5th Technical Advisory Group
HCV Elimination Program in Georgia

Progress & Challenges, 2015-2019

Francisco Averhoff, MD, MPH, PhD
Division of Viral Hepatitis
Centers for Disease Control and Prevention

November 2019

Where are we in 2019?

2015
- Know the burden: 5.4% adults
- Know the risk factors: injection drug use, blood transfusion receipt
- Goals and targets: 90% reduction in prevalence
- National screening program
- Treatment available and free of charge

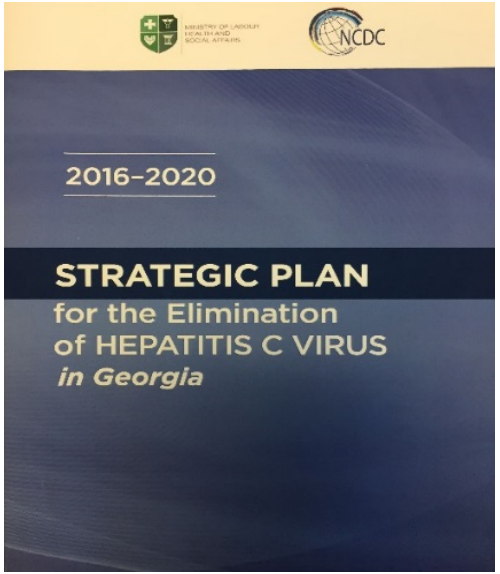
2016
- National Strategy 2016-2020
- Indicators developed and monitored (M&E)
- Scientific committee established

2018
- Robust (integrated) information systems
- Decentralization of care and treatment launched

2019
- Diagnostics available and free of charge
- Georgia named EILF Center of Excellence in Viral Hepatitis Elimination

HCV Elimination Strategic Plan, Georgia, 2016 - 2020

- Georgia HCV Elimination Plan
  - Advocacy
  - Surveillance
  - Prevention:
    - Infection Control
    - Harm Reduction
    - Safe Blood
  - Laboratory and Diagnostics
  - Screening and Linkage to Care
  - Care and Treatment



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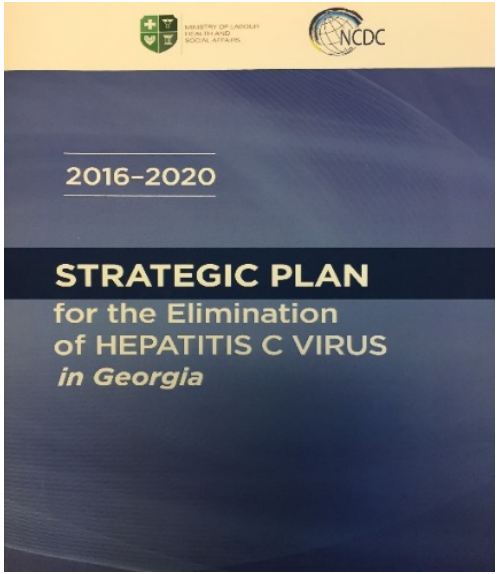


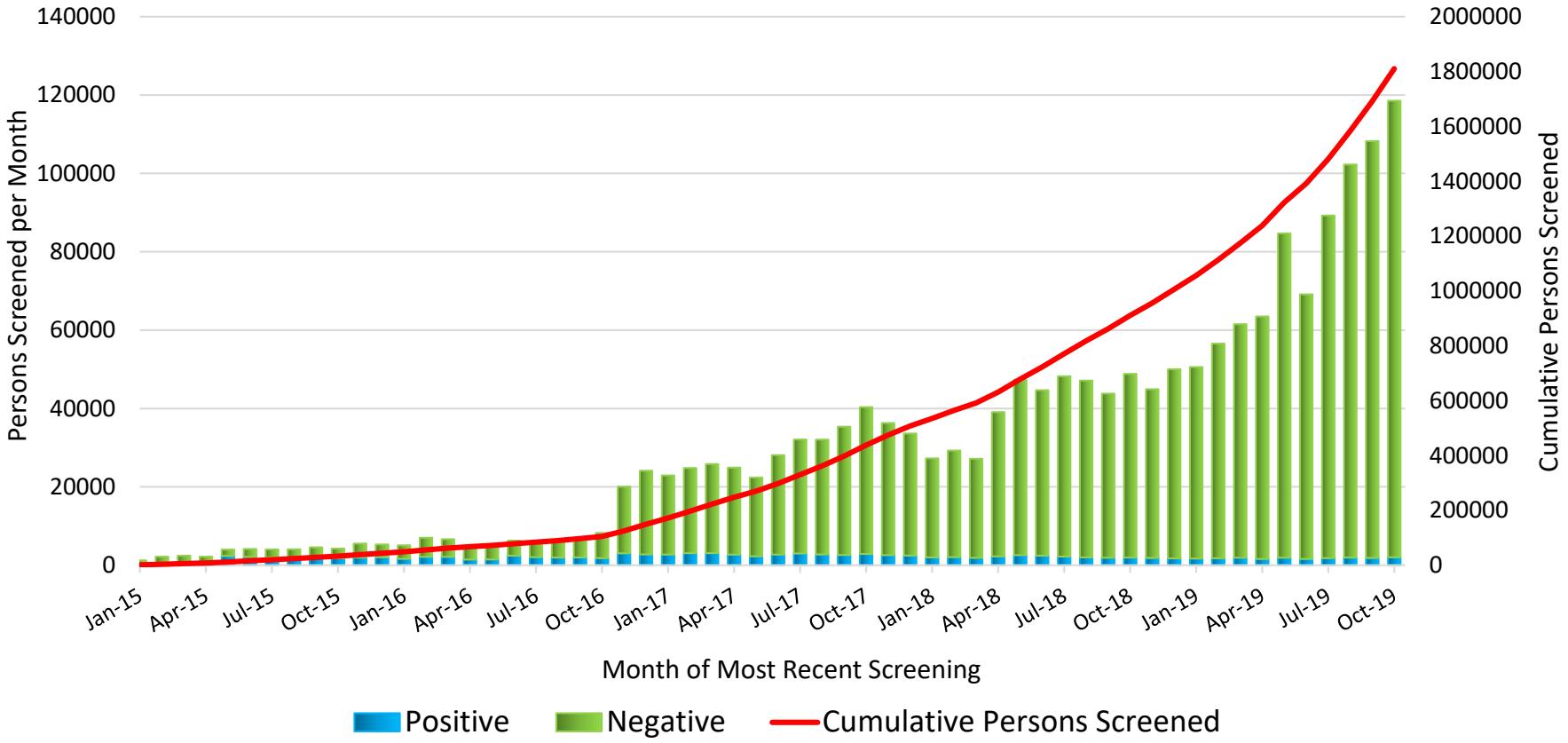
Number of adults aged ≥18 years screened for hepatitis C virus antibody (anti-HCV) and percentage testing positive, by group screened – Georgia, 2015-2018

Group/Location of Screening	No. Adults (aged ⩾18) Screened	% anti-HCV Positive
Blood donors	112,926	3.0%
NCDC	131,479	33.4%
Pregnant women/ANCs	108,776	0.6%
Hospitalized patients	468,479	4.7%
Harm reduction beneficiaries	10,886	30.6%
Outpatients	612,452	5.0%
Prisoners	7,008	24.3%
Military recruits	19,759	1.5%
Persons living with HIV*	3,889	39.5%

Abbreviations: ANC = antenatal clinic; HCV = hepatitis C virus; HIV = human immunodeficiency virus; NCDC = National Centers for Disease Control and Public Health

