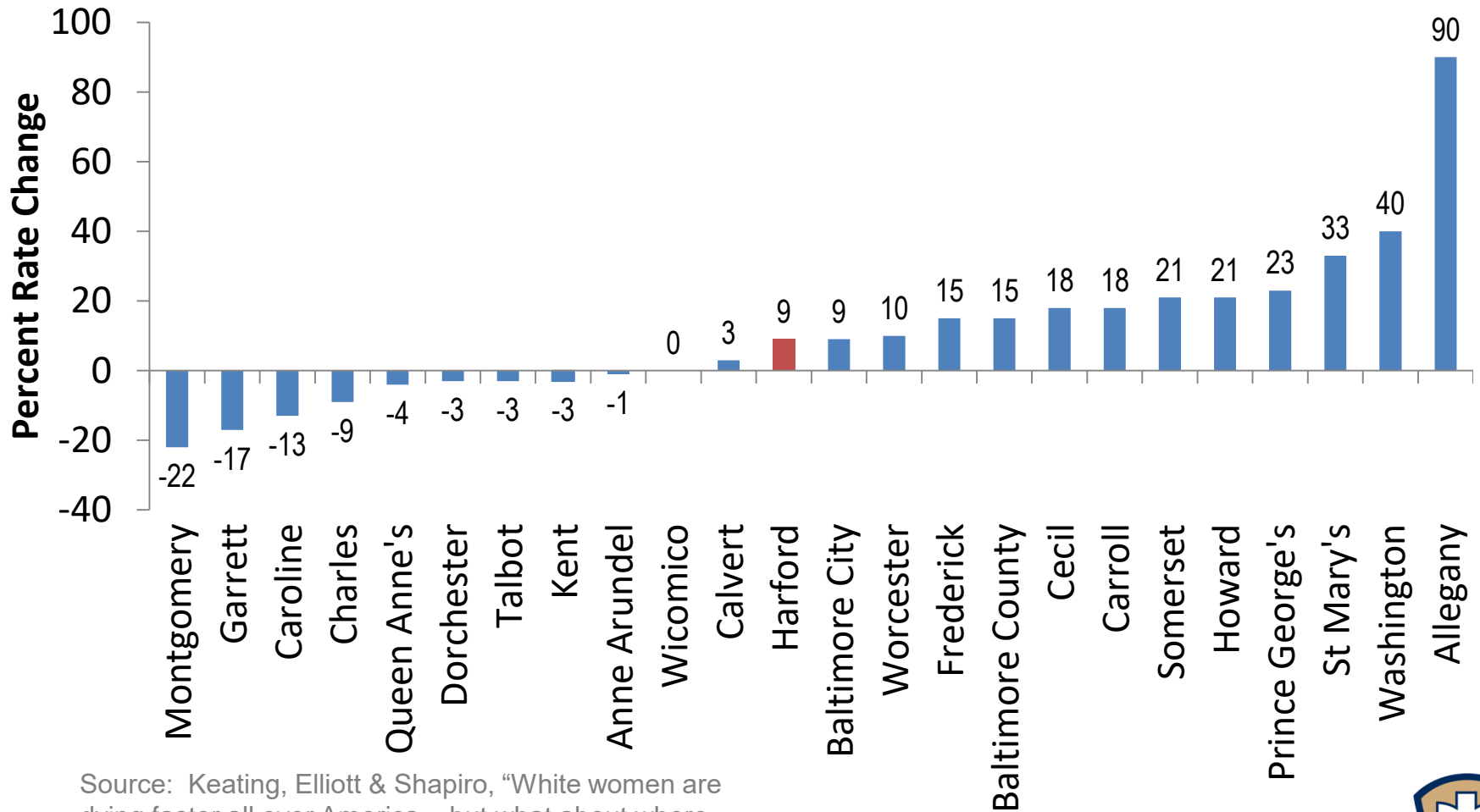
(C) Black males: 55% decrease

(C) Black females: 34% decrease



Death Rate Change for White Females

Ages 45-54, Since 1999, By Maryland Jurisdiction



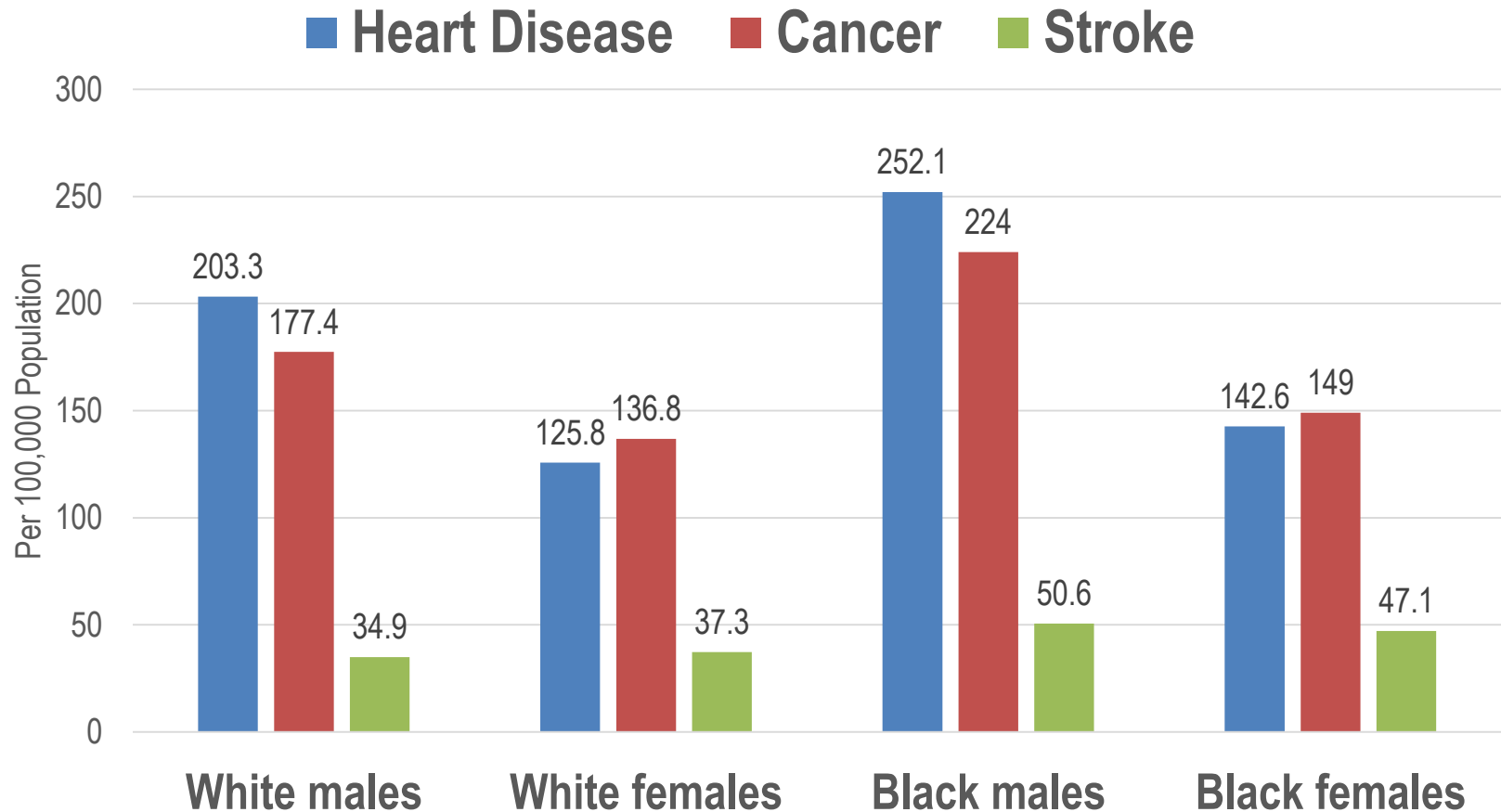
Source: Keating, Elliott & Shapiro, "White women are dying faster all over America – but what about where your live?" Washington Post, 8/31/16



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Black : White health disparities in mortality rates continue to exist ...



Source: Maryland Vital Statistics Reports, 2016

Note: Age-adjusted mortality rates



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... But the rate of change in mortality rates among population groups has been surprising

