

# GAY HIVE

GONE VIRAL EDITION • JUNE 2020

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NO. 1 • \$0.00



## WHAT IS HIV?

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# LAND ACKNOWLEDGMENT

As a land grant institution, the Spring 2020 Society and Genetics Group AE at UCLA acknowledges the Gabrielino/Tongva peoples as the traditional land caretakers of Tovaangar (Los Angeles basin, South Channel Islands). (Tongva Cultural Leaders, et al., 2019).

## STATEMENT OF PERSONAL IDENTITIES

Derek Sportsman identifies as a white, cisgender, able-bodied, queer man. He is not a person who is living with HIV or AIDS. Kim Graybeal identifies as a white, cisgender, able-bodied gay woman. She is not a person living with HIV or AIDS. Jesus Garcia Blanco identifies as a hispanic, cisgender, able-bodied, gay man. He is not a person who is living with HIV or AIDS.

The privileges and oppressions that we experience in American society as a result of these identities are inherently connected to the ways in which we interpret, navigate, theorize, and create in this world. Because of this, it is inevitable that we will, in some cases, be wrong in our claims and assumptions. Therefore, we invite constructive criticism, as this project is a mutual opportunity for education.

We do not intend to speak for people living with HIV or AIDS. Rather, our intention is to present data accompanied with educated reasoning to demonstrate how oppressive institutions have and continue to influence HIV prevalence and to describe how oppressed communities are actively involved in counteracting these influences.





# **AIDS**

GET THE FACTS

People  
are dying  
to know.



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# GLOSSARY OF TERMS

- **“Homosexuality”** refers to individuals who are “emotionally, romantically, or sexually attracted to members of the same gender” (1).
- **“Queer”** is “a term people often use to express fluid identities and orientations. This term is often used interchangeably with ‘LGBTQ’” (1).
- **“Men who have sex with men (MSM)”** is term that is intended to avoid identity labels, and thus includes all self-identified men who engage in sexual activity with other men, not excluding those who identify as heterosexual or who want to avoid the stigma associated with sexual identity terms. For this reason, this term is commonly utilized in public health contexts but should generally not be used outside of health and/or research purposes. Though it should be recognized that not all MSM self-identify as “queer”, this term may be used as an umbrella term to describe MSM and LGBTQ populations throughout our project.
- **“Homophobia”** is the term that describes “the fear and hatred of or discomfort with people who are attracted to members of the same sex” (1).
- **“Heterosexism”** describes the institutional oppressive systems experienced by queer people that are built upon the majority’s homophobic perspectives.
- **“Transgender”** is “an umbrella term for people whose gender identity and/or expression is different from cultural expectations based on the sex they were assigned at birth. Being transgender does not imply any specific sexual orientation. Therefore, transgender people may identify as straight, gay, lesbian, bisexual, etc” (1).
- **“Transphobia”** is the term that describes “the fear and hatred of, or discomfort with, transgender people” (1).
- **“Genderism”** describes the institutional oppressive systems experienced by transgender people that are built upon the majority’s transphobic perspectives.
- **“Intersectionality”** is a term that originally referred to the compounding factors of institutional racism and sexism that created a uniquely oppressive experience for black women in American society (2). Since the coining of the term by Kimberlé Crenshaw, it has been adapted to refer to other compounded institutional oppressions and privileges that situate individuals in more or less privileged social positions. In this project, this concept will predominantly be applied in respect to institutional structures of heterosexism and racism used to oppress queer people of color.

## **These definitions are not all encompassing.**

Sexual and gender identities outside of the ones described here exist and should be validated equally. Our project focuses predominantly on MSM, as this population is most drastically impacted by HIV/AIDS, but that is not to say that other communities are not disproportionately affected by HIV/AIDS as well.

# MYTH OR FACT?

## **“HIV is a death sentence”**

Myth: while in many cases this used to be true, current therapies allow people living with HIV to live normal lives (see page 20)

## **“HIV infection rates are universally decreasing in the United States”**

Myth: while the overall rate of HIV infection is decreasing, this progress is not equally felt. For example, rates of infection among Asian and Latinx MSM are increasing, and rates among African American MSM remain stagnant (see page 13)

## **“If PEP is administered after exposure to HIV, infection can be prevented”**

Fact: PEP stands for post-exposure prophylaxis, and, if administration begins within 72 hours of exposure and continues daily for 28 days, PEP can prevent new infection (see page 17)

## **“HIV can be spread through kissing”**

Myth: HIV can only be spread through pre-cum, cum, vaginal fluid, anal fluid, breast milk, and blood; note that saliva, urine, sweat, and feces are not included (see page 6)

## **“AIDS is contagious”**

Myth: AIDS is a condition that can be caused by HIV. While HIV is contagious, AIDS is not (see page 11)

## **“Gay men and other MSM make up the largest proportion of infections worldwide”**

Myth: MSM only made up 17% of new cases in 2018 (see page 12)

## **“Some states in the US prohibit discussion of LGBT health in public schools”**

Fact: five states have “no promo homo” laws that prohibit public schools from instructing on LGBT issues: Texas, Oklahoma, Louisiana, Mississippi, and Alabama (see page 32)



# WHAT IS HIV?

## The Science Behind the Virus

jesus garcia blanco



So, what exactly is this menace and what can it do to my body?  
The next few sections will give you all the details. (well.... almost)



← This pair of glasses will point out simplified summaries of some sections

### The Basics

The term HIV stands for Human Immunodeficiency Virus. This means that this virus severely weakens the host's immune system through mediated apoptosis of T-cells. A weakened immune system is detrimental in various ways including: gaining a much higher susceptibility to infections, more intense infections, slower healing and regeneration of tissues, and great fatigue.

HIV is categorized as a retrovirus and belongs to the lentivirus family. Lentiviruses are characterized by a unique combination of 3 traits:

1. Infections from lentiviruses result in chronic course of disease (meaning that effects are long-lasting)
2. Lentiviruses possess a long period of clinical latency (a period where the disease is constantly replicating, but may be undetectable due to its "inactivity")
3. Lentiviruses are infamous for their persistent viral replication and their efficient multiplication in hosts

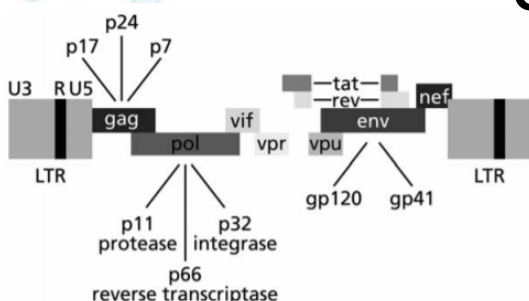


*HIV weakens your immune system. This means you can get sick more easily, infections may be worse, and it might take you longer to heal. It belongs to the virus family that is known for having long-lasting effects, may be hard to detect at first, and can multiply quickly in your body.*

### Genetic Morphology

An HIV virion has 3 main genes: gag, pol, env (complex):

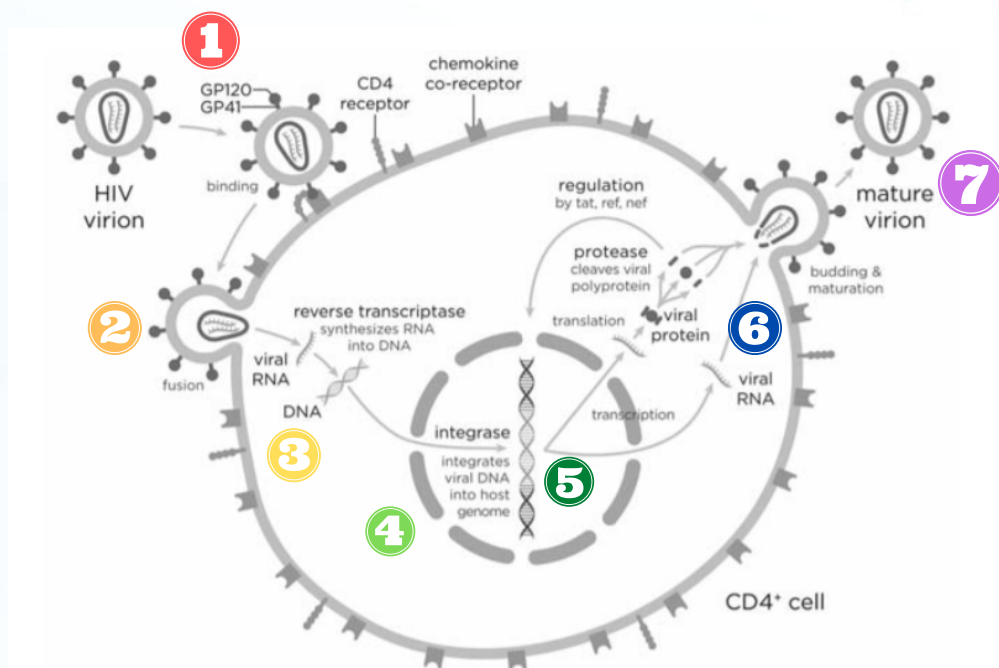
- gag - codes for matrix, capsid, and nucleocapsid (basically the insides of the virus)
- pol - codes for reverse transcriptase and other enzymes
- env (complex) - codes for glycoproteins (essential for binding to T-cell) and viral membrane



## Replication Cycle (inside host)

**1** For a virion to effectively invade a host cell, it needs to possess a mechanism for attachment. In the case of an HIV virion, gp120, a glycoprotein found in the env complex, attaches to the CD4 receptor on the surface of the T-cell. This initial attachment is a crucial step for viral entry, and it promotes the cell destruction mechanism of the CD4 T-cell. Apoptosis, cell destruction, is a key characteristic in immune system suppression because T-cells act as a defense mechanism. Thus, the fewer T-cells, the less opposition for infections.

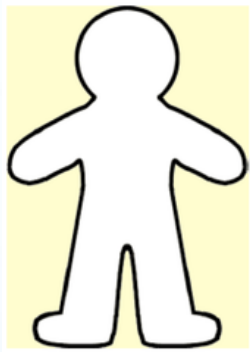
Once the virion successfully attaches, **2** it fuses into the host cell and releases the HIV viral RNA inside. **3** The reverse transcriptase found in the initial HIV virions is also present during this transduction and it begins to synthesize viral DNA from the viral RNA. **4** The HIV viral DNA then integrates into the host genome using integrase. Once inside the host genome, it has access to the host's translation and transcription factors. **5** The host cell unknowingly begins to use the HIV viral DNA to generate more HIV viral RNA and viral proteins as well. **6** The viral proteins and RNA then begin their exit from the host cell through a process known as budding. **7** Once the "bud" is mature, it dissociates as a separate mature virion. The original HIV virion has now successfully replicated another copy.



**🧐 1** The HIV virus uses a glycoprotein (#120) that acts like a hand to grab onto the T-cell. A T-cell is a white blood cell that acts like a security system that destroys cells that your body does not recognize, like infections and viruses. **2** Once the HIV virus grabs onto the T-cell, it pushes itself inside and releases all of its RNA and enzymes. **3** The HIV RNA then uses the HIV enzymes to code backwards into HIV DNA. **4** The HIV DNA then hides itself inside the T-cell's genome. A genome is basically the cell's entire DNA code. Because the HIV DNA is hiding with the T-cell's regular DNA, **5** the T-cell cannot tell the difference and it just begins to make what it thinks is its normal RNA and proteins. The T-cell ends up making copies of the HIV RNA and proteins. **6 7** These new copies of HIV RNA and proteins then start to leave the T-cell. Why? Because they want to go infect another T-cell. This cycle continues. When the T-cell finally notices that it has been infected, it begins its natural defense reaction, which is to self-destruct. So, in the end, we now have more copies of HIV virus and the infected T-cell dies.



## What happens after infection?




NO HIV  
INFECTION



NEW HIV  
INFECTION

Due to the previously discussed long clinical latency period, the HIV-1 specific antibodies are not detectable during the early stages of infection. As it goes unnoticed, HIV virions begin invasion of T-cells at a rapid rate. This leads to an extreme accumulation of HIV virions with a simultaneous severe loss of CD4 T-cells. If not asymptomatic, an individual may begin to experience symptoms closely resembling

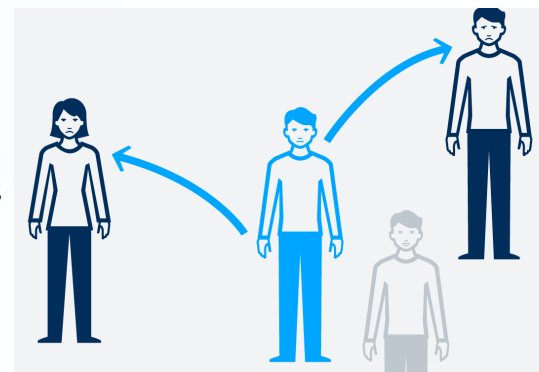
mononucleosis or other flu-like conditions. With both factors of clinical latency and mimic symptoms, individuals infected with HIV may often be misdiagnosed at early stages.

