Linking testing to treatment:

Update on hepatitis C care in Ontario

PRESENTED BY

Dr. Michelle Murti

Dr. Mina Tadrous

Dr. Jordan Feld

Dr. Chris Steingart

March 16, 2020

CATIE

Canada's source for HIV and hepatitis C information

Today's Agenda

Hepatitis C epidemiology in Ontario *Dr. Bryna Warshawsky, Public Health Ontario*
Hepatitis C treatment data in Ontario *Dr. Mina Tadrous, Ontario Drug Policy Research Network*
The big picture of hepatitis C care in Ontario *Dr. Jordan Feld, University Health Network*
The frontline perspective on hepatitis C care *Dr. Chris Steingart, Sanguen Health Centre*
Q&A and discussion

Dr. Bryna Warshawsky is a Public Health Physician at Public Health Ontario working in communicable diseases and emergency preparedness and response. Her expertise includes vaccine-preventable diseases, outbreak management and communicable disease prevention and control. She is also an Assistant Professor in the Department of Epidemiology and Biostatistics at Western University.

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The Epidemiology of HCV in Ontario, 2018

Dr. Michelle Murti

Public Health Physician

Communicable Diseases, Emergency Preparedness and Response

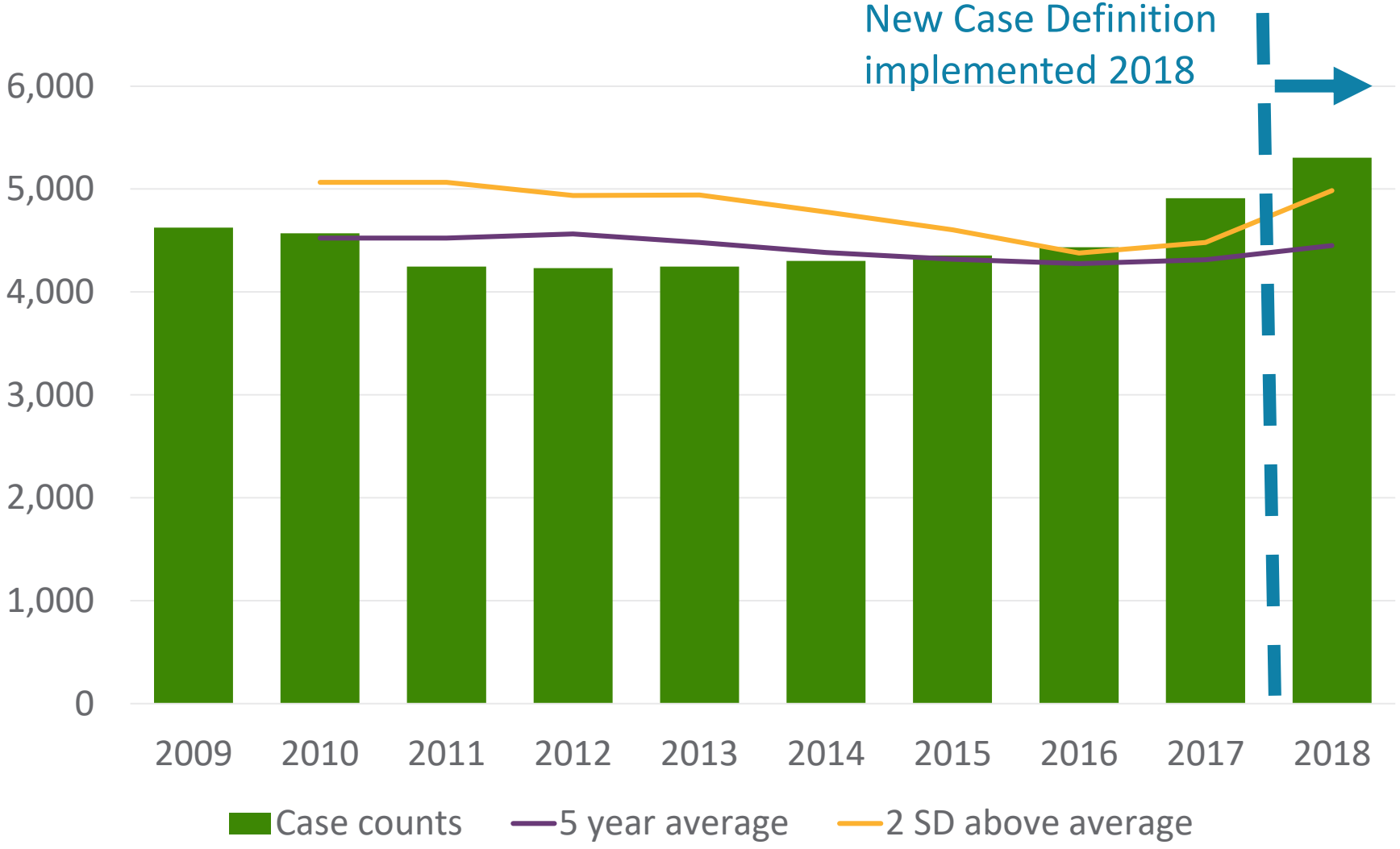
March 16, 2020

CATIE Webinar

Overview

- Trends over time for HCV
- Describe case definition change as of 2018
- Trends in Ontario in 2018 after the case definition change

HCV Annual Cases



Public Health Ontario, ID Query, data as of October 16, 2019

Pre-2018

- All confirmed positive anti-HCV antibodies reported to public health
  - Entry of all cases
  - No differentiation of potential timing of acquisition
  - No differentiation of whether infectious or not

As of 2018 - New Case Definition

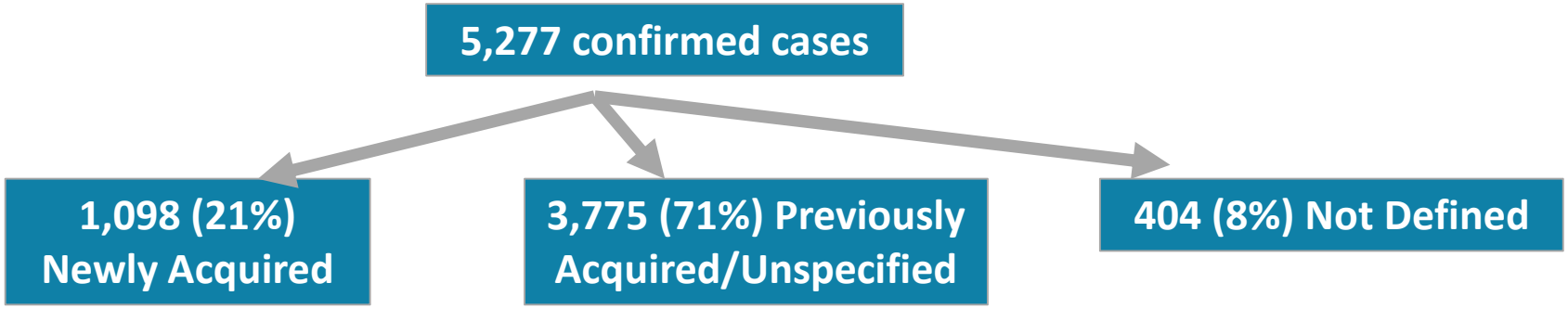
- All positive anti-HCV antibody results reported
- **NEW:** All detectable HCV RNA results reported
- When a new positive result is reported, a cumulative history of antibody and RNA testing (from PHO) is provided
  - Able to assess **whether there has been a change in status** (negative to positive)
  - Able to **assess RNA infectiousness** status

