

**C-FREE:
COMMUNITY BASED TESTING
AND TREATMENT OF HCV,
HBV, & HIV AMONG PEOPLE
WHO USE DRUGS AND THEIR
PARTNERS IN THAILAND**

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ISSUP World Hepatitis Day Webinar
25 July 2022

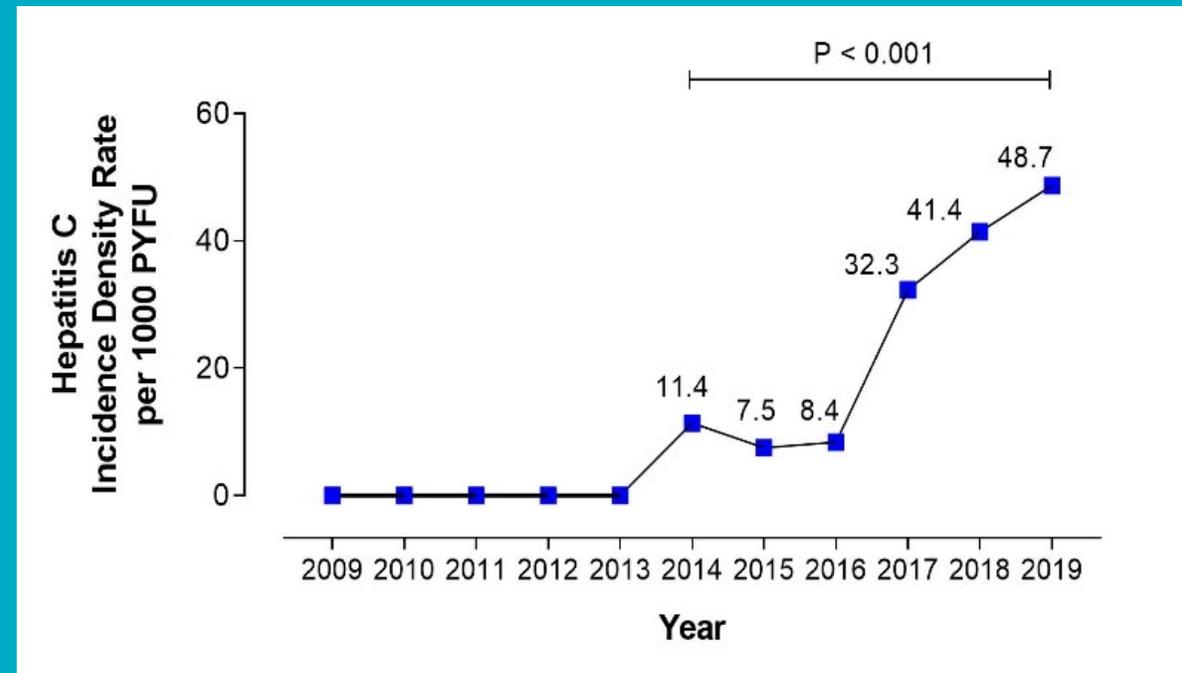
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No conflicts of interest to report



HCV among key populations: PWID/PWUD and MSM

- Among PWID, global HCV antibody prevalence reported at 52.3% (95% CI 42.4-62.1%). Recent WHO estimates for PWID in Thailand are near 60%.
- PWID account for 50-60% of all HIV/HCV coinfections worldwide
- MSM identified as emerging KP for HCV infection with multiple outbreaks and increasing incidence noted globally.
 - Methamphetamine use, group sex, syphilis co-infection identified as key risk factors for HCV acquisition.



- Degenhardt et al, *Lancet Global Health*, 2017

- Wansom et al, *JAIDS*, 2020



C-FREE Primary Objectives

Among people who use drugs and their sexual/life partners:

1. Evaluate prevalence of HIV, HBV, and HCV through community-based testing
2. For people living with HIV (PLHIV), measure engagement in care and rates of viral suppression
3. Assess effectiveness of community-based HCV treatment using direct acting antivirals (DAAs)

Emphasis on delivering one-stop shop diagnosis and treatment within community drop-in centers offering harm reduction services



C-FREE: Study Design



First study in Thailand to offer community-based integrated HCV treatment to active and former drug users and their partners.