 You might remember that these types of virus are hard to detect during early infection. Why is this bad? If doctors can't tell that you have the infection, they can't help you start taking care of it. The HIV virus also gives you flu-like symptoms. So, because the doctor can't tell that you have HIV and because it looks like the flu, you might get misdiagnosed. In the meantime, the virus continues to quickly multiply itself while killing your T-cells.

## Transmission

There are many misconceptions when it comes to the transmission of HIV. However, a viable transmission requires a direct exchange of infected body secretions/fluids that penetrate a mucous membrane. The six body secretions/fluids include (2):

- |               |                |                  |
|---------------|----------------|------------------|
| 1. Pre-cum    | 2. Cum         | 3. Vaginal Fluid |
| 4. Anal Fluid | 5. Breast Milk | 6. Blood         |



The 3 main routes for transmission include (2):



1. Unsafe sexual intercourse with HIV+ partner



2. Shared injection paraphernalia with HIV+ individual



3. Mother-to-child vertical transmission during gestation or through breastfeeding



## So What Does This Mean?

As you read, viable transmission does not occur as easily as one may believe. Preconceived notions claim that saliva can transmit the virus, but this is untrue as it is not a viable body fluid. And because infected fluids must penetrate mucous membranes, daily contacts are not viable forms of contractions. Meaning that sharing a drink, touching the same table, or living with a person that is HIV+ will not put you at risk of transmission.



**X Sharing food**



**X Touching**



**X Sharing bathrooms**



**X Kissing**

## How Did This Affect HIV+ Individuals?

Previous stigmatization and preconceived notions of infection depicted HIV+ individuals as “dirty”. Many were irrationally fearful of coming in close contact with HIV patients. This led to the discrimination and segregation of people living with HIV, making it difficult for them to partake in mundane tasks such as acquiring jobs, eating at restaurants, visiting parks, and using public restrooms.

## Different Risk Per Different Type of Sex

Though all unprotected sex with a partner who is HIV+ or of unknown status puts individuals at risk of contraction, risk varies depending the type of sexual intercourse and the role taken. For example, receptive partners generally have a higher risk of HIV acquisitions since penetration is likely to break mucous membranes. Below is a table detailing the types of sexual intercourse and their respective risk



**Risk of HIV transmission from different types of unprotected sex**

	Number of individual studies	Range of estimates	Meta-analysis estimate
Receptive anal	4	1.02%-1.86%	1.4%
Insertive anal	2	0.04%-0.28%	0.11%
Receptive vaginal	10	0.06%-0.11%	0.08%
Insertive vaginal	2	0.01%-0.14%	0.04%

# Some people think you can catch AIDS from a glass.



## You can't.

The California Medical Association and public health officials agree: AIDS is not spread through the air. AIDS is not spread by touching someone. AIDS is not spread by hot tubs. AIDS is not spread through the preparation or serving of food or beverages in restaurants or homes.

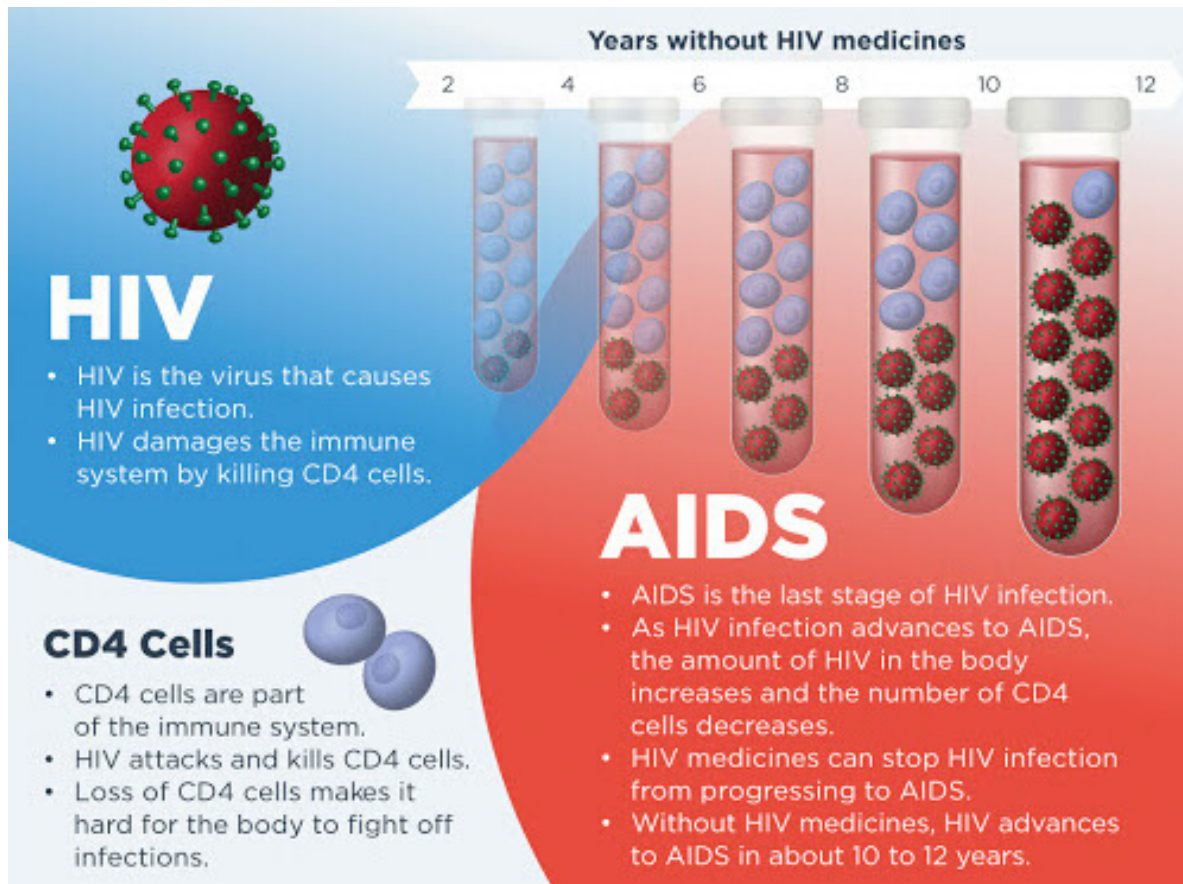
The virus that causes AIDS is spread by unprotected sex with an infected person, or by contaminated blood entering the blood stream—such as by sharing drug needles.

Fight the fear with the facts:  
800-367-AIDS/800-922-AIDS

# HIV vs. AIDS: What's the difference?

kim graybeal

Despite common belief, HIV is not the same as AIDS, and HIV does not always lead to AIDS. HIV stands for human immunodeficiency virus and is the physical virus itself, while AIDS, acquired immunodeficiency syndrome, is a medical condition that can result from HIV infection.



If left untreated, HIV can ravage the immune system to the point where the individual has dangerously low levels of CD4, or helper, T-cell counts. Without enough helper T-cells, the immune system cannot adequately defend against infection, and so the individual may contract illnesses that are typically rare in people without HIV, such as esophageal candidiasis, pneumocystis carinii pneumonia, cachexia, or Kaposi's sarcoma. When an individual with HIV has one or more of these characteristic opportunistic infections or a CD4 T-cell counts below 200 cells/ $\mu$ L, they are said to have AIDS. While HIV can be transmitted, AIDS cannot.

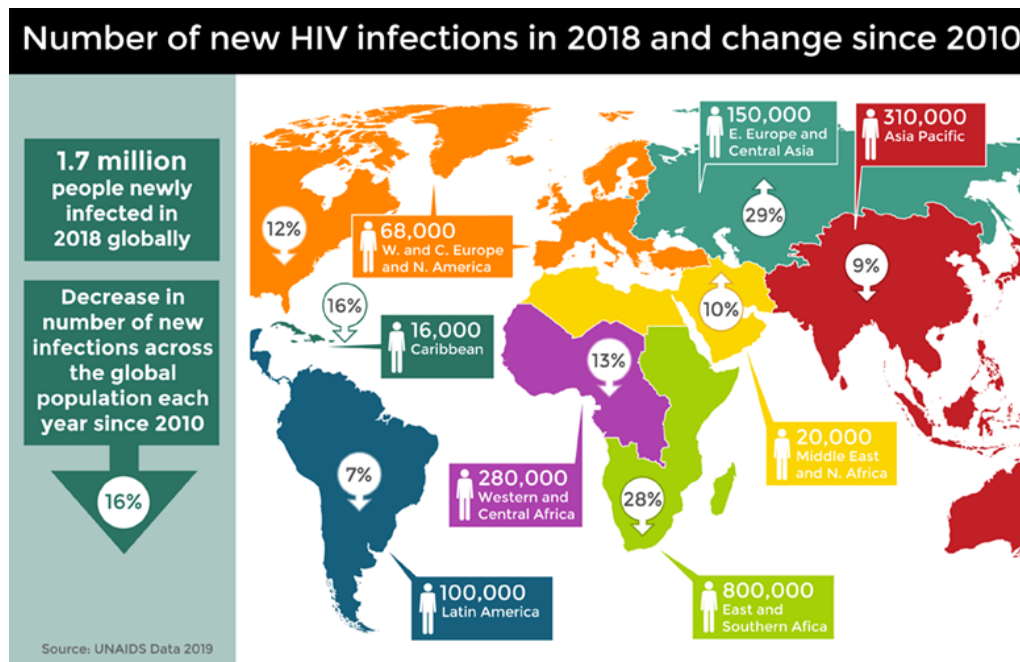
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# DEMOGRAPHICS OF HIV

kim graybeal

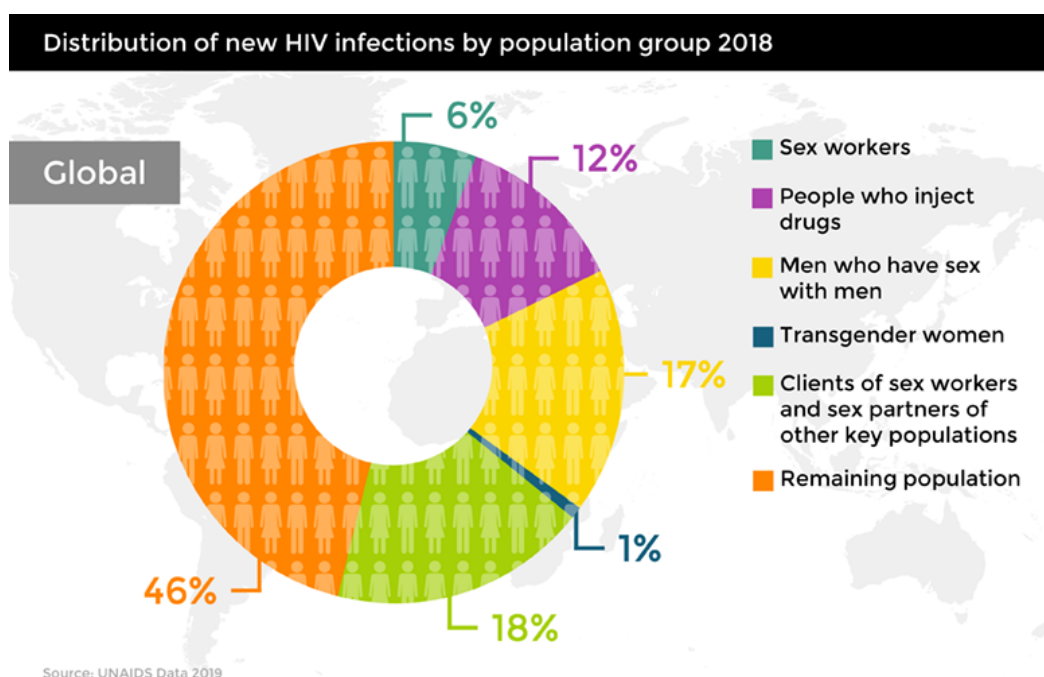
HIV DIAGNOSES DECREASED 16% FROM 2010 TO 2018,  
BUT **PROGRESS HAS NOT BEEN EQUAL.**



(4)

About 38 million people are living with HIV across the world, including 1.7 million children (4). In 2018, about 1.7 million people were diagnosed with HIV, and over 700,000 people died from AIDS-related issues (4).

Globally, 21% of people living with HIV do not know their status (4). In the US, 1 in 7 people are not aware they have HIV (1), while in Russia an estimated 50% are unaware (2).

