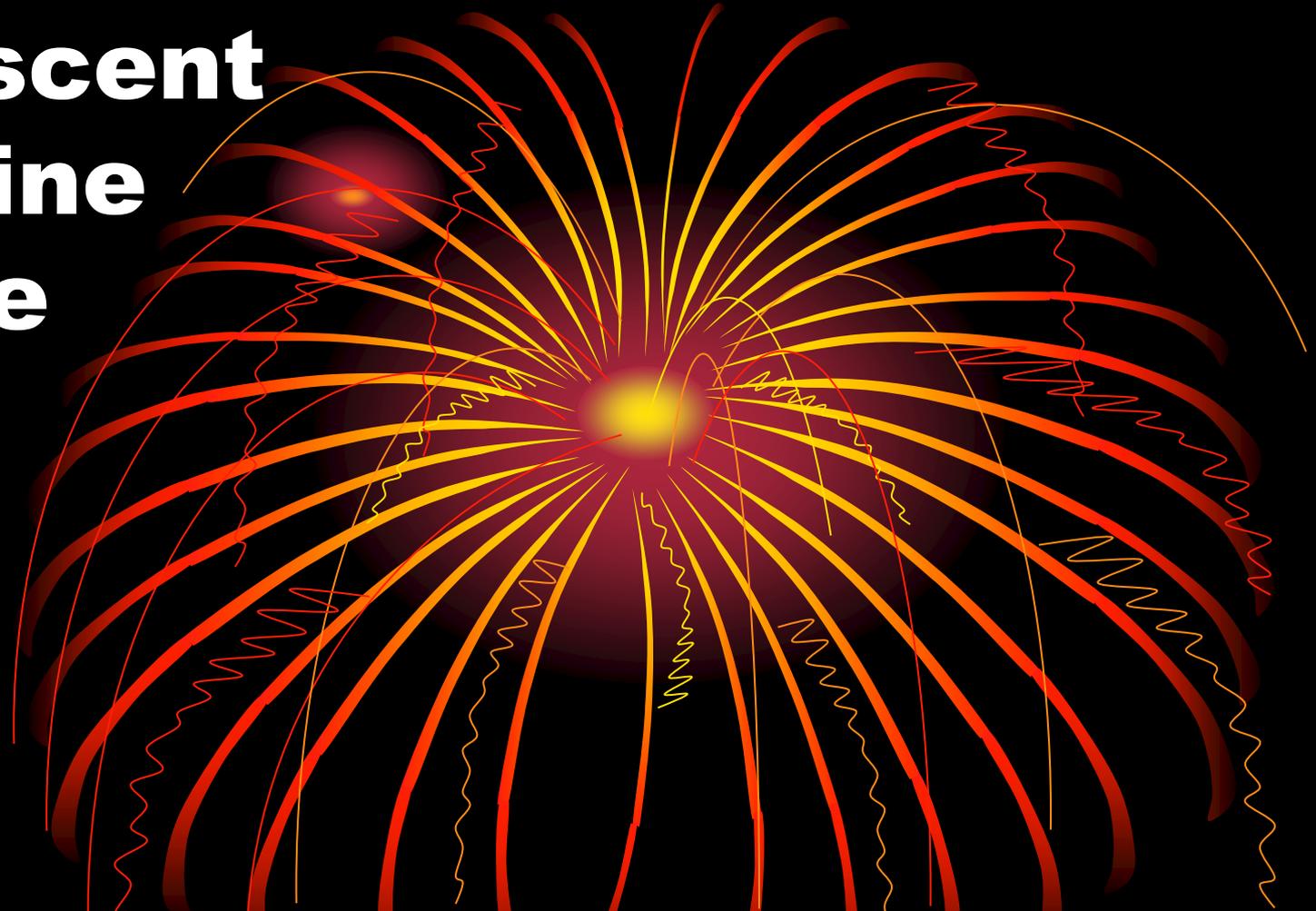


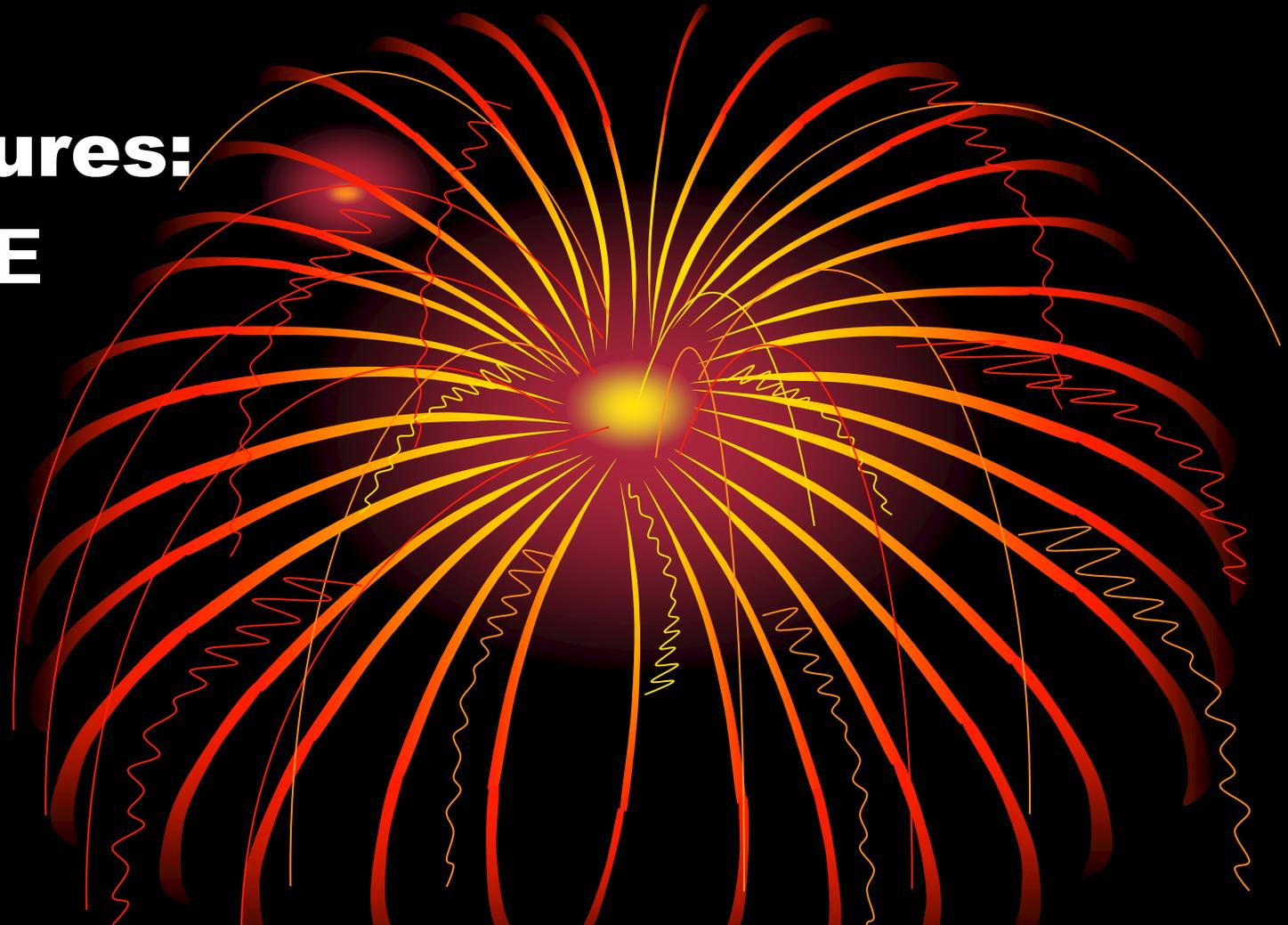
# Adolescent Medicine Update 2023



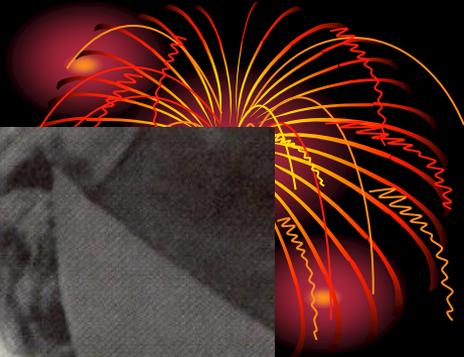
**Danielle Ferstler, MD / Samuel A Sandowski, MD**

Senior Resident and Academic Chief / VP Medical Education, Chair, Family Medicine  
Icahn School of Medicine at Mount Sinai (South Nassau) Family Medicine Residency  
Oceanside, NY

# Disclosures: NONE



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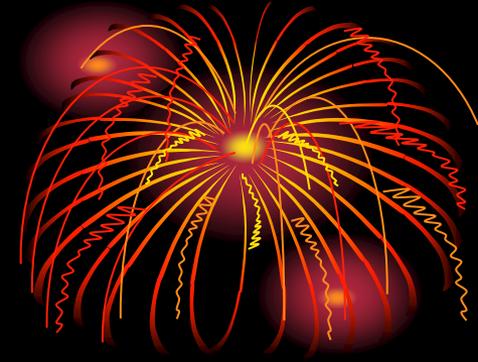


# HEADSSS



- Home
- Education, Employment, Exercise
- Activities
- Depression
- Diet
- **Drugs, Substance Abuse**
- **Sexuality**
- **Suicide**
- **Safety**

# Sexuality



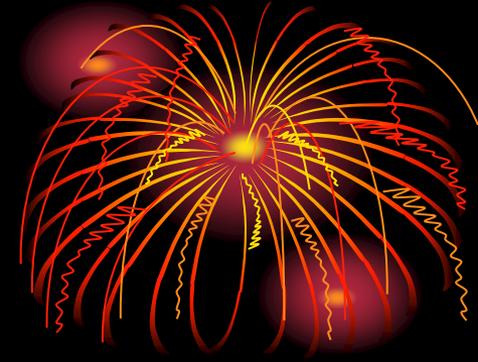
- Are you attracted to boys, girls, both?
- Relationships?
- Have you ever had sex? (define sex)
  - What types of sexual experiences have you had?
- Has anyone ever touched you in a way that made you uncomfortable or forced you to have sex?

# Sexuality Continued



- Want to assess risk in a nonjudgmental way
  - How many people have you had sex with in the last 3 months?
  - How old were you when you first had sex?
- Clarify unfamiliar terms
- What are your questions or concerns regarding sex?

# Sexuality Continued



- Do you or your partner use anything to prevent pregnancy or getting an STI?
- Have you ever had a STI?
- Have you ever had any pregnancies or fathered pregnancy?

# Mobile Phone Interventions



**Mobile phone, social media usage, and perceptions of delivering a social media safer sex intervention for adolescents: results from two countries**

- Adolescent Health Med Therapeutics 2020