Currently conducted at seven clinical sites in five Thai cities embedded in community centers run by partner organizations that provide outreach and harm reduction services.



Those who are 18 and over, provide informed consent, and have a past/current history of drug use or are sexual/life partners of former/current drug users are eligible to participate.

C-Free Study :

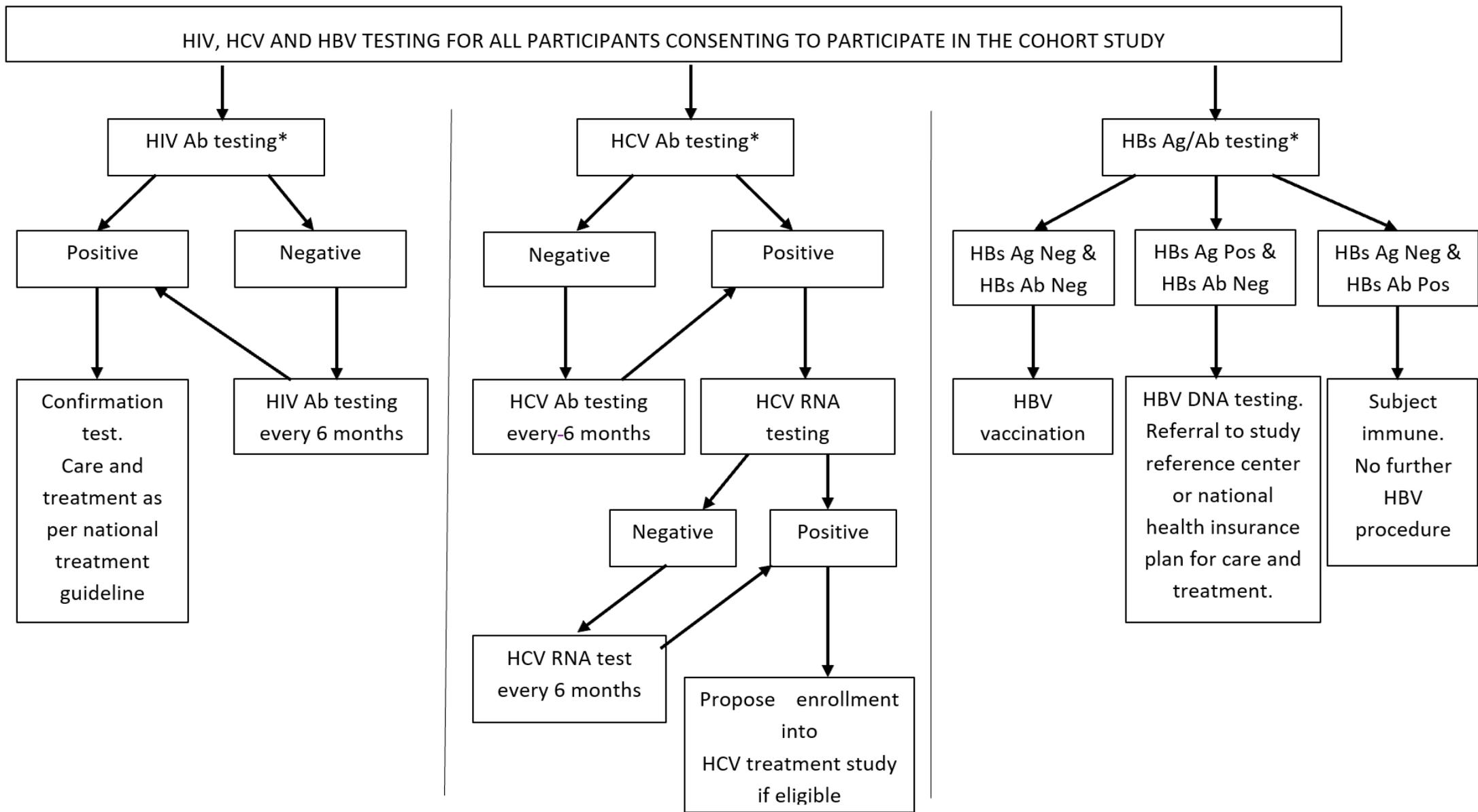
Testing and Diagnosis

- Prospective cohort study
- HIV, HBV, HCV testing every six months
- Nurses collect blood and conduct all rapid and GeneXpert testing (HIV RNA, HBV DNA, HCV RNA)

HCV Treatment

- Nested open-label treatment study
- 12 weeks of sofosbuvir/velpatasvir, direct acting antiviral (DAA) that treats ALL genotypes of HCV, for eligible participants with active HCV.





* Participants with prior evidence of results for these tests may not need to repeat them. For details, refer to narrative of section 6.

