5th HEPATITIS C TECHNICAL ADVISORY GROUP

TAG Meeting

ESTABLISHING A GEORGIAN PWID COHORT STUDY TO ESTIMATE INCIDENCE OF HCV INFECTION

Ketevan Shermadini, MD

Infectious Diseases, AIDS and Clinical Immunology Research Center

Background

- People who inject drugs (PWID) are at highest risk of hepatitis C
- 38.2% of HCV infections in Georgia is attributed to injection drug use
- Estimated size of PWID population in Georgia: 52,500
- anti-HCV prevalence among PWID: 57.1%-91.9%
- HCV incidence is unknown

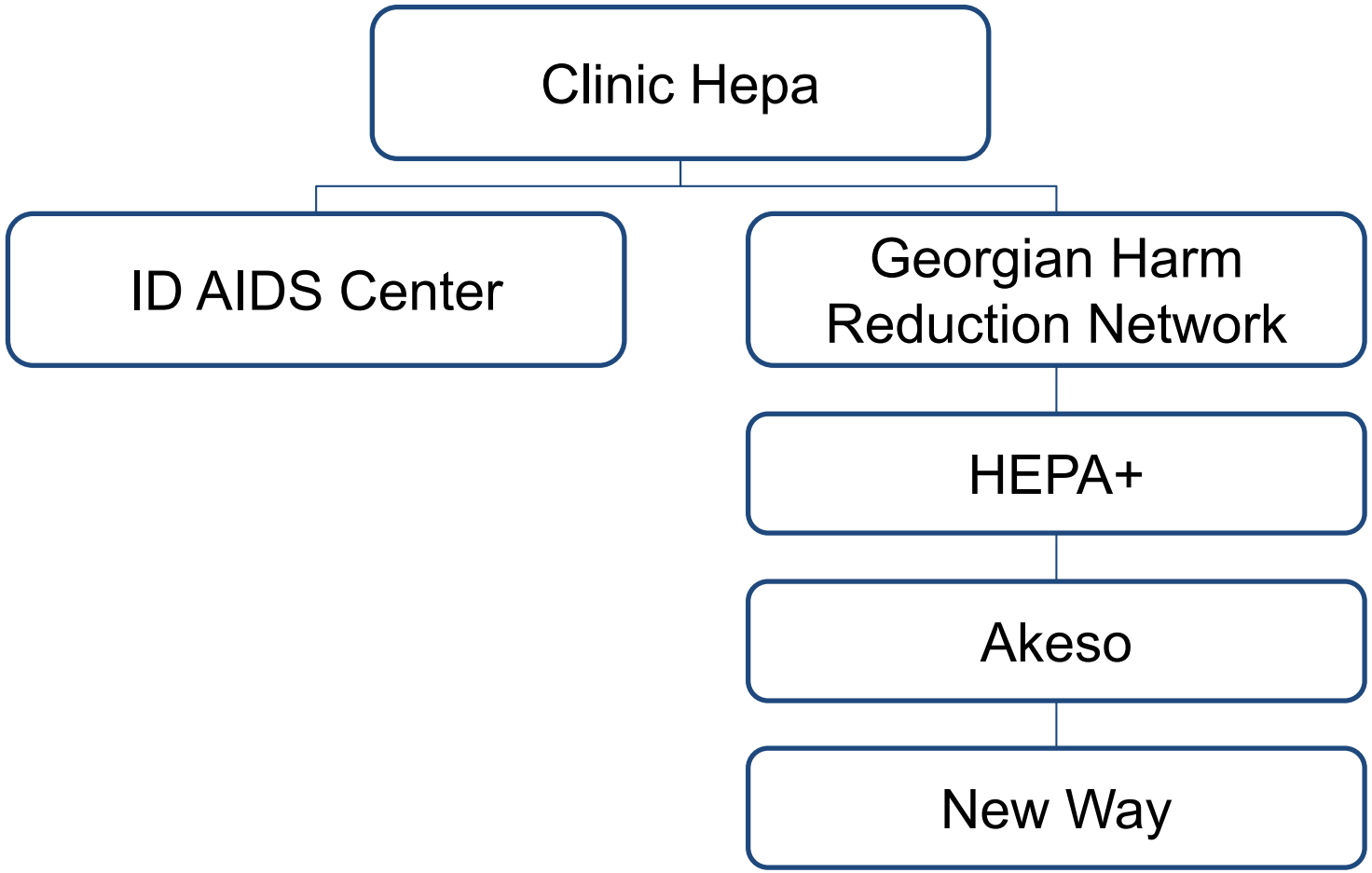
Liang TJ, Ward JW. N Engl J Med. 2018;378:1169-1171. Hagan LM et al. BMC Public Health 2019;19(Suppl 3):480. Shapatava E, et al. Drug Alcohol Depend. 2006;82(Suppl 1):S35-8. CIF. IBBSS Surveys 2015, 2017. Bouscaillou J, et al. Int J Drug Policy. 2014;25:871-8.