Compared US and Botswana. Both countries showed youth believed mobile phones positively impacted sexual health.

**Using mobile phones to improve young people sexual and reproductive health in low and middle-income countries: a systematic review to identify barriers, facilitators, and range of mHealth solutions**

- Reproductive Health 2021

Systemic review of 75 articles proved mHealth had a positive impact on adolescent health.

# Youth Risk Behavior Surveillance System (YRBSS)



Looked at 4.9 million high school students, with more than different types of 2,100 surveys (between 1991 and 2019)

- Behaviors that contribute to unintentional injuries and violence.
- Sexual behaviors related to unintended pregnancy and sexually transmitted infections, including HIV infection.
- Alcohol and other drug use.
- Tobacco use.
- Unhealthy dietary behaviors.
- Inadequate physical activity.
- Prevalence of obesity
- Sexual identity
- Sex of sexual contacts

# High Risk Sexual Behaviors – JAMA 2021

THE PERCENTAGE OF HIGH SCHOOL STUDENTS WHO <sup>*</sup> :	2009 Total	2011 Total	2013 Total	2015 Total	2017 Total	2019 Total	Trend
Ever had sex	46.0	47.4	46.8	41.2	39.5	38.4	
Had four or more lifetime sexual partners	13.8	15.3	15.0	11.5	9.7	8.6	
Were currently sexually active	34.2	33.7	34.0	30.1	28.7	27.4	
Used a condom during last sexual intercourse <sup>†</sup>	61.1	60.2	59.1	56.9	53.8	54.3	
Used effective hormonal birth control <sup>†</sup>	—	—	25.3	26.8	29.4	30.9	
Used a condom and effective hormonal birth control <sup>†</sup>	—	—	8.8	8.8	8.8	9.1	
Were ever tested for HIV	12.7	12.9	12.9	10.2	9.3	9.4	
Were tested for sexually transmitted diseases during the past year <sup>‡</sup>	—	—	—	—	—	8.6	—

