



BC Centre for Disease Control
Provincial Health Services Authority

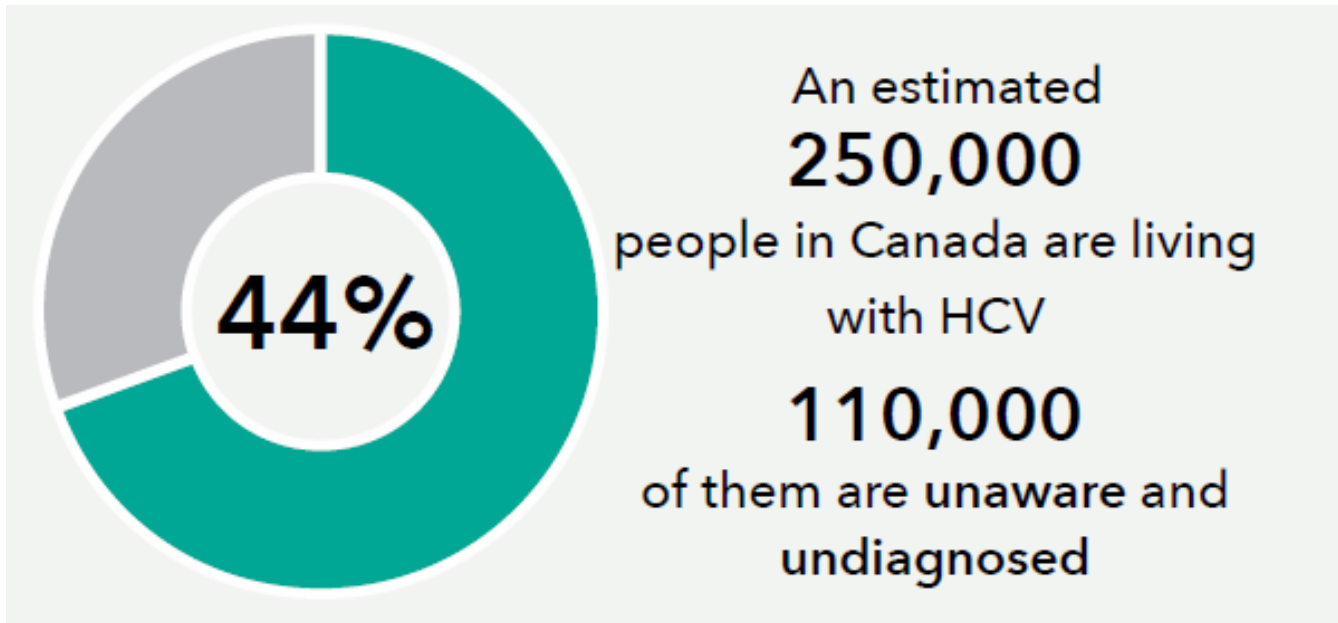


Implementation of reflex HCV RNA testing at the BCCDC

Agatha Jassem, PhD, D(ABMM), FCCM

Program Head, Virology/Molecular Diagnostics