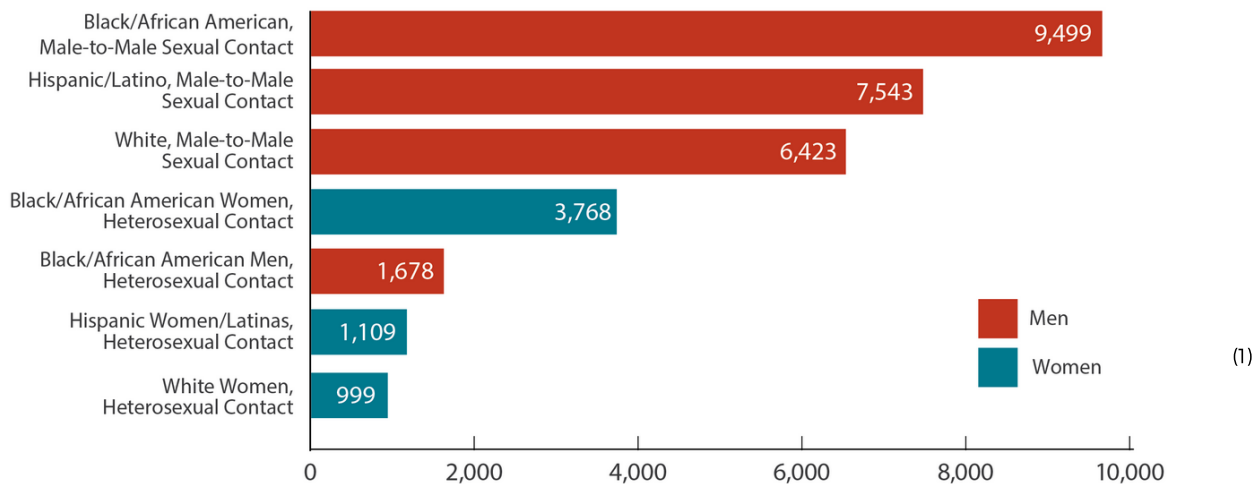


(4)

SEXUAL ORIENTATION AND GENDER IDENTITY

MSM still face the burden of HIV in the US, accounting for 69% of new HIV cases in 2018 (1). In the same year 24% of new cases were among heterosexuals, with 16% of that being heterosexual women and 7% heterosexual men (1). From 2010-2017, heterosexuals saw larger decreases in HIV diagnoses than MSM populations (1). Worldwide, MSM only made up 17% of new infections in 2018 (4). In Russia in 2016, MSM made up only 1.5% of new cases, while heterosexuals made up 49% (2).

New HIV Diagnoses in the US and Dependent Areas for the Most-Affected Subpopulations, 2018



PEOPLE WHO INJECT DRUGS

In 2018, people who inject drugs made up 7% of new cases in the US. In Russia, 49% of new cases were among injection drug users.

RACE

Men of color, particularly black and Latinx men, are significantly more likely to be living with HIV compared to white individuals. A 2017 study estimated rates of new HIV infection was 6 times higher among black MSM and trans women versus white MSM and trans women (3). Black individuals make up 13% of the population and 42% of new diagnoses in 2018; Latinx people make up 18% of the population but 27% of new infections (1). Furthermore, while white MSM saw a 19% decrease in HIV diagnoses from 2010-2017, Black MSM saw no change and Latinx men saw a 17% increase (1).

Gay and bisexual men overall: **stable**

Gay and bisexual men by race/ethnicity



Black/African American: <b>stable</b>
Hispanic/Latino: <b>up 17%</b>
Asian: <b>up 56%</b>
White: <b>down 19%</b>
American Indian/Alaska Native: <b>up 59%</b>
Multiple Races: <b>down 44%</b>
Native Hawaiian/Other Pacific Islander: <b>up 22%</b>

(1)

# THE FIRST 15 YEARS OF HIV/AIDS IN THE US

kim graybeal

**1981:** CDC reports first cases of young gay men with rare opportunistic infections like pneumocystis carinii pneumonia and Kaposi's Sarcoma; first KS clinic opens at UCSF; researchers call the condition GRID (gay-related immune deficiency); **270 cases and 121 deaths by the end of the year**

**1982:** CDC uses AIDS instead of GRID; first cases of transmission through blood transfusion and childbirth

**1983:** US Congress passes bill that gives funding specifically for AIDS research; first AIDS discrimination lawsuit

**1984:** HIV virus discovered (originally called HTLV-III)

**1985:** first blood test for HIV used in blood banks; Pentagon announces it will reject all new military recruits that test positive; Ryan White, a hemophiliac who contracted AIDS, is refused entry to his school; Cleve Jones creates first panel of the AIDS Memorial Quilt; Ronald Reagan mentions AIDS publicly for the first time; **over 15,500 cases and over 12,500 deaths to date**

**1986:** Surgeon General and IOM both call for nationwide education campaigns; CDC reports African Americans and Latinos are disproportionately affected

**1987:** Larry Kramer founds ACT UP; US bans immigrants/rejects visa applicants who test positive for HIV; Ronald Reagan makes first public speech about AIDS; the Helms Amendment enacted which "requires federally financed educational materials about AIDS to stress sexual abstinence and forbids any material that "promotes" homosexuality or drug use"; **over 50,000 cases and 41,000 deaths**





# Over **41,000 people died** before President Ronald Reagan's first public speech on HIV/AIDS in 1987

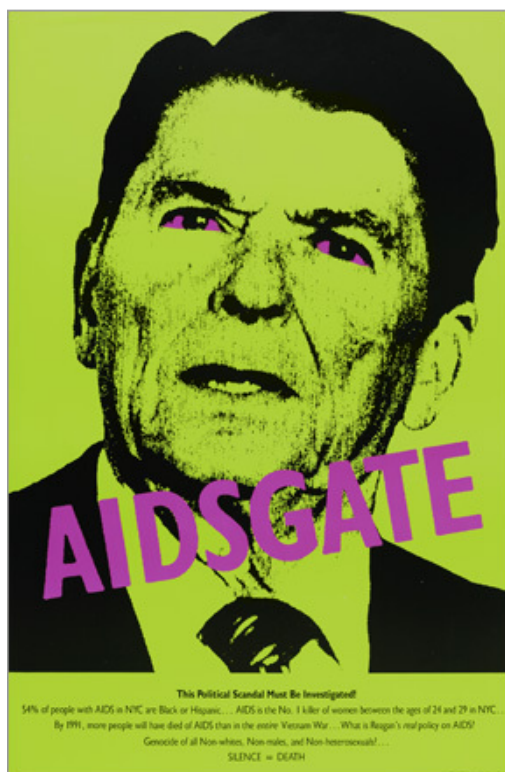
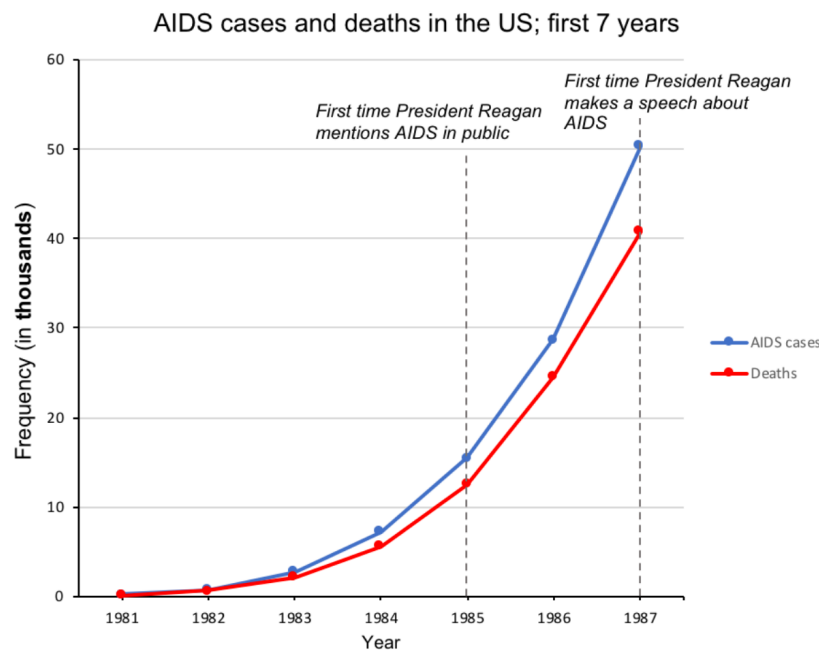
**1990:** Americans with Disabilities Act prohibits discrimination against people living with HIV/AIDS; Ryan White Care Act enacted; AZT drug for pediatric AIDS

**1992:** AIDS is the number one cause of death for US men aged 25-44

**1994:** AIDS is the number one cause of death for ALL Americans 25-44

**1995:** HAART treatment first introduced; **500,000 AIDS cases in the US to date**

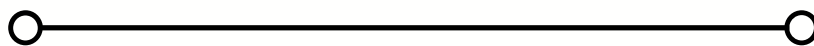
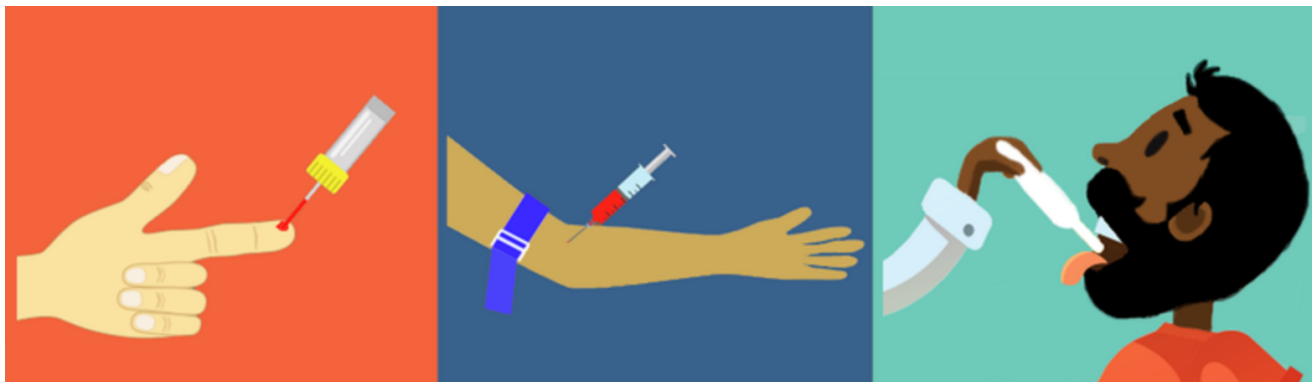
**1996:** First year that number of new AIDS cases diagnosed declines in the US; first NNRTI drug, called nevirapine



# HOW DO WE TEST FOR HIV?

kim graybeal

<u>Test</u>	Time from exposure to detection (days)	Target of detection	Notes
<b>Nucleic acid tests (NAT)</b>	10-33	The virus itself (viral RNA/DNA)	Expensive; not commonly used
<b>Antigen/antibody</b>	18-45	HIV antibodies and antigens	The most commonly used test in labs
<b>Antibody</b>	23-90	HIV antibodies only	



## ON JUNE 12, 2016, A GUNMAN ATTACKED PULSE, AN LGBT NIGHTCLUB IN ORLANDO, FLORIDA.

49 people were killed and 53 injured, most of whom were Hispanic. While many of the victims were gay or bisexual men, no MSM were allowed to donate to aid the surviving members of their community.

Even though MSM are far from the only group struggling in the HIV crisis, they have long faced restrictions on donating blood. MSM were banned from donating blood for life from 1983 until 2015, when the FDA instead enacted a one year deferral policy (1). On April 2, 2020, in response to the coronavirus pandemic, the FDA reduced their deferral policy to three months, though many seek to remove the deferral completely (1). The ban includes all of the estimated 10 million MSM in the US, including those not at risk, such as those in monogamous relationship with HIV-negative partners. Other countries have instituted restrictions based on individual activity, but the US maintains a complete, across the board restriction (3)

According to one estimate, lifting the restrictions could increase blood supply by 2-4% each year, resulting in over one million lives saved (2).