# High Risk Sexual Behaviors - 2019



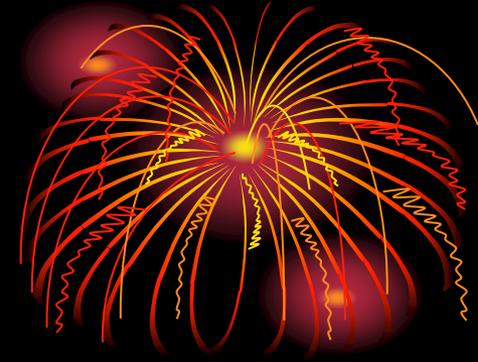
- Over the last 10 years, fewer high school students engaged in sexual activity
- All students (with the exception of Hispanic students) were more likely to use effective hormonal contraception in 2019 vs 2013; More White students used effective contraception than Black or Hispanic students
- Fewer students got tested for HIV in 2019 compared to 2009
- Only 9% of students were tested for STD's during the past year



# Suicide and Depression

- Do you ever feel very sad, tearful, bored, disconnected?
- Did you ever think about hurting or killing yourself?
- Is there a family history of suicide?
- What level recommendation has been given by the USPSTF for suicide screening? Depression screening?
  - PHQ2, PHQ-9A

# Depression



## Depression in Adolescents

– NEJM July 2021; JAMA June 2021

- Depression in Adolescents has more than doubled in last 10 years
- Suicide ideation decreased from 19% to 15% in past 30 years
- Suicide attempts increased from 7% to 9 %
- Recent articles – and this is pre-Covid data

## Depression and Pandemic

-JAMA Pediatrics Nov 2021

- 1 in 4 youth with elevated depressive symptoms, 1 in 5 youth with elevated anxiety symptoms globally
- This is double prepandemic



# Depression – Teenage Loneliness

## The Smartphone Trap

Editorial, NY Times by Jonathan Haidt and Jean Twenge; August 2021

- Teenage loneliness was stable from 2000-2012
- Teenage loneliness doubled from 2012 – 2018 (study concluded in 2018)
- Looked at impact of declining family size, GDP, rising inequalities, increases in unemployment, smartphone access and hours of internet usage – only smartphone access and internet usage were correlated.
- The increase in smartphone access and internet usage mirrored the increase in depression

# Mental Health And Suicide Variables



THE PERCENTAGE OF HIGH SCHOOL STUDENTS WHO:	2009 Total	2011 Total	2013 Total	2015 Total	2017 Total	2019 Total	Trend
Experienced persistent feelings of sadness or hopelessness	26.1	28.5	29.9	29.9	31.5	36.7	
Seriously considered attempting suicide	13.8	15.8	17.0	17.7	17.2	18.8	
Made a suicide plan	10.9	12.8	13.6	14.6	13.6	15.7	
Attempted suicide	6.3	7.8	8.0	8.6	7.4	8.9	
Were injured in a suicide attempt that had to be treated by a doctor or nurse	1.9	2.4	2.7	2.8	2.4	2.5	

Source: National Youth Risk Behavior Surveys, 2009-2019  
 \*For the complete wording of YRBS questions, refer to Appendix.

	In wrong direction
	No change
	In right direction

# Safety



- When you drive or ride in a car, do you use a seat belt?
- What do you do if the person you are riding with is drunk or using drugs?
- When you bike, ride a motorcycle, skate board or roller skate, do you use a helmet?
- Do you use protective gear when you play sports?

# Safety



- Do you ever carry a weapon to protect yourself?
- Is there a gun in your home?
- How is the gun stored?

# Top Causes of Death



- Accidents
- Suicide
- Homicide
- Does race play a role?



# Firearms Data

- CDC and [childrensdefense.org](http://childrensdefense.org)  
- data collected through 2019

- Gun violence has surpassed MVA as the number one cause of death in children and teens (aged 1-19) with 85% of those deaths in teens aged 15-19.
- Black children had the highest rate of gun death (11.9 / 100,000). This was followed by American Indian/Alaskan Native children (6.4 / 100,000)
- Males account for 86% of all victims of firearm death and 87% of all firearm injury
- Black children are 4x more likely to die from firearms homicide than White children
- 1/3 of households with children have guns and 1/2 of those households do not store the guns safely.

# Experiencing Violence: 2009 - 2019



Fewer male students and Hispanic students were threatened or injured with a weapon at school from 2009 through 2019.

Overall, more students missed school because of safety concerns from 2009 through 2019.

In 2019, more black and Hispanic students missed school because of safety concerns than white students.

Nearly twice as many female students as male students were electronically bullied.

Almost 1 in 5 students were bullied at school during the past year.

