

STANDARD DEVIATIONS: An Ounce of Prevention? We Could Use a Ton.

Greetings,

Yesterday, 12/01/2019, marked **World Aids Day**. First observed in 1988, it's an event to encourage awareness and promote response to the ongoing HIV epidemic. How much did you hear about it?

Today, I'm shining some light and throwing some shade, because there's reason for hope, reason for alarm, and no good reason at all for the state of HIV in America (let alone the world).

In the State of the Union Address on February 5, 2019, President Donald J. Trump announced his Administration's goal to end the HIV epidemic in the United States within 10 years. The plan is titled "*Ending the HIV Epidemic: A Plan for America*" and aims to reduce new HIV infections in the United States by 75 percent in five years and by 90 percent by 2030.

Wow! Okay! Here we go! *Adios*, AIDS and *hasta la vista*, HIV!

Well....wait a sec....we've been throwing billions of dollars at HIV/AIDS since 1990 and we're not much better at stopping this epidemic now than since it was declared.

The Ryan White Program (the largest federal program designed specifically for people with HIV in the United States) began in 1990 and was funded 2.3B\$ in 2019. In the US, it's the fourth largest source of funding for HIV care (NIH, Medicare and Medicaid each spend more). As a matter of fact, the U.S. government investment in the domestic response to HIV has risen to more than \$28 billion per year (or ~\$90/person/yr.).

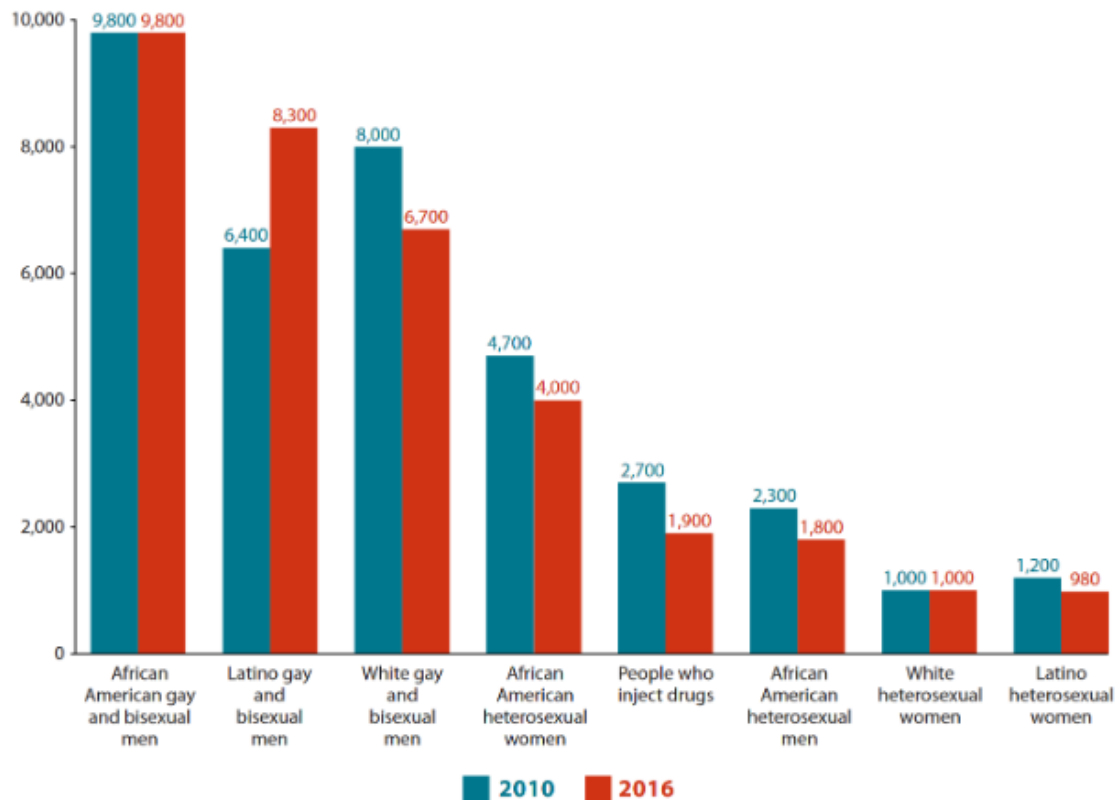
How does all that cash impact HIV? Listen up:

- 77% goes to **care** of HIV/AIDS positive individuals,
- 9% goes to Cash/Housing **assistance** for disabled people with HIV,
- 7% goes to domestic HIV **research**,
- 3% (less than 1B\$) goes to the smallest category of the federal HIV budget, domestic HIV **prevention**.

Our focus on prevention needs some work. Take a gander at this chart of new infections comparing 2010 to 2016:



New HIV Infections by Race and Transmission Group, U.S. 2010 vs. 2016:



Source: CDC, *HIV Incidence: Estimated Annual Infections in the U.S., 2010-2016*, Feb. 2019.

Are we making progress in prevention?

Not much. **The annual number of new HIV diagnoses in the U.S. remained stable from 2012 to 2016.**

In Utah the rate of HIV diagnosis has not changed in 10 years, ~4/100,000 (2009-2018).

It's *estimated* that >1.1 Million Americans are living with HIV. Estimated because we *think* 14% are unaware of their infection. So, those two conjectures right there give me pause; we really don't know how many HIV infections there are (let's say at least 1.1 M). What we do know is that the number of persons living with diagnosed HIV is increasing. If care gets better (and it has) but incidence remains the same (and it has) then the population of infected must increase.