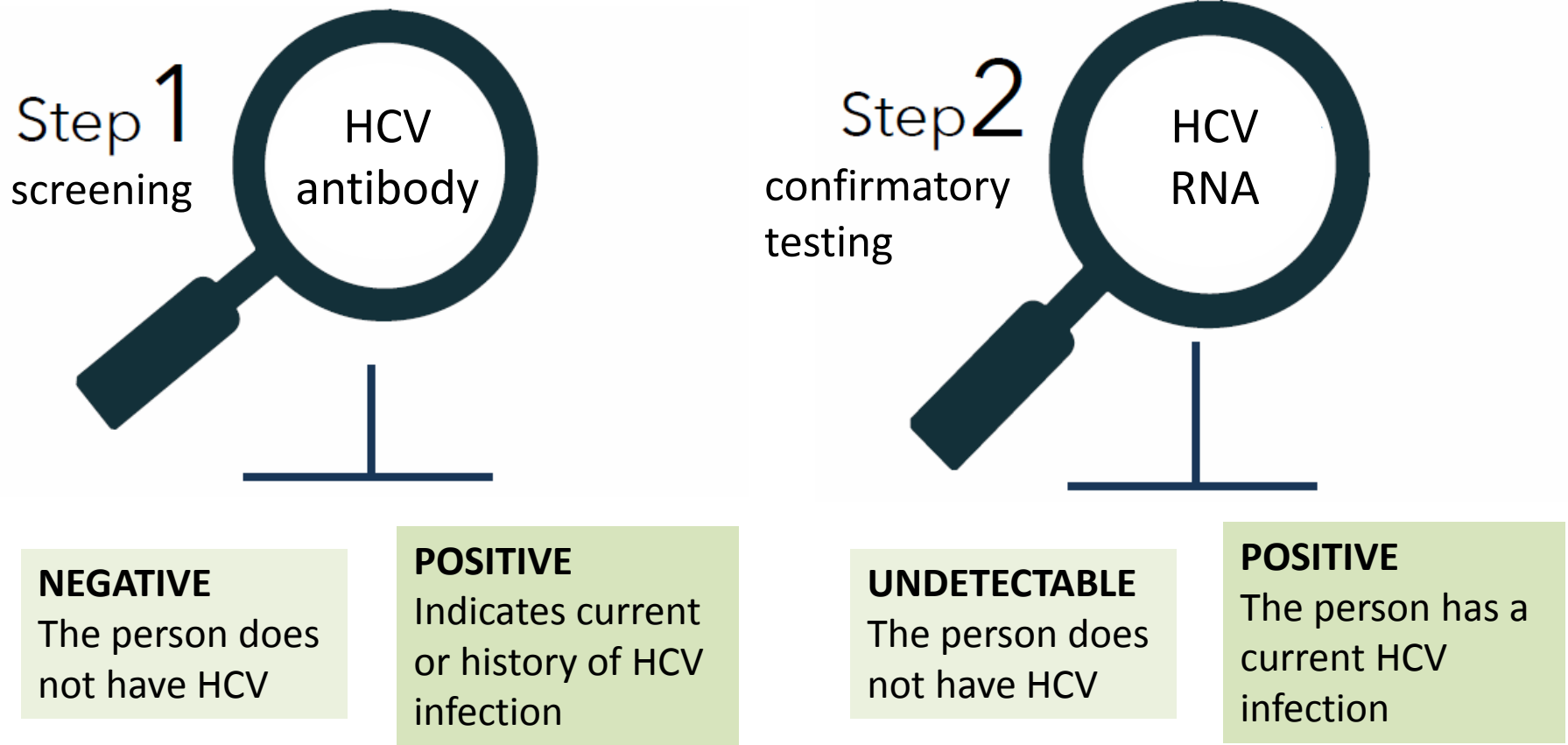
BCCDC Public Health Laboratory



“Identifying people who are undiagnosed and linking them with care and treatment before they develop HCV complications will decrease the health consequences of HCV.”

Blueprint to inform Hepatitis C Elimination Efforts in Canada, CanHepC 2019

Current HCV screening and testing algorithm

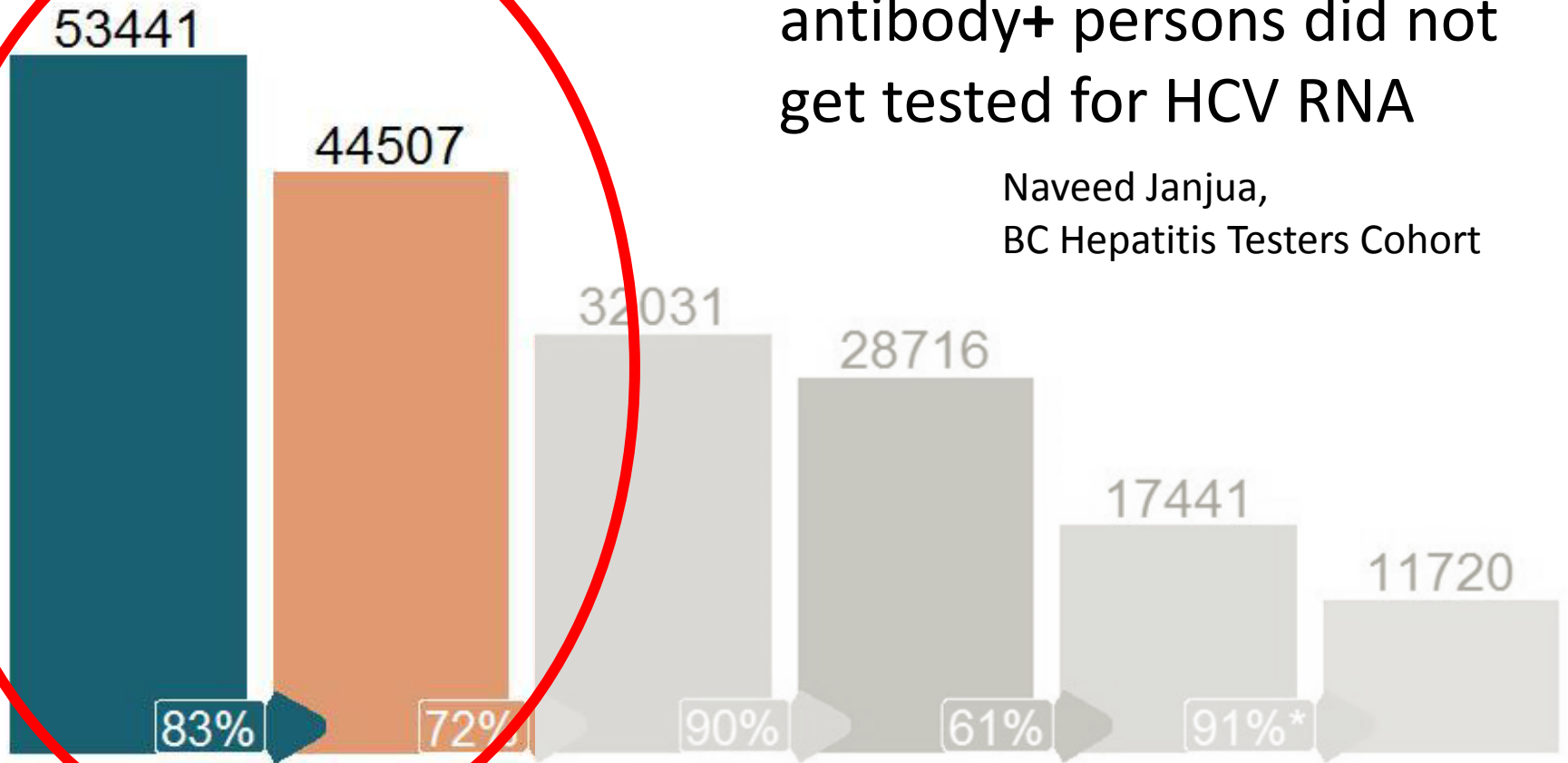


25-35% of people who test antibody positive never have a follow-up RNA test (up to 73% in Priority populations)

In BC in 2018, 17% of antibody+ persons did not get tested for HCV RNA

Naveed Janjua,
BC Hepatitis Testers Cohort

Number of persons



Diagnosed



RNA
tested



RNA
positive



Genotyped

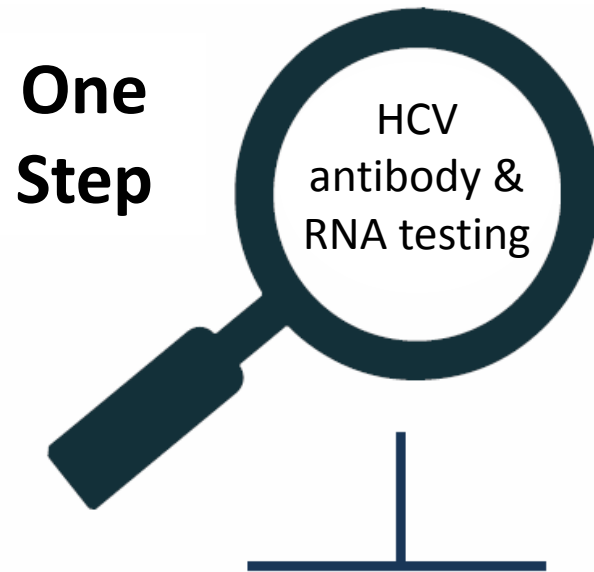


Treated



SVR

Proposed HCV screening and testing algorithm



Reflex HCV RNA testing is performed for all first-time positive antibody test results

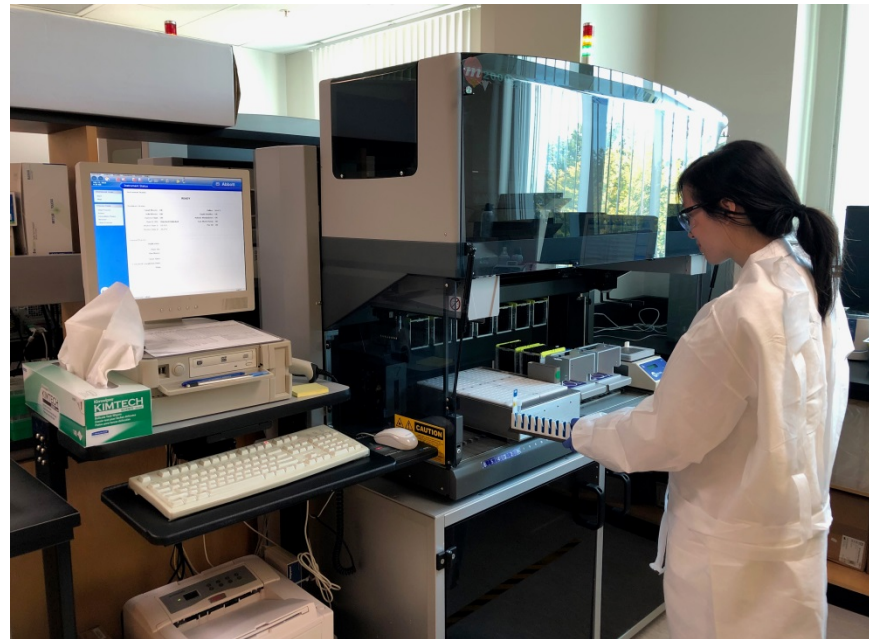
At the BCCDC Public Health Lab will use the blood sample collected for antibody testing for reflex RNA testing

Serum HCV RNA testing verification

Testing platform: Abbott RealTime HCV RNA assay

Methods: 27 patients with 1 EDTA plasma & 2 SST serum samples collected on the same day were included

- 1 plasma & 1 serum sample tested in parallel upon receipt
- Second serum sample held for 10 days post collection at 4°C prior to testing (RNA stability analysis)