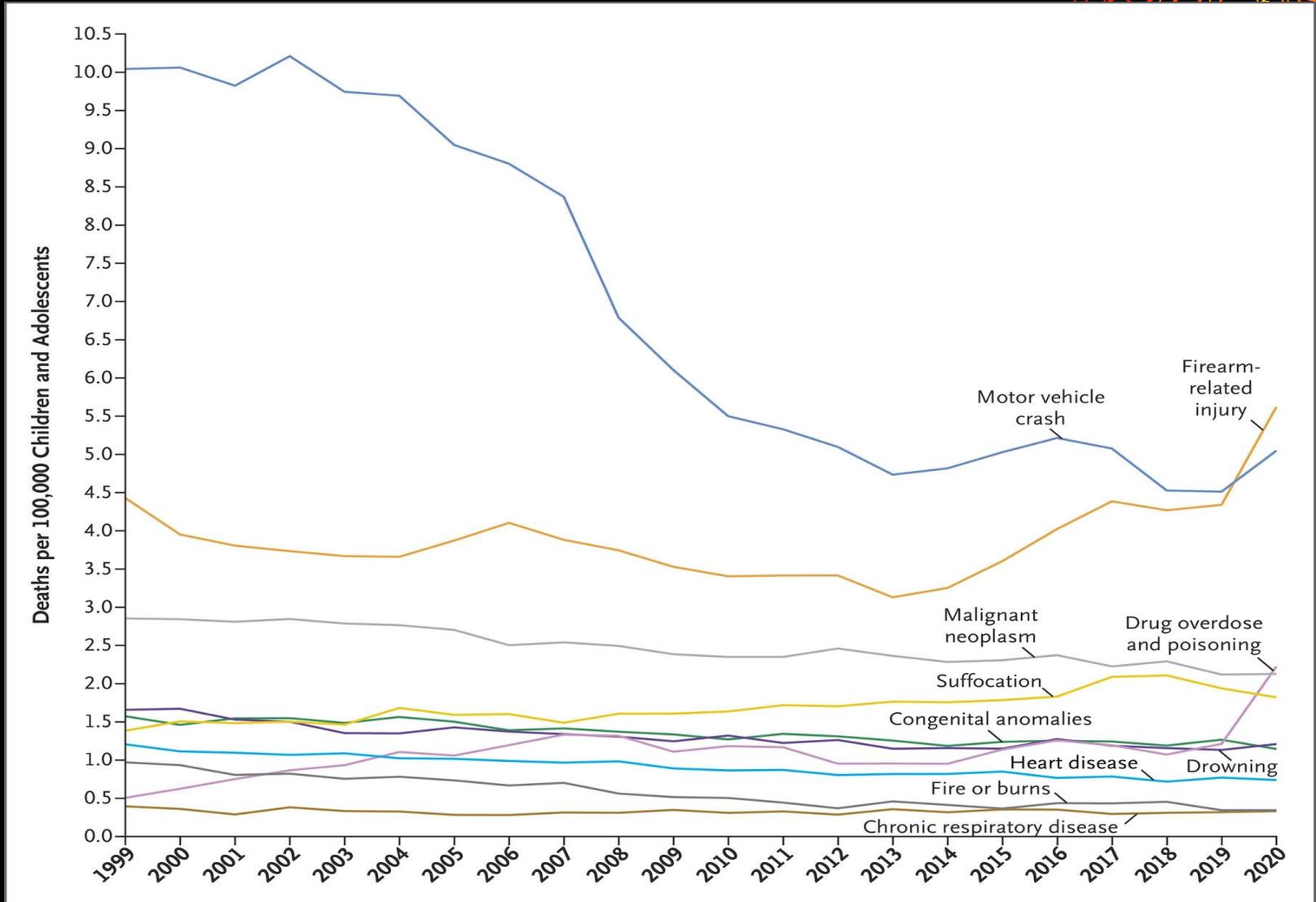
Female students were more than three times as likely to be forced to have sex than male students, and the trend in the percentage of students who were physically forced to have sex has not declined.

Fewer female students experienced physical dating violence from 2013 through 2019.

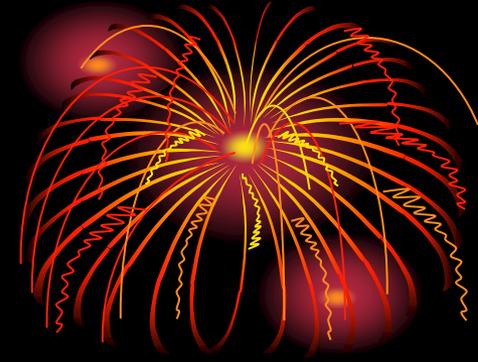
Fewer students experienced sexual dating violence from 2013 through 2019. However, female students were more than three times as likely to experience sexual dating violence as male students.

EXPERIENCING VIOLENCE

# Mortality and Morbidity 2022 – NEJM May 2022



# High Risk Behaviors Substance Abuse



5,100,000 young adults reported having a substance use disorder

87% of them went untreated

Stats for ages 16-17 year olds

- Any Illicit Drug use – 15%
- Marijuana – 13.5% (38% reported trying it)
- Prescription Psychotherapy Drug misuse - 2.3%
- Alcohol use - 17.9% (down from 32.6% in 2002)
- Cigarettes – 5.2 % (down from 24.9% in 2002)

- US Dept of Health & Human Services – Substance Abuse and Mental Health Services Administration

**Which listed below is another name for Heroin?**



- A. Skag
- B. Black tar
- C. Brown sugar
- D. Horse
- E. China white

# What is another name for prescription narcotics?



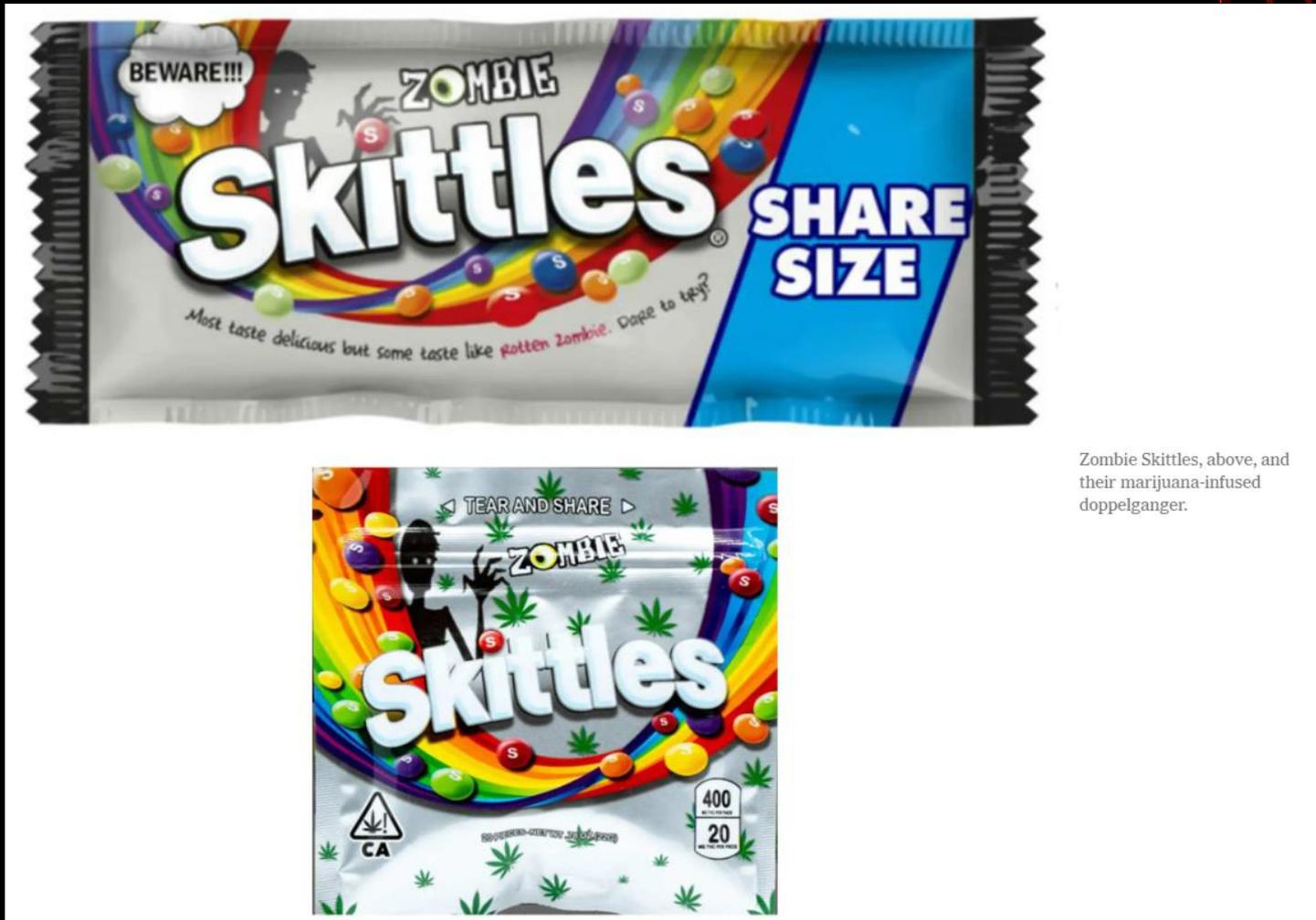
- Demmies
- Octagons
- Sizzurp
- Captain Cody
- Footballs
- Stop signs