New Case Definition

- "Newly Acquired"
  - Seroconversion within last 24 months; OR
  - Compatible symptoms of acute hepatitis
- "Previously Acquired/Unspecified"
  - Seroconversion >24 months or no known prior negative

- Use of either antibody or detectable RNA as evidence of infection
- Able to classify cases as RNA +ve/-ve/unknown (if no RNA result)

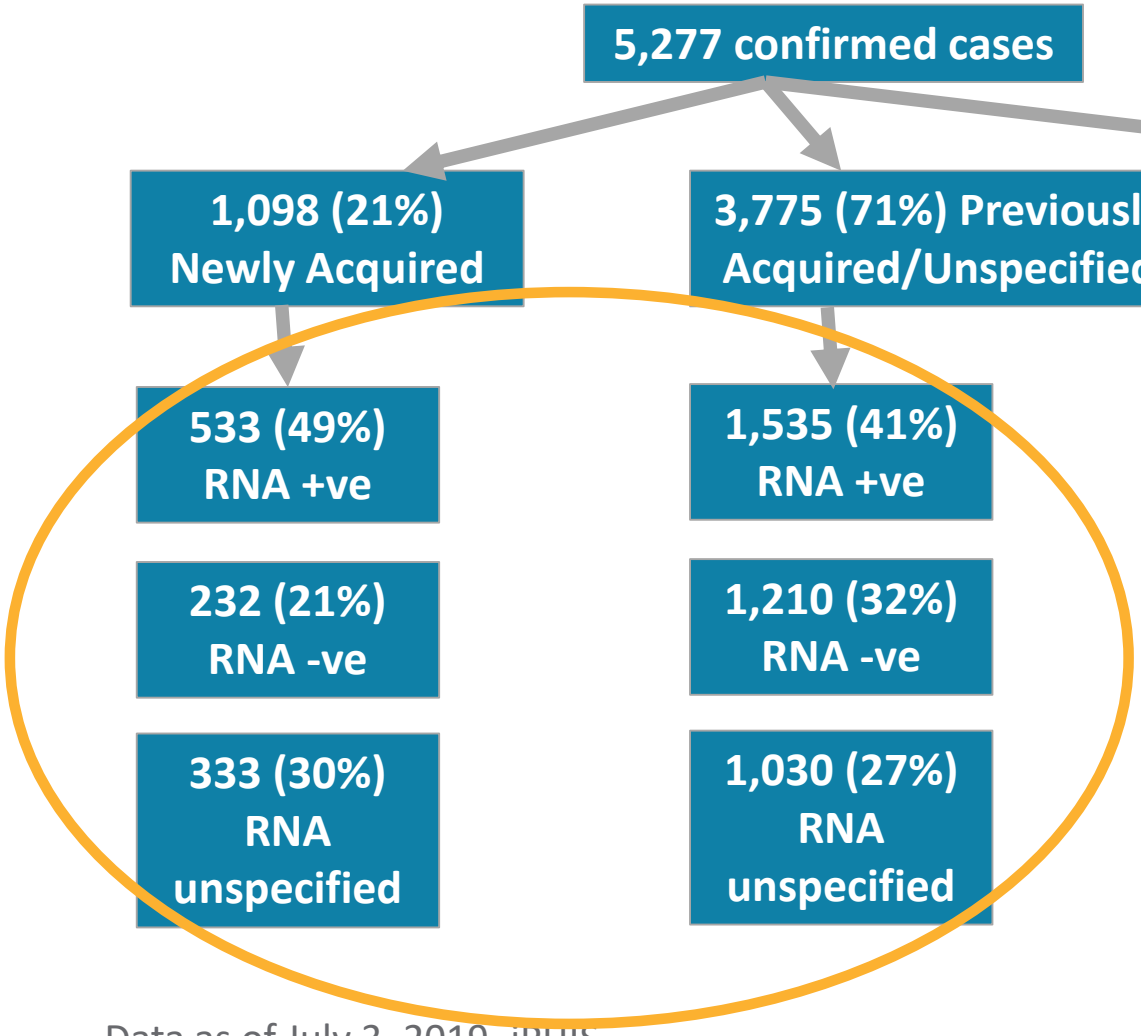
Status of Cases in 2018



- Among cases with a defined case classification (n=4,873)
  - 22.5% were ‘Newly Acquired’

Data as of July 3, 2019, iPHIS

Status of Cases in 2018



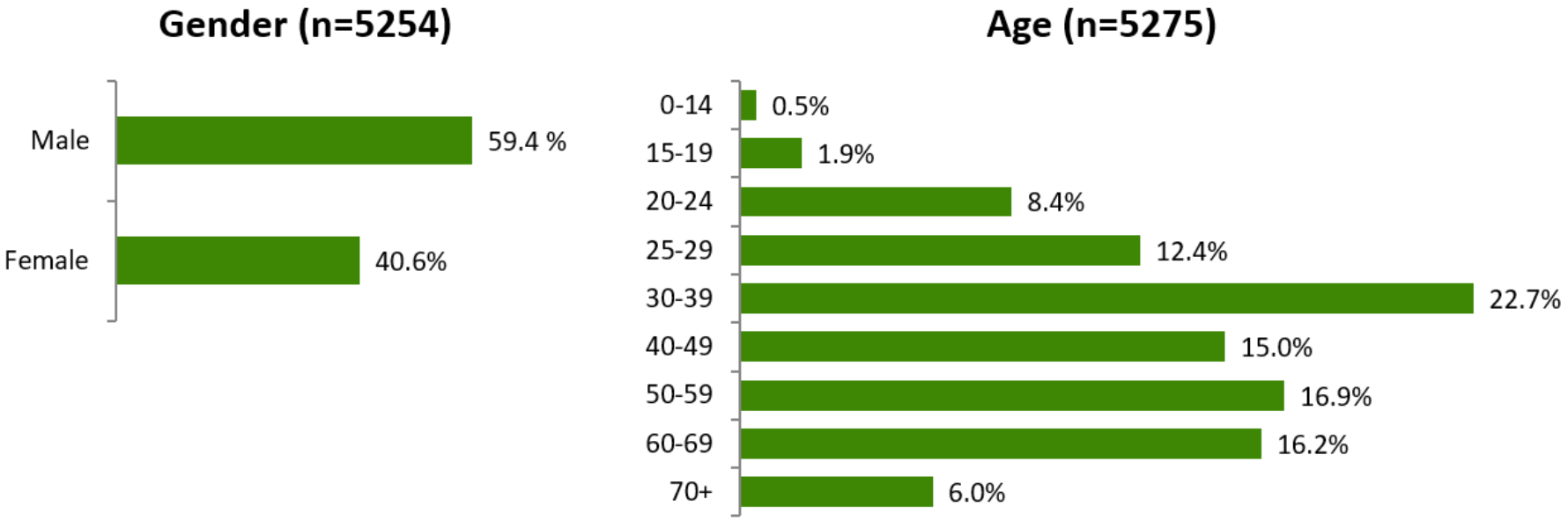
Higher proportion of 'Newly Acquired' who are **infectious** at diagnosis