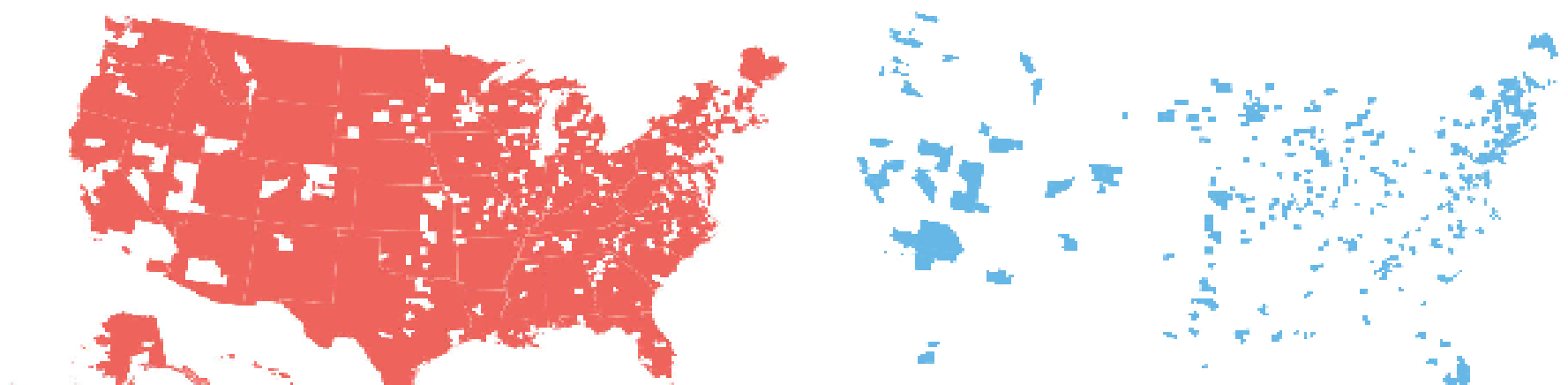
The Washington Post

8/31/16

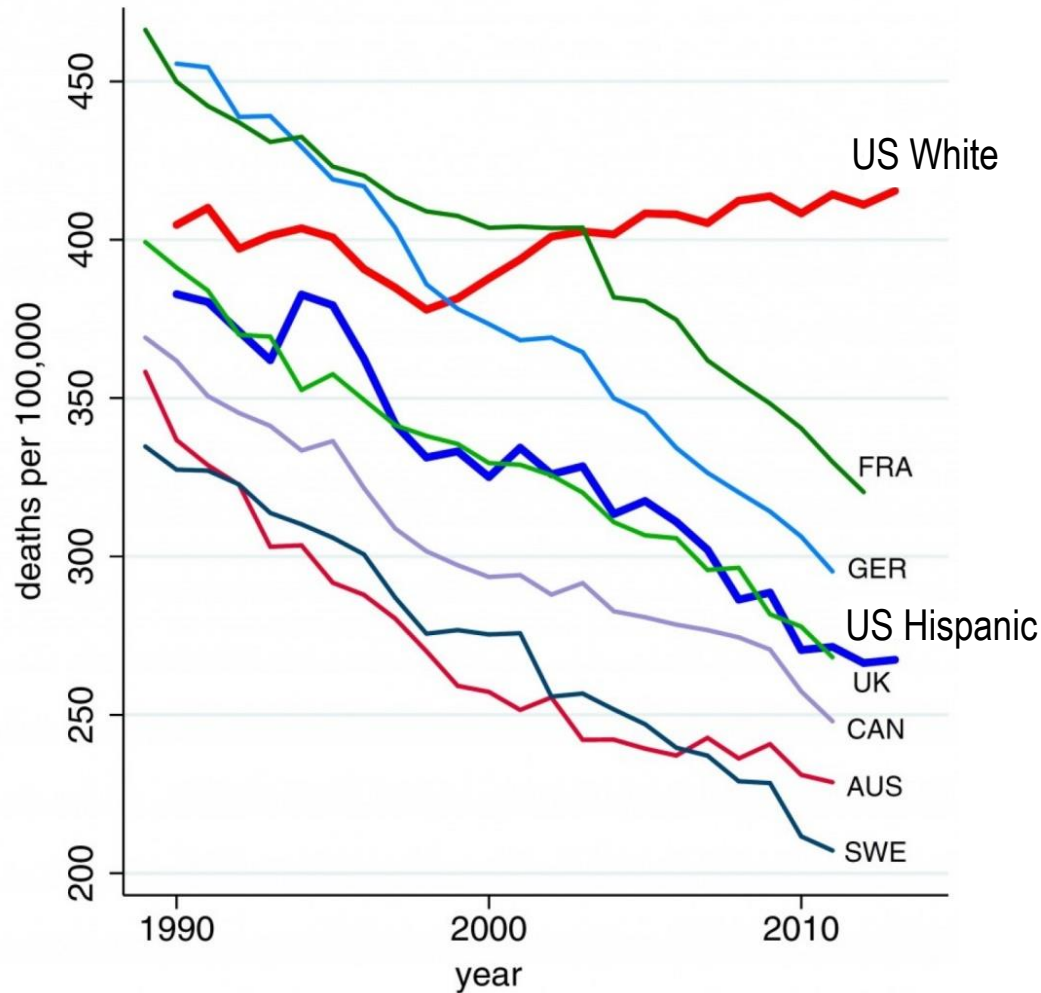
(//www.washingtonpost.com?nid=top_pb_wplogo)

National (<https://www.washingtonpost.com/national/>)

White women are dying faster all over America — but what about where you live?



Which population group (ages 45-54) is dying at the fastest rate?



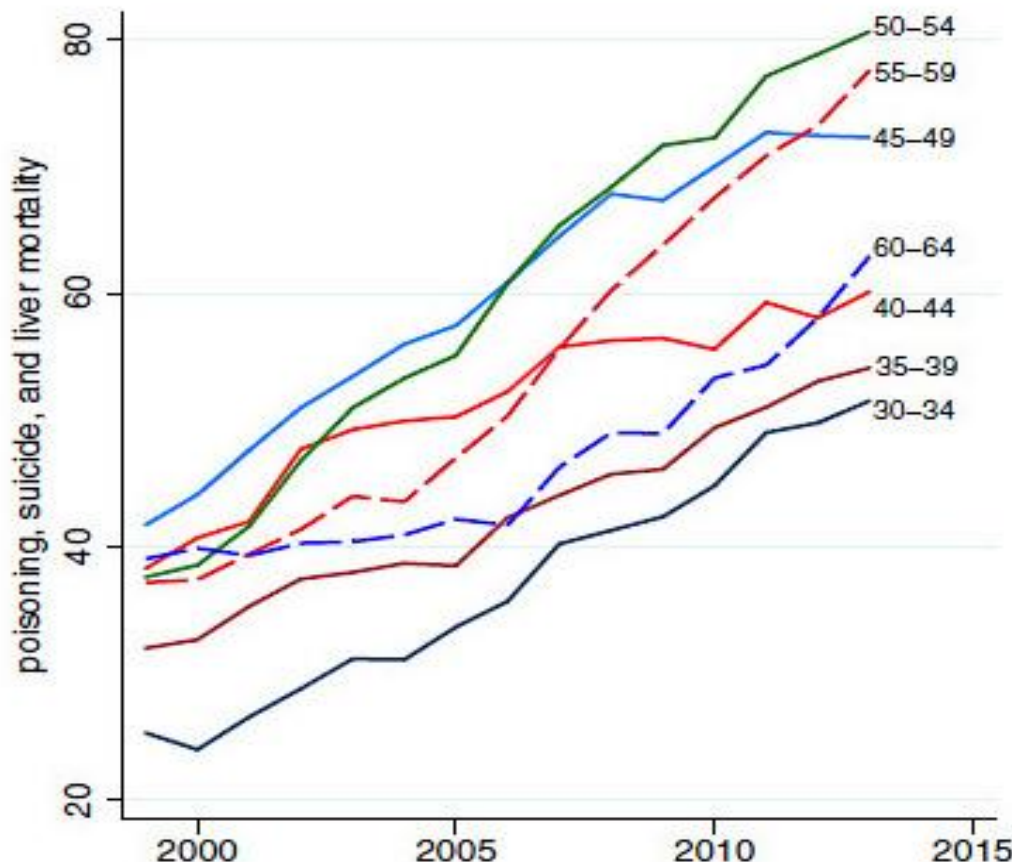
U.S. White population has had a marked increase in all-cause mortality between 1999-2013.

Source: Case and Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century," PNAS 12/8/15



Are just people ages 45-54 dying faster?

Overall White Mortality by Age Group Men and Women Combined



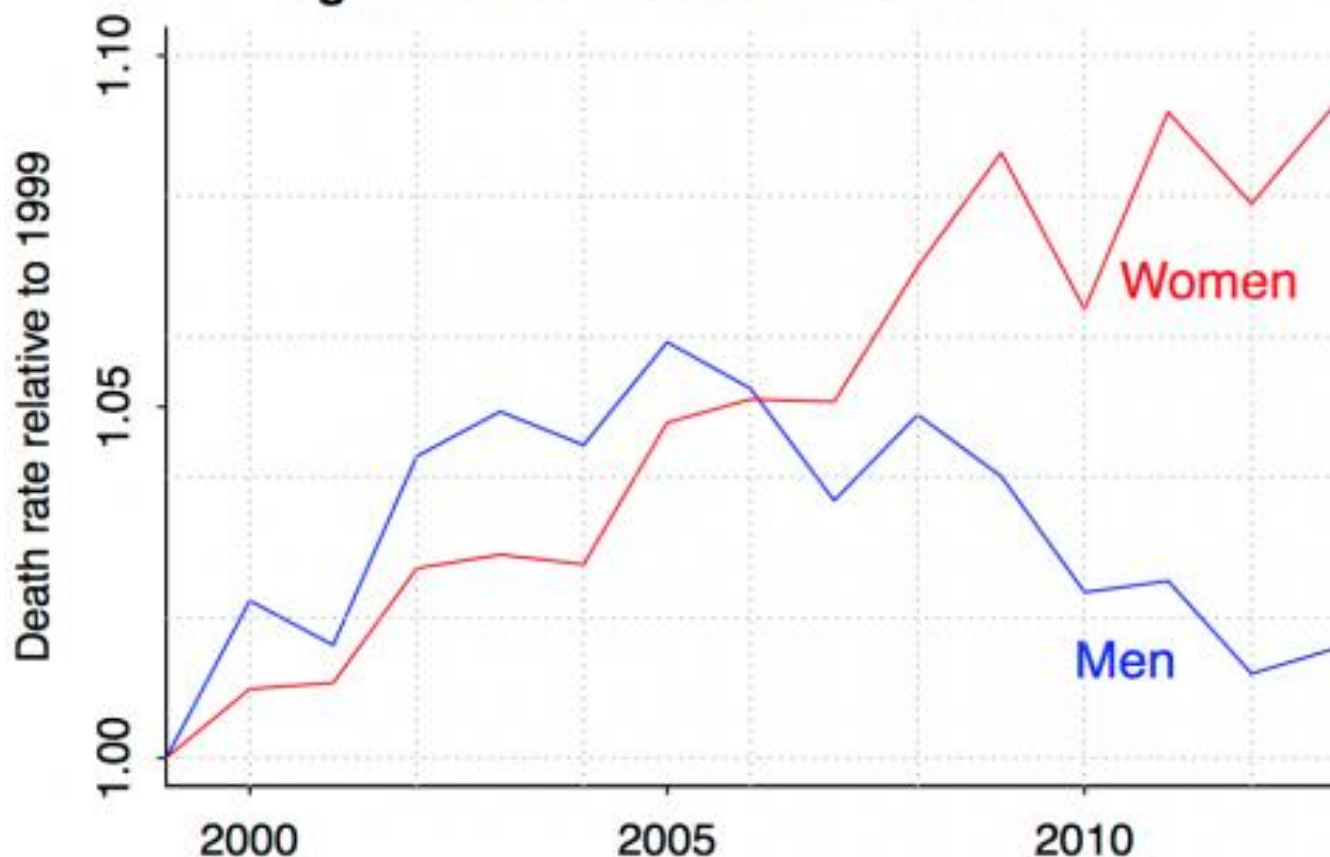
U.S. White population, ages 30-64, are all dying at a faster rate.

Source: Case and Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century," PNAS 12/8/15



Are both men and women dying faster?

Age-adjusted death rates for non-Hispanic whites aged 45–54: Trends for women and men

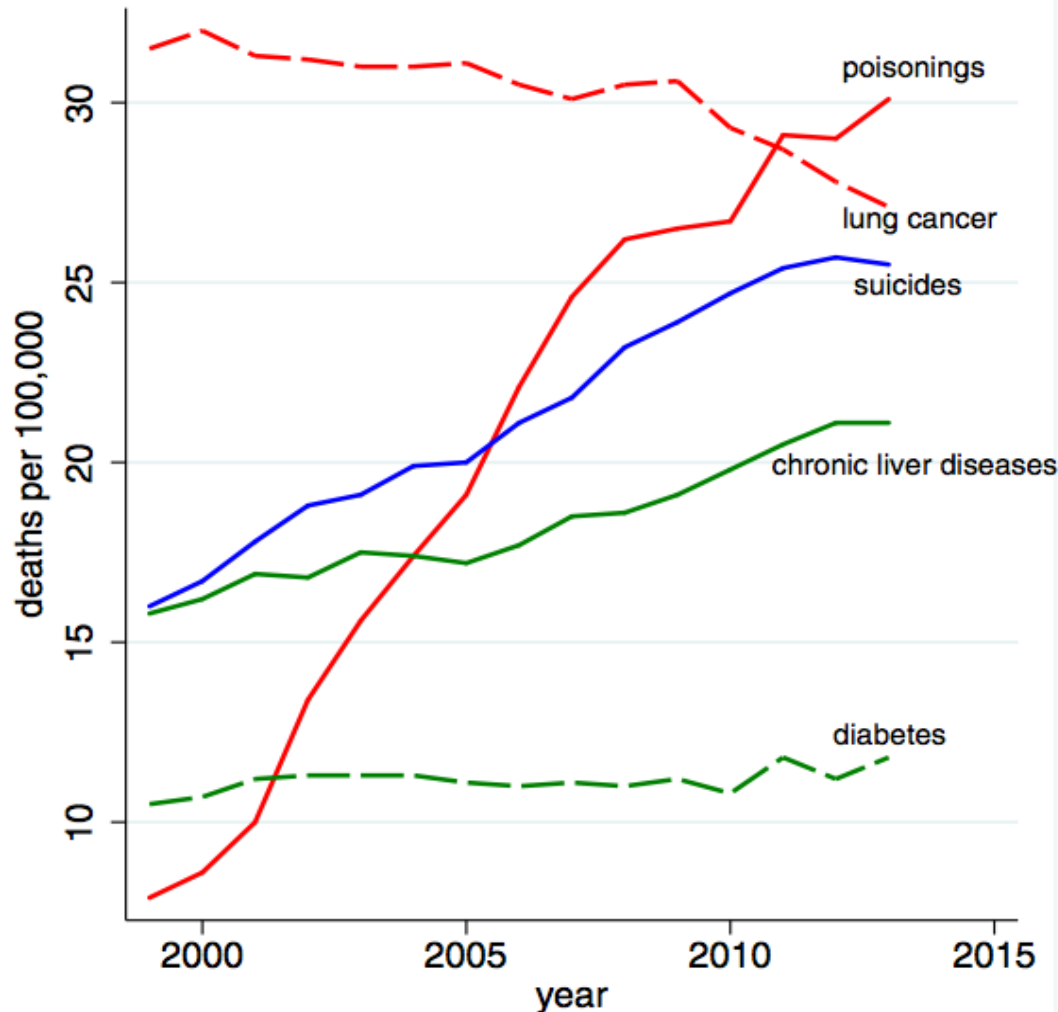


U.S. White women are dying at a faster rate than men.