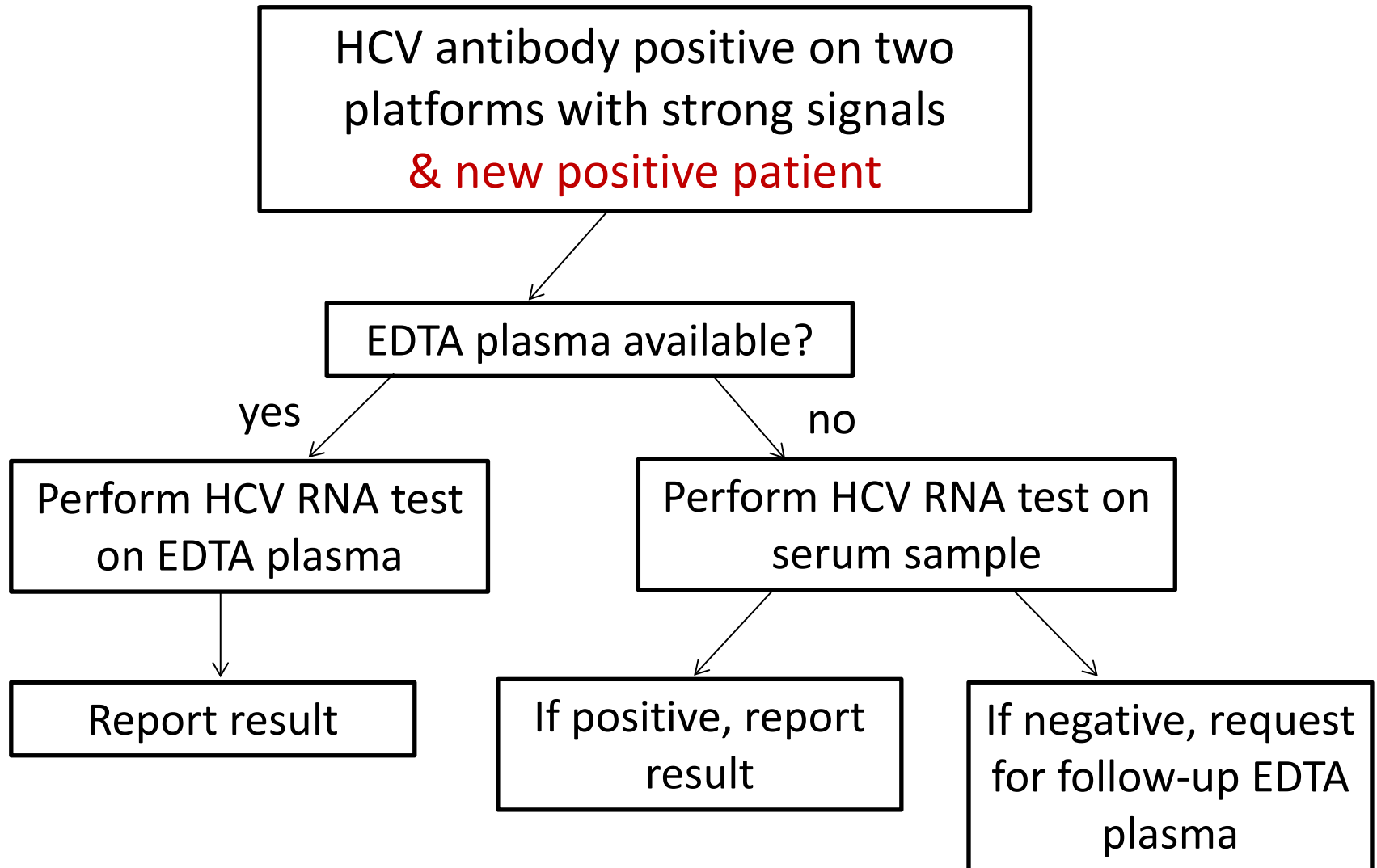
Serum HCV RNA testing verification

Study ID	log IU/mL				log IU/mL		
	EDTA	SST1	SST2		EDTA	SST1	SST2
1	5.89	5.70	4.77	20	6.12	6.35	6.34
2	6.95	7.00	7.07	21	5.81	5.88	5.90
3	6.22	6.06	6.49	22	6.53	6.69	6.71
4	4.18	4.06	4.18	23	5.02	5.02	4.93
5	5.30	5.46	5.47	24	6.71	6.75	6.83
7	5.55	5.53	5.67	25	6.66	6.63	6.69
8	2.83	4.84	3.61	26	4.80	5.75	5.85
9	6.35	6.56	6.38	27	6.44	6.69	6.46
10	5.92	6.09	6.01				
11	3.88	4.90	4.24				
12	6.74	6.81	6.80				
13	5.87	6.03	5.38				
15	5.61	5.77	5.84				
16	6.63	6.65	6.47				
17	5.51	6.30	5.76				
18	7.15	7.23	7.05				
19	5.55	6.42	6.00				

*2/27 patients were HCV RNA negative

	Δ log IU/mL		
	SST1 - EDTA	SST2 - EDTA	SST2 - SST1
Mean	0.277	0.107	-0.171
Standard deviation	0.482	0.381	0.369

Proposed HCV RNA testing workflow: Fall 2019



Acknowledgements

Dr. Mel Krajden, Medical Director, BCCDC PHL

Dr. Paul Levett, High Volume Serology, BCCDC PHL

Virology/MD leads: Frankie Tsang, Kingsley Gunadasa, Ron Chow

HV Serology leads: Annie Mak, Ken Chu, Tamara Pidduck

Martin Cheung, Molecular Validation

All of our
technologists and
MLAs!



CanHepC

Canadian Network on Hepatitis C
Réseau Canadien sur l'Hépatite C