Similar proportions with missing RNA status

Data as of July 3, 2019, iPHIS

Proportion of All Cases of Hepatitis C by Age and Gender

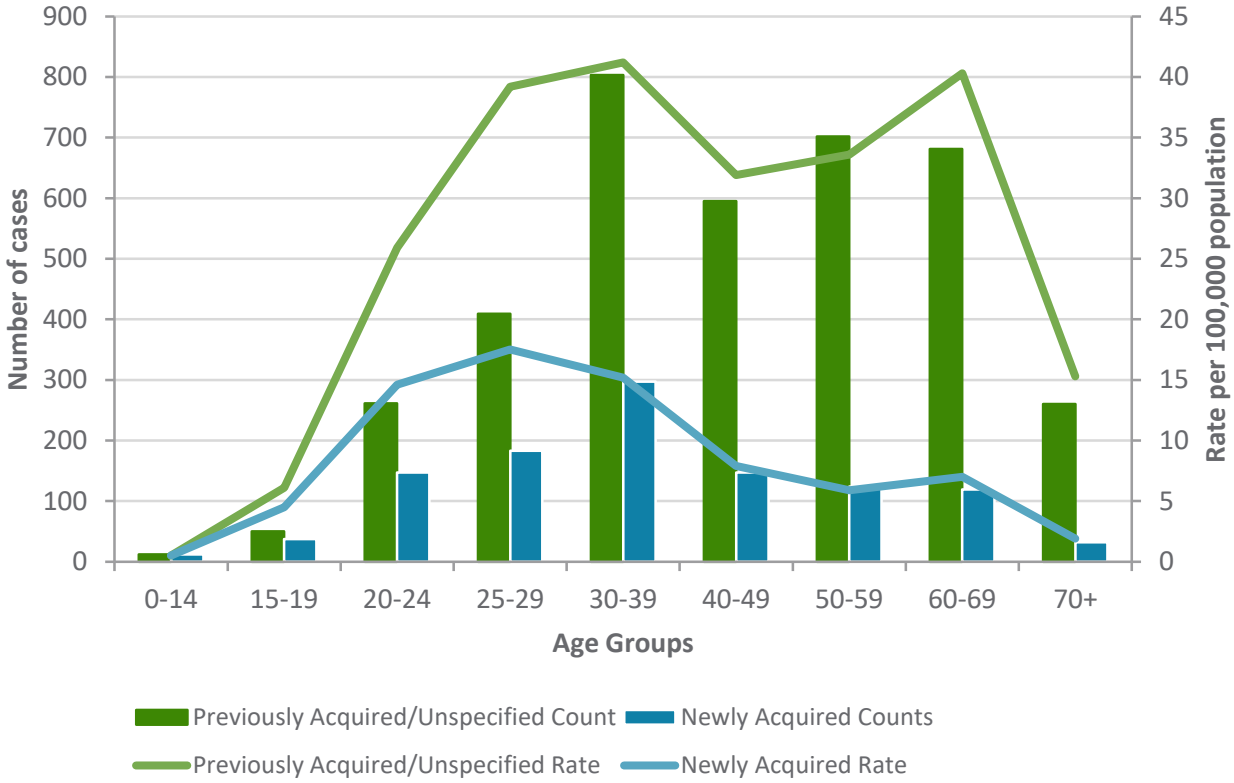
Figure 4: Percentage of Confirmed Hepatitis C Cases by Gender and Age, in Ontario, 2018



Data as of July 3, 2019, iPHIS

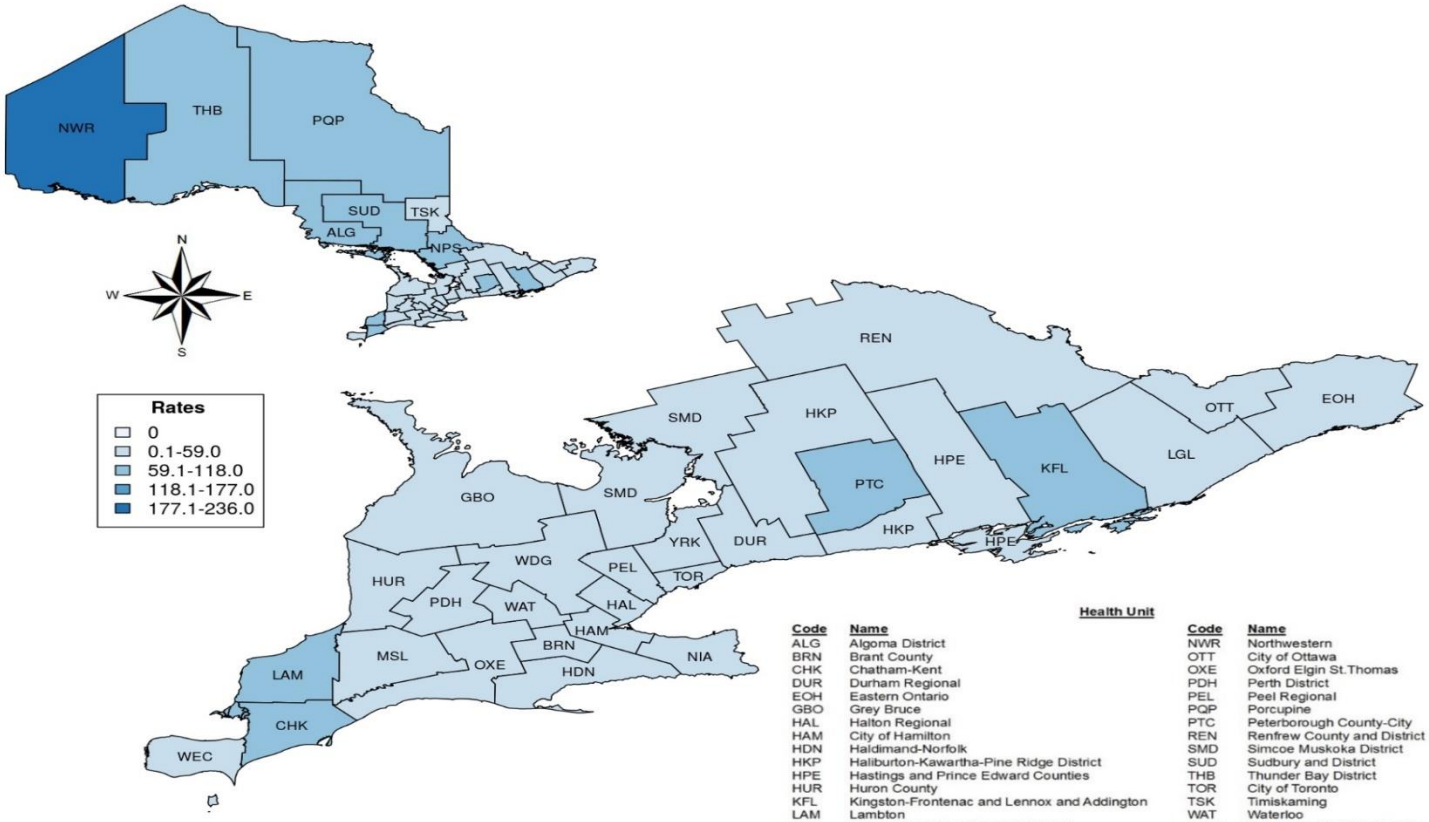
Hepatitis C by Age and Timing of Infection