# BE PrEPARED!

PhotoCitation

*US only*  
CAN BE  
**>\$1700**  
**/MONTH**  
**<\$10 IN DEVELOPING NATIONS**

**PrEP IS A SAFE, LEGAL, AND EFFECTIVE  
OPTION FOR PREVENTING HIV**

PrEP: Pre-Exposure Prophylaxis. Truvada is currently the only drug approved by the FDA for PrEP. When taken as directed Truvada is more than 90% effective at preventing HIV infection. Consult the manufacturer's website for a full list of side-effects and indications

MUST BE TAKEN DAILY; side effects include headaches, nausea, vomiting, rash, weight loss, liver and kidney issues

PrEP (post exposure prophylaxis), taken after a single exposure, contains similar medications but at higher doses and thus should be taken less frequently





## WHY AREN'T MORE PEOPLE USING PREP?

kim graybeal

In one study of gay and bisexual men in California, 89.7% agreed that “taking PrEP would be a good way to protect myself from getting HIV,” yet 90% of those in the study had never taken it (4). Across the US in 2016, only 7% of those that could benefit from PrEP received it, with black and Latinx men (who are at the highest risk) having the lowest rates of PrEP usage (5). This article will investigate why that is.

**Main barriers:** lack of education of what PrEP is and where to get it, biases among healthcare practitioners, financial barrier, stigma around PrEP usage.

### **Financial limitations**

Gilead, the company that sells Truvada which is the most common drug used for PrEP, has essentially a monopoly in the US – while other countries can access generic versions, only the brand name versions are available in the US which are much more expensive (a 25,000% markup from generic) (1, 2). Further, current PrEP medications must be taken daily and as a result users must buy frequently (monthly) and so spend much more (1). The aforementioned study of MSM in California found 87% of respondents said they would take PrEP if it was free, but 60% said they could not afford PrEP (4). Likewise, Boston area MSM said they would be more likely to use PrEP if it could be acquired at no expense to them (7), and black MSM in Atlanta said access to PrEP was significantly limited by perceived financial barriers (8)



### **Lack of education**

Among at-risk groups, there is a lack of education of what PrEP is and where to get it. A study of MSM in California found 60% said they don't know where to get a PrEP prescription and 56% agreed that they don't know how to find a doctor who can prescribe PrEP (4). 42% of participants in a study had conspiracy beliefs around PrEP, with black participants more likely to (6).

### **Homophobia among medical practitioners (3)**

Homophobia and heterosexism among medical practitioners is associated with a decreased likelihood of prescribing PrEP to those in need. A study found that participants expressing homophobic/heterosexist attitudes judged MSM desiring PrEP more harshly; e.g. they believed their patients would not adhere to a PrEP treatment regiment or that taking PrEP would make them have more risky sex. These participants were as a result less likely to prescribe PrEP to MSM patients. Compounding this, dealing with heterosexist attitudes deters MSM from seeking PrEP in the first place.

### **Stigma and internalized homophobia**

Stigma and internalized homophobia deters MSM from taking PrEP. HIV/AIDS has historically been associated with promiscuity, a common stereotype of MSM, and PrEP has a similar fate.

Many MSM fear the judgement of their doctor when seeking PrEP. In the aforementioned study of MSM in California, 31% said they would be uncomfortable asking a doctor for a PrEP prescription (4).

In his explanation about why he was not taking PrEP, one MSM said "So, you're at the ER asking for PEP and you're wondering what's this doctor thinking. For instance, one time I went to the health department and they ask you how many sexual partners you've had in the last 3 months and I gave the doctor a number, and they had a lot to say about the number that I gave them." (5)

Others fear the stigma of their friends or partner who associate usage of PEP and PrEP with promiscuity, cheating, and irresponsibility. "I believe it is the stigma of 'oh why are you on PrEP? Are you having sex outside of your relationship? You wanna be a hoe?'" One MSM said, on why they wouldn't take it in a monogamous relationship, "You're gonna have all this unsafe sex ... they might think 'Oh, like if we're monogamous like why would you even need that.'" Regarding why he did not take PEP, one MSM said, "I think PEP over PrEP also has the fear of, 'oh no it's also post exposure, so you also have to admit to this behaviour.'"

Another study had a similar conclusion; many saw PrEP as only for people that are promiscuous and those that did most often did not use PrEP and engaged in more risky sexual behavior; for example individuals using PrEP are called "Truvada Whores" by some (6). Truvada is the brand name of the most commonly prescribed PrEP medication.

● ● ●

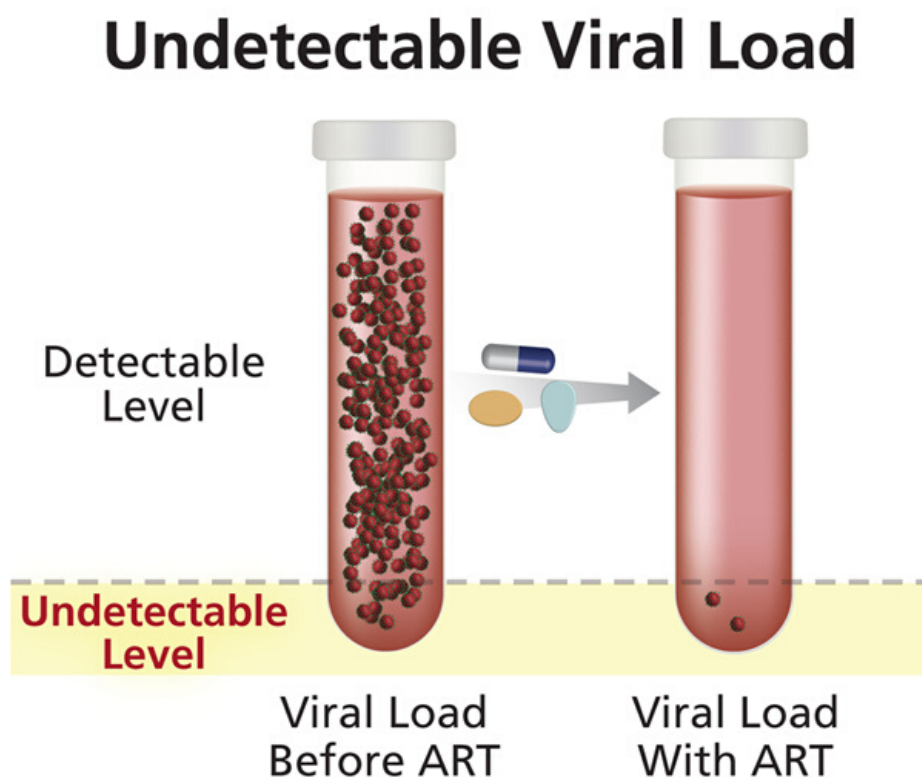
# ANTIRETROVIRAL THERAPY

kim graybeal

**U=U; UNDETECTABLE=UNTRANSMITTABLE**

There is no feasible cure for HIV. Treatment for people living with HIV focuses on reducing viral loads to the point where the virus is undetectable. Antiretroviral therapy (ART) accomplishes this using seven main types of medication:

- NNRTIs are non-nucleoside reverse transcriptase inhibitors. NNRTIs bind to and alter the reverse transcriptase enzyme that HIV uses to copy itself, preventing it from working.
- NRTIs are nucleoside reverse transcriptase inhibitors. NRTIs block the reverse transcriptase enzyme.
- PIs are protease inhibitors. PIs block the protease enzyme that HIV uses to copy itself.
- Fusion inhibitors block HIV from entering CD4 helper T cells.
- CCR5 antagonists block the CCR5 coreceptors that HIV needs to enter cells)
- INSTIs are integrase strand transfer inhibitors. INSTIs block the HIV enzyme integrase that HIV uses to copy itself.
- Post-attachment inhibitors block CD4 receptors.



# ALTERNATIVE AND EXPERIMENTAL TREATMENTS

jesus garcia blanco and kim graybeal



## Is what we already have not good enough?

The answer is... not quite. Currently, the only method for HIV prevention, besides abstaining from the 3 main routes, is to use treatment as prevention. Meaning that if we treat all current HIV+ individuals to develop an undetectable viral load, then new infections will be reduced. However, researchers are trying to find a way to develop a vaccine to completely prevent initial contraction of the virus

## Preventative HIV-1 Vaccine



If you remember from the Virology and Pathogenesis section, attachment of the virus to the T-cell is crucial for viral entry. Without attachment, the virus will not be able to replicate and the T-cell will not initiate apoptosis. Keeping this in mind, researchers wondered if there was a way to either inhibit the CD4 receptor on T-cells or gp120 on the virion. Inhibition of either would theoretically prevent viral entry as both are necessary for attachment.



# Inhibition of Envelope Subunits (Glycoproteins)

## Are antibodies the answer?

In a study conducted by Mascola et al., researchers aimed to test if specific antibodies derived through immunogen stimulated production could neutralize HIV-1 virion through inhibition of envelope subunits, aka glycoprotein 120 and 41. Results the induced antibodies could successfully neutralize envelope subunits in vitro. However, when introduced in vivo, the induced antibodies failed to neutralize the patient variant strains of HIV. This meant that there was a significant factor in patient variant strains, not present in in vitro strains, that prevented the antibodies from attaching to its glycoproteins in order to prevent viral entry.

## Can humans make these antibodies?

Another study, conducted by Kwong et al. built upon the previous study and wondered if viable antibodies could even be induced in vivo. The environment in vitro and in vivo are very different due to regulatory factors in the human body that are difficult to replicate and account for in a laboratory. They found that the body could be induced into producing antibodies, but concluded that more tests need to be done on its application to preventative vaccines.



## Can Glycoproteins Even Be Inhibited?

Kwong et al continued to explore why antibodies might struggle to block viral entry glycoproteins in the envelope unit. They found that envelope subunits, specially gp120, experiences multiple conformational changes during the process of attachment to CD4 receptors. Before attachment, Gp120 is not accessible from the outside of the virion as it is stored inside the membrane. Because it is not exposed to the outside matrix, antibodies are unable to find the envelope subunits and attached to them. Even after exposure of gp120 to the outside matrix, it undergoes other conformational changes that would knock off the antibodies if not strongly attached. .



*Researchers hypothesize that a vaccine might work*

*if they can find a way to prevent the HIV virus from grabbing onto T-cells. So, they*

*thought that antibodies might be able to prevent attachment to the T-cell by having them stick onto*

*the glycoprotein hands of the HIV virus before the hands could reach the T-cells. The Mascola et al. team were able to make antibodies that could shutdown a lab grown version of the HIV virus. However, when they tested the same antibodies on the version that grows in humans, it failed. The Kwong et al. team wondered if these antibodies could even be grown inside the human body (they found out they could). Kwong et al. then tried to see why the antibodies were unable to shut down the human grown version of HIV. They found the the hands of the HIV virus are initially found inside the virus, so antibodies can't find the hands. Once the hands popped out of the virus, they transformed and moved in certain ways that made it hard for the antibodies to stick. The different transformations could easily knock off the antibodies.*

## Alternative Generation of bNAbs

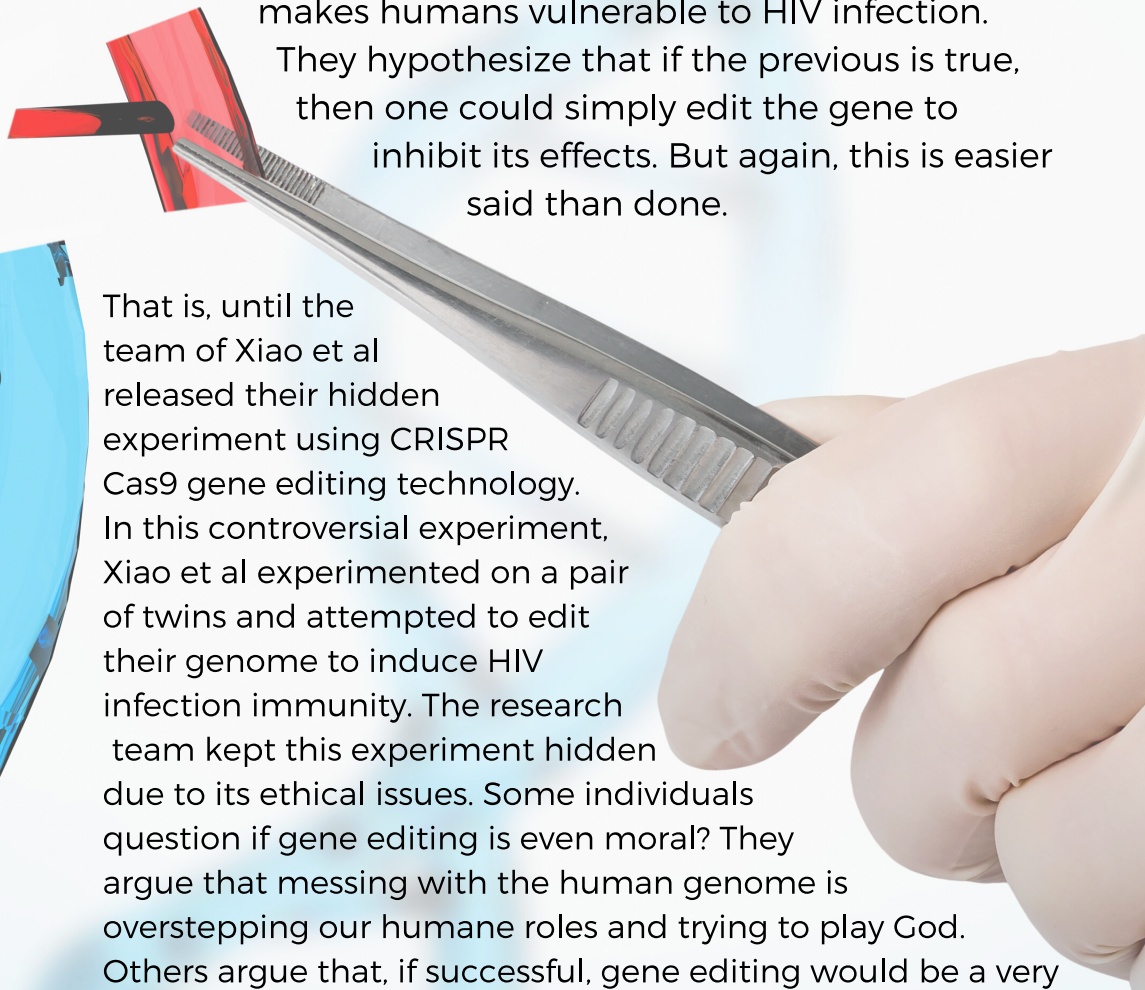
A 2017 study by Moir et al aimed to explore the role of b cells during HIV infection. Their rational was that B cells might be a viable source of antibody production. They found that 2 main abnormalities occurred during HIV infection: hypergammaglobulinemia and defects in memory b cells. They believe that with this knowledge, further research could be procured to test if antigen-specific B cells can be used to generate bNAbs in the human body.





