Good practices of integrated POC testing for HCV, HIV other STIs and TB with harm reduction strategies for people who use drugs

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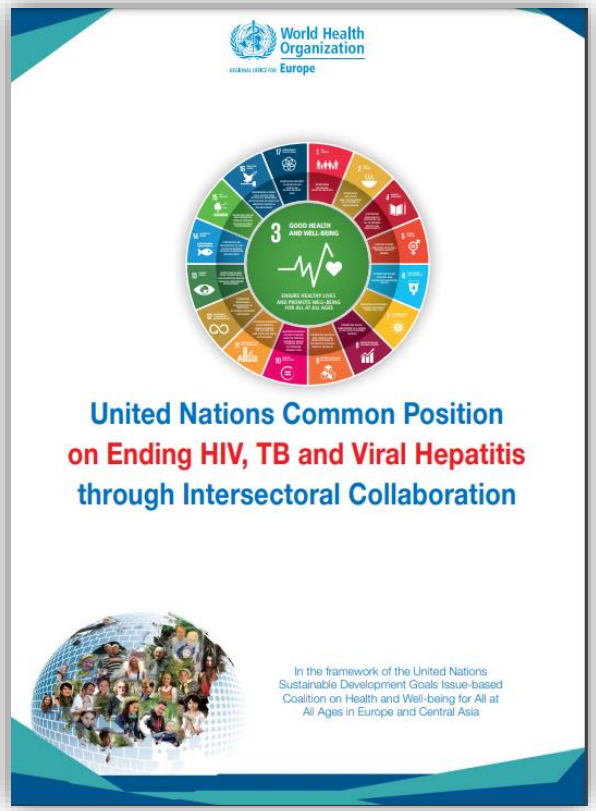
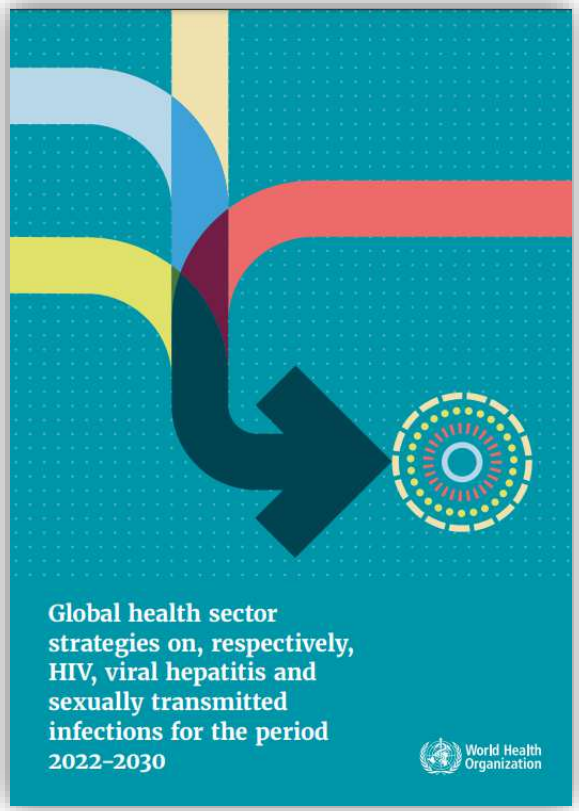
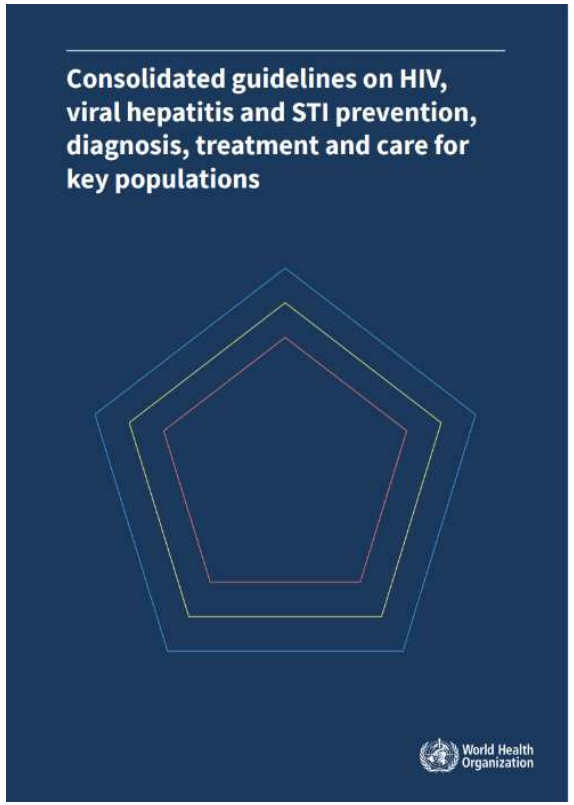
ciber ESP

Integration of strategies

- The global objective under target 3.3 of the United Nations Sustainable Development Goals (SDGs) seeks to **end by 2030 the epidemics** of **AIDS**, **tuberculosis** and combat **hepatitis**, among others
- In **key populations**, such as people who use drugs, **point-of-care (PoC) tests** and **simplified diagnostic algorithms** are required, with **decentralized care and treatment**.

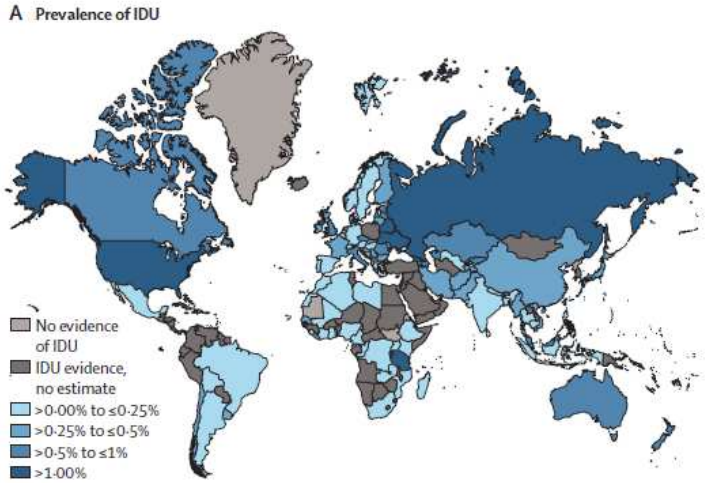




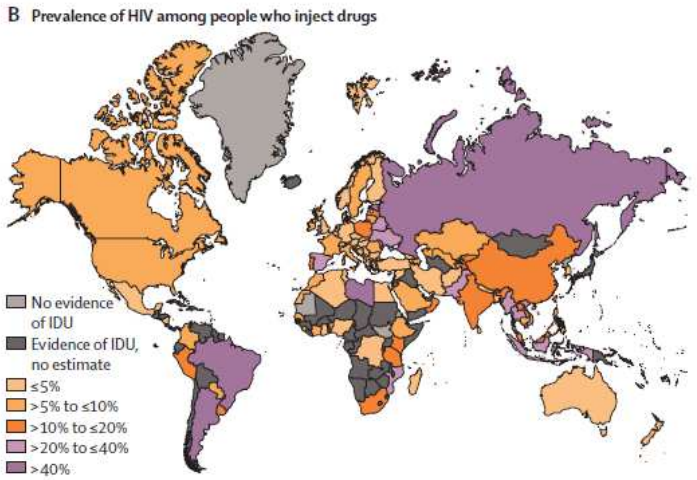


Burden of blood-borne viruses in people who inject drugs (systematic review)

IDU
14.8 M

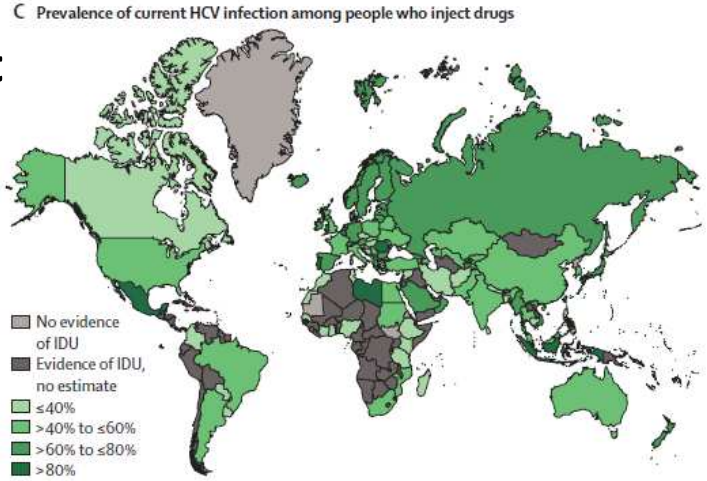


HIV
15.2%
2.3 M

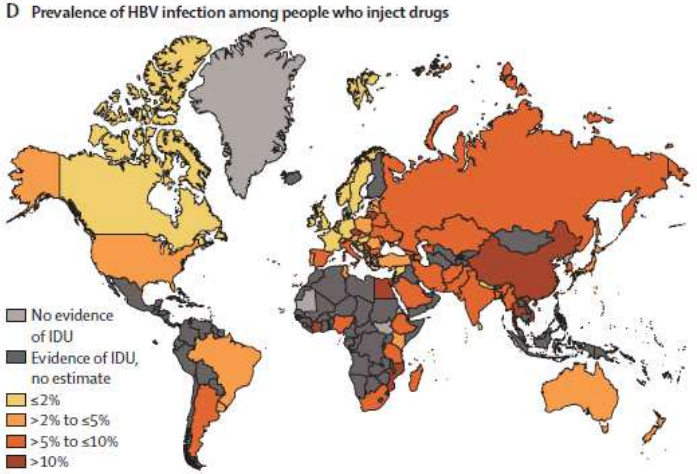


- **24.8%** had experienced recent **homelessness or unstable housing**
- **58.4%** had a lifetime history of **incarceration**
- **14.9%** (95% CI, 8.1–24.3) had recently engaged in **sex work**