Pre-exposure prophylaxis (PrEP) represents the best preventive strategy to come along, so far. We've looked at the problem with U.S. policy and the pharma giant, Gilead, in past issues of this rag (SD 5-20-19, *The Truth About Truvada*), and the President's new initiative is confronting Gilead's abuse of patent and price gouging. Still, only a small percentage of people who need this therapy can access it. **Until it becomes a priority for our response effort, prevention will remain the weakest link in HIV control.**



And **here's why it matters to you.** HIV is a bloodborne pathogen; it's a driver behind most of the safety precautions we utilize in a clinical lab setting. If we think about it, HIV/AIDS patients have relatively more blood drawn than non-infected persons (that's one reason we're spending so much on care).

In 2016, 16,000 HIV-diagnosed Americans died. These deaths may be due to any cause; but they tend to die in hospitals or in care where laboratory support is a big part of care. And, that means you see a disproportionate amount of HIV-positive blood on the bench.

Our work with blood and bloodborne pathogens puts us closer to this issue than most. If you work the bench in a clinical laboratory, HIV awareness should be more than a once-a-year observation. It deserves to be in your mind and safety practices with every specimen you handle.

Our newest government pledge is to reduce new HIV infections in the United States by 75 percent in five years and by 90 percent by 2030. Noble goals. Achievable? I guess we'll see; check back here in a decade.

Have a great week and be safe,

Bryan



37,832* · Total HIV Diagnoses in 2018

Diagnoses by Race/Ethnicity

In 2018, Blacks/African Americans **and** Hispanics/Latinos accounted for **69% of HIV diagnoses** but comprised only 31% of the U.S.** population

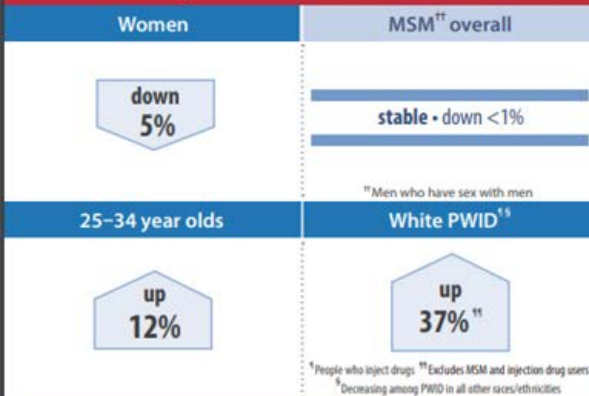


■ Black/African American
 ■ Hispanic/Latino
 ■ White
 ■ Other†

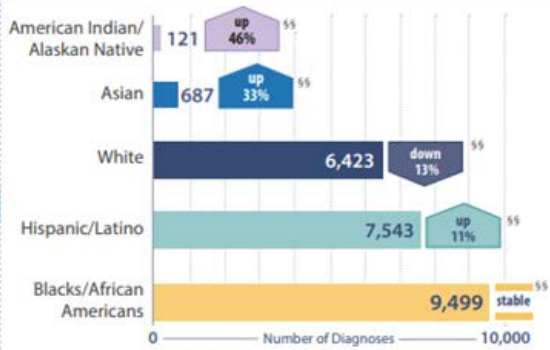
** Does not include 6 dependent areas

† American Indian/Alaska Native: 1% • Asian: 2% • Native Hawaiian/Other Pacific Islander: <1% • Multiple races: 2%

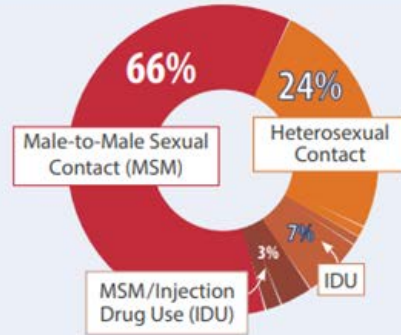
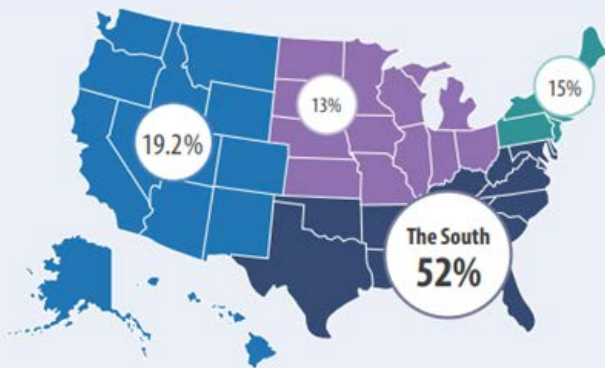
HIV Diagnoses Trends from 2013–2017



Diagnoses Among MSM by Race/Ethnicity in 2018



Percentage of HIV Diagnoses in 2018*



1.2% of HIV diagnoses are in the 6 U.S. dependent areas: American Samoa, Guam, Northern Mariana Islands, Puerto Rico, Republic of Palau, U.S. Virgin Islands

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of HIV/AIDS Prevention



* Data include diagnoses from the U.S. and 6 dependent areas. Data for the year 2018 are preliminary and based on 6 months reporting delay. Trends in numbers and rates are considered stable if there is an increase or decrease of less than 5%.