# CRISPR & Gene Editing Technology

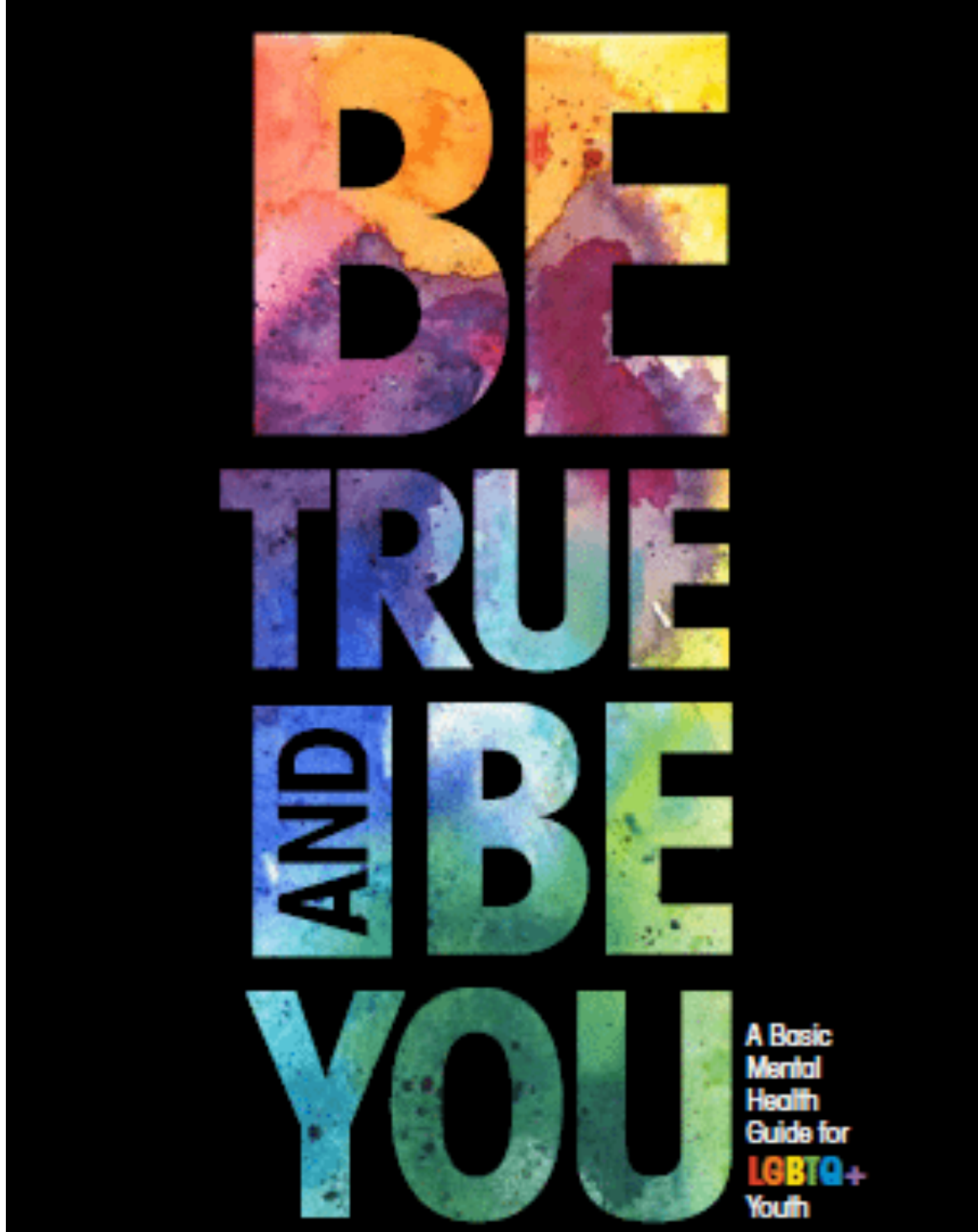
Other approaches to preventative treatment involve contemporary technology. Some researchers wonder if there is a specific gene that makes humans vulnerable to HIV infection. They hypothesize that if the previous is true, then one could simply edit the gene to inhibit its effects. But again, this is easier said than done.



That is, until the team of Xiao et al released their hidden experiment using CRISPR Cas9 gene editing technology. In this controversial experiment, Xiao et al experimented on a pair of twins and attempted to edit their genome to induce HIV infection immunity. The research team kept this experiment hidden due to its ethical issues. Some individuals question if gene editing is even moral? They argue that messing with the human genome is overstepping our humane roles and trying to play God. Others argue that, if successful, gene editing would be a very expensive procedure, meaning that it would only be available to higher socioeconomic populations. This would inevitably make HIV a “disease of the poor” since high socioeconomic groups have immunity.

## Long-acting injectable PrEP (LAI-PrEP)

The current PrEP medications must be taken every day to be effective, a regimen that can be difficult and expensive to maintain. Long-acting injectable PrEP (LAI-PrEP) is an injectable treatment that can be taken every other month. The drug is currently in human phase 3 clinical trials, and so far results have been encouraging. If successful, it could alleviate the stresses of taking a pill every day. There are still many unknowns and some downsides. Researchers are not sure exactly how long the drug remains in the system (what if people are late to their injection?) and what happens when it is discontinued (does it cause drug resistance?). Furthermore, some have reported pain at the injection site. It is also still unclear if people would adhere to this regimen. [7]



## MENTAL HEALTH

derek sportsman

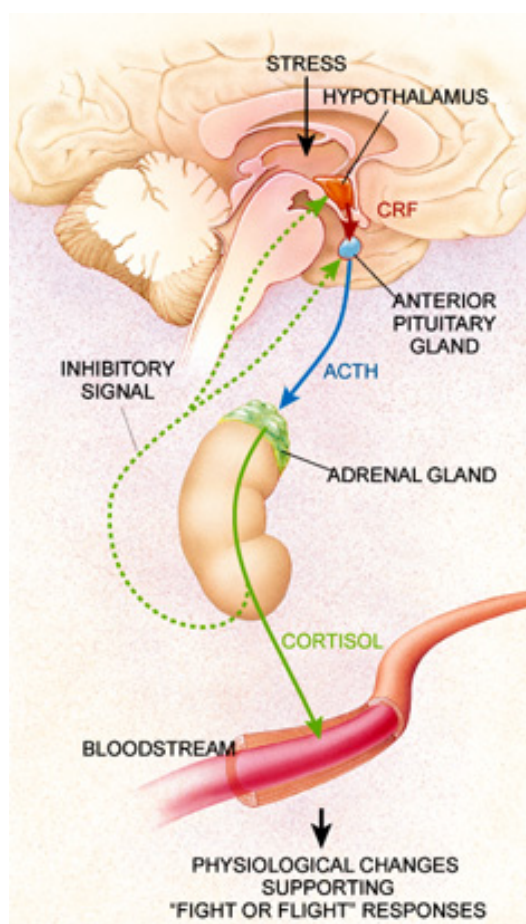
This section will first briefly mention the neurobiology of depression and its link to traumatic experiences. It will then outline how LGBTQ youth are at high risk for depression and how depression and internalized homophobia increase sexual risk-taking behaviors. The first article will introduce data which shows that LGBTQ

youth are at greater risk for emotional hardship due to their social experiences, resulting in higher rates of depression and internalized homophobia. The second article will demonstrate how depression and internalized homophobia will subsequently increase sexual risk-taking behaviors, and thus result in a rise in HIV prevalence.



## LGBTQ Youth and Depression

Neurobiological studies of depression have demonstrated a strong link between depressive symptoms and long-term cortisol output (1). Cortisol, which is a hormone released from the Adrenal Glands via the Hypothalamus-Pituitary-Adrenal (HPA) Axis, is strongly correlated with the emotional and physiological stress response (1). This connection is quite complex, but in perhaps an oversimplified explanation, emotionally challenging or traumatic experiences that occur during early and mid stages of human development often result in long-term cortisol output as the individual is continually experiencing stress (1). Thus, a neurobiological link can be drawn between emotionally challenging or traumatic experiences and depression.



LGBTQ youth face a number of emotionally challenging and traumatic experiences. LGBTQ youth, especially those assigned male at birth, are disproportionately subjected to bullying and exclusionary practices by peers (2). Evidence from the 2017 Youth Risk Behavior Surveillance Report produced by the Center for Disease Control and Prevention indicates that LGBTQ youth are actually twice as likely to experience both physical and cyber bullying than their heterosexual peers, and almost twice as likely to avoid attending school due to concern for their physical safety (2, 3).



In the court case "Nabozny v. Podlesny", Nabozny argued that school officials were partially responsible for the abuse he experienced in high school as he was bullied for identifying as gay (4). School officials had been aware that he was being physically tormented and failed to intervene, stating that Nabozny should expect the abuse given his sexual orientation (4). After lifelong experiences with depression and multiple suicide attempts, Nabozny eventually returned with this court case to set a precedent for the protection of LGBTQ youth and the prevention of discrimination against the community (4).

# SCHOOLS ARE **UNSAFE** AND UNWELCOMING FOR THE MAJORITY OF LGBT STUDENTS.



Heard homophobic remarks frequently or often

65%

heard homophobic remarks like “fag” or “dyke” frequently or often



Missed at least one day of school

30%

missed at least one day of school in the past month because they felt unsafe or uncomfortable



Verbally harassed at school in the past year

85%

were verbally harassed in the past year


The traumatic school experiences of LGBTQ youth are exacerbated by school disciplinary practices that disproportionately affect LGBTQ youth. LGBTQ youth are more likely to be “deprived of their ability to learn” due to homophobic school policies or homophobic events enacted by school staff (5). Because LGBTQ students are more likely to be victims of harassment than non-LGBTQ students, they are more likely

to spend large amounts of time outside of the classroom speaking with school authorities, who often decide to discipline them for acting in self-defense (5). Thus, schools deprive LGBTQ youth of their education by “pushing them out, increasing their likelihood of dropping out, or funneling them into the school-to-prison pipeline” (5). The experiences with rejection typically result in feelings of depression and internalized homophobia.

## Parental Relationships

LGBTQ youth also often struggle to maintain their relationships with their parents after disclosing their sexual orientation or gender identity. A study on relationships between gay sons and their parents showed that parental reactions to their son's coming out were generally negative and resulted in strained relationships. Over time, parents typically grew more accepting and the relationships improved; nonetheless, early experiences with familial rejection often have lasting consequences on the mental health of LGBTQ youth (6).

A study conducted by the American Psychological Association found that lesbian, gay, and bisexual youth that were rejected by their families were 8.4 times more likely to have attempted suicide and 5.9 times more likely to experience high levels of depression than if they were accepted by their families (7). This shows that LGBTQ individuals are not inherently more depressed than heterosexual youth, but rather are more susceptible to depression due to homophobic experiences that many LGBTQ people face in their years of adolescence, such as rejection from their families (7).