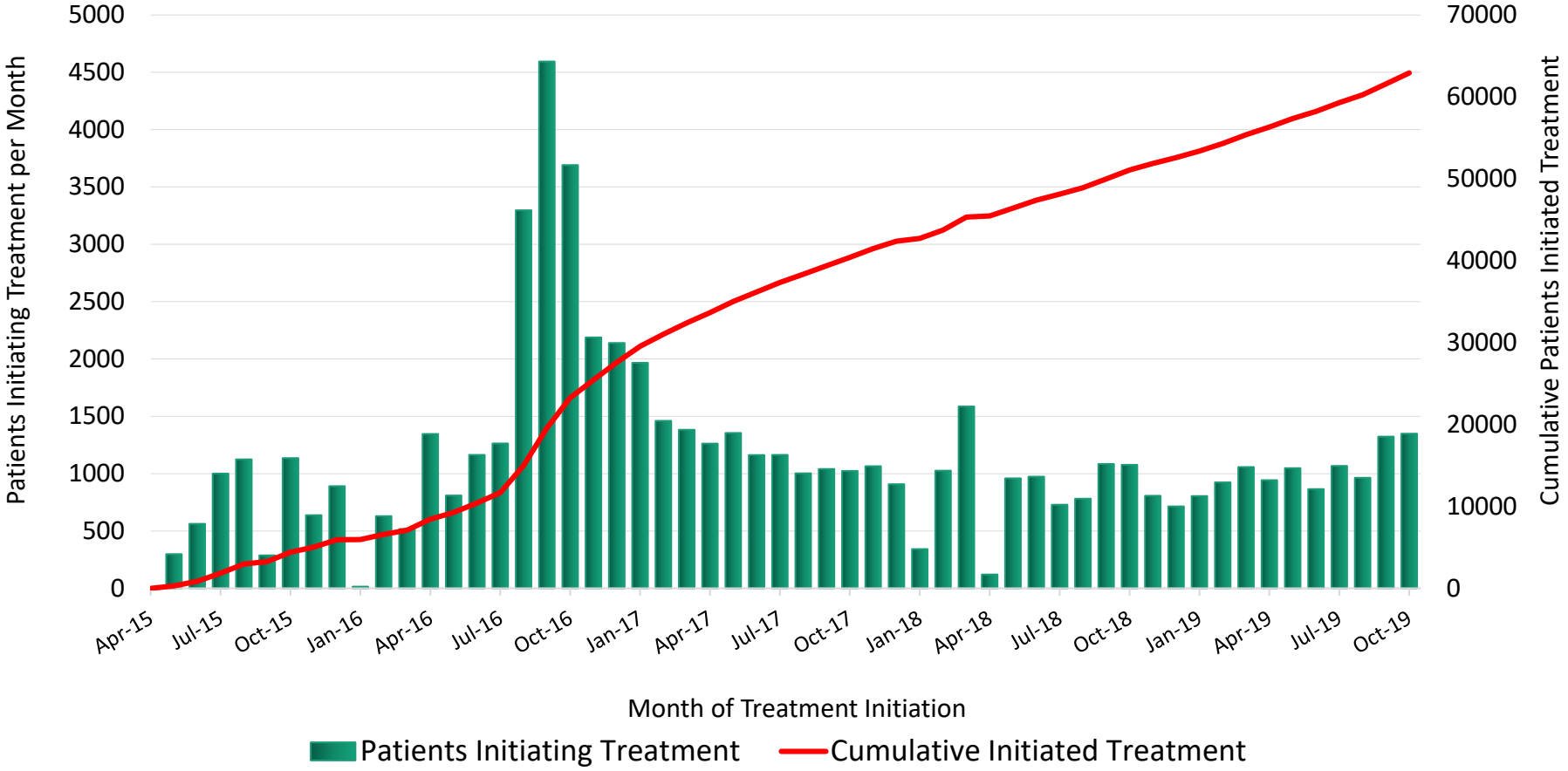
* Data through July 1, 2018

Persons* screened per month, Georgia HCV elimination program, Jan 2015 – Oct 2019

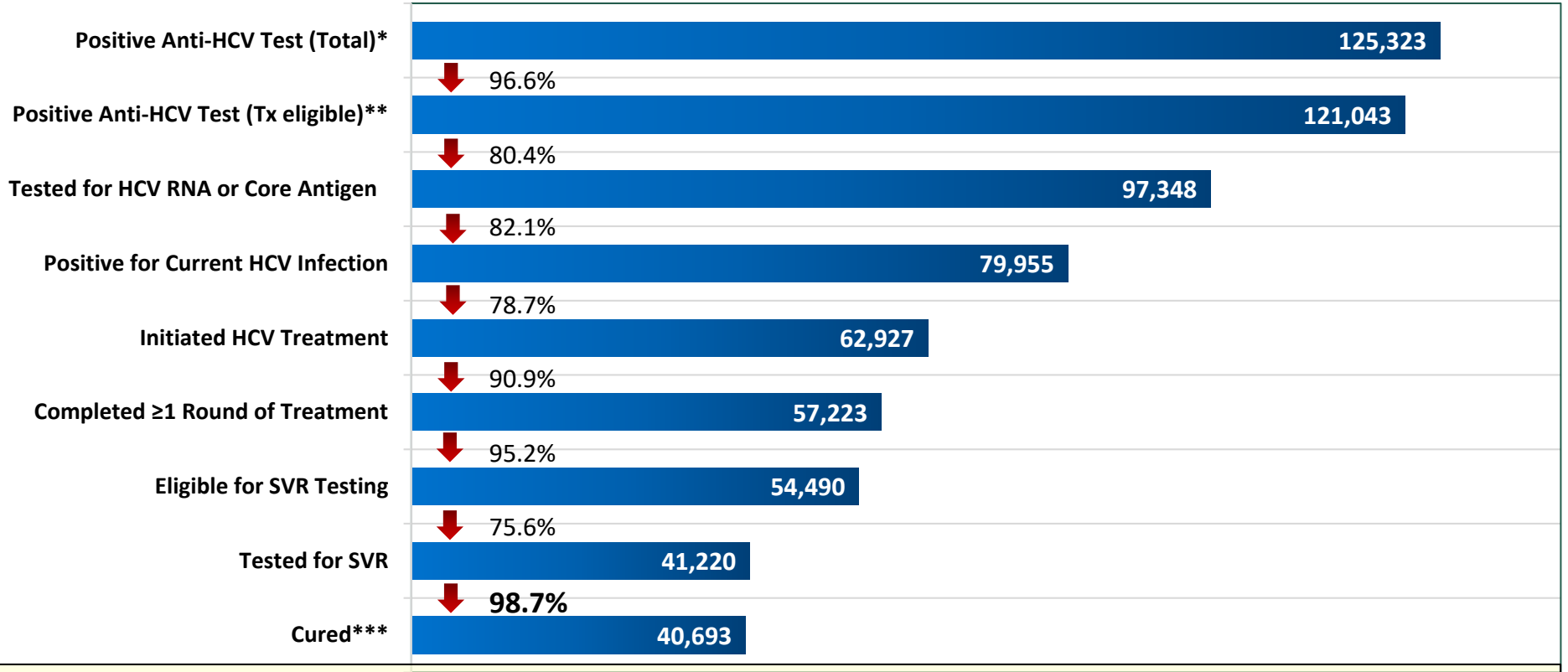


* Among all persons with national ID. Does not include persons with 15-digit code

Patients initiating treatment, Georgia HCV elimination program, April 2015 – Oct 2019



Georgia Hepatitis C Elimination Program Care Cascade, April 28, 2015 – October 31, 2019



* Among persons with national ID number; ** Age ≥ 12 with no mortality data prior to confirmation

*** Per-protocol, includes retreatments. Among 41,683 persons tested after their **1st round of treatment**, 40,082 (96.2%) achieved SVR (Including 82.1% for **SOF-based regimens**, 98.1% for **SOF/LED regimens**, and 98.2% for **SOF/VEL regimens**). 1,510 persons were **retreated** with a 2nd round of treatment, with 94.2% (663/704) of those tested achieving SVR. Overall SVR by **Intention-to-Treat analysis:** 73.6%