# What's a skittles party?





# The New Skittles Packaging



Zombie Skittles, above, and their marijuana-infused doppelganger.



# 5 Stages of Substance Abuse

- Stage 1 - Curiosity
- Stage 2 - Experimentation
- Stage 3 - Regular Use
- Stage 4 - Psychologic or Chemical Dependency
- Stage 5 - Using Drugs to Feel “Normal”

# The “C.A.G.E.”



- C - CUT DOWN
- A - ANNOYED at questioning about your alcohol or drug use
- G - GUILTY because of something which happened
- E - EYE OPENER to get started in the morning



# The “C. R. A. F. F. T.”

- C** - Have you ever ridden in a **CAR** driven by someone (including yourself) who was "high" on alcohol or drugs?
- R** - Do you ever use alcohol or drugs to **RELAX**, feel better about yourself, or fit in?
- A** - Do you use alcohol or drugs while you're by yourself, **ALONE**?
- F** - Do you **FORGET** things you did while using alcohol or drugs?
- F** - Does your **FAMILY** or **FRIENDS** tell you that you should cut down on your drinking or drug use?
- T** - Have you gotten into **TROUBLE** while using alcohol or drugs?

# New Screening Tools by NIDA National Institute of Drug Abuse - 2019



- Screening To Brief Intervention (S2BI)
- Brief Screener for Tobacco, Alcohol, and other Drugs (BSTAD)
  - Take less than 2 minutes
  - Validated
  - Can be self-administered
  - Provide clinicians with score's implications suggested actions and additional resources

<https://www.drugabuse.gov/nidamed-medical-health-professionals/screening-tools-resources/screening-tools-adolescent-substance-use>

<https://www.drugabuse.gov/ast/s2bi/#/>

# Drug Screening



Ethical Issues – Screening without the knowledge and consent will likely have a negative effect on the doctor-patient relationship. The AAP does not endorse such “non-informed” screening.

# Drug Screening



Obtain the appropriate sample

Either urine or serum are adequate for general screening.

The use of hair for screening is more sophisticated than generally necessary for routine screening.

# Drug Screening



How long will drug screening remain positive?

- Amphetamines: < 48 hours
- Barbiturates: 3 – 4 days
- Cocaine: 2 – 4 days
- Ethanol: 2 – 14 hours
- Opiates: 2 days
- Cannabinoids: 10 – 20 days

# Division of Adolescent and School Health (DASH) 2020-2025 Strategic Plan - CDC



- Improve capacity of schools, families and communities to help youth become healthy
- Decrease prevalence of behaviors and experiences that contribute to HIV, STDs, and unintended pregnancy, including priority health issues (such as sexual risk behaviors, high-risk substance use, violence, poor mental health and suicidality)
- Advance health equity
- Increase the implementation of strategies that promote protective factors that contribute to healthy your development

# John...



John is a 15 year old male who is going to a summer college program. He needs a physical form completed, and wants to know if his vaccines are up to date.

# Immunizations



Vaccine	Ages 7-10	Ages 11-12	Ages 13-18
<b>Tetanus, Diphtheria, Pertussis</b>		Tdap Recommend	Tdap If not yet given
<b>HPV</b> (9-valent preferred)		HPV x <u>2</u> (6 months apart) *JAMA 2016 – 2 vaccines series	HPV series If not yet given 2 vaccines – ages 13-14 3 vaccines ages 15 & up
<b>Meningococcal</b> (Quad Valent-ACWY) Consider coverage for serotype B for high risk	High Risk	Recommend with booster at age 16	Recommend if not yet given – one dose only after age 16, otherwise booster at age 16  (serotype B – best for ages 16-18; 2-3 doses)
<b>Influenza</b> *2016 – No LAIV	Yearly	Yearly	Yearly

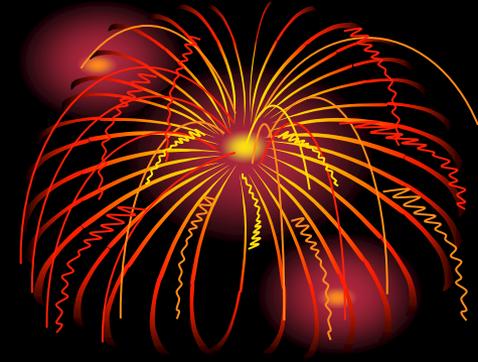
# Immunizations



Vaccine	Ages 7-10	Ages 11-12	Ages 13-18
Pneumococcal	High Risk		
Hepatitis A	High Risk		0.5 cc till age 18; 1 cc over age 18
Hepatitis B	Catch Up	Generally 3 doses	Generally 3 doses 2 for Recomb Ivax HB
IPV	Catch Up		
MMR	4 weeks apart		
Varicella	Catch Up Total 2 doses		4 weeks apart (ages 12 and older) 3 months apart (ages 7-13 recommended)

**School Based Vaccine Programs are effective, and parents tend to be in favor of them** - Family Practice News (Sept 2016)  
 – more recent studies in Europe and Africa, not in US

# COVID – 19 Vaccinations



## COVID-19 primary series vaccination for children and teens

Child's Age	Pfizer-BioNTech	Moderna	Novavax	J&J/Janssen
6 months – 4 years old	3-dose primary series	2-dose primary series	Not authorized	Not authorized
5 – 11 years old	2-dose primary series	2-dose primary series	Not authorized	Not authorized
12 – 17 years old	2-dose primary series	2-dose primary series	2-dose primary series	Not authorized

**At this time, only Moderna and Pfizer-BioNTech is approved for boosters for adolescents. Novavax is approved for >18 yrs and is monovalent.**



# M Pox Vaccine

- JYNNEOS – only approved vaccine
- Give SQ – not ID for adolescents
- Recommended for PEP
- What about Pre exposure??