**AS PARENTS, YOUTH-SERVING PROFESSIONALS AND ALLIES, WE ALL HAVE A RESPONSIBILITY TO CREATE SAFE AND AFFIRMING SPACES SO EVERY LGBTQ YOUTH CAN BE OUT, PROUD AND ABLE TO THRIVE**

## Religious Affiliation

Religious institutions can similarly have a negative impact on the mental health of LGBTQ youth. Affiliation with non-affirming religious institutions among Black, Latino, and White lesbians, gays, and bisexuals in the United States was shown to be correlated with high degrees of internalized homophobia (8). For many communities, religion often plays a central role in child development and socialization. Thus, it is not surprising that the subsequent rejection, exclusion, and shaming of LGBTQ youth in non-affirming religious spaces leads to high rates of depression and internalized homophobia among this population.



## Resistance

As demonstrated through Nabozny's court case, many LGBTQ youth grow up to be strong advocates for the mental health of members of the LGBTQ community. LGBTQ lives are frequently subjected to bullying, discrimination, rejection, exclusion, and abuse which often results in depression and internalized homophobia, but LGBTQ narratives are not solely rooted in a powerless victimization; rather, the LGBTQ community has been resisting domination through formation of political protests, creation of safe community spaces, and proud, public expression of self-love for decades. LGBTQ communities do not remain stagnant and await support of heterosexual sympathizers. They rise up against their oppressors and support one another in the process.



## Depression and Sexual Risk-Taking

Given that LGBTQ individuals are at higher risk for depression due to traumatic social experiences and internalized homophobia, we sought to research how poor mental health impacted sexual risk-taking and thus, HIV prevalence. The Sage Encyclopedia of LGBTQ Studies sets the foundation for the link between depression among gay men and HIV prevalence, stating that perceived behavioral control and self-efficacy as influenced by one's mental health impacts sexual behavior. Since the LGBTQ population on average faces more mental health challenges than the general population, this indicates that LGBTQ people are at higher risk for low perceived behavioral control and low sexual self-efficacy, thus resulting in higher rates of risky sexual behavior and a higher risk for acquiring HIV (1).

## Covariate Factors

Similarly, a recent study on the link between depression, cognitive escape, sexual self-efficacy, and HIV transmission risk for MSM found that MSM with high degrees of depression were more likely to engage in risky sexual behaviors. This trend was found to be in concordance with measured levels of sexual self-efficacy, meaning that individuals who had low sexual self-efficacy were more likely to have high degrees of depression and therefore have higher risk of HIV acquisition or transmission (2).

The sexual health of LGBTQ individuals with depression is differentially impacted by degree of traumatic experience, perceived familial or community stigma, as well as intersectional cofactors of social oppression.

In a study analyzing the effects of covariate factors victimization, depression, and substance use on the sexual health of MSM, it was found that MSM with higher scores of these covariates were more likely to abuse substances during sexual encounters and have multiple sexual partners, behaviors that are strongly correlated to high rates of HIV transmission (3).

Likewise, a survey of young MSM with varying levels of depression indicated that those with high levels of depression were more likely to exhibit compulsive sexual behavior and engage in condomless intercourse (4). This research calls for active early intervention for the mental health of LGBTQ youth, as it demonstrates that any support which lowers one's degree of depression has the potential to decrease sexual risk-taking in the LGBTQ population.

## Open Communication

Although relationships with parents can often contribute to feelings of rejection and depression among LGBTQ youth, positive interactions with parents also have the potential to mediate risky HIV-related behaviors. A study of white and black communities in the United States found that adolescents who had discussed HIV with their parents were less likely to have multiple sexual partners, have unprotected sex, or use intravenous drug injections than adolescents who hadn't discussed this topic with their parents (5).





This indicates that open communication about HIV-related behaviors with parents can potentially have a significant impact on reducing HIV prevalence in all communities. However, because LGBTQ youth are more likely to have strained relationships with their parents due to homophobic biases in the household, they are less likely to have conversations with them about HIV, and therefore more likely to engage in risky behaviors than heterosexual peers.

### **Community Involvement**

The response of the community to LGBTQ identities has also been shown to play an important role in influencing sexual behavior among LGBTQ people. A survey of rural MSM showed that they were more likely to engage in “sexual sensation seeking” if they had perceived community stigma toward their sexual orientation (6). The findings suggest that when experiencing intolerance toward their sexual identities, risky sexual behavior may be a “coping mechanism” for rural MSM (6).

Thus, if rural MSM were to be openly accepted as opposed to feeling stigmatized by a homophobic community, they may perceive less of a need for a “coping mechanism” and exhibit fewer instances of sexual risk-taking. This trend of community stigma against queer identity impacting sexual health of LGBTQ people is seen outside of the United States as well.

A study on the effectiveness of HIV prevention programs for Chinese MSM in Jiangsu Province, China, demonstrated that HIV testing uptake was significantly lower among men who had symptoms of depression or who experienced increased levels of community stigma (7). With lower rates of HIV testing, there are more sexually active individuals who are unaware that they are living with HIV, and therefore a higher rate of transmission via sexual contact. For this reason, this study concluded that institutions should also consider the mental health status and perceived community stigma of LGBTQ populations when assessing strategies for reducing HIV prevalence (7).

## Institutional Experiences

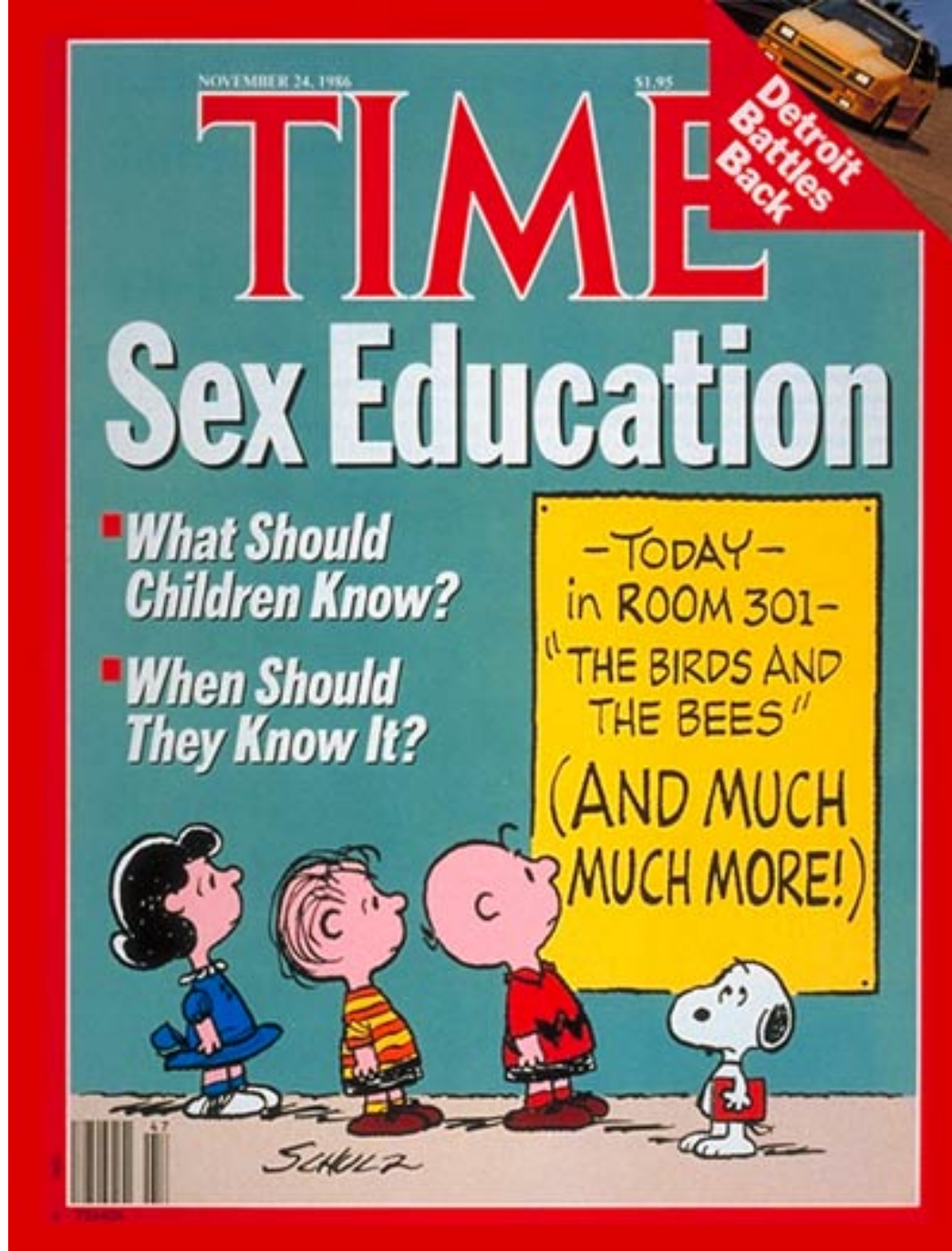
Finally, it is essential to acknowledge how intersectional experiences of oppression impact depression and sexual risk-taking behavior. A study on Black MSM found that they were more likely to engage in unprotected anal intercourse if they had experienced a racist or homophobic event within the past 12 months (8). The sexual risk-taking behavior was associated with psychological responses to the traumatic event, thus leading to an increased risk of HIV acquisition due to their experience of oppression. In the study previously mentioned regarding the sexual activity of young MSM with depression, it was found that study participants were also more likely to exhibit compulsive sexual behavior and engage in condomless intercourse if they were of low socioeconomic standing (4). This indicates that young MSM of low socioeconomic status are differentially impacted by the intersectional institutional oppressions of classicism and heterosexism. Together, these studies demonstrate how intersectional oppressions impact the sexual health and well-being of communities that are most vulnerable to HIV prevalence.



## Activist Media

Though the current structures of institutional oppression present a daunting situation for queer communities of color, activist efforts by the communities have identified the impact of these intersectional oppressions on their mental health and resulting sexual behaviors and are actively constructing systems of emotional and financial support to reduce HIV prevalence. One particular example of these activist efforts is the film, *Tongues Untied*, directed by Marlon Riggs, which publicizes black queer activist efforts and reinforces comradery in the fight against HIV for queer communities of color (9). The film exemplifies the effectiveness of educational materials created by queer communities of color for queer communities of color, thus showing that such communities are not reliant on white saviorist efforts to address the health needs of their community.





## SEX EDUCATION

derek sportsman

A prominent debate in secondary education has revolved around sexual health curriculums. Proponents of abstinence-only sexual education claim that youth will be less likely to engage in sexual activity and thus less likely to become pregnant or acquire a Sexually Transmitted Infection (STI) if schools solely emphasize the value of waiting until marriage to engage in sexual activity. In contrast, proponents of protection-based sexual education recognize that youth will likely engage in sexual activity regardless of whether or not they are discouraged to do so. In accepting this reality, supporters of protection-based education instead intend to educate youth on principles of safe sex, including condom usage, pre-exposure prophylaxis, and STI testing. This article intends to break down the myths and present relevant research regarding the strength of these two sexual health education strategies.

## **Abstinence-Only vs. Protection-Based Sex Education**

In the 1960s, advocates for sex education in schools garnered “widespread support”, but even more widespread attention. Though most sex education efforts centered around sexual repression and avoidance of STIs through abstinence, these were still opposed, as religious authorities argued that any discussion of sexual activity would promote it (1). For the most part, the power that these religious institutions had in the education sector halted efforts for curriculum reform.

When the first cases of HIV/AIDS were noted to be sexually transmitted, activists of the LGBTQ community reinforced these arguments for sexual health education in schools. Early studies indicating the effectiveness of any sex education programs in slowing rates of HIV transmission were promising, and these efforts to include sex education in schools eventually overcame their opposition (1). By the early 1990s, all U.S. states had some form of required sexual health curriculum. These curriculums were reinforced by guidelines produced by the Sexuality Information and Education Council of the United States (SIECUS) which proposed that effective education measures would improve sexual health among youth by adhering to medically accurate information, encouraging healthy attitudes about sex, promoting active sexual decision-making, and considering responsible choices (1).

As sexual education became more prominent in schools, conservative political power gained support for abstinence-only education. Government regulations which heavily funded abstinence-only programs stated such programs must teach that “abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems” (1). Additionally, these regulations took a strong stance on the importance of marriage, emphasizing marriage as the “expected standard of sexual activity”, and that “sexual activity outside the context of marriage is likely to have harmful psychological and physical effects” (1). Regulations did not include requirements for information about safe sexual practices outside of abstinence, such as condom use or oral contraceptives.

