

## BACKGROUND

- The burden of HIV is around four times higher and the HCV positivity rate is up to ten times higher in correctional facilities compared to the general population<sup>1</sup>
- Incarceration provides a unique opportunity to perform HIV/HCV screening in high-risk and hard-to-reach individuals
- The CDC recommends routine opt-out HIV testing in jails and prisons, however only 19% of prisons and 35% of jails offer this service<sup>2</sup>
- The WHO recommends that all inmates should be tested for HCV, however only 12 to 15 states in the US report performing routine HCV screening.<sup>3,4</sup> In the US, HCV screening is focused mainly on individuals born between 1945-1965 (“baby boomer” cohort)

## OBJECTIVES

- To describe the results of an opt-out combined HIV and HCV testing program in a criminal justice system
- To determine the prevalence and demographic characteristics of HIV and HCV in this population

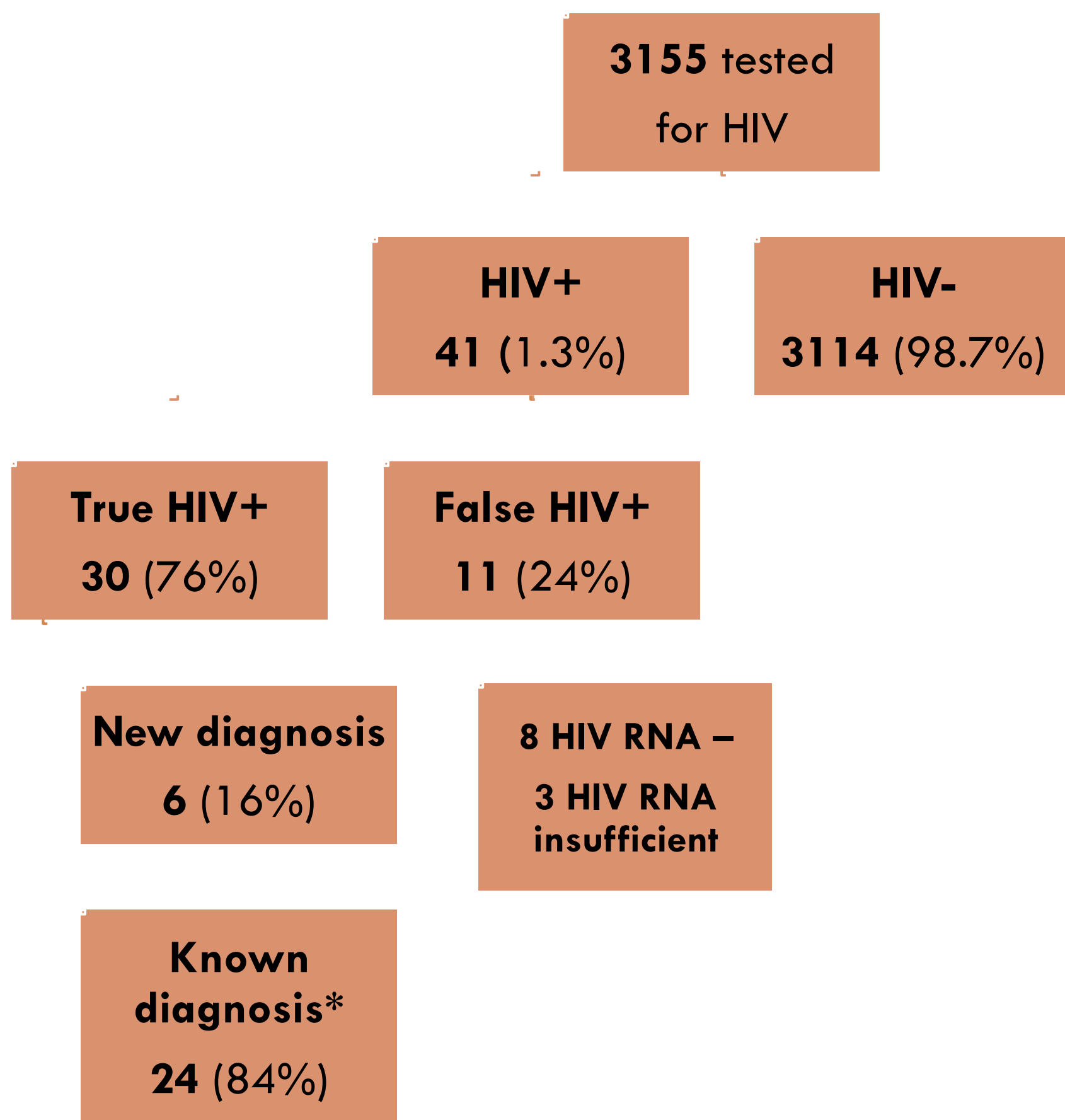
## METHODS

- Opt-out HIV/HCV testing was offered to individuals entering the Dallas County Jail between October 2015 and July 2016 at the time of a scheduled blood draw
- HIV testing was performed using the 4<sup>th</sup> generation Ag/Ab test (LabCorp) Laboratories, Redmond, WA) and HCV antibody assay (BioRad) was used to screen for HCV
- Basic demographics were extracted from electronic health records
- For those who tested HIV positive, risk factors, prior engagement in care (seen by and HIV provider within 6 months previous to incarceration), and re-engagement in care (receipt of HIV care during incarceration) were assessed