Objectives

In 2018 Georgian PWID Cohort Study was established

- Estimate prevalence and incidence of HCV infection in PWID
- Explore factors associated with prevalent and incident HCV infections among PWID

Participating Organizations



Methods

- Prospective observational cohort study
  - Baseline cross-sectional survey
  - 6 monthly follow-up of anti-HCV negative persons
- Location: Capital city of Tbilisi
- Main outcome measure: anti-HCV status
- Eligibility
  - Injected drugs within 6 months, ≥18 years, both genders, able to communicate in Georgian, informed consent
- Recruitment
  - Incentivized chain-referral sampling with max 5 peers recruited by each participant

Methods

- Rapid anti-HCV test
- Structured questionnaire
  - Socio-demographic information
  - Injection practice
  - Non-injection related risk factors
  - Knowledge about HCV
  - History of HCV treatment
  - Risk assessment battery (RAB)
  - Health status using EQ-5D-5L

Cohort population

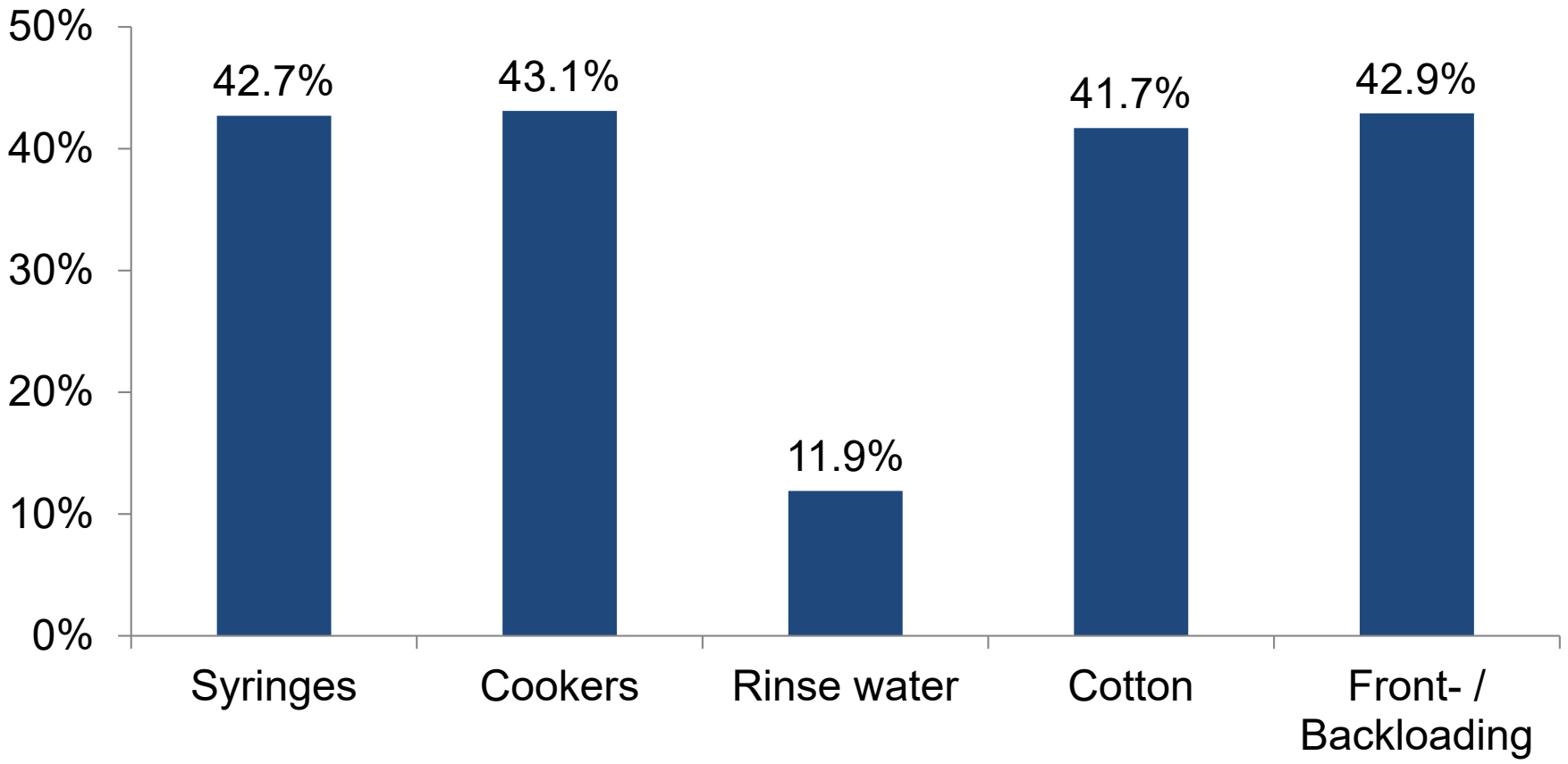
1,744 PWID Enrolled in the Cohort

Characteristic	n (%)
Age, median years (IQR)	40 (33-49)
Men	1655 (94.9%)
High-school education	1011 (58.0%)
Unemployed	897 (51.5%)
Monthly income	
<300 GEL	438 (25.1%)
300-<500 GEL	578 (33.2%)
500-<700 GEL	564 (32.4%)

Baseline survey: Drug use

Characteristic	n (%)
Age at first injection, median years (IQR)	19 (16-22)
Duration of injection, median years (IQR)	12 (9-18)
No history of OST	1269 (72.8%)
# injections within 30 day, median (IQR)	7 (5-10)
# different persons injected with, median (IQR)	3 (2-5)