Source: Case and Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century," PNAS 12/8/15



Why are people dying so fast?



Poisonings or drug and alcohol intoxication deaths are increasing the most.

Source: Case and Deaton, "Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century," PNAS 12/8/15



Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century

Anne Case¹ and Angus Deaton¹

Woodrow Wilson School of Public and International Affairs and Department of Economics, Princeton University, Princeton, NJ 08544

Contribu

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New York Times, 11/2/15

“Death Rates Rising for Middle-Aged White Americans, Study Finds:

Something startling is happening to middle-aged white Americans.

Unlike every other age group, unlike every other racial and ethnic group, unlike their counterparts in other rich countries, **death rates in this group have been rising, not falling . . .**”

midlife mortality | morbidity | US white non-Hispanics

There has been a remarkable long-term decline in mortality rates in the United States, a decline in which middle-aged and older adults have fully participated (1–3). Between 1970 and 2013, a

in 2013 alone. If it had continued to fall at its previous (1979–1998) rate of decline of 1.8% per year, 488,500 deaths would have been avoided in the period 1999–2013, 54,000 in 2013. (*Supporting Information* provides details on calculations.)

This turnaround, as of 2014, is specific to midlife. All-cause

The Epidemic of Despair Among Whites

Trends in the

“Young adult (25-34 yrs) Whites in suburban areas and middle-aged (45-64 yrs) Whites in rural areas had the most marked increase in premature death relative to other sub-populations in each respective age group...”

Elizabeth M. Stein

“The marked increases in **accidental poisonings and suicide death rates**, together with unfavorable chronic disease trends, are driving increased premature mortality in Whites. A large portion of these deaths are caused by underlying behavioral risk factors and behavioral health. Case and Deaton coined such deaths as ‘**despair deaths**’ ... as they enter the labor market and are met with bleaker prospects and lower paying jobs...”

“Despair manifests in health, including ending life intentionally or soothing through opiates, food, tobacco or alcohol use ... having the highest increases in poisonings, suicide... CVD and respiratory disease.”

Stein et al, AJPH, October 2017



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... However, since 2010 the death rates for almost all groups, ages 25-44, have been rising

The Washington Post

Health & Science

Drug crisis is pushing up death rates for almost all groups of Americans

By Joel Achenbach and



Joel Achenbach
Reporter covering science a

Email Bio

Dan Keating



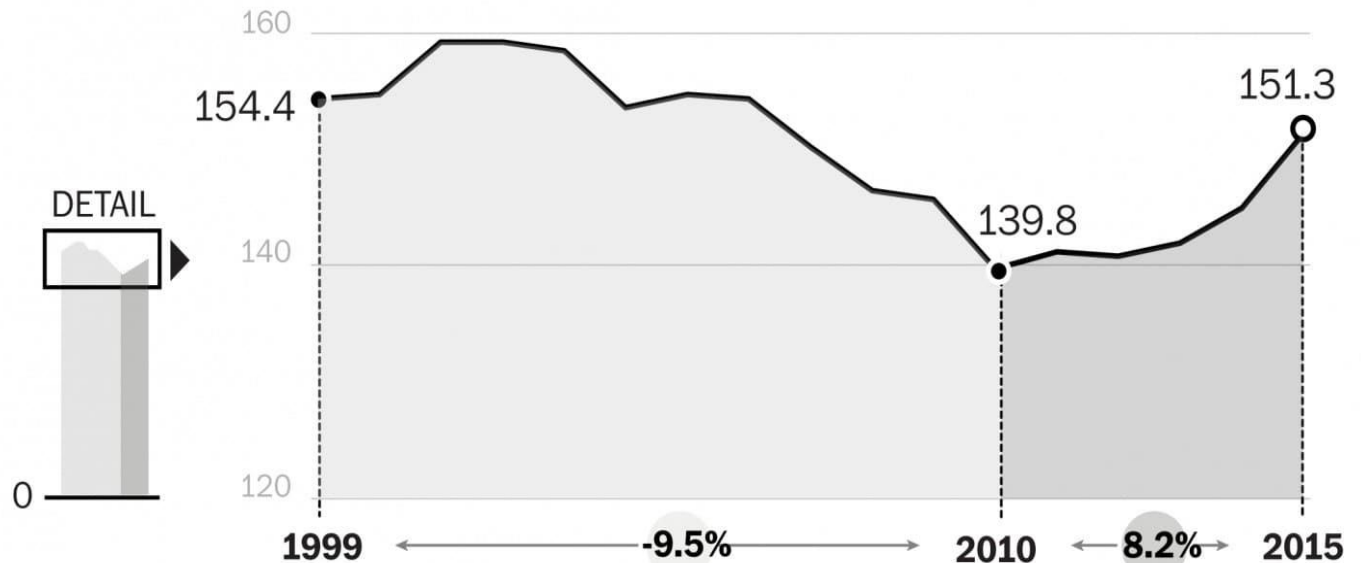
Dan Keating
Reporter on data/graphics

Email Bio Follow

June 9, 2017

Death rate rising for young adults since 2010

Deaths per 100,000 people age 25-44



U.S. & MD Life Expectancy is Declining

Opioids Driving U.S. Life Expectancy Decline: CDC

By Dennis Thompson

HealthDay Reporter

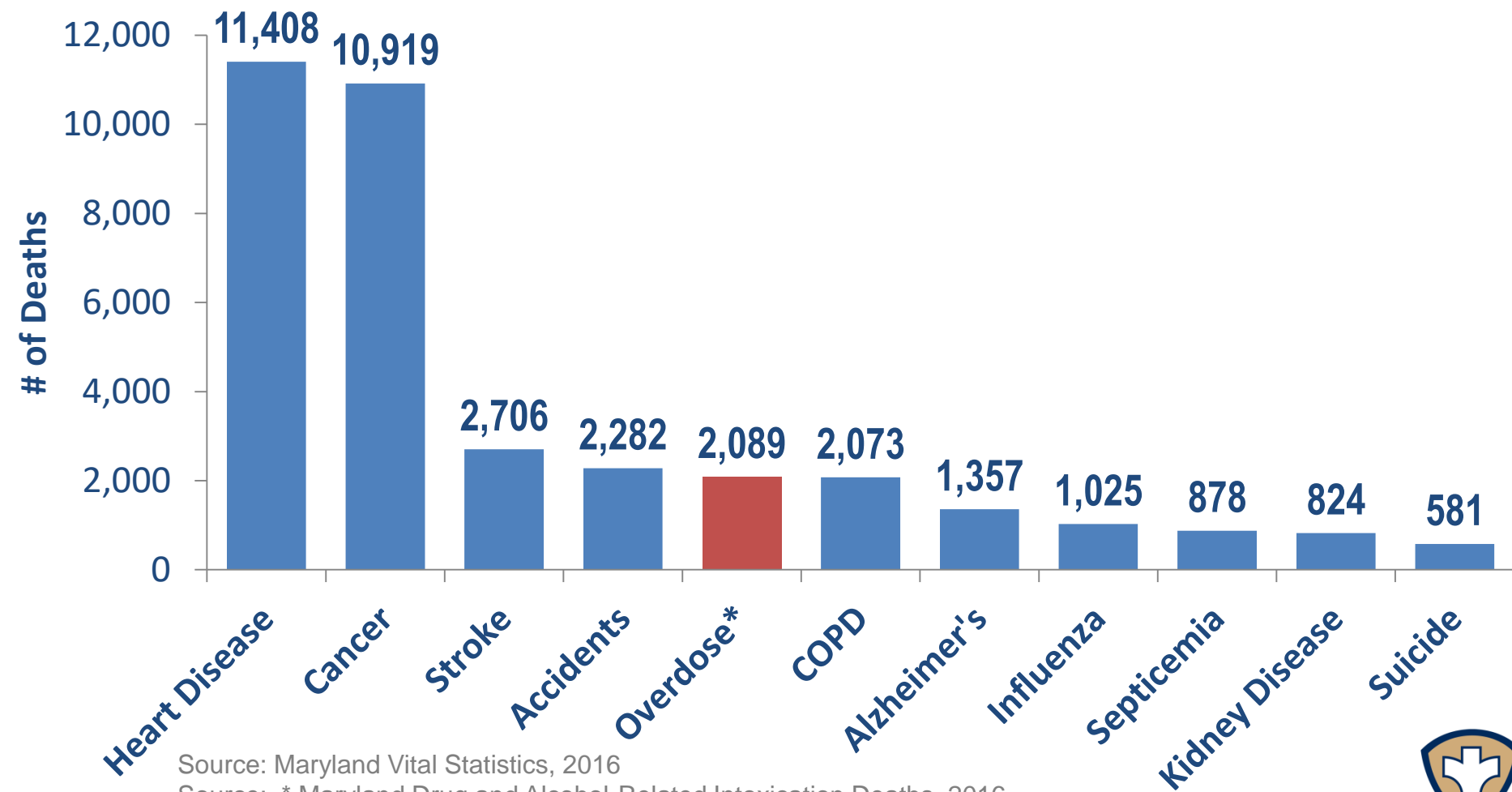
THURSDAY, Sept. 20, 2018 (HealthDay News) -- Life expectancy in the United States has declined for two years in a row, fueled by increasing death rates from [opioid](#) drug overdoses, suicides and chronic [liver](#) disease, a new government report shows.

"It's really the first time we've seen this multi-year drop" in decades, said Renee Gindi, chief of the Analytic Studies Branch of the National Center for Health Statistics (NCHS), part of the U.S. Centers for Disease Control and Prevention. She's one of the lead coordinators for the report.

Babies now can expect to live 78.6 years on average, based on 2016 data that's the most recent, according to NCHS researchers.

That's down from 78.7 years in 2015 and 78.9 years in 2014.

Leading Causes of Death Maryland, 2016



Source: Maryland Vital Statistics, 2016

Source: * Maryland Drug and Alcohol-Related Intoxication Deaths, 2016



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Health consequences of drug misuse are wide-ranging, affecting both physical and mental health



[Home](#) » [Related Topics](#) » [Health Consequences of Drug Misuse](#)

Health Consequences of Drug Misuse

Drug use can have a wide range of short- and long-term direct and indirect effects. These effects depend on the specific drug or drugs used, the amount of drug taken, the person's health, and other factors.

Long-term effects can include heart or lung disease, cancer, mental illness, HIV/AIDS, hepatitis, and others. Long-term drug use can also lead to addiction. Drug addiction is a brain disorder. Not everyone who uses drugs will become addicted, but for some, drug use can change how certain brain circuits work. These brain changes interfere with how people experience normal pleasures in life such as food and sex, their ability to control their stress level, their decision-making, their ability to learn and remember, etc. These changes make it much more difficult for someone to stop taking the drug even when it's having negative effects on their life and they want to quit.

Longer-term effects include heart or lung disease, cancer, HIV/AIDS, hepatitis, mental health and others.



How healthy is Maryland?

How healthy is Maryland when compared with other states?