Figure 5: Confirmed Cases and Rates of Hepatitis C in Ontario by Timing of Infection and Age Group, 2018 (n=4,871)



Data as of July 3, 2019, iPHIS

Rates of Confirmed Cases of Hepatitis C by Health Unit in Ontario, 2018



Code	Name
ALG	Algoma District
BRN	Brant County
CHK	Chatham-Kent
DUR	Durham Regional
EOH	Eastern Ontario
GBO	Grey Bruce
HAL	Halton Regional
HAM	City of Hamilton
HDN	Haldimand-Norfolk
HKP	Haliburton-Kawartha-Pine Ridge District
HPE	Hastings and Prince Edward Counties
HUR	Huron County
KFL	Kingston-Frontenac and Lennox and Addington
LAM	Lambton
LGL	Leeds-Grenville and Lanark District
MSL	Middlesex-London
NIA	Niagara Regional Area
NPS	North Bay Parry Sound District

Health Unit

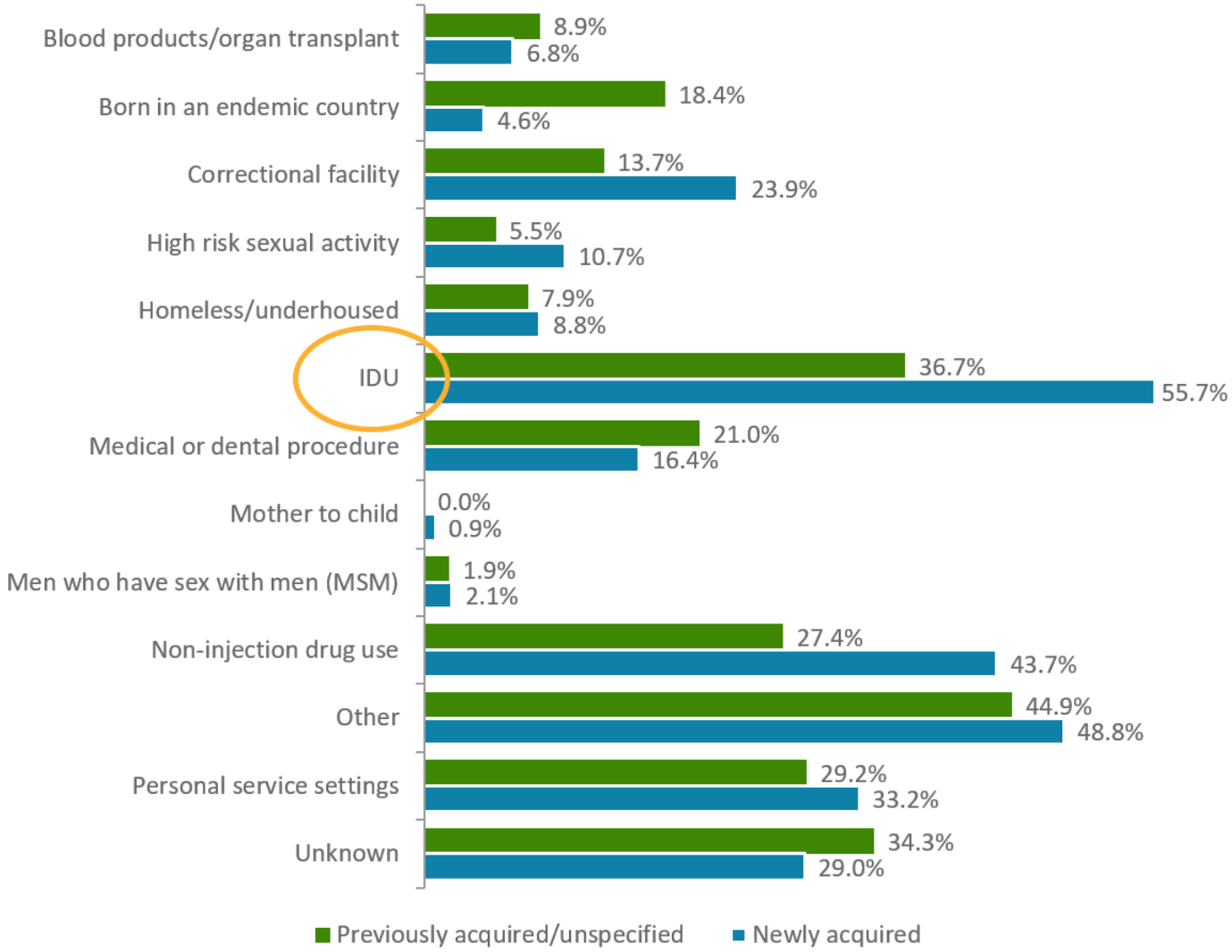
Code	Name
NWR	Northwestern
OTT	City of Ottawa
OXE	Oxford Elgin St.Thomas
PDH	Perth District
PEL	Peel Regional
PQP	Porcupine
PTC	Peterborough County-City
REN	Renfrew County and District
SMD	Simcoe Muskoka District
SUD	Sudbury and District
THB	Thunder Bay District
TOR	City of Toronto
TSK	Timiskaming
WAT	Waterloo
WDG	Wellington-Dufferin-Guelph
WEC	Windsor-Essex County
YRK	York Regional

Top 3 Increases in Health Unit Rates 2014 to 2018

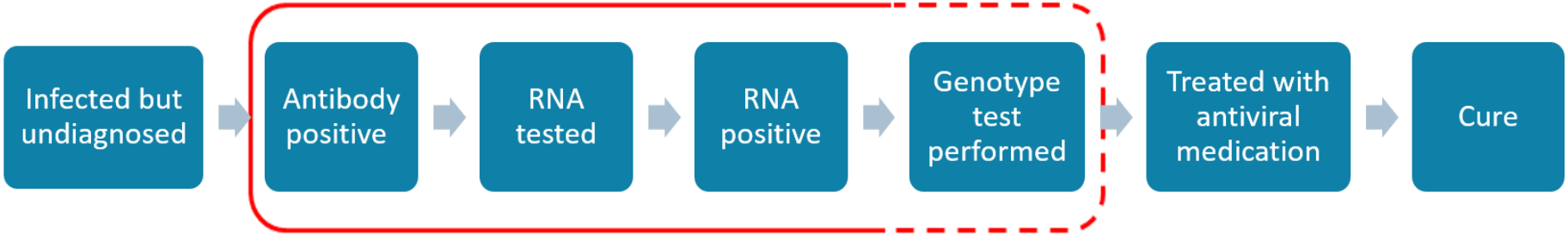
Public Health Unit	Rate per 100,000 population in 2014	Rate per 100,000 population in 2018	Percent increase
Porcupine Health Unit	32.4	70.4	117.3%
Renfrew County and District Health Unit	17.9	38.0	112.3%
Northwestern Health Unit	120.4	235.7	95.8%
ONTARIO	**31.4**	**36.5**	**16.2%**