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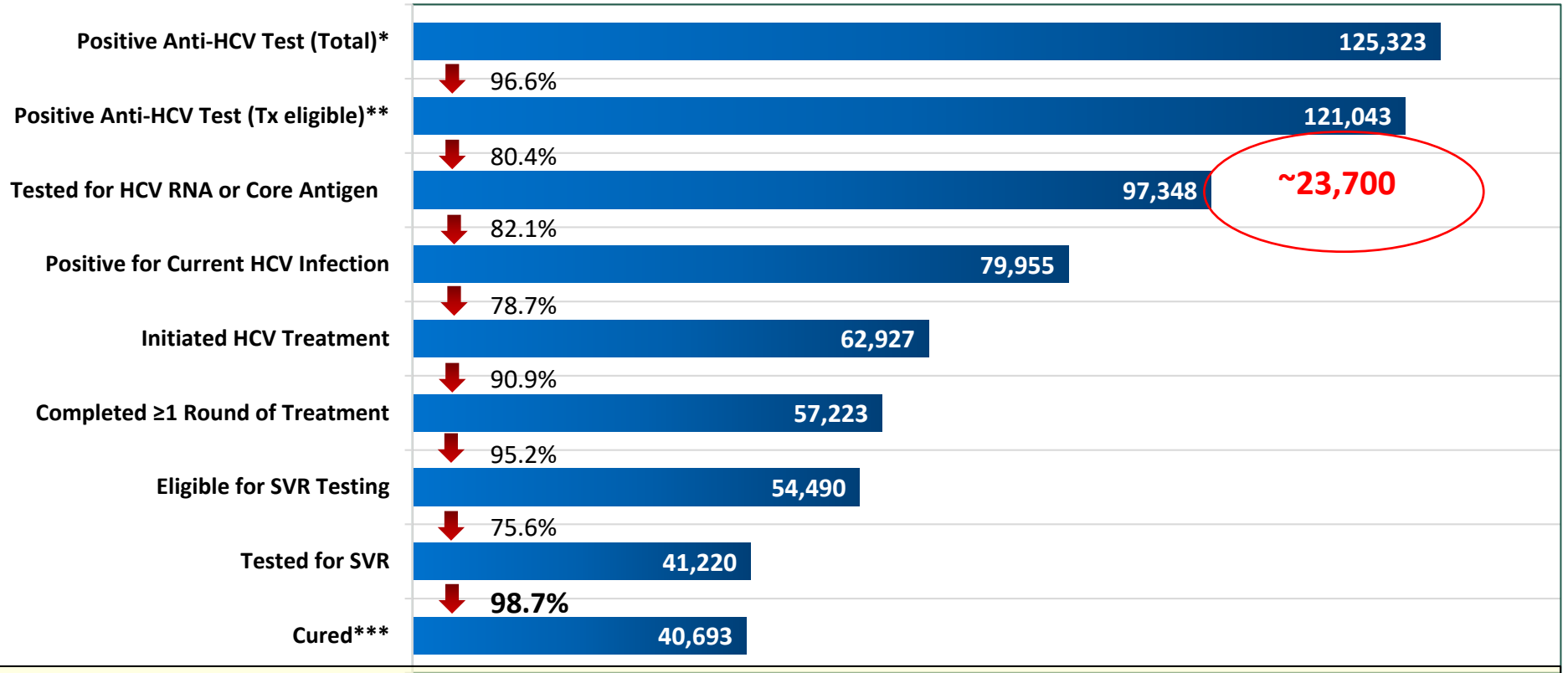

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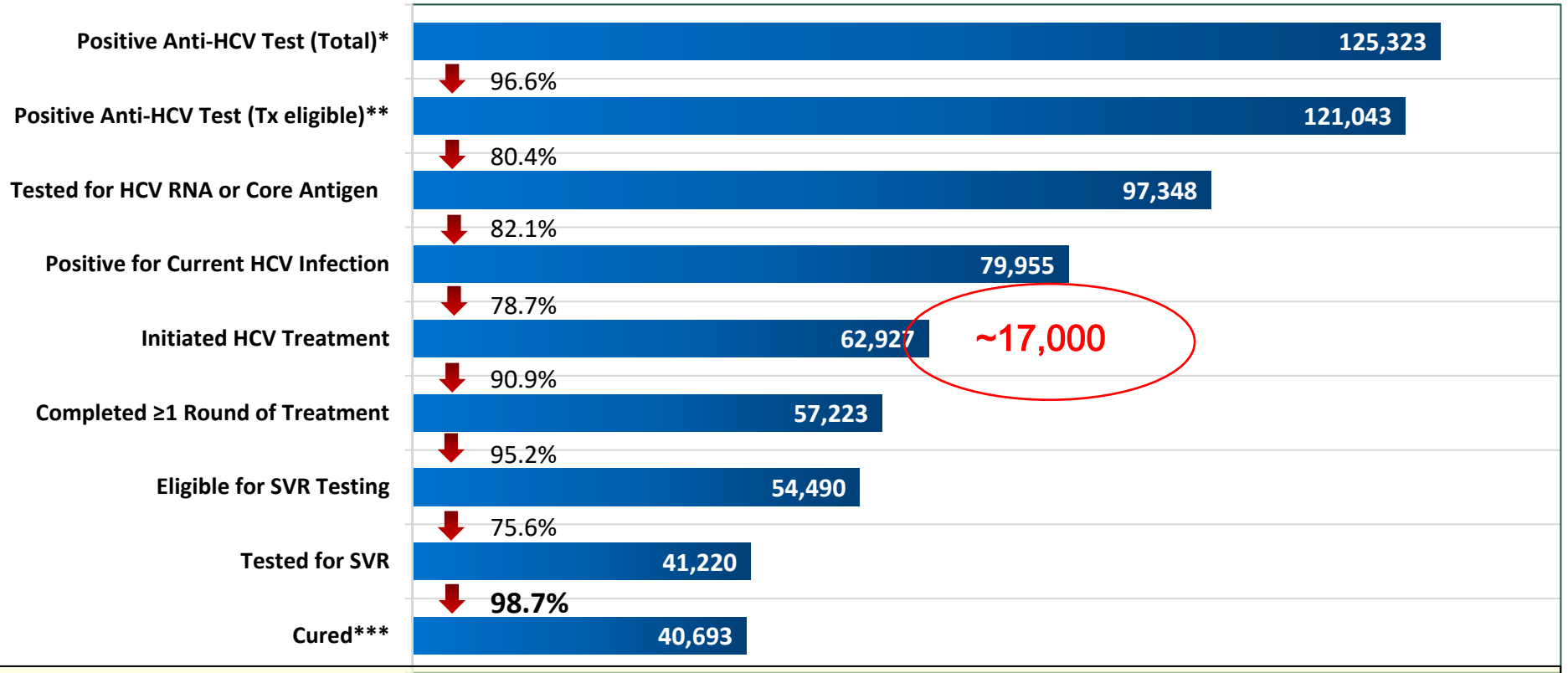

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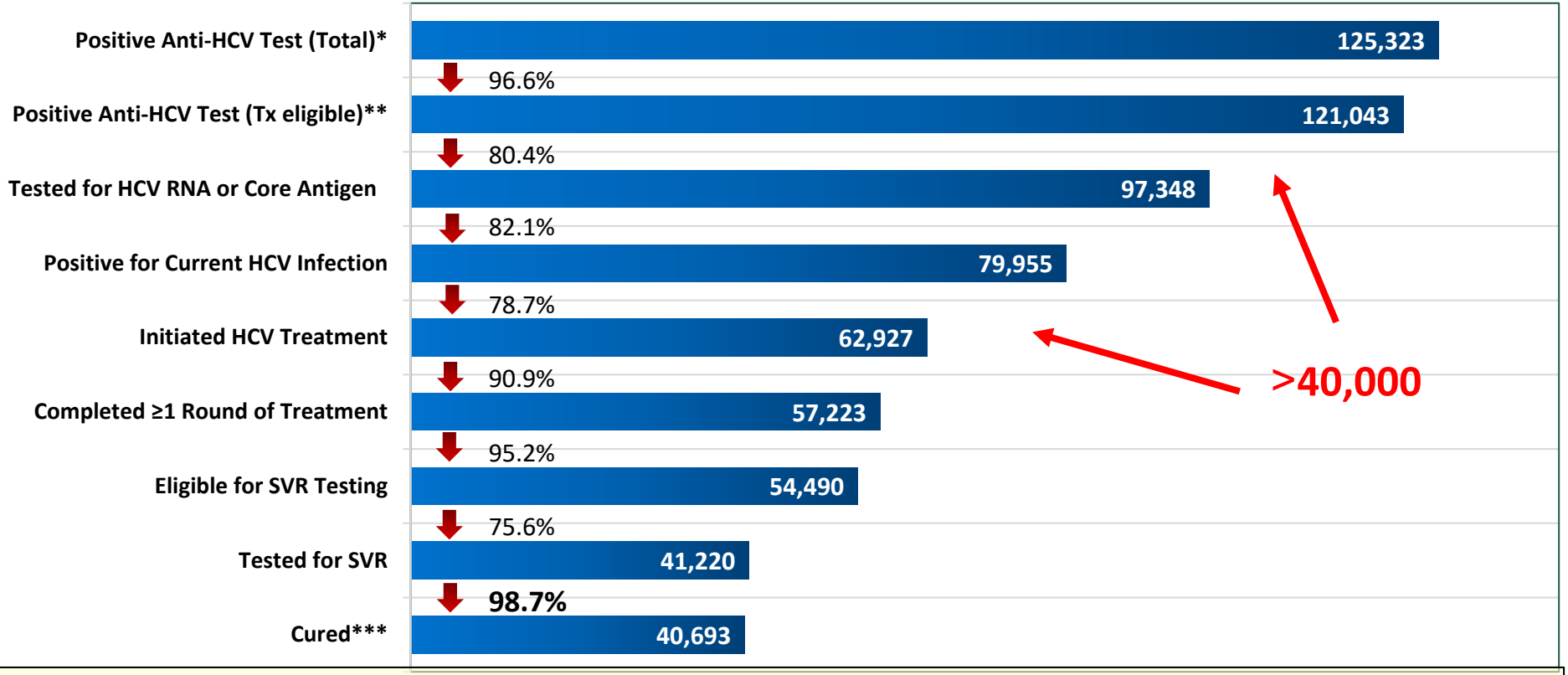