Baseline survey: Sharing Injection Paraphernalia



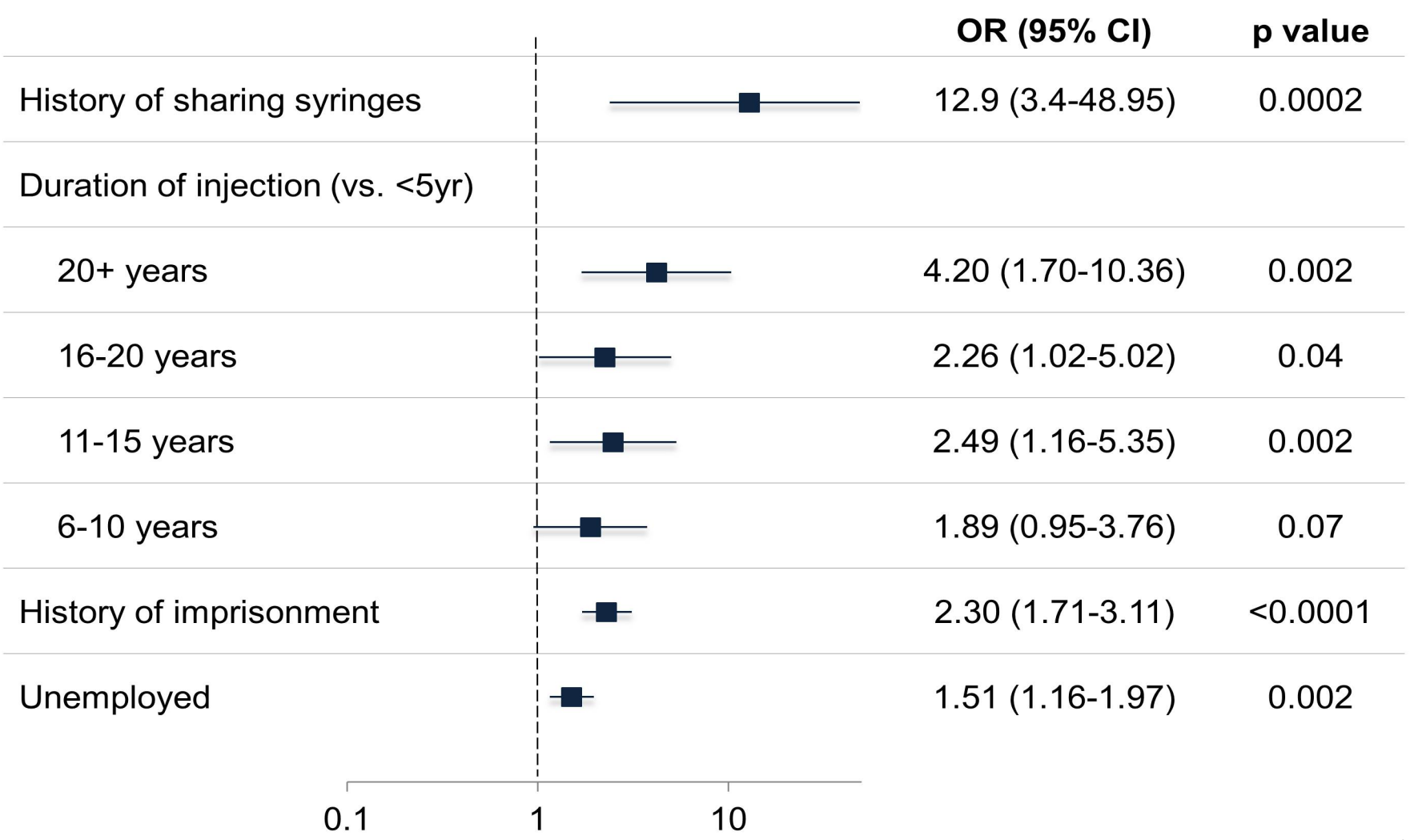
Baseline survey: Other risk factors

Characteristic	n (%)
History of imprisonment	444 (25.5%)
Ever been homeless	40 (2.3%)
History of blood transfusion	123 (7.1%)
History of surgery	384 (22.0%)
History of dental procedure	1244 (71.4%)