Current HCV
38.8%
5.8 M



Current HBV
8.4%
1.2 M



HIV and HCV prevalence remain high globally requiring improvements in **harm reduction coverage** and prevention of drug-related harm (including **provision of antiviral treatment and care**)

Degenhardt L, et al. Lancet Glob Health 2023;11: e659–72

Recommended package for people who inject drugs

HepHIV 2023
13-15 NOVEMBER · MADRID

Essential for impact: health interventions

Prevention of HIV, viral hepatitis and STIs

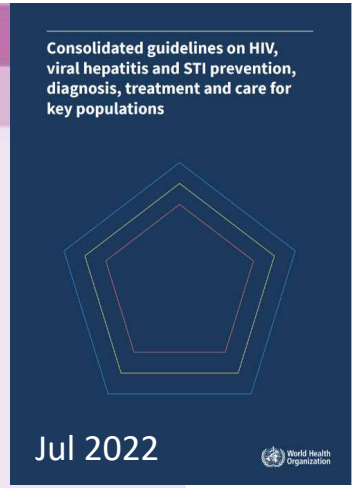
- Harm reduction (NSPs, OAMT and naloxone for overdose management)
- Condoms and lubricant
- Pre-exposure prophylaxis for HIV[24]
- Post-exposure prophylaxis for HIV and STIs
- Prevention of vertical transmission of HIV, syphilis and HBV
- Hepatitis B vaccination
- Addressing chemsex

Diagnosis

- HIV testing
- STI testing
- Hepatitis B and C testing

Treatment

- HIV treatment
- Screening, diagnosis, treatment and prevention of HIV associated TB
- STI treatment
- HBV and HCV treatment



Essential for impact: enabling interventions

- Removing punitive laws, policies and practices
- Reducing stigma and discrimination
- Community empowerment
- Addressing violence

Essential for broader health: health interventions

- Conception and pregnancy care
- Contraception
- Mental health
- Prevention, assessment and treatment of cervical cancer
- Safe abortion
- Screening and treatment for hazardous and harmful alcohol and other substance use
- TB prevention, screening, diagnosis and treatment

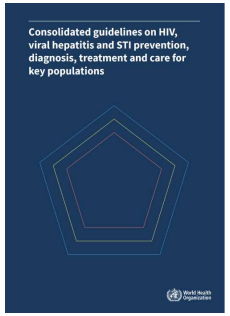
- **High prevalence of blood-borne viruses**
- **Increased risk of TB**, irrespective of their HIV status, a leading cause of HIV-related mortality
- **May be at increased risk of STIs** (particularly those engaging in chemsex or those using stimulants); global estimates not known

https://www.who.int/publications/i/item/9789240052390

Service delivery

- To improve **access**, **acceptability** and **availability** of services for key populations (from **prevention** and **diagnosis** to **treatment** and **care**)

Community-led services	**Task sharing:** peers, nurses, outreach workers	**Integration**: "one-top-shop"



https://www.who.int/publications/i/item/9789240052390

Harm reduction: the opportunity of integrated screening and care

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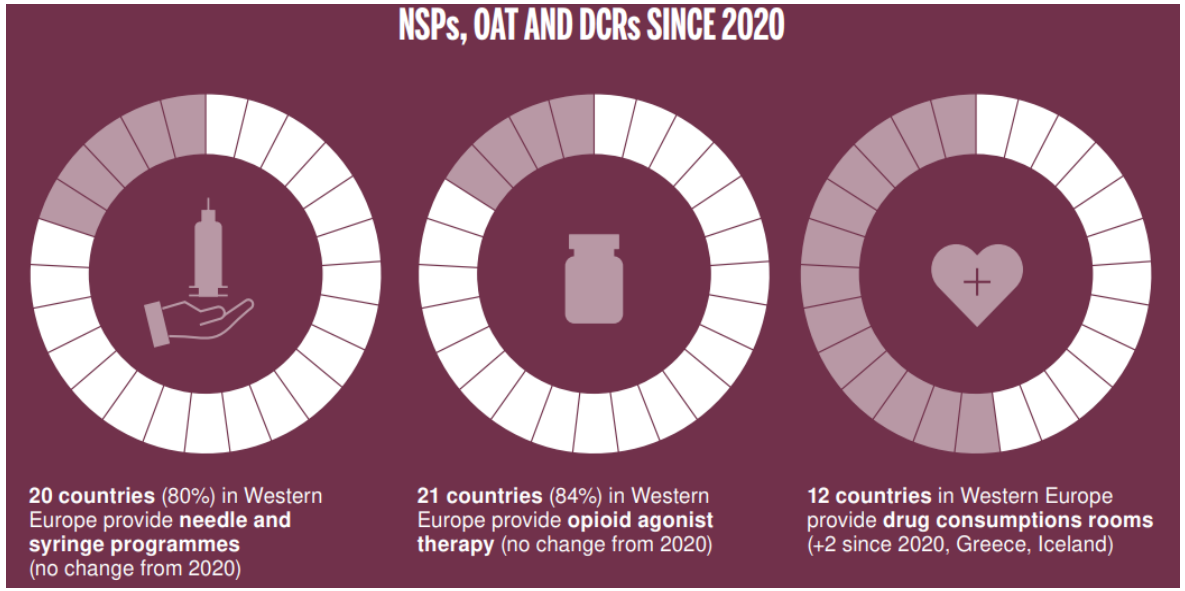
Preventing major public and individual health harms (HIV, viral hepatitis, overdose) without necessarily stopping drug use:

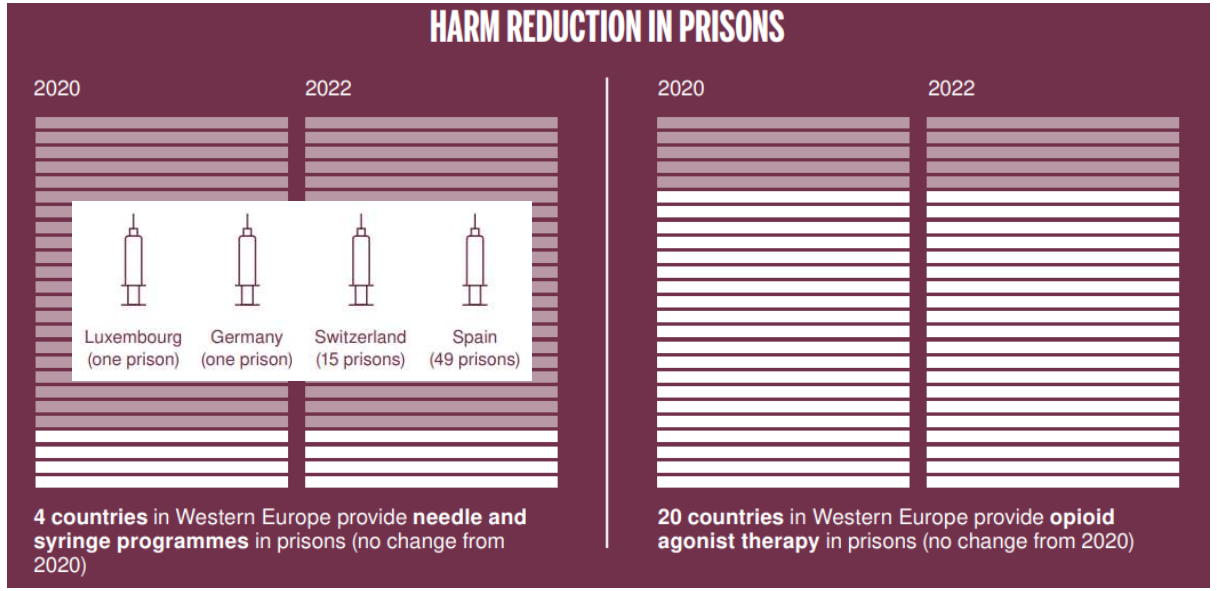
- **needle and syringe programmes (NSPs)**
- **drug consumption rooms (DCRs)**
- **opioid agonist therapy (OAT)**
- **naloxone programmes** for overdose management

Community centers, **prisons, pharmacies,** outreach settings (**mobile units**)

Missing in many countries
Western Europe: long tradition of harm reduction but **uneven distribution of services within countries** (rural areas underserved)



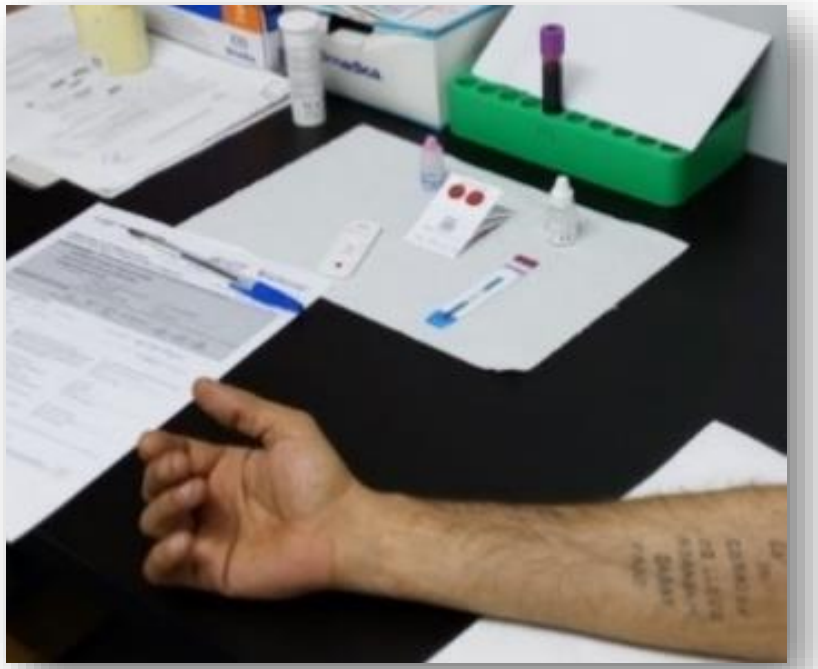
Only Spain, Luxembourg and Norway meet the WHO targets (200 syringes/p/y and 40% of people who use opioids on OAT)