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Viremia testing and treatment initiation by year of screening positive, 2015-2019*

Year of first positive screening	Screened HCV+	Had Viremia Testing (%)	Viremic Infection (%)	Initiated Treatment (%)
2015	17,216	15,972 (92.8)	13,852 (86.7)	12,696 (91.6)
2016	24,973	21,809 (87.3)	18,375 (84.3)	16,783 (91.3)
2017	32,663	23,746 (72.7)	19,972 (84.1)	16,900 (84.6)
2018	24,672	19,656 (79.7)	15,294 (77.8)	9,486 (62.0)
2019 (Jan-July)*	12,176	9,277 (76.2)	6,991 (75.4)	4,054 (58.0)

Evolving landscape in screening & linkage to care, HCV Elimination Program, Georgia, 2015 & 2019

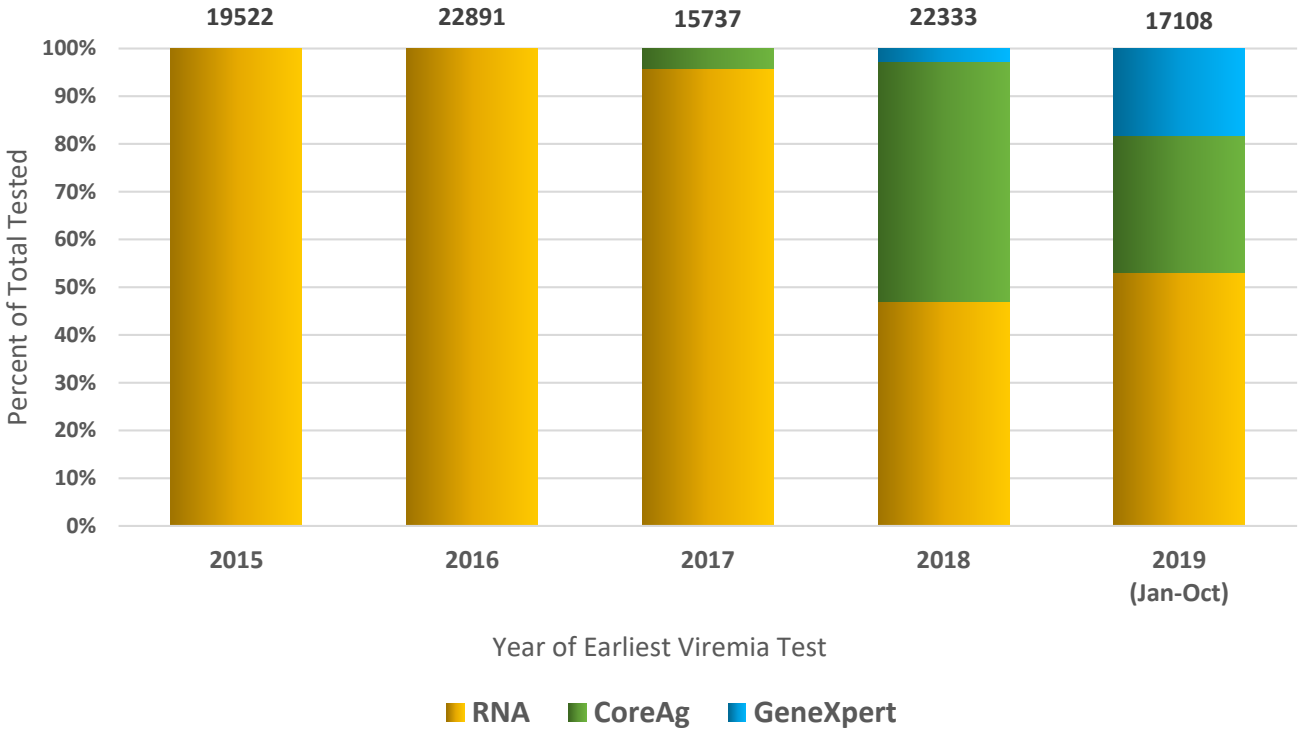
2015

- **Screening HCVAb+**
  - Referral to specialist hospitals
- **Viremia testing sites**
  - Specialist hospitals
- **Viremia tests**
  - RNA (conventional)
- **Treatment sites**
  - Specialist hospitals

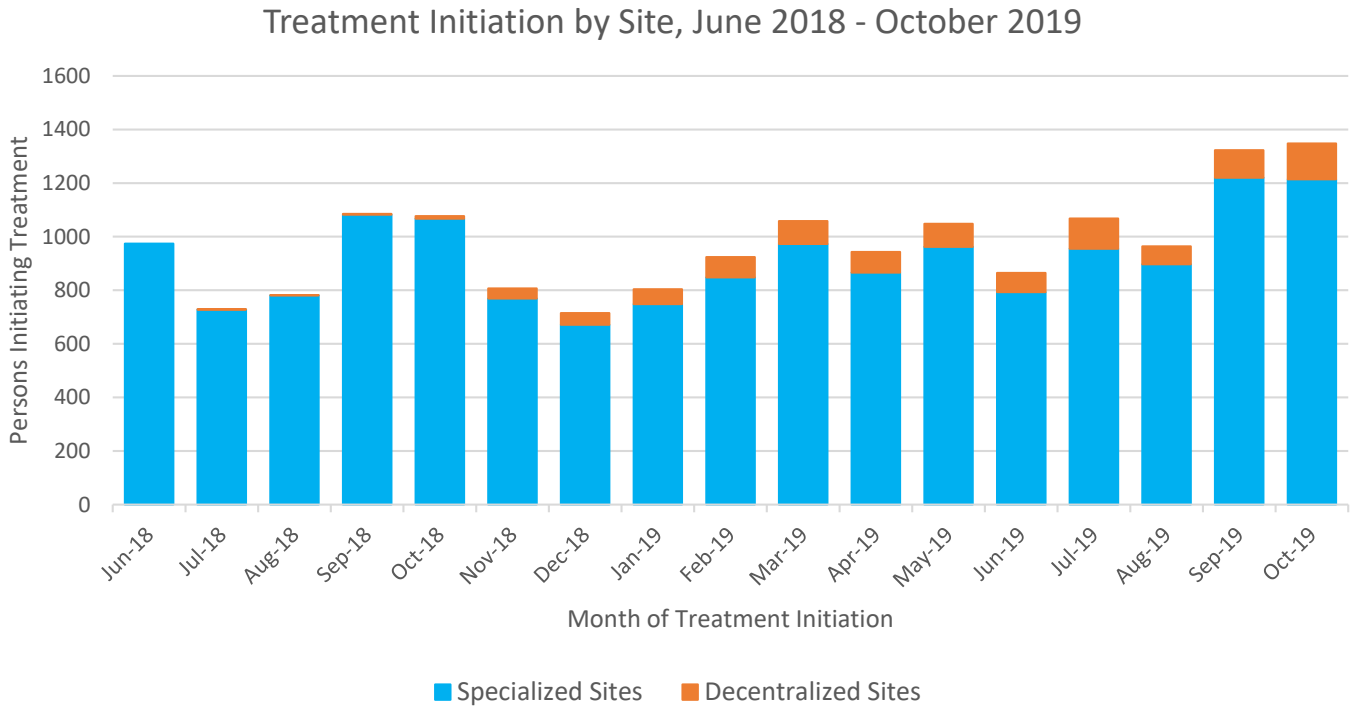
2019

- **Screening HCVAb+**
  - Referral to specialist hospitals
  - Reflex testing- serum to Lugar/NCDC
  - Same day GeneXpert
- **Viremia testing sites**
  - Specialist hospitals
  - Lugar/NCDC
  - Harm Reduction
- **Viremia tests**
  - RNA (conventional)
  - RNA (GeneXpert)
  - HCVcAg
- **Treatment sites**
  - Specialist hospitals
  - PHC
  - Harm reduction

