An International Collaboration on Hepatitis C Elimination in HIV Coinfection (InCHEHC) – a cohort profile

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Background

Data demonstrating the impact of DAA on HCV incidence are currently scarce and individual studies lack the power to observe sufficient "incident events", particularly reinfection.

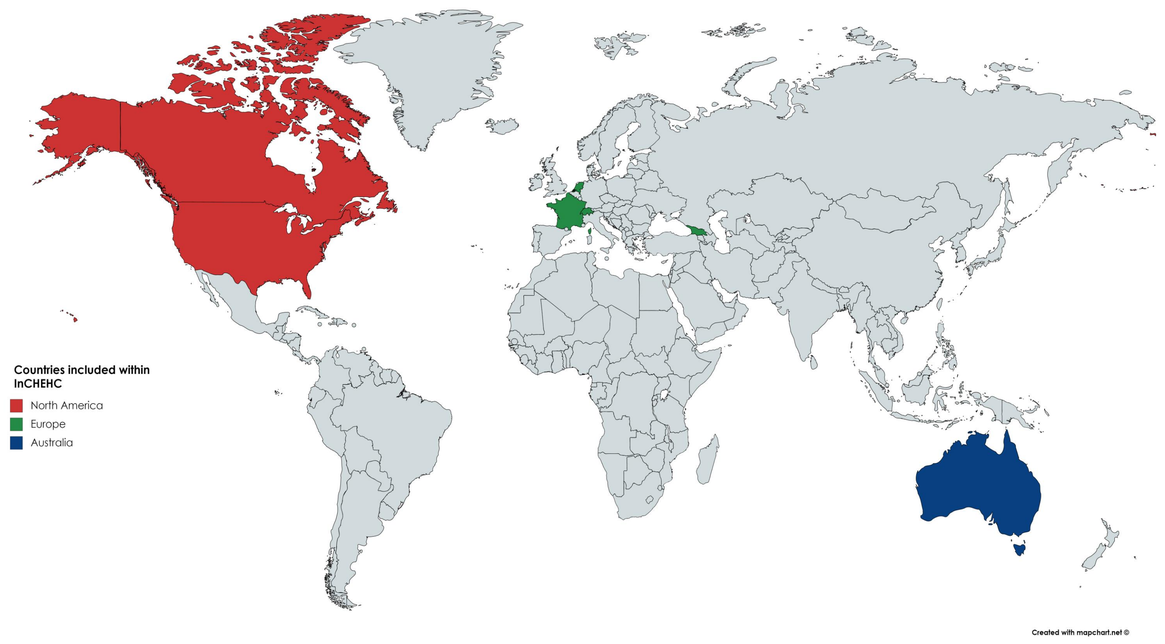
We describe the establishment of a multinational collaboration pooling data from HIV/HCV-coinfected individuals from seven countries known to be global leaders in HCV elimination.

The International Collaboration on Hepatitis C Elimination in HIV –Coinfection (InCHEHC) primary aims are to:

1. Measure the incidence of HCV primary infection and reinfection, comparing the pre- and post-DAA periods
2. Identify key risk behaviors that increase the risk of HCV primary infection and re-infection, in both men who have sex with men and people who inject drugs.

InCHEHC cohorts

- Includes 12 cohorts across Europe, Australia and North America (Figure)
- These include cohorts of people living with HIV and cohorts of people living with HIV and HCV coinfection



Methods

Data merge:

- InCHEHC will pool data from ~60,000 HIV-infected individuals with or without HCV co-infection
- Around 40,000 HIV-infected participants are at risk for primary HCV infection and ~6,000 participants at risk for HCV re-infection
- First data merge expected to be complete mid-2019

Table: Numbers of HIV infected participants at risk of primary infection and post-treatment reinfection

Cohort (location)	At risk of primary infection	At risk of post-treatment reinfection	Patient characteristics* %	Detailed longitudinal drug and sex risk behavior
Owen Clinic (USA)	2259	226#	11% PWID, 74% MSM	✓
ACCESS (Australia)	3173	n/a	10% PWID, 61% MSM	~ (subset of participants)
co-EC (Australia)	0	153	65% PWID, 67% MSM	✓
CEASE (Australia)	0	323	80% PWID, 80% MSM	✓
CCC (Canada)	0	572#	83% PWID, 24% MSM	✓
Aquitaine (France)	4098	1319#	19% PWID, 55% MSM	×
SAIDCC (France)	3575	583#	4% PWID, 54% MSM	×
HEPAVIH (France)	0	662#	65% PWID, 70% male	×
ATHENA (the Netherlands)	18403	1284#		×
MOSAIC (the Netherlands)	200	200#	6% PWID, 100% MSM	✓
AIDS HIS (Georgia)	2933	480#	35% PWID, 19% MSM	×
SHCS (Switzerland)	6367	n/a	14% PWID, 45% MSM	✓
Total	41,008	5,952		

Abbreviations: PWID: people who inject drugs, MSM: men who have sex with men, ACCESS: Australian Collaboration for Coordinated Enhanced Sentinel Surveillance; co-EC: Eliminating hepatitis C transmission by enhancing care and treatment among HIV co-infected individuals; CEASE: Control and Elimination within AuStralia of HEpatitis C from people living with HIV; CCC: Canadian Co-infection Cohort study; MOSAIC: MSM Observational Study of Acute Infection with hepatitis C; HEPAVIH: Clinical Centres Collaborations of Subjects Co-infected with HIV and HCV ; AIDS HIS: National AIDS Health Information System; SHCS: Swiss HIV cohort study; ATHENA: AIDS Therapy Evaluation in the Netherlands. Number obtained at the end of 2017; SAIDCC : Saint-Antoine Infectious Disease Clinical Cohort; . * PWID and MSM groups can overlap. #Includes those treated with interferon-based and DAA therapies .

Significance

- The InCHEHC Collaboration will be one of the largest, well-characterized studies of HIV-infected populations with detailed HCV data worldwide.
- Our work will demonstrate the impact of DAA therapy on HCV primary infection and re-infection incidence and help identify key drivers for ongoing HCV transmission in the DAA era.
- Our results will inform HCV micro-elimination programs in HIV infection populations globally.

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