(A) # 1 (most healthy)

(B) # 13

(C) # 25

(D) # 38

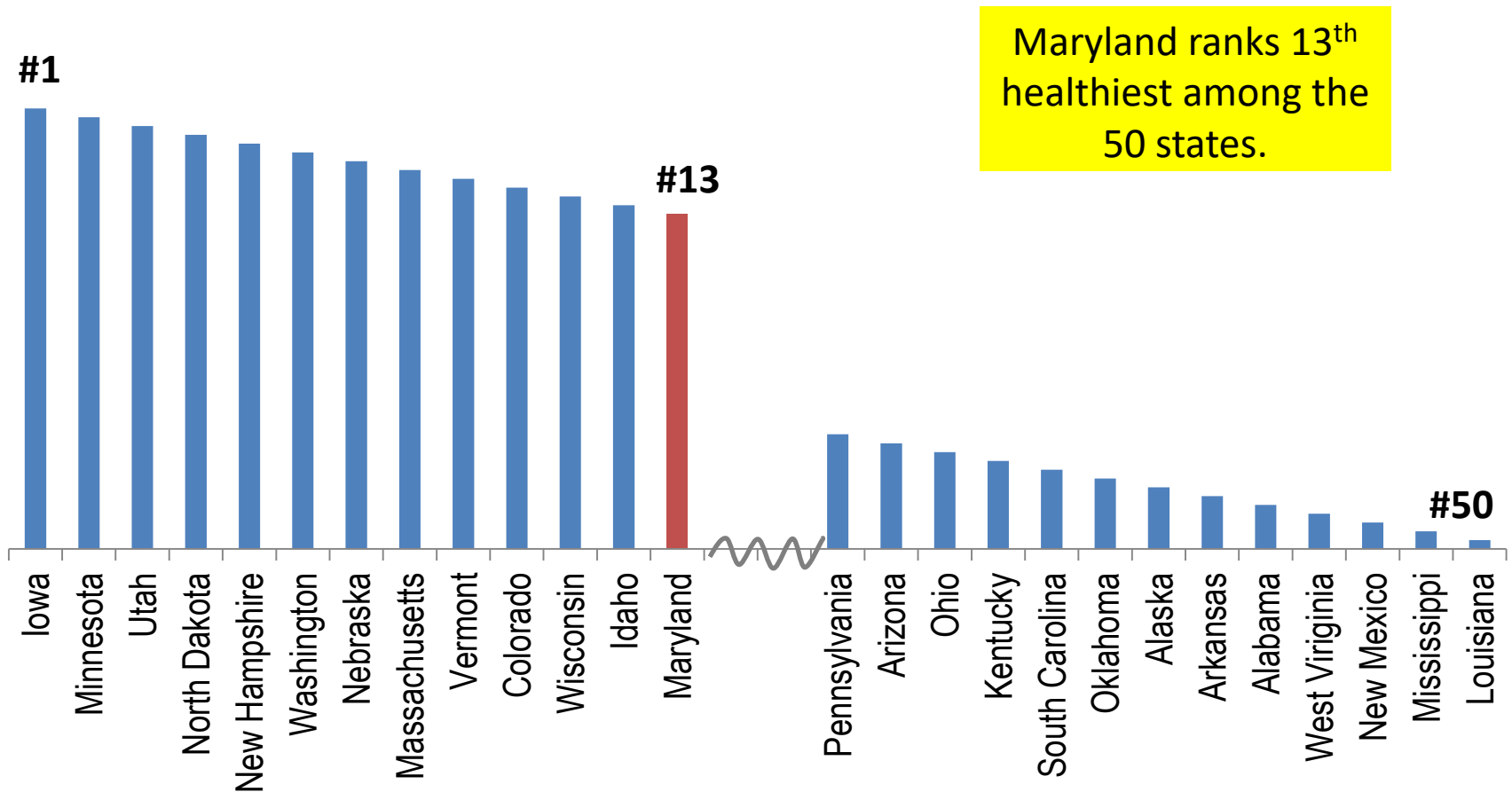
(E) # 50 (least healthy)



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State Health Rankings, 2018



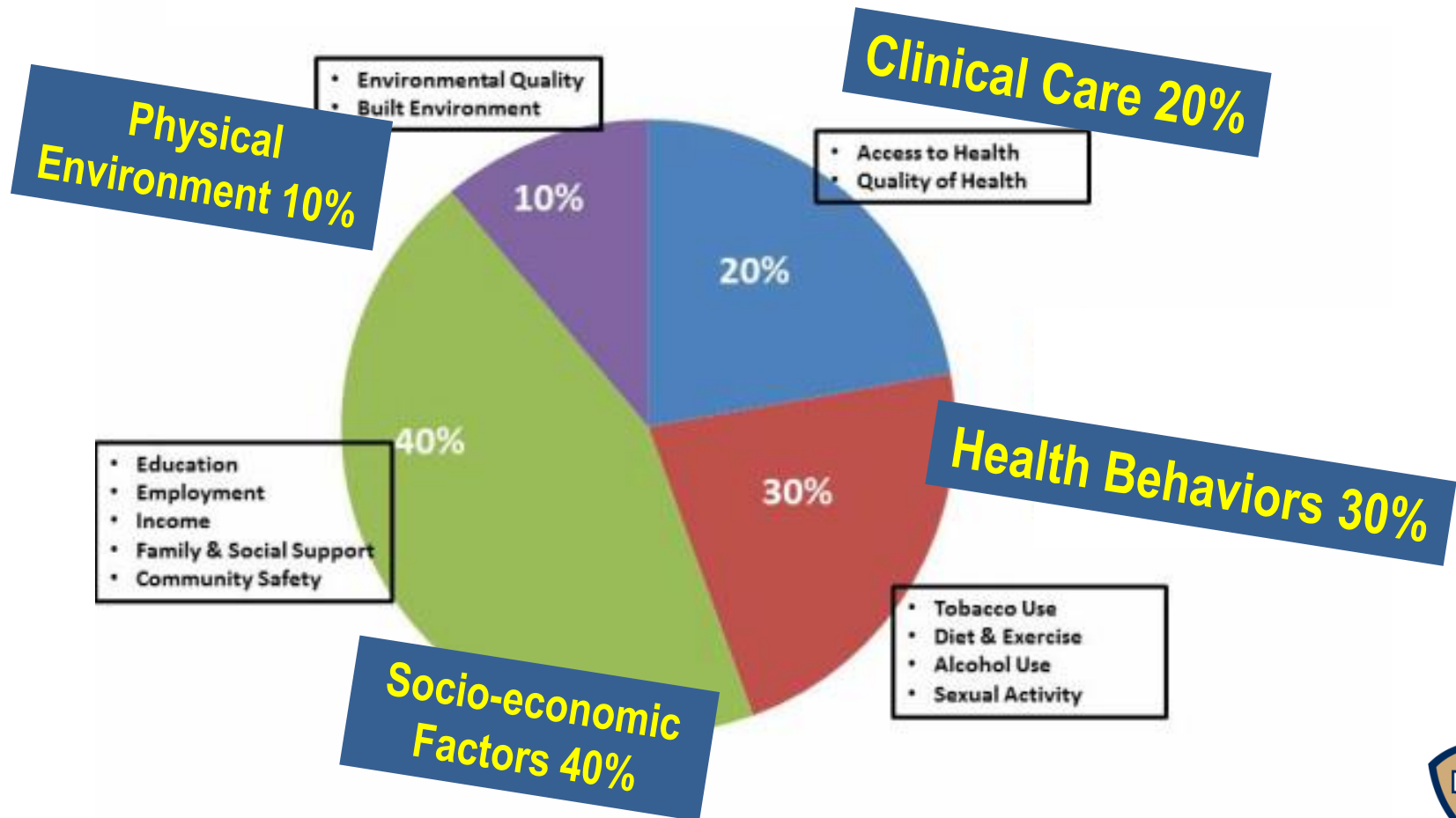
Source: U.S. News and World Report



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Health is not just medical care





80%

**of what influences your
health and life expectancy
happens outside of the
healthcare system**

What is the average life expectancy of a Maryland resident?

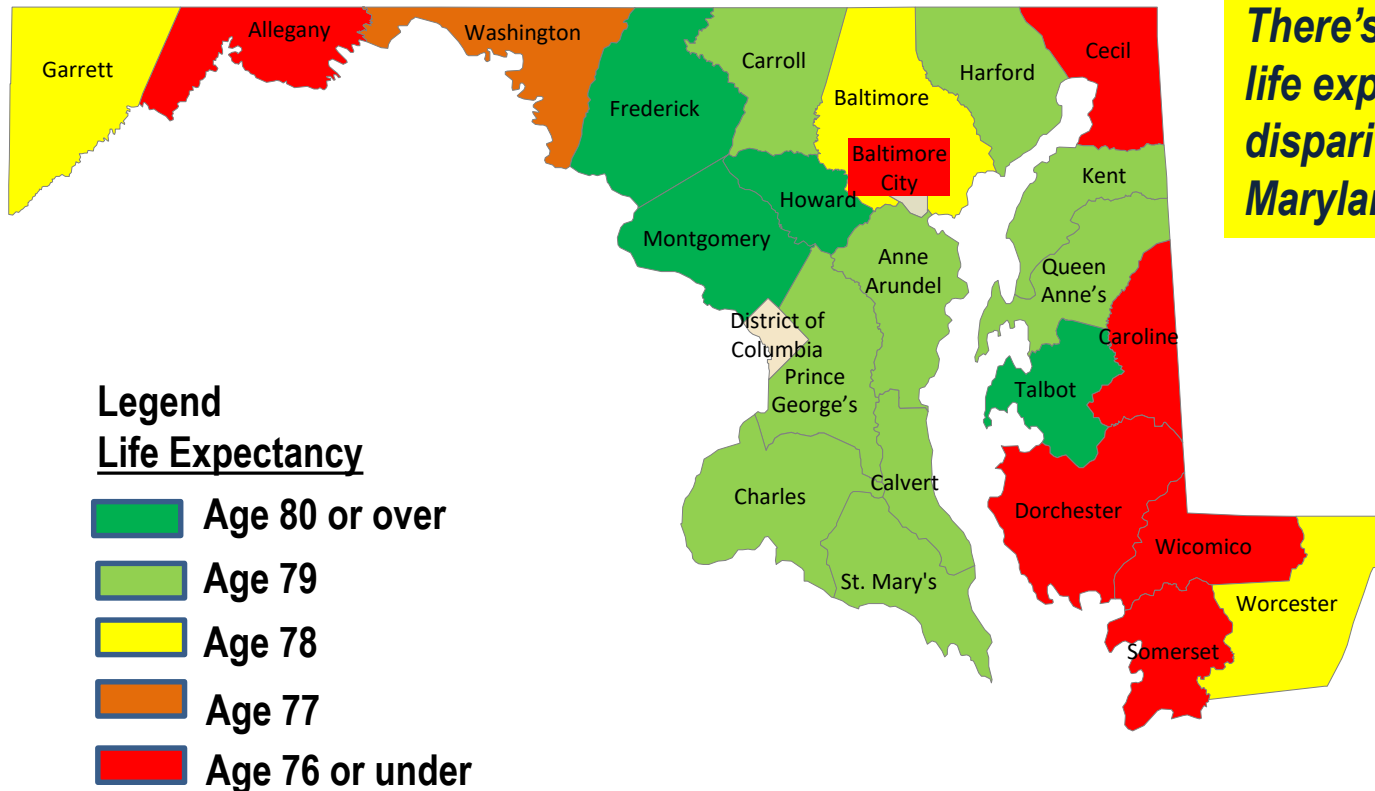
- (A) 84.9 years – Montgomery County
- (B) 79.5 years – Maryland State average**
- (C) 79.4 years – Harford County
- (C) 78.6 years – U.S. average
- (D) 73.4 years – Baltimore City

Location – Location - Location

There's an 11.5 year geographic disparity in average life expectancy within Maryland.



Zip Code Matters More Than Genetic Code for Your Health*



There's an 11-year life expectancy disparity within Maryland.