Predominantly only available to people who started OAT before going to prison

https://hri.global/wp-content/uploads/2022/11/HRI_GSHR-2022_Full-Report_Final.pdf

Available PoC tests for HCV, HIV other STIs and TB



Rapid diagnostic tests (RDTs) for point-of-care (PoC) testing

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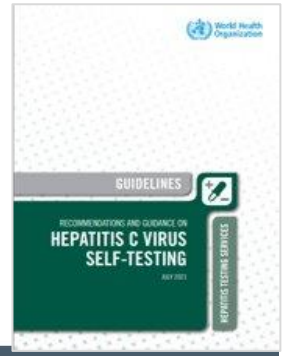
Blood-borne viruses, single RDTs:

- **HIV**: Ab/Ag (4th gen.) in whole blood, oral fluid
- **HCV**: HCV-Ab in whole blood, oral fluid
- **HBV**: HBsAg in whole blood

→ **Molecular confirmatory tests** (viral load)

Regional approval, WHO prequalification
https://extranet.who.int/prequal/sites/default/files/document_files/231020_prequalified_IVD_product_list.pdf



Multiplex RDTs:

Test	Manufacturer
Detect 3 HIV/HCV/HBV combo kit	Artron Laboratories (Canada)
Triplex HIV, HCV, HBsAg	Biosynex (France)
Hep B, Hep C, HIV Combination Rapid Test	Maternova (US)
Multiplo HBc/HIV/HCV	MedMira (Canada)
HBsAg/HCV Ab Rapid Test	Spectrum Diagnostics (Egypt)
Rapid HBsAg/HCV/HIV/Syphlis Combo	Euro Genomas (Lithuania)
OnSite HBsAg/HCV Ab Rapid Test	CTK Biotech (US)
COMBIQUIC HIV/HCV	Qualpro Diagnostics (India)
TriQuick HIV/HCV/HCV	Genlantis Diagnostics

Field validation is needed to assess diagnostic accuracy of these tests

Self-testing:

Company	HCV self-test status	Specimen type	HCV RDT for prof use
OraSure Inc, US	WHO PQ submission HIV	Oral fluids	CE, FDA, WHO PQ
Premier Medical Corporation, US/India	Clinical studies completed, WHO PQ submission in prep	Blood	CE + submitted to WHO PQ (under review)
bioLytical (Canada)	Studies ongoing HIV	Blood	WHO PQ under review
Wondfo	In development HIV	Blood	WHO PQ in prep
Abbott Rapid Diagnostics Korea; SD Biosensor	Development plans	Blood	WHO PQ

Source: E. Ivanova, FIND

Molecular near-PoC tests

PLATFORM	Xpert HCV VL assay	Xpert HCV Fingerstick VL assay	GeneDrive HCV ID assay **Discontinued**	Truenat™ HCV assay
				
SAMPLE TYPE	Plasma	Capillary blood	Plasma	Plasma, serum, capillary blood
SENSITIVITY	100%	98%	99%	95%
SPECIFICITY	97%	99%	100%	99%
SAMPLE PREP	Integrated	Integrated	Off-board (several pipetting steps)	Separate kit and instrument for sample prep
TIME TO RESULT	110 min	60 min	90 min	20 min (sample prep), 40 min (analysis)
REGULATORY STATUS	CE-IVD, WHO PQ	CE-IVD, WHO PQ	CE-IVD, WHO PQ	Approved in India. Submitted to CE-IVD
POWER SUPPLY	Need electricity supply		Need electricity supply	Battery integrated
DATA ANALYSIS	PC		Integrated	Integrated
TEST MENU	TB, HIV, HBV, CV19 and many others		CV19, MTB/RIF in development	TB, HIV, CV19 and many others
TEST COST	US$ 14.95 ex works (HBDC price)		$25-30	Not disclosed
INSTRUMENT COST	US$ 17,500 (4 module)		US$ 5,000*	US$ 18,000 (4 tests at a time)**

Source: E. Ivanova, FIND

HCV DIAGNOSTICS: USE OF POINT-OF-CARE (POC) HCV RNA ASSAYS FOR DETECTION OF HCV VIRAEMIC INFECTION TO GUIDE TREATMENT, AND AS TEST OF CURE

https://www.who.int/publications/i/item/9789240052697

→ **"Test & Treat" strategies**

HCV: Intermediate-high RNA prevalence (**50-74%**) → RNA screening recommended (*one-step*)

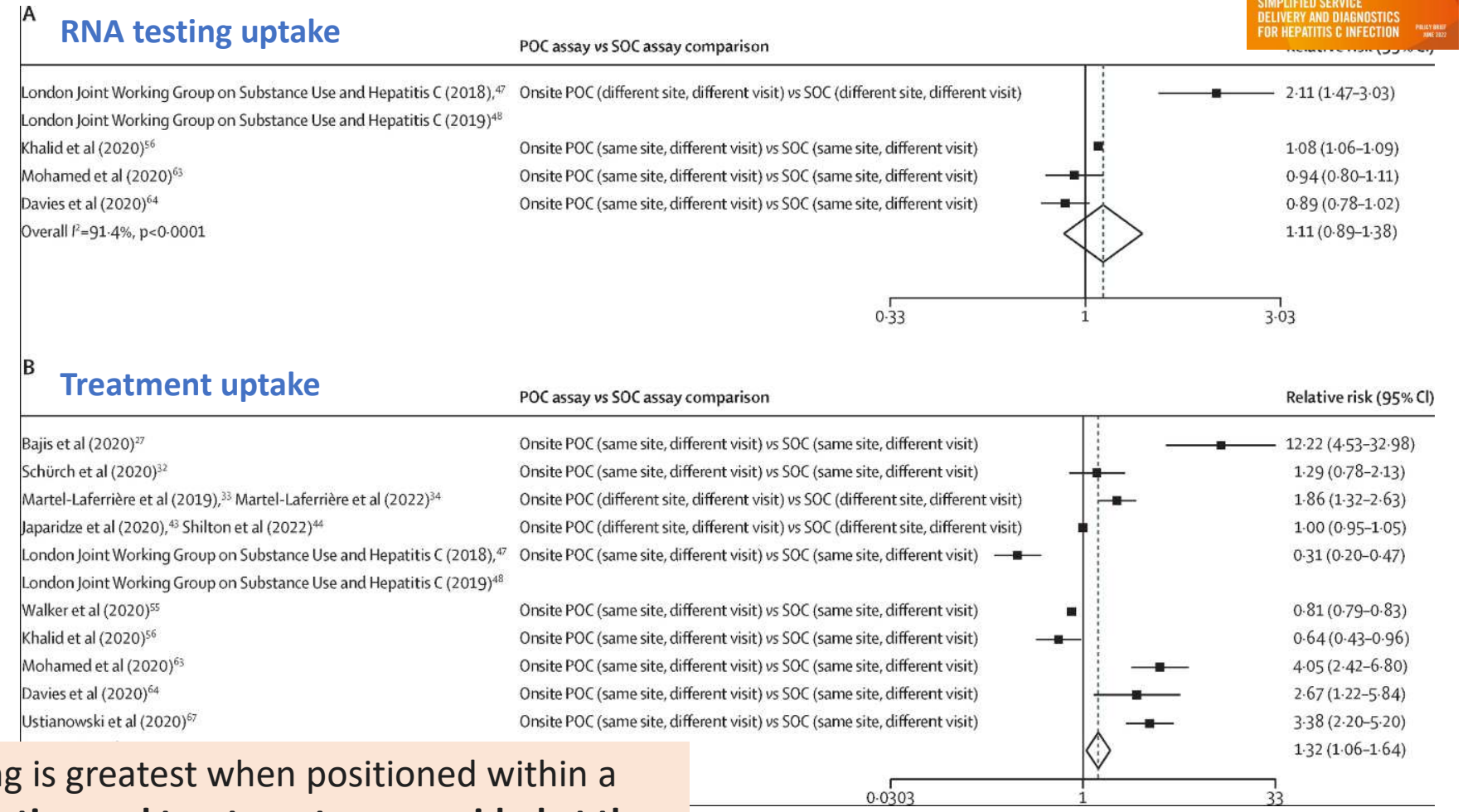
Scott N, et al. J Viral Hepat 2018; 25(12):1472-1480

Importance of PoC testing for HCV-RNA

Studies in people who inject drugs and/or were homeless (28); people incarcerated in prison (4); general or mixed populations (4); and in people living with HIV (4)

Lower turnaround time between HCV-Ab screening and treatment initiation:
Onsite PoC: **19 d** [95% CI 14–53]
vs.
Laboratory-based PoC: **64 d** [64–64]
Laboratory-based SoC: **67 d** [50–67]

Higher treatment uptake:
Onsite PoC: **77%** [95% CI 72–83]
Mobile PoC: **81%** [60–97]
vs.
SoC assays: **53%** [31–75]



The effect of POC viral load testing is greatest when positioned within a simplified care model in which **testing and treatment are provided at the same site** and, where possible, on the **same day**.

Trickey A, et al. Lancet Gastroenterol Hepatol. 2023;8(3):253-270

Molecular near-PoC tests

	SD Biosensor	Bioneer
		
Value to Market	Established company with large manufacturing capacity and strong global heath focus with a number of assays in the pipeline. Can run isothermal and PCR assays	Several assays in late development stage, high multiplexing capacity, strong global health focus
	COVID/Flu/RSV, TB, Zika/Dengue/ChikV, HIV, HCV, HBV VL, HPV,	COVID/Flu/RSV, TB, HCV,
Timeline	HCV in development	HCV expected i
Data analysis	Integrated	Integrated

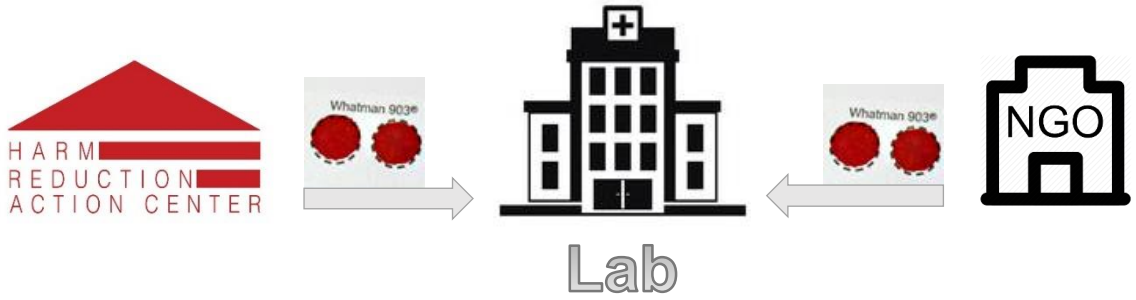
During the **COVID-19** pandemic, countries expanded molecular testing capacity
This infrastructure should now be repurposed to diagnose VH/HIV/STIs/TB

Molecular **true-PoC** tests in the pipeline

	Minute Molecular, DASH	Mirai Genomics, GenPad	PlusLife, Mini Dock	ThermoFisher Scientific, Accula™
				
Sample preparation	Chemical lysis, RNA filtering†	Chemical lysis, RNA filtering‡	Thermal and chemical lysis	Thermal and chemical lysis
Amplification method	RT-qPCR	Smart Amp, proprietary isothermal technology	RHAM (proprietary isothermal technology)	RT-PCR
Turnaround time	15 min	40 min	15–35min	30 min
Tests menu (commercially available)	SARS-COV2	SARS-COV2 SARS-COV2/Flu A/B	SARS-COV2 SARS COV2/Flu A/B Monkeypox (RUO)	SARS-COV2 Flu A/B
Tests in development	HCV, HIV, STDs, Flu	Strep A, STDs	HPV, HCV, M. tuberculosis, Strep A, STDs	N/A

Source: E. Ivanova, FIND

Dried blood spots (DBS) testing: decentralised sample collection



Serological and molecular testing

The Author(s) *BMC Infectious Diseases* 2017, **17**(Suppl 1):700
DOI 10.1186/s12879-017-2777-y

BMC Infectious Diseases

RESEARCH Open Access

Diagnostic accuracy of serological diagnosis of hepatitis C and B using dried blood spot samples (DBS): two systematic reviews and meta-analyses

Berit Lange[1,2*], Jennifer Cohn[3], Teri Roberts[4], Johannes Camp[1], Jeanne Chauffour[5], Nina Gummadi[6], Azumi Ishizaki[7], Anupriya Nagarathnam[8], Edouard Tuaillon[9,10], Philippe van de Perre[9,10], Christine Pichler[11], Philippa Easterbrook[7] and Claudia M. Denkinger[4]

The Author(s) *BMC Infectious Diseases* 2017, **17**(Suppl 1):693
DOI 10.1186/s12879-017-2776-z

BMC Infectious Diseases

RESEARCH Open Access

Diagnostic accuracy of detection and quantification of HBV-DNA and HCV-RNA using dried blood spot (DBS) samples – a systematic review and meta-analysis

Berit Lange[1,2*], Teri Roberts[3], Jennifer Cohn[4], Jamie Greenman[4], Johannes Camp[1], Azumi Ishizaki[5], Luke Messac[4], Edouard Tuaillon[6,7], Philippe van de Perre[6,7], Christine Pichler[1], Claudia M. Denkinger[3] and Philippa Easterbrook[5]

PLOS MEDICINE

RESEARCH ARTICLE

The performance of using dried blood spot specimens for HIV-1 viral load testing: A systematic review and meta-analysis

Lara Vojnov[1☯*], Sergio Carmona[2], Clement Zeh[3], Jessica Markby[4], Debrah Boeras[3], Marta R. Prescott[1], Anthony L. H. Mayne[5], Souleymane Sawadogo[6], Christiane Adje-Toure[7], Guoqing Zhang[3], Mercedes Perez Gonzalez[4], Wendy S. Stevens[2,8], Meg Doherty[4], Chunfu Yang[3], Heather Alexander[3], Trevor F. Peter[1], John Nkengasong[3], the DBS for VL Diagnostics Investigation Consortium[¶]

The Journal of Infectious Diseases

MAJOR ARTICLE

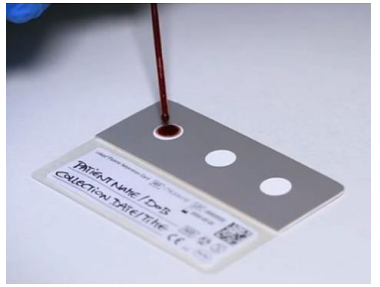
IDSA Infectious Diseases Society of America · hivma hiv medicine association · OXFORD

Diagnostic Accuracy of Assays Using Point-of-Care Testing or Dried Blood Spot Samples for the Determination of Hepatitis C Virus RNA: A Systematic Review

Beth Catlett,[1,2,0] Behzad Hajarizadeh,[1] Evan Cunningham,[1] Brett Wolfson-Stofko,[2] Alice Wheeler,[1] Benazir Khandaker-Hussain,[4] Jordan J. Feld,[3] Elisa Martró,[5,6] Stéphane Chevaliez,[7] Jean-Michel Pawlotsky,[7] Chrianna Bharat,[8] Philip H. Cunningham,[1,2] Gregory J. Dore,[1] Tanya Applegate,[1] and Jason Grebely[1,0]

Conventional dried blood spots:
CE-IVD for **HCV** and **HIV** viral load
(Abbott Molecular Inc)

Plasma separation cards:
CE-IVD for **HIV** viral load (Roche Diagnostics)



Velásquez-Orozco F, et al. Diagnostics 2021

PoC tests for STIs

- **Syphilis RDTs**:
  Treponemal tests: Ab to *Treponema pallidum* (10-30 min), cannot distinguish active/past treated infections.

  First dual **treponemal and non-treponemal** RDT: DPP Syphilis Screen and Confirm Assay (Chembio Diagnostic Systems), 15-20 min, whole blood

- **Combined HIV/syphilis RDTs**

- **Chlamydia and gonorrhea RDTs:** suboptimal sensitivity, improved assays needed

- **Molecular near-PoC tests** for *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis,* require equipment (35-90 min), urine/swab samples

Platform	Technology	*C. trachomatis*	*N. gonorrhoeae*	*C. trachomatis*/*N. gonorrhoeae*	*T. vaginalis*
				Available platforms/assays	
GeneXpert Cepheid	PCR-based NAAT	N/A	N/A	√ CE-IVD FDA	√ CE-IVD FDA
Solana QuidelOrtho	iNAAT-HDA	N/A	N/A	N/A	√ FDA CE-IVD
***care*HPV System** QIAGEN	Nucleic acid hybridization	N/A	N/A	N/A	N/A
Truelab RT micro PCR Molbio	Real-time PCR	√ CE-IVD	√ CE-IVD	√ CE-IVD	√ CE-IVD
***io* Diagnostic System** binx health	PCR-based NAAT; electrochemical detection	N/A	N/A	√ FDA CE-IVD	
EasyNAT Ustar	iNAAT – CPA	N/A	√ CE-IVD	√	√ CE-IVD
Visby Medical	PCR-based NAAT	N/A	N/A	√ CT/NG/TV FDA	√
HG Swift HiberGene Diagnostics	Isothermal LAMP; Fluorometric detection	N/A	N/A	√ CE-IVD	N/A
Genie II & Genie III eazyplex Amplex/OptiGene	iNAAT; fluorescence	√ CE-IVD		√ Plus *C. trachomatis*, *N. gonorrhoeae*, *U. urealyticum*, *M. hominis*, *M. genitalium* and *T. pallidum* combo test CE-IVD	√
Vivalytic Randox/Bosch	PCR-based NAAT	N/A	N/A	√ *C. trachomatis*/*N. gonorrhoeae*/*T. vaginalis*/*M. genitalium*/HSV-1 and HSV-2, plus CE-IVD	√

https://www.who.int/publications/i/item/9789240077126

Tuberculosis

Screening for LTBI

Confined to those at high risk of progressing to disease and who will benefit from chemoprophylaxis (e.g.: PLWH)

Tuberculin skin test (TST)

- high proportion of **FN** and FP results (BCG vaccination, NTM)
- subjective interpretation
- a need for a second visit (48-96 h)

Administering the TB skin test

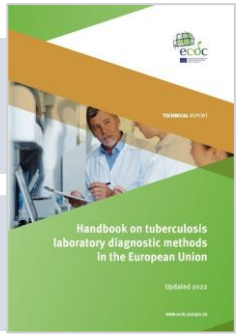
Reading the result of a TB skin test

Interferon-γ release assays (IGRAs):

- higher sensitivity and specificity
- only one visit (lab testing)

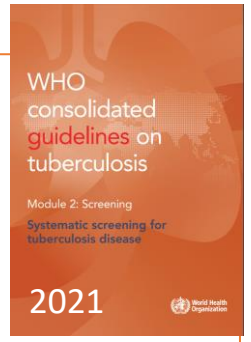
Limitations (both tests): **cannot accurately differentiate between LTBI / active TB,** nor reactivation / reinfection

In high-incidence settings, the focus of prevention and control is on **identifying and treating active TB cases**.

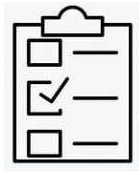


https://www.ecdc.europa.eu/en/publications-data/handbook-tuberculosis-laboratory-diagnostic-methods-european-union-updated-2023

Screening for active TB



In populations in which TB screening is recommended, **systematic screening for TB disease** may be conducted using (alone or in combination):



Symptom screen

Chest X-ray

Molecular WHO-recommended rapid diagnostic tests (mWRDs)

➔ Community-wide systematic screening using an accurate screening and diagnostic algorithm may be used in settings with a TB prevalence of 0.5% and higher, based on new evidence of public health benefit.

Screening and testing **in communities** by **mobile teams**. Needs **confirmation by a diagnostic test** and **clinical evaluation**.

**Sputum collection generates infectious aerosols*, *should only be performed at a distance from other people, preferably in open spaces, or in rooms with negative pressure and adequate air exchange.*

Tuberculosis: Need for **sputum-free tests** for decentralised testing

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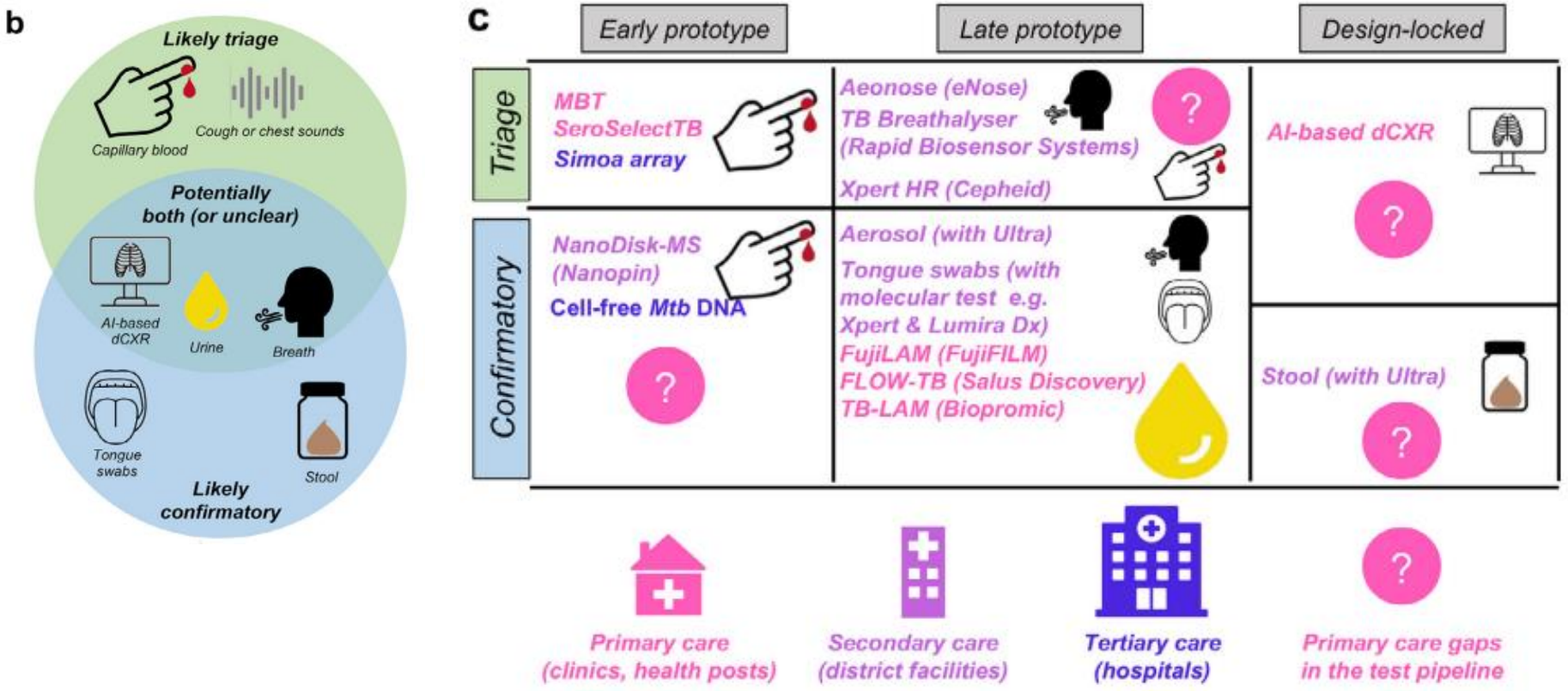
Moving from **passive case-finding** to **active case-finding (systematic screening) for TB disease**

- Sputum: difficult to obtain in high-risk groups, such as PLWH, and early disease patients;
- High proportion in surveys of **a- or pre-symptomatic cases (subclinical TB)**

  missed by current symptom screening approaches, may be responsible for more than half of TB transmission.

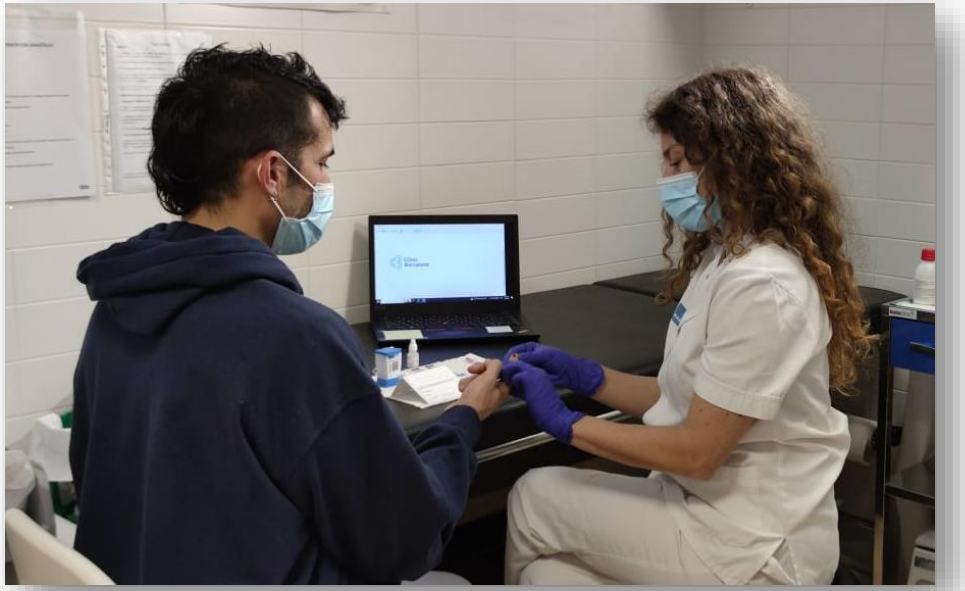


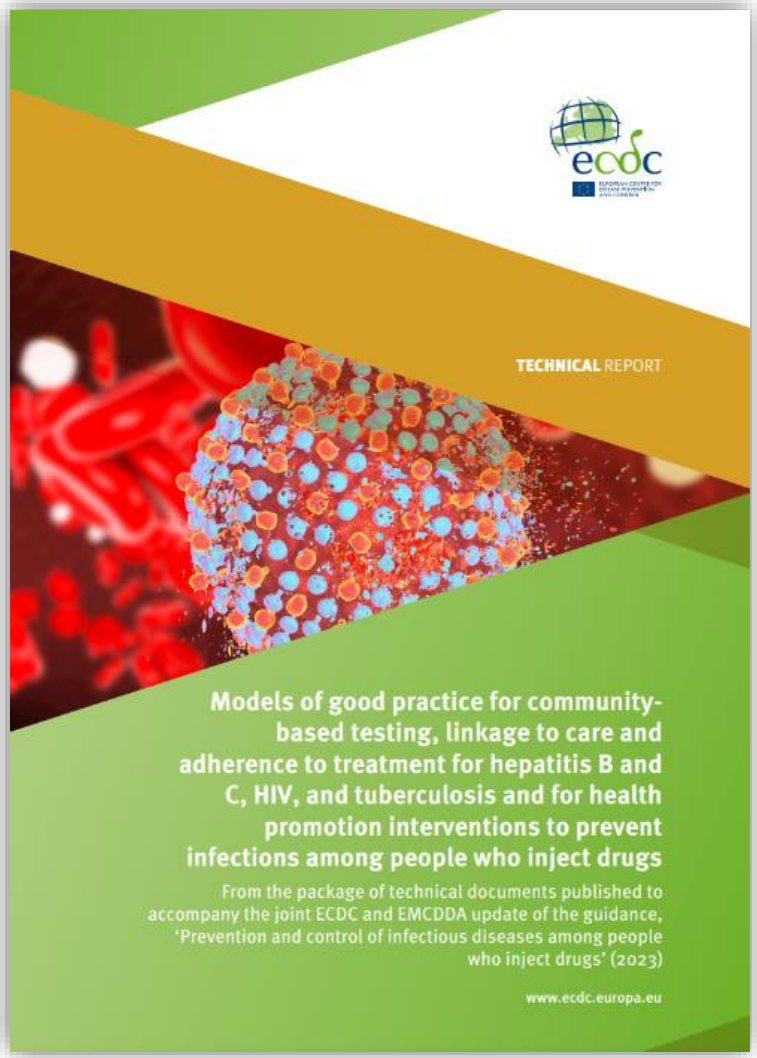
Insufficient late-stage tests useful for:
- **facility-based PoC testing**
- **community-based testing**

(diagnostically and operationally more challenging)

Nathavitharana RR, et al. EBioMedicine. 2022;78:103939

Examples of good practices





https://www.ecdc.europa.eu/en/publications-data/models-good-practice-community-based-testing-linkage-care-and-adherence-treatment

Community-based VH/HIV/TB models of good practice in people who inject drugs emerged among the 12 projects/programmes:

- **Peer involvement** (7/12):
  - ✓ to enhance community-based testing
    (e.g. outreach peer support, peer-to-peer recruiting, involvement in PoC testing)
  - ✓ to increase linkage to care
    (e.g. peer navigators supporting referrals, outreach tracing of those not in care)
  - ✓ to increase adherence to treatment
    (e.g. keep regular contact during treatment).

http://www.peerinvolvement.eu/

- **Integration of nurses** in the treatment cascade (5/12)
- **Multidisciplinary approach**, cooperation between drug services and specialised healthcare services often using a **low-threshold approach** (in particular to increase linkage to care).

Find & Treat
(London, UK)

HepHIV 2023
13-15 NOVEMBER·MADRID

1. **Active case finding of people with active tuberculosis** (homeless people, drug or alcohol users, vulnerable migrants and people who have been in prison)

   - **Multidisciplinary team:** former TB patients as peer advocates, TB nurse specialists, social and outreach workers, radiographers and expert technicians.
   - Screen 8,000 high risk people every year using a mobile **digital X-ray unit** (12.5% onward referral)
   - Supports Public Health England to manage TB outbreaks nationally

Digital X-ray
GeneXpert and RDTs
Fibroscan
Screening & treatment

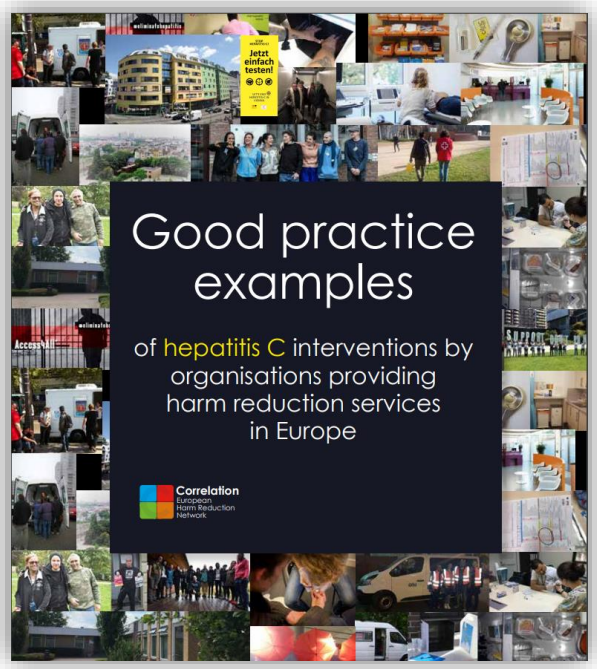
2. Extended to BBVs: trained peer support workers (PSWs) + clinical team (nurses, medical staff, social worker)

- **HCV confirmatory testing and treatment initiation on the same day** and DAAs delivery and post-treatment tests are performed on-site. Complex cases are accompanied to specialist treatment services.
- **Video Supported Care** via smart phone with a secure app that is used to monitor treatment adherence and other healthcare support interventions.

3. Expansion to outreach testing activities for **HBV** and **HIV**.

Partners: **harm reduction providers** and **NGOs** (homeless and drug services) in developing screening interventions, **peers** in developing the models

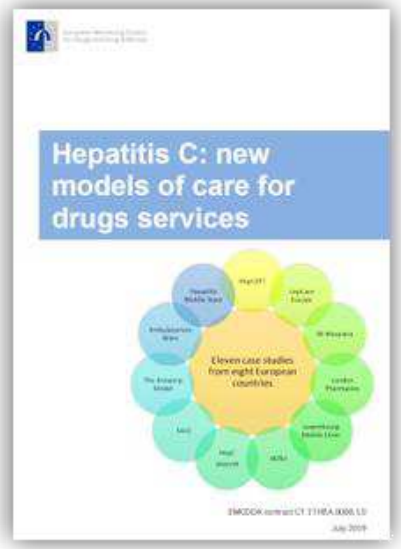
https://www.uclh.nhs.uk/our-services/find-service/tropical-and-infectious-diseases/find-treat-service

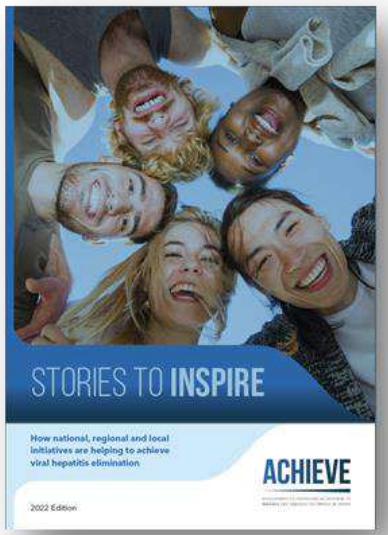


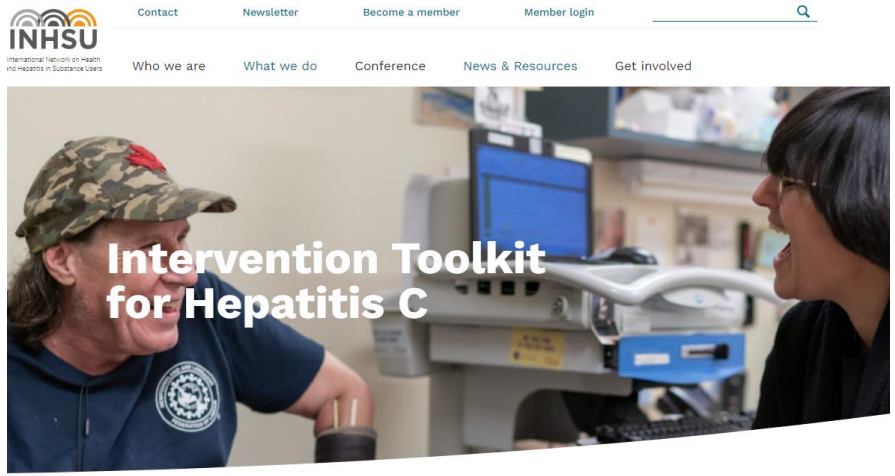
https://www.correlation-net.org/wp-content/uploads/2019/09/good-practice_-example_web.pdf

- **On-site HIV, HCV, HBV and syphilis testing** and counseling, including **rapid diagnostic tests**, **DBS**, **venipuncture**, and external HCV core antigen assay as well as fibroscan-elastography.
- Two GIRUGaia staff, a nurse and a harm reduction worker, conduct the tests.

- Clients can receive daily treatment in the Combined Therapy Programme on-site, enabling **HIV and tuberculosis treatment** and **psychiatric medicines** to be dispensed at the same time at GiruGaia.







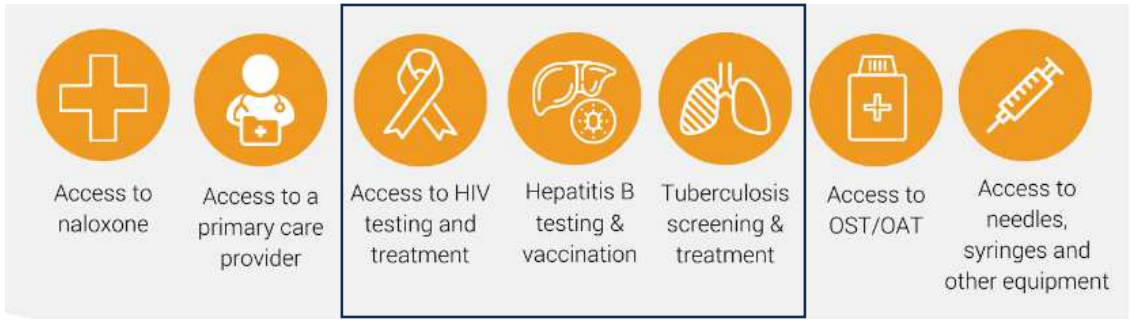
Welcome to our Intervention Toolkit, developed to inform and inspire global hepatitis C testing, diagnosis, linkage to care and treatment for people who use drugs.

How-to guides

Below you will discover practical guides on how to implement evidence-based HCV interventions in your service, with more How-To Guides coming soon.

- Dried Blood Spot (DBS) Testing for Hepatitis C
- Hepatitis C Care Navigation
- Medical Record Auditing for Hepatitis C
- Peer Support for Hepatitis C
- Point-of-Care Antibody Testing for Hepatitis C
- Point-of-Care RNA Testing for Hepatitis C

COMMUNITY HEALTH | KACHIN STATE, MYANMAR
A PEER-LED APPROACH TO HEPATITIS C



WHAT HCV SERVICES DO WE PROVIDE?

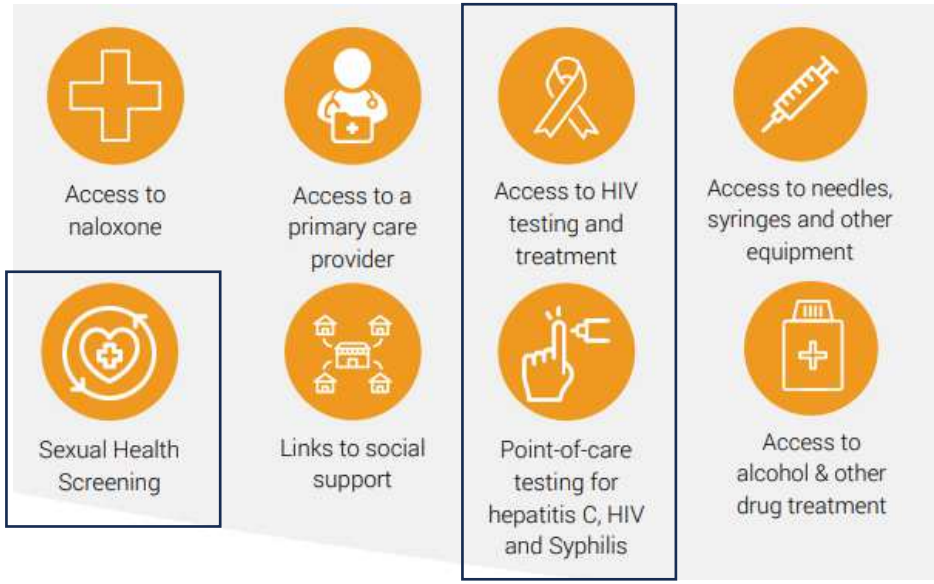
- HCV education and information
- Peer support
- HCV testing
- HCV diagnosis
- HCV treatment
- Liver disease assessment
- Genotyping for HCV

WHAT INTERVENTIONS DO WE USE?

- Peer support
- Opt-out screening
- On-site testing
- Point-of-care HCV antibody testing
- Point-of-care HCV RNA testing
- Dried blood spot testing
- Pre-test counselling and education
- Patient navigation

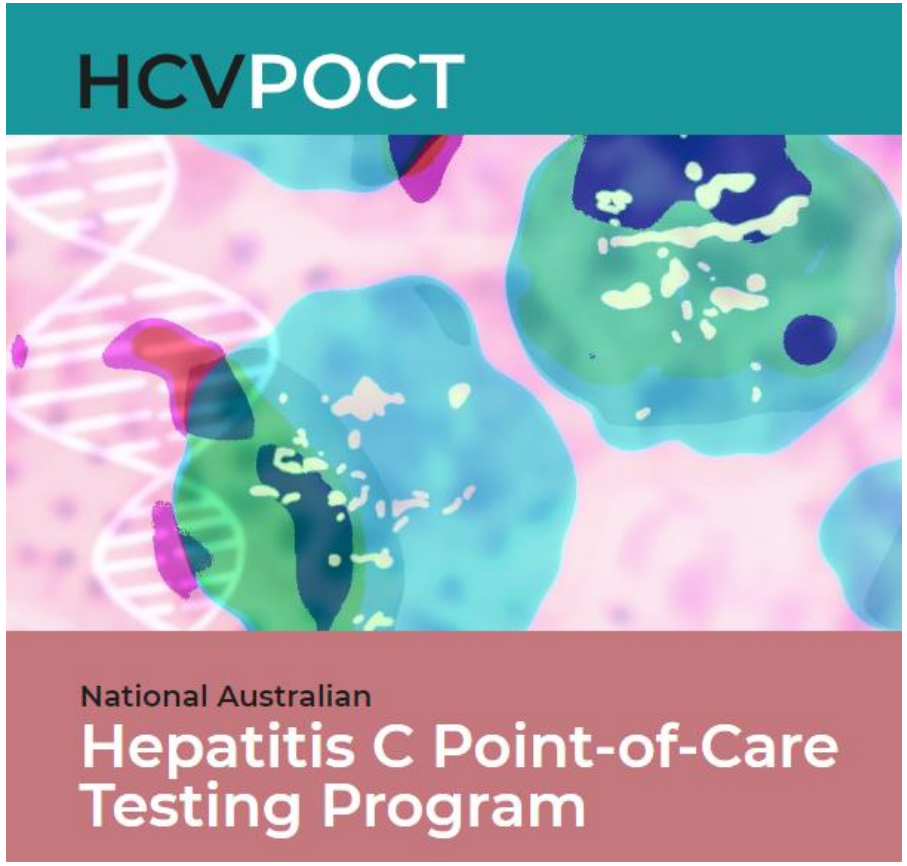
This Médicins du Monde programme uses a **peer-led approach** to **refer people** at risk for HCV to **existing HIV / harm reduction clinics/mobile unit**, where testing and treatment is provided

NSP AND HEPATITIS C TESTING AND TREATMENT SERVICE | QUEENSLAND, AUSTRALIA

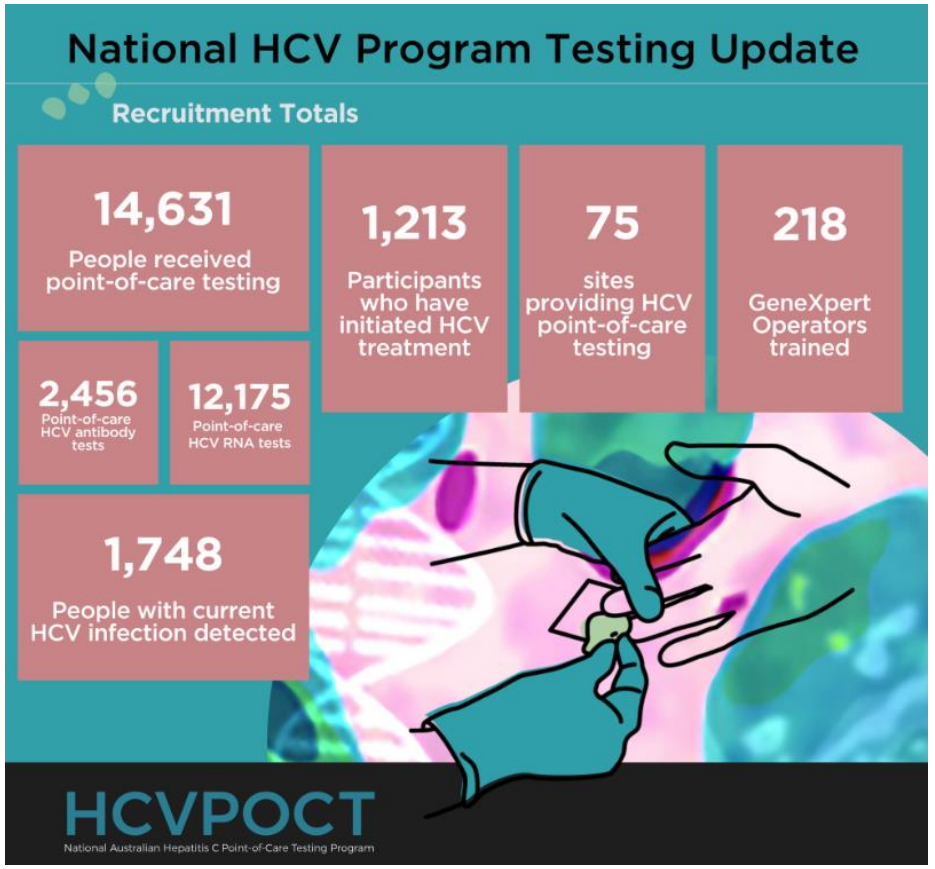


The Queensland Injectors Health Network (QuIHN), extended its existing harm reduction services to provide a '**one-stop-shop**' where people who use drugs could access **testing and treatment** in a safe and familiar environment.

https://www.inhsu.org/what-we-do/global-knowledge-exchange/innovative-models-of-hcv-care-infographics/



- HCV Ab
- HCV RNA
- HIV Ab/Ag
- HBsAg



https://x.com/hcvpoct/status/1713696575120437650?s=20

16/10/23

Drug treatment clinics, NSPs, prisons, mental health, mobile outreach models, homelessness services, Aboriginal Community Controlled Health Organisations

https://hepcpoct.com.au/

Integration of services in harm reduction centres in Spain

Centre (city name)	HCV DAA	HIV ART	HBV testing	HCV testing	HIV testing	TB testing *
Centre 1 (Badalona)						
Centre 2 (Bilbao)				✓		✓
Centre 3 (Madrid)	✓	✓	✓	✓	✓	✓
Centre 4 (Madrid)	✓	✓	✓	✓	✓	✓
Centre 5 (Vitoria-Gasteiz)					✓	
Centre 6 (Bilbao)	✓	✓	✓	✓	✓	
Centre 7 (Reus)						
Centre 8 (Valencia)	✓	✓	✓	✓	✓	✓
Centre 9 (Bilbao)						
Centre 10 (El Prat de Llobregat)		✓		✓	✓	
Centre 11 (Barcelona)	✓		✓	✓	✓	✓
Centre 12 (Barcelona)	✓		✓	✓	✓	✓
Centre 13 (Sant Adrià de Besos)	✓			✓	✓	
Total	7	5	6	9	9	6

*LTBI testing with the tuberculin skin test.

COVID-19-related disruptions to harm reduction services: **reduced outreach activities** and low threshold harm reduction **service capacities** in general, leading to **reduced HIV and hepatitis C testing availability**

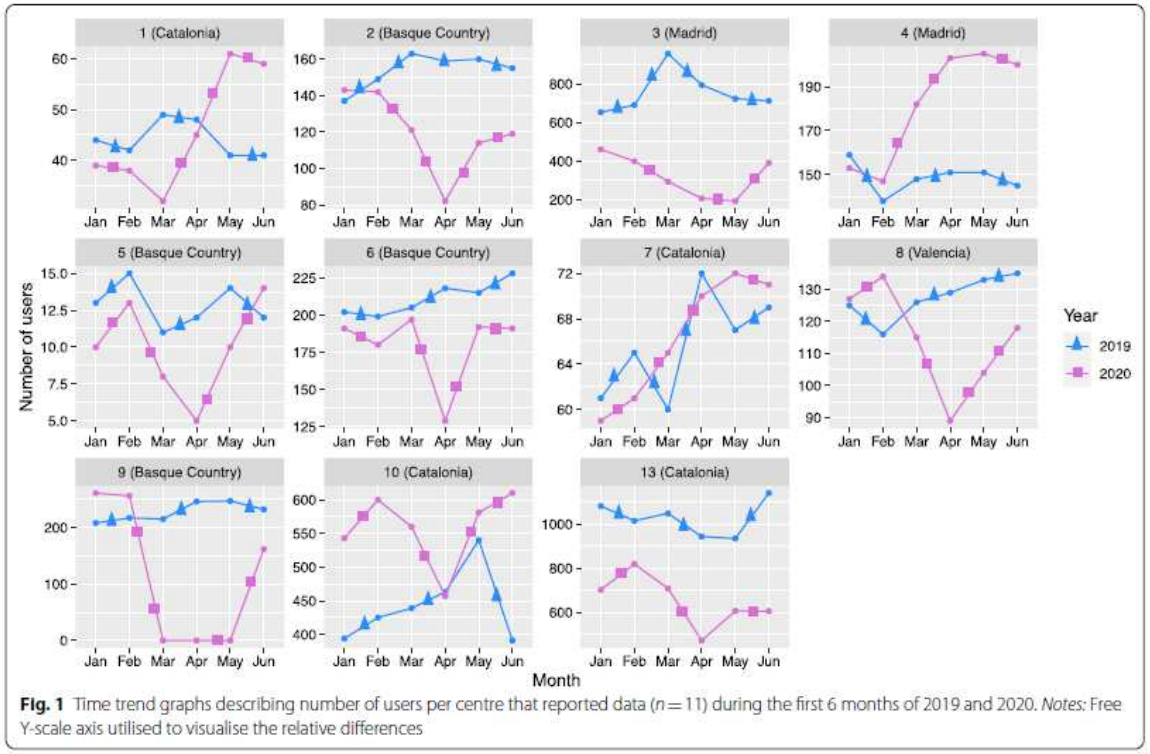


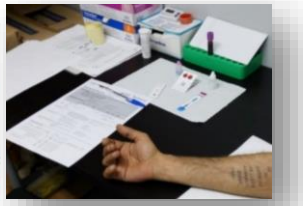
Fig. 1 Time trend graphs describing number of users per centre that reported data ($n = 11$) during the first 6 months of 2019 and 2020. *Notes:* Free Y-scale axis utilised to visualise the relative differences

Picchio C, et al. Harm Reduct J. 2020;17(1):87.

Integrated screening of HCV/HBV/VIH in people who inject drugs in harm reduction services in Catalonia

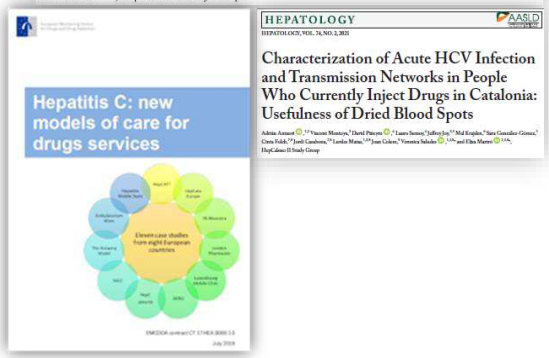
HepHIV 2023
13-15 NOVEMBER · MADRID

Germans Trias i Pujol Hospital | IGTP | CEEIS Cat | Generalitat de Catalunya Agència de Salut Pública de Catalunya

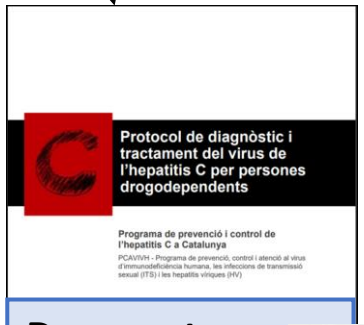


HepC*detect* II
2016-17, N=410

1. Decentralised DBS collection for one-step HCV-RNA testing



HepTestFarma:
community pharmacies (harm reduction)
2023-24, N=400



Drug centres
2021-to date

Generalitat de Catalunya | Salut Agència de Salut Pública de Catalunya

HepC*detect* II
2018-19, N=100

2. Decentralised HCV-RNA testing

CHIME
2019-to date, N=750
Dx & test of cure

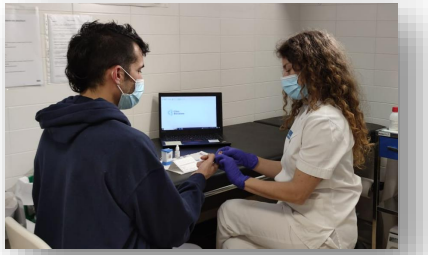
FUNDACIÓ CLÍNIC BARCELONA

3. Decentralised Test & Treat pilot

M. Gálvez. HepHIV - PO3/03

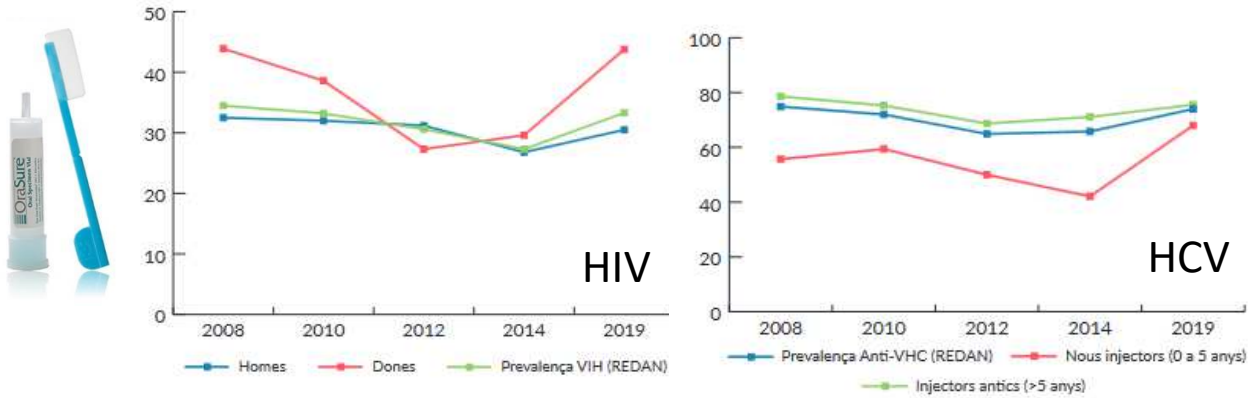
Training and remote validation of GeneXpert results

DBS:
*- Baseline vs. post-tx HCV sequencing (differentiation between **reinfection** and **tx failure**)*
- Validation as 'test of cure'



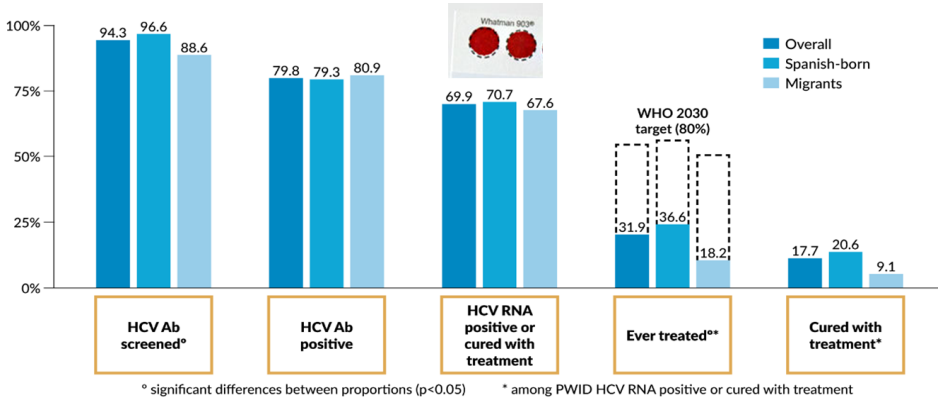
Biobehabioural monitoring in people who inject drugs in harm reduction centers in Catalonia

- **HIV and HCV screening in oral fluid (Ab)**



SIVES 2020. CEEISCAT, 2021.

- **HCV screening with RDTs (Ab) and DBS (RNA)**

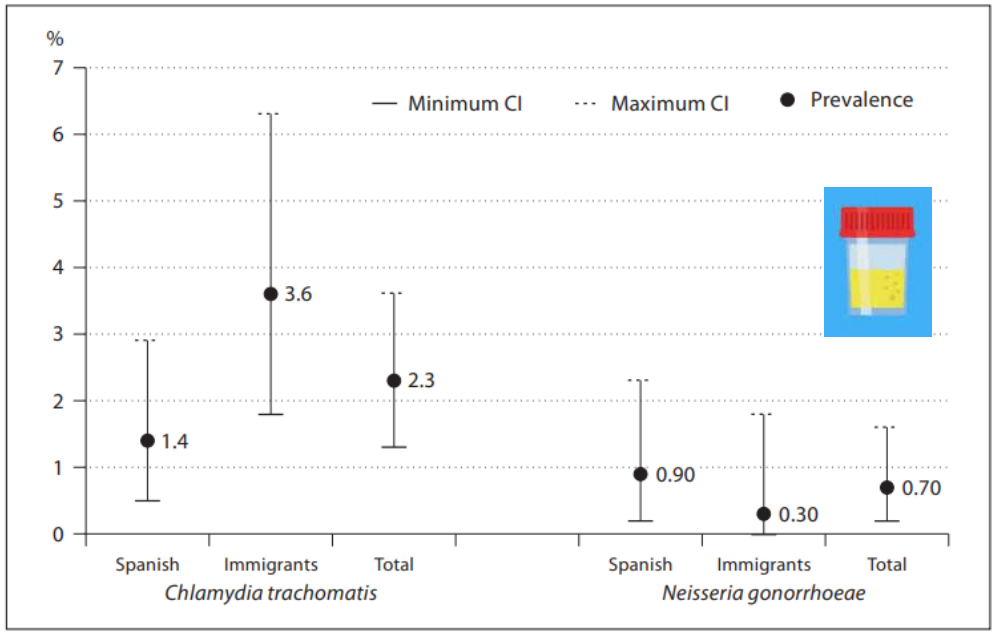


HCV care cascade in people who actively inject drugs attending harm reduction services in Catalonia (HepC*detect* II Study)

Folch C, et al. Int J Drug Policy 2021;90:103057

- **STI screening in urine** (laboratory testing)

Respondents aged ≤25 years had a higher risk of STIs (OR 3.39), as did women (OR 3.08).



Folch C, et al. Eur Addict Res 2011;17(5):271-8.

Integrated srceening of HCV/HBV/VIH in drug centres and homlesness services in Catalonia

Mobile unit

Generalitat de Catalunya
Agència de Salut Pública de Catalunya

Creu Roja

- Nurse and social educator
- RDTs for **HCV/HBV/VIH**
- HCV-RNA confirmatory testing and 'test of cure' (GeneXpert)
- Transient elastography for liver fibrosis assessment
- Access to **decentralized HCV treatment** though visited centres

- **2023**: **Screening of STIs** (*C. trachomatis, N. gonorrhoeae, T. vaginalis*) by decentralized sample collection
- **2024**: Expanding to **active TB testing**

CEEIS Cat

Germans Trias i Pujol Hospital

IGTP

Conclusions

What will it take to achieve elimination of these infections in people who use drugs?

- ✓ **Radical simplification of diagnosis and care pathways**
- ✓ **Integrated services**

- **Training** of testing teams and **quality assurance**
- **Careful choice of specific tests and diagnostic algorithms** (balance suitability for decentralized settings, multiplexing capacity, low cost, high diagnostic accuracy)
- Involvement of all necessary partners to **ensure access to confirmatory diagnosis and treatment** if not provided on-site
- **Connectivity** and **reporting** systems, **monitoring** of the elimination progress

Thank you for your attention

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