Data as of July 3, 2019, iPHIS

Reported Risk Factors in 2018

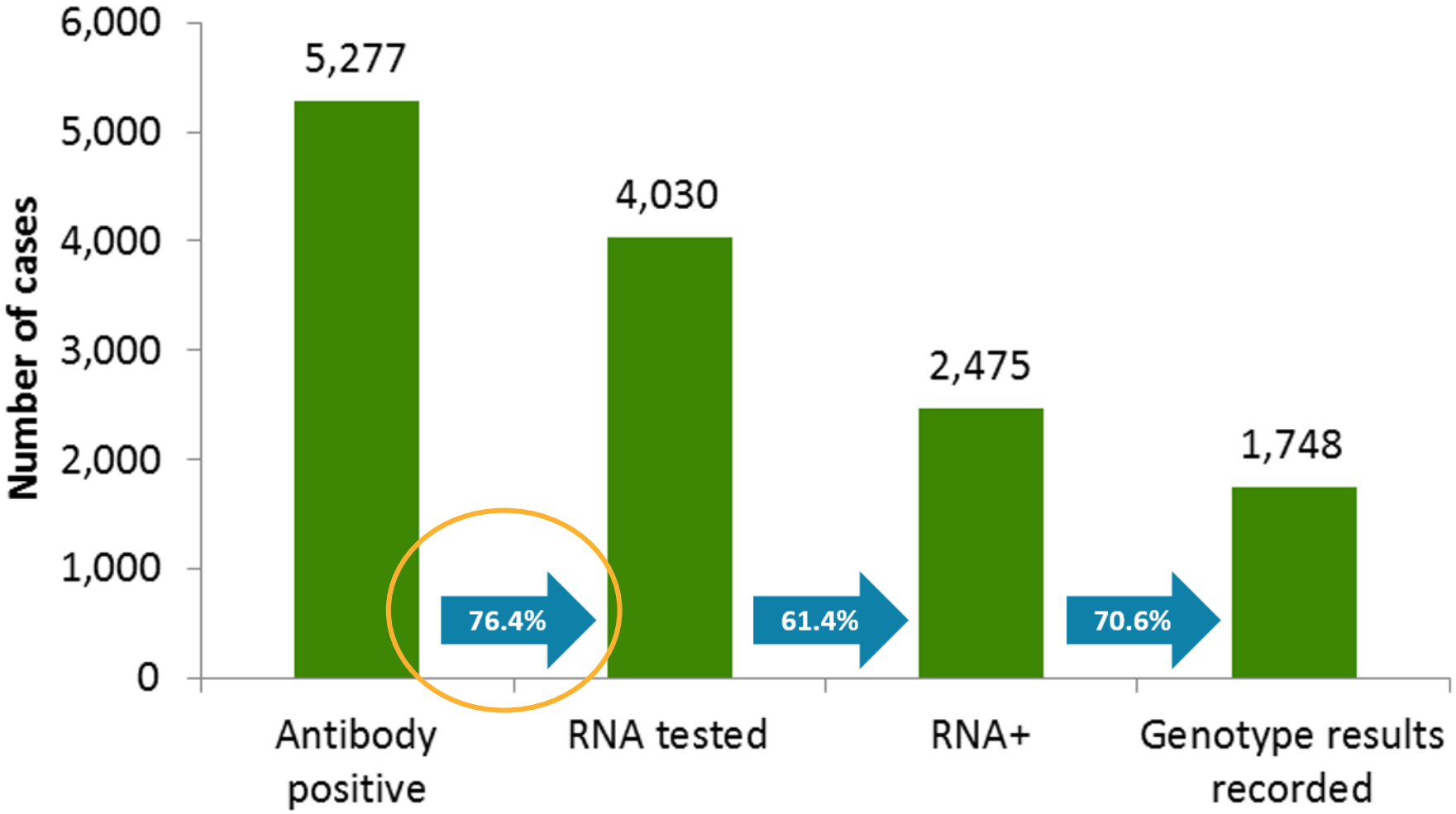


Hepatitis C Testing Cascade in 2018

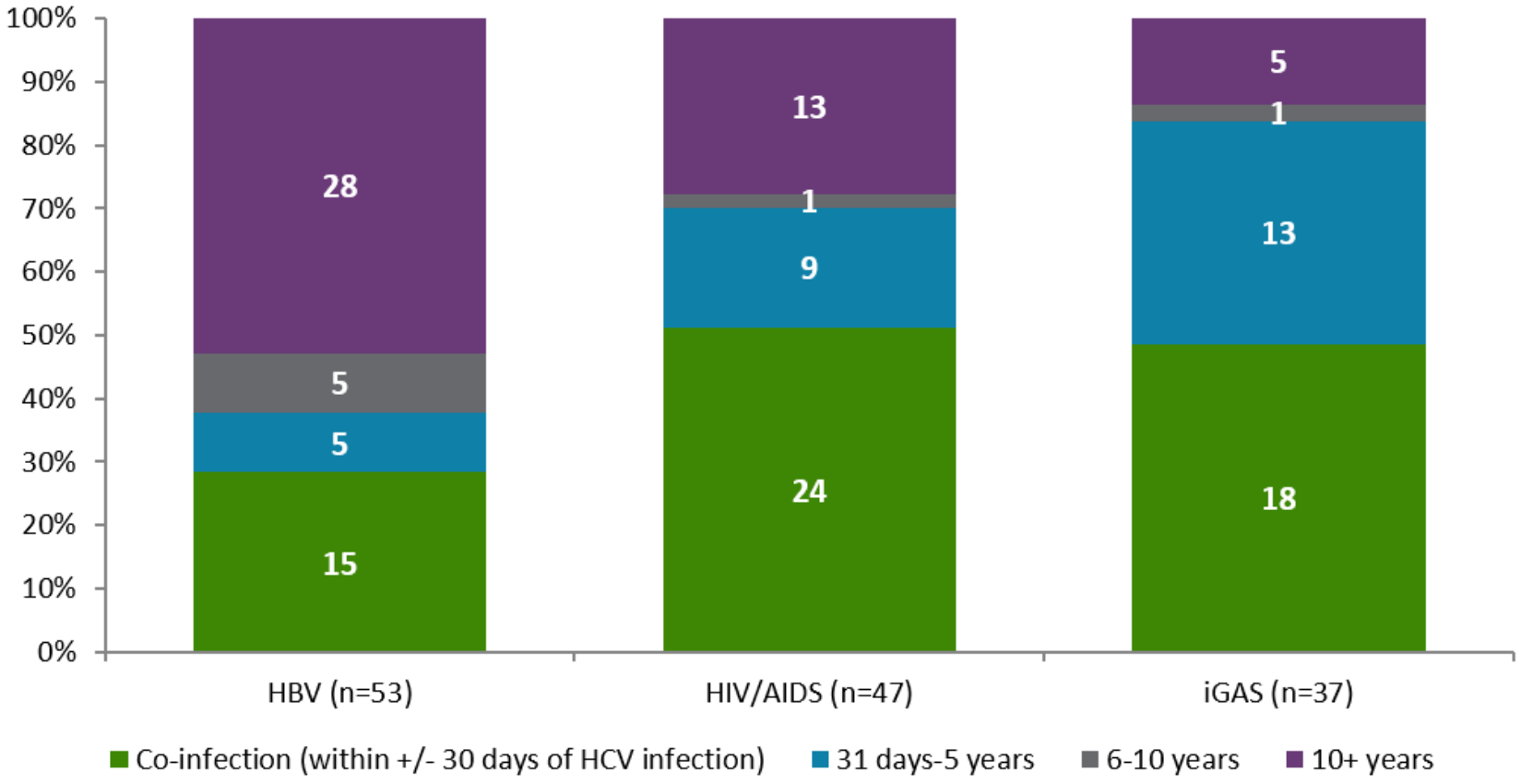


- Using iPHIS data, this report describes how Ontarians with Hepatitis C are moving through the testing cascade

Hepatitis C Testing Cascade in 2018



Hepatitis C Cases with Concurrent or Prior Infections in 2018



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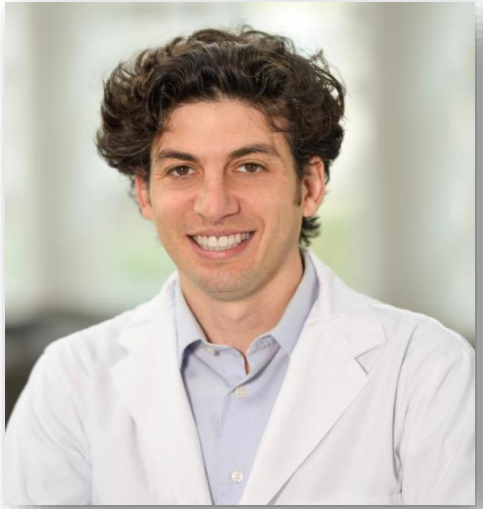
Dr. Mina Tadrous is a researcher with the Women's College Hospital, Ontario Drug Policy Research Network and IC/ES. He is also an assistant professor at the Leslie Dan Faculty of Pharmacy at the University of Toronto. His research interests lie in developing real-world evidence to inform provincial and national drug policy and the post-marketing surveillance of medications.



Dr. Jordan Feld is a Clinician-Scientist at the Toronto Centre for Liver Disease at the Toronto General Hospital and the Sandra Rotman Centre for Global Health