### **Abstinence Program Evaluation**

In regards to the efficacy of abstinence-only education for improving sexual health of the general adolescent population, Planned Parenthood cites a series of authoritative reports which establish that abstinence-only education programs have been ineffective. The Waxman report noted that 11 of 13 abstinence-only education curriculums evaluated contained “false and misleading information” about a wide range of topics, including the effectiveness of contraceptives, HIV risk behaviors, and risks of sexual activity (2).

Related reports concluded that none of the abstinence-only programs evaluated “helped reduce the number of teens’ sex partners” (3), “helped improve the use of condoms” (4), or “helped sexually-active teens become sexually abstinent” (5). In general, all of these studies concluded that abstinence-only standards of sexual education curriculum were incredibly inept at promoting healthy sexual behaviors among youth. Despite the publication of their results, however, President “George W. Bush requested \$242 million for abstinence-only funding in his proposed [Fiscal Year] 2008 budget” (1). This resulted in a total of more than \$1.75 billion in federal and state funds allocated toward abstinence-only sexual education programs during the Bush Administration (6).



Wellcome Images

### Comprehensive Program Evaluation

In contrast to the reviews of abstinence-only education program evaluations that have demonstrated their ineffectiveness in promoting healthy sexual behaviors in youth, studies on the strength of comprehensive or protection-based sex education programs have shown significant successes in reducing sexual behaviors in the same age groups.

A compilation review of 83 studies on the effects of sex and HIV education programs on sexual behaviors of youth under the age of 25 concluded that over two thirds of studies had demonstrated that curriculum- and group-based sex and HIV education programs had significant positive impacts on reducing risky sexual behavior (7).

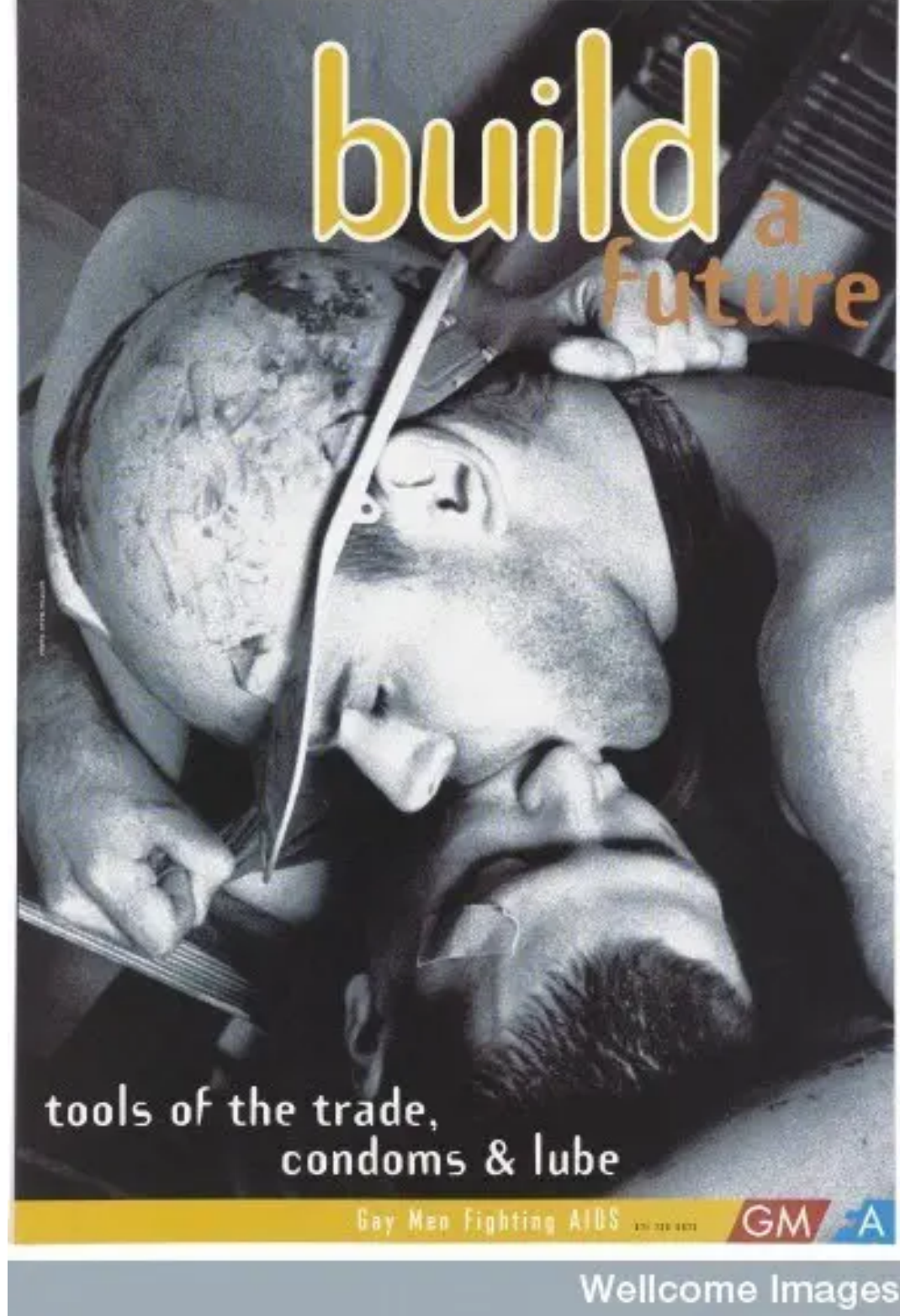


Similarly, a paper regarding the ethical consequences of sexual education concluded that youth who had engaged in risky sexual behaviors, including having unprotected sex, having multiples sexual partners, or using drugs or alcohol before engaging in sexual intercourse, were more likely to seek out HIV testing if they had received comprehensive, protection-based sexual education inclusive of HIV-related content (8).

Together, these studies show a compelling need for comprehensive school-based sex and HIV/AIDS education to reduce sexual risk behaviors among teens and thus lower HIV/AIDS prevalence in adolescent populations.

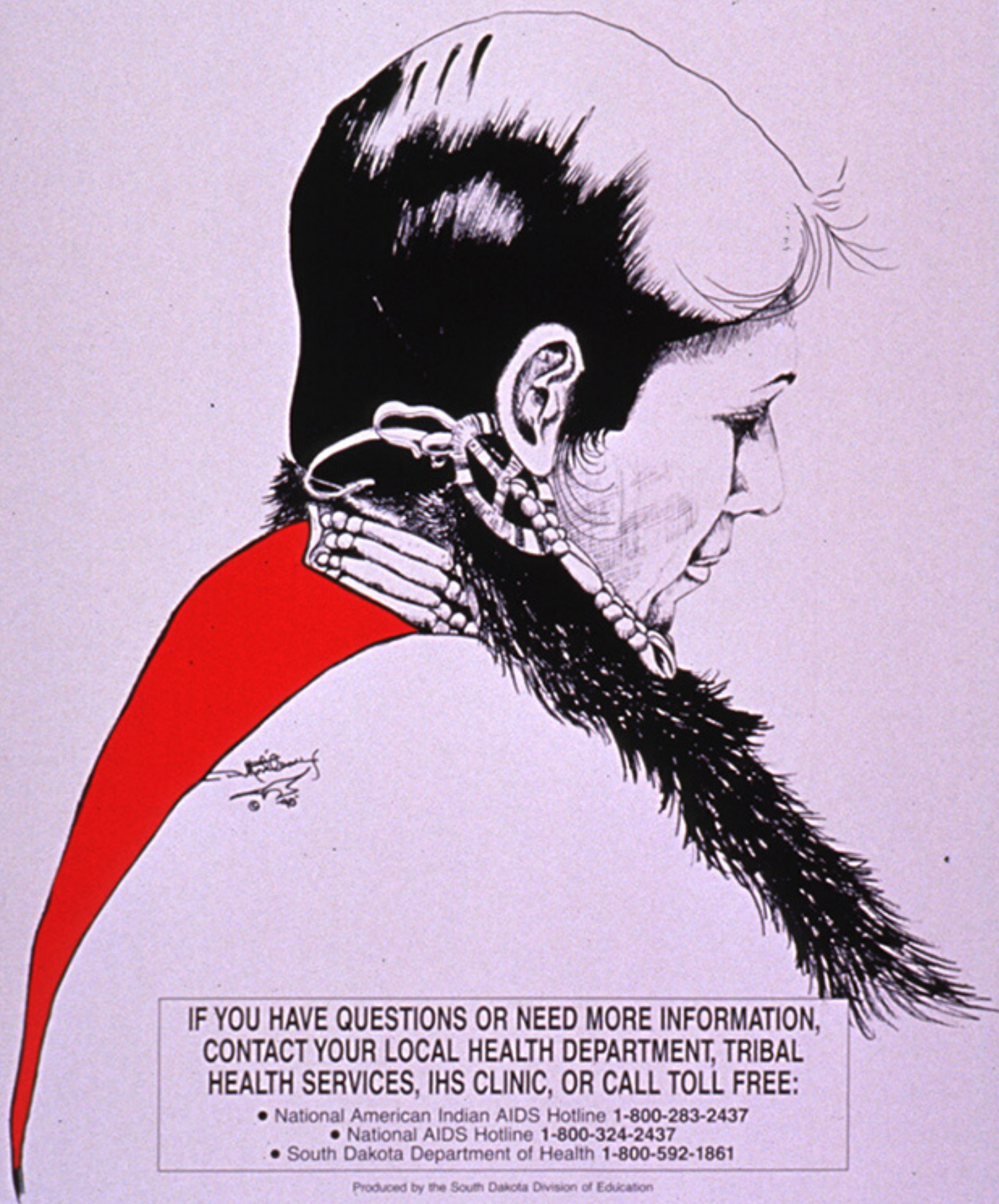
Although not all studies on comprehensive sex education show a decrease in overall sexual activity in teens, almost all of them show a decrease in sexual risk-taking and an increase in responsible sexual choices and sexual self-efficacy. Thus, research conclusions drawn on the effectiveness of sex and HIV education programs strongly favor comprehensive programs.

Overall, the United States presents a vastly inept system of sexual health education as many states continue to function along lines of religiously-influenced, morality-based, abstinence-only education in spite of the evidence presented in scientific studies which demonstrate the significantly greater effectiveness of comprehensive, protection-based sexual health education in reducing sexual risk-taking behaviors among teens.





# Whispers and shyness will not control AIDS; education will!!



**IF YOU HAVE QUESTIONS OR NEED MORE INFORMATION,  
CONTACT YOUR LOCAL HEALTH DEPARTMENT, TRIBAL  
HEALTH SERVICES, IHS CLINIC, OR CALL TOLL FREE:**

- National American Indian AIDS Hotline 1-800-283-2437
- National AIDS Hotline 1-800-324-2437
- South Dakota Department of Health 1-800-592-1861

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## LGBTQ Sexual Health Education

From an LGBTQ perspective, sexual health regulations emphasizing the importance of abstinence until marriage were heterosexist even in their basic conception. Due to the legal restrictions against same-sex marriage in the United States up until 2015, there was not a possibility for LGBTQ individuals to marry outside of heteronormative standards. Given the restriction of marriage, it is evident that the response of LGBTQ youth to these regulations would either be one of indifference, since marriage was not a possibility and this information could thus be ignored, or one of heightened shame and an increased internalization of homophobia, which has been linked to increased sexual risk-taking. This situation is worsened by the heavy emphasis placed on reproduction as the sole purpose of sex in educational curricula (1).





## State Mandates

Currently, there are very few states which mandate inclusive content to be given in sex education courses. Out of the 29 states which require sex education to be taught at all, only 17 of them require information on sexual orientation. However, only 10 of these 17 states mandate inclusive content, whereas the other 7 states mandate that a negative stance to be taken in regards to homosexuality (2). While many states hide their homophobic positions in sex education by not acknowledging sexual orientations aside from heterosexuality, these 7 states not only allow homophobia to be demonstrated in educational settings, but even require it. Additionally, when sexual orientation is mentioned, it is typically framed in such a way that villainizes LGBTQ men and blames them for the existence and prevalence of HIV (1).

## Self-Esteem

Given the current state of sexual health education, it is unsurprising that many LGBTQ youth struggle to develop a positive self-image and are more likely to engage in sexual risk-taking than their heterosexual and cisgender counterparts (3). As a result, rates of substance abuse, poor mental health, and rates of STIs are higher among LGBTQ youth than the general teen population (3). The homophobic sexual education standards presented should therefore be recognized as causing harm to the sexual health of LGBTQ youth.