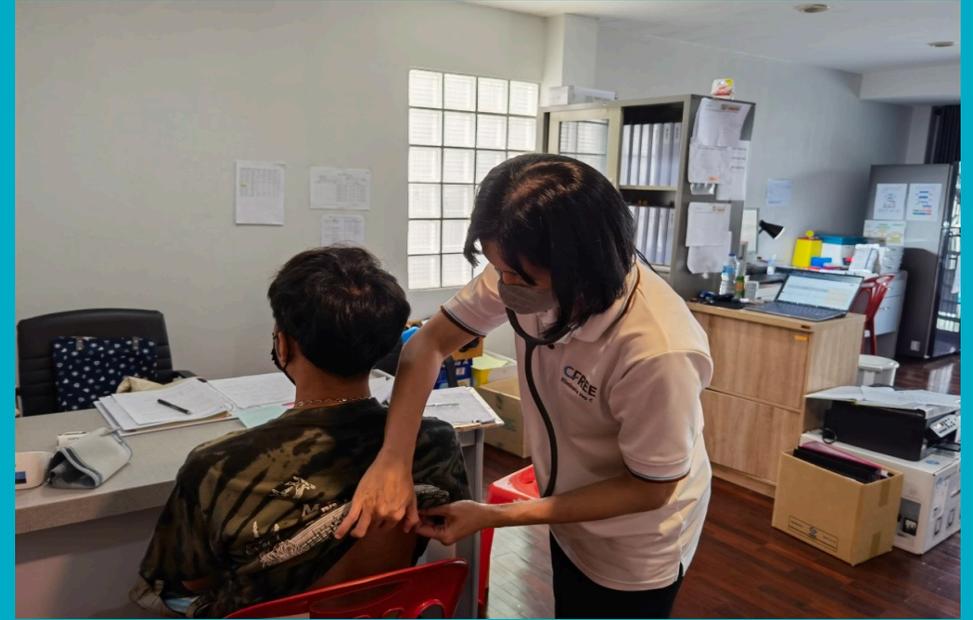


Eligibility criteria for HCV treatment

- **Inclusion criteria:** Cohort participants with detectable HCV RNA
- Cirrhosis assessed by APRI score (AST to platelet ratio)
 - If 2.0 and above, referred for abdominal ultrasound to rule out hepatocellular carcinoma (HCC)
 - Specialty labs: AFP, PT/INR, albumin, bilirubin
- **Key exclusion criteria**
 - Prior history of treatment failure with sofosbuvir-containing regimen
 - Decompensated liver cirrhosis (Child Pugh B and above)
 - Hepatocellular carcinoma (HCC)
 - eGFR<30 ml/min
 - Pregnancy
- Sofosbuvir/velpatasvir cannot be taken concomitantly with:
 - Efavirenz (HIV therapy)
 - Rifampin/rifampicin (TB therapy)
 - If patients on these meds, asked to switch or wait until therapy completed prior to HCV treatment