at the University of Toronto. He is a leader in clinical hepatitis C management and research, and serves with various international and national initiatives related to hepatitis C elimination.

Some reflections with the Blueprint in mind

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Why the data are important

- Super helpful information!
- Data collection is not sexy, *but it is vital to elimination efforts!*
  - Reporting is time-consuming but incredibly valuable
  - Linking data across data-sets
    - Testing, treatment, other healthcare services and outcomes – not simple but important
- Good data inform everything else
  - Testing strategy – whom to prioritize
  - Treatment numbers – price negotiations, budget impact etc
  - Healthcare burden
  - All starts with identifying people infected…

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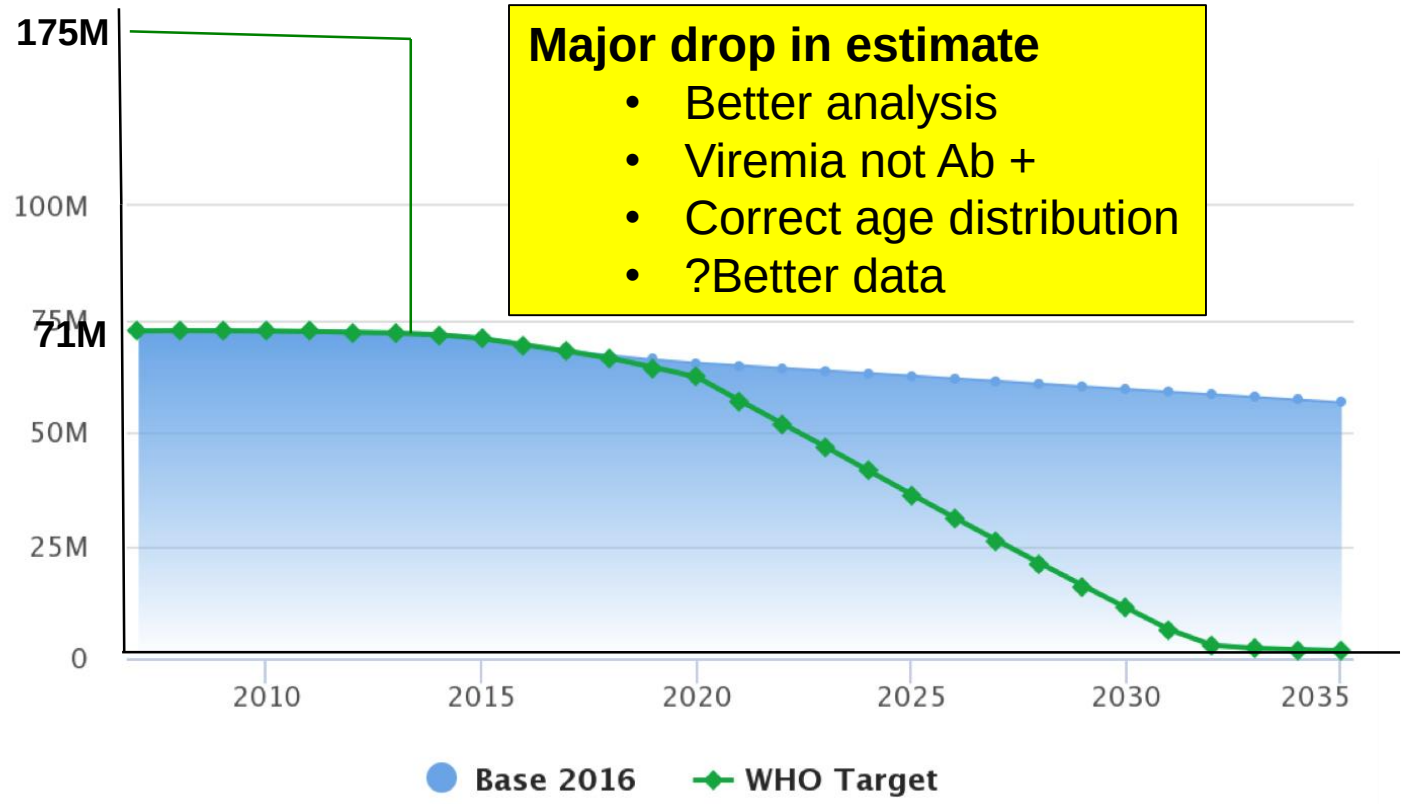
Global burden…importance of good data

Polaris Observatory – excellent resource – global, regional and country-level data