- For those who tested HCV positive, prior seropositivity was determined by chart review
- SAS statistical software, v9.4 (SAS Enterprises, Inc. Cary, NC) was used for all analyses

## RESULTS

### HIV OPT-OUT TESTING

**Figure 1.** Flow diagram outlining the HIV screening process.



HIV screening test was performed with the 4<sup>th</sup> generation Ag/Ab test. Confirmation was performed with HIV 1/2 differentiation test and viral load.  
\* Known diagnosis = previous documented HIV-positivity in jail records

**Table 1.** Baseline characteristics of the HIV-positive population

	True positives=30	
	New Diagnosis=6	Known Diagnosis*=24
Age (mean ± SD)	27 ± 10.4	38.9 ± 12
Gender	Male	6 (100%)
	Female	0 (0%)
Race	White	1 (16.7%)
	Black	4 (66.7%)
	Hispanic	1 (16.7%)
Risk Factors <sup>b</sup>	IDU	0 (0%)
	Heterosexual	4 (66.7%)
	MSM	2 (33.3%)
	Unknown	.
Undetectable VL <sup>c</sup>	Yes	0 (0%)
	No	6 (100%)
	Unknown	.
ART <sup>d</sup>	Yes	3 (50%)
	No	3 (50%)
	Unknown	.
HCV Ab positive	Yes	0 (0%)
	No	6 (100%)
	Unknown	.
Inmate disclosed HIV status	Yes	.
	No	.
	Unknown	.
Engagement in care <sup>e</sup> before in jail (6 month before)	Yes	.
	No	.
	Unknown	.
Engagement in care while in jail	Yes	6 (100%)
	No	0 (0%)
	Unknown	.
Engagement in care post jail (6 months after)	Yes	6 (100%)
	No	0 (0%)
	Unknown	.

<sup>a</sup> Known diagnosis = previous documented HIV-positivity in jail records

<sup>b</sup> Inmates reported multiple risk factors

<sup>c</sup> Undetectable VL = viral load < 200 copies/mL

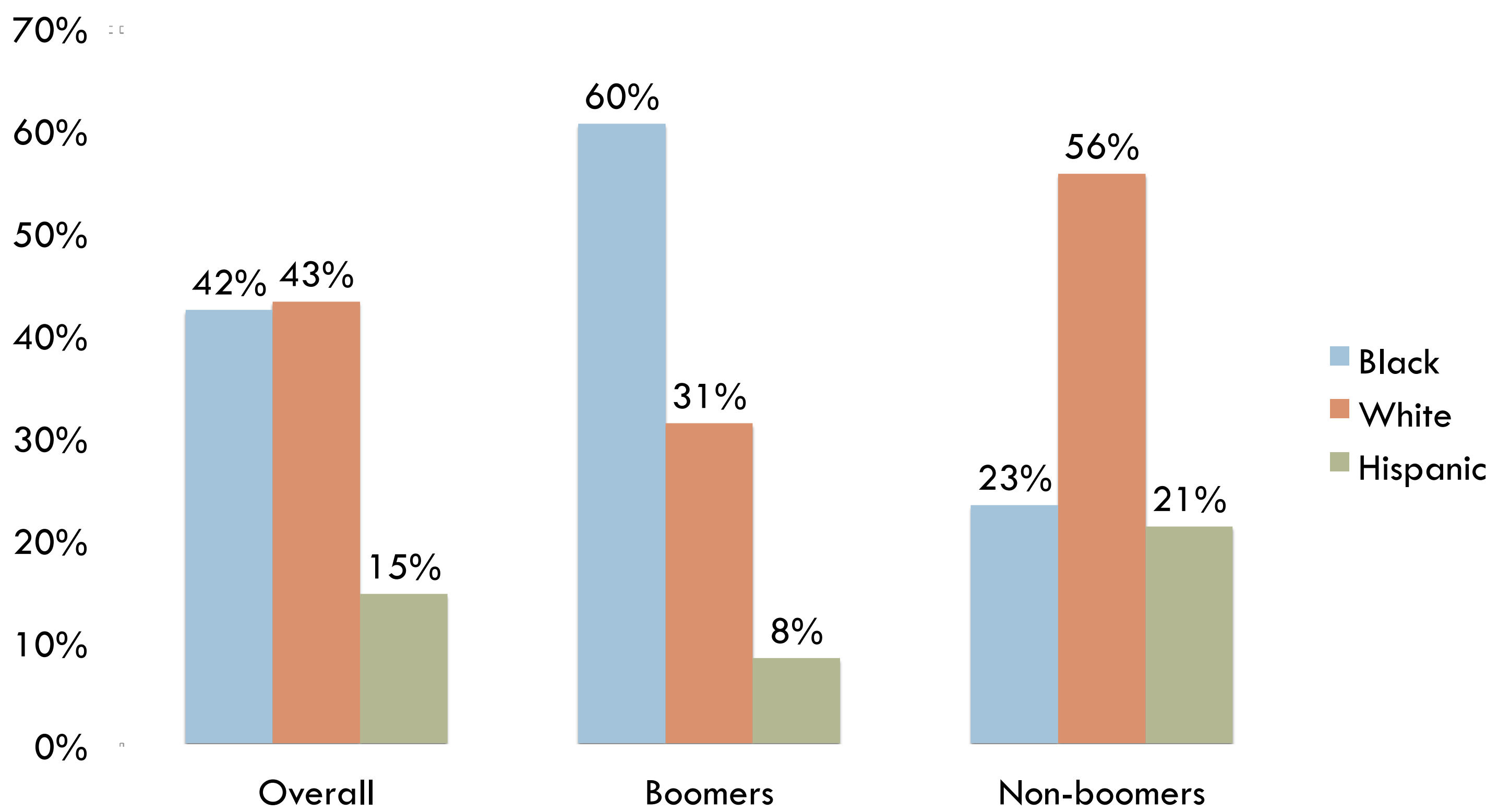
<sup>d</sup> ART = antiretroviral therapy was initiated, continued or re-started while in jail