Viremia testing, by test method, Georgia, 2015-2019

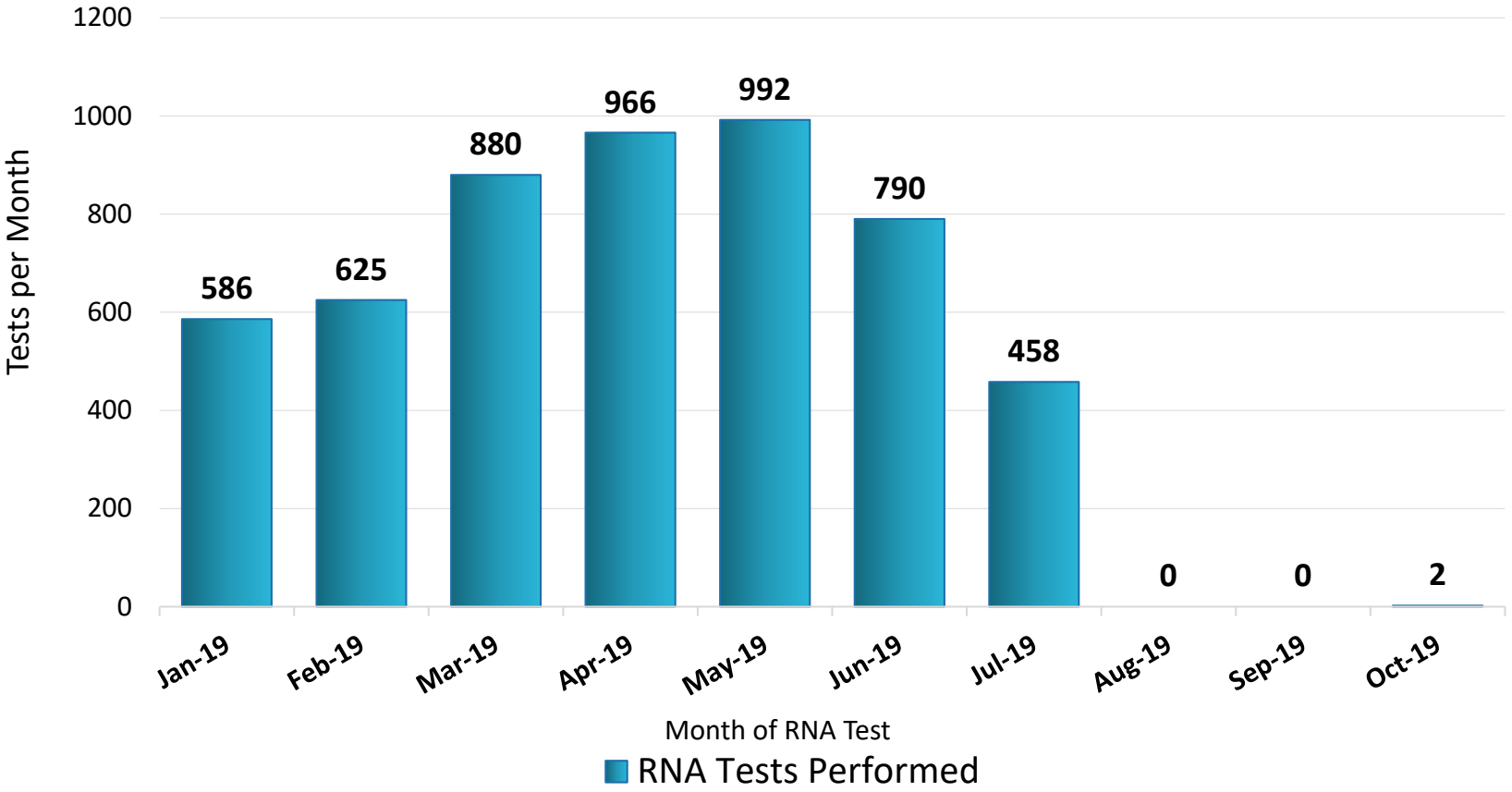


Treatment initiation of HCV infected (viremic), at specialized clinics and decentralized sites*, 2018-2019

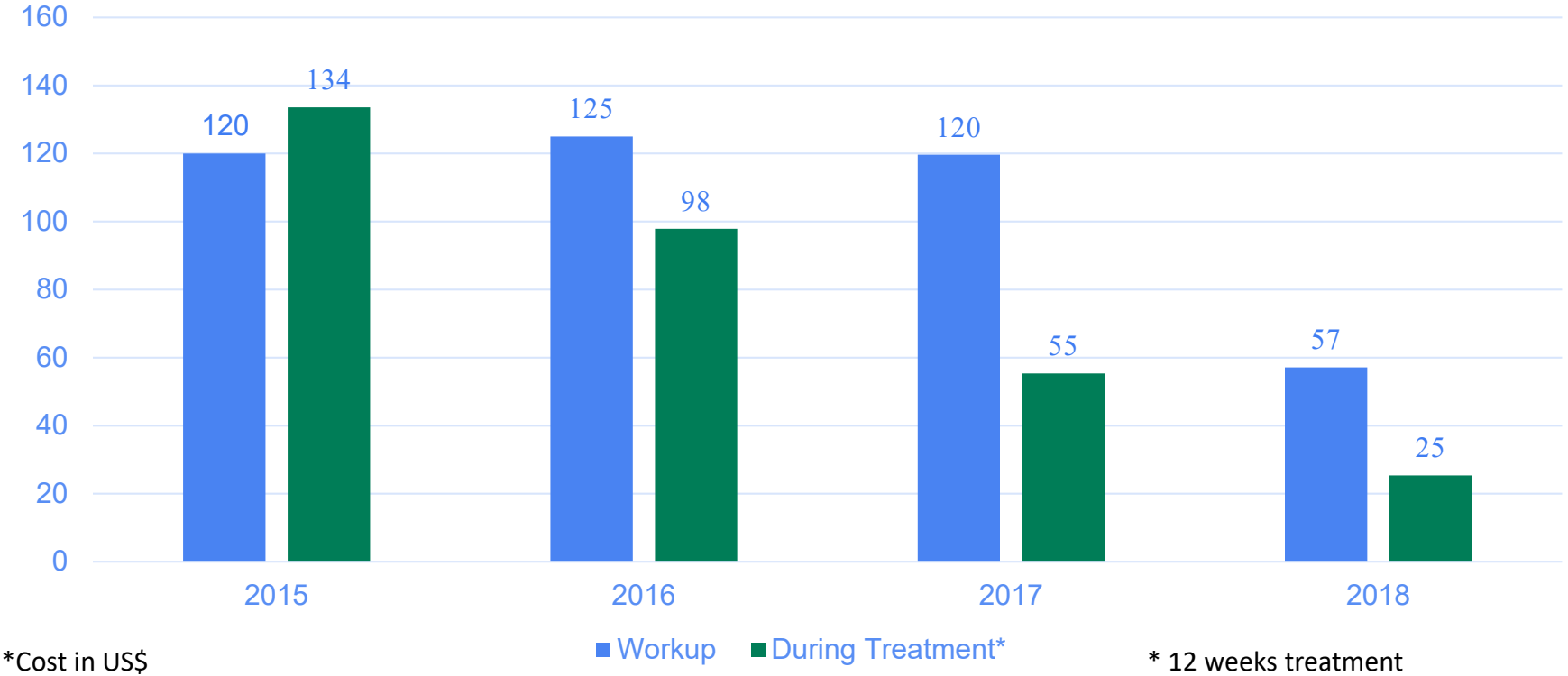


* Includes Primary Health Centers (PHC) and Harm Reduction (HR) sites; only FIB4 < 1.25

RNA tests performed at 4 weeks of treatment, Georgia HCV elimination program, January – October 2019