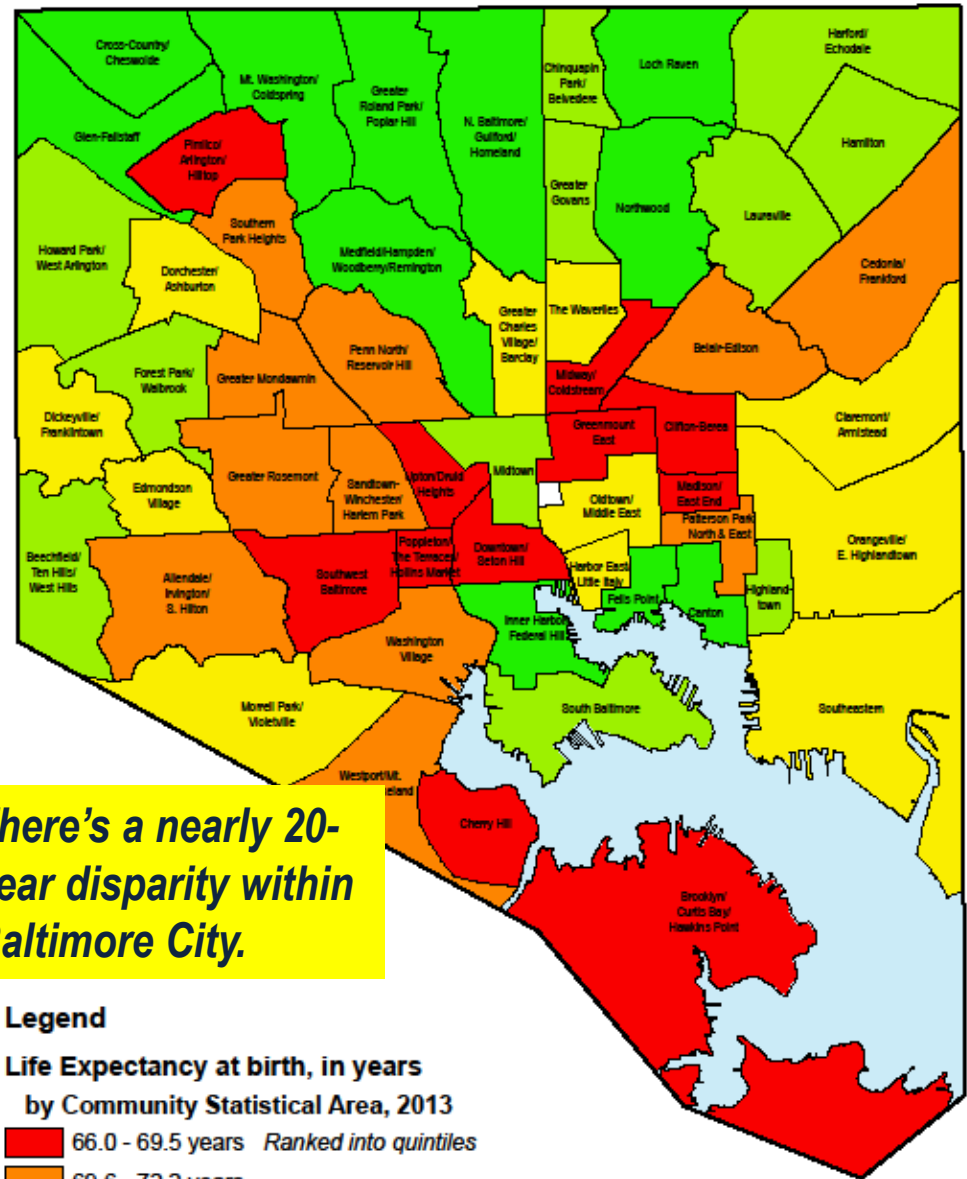
"Beyond Health Care," RWJF Commission to Build a Healthier America, 2009
Source: Maryland Vital Statistics, 2016



Zip code matters more than genetic code for your health*

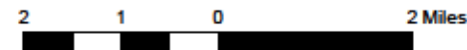
Lifestyle behaviors, environment, genetics, and medical care impact health outcomes.

* Source: "Beyond Health Care," RWJF Commission to Build a Healthier America, 2009



Legend

Life Expectancy at birth, in years
by Community Statistical Area, 2013



Prepared by the Baltimore City Health Department.
2013 Life Expectancy data provided by DHMH's Vital Statistics Administration.

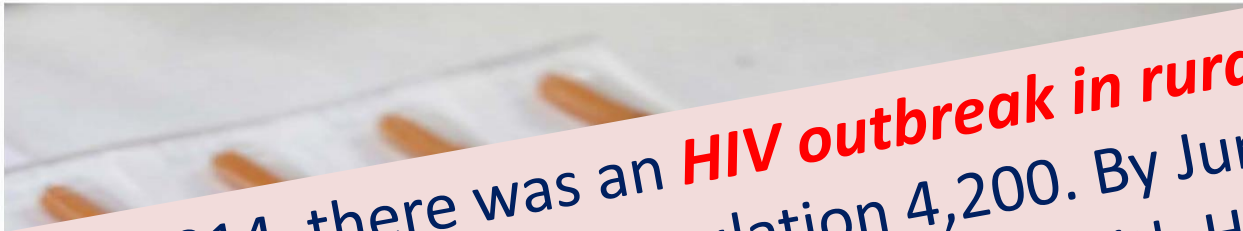
A Case Study: How the opioid epidemic sparked an HIV, hepatitis, and STD outbreak

PUBLIC HEALTH

Mapping How The Opioid Epidemic Sparked An HIV Outbreak

January 14, 2018 · 6:00 AM ET

HEATHER BOERNER



In late 2014, there was an **HIV outbreak in rural Scott County, Indiana**, population 4,200. By June 2015, **170 people had been diagnosed** with HIV infection. To put this number in perspective, during the 10 years before the outbreak, only 5 people had been diagnosed with HIV in Scott County...

When people started to show up to Dr. William Cooke's primary care office in Austin, Ind., in 2014 with HIV, Cooke knew it was probably related to the region's opioid



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Harm reduction strategies helped turn around this HIV epidemic

CONNECTION
REFERRALS TO SERVICES
HIV AND HEP C TESTING
NARCAN DISTRIBUTION
CLEAN SUPPLIES FOR SAFER USE
SHARPS CONTAINERS

HARM REDUCTION SAVES LIVES

DIGNITY
HEALTHCARE
COMPASSION

Harm reduction public health strategies focus on preventing the harms of substance use, reducing deaths and crimes, including: naloxone/Narcan distribution, HIV/STD services, medication-assisted treatment, peer recovery services, mental health services, pre-exposure prophylaxis (PrEP), condom & syringe services, and others.



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Lessons from the HIV/AIDS Crisis applied to the opioid crisis

OPINION

How lessons from HIV/AIDS crisis can apply to the opioid crisis | Opinion

Posted: July 27, 2018 - 2:34 PM

Daniel Raymond, For the Inquirer



Over the last year, I've seen a growing number of comparisons between the current overdose crisis and the height of the HIV/AIDS epidemic three decades ago. The parallels are certainly striking: an escalating number of deaths, particularly among younger people; a sense of hard-hit communities feeling under siege; and a growing wave of new advocates demanding action and innovative solutions.

How does Maryland rank in new HIV diagnosis rate among states?

(A) #1 (worst)

(B) #4

(C) #14

(D) #34

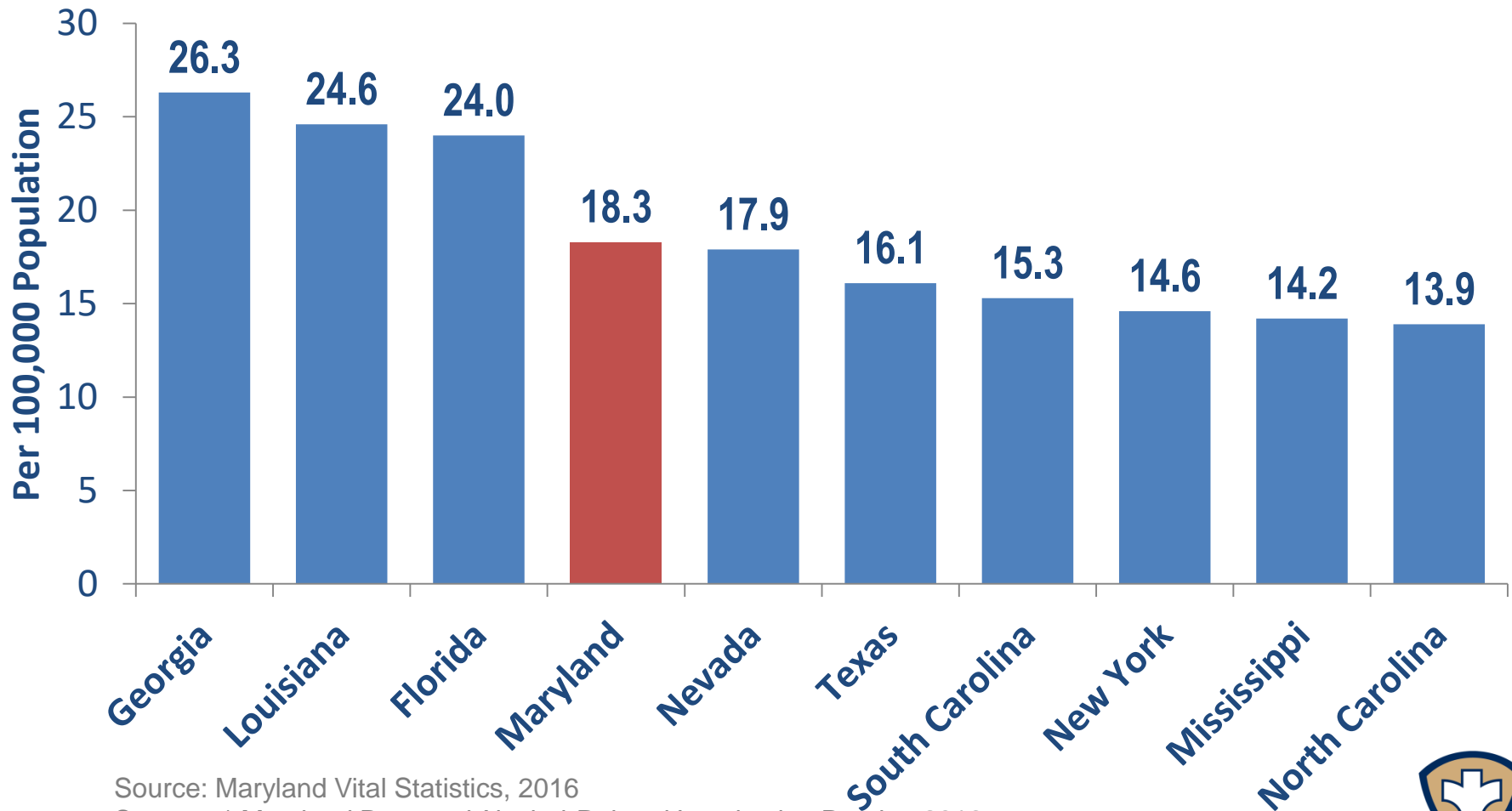
(E) #50 (best)



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States with Highest HIV Diagnosis Rates, 2016



Source: Maryland Vital Statistics, 2016

Source: * Maryland Drug and Alcohol-Related Intoxication Deaths, 2016



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STDs have dramatically increased in the U.S. over the past 5 years

The New York Times

S.T.D. Diagnoses Reach Record 2.3 Million New Cases in U.S.