Major drop in estimate

- Better analysis
- Viremia not Ab +
- Correct age distribution
- ?Better data

Polaris Observatory

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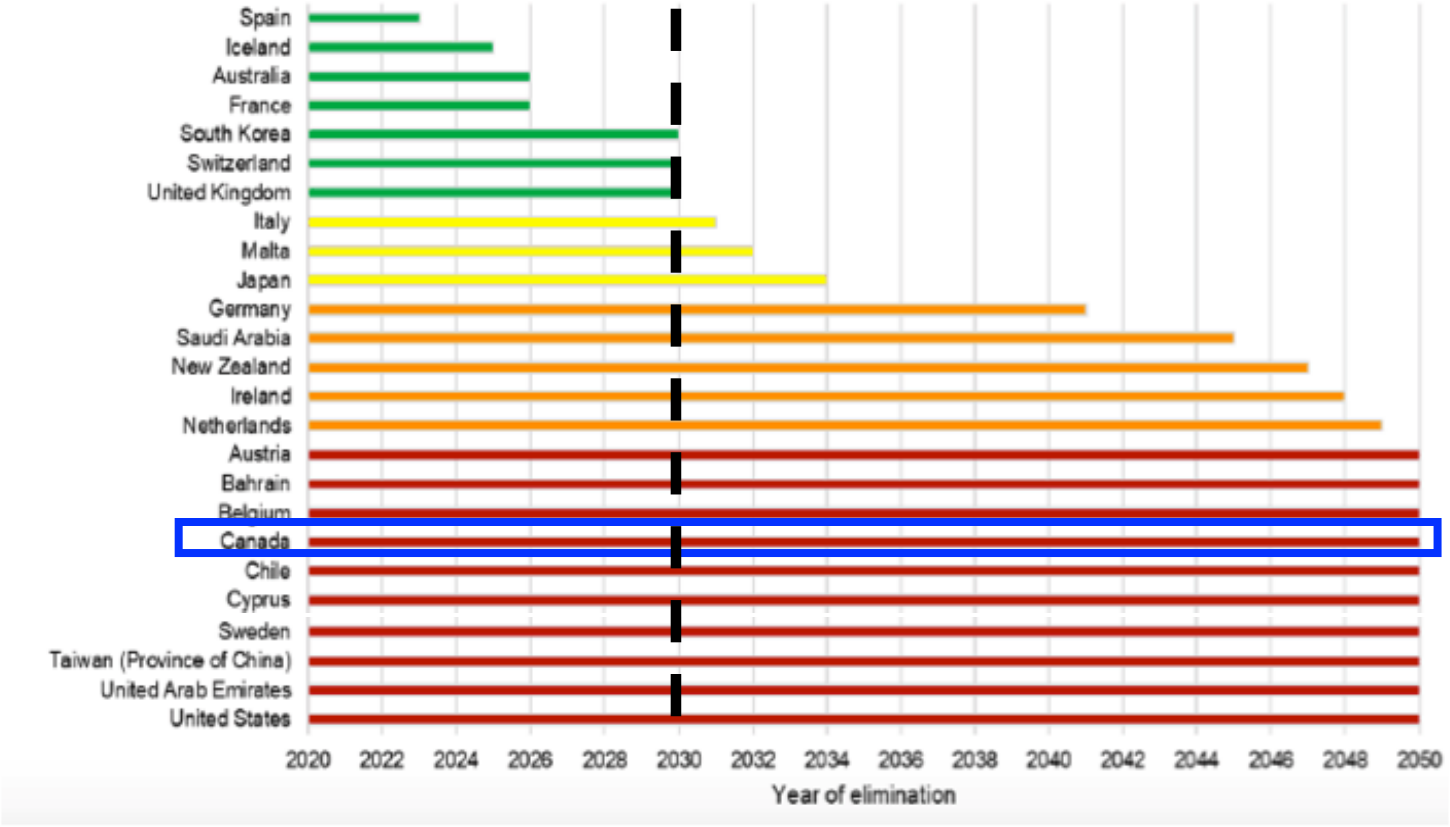
Progress toward elimination

Expected year of elimination by country



- Things did not look so good last year
- Lots of work to do…

Razavi EASL 2019

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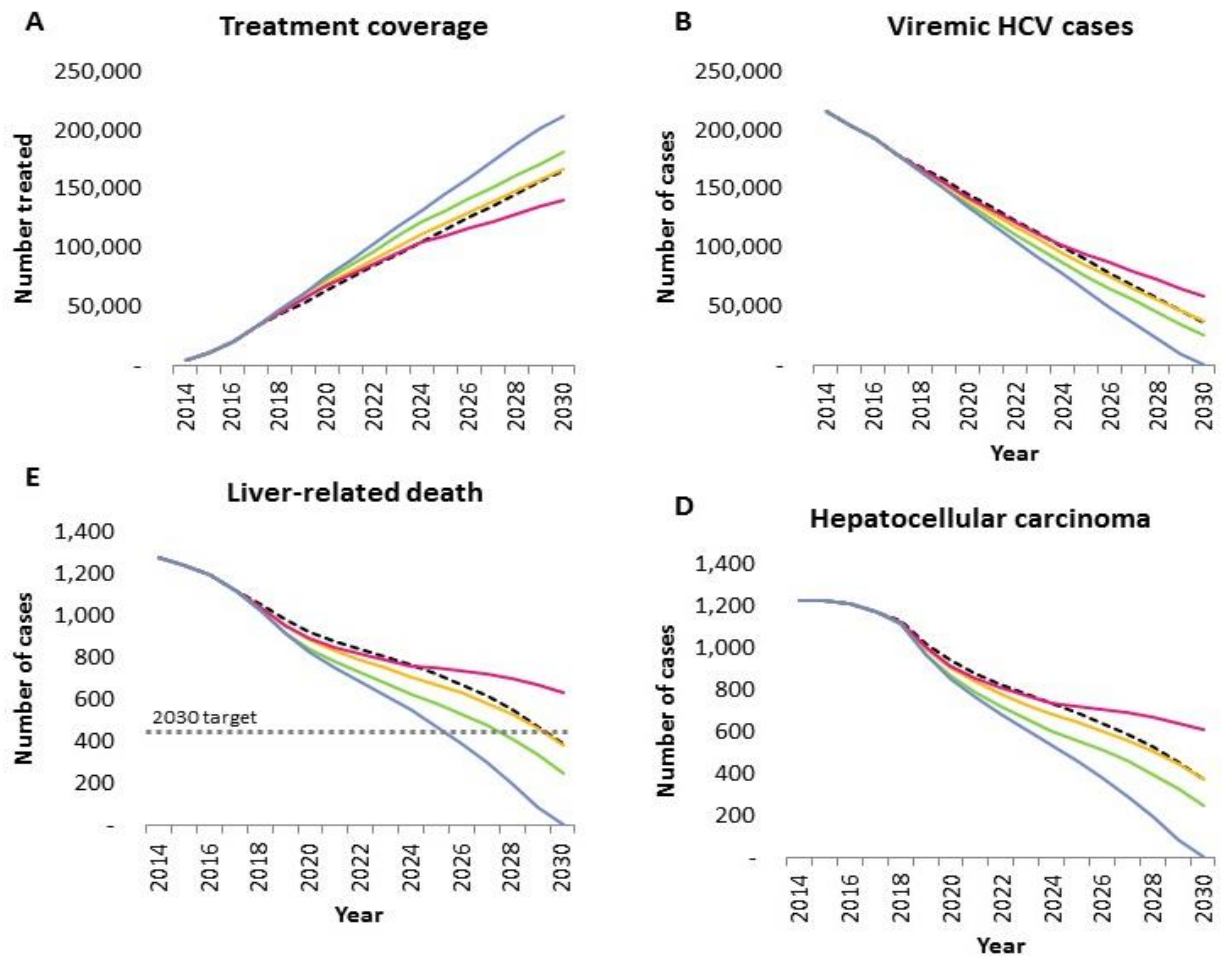
What do we need to do to change this?