# NYC – School Requirements

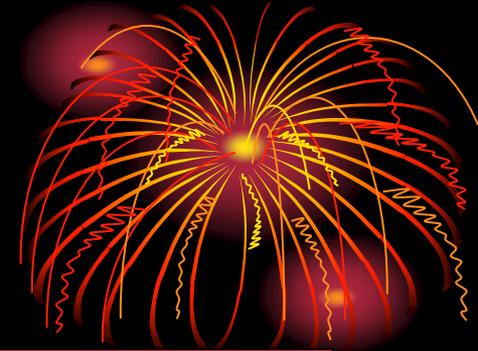
## Grades 6-12

Aug 2022



- MMR – 2 doses
- DTaP – 3 doses
- Tdap – 1 dose
- Polio – 3 doses
- Hep B – 3 doses (2 doses if Recombivax – ages 11-15)
- Varicella – 2 doses
- Meningococcal conjugate (MenACWY)
  - grade 7-11 1 dose
  - grade 12 1 dose if given after age 16 years / 2 doses if given before)
- Pneumococcal / Haemophilus / Influenza – not required

# USPSTF – Recommendations



Grade	Definition	Suggestions for Practice
<b>A</b>	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
<b>B</b>	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
<b>C</b>	Note: The following statement is undergoing revision. Clinicians may provide this service to selected patients depending on individual circumstances. However, for most individuals without signs or symptoms there is likely to be only a small benefit from this service.	Offer or provide this service only if other considerations support the offering or providing the service in an individual patient.
<b>D</b>	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
<b>I</b>	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

# USPSTF Update: Lipid Disorder Screening



- Lipid Disorders:
- What level recommendation?

# USPSTF Update: Lipid Disorder Screening



- Lipid Disorders:
- I recommendation

Insufficient evidence to assess the balance of benefits and harms of screening for lipid disorders in children and adolescents 20 years or younger. - JAMA. 2016;316(6):625-633

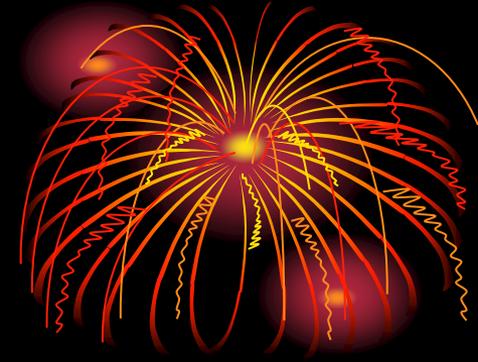
Currently being reviewed (January 2023 – draft summary)

# USPSTF: Screening for Syphilis



- What level recommendation?

# USPSTF: Screening for Syphilis



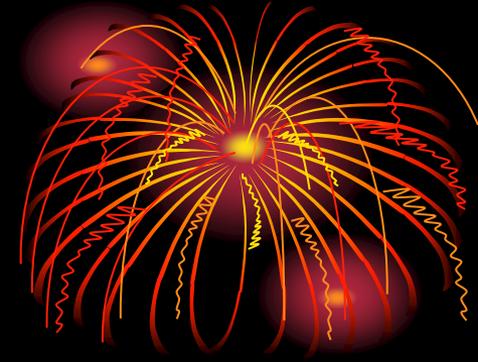
- “A” recommendation: The USPSTF recommends screening for syphilis infection in persons who are at increased risk for infection
- This is for non-pregnant people (not just pregnant women) - JAMA 2016; Draft recommendations February 2022 are similar

# USPSTF Update: Screening for Genital Herpes



- What level recommendation?

# USPSTF Screening for Genital Herpes



- D recommendation
- JAMA 2016 316(23);2525-2530
- Currently being reviewed (August 2022) - still a D

# USPSTF Update: Screening for Chlamydia and Gonorrhea



- What level recommendation?

# USPSTF Screening for Chlamydia and Gonorrhea



- Women (sexually active) age 24 and younger:
  - “B” recommendation
- Women (sexually active) age 25 and older:
  - “I” recommendation
- Men (sexually active) regardless of age:
  - “I” recommendation The CDC disagrees, and advocates for screening in men in high prevalence areas and annual screening in MSM (more frequent if behaviors place them at increased risk).
- JAMA – Sept 2021

# USPSTF 2022: Screening for Depression



- What level recommendation?



# USPSTF 2022: Screening for Depression

- “B” recommendation

Screening in children over age 12

Consider using PHQ-9 for teens

This year, is the first time they are recommending screening for ANXIETY as well, and that should occur in children over age 8

– JAMA April 2022.



# Treatment of Depression

- Meta-analysis including Fluoxetine, Sertraline, Escitalopram, citalopram, Paroxetine, Venlafaxine, Mirtazapine
- Only Fluoxetine, Sertraline, and Escitalopram were proven to have some significant improvement (self-reported depression scales)

Only Fluoxetine had a confidence interval (CI) that didn't cross "1". - J Fam Practice Sept 2016



# USPSTF Screening for Suicide

- What is the recommendation?



# Suicide Screening

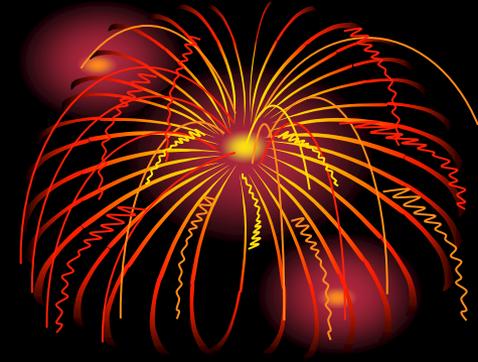
- I recommendation (2014) – but is being updated
- The UPDATE (draft) >>> April 2022 – still an I recommendation

# USPSTF



- What is the recommendation for Alcohol Screening?