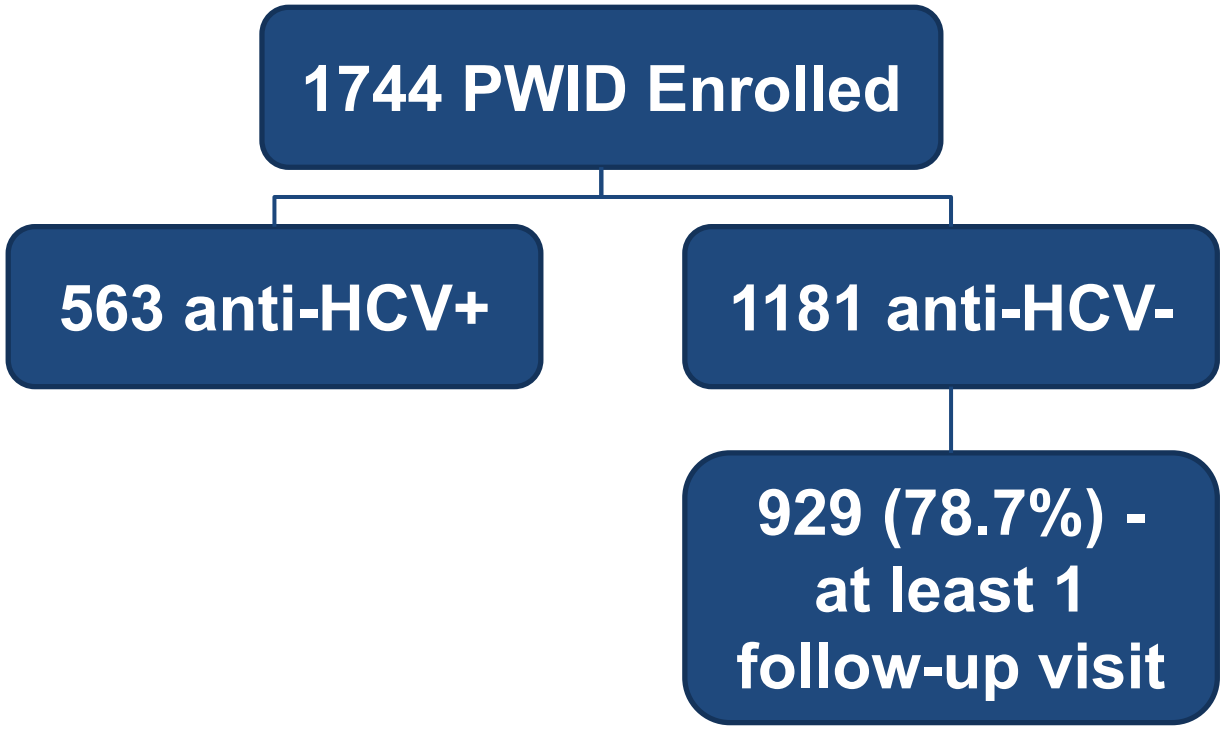
Baseline anti-HCV Prevalence

32.3% (563/1744)