Treatment scenarios	Treatment per year
WHO optimistic	10,200
Gradual decline	12,000→8,500
Rapid decline	12,000→4,500
Aggressive	14,000→10,000
Very aggressive	14,200

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Not as bad as we feared….

Year of achievement	End of 2017	WHO optimistic	Aggressive	Gradual decline	Rapid decline	Very aggressive
	90% diagnosed[b]	2022	2022	2022	2022	2022
	80% treated	2030	2028	2030	2034	2027
	80% ↓ HCV incidence[b]	2025	2025	2025	2025	2025
	65% ↓ liver-related death					
	Viremic cases only	2030	2028	2030	2034	2026
	Viremic + cured cases	2034	2033	2034	2040	2030
	All targets met					
	Viremic cases only	2030	2028	2030	2034	2027
	Viremic + cured cases	2034	2033	2034	2040	2030

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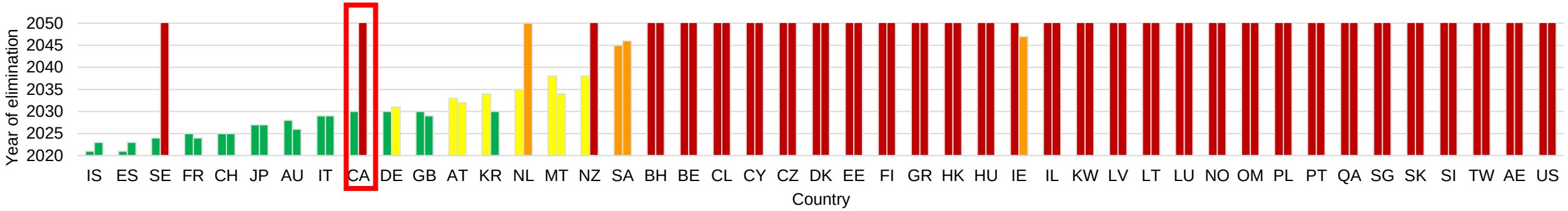
Better than many countries…

Timing of the WHO's 2030 HCV elimination targets in high-income countries



Country	Year WHO's 2030 target will be met				Annual treatments necessary	Restrictions on treatment by fibrosis score, 2019	Year of elimination
	Incidence	Mortality	Diagnosis	Treatment			
Australia	2028	2027	2016	2023	6,600	No	2028
Canada	**2030**	**2029**	**2022**	**2028**	**9,900**	**No**	**2030**
France	2025	2024	2016	2021	4,000	No	2025
Germany	2026	2030	2028	2029	9,900	No	2030
Spain	2021	2020	2021	2020	3,800	No	2021
Sweden	2024	2022	2016	2020	950	No	2024
United Kingdom	2030	2030	2025	2024	6,100	No	2030
United States	–	2023	2025	2027	112,000	Yes	–

Razavi 2020

Why the rapid change?

- The ***Blueprint*** of course!

- Some action…but mostly **better data**…

- Looks good but is this realistic? **~10,000 treatments/year is no small task…and even the drop-off scenarios may be optimistic**
- Sustaining high treatment rates means:
  - **Increasing diagnosis**
  - **Increasing linkage to care**
  - **And…must expand prevention efforts to keep moving forward**
  - ***Difficult on many levels…***

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Some reflections on the data

- Acute HCV is VERY hard to track
  - Reported data are critical to keep track of incidence – one of our major endpoints
  - Ideally can link this with the lab data
- Treatment
  - Rates are falling off…we won't make targets if we don't treat people
  - We need more new treaters
    - Easier to treat (not cure) were happy to see hepatologists in hospitals…not everyone is
    - Need more primary care, more ID and hopefully we can teach the GI/Hep people to think about more than the liver!

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Upcoming plans

- Data
  - Ontario Public Health Lab data to Dec 31 2018 - for HCV and HBV just moved to ICES - now available!
- Changers in practice
  - Discussions about moving to reflex HCV RNA testing (for all Ab+)
  - Discussions about revising requirement for 2 HCV RNA results for treatment access
  - Hopefully some good news soon…
-

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National Efforts - Positive signals

- PHAC-sponsored '**Knowledge Exchange Forum on STBBI Testing and Linkage to Care: Reaching the Undiagnosed**'
  - Ottawa Feb 4 & 5 2020

- National representation by **key stakeholders**
  - Government & Public Health
  - Lab/Clinical/Researchers
  - People with lived experience & community partners
- **Great knowledge exchange** – HCV well represented
- Sharing **good practices from around the country**

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Next steps

- ***Blueprint Regional Elimination Meetings 2020***
  - BC
  - Prairies (AB, SK, MN)
  - Ontario
  - Quebec
  - Maritimes (NS, PEI, NB, NFLD)
  - The North (NWT, YT, NU)

- Identify barriers/challenges → ***find solutions!***
- ***Develop regional/provincial plans*** (some well on their way)

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National Progress

- ***National Blueprint Elimination Summit 2021***
  - Track progress across the country
  - Report to WHO (and ourselves)
  - Share good practices
- Continue with alternating regional and national summits to keep us on track…

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Long road ahead…

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Dr. Chris Steingart is the founder and Executive Director at Sanguen Health Centre. As a physician, he leads specialized care, including hepatitis C treatment, to meet the complex needs of his clients. The centre’s dedicated team provide compassionate and comprehensive education, outreach and medical services for at-risk clients in their communities.

“From a community or “on the ground” perspective, our primary concern with our hepatitis C response and the key to elimination at a local level, is the ability to screen in high-risk populations and engage them in care. For many of our clients, competing priorities such as homelessness, overdose risk, mental health and many other co-existing issues can create an environment that makes talking about hepatitis C risks, testing and treatment very difficult.

At Sanguen Health Centre, we are trying to overcome this by growing our outreach programming, and “embedding” hepatitis C efforts into other services, including harm reduction, as part of a wholistic, wrap-around model of care. This includes integrating hepatitis C into our Community Health Vans, Primary Care Bus, Consumption & Treatment Services, Safe Supply services and addiction treatment. We feel that outreach to our highest risk populations requires these kinds of efforts to try to overcome inherent barriers in delivering hepatitis C care.”

Questions and discussion