C-FREE Clinic Sites





C-Free Cohort Results: May 1, 2022

Cohort Study:



2,210
participants

- 34% from Southern provinces
- 51% enrolled at Bangkok sites
- Approximately 15% travel from other provinces
- 13% from Chiang Mai (site initiated in Nov 2020)
- 3% from Tak (site initiated in Jan 2022)



78% are referred by community outreach workers

Chiangmai
Thai Drug Users
Network

Tak
Give Hope

Bangkok
Raks Thai
Ozone
APASS

Songkhla
CARE TEAM

Narathiwat:
Together



Key Cohort Demographics

Baseline Characteristic	Cohort Study (n=2,210)
Median age in years (range)	40.4 (18-77)
Female sex at birth, n (%)	319 (14.4%)
Transgender	19 (0.9%)
Men who have sex with men	309 (14%)
Highest education level completed	
Primary school	650 (29.4%)
Secondary school	495 (22.4%)
High school	318 (14.4%)
Injecting drug use	
Current	874 (39.6%)
Previous	997 (45.1%)
Age at first injection (median, IQR)	20 (18, 26)
Alcohol use	
Current	475 (21.5%)
Previous	664 (30.0%)
History of incarceration	936 (42.3%)

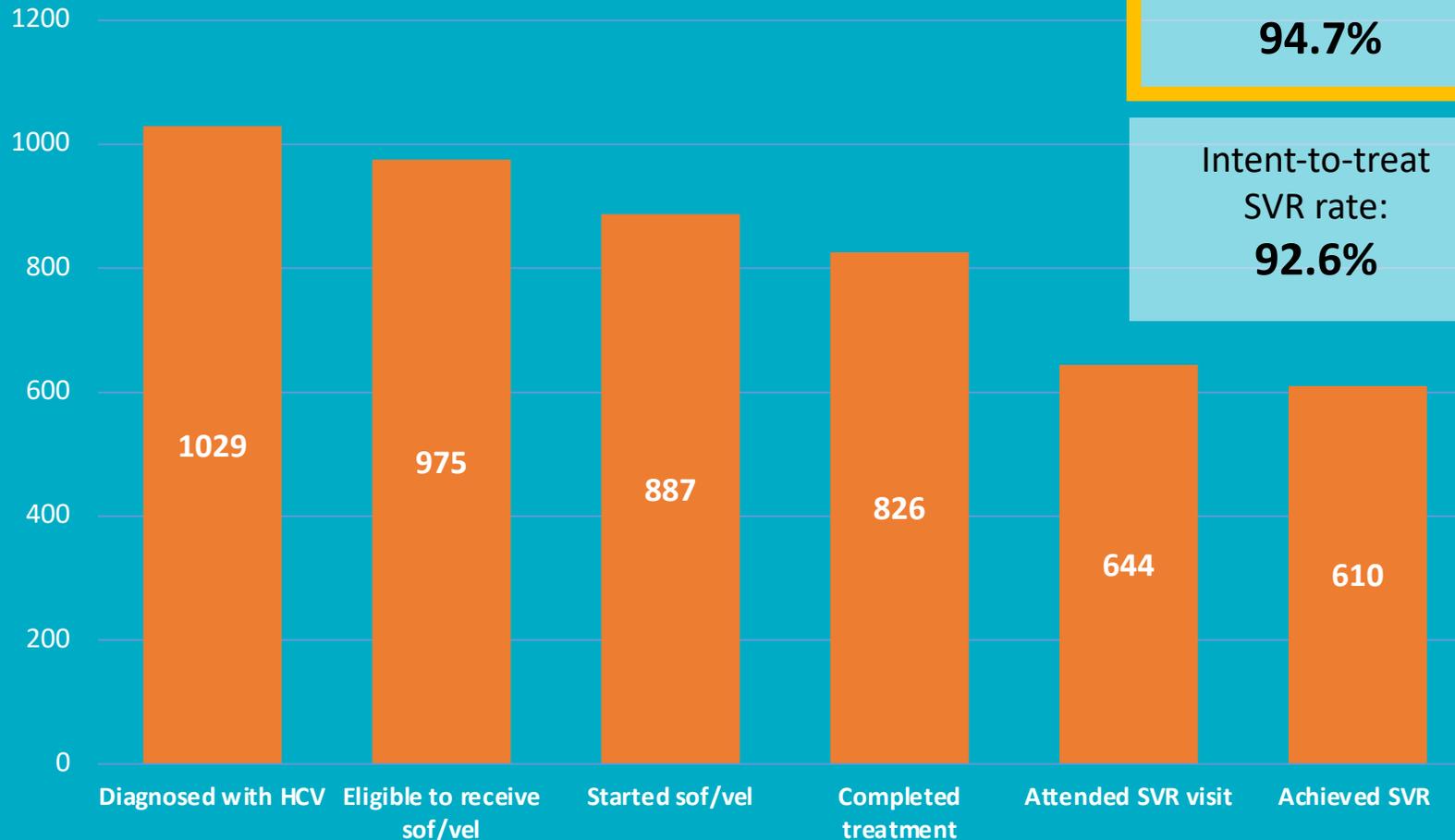
HIV, HBV, and HCV

	Cohort Study (n=2,210)
HIV	
HIV infection, N (%)	708 (32.0%)
On ART	643 (90.8%)
Undetectable HIV RNA (<40 copies/ml)	539 (76.1%)
Hepatitis B	
Chronic HBV (HBs Ag positive)	164 (7.5%)
Hepatitis B immune (HBs Ab positive)	642 (29.1%)
Hepatitis C	
HCV Antibody positive	1317 (59.6%)
Chronic HCV (HCV RNA >LLOD) ⁺	1029 (78.1%)
Cirrhosis (APRI 2.0 and above) [§]	106 (10.3%)
Coinfection	
HIV/HCV*	485 (68.5%)
HIV/HBV	23
HIV/HBV/HCV	14
HBV/HCV	16

+ Percentage of HCV Ab positive
 § Percentage of chronic HCV
 *Percentage of HIV infected