## LGBTQ Youth Activism

While activist efforts among adults, especially LGBTQ adults, continue to push for comprehensive sexual education curriculum standards nationwide, many LGBTQ youth are organizing their own forms of sexual education in resistance to the dominant heterosexual narrative. In a study conducted by Karli Reeves, a small sample of LGBTQ youth stated that they had taught themselves information regarding safe queer sexual practices because they recognized that the content provided to them by schools, parents, and even medical establishments had been inadequate to ensure their well-being (1). These LGBTQ youth activists have been celebrated for their efforts to educate themselves and their peers (1); however, not all youth have the educational resources to acquire the information they need to make healthy sexual decisions. Thus, LGBTQ activists argue that it is the responsibility of the government to ensure the implementation of inclusive sexual education curriculums and thus, improve the sexual health of its citizens. The current state of institutional heterosexism in sex education programs is preventing such improvements.





***B**e good in bed!*

**USE A CONDOM**

# CDC SURVEILLANCE REPORT

derek sportsman

In the 2017 HIV Surveillance Report, produced by the Division of HIV/AIDS Prevention at the Center for Disease Control and Prevention, Table 3a. "Diagnoses of HIV Infection, by race/ethnicity and selected characteristics, 2017- United States", displays the racial demographic data of new HIV diagnoses in 2017 alongside factors of age, mode of transmission, and geographic region of residence. This table also presents the rate of new diagnoses for each component based on a population factor of per 100,000 individuals within each category (1).

This table demonstrates how marginalized racial communities are disproportionately affected by HIV, particularly in the geographic region of the United States South. Overall, the rate of new HIV diagnoses in the South in 2017 was approximately 16.1 per 100,000 people, which was about 1.5 times higher than the second highest regional rate of new HIV diagnoses of 10.6 per 100,000 people in the Northeast (1). Additionally, the total number of cases in the South (19,968) was more than three times the total number of cases in the Northeast (6,011) (1). Thus, from this data, it is evident that the geographic South is disproportionately affected by HIV.

By examining the compounding factor of racial demographics, it is clear that the Black/African American community experiences significantly higher rates of HIV prevalence than the White community. In the United States South, the total number of cases of new HIV diagnoses among the Black/African American community (10,569) was more than twice the total number among the White community (4,596) (1). More significantly, the rate at which the Black/African American community experienced new HIV diagnoses (44.8 per 100,000 people) was almost seven times greater than the rate of new HIV diagnoses in the white population (6.5 per 100,000 people) (1). The data displayed in Table 3a displays clear racial disparities in HIV prevalence across the United States, but this disparity is most serious and most pronounced in the South. It is also important to note that almost 60% of the new HIV diagnoses among the Black/African American community occurred due to transmission through male-to-male sexual contact (1).

The data presented in Table 3a highlights how inclusive sexual education programs might play a role in reducing HIV prevalence. The conservative political atmosphere of the South establishes a foundation for homophobia and racism, and the education system does little to combat these influences on the sexual behaviors of young Black MSM. Without unbiased, inclusive sexual education, it is not surprising that this region continues to experience the highest rates of new HIV diagnoses, particularly in the Black MSM community, which generally experiences intersectional institutional oppression and has fewer lines of access to education and crucial health resources. The data presented in this report is therefore important evidence that demonstrates how disparity in HIV prevalence may be correlated with homophobic political ideology and compounding institutional oppressions.



Table 3a. Diagnoses of HIV infection, by race/ethnicity and selected characteristics, 2018—United States

	American Indian/ Alaska Native		Asian		Black/African American		Hispanic/ Latino <sup>a</sup>		Native Hawaiian/ Other Pacific Islander		White	
	No.	Rate <sup>b</sup>	No.	Rate <sup>b</sup>	No.	Rate <sup>b</sup>	No.	Rate <sup>b</sup>	No.	Rate <sup>b</sup>	No.	Rate <sup>b</sup>
<b>Age at diagnosis (yr)</b>												
<13	0	0.0	5	0.2	59	0.8	9	0.1	0	0.0	14	0.1
13–14	0	0.0	1	0.2	11	1.0	5	0.2	0	0.0	2	0.0
15–19	10	5.6	21	1.9	1,010	34.5	363	7.3	4	9.8	233	2.1
20–24	31	16.8	126	9.7	3,052	97.6	1,535	31.7	9	20.5	1,098	9.4
25–29	35	17.5	196	12.2	3,448	99.2	2,057	42.2	13	25.3	1,704	13.3
30–34	35	20.5	151	9.2	2,184	74.9	1,634	35.9	18	35.5	1,505	12.1
35–39	20	12.8	91	5.8	1,572	56.8	1,232	27.5	8	16.8	1,158	9.5
40–44	14	9.9	90	6.3	1,150	46.2	801	19.5	3	7.6	862	7.7
45–49	12	8.3	71	5.1	1,033	39.9	766	20.4	4	10.8	891	7.1
50–54	16	10.7	42	3.5	950	36.7	571	17.5	3	8.6	822	6.1
55–59	9	5.7	32	2.9	775	29.7	355	12.9	5	14.9	675	4.5
60–64	3	2.2	24	2.4	446	19.5	185	8.6	1	3.6	361	2.5
≥65	4	1.4	24	1.0	377	7.9	160	3.6	1	1.8	295	0.7
<b>Transmission category<sup>c</sup></b>												
<b>Male adult or adolescent</b>												
Male-to-male sexual contact	121	—	683	—	9,496	—	7,298	—	54	—	6,418	—
Injection drug use	7	—	12	—	448	—	332	—	2	—	592	—
Male-to-male sexual contact and injection drug use	20	—	13	—	257	—	311	—	5	—	647	—
Heterosexual contact <sup>d</sup>	9	—	55	—	1,674	—	532	—	3	—	417	—
Other <sup>e</sup>	0	—	3	—	19	—	8	—	0	—	5	—
<b>Subtotal</b>	<b>157</b>	<b>16.3</b>	<b>766</b>	<b>10.1</b>	<b>11,894</b>	<b>74.8</b>	<b>8,481</b>	<b>36.4</b>	<b>64</b>	<b>26.6</b>	<b>8,080</b>	<b>9.6</b>
<b>Female adult or adolescent</b>												
Injection drug use	14	—	6	—	320	—	147	—	0	—	522	—
Heterosexual contact <sup>d</sup>	18	—	96	—	3,768	—	1,029	—	5	—	999	—
Other <sup>e</sup>	0	—	1	—	26	—	7	—	0	—	6	—
<b>Subtotal</b>	<b>32</b>	<b>3.2</b>	<b>103</b>	<b>1.2</b>	<b>4,114</b>	<b>23.1</b>	<b>1,183</b>	<b>5.2</b>	<b>5</b>	<b>2.1</b>	<b>1,526</b>	<b>1.7</b>
<b>Child (&lt;13 yrs at diagnosis)</b>												
Perinatal	0	—	3	—	44	—	6	—	0	—	9	—
Other <sup>f</sup>	0	—	2	—	15	—	3	—	0	—	5	—
<b>Subtotal</b>	<b>0</b>	<b>0.0</b>	<b>5</b>	<b>0.2</b>	<b>59</b>	<b>0.8</b>	<b>9</b>	<b>0.1</b>	<b>0</b>	<b>0.0</b>	<b>14</b>	<b>0.1</b>
<b>Region of residence<sup>g</sup></b>												
Northeast	7	5.5	186	4.9	2,239	35.3	1,720	20.8	4	18.3	1,270	3.5
Midwest	27	6.5	78	3.3	2,346	32.8	646	11.8	3	8.6	1,708	3.3
South	43	5.4	244	5.5	10,178	42.7	4,272	18.8	17	18.2	4,422	6.3
West	112	10.4	366	4.5	1,304	36.5	3,035	12.9	45	10.3	2,220	5.7
<b>Total</b>	<b>189</b>	<b>7.8</b>	<b>874</b>	<b>4.7</b>	<b>16,067</b>	<b>39.3</b>	<b>9,673</b>	<b>16.2</b>	<b>69</b>	<b>11.8</b>	<b>9,620</b>	<b>4.9</b>

Note. Data for the year 2018 are considered preliminary because they are based on a 6-month reporting delay.

Numbers less than 12, and rates based on these numbers, should be interpreted with caution.

<sup>a</sup> Hispanics/Latinos can be of any race.

<sup>b</sup> Rates are per 100,000 population. Rates are not calculated by transmission category because of the lack of denominator data.

<sup>c</sup> Data have been statistically adjusted to account for missing transmission category; therefore, values may not sum to column subtotals and total.

<sup>d</sup> Heterosexual contact with a person known to have, or to be at high risk for, HIV infection.

<sup>e</sup> Includes hemophilia, blood transfusion, perinatal exposure, and risk factor not reported or not identified.

<sup>f</sup> Includes hemophilia, blood transfusion, and risk factor not reported or not identified.

<sup>g</sup> Data are based on residence at time of diagnosis of HIV infection.

# POLITICAL, LEGAL, AND RELIGIOUS FACTORS

jesus garcia blanco



The AIDS crisis in the US sparked a movement of discrimination against HIV+ individuals.

## Equal Protection Clause Conflicts

### Vs Religious Freedom

Some of the most infamous conflicts in LGBTQ right movements involve pitting religious freedom against equal protection clauses in the courts. For example, some individuals argue that their right to religious freedom allows them to enforce their values unto their practice. In the case of Benitez v North Coast Women's Care Medical Group, Guadalupe Benitez was denied medical treatment because she identified as

a lesbian. Her doctors, who identified as conservative Christians, stated that their religious beliefs gave them the right to withhold healthcare based on Benitez's conflicting sexuality. Though this case is still moving forward at the California Supreme Court and questions whether religious beliefs

give validity to violation of state rights, a previous US Supreme Court case set a prominent precedent. In 2014, Burwell v Hobby Lobby Stores questioned whether the Religious Freedom Restoration Act of 1993 allows for-profit companies to deny certain rights.







Continued:

In this specific case, it was medical coverage for contraception for employees. Though not specifically targeting LGBTQ individuals, the decision set the precedent that religious freedom, through the Restoration Act of 1993, could surpass other rights. This precedent may be applicable to other court cases involve religious freedom and, unless overturned, could lead to legal denial of rights for LGBTQ individuals such as in the *Benitez v North Coast Women's Care Medical Group*.

## Vs. Judicial Prejudice

Due to patent laws, the US government takes little control of drug laws and prices. This creates a loophole for companies to exploit HIV+ patients that rely on treatment and therapy for survival. In the case of *SmithKline Beecham v Abbott Laboratories*, Beecham fought against discrimination in juror selection on the basis of sexuality. They argued that this discrimination went against the Equal Protection Clause. To clarify, Abbott Laboratories were previously sued for quadrupling the cost of their PI boosters (protease inhibitor). These boosters are prominently used in HIV treatment. During this previous court case, Beecham was strategically removed from the jury based off his sexuality in an attempt to sway the ending vote. Beecham argues that this removal was unjustified and violated the Equal Protection Clause. This is an example of how political discrimination affects financial access to healthcare for LGBTQ individuals.



## When Gay Was Not Okay

### APA Mental Disorder Classification



In the 1950's, the American Psychiatric Associations officially labeled Homosexuality as a mental disorder. This gave anti-LGBTQ individuals a basis for validity when claiming that homosexuality was not natural. The official classification also invalidated a lot of LGBTQ folx by labeling them as "sick". As a mental disorder, people began to assume that there was a cure, or treatment, to undo homosexuality. For a period of time, the APA's classification validated conversion therapies for LGBTQ folx.



# RUSSIA

## An International Case Study



kim graybeal & jesus garcia blanco

Currently, Russia is one of the two regions that still has an increasing incidence rate for HIV. But Why?

## HIV EDUCATION IN RUSSIA

In Russia, schools are required to teach “moral education,” which focuses on heterosexuality and abstinence rather than LGBTQ inclusive, protection-based sex education. In 2013, the Russian government under President Vladimir Putin enacted a “gay propaganda” law, which prevents children from learning about LGBT issues – which HIV is often considered – in any way, including the internet. A report estimated that HIV prevalence among MSM more than doubled from the year before the law was enacted to 2015”



People and organizations working with HIV positive LGBT people are also arrested for “promoting” nontraditional and nonheterosexual activities

There is also no targeting of HIV testing, prevention methods, education, or treatment towards at risk populations. This originates in a purposeful erasure of LGBT identities, leading to a mindset of “there are no MSM, so who would PrEP be for?” In doing so, the government also ignores other at risk populations. This policy limits Russia’s ability to prevent or treat cases of HIV



## Lack of Political Action

When the HIV crisis began, previous Russian government chose to ignore it. Why? Because of the population that it was affecting. Similar to the US, because LGBTQ folx were associated with HIV/AIDS, anti-queer inclined politics did not believe that it was an issue worth addressing. Despite the propaganda, It wasn't until the Putin era that Russia began addressing their HIV crisis.

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