By Karen Zraick

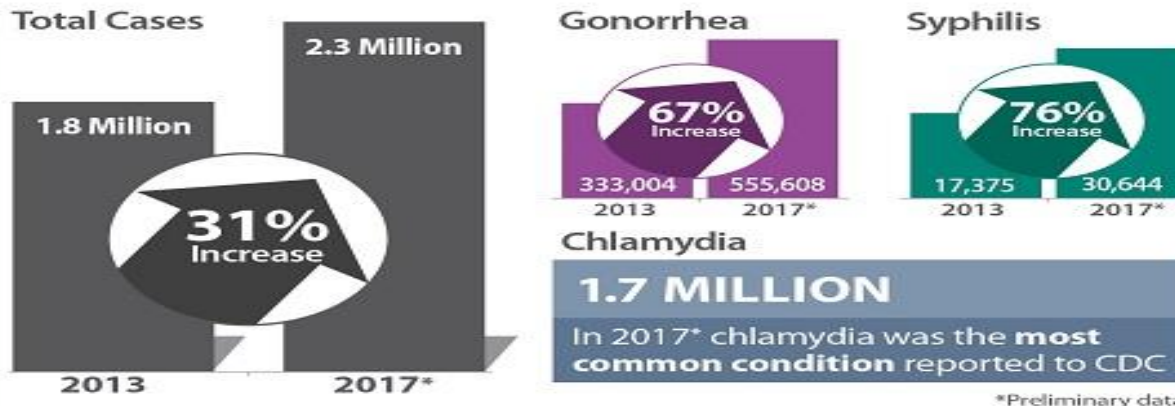
Aug. 28, 2018

New cases of sexually transmitted diseases reached a record high last year in 2017, according to the Centers for Disease Control and Prevention.

That number of new diagnoses rose from 1.8 million in 2013 to 2.3 million in 2017, a 31% increase. The increase was driven by a rise in chlamydia, which was the most common condition reported to the CDC last year, and a 67% increase in gonorrhea, a sexually transmitted infection that can lead to infertility, and a 76% increase in syphilis, a bacterial infection that can be fatal if left untreated.

THE U.S. IS EXPERIENCING STEEP, SUSTAINED INCREASES IN SEXUALLY TRANSMITTED DISEASES

Combined diagnoses of chlamydia, gonorrhea, and syphilis increased sharply over the past five years



For more information, visit cdc.gov/nchhstp/newsroom



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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STDs increased by 10.5% in Maryland over the past year

STDs such as syphilis and gonorrhea rising rapidly in Maryland



By **Andrea K. McDaniels**
The Baltimore Sun

SEPTEMBER 18, 2018, 5:00 AM

The number of people with **sexually transmitted diseases** in Maryland is growing rapidly and many might not even know they are infected, fueling the spread.

The rise in STDs is happening across the state and not just in trouble spots such as Baltimore, which has a history of high rates.

The spread of syphilis, gonorrhea and chlamydia are of particular concern to public health officials and doctors, who say they are treating many more cases.

The STDs can be asymptomatic, which means they produce no symptoms in early stages, making it challenging to capture everyone who is infected and increasing the chances of passing it on to others.

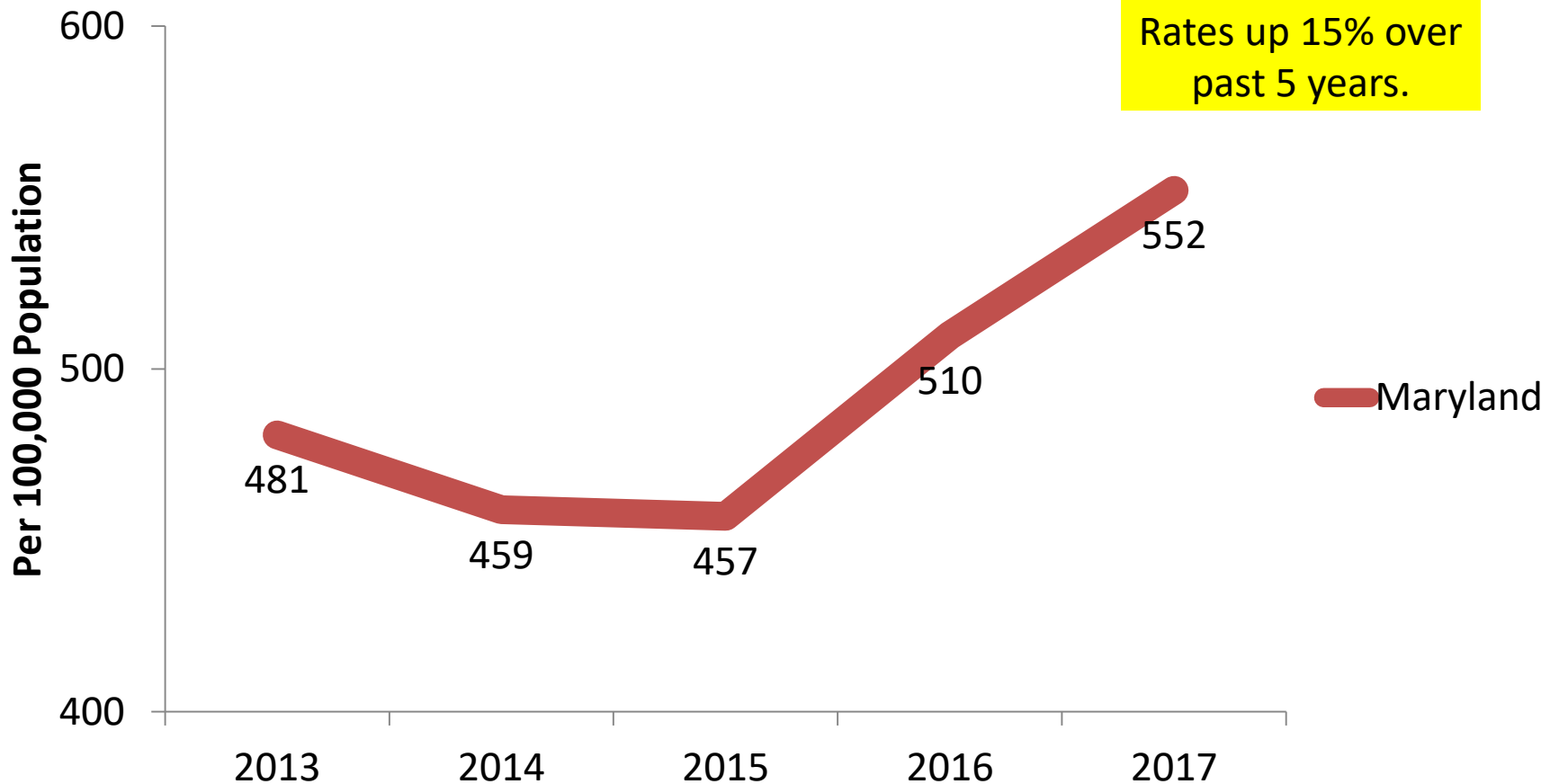
There were 44,967 cases of the three diseases in the state in 2017, a 10.5 percent increase from the year before, according to the Maryland Health Department. Cases of gonorrhea increased 15 percent, syphilis by 12.3 percent and chlamydia by 9 percent.

“We definitely have seen drastic increases,” said Dr. Sebastian Ruhs, director of the infectious disease center of excellence at Chase Brexton Health Services, a Baltimore-based system of health clinics. “We are diagnosing new cases every day.”

What is happening in Maryland reflects a national trend.

Chlamydia Rates

Maryland, 2013-2017



* Age-Adjusted Rates

Source: Maryland Vital Statistics Reports

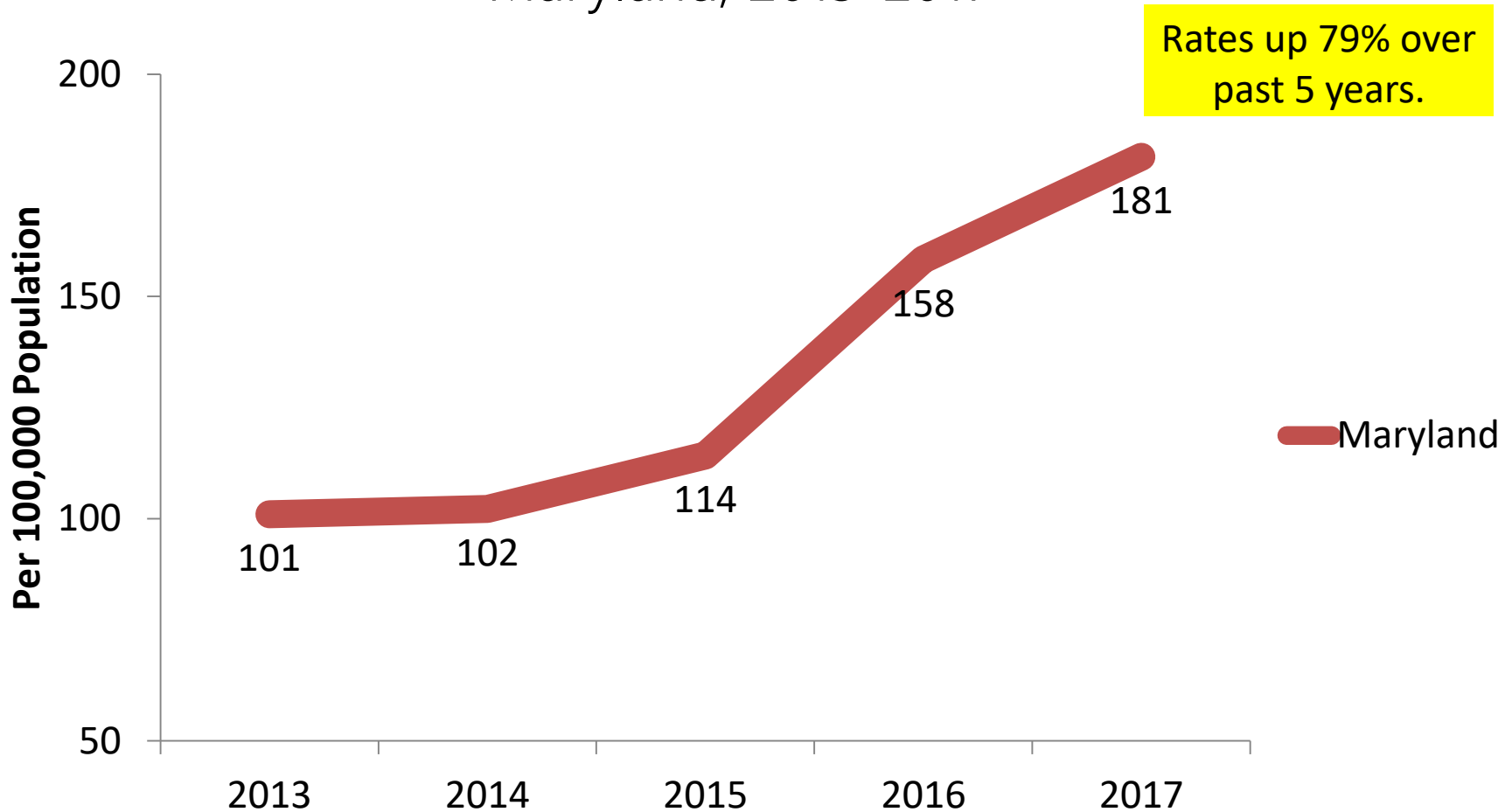


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Gonorrhea Rates

Maryland, 2013-2017

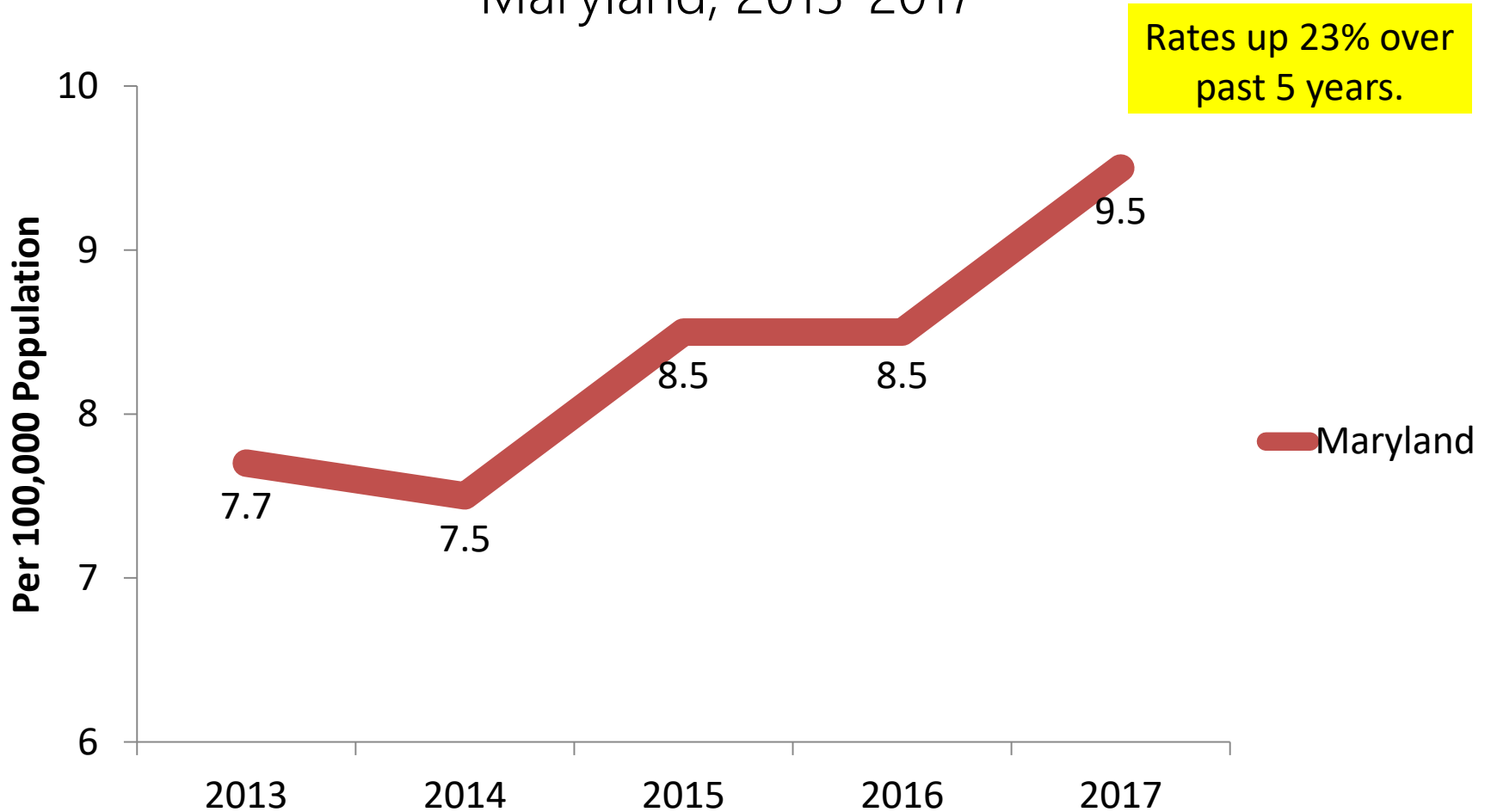


* Age-Adjusted Rates
Source: Maryland Vital Statistics Reports



Syphilis Rates

Maryland, 2013-2017



* Age-Adjusted Rates

Source: Maryland Vital Statistics Reports

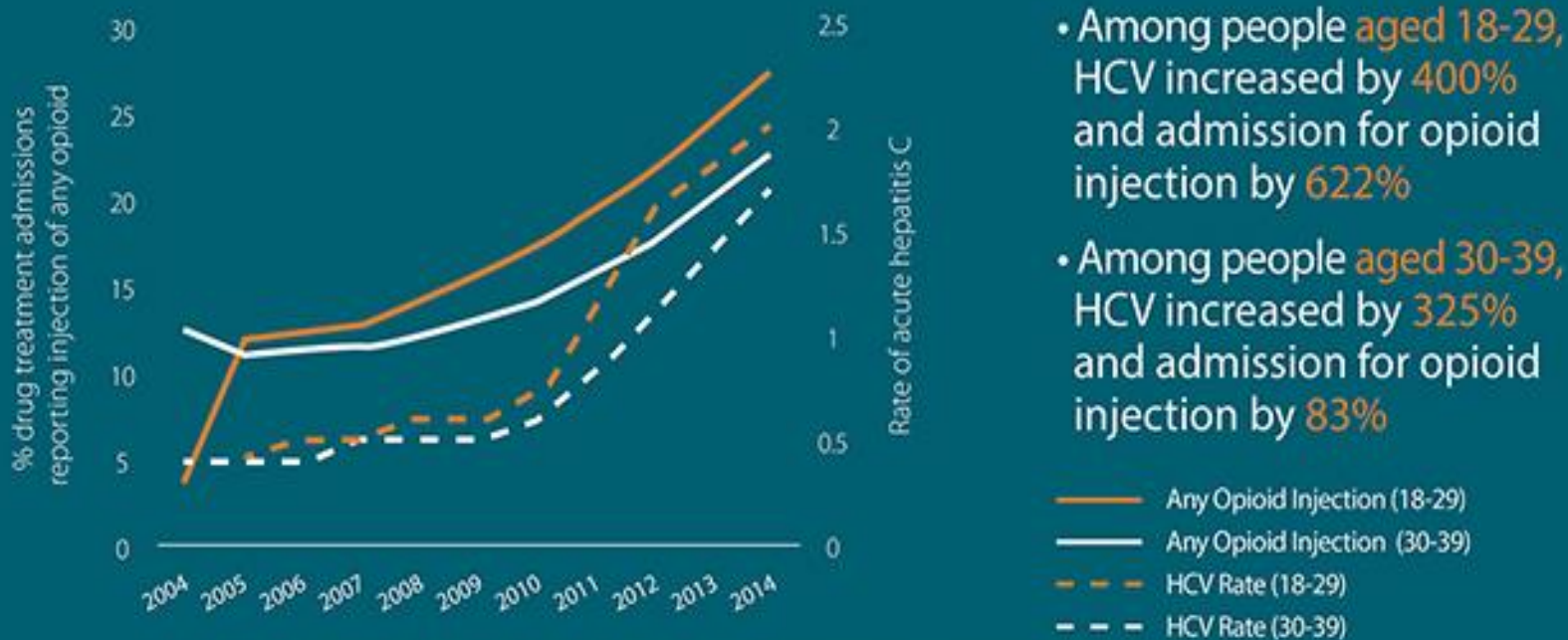


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The opioid epidemic is also linked to the increase in Hepatitis C infections

HEPATITIS C AND OPIOID INJECTION ROSE DRAMATICALLY IN YOUNGER AMERICANS FROM 2004-2014



- Among people aged 18-29, HCV increased by 400% and admission for opioid injection by 622%
- Among people aged 30-39, HCV increased by 325% and admission for opioid injection by 83%

Source: Centers for Disease Control and Prevention and Substance Abuse and Mental Health Services Administration



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Hepatitis C is a Leading Cause of Liver Cancer

FACT

Hepatitis C is
a leading cause
of liver cancer.



[click here to learn more.](#)



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... but some of the most preventable cancers are caused by HPV ...

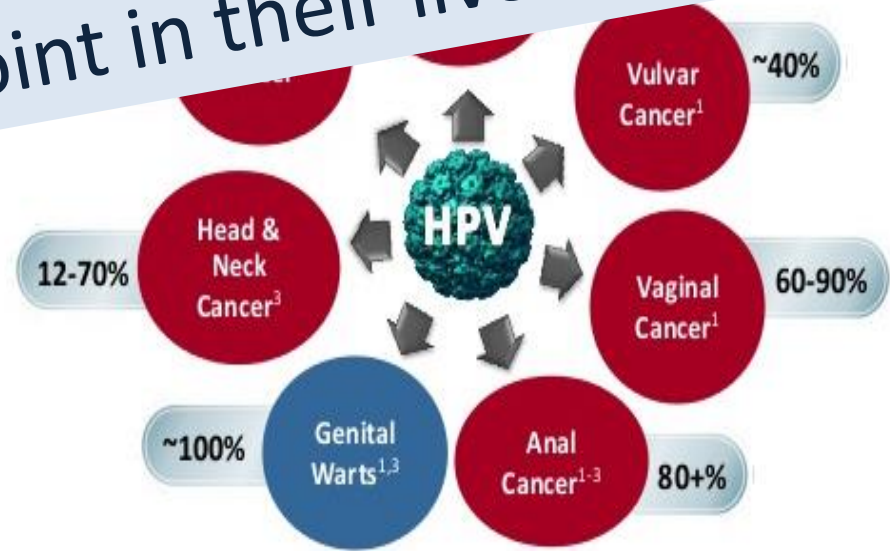


HPV causes more than 100 types of cancer

80-90% of all people are infected with HPV at some point in their lives.

HPV

the most common STD,
can cause Cancer or Warts



Percentages represent cases attributable to HPV infection



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... and HPV can be prevented by a vaccine.

3 vaccine shots needed between ages 15-26.
Only 2 vaccine shots needed < age 15.

HPV Vaccine
is **CANCER PREVENTION.**
Vaccinate kids at 11-12 years.



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention



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HPV can be transmitted sexually, but also non-sexually

THE PEDIATRIC FORUM

Source: Widdice et al, "Prevalence of HPV in Young Women," Archives of Pediatric and Adolescent Medicine, Aug 2012

RESEARCH LETTERS

Prevalence of Human Papillomavirus Infection in Young Women Receiving the First Quadrivalent Vaccine Dose

The objective of this study was to determine the prevalence of HPV infection in young women receiving their first HPV vaccine dose.

Methods. Participants were 13- to 21-year-old females receiving their first HPV vaccine dose, recruited from an adolescent primary care clinic between June 2008 and June 2010. These data are from the baseline visit of a longitudinal study that was approved by the hospital's institutional review board. Each participant completed a questionnaire assessing sociodemographic factors and behaviors. History of sexual contact was assessed using the following items: "Have you ever had sexual contact with

(≥ 1 type): 17.4% (33 of 190) for HPV-16 and 6.3% (12 of 190) for HPV-18. The only variable independently associated with HPV in a multivariable model was history of multiple sexual partners (2-5 partners vs 1 partner, OR, 6.2; 95% CI, 2.1-18.1 and ≥ 6 partners vs 1 partner, OR, 10.3; 95% CI, 2.1-50.1).

11.6% of sexually inactive females, ages 13-21, were HPV positive.

of sexually experienced females. The most commonly detected types were HPV-16 and HPV-18. Of the 190 females, 103 (54%) had multiple types: 2 had 2 types and 101 had 3 types. No variables were significantly associated with HPV in sexually inexperienced females.

Comment. The prevalence of HPV in this population was higher than that reported in a nationally representative sample of young women, likely because of differences in sexual behaviors in the 2 populations studied.³ As expected, sexually inexperienced females had lower rates of HPV than sexually experienced females; however, a subgroup of sexually inexperienced females was positive for both vaccine and nonvaccine types. Our finding that 11.6% of sexually inexperienced females were positive for HPV is surprising. This finding suggests that HPV can be transmitted non-sexually.



Oral cancer is on the rise:

*“My name is Eva Grayzel. At age 33, I was diagnosed with **stage IV squamous cell carcinoma of the lateral tongue.***

I never smoked and rarely consumed alcohol...

No longer is the male over the age of 60 who uses tobacco the only patient who requires a screening for oral cancer. Now it includes younger patients. The new face of oral cancer is the one who doesn't smoke or drink.

The new face of oral cancer looks more like mine.”

...patient who requires a screening for oral cancer. Now, it includes younger patients. The new face of oral cancer is the one who doesn't smoke or drink. The new face of oral cancer looks more like mine.



Relationship between untreated substance abuse disorders and suicide

Among Patients with Untreated Substance Abuse Disorders...

45%

**Attempt suicide,
according to one study**

Source: PsychologyToday.com



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Suicide is the top cause of death in young people, ages 15-29

BIGGEST KILLERS

The top five causes of death in the age group 15-29 in 2010-13.

RANK	CAUSE OF DEATH	DEATHS (% OF TOTAL)
1	Suicide	18
2	Unintentional injuries (motor vehicle accidents)	13.7
3	Unintentional injuries (others)	10.9
4	Cardiovascular diseases	7.5
5	Digestive diseases	7.2

Source: Office of the Census Commissioner



The role of adverse childhood experiences (ACEs) in substance misuse

ADVERSE CHILDHOOD EXPERIENCES – ACEs

What are Adverse Childhood Experiences (ACEs)?
ACEs are potentially traumatic events that occur in a child's life:



Physical Abuse



Emotional Abuse



Sexual Abuse



Domestic Violence



Parental Substance Abuse



Mental Illness



Suicide or Death



Crime or Imprisoned Family

Causing lifelong medical, mental & social suffering



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What did the ACE Study find?

The ACE (Adverse Childhood Experience) Study
Conducted by the US Center for Disease Control & Kaiser Permanente
17,000 PARTICIPANTS SURVEYED



Adverse Childhood Experiences (ACEs) Influences both mental and physical health

A PERSON WITH 4 OR MORE
**ADVERSE CHILDHOOD
EXPERIENCES IS***

12.2 TIMES AS LIKELY TO ATTEMPT SUICIDE

10.3 TIMES AS LIKELY TO USE INJECTION DRUGS

7.4 TIMES AS LIKELY TO BE AN ALCOHOLIC

*Vincent J. Felitti, et al., The Adverse Childhood Experiences (ACE) study, 14 AMERICAN J. OF PREVENTATIVE MEDICINE 245 (1998).

A PERSON WITH 4 OR MORE
**ADVERSE CHILDHOOD
EXPERIENCES IS***

2.2 TIMES AS LIKELY TO HAVE ISCHEMIC HEART DISEASE

2.4 TIMES AS LIKELY TO HAVE A STROKE

1.9 TIMES AS LIKELY TO HAVE CANCER

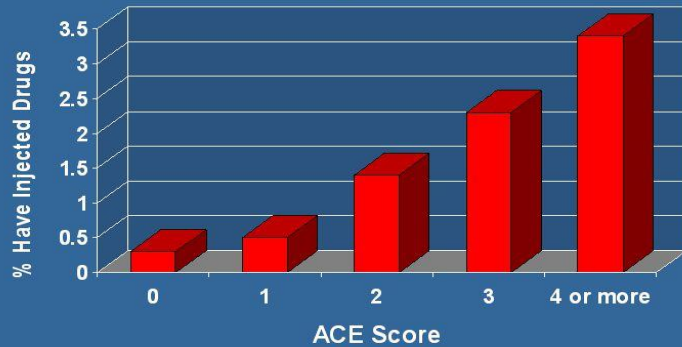
1.6 TIMES AS LIKELY TO HAVE DIABETES

*Vincent J. Felitti, et al., The Adverse Childhood Experiences (ACE) study, 14 AMERICAN J. OF PREVENTATIVE MEDICINE 245 (1998).



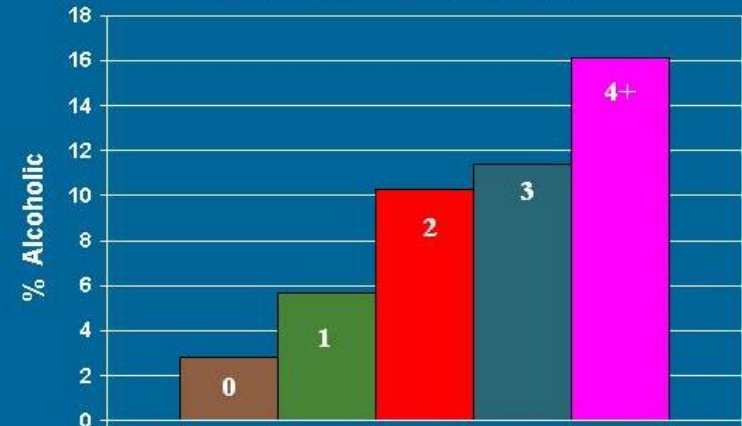
ACEs have a dose-response relationship with many health problems

ACE Score and Intravenous Drug Use



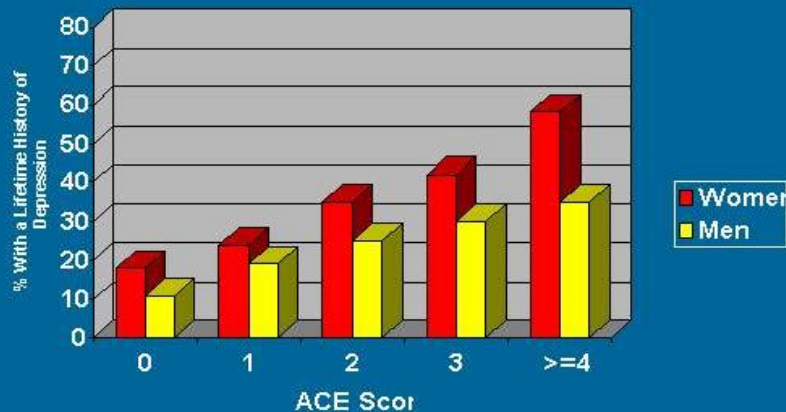
Health Risks

Childhood Experiences vs. Adult Alcoholism



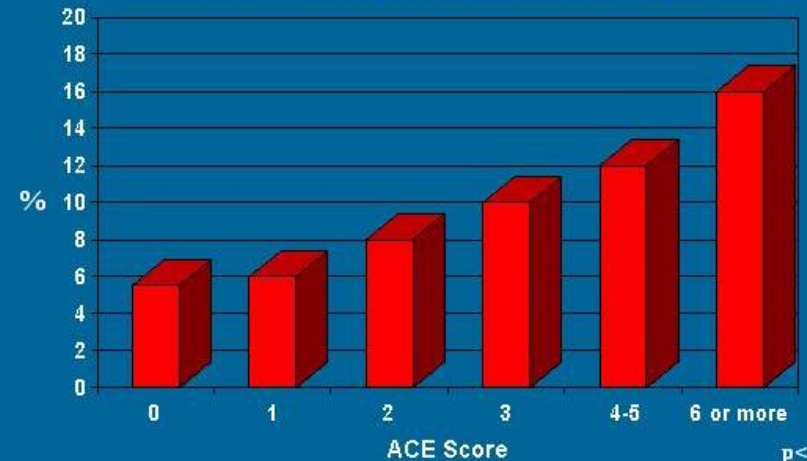
Mental Health

Childhood Experiences Underlie Chronic Depression



Health Risks

Adverse Childhood Experiences vs. Smoking as an Adult



Family Health and Resiliency

HOME VISITING

Supporting Parents and Child Development

A knock on the front door can bring parents the support they need to nurture their young child's healthy development. Home visiting reaches families where they live by delivering parent support and child development services directly to the home environment.

- Developmental Screenings
- Information on child development and early learning
- Social Support
- Referrals to ancillary community services
- Linkages for enrollment in public benefits

INVESTMENT IN PRE-K

- decreases dropout rates
- reduces crime and incarceration
- improves lifelong earnings
- saves taxpayer money
- benefits our communities

PRE-K

How it Started:

PEER SUPPORT

In the 1990's, as additional consumer/survivor groups emerged across the nation, the peer support movement began to focus more on the concept of supporting consumers by offering their own experiences, failures and successes as inspiration.

In more recent years, consumer groups began to advocate for hiring of peer specialists within traditional mental health programs.



Some focused on the development of recovery/wellness centers



Others chose to offer residential, vocational, socialization and other rehabilitation services



And others specialized in trauma-oriented care or consumer's spiritual lives

Intimate Partner Violence

is one of the most common forms of violence against women



includes physical, sexual and emotional abuse, as well as controlling behaviors by an intimate partner.

These violations result in serious short and long-term

- physical problems
- reproductive problems
- sexual problems
- mental health problems
- and increased vulnerability to HIV

How the opioid/HIV outbreak was managed through public health interventions

'There is hope.' Peer recovery coaches use experience to help others overcome addiction.

Billy Kobin, Indianapolis Star Published 6:00 a.m. ET Aug. 12, 2018



(Photo: Michelle Pemberton/IndyStar)

Matt Heskett had been struggling with painkillers, alcohol and heroin for several years. He was sleeping out of his car. He was broke.

Then, in the fall of 2015, police raided a trailer he was in with several others on the west side of Indianapolis.

The police were serving warrants. None of the warrants had been issued for Heskett. Still, with no money and a car almost out of gas, he found himself in a reflective mood.

"That was kind of the moment where it all smacked me in the face," Heskett said. "I just remember going across the street to a gas station and kind of thinking to myself, 'Is this really what my life is today?'"

Fast forward to 2018, and Heskett's life is much different.

Family Resilience

Beliefs

Shared beliefs help family members find **meaning** in adversity, cultivate hope and a **positive outlook**. They can be tied to **spirituality**, giving individuals a bigger purpose. They help members see the transformative opportunity for growth and foster a "can-do" attitude.

Organization

Refers to family structure, mutual support and **connections**.

Communication

Communication is open and honest. It's about **listening** and **empathy**. It's about making family members more skilled at coping with future stresses.

Family resilience is the family's ability to "**withstand and rebound from disruptive life challenges, strengthened and more resourceful.**"

Family resilience is not just about weathering a storm. It's about turning adversity into a catalyst for the family's growth. It's about enriching relationships and making family members more skilled at coping with future stresses.

The Walsh Family Resilience Framework (Walsh, 2011)



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**Harford County
Health Department**

HELPING FAMILIES

Recover

Do you need help with any of the following services?

Addictions/Behavioral Health

410.877.2340

Medication Management, OP/IOP Treatment, & Peer Recovery Services

Birth Certificates

410.838.1500

Available to those born in Maryland

Care Coordination

410.942.7999

Helps to educate families regarding services offered through the Medicaid system

Dental Care

443.922.7670

Serves children ages 1 through 20 and pregnant women on Medical Assistance

Family Planning/Reproductive Health

410.612.1779

Provides gynecological exams/pregnancy tests and emergency contraception

HIV/ STI

410.638.3060

Provides HIV and STI testing and treatment

Immunizations

410.612.1779

Offered to uninsured and under-insured children ages 2-18

Infants and Toddlers

410.638.3823

Provides early intervention services to children, ages 1-4, who have, or are at risk of, having developmental delays

Maryland Health Insurance

410.942.7999

Provides free healthcare to eligible pregnant women and children with low to average income

Tobacco Cessation

410.612.1781

Provides tobacco education, treatment and prevention

Transportation Services

410.638.1671

Offers transportation to those on Medical Assistance and other populations

Women, Infants, and Children (WIC)

410.939.6680

Provides nutrition education, breastfeeding support and healthcare referrals

Contact a Harford County Health Department Care Coordination/Peer Recovery Specialist at 410.459.8727

Families are the Heart of Our Community



September is National Recovery Month



Shine light on
RECOVERY

Help us light the way during the month of September for Recovery Month. By using purple lights, show Harford County there is hope and recovery is possible.

If you need help, call 410-877-2340.

Thank You!



Public Health
Prevent. Promote. Protect.

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Health Department