Excellent HCV Cure (SVR) Rate

C-Free HCV Treatment Cascade



Per-protocol SVR rate:
94.7%

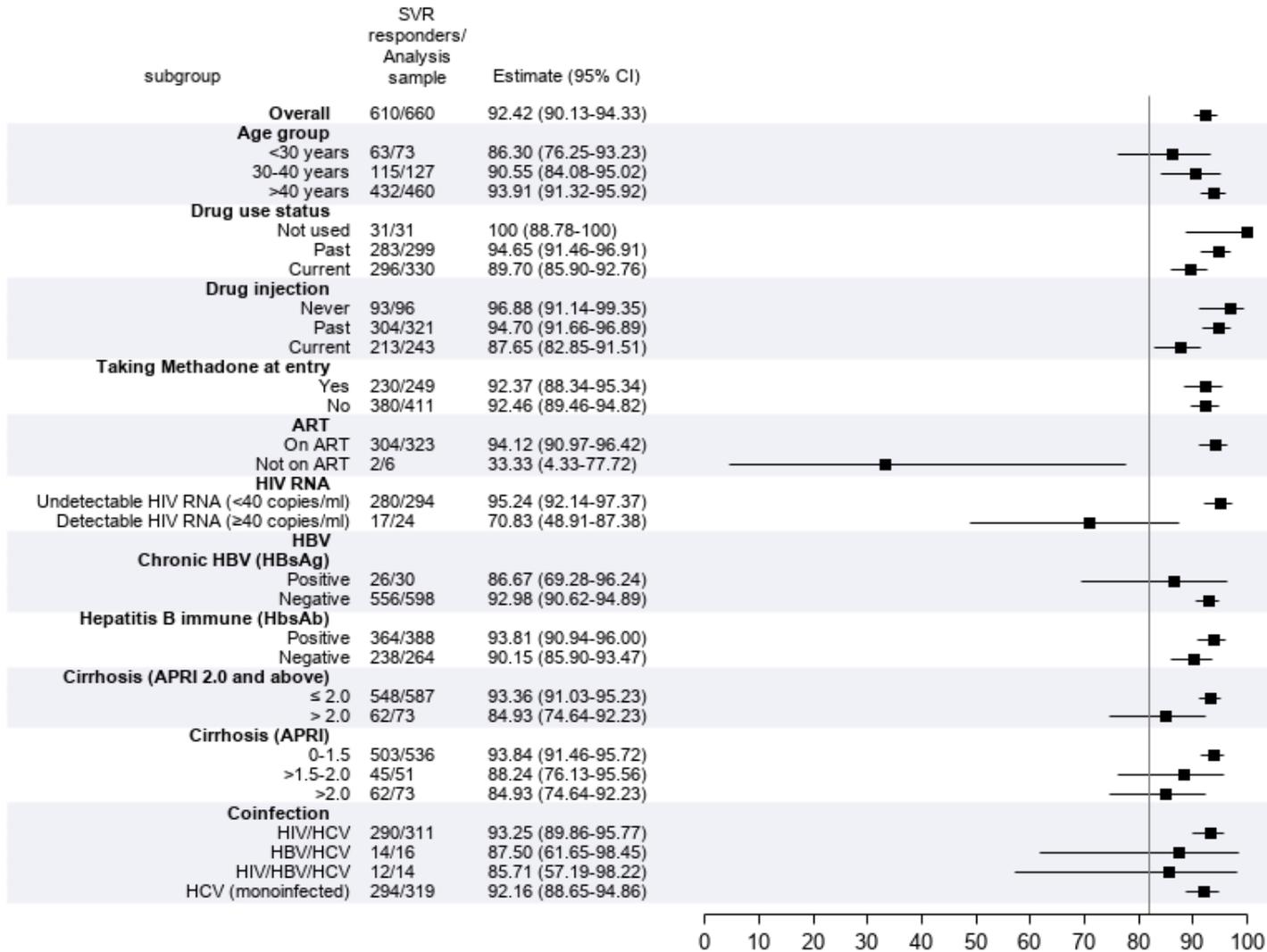
Intent-to-treat SVR rate:
92.6%



- Study is ongoing.
- 12 weeks is the time of the treatment course.
- SVR (cure) is measured at least 12 weeks after completion of treatment.
- **The majority of participants in between these visits are in the process of completing treatment or awaiting SVR.**

Data as of 1 May 2022

Predictors of SVR



Age, drug use status, coinfection status, APRI score were NOT SIGNIFICANTLY associated with SVR, although some differences seen in younger age groups, higher APRI scores.

Only **significant** predictor was being on ART and/or undetectable HIV RNA ($p=0.005$) in those who were coinfecting with HIV/HCV

Lessons Learned



Effective

Excellent cure rates among traditionally difficult-to-reach population

Comprehensive

The model of care can be expanded to offer comprehensive services for PWID/PWUD, partners and other high-risk groups.

Engaging

Those who are HIV+ and/or HBV+ are re-engaged in care or start therapy.

Safe

No SAE (serious adverse events) considered related to study medicine

Decentralization

Non specialist doctors can effectively treat HCV

Access

Increased access to curative treatment

Hospitals and others refer their patients to C-FREE



Engagement and Advocacy

- Education and training of community outreach workers
- Knowledge sharing within province and regions
 - Integration within informal and formal referral processes for HCV care
 - Fostering relationships with ARV clinic nurses for HIV coinfecting participants
- Support for medication dispensation, necessary study procedures for incarcerated participants through Department of Corrections
- Advocacy for national policy changes to support reimbursement of community-based testing, care



Acknowledgements



THANK YOU



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