# USPSTF



- Recommends Alcohol Screening in adults (B level)
- Recommendation is “I” for adolescents 12-17
- This recommendation is not agreed to by many other agencies, including the AAP



# Screening and Interventions for Unhealthy Drug Use? Tobacco Use?

- What is the recommendation?



# Screening for Unhealthy Drug Use and Tobacco Use

- 2020 – I recommendation for screening for Drug Use
- 2020 – B Recommendation to provide interventions, education and brief counseling to PREVENT tobacco use
- 2020 – I Recommendation to provide feasible interventions for the CESSATION of tobacco use



# Recommended Behaviors in Adolescents (2019)

- 8-10 hours sleep per night (age 14-18)
- Exercise of 1 hour / day
- No more than 2 hours of screen time / day



# Physical Activity Guidelines

For ages 6 - 17

- 60 minutes per day of moderate to vigorous physical activity each day
- Aerobic activities and bone strengthening – each 3 days per week
- In adults – 150 min per week of moderate aerobic exercise and 2 days per week of weights.

# Screening and Interventions for Eating Disorders



- What is the recommendation?

# Screening and Interventions for Eating Disorders



“I” recommendation

This is based on “not enough research”. The task force sensed that there would be benefit and recommended more research – but could not issue a stronger statement until this occurs.

JAMA – March 2022

# Screening and Interventions for Diabetes and Prediabetes



- What is the recommendation?

# Screening and Interventions Diabetes and Prediabetes

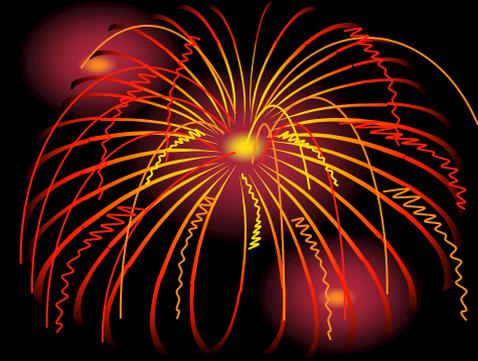


## “I” recommendation

This too is based on “not enough research”. The task force recognizes there are certain groups, such as American Indians, Alaska Natives, Blacks, Hispanics, and Latinos, as well as all children with obesity that are at increased risk but does not separate their recommendations for these select groups. They do advocate for adolescents be physically active and have a healthy diet.

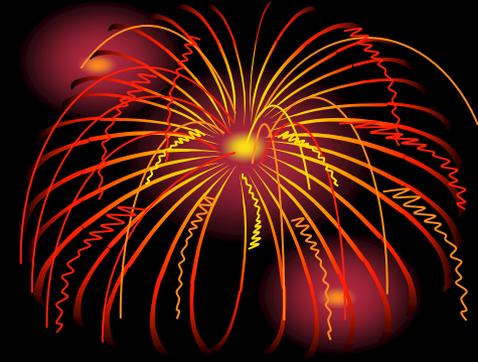
JAMA – December 2022

# USPSTF Recommendations



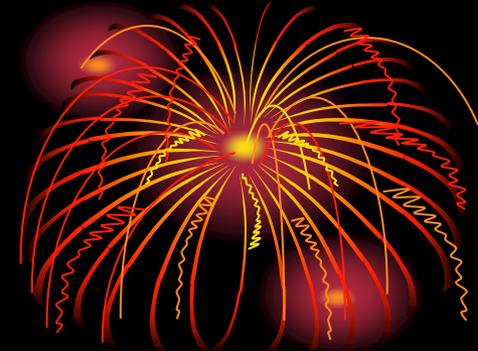
Item	To be Screened or COUNSELED	Recommendation	Year
Hep B	Screening	<b>B</b> for individuals with high risk for infection	2020
HIV	Screening	<b>A</b> (starting at age 15. Frequency of retesting varies on risk factors)	2019
HIV - PrEP	Treatment	<b>A</b> (For those at high risk)	2019
Syphilis	Screening	<b>A</b> (for those at risk of infection)	2016
GC and Chlamydia	Screening	<b>B</b> (for all sexually active women under 24) <b>I</b> – for men	2021

# USPSTF Recommendations



Item	To be Screened or Counseled	Recommendation	Year
PAP Smears	Screening	<b>D</b> (till age 21) <b>A</b> (after age 21)	2018
Herpes	Screening	<b>D</b>	2016

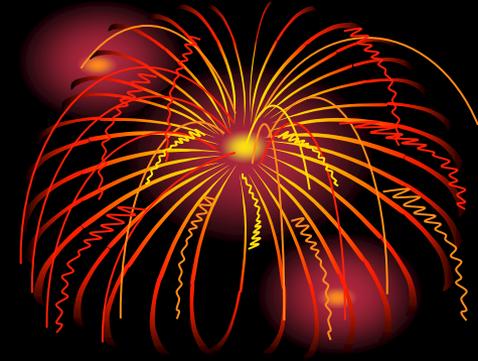
# USPSTF Recommendations



## USPSTF Recommendations

<b>STI</b>	Counseling	B (for those at risk for STI's)	2020
<b>Skin Cancer</b>	Counseling	B (Was an I 2016 – now it's a B)	2018
<b>Depression</b>	Screening	B (ages 12-18)	2016
<b>Obesity</b>	Screening / Counseling	B Recommends screening for obesity and offer or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status	2017

# USPSTF Recommendations



Disease			Year
Testicular Cancer	Screening	<b>D</b>	2011
Illicit Drug Use	Screening	<b>I</b> <b>I recommendation for behavioral counseling to prevent drug use</b>	2020
Dental and Periodontal Disease	Screening	Recommendations not updated	1996
Suicide Risk	Screening	<b>I</b>	2014
Blood Pressure	Screening	<b>I</b>	2013
Lipid Disorder	Screening	<b>I</b>	2016
Scoliosis	Screening	<b>I (Was a D in 2004)</b>	2018

# USPSTF Recommendations



Title			Year
<b>Motor Vehicle Restraints</b>	Counseling	Recommendations intentionally not updated The USPSTF feels their updated recommendations will not have an impact	2007



# LGBT – High Risk Group

- 321,000 students identify as gay or lesbian
- 964,000 bisexual
- 514,000 unsure of sexual identity