<sup>e</sup> Engagement in care = any clinic visit with a medical provider in a 6 month period

<sup>f</sup> 8 patients were scheduled to follow up with clinics outside our system

Abbreviations: IDU = injection drug users; MSM = men who have sex with men,

**Figure 3.** HCV Ab positivity by birth cohort and race



## CONCLUSIONS

- Routine opt-out testing in a jail setting identified multiple HIV and HCV infections
- New HIV diagnoses were relatively rare 6/3155, though above CDC recommended thresholds for testing (1.0% prevalence, 0.12 incidence); linkage to HIV care and re-engagement in care were high
- The rate of HCV Ab positivity was high and one-third was already aware of this diagnosis
- Testing only those in the baby boomer cohort would have missed approximately half of HCV infections, predominately among whites
- HCV Ab positivity was > 2X higher in Whites vs Blacks among those born after 1965, and nearly 2X higher among in Black vs White baby-boomers (born 1945-1965)

## LESSONS LEARNED/ BEST PRACTICES

- Opt-out HIV and HCV testing is feasible in the correctional health setting
- Existing linkage to HIV care programs within the jail are robust, however, consider additional resources for this after release
- HCV testing should be offered to all inmates, regardless of whether they are baby boomers or not
- Need to add reflex HCV RNA testing to confirm HCV infection and increase HCV education and linkage to care programs

## REFERENCES

- Goug E, Kempf MC, Graham L, et al. HIV and Hepatitis B and C incidence rates in US correctional populations and high risk groups: a systematic review and meta-analysis. BMC Public Health 2010;10:777
- Soloman L, Montague BT, Beckwith CG, et al. Survey finds that many prisons and jails have room to improve HIV testing and coordination of post release treatment. Health affairs. 2014;33:434-442
- Varan AK, Mercer DW, Stein MS, et al. Hepatitis C Seroprevalence Among Prison Inmates Since 2001: Still High but Declining. Public Health Rep. 2014 Mar-Apr;129: 187-95
- Beckman AL, Bilinski A, Boyko R, et al. New Hepatitis C Drugs Are Very Costly and Unavailable to Many State Prisoners. Health Affairs 35,no.10(2016):1893-1901
- Paltiel AD, Weinstein MC, Kimmel AD, et al. Expanded screening for HIV in the United States---an analysis of cost-effectiveness. N Engl J Med 2005;352:586--95

ACKNOWLEDGEMENTS: We would like to acknowledge GILEAD Sciences, Inc. FOCUS program for funding of the opt-out HIV/HCV testing program

### HCV OPT-OUT TESTING

- Positive HCV Ab: **16%** (500/3042)
  - Mean age: 49
  - 80% men
  - One third (177/500) had previous documented HCV Ab positivity
  - Only 52% (258/500) born in the “baby-boomer” cohort

**Figure 2.** HCV Ab positivity by race