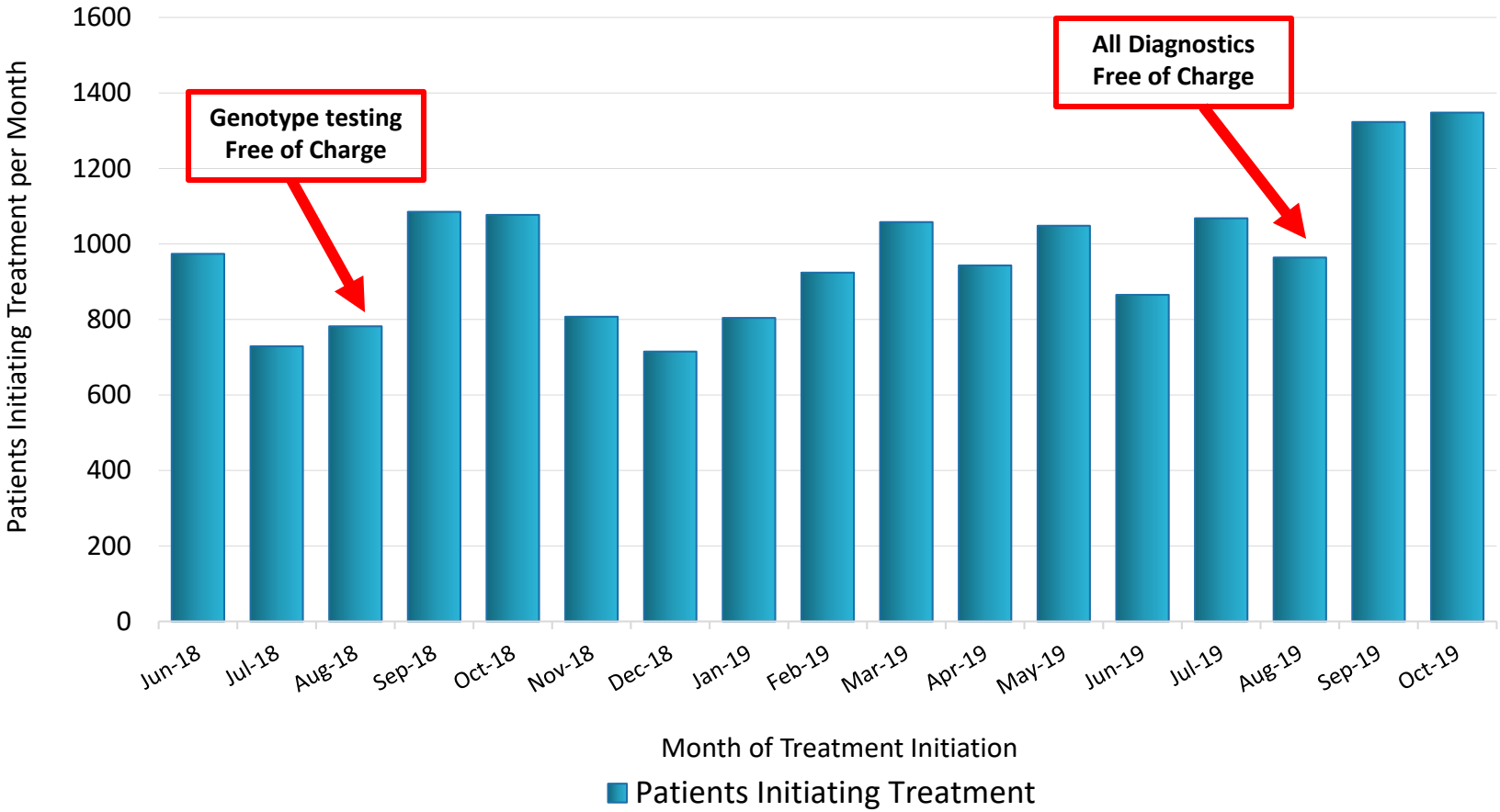
Patient Cost** of Diagnostics, Georgia, 2015-2018



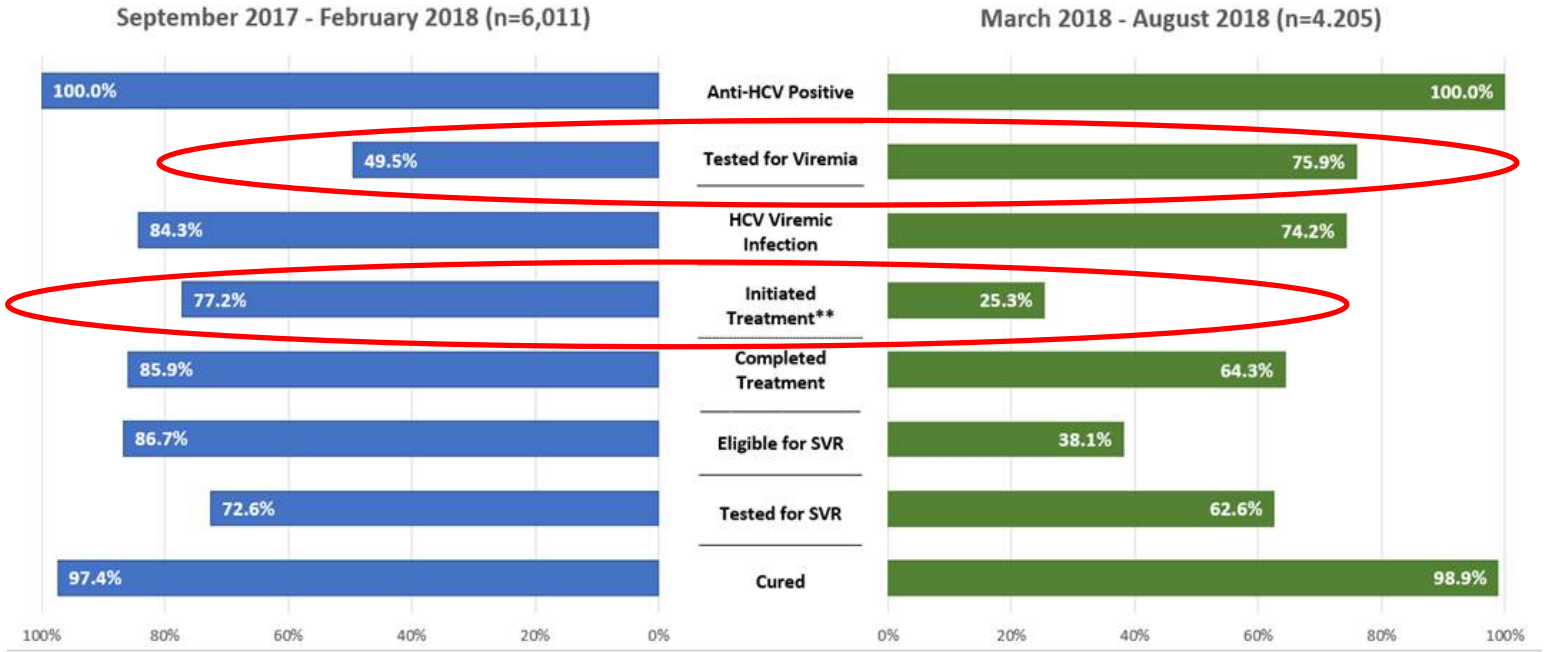
**Cost in US$

* 12 weeks treatment

Patients initiating treatment, Georgia HCV elimination program, June 2018 – October 2019



Care cascade, by percent (%), among hospitalized patients before and after the implementation of HCVcAg reflex testing, Georgia, 2017-2018*