Risk factors for prevalent anti-HCV+



Follow-up

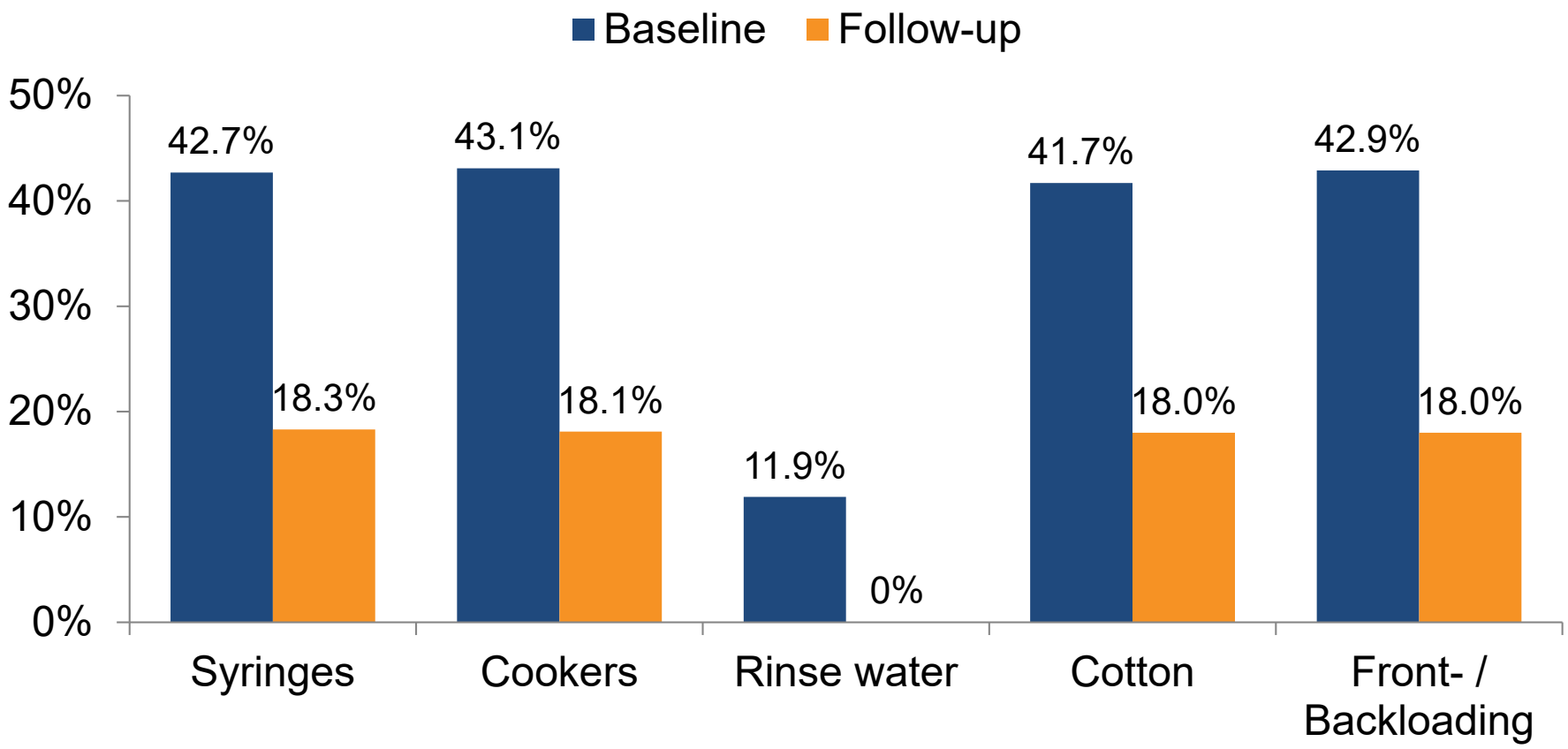


- Median follow-up:11 (IQR: 10-12) months
- Total follow-up: 906 person-years

Follow-up: Injection practices

	Baseline (n=1744)	Follow-up (n=929)
# injections within 30 day, median (IQR)	7 (5-10)	12 (5-17)

Sharing Injection Paraphernalia



Other Risk Factors

Characteristic	Baseline (n=1744)	Follow-up (n=929)
History of imprisonment	444 (25.5%)	7 (0.8%)
Ever been homeless	40 (2.3%)	3 (0.3%)
History of blood transfusion	123 (7.1%)	2 (0.2%)
History of surgery	384 (22.0%)	126 (13.6%)
History of dental procedure	1244 (71.4%)	292 (31.5%)

Incidence of HCV infection

anti-HCV seroconversion was documented in 7 (0.8%) persons

	Rate per 100 PY (95% CI)	p value
Total cohort (n=929)	0.77 (0.31-1.59)	
Sharing of injection equipment during follow-up		
Yes (n=170)	1.82 (0.38-5.31)	0.14
No (n=759)	0.54 (0.15-1.38)	
Invasive medical procedures during follow-up		
Surgical (n=126)	0.82 (0.02-4.57)	0.59
Dental (n=292)	1.39 (0.38-3.57)	0.16
No procedures (n=511)	0.40 (0.05-1.45)	
# injections in preceding month		
≥12 (n=505)	0.78 (0.21-1.98)	0.99
<12 (n=424)	0.77 (0.16-2.25)	

Limitations

- Limited to Tbilisi, not nationally representative
- Low numbers of incident cases limited statistical power
- No HCV RNA testing

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Conclusions

- Incidence of HCV infection in our cohort was low
- Although not statistically significant, rates on new infection were higher among those reporting sharing of injection equipment (1.82/100PY vs. 0.54/100PY)
- Although not statistically significant, higher rates of HCV infection among persons with history of medical procedures, particularly dental procedures, requires additional attention

Acknowledgement

- Funding: CDC Foundation #807-17 SC
- Participating organizations
- All persons enrolled in the cohort