

Considerations for Age Expanded Hepatitis C Testing: 2018

Brian McMahon MD ANTHC Liver Disease and Hepatitis Program

Conflict of Interest Disclosure Statement

None.

Goals for this Presentation

- * Epidemiology of HCV in Alaska and Indian Country
- * Understand who should be screened to detect chronic HCV infection based on recommendations from the CDC
 - * Screening beyond the current recommendations
- * Understand Natural history of HCV

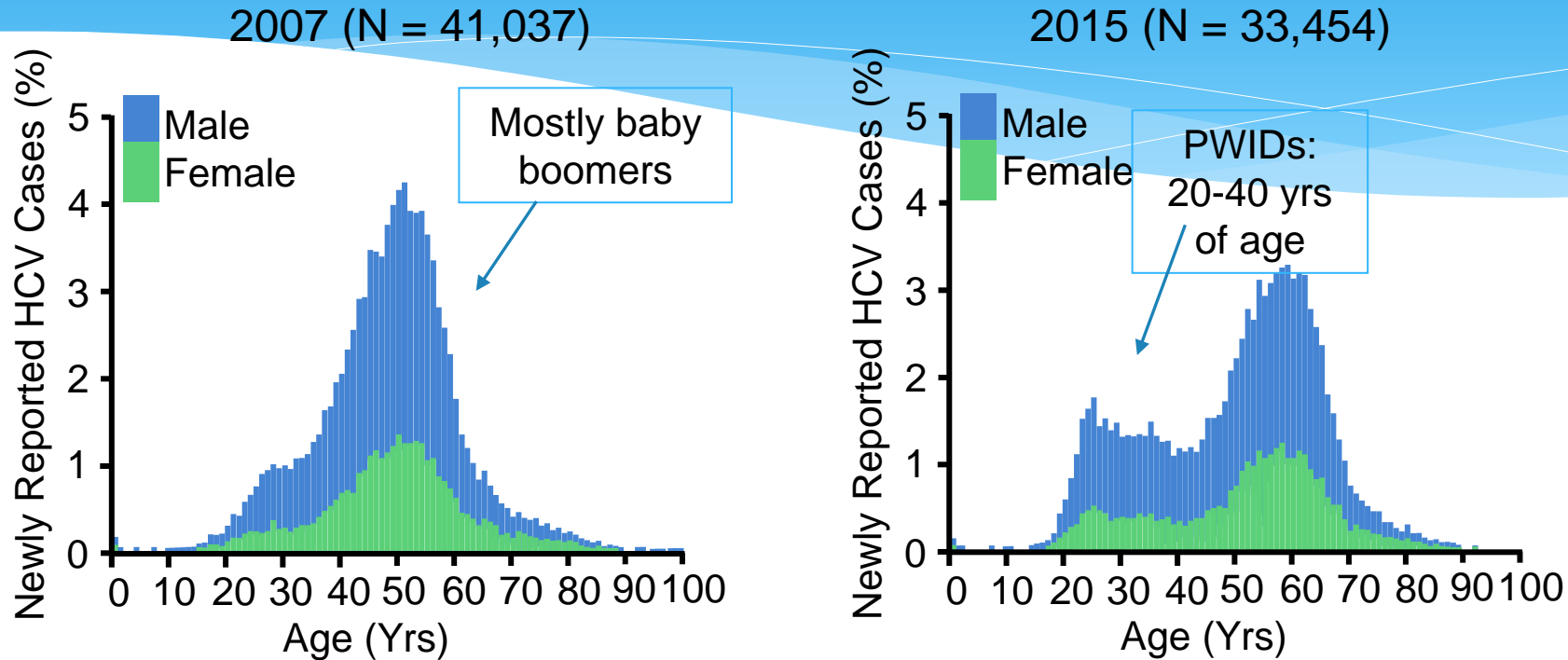
The Two Epidemics of Hepatitis C in the USA and Alaska

- * Epidemic in the 1960's, 1970's and Early 1980's
 - * Related to heavy IDU use, unscreened blood transfusions, unregulated tattooing and lack of universal precautions before HIV
- * Current epidemic since 2010 from recent surge in injection opioid and other drug use
 - * Up to 90% of IDU will acquire HCV infection within one year of starting

Hepatitis C Prevalence

- * In 2010 an estimated 3-4 million persons in US were living with hepatitis C
 - * 1.6% overall prevalence
 - * 3.25% are born between 1945-1965 (baby boomers)
- * This estimate does not include persons infected in current Opioid epidemic

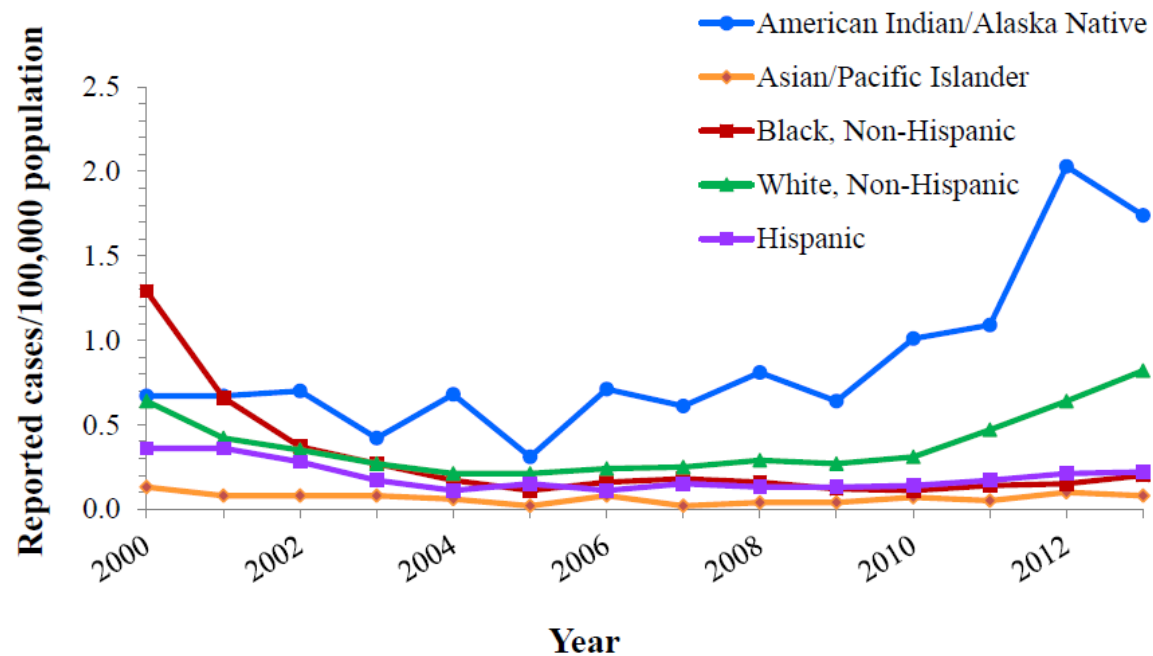
Changing Epidemiology of HCV in the US



- * Screening → linkage to HCV care → DAA treatment cascade must be operative in all those at risk
- * Treatment of PWIDs plus harm reduction efforts essential part of elimination efforts

Increases in Reported cases Acute Hepatitis C in U.S

Figure 4.4. Incidence of acute hepatitis C, by race/ethnicity — United States, 2000-2013



Source: CDC, National Notifiable Diseases Surveillance System.