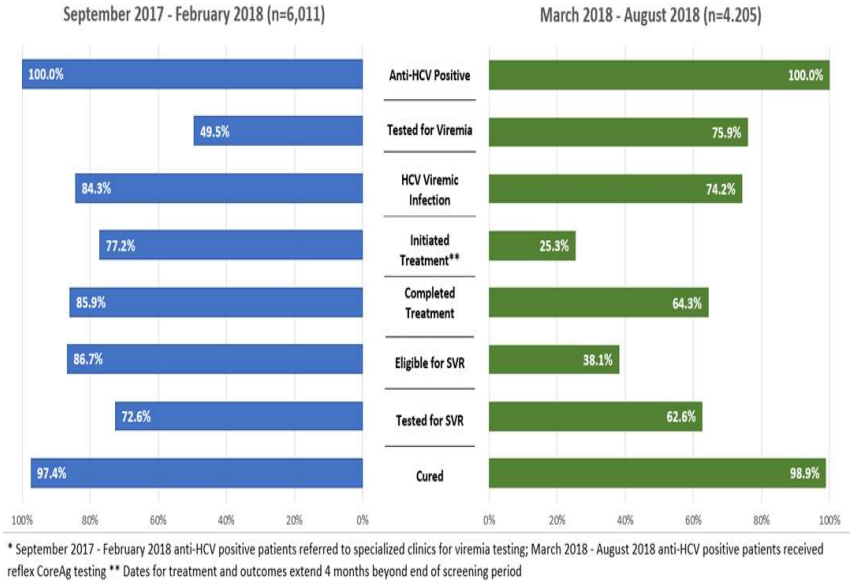


* September 2017 - February 2018 anti-HCV positive patients referred to specialized clinics for viremia testing; March 2018 - August 2018 anti-HCV positive patients received reflex CoreAg testing ** Dates for treatment and outcomes extend 4 months beyond end of screening period

Comparison of treatment initiation rates (linkage to care) among hospitalized patients screening HCVAb+: Referral to specialist vs. reflex testing*

- **Referral for viremia testing (RNA)**
  - 49.5% tested for viremia
  - Among RNA+: 77.2% initiated treatment
  - Overall: (49.5%) X (77.2%) = <u>38.2%</u>

- **Reflex viremia testing (HCVcAg)**
  - 75.9% tested for viremia
  - Among RNA+: 25.3% initiated treatment
  - Overall: (75.9%) X (25.3%)= <u>19.2%</u>



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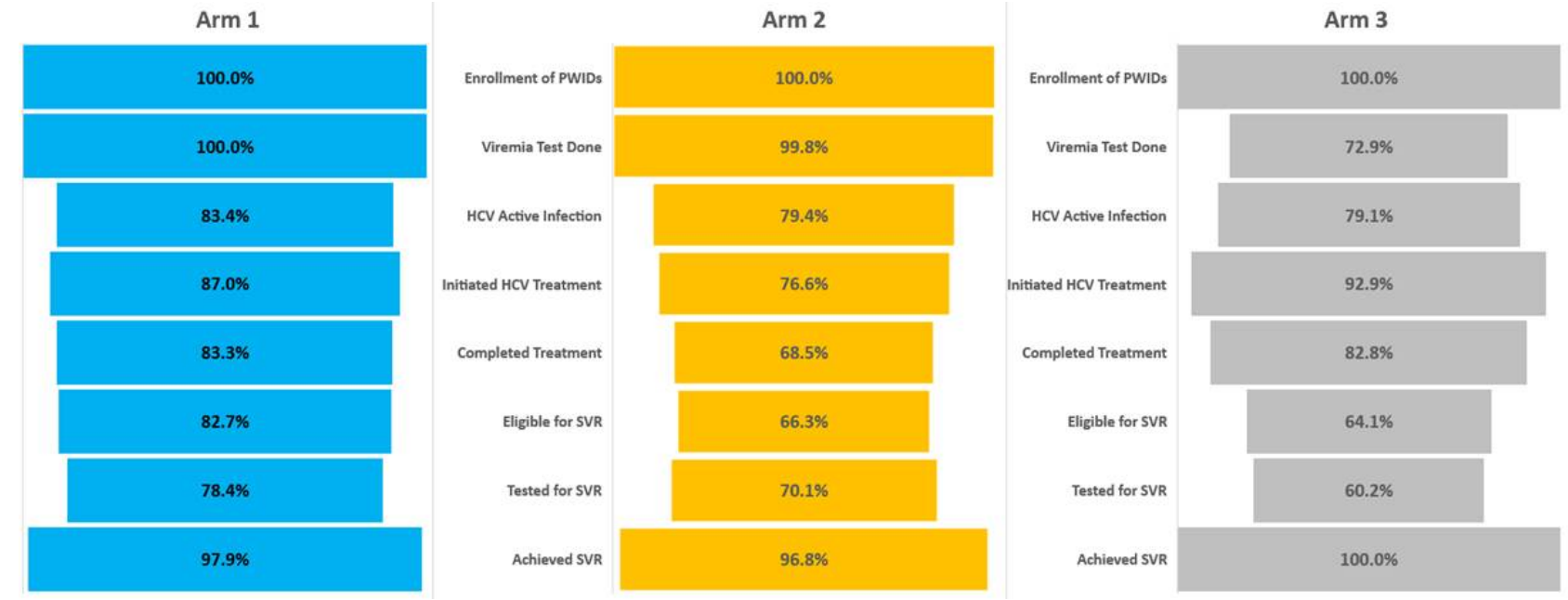
* Diagnostics not free of charge at time of this analysis

FIND Study: Linkage to care among PWID HCVAb+ in harm reduction centers, Georgia

Arm 1= Same day viremia testing GeneXpert, Ve+ referral to treatment
Arm 2 = Same day serum collection for HCVcAg, Lugar Center, Ve+ referral to treatment
Arm 3 = Referral to specialized hospital for Ve testing and treatment initiation



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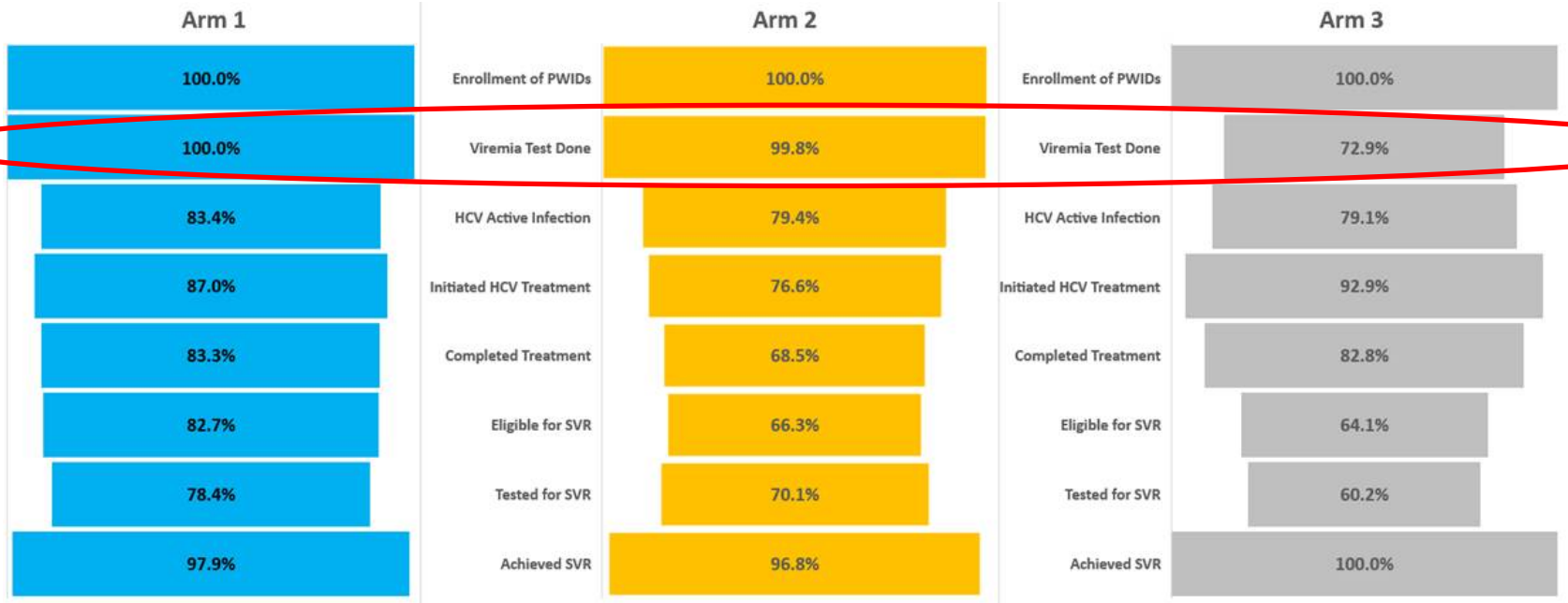