JAMA – Looked at high school students

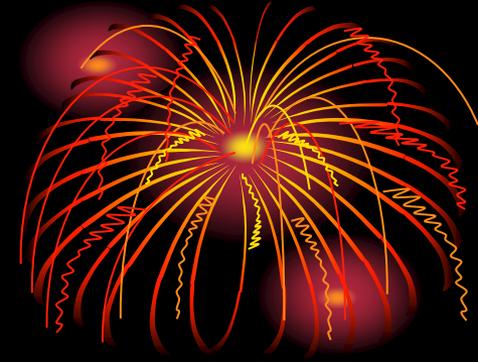


# Sexual activity and Identification Discordance

- 273,000 same sex only encounters
- 739,000 sexual encounters with both sexes
  - 25% identified as straight
  - 13% as unsure
- 2.8% of opposite sex only encounters identifies as gay
- 3.2% unsure of sexual identity

# Being Bullied

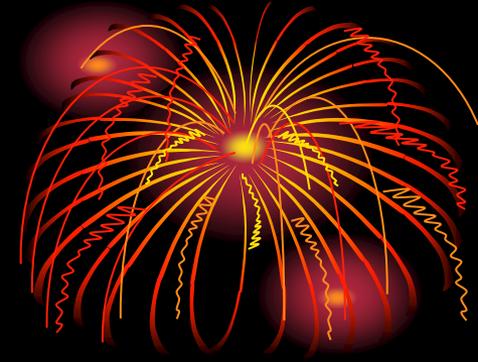
## (LGB versus Straight Students)



- **School bullying**
  - 34% vs 18.8%
- **Electronic bullying**
  - 28% vs 14%
- **Forced intercourse**
  - 17.8% vs 8.3%
- **Dating violence**
  - 22.7% vs 9.1%

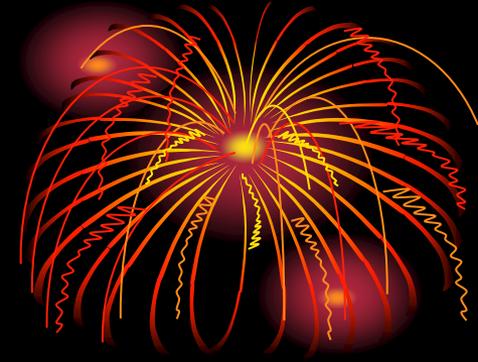
# Drug Use

## (LGB versus Straight Students)



Substance	LGB	vs.	Straight
• Cigarettes	19%		10%
• Alcohol	40%		32%
• Marijuana	32%		20%
• Hallucinogens	11.5%		5.5%
• Heroin	6%		1.3%
• Methamphetamines	8.2%		2.1%
• Prescription drugs	27.5%		15.5%

# Depression and Suicide (LGB versus Straight Students)



LGB versus Straight  
**Felt Sad or Hopeless**

– 60.4% vs 25.4%

**Considered Suicide Seriously**

– 42.8% vs 14.8%

**Made a suicide plan**

– 38.2% vs 11.9%

**Attempted Suicide**

– 29.4% vs 6.4%

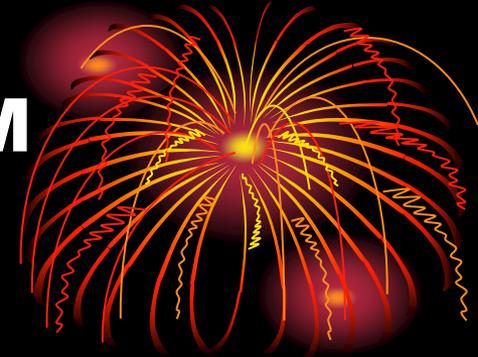




# Transgender Youth (2019 - JAMA)

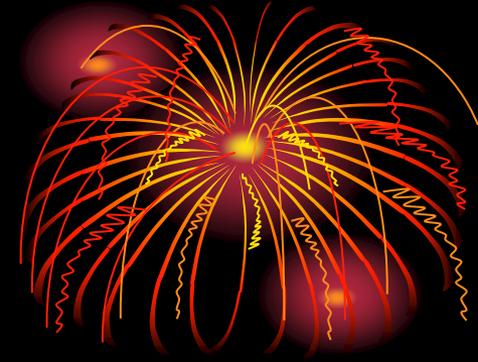
- 1.8% identify as transgender
- 1.6% aren't sure if they're transgender
  
- 35% bullied
- 35% attempted suicide
- 26% report physical dating violence

# CDC Recommendations for MSM 2016



Recommendations	Men who do not have sex with other men	Men who have sex with men (MSM)
<b>HIV</b>	All men 13-64 at least once; then based on risk; All men who seek evaluation and treatment for STD	Annually if HIV status unknown or negative and the patient himself or his partner(s) have had more than one sex partner since most recent HIV test
<b>Syphilis</b>	Once	At least annually; every 3-6 months if at increased risk (2/3 of new cases in MSM)
<b>Chlamydia</b>	Young men in high prevalence clinical settings or in populations with high burden of infection	At least annually at sites of contact (urethra, rectum); every 3-6 months if at increased risk; Screen regardless of condom use
<b>Gonorrhea</b>	None	At least annually at sites of contact (urethra, rectum, pharynx); every 3-6 months if at increased risk; Screen regardless of condom use
<b>Hepatitis B</b>	Men at increased risk	All MSM should be tested for HBsAg
<b>Hepatitis C</b>	Men born between 1945-1965; If risk factors are present	Men born between 1945-1965; If risk factors are present; Annual HCV in MSM with HIV infection
<b>Herpes</b>	Type specific HSV serologic testing for men presenting for an STD evaluation	Type specific tests if infection status is unknown in MSM with previously undiagnosed genital tract infection

# ACIP (CDC) 2016 Recommendations for MSM



Disease	Men who do not have sex with other men	Men who have sex with men (MSM)
<b>Hepatitis A</b>	At risk populations	MSM is an at risk population
<b>Hepatitis B</b>	At risk populations	MSM is an at risk population
<b>Meningococcal (A, C, W, Y)</b>	All adolescents and at risk adults	MSM is an risk population – based on geographic location
<b>Meningococcal (B)</b>	At risk adolescents and adults	MSM is an risk population – based on geographic location
<b>HPV</b>	Recommended till the age of 26	Recommended till the age of 26



# PrEP in Adolescents

- JAMA Pediatrics Sept 5, 2017

- Effective and Safe
- Adherence decreases as time increases (over 48 months) in males ages 15-17

**Thank You**