2010 to 2013

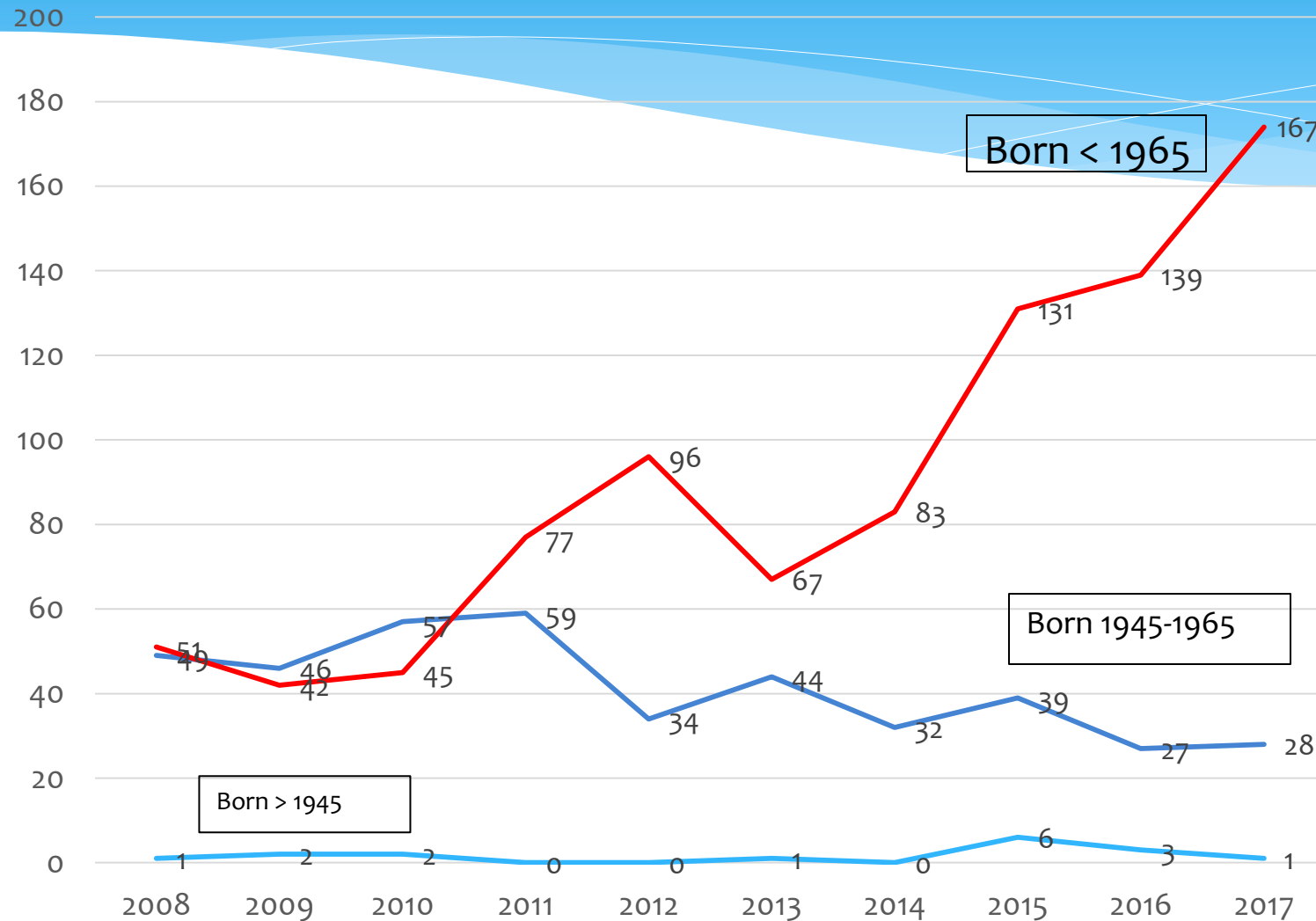
Overall **2.5X**
increase

2.7X increase
amongst 20-29 year
olds

2012 to 2013

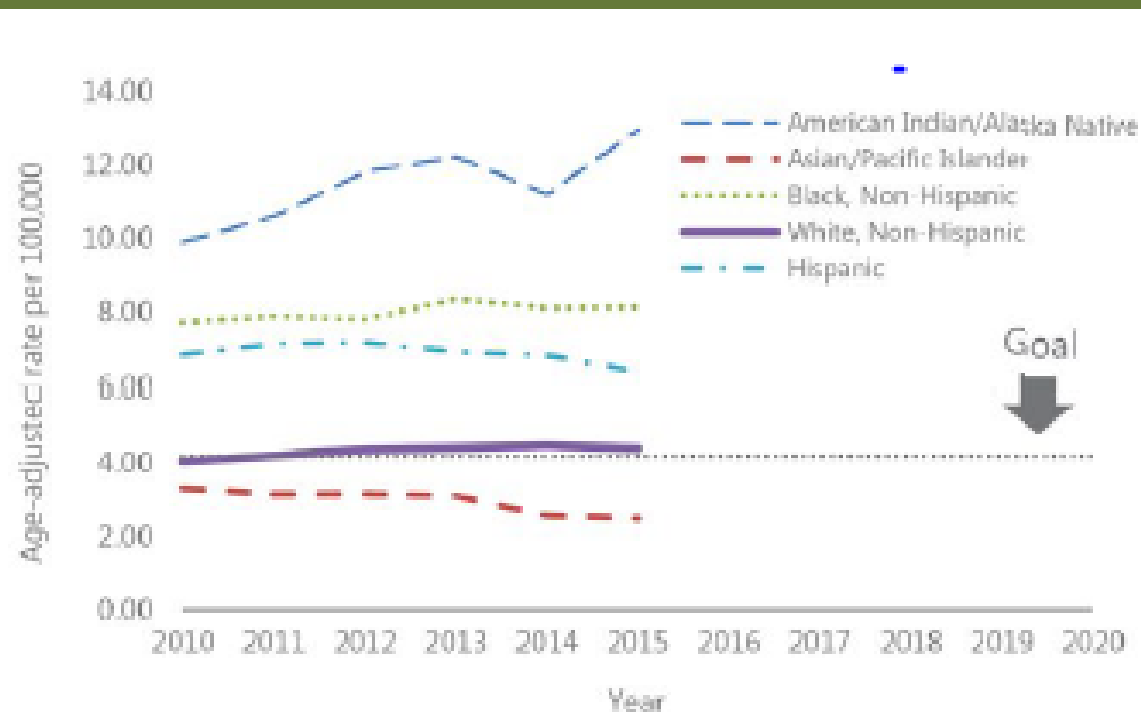
86.2% increase
among American
Indian/Alaska Native
persons

Hepatitis C On the Rise: Data from ANTHC



Age-adjusted rate* of HCV-related deaths,[†] by

race/ethnicity[‡]



American Indians/Alaska Natives have the highest death rates of all racial/ethnic populations, and rates for this group increased by 16% from 2014 to 2015. Death rates are also elevated for non-Hispanic black and Hispanic persons compared with other populations.

Source: CDC, National Vital Statistics System^{1,2}

*Rates for sex and race/ethnicity are age-adjusted per 100,000 U.S. standard population in 2000.

[†]Cause of death is defined as the underlying cause of death or one of the multiple causes of death and is based on the International Classification of Disease, 10th Revision (ICD-10) codes B17.1 and B18.2.

[‡]2 deaths in 2010, 1 death in 2011, 2 deaths in 2012, 2 deaths in 2013, 5 deaths in 2014, and 1 death in 2015 are not represented due to missing age data.

[§]65 deaths in 2010, 73 deaths in 2011, 126 deaths in 2012, 111 deaths in 2013, 142 deaths in 2014, and 157 deaths in 2015 are not represented due to missing race/ethnicity data.

2010 Institute of Medicine Report on Chronic Viral Hepatitis in the US

- * Incidence of liver cancer is rising in US
- * Deaths attributable to hepatitis B and hepatitis C exceeded deaths due to HIV/AIDS
 - * 15,000 per year for hepatitis versus 14,000 per year for HIV
 - * Deaths due to viral hepatitis B and C; these kill more people than all other chronic infectious diseases in the USA combined
- * Studies showed that current data on hepatitis B and C underestimated the true prevalence and impact of these infections
- * Preventive measures and medications for effective treatment were now available

2016/2017 National Academy of Science and Medicine Report

- * Hepatitis C could now be easily cured with DAA
- * Not much progress made on baby boomer screening
- * Lots of talk, but little new initiatives have stemmed the spread from opioid epidemic
- * Federal, State and Local government legislation is being considered

Who Should be Screened Beyond the Current CDC and USPHTF Recommendations

- * Pregnant Women
 - * Prevalence in AN Pregnant women exceeds 2% in recent serosurvey
 - * If prevalence is \geq in other Tribal Clinics and regions, consideration for universal screening or at least enhanced risk based screening should occur
 - * If a Tribal Region does not know prevalence, a serosurvey should be done
- * All incarcerated persons
- * Young adults > 18 years if opioid epidemic present in a region

Risk Factors Associated with Progression of HCV

- * Heavy alcohol usage: Strongest factor
- * Male sex
- * Diabetes or hepatic steatosis
- * Older age at time of infection
- * HCV genotype 3
- * Co-infection with HIV or HBV
- * Not associated:
 - * Viral load
 - * Presence of Anti-HBc without HBsAg

How Can the Incidence and Prevalence of HCV in the US and Indian Country be Reduced in the Near Future? CDC and IOM recommendations

- * Enhanced screening of high risk groups
- * Risk reduction:
 - * Counseling and availability of clean needles
 - * Alcohol and drug rehabilitation
- * Treatment of all persons with chronic HCV including persons currently using injecting drugs and prisoners

Treatment Beyond the Traditional Venues

- * Treating persons in private clinics
- * Treating incarcerated persons
- * Treating persons in drug rehab programs, needle exchange programs, safe injecting, homeless sites/shelters and other non-traditional sites
- * No vaccine on horizon for decade or more
- * **Treatment as prevention**

Conclusions

- * Chronic HCV is a progressive disease that leads to cirrhosis over 20-40 years in at least half of infected persons
- * Enhanced screening for infected persons and universal treatment can greatly impact the future development of liver related death and costs
- * Cure of HCV reduces the risk of liver complications in those with advanced liver disease and likely eliminates development of cirrhosis and HCC as well as preventing new infections