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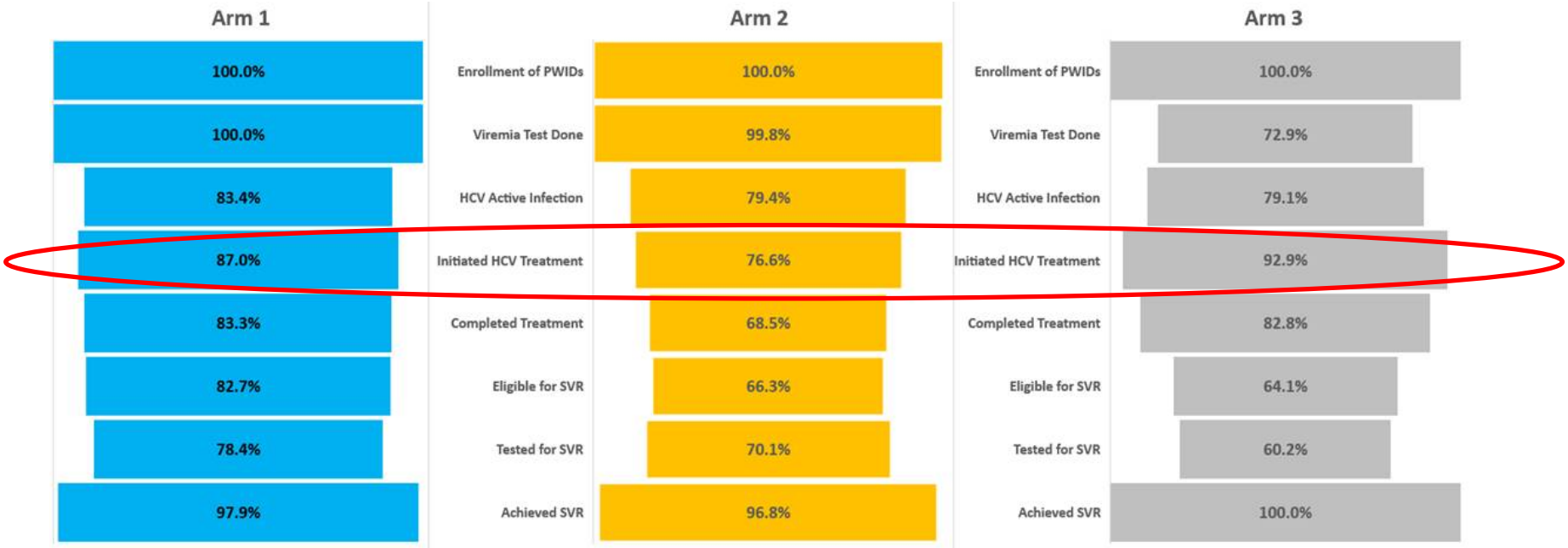


FIND Study*: Treatment initiation (linkage to care) among PWID HCVAb+ in harm reduction centers, Georgia, 2018-19

Arm 1: GeneXpert (RNA) + referral for treatment

- Overall: (100%) X (87.0%) = 87.0%

Arm 2: Reflex viremia testing (HCVcAg) + referral for treatment

- Overall: (99.8%) X (76.6%)= 76.4%

Arm 3: Referral for viremia testing (RNA) + treatment

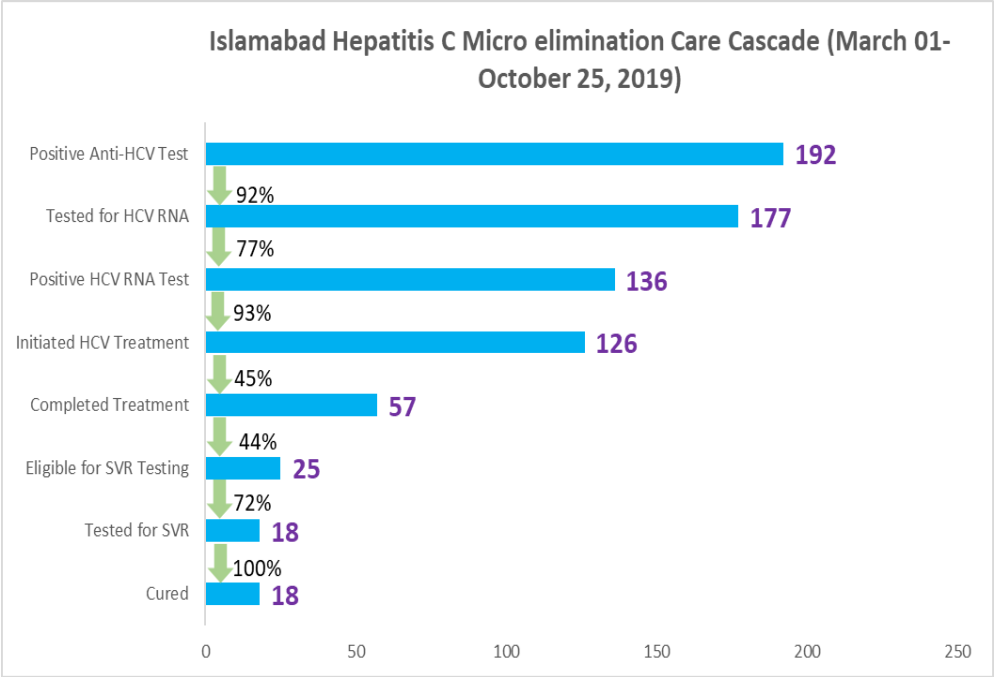
- Overall: (72.9%) X (92.9%)= 67.7%

* No cost for diagnostics as part of study

HCV micro-elimination pilot project, two slums, Pakistan, 2019 (preliminary data)

- **Strategy**
  - House to house screening
  - CHW navigators guide to clinic
  - Same-day viremia testing, APRI, and treatment initiation (pan-genotypic; SOF/DAC)
  - No cost to patients

- **Linkage to care rate (preliminary data)**
  - 92% tested for viremia
  - Among RNA+: 93% initiated treatment
  - Overall: (92%) X (93%) = 86%



Quereshi et al, unpublished

Linkage to care (confirmatory testing & referral of HCV infected) to care & treatment, Georgia & Pakistan, 2018-19

Strategy	Overall Linkage to Care Rate
Hospitals: refer HCVAb+ to specialized center	38%
Hospitals: Reflex HCVcAg confirmation and referral of positives to care and treatment	19%
Harm Reduction: on-site same day GeneXpert HCV RNA confirmation with referral of positives to care and treatment	87%
Harm Reduction: serum for HCVcAg to Lugar Center for confirmation, referral of positives to care and treatment	76%
Harm Reduction: referral of HCVAb+ to specialized center	67%
Pakistan: HCVAb+ to local clinic with same day confirmation and treatment initiation	86%

Conclusions

- Linkage to care rates vary by site and strategy
- Multiple options for linkage to care may increase complexity, in Georgia:
  - Dropout rate following referral for viremia testing increasing
  - Dropout for treatment initiation following positive viremia testing increasing
- Simplifying treatment and diagnostics can improve linkage to care and access through decentralization, but:
  - Lack of pan-genotypic DAAs precludes same-day test/treat, increases costs for government, likely increases drop-out rate
  - Referral of cirrhotic/non-cirrhotic patients (FIB4 > 1.25) from PHC and HR likely increases drop-out
  - 4 week RNA (recently discontinued) improves compliance/efficiency
  - Other testing/visits during treatment may be simplified

Conclusions

- "Hardest to reach" (least motivated?) patients remaining*
  - Poor understanding about HCV elimination program and benefits of treatment to patients
  - Perceived high cost of testing and care, although, recently, all diagnostics and treatment free of charge
  - Navigating the landscape to access services may be challenging
  - Distance to treatment sites may be a barrier
  - Lack of trust in program (mis-information)
- Innovations to increase access in Georgia
  - Simplified regimens, simplified/decentralized diagnostics (i.e. GeneXpert), decentralization of treatment services, & eliminating costs

* Health Research Union and NCDC, FIND, CDC unpublished

Innovation to improving linkage to care

- Monitor/assess linkage to care rates across different strategies (high yield)
- Develop media messages of benefits of program: saves lives & free of cost
- Minimize stigma: treat PWID in harm reduction (HR) settings
- Expand treatment in medical home: primary health care (PHC) & HR
  - Include compensated cirrhotics
  - Simplify regimens/eliminate genotype requirement with pan-genotypic regimens, same day treatment initiation if possible
  - Eliminate costs (done)
  - Outreach (mobile vans & other)
  - Utilize navigation/case management strategies to minimize drop-outs
  - Local planning: recruit motivated local leadership
  - Focus on high yield settings

Didi Madloba!

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov