

Francisco Pascual^{1,2} | Marta Pastor³ | Federico García⁴ | Juan Jesús Ruiz⁵ | José Manuel Fernández-Fernández⁶ | Marinela Méndez⁷ | Magdalena Rueda⁷ | Cristina de Alvaro⁸ | Benjamín Climent⁸
 1- Generalitat Valenciana, Unidad de Conductas Adictivas Alco | 2- Sociedad Científica Española para el Estudio del Alcohol, el Alcoholismo y las Otras Toxicomanías, Sociodrogalcohol | 3- Comisión Ciudadana Antisida de Bizkaia-Bizkaia | 4- Hospital Clínico Universitario San Cecilio, Servicio de Microbiología, Instituto de Investigación IBS, Granada | 5- Centro Provincial de Drogodependencias (CPD) de Málaga, Diputación de Málaga | 6- UAD Ribera (La Coruña) | 7- Departamento Médico de Gilead Sciences SLU, España | 8- Unidad Toxicología Clínica, Servicio Medicina Interna, Consorcio Hospital General Universitario, Valencia

INTRODUCCIÓN

To meet the objectives set by the WHO for the elimination of hepatitis C by 2030, it is essential to target vulnerable groups with high prevalence. Given the particular situation and vulnerability of these groups, a different approach is required, facilitating access to screening and to specialized care, adapting to the patient need, wherever they are.

OBJETIVE

The objective of this project is to facilitate Point of Care (PoC) screening for Hepatitis C Virus (HCV) in vulnerable populations and referral of HCV-positive patients to specialized healthcare.

METHOD

- In November 2019, the SOCIDROGALCOHOL Scientific Society, with the support of Gilead Sciences SLU, launched the "DETECT-C" program for PoC diagnosis of HCV, providing a rapid test for HCV in oral fluid (Oraquick) and devices for dry blood samples (DBS or Cobas Plasma Separation Card), for screening of individuals who attend addiction care centres and other socio-health centres, such as shelters, mental health centres, immigrant care centres, or social integration centres.
- In addition, to facilitate Point of Care (PoC) RNA testing that was an unmet need, in May 2021, a GeneXpert was made available at a Bizkaia's Center.
- This Bizkaia's center is a Low-demand Day Resource for Socio-Sanitary Care and Emergency center for people with addictions and/or in serious social exclusion that opened its doors in 2001. This center offers Harm Reduction service since its inception (1986) and June 1988 launched the first Syringe Exchange Program (SEP) in Spain. Around 70 different people a day frequently attend this resource.
- Moreover, to continue improving RNA PoC testing in for dried blood samples, recently, a Centralized Laboratory of Reference to analyze viremia on DBS devices was also implemented within the DETECT-C program.

The results are presented in two parts:

1. Results for the global program for the provision of Oraquick and dried blood devices and referrals to specialized care. Prevalence was analysed by test type in participating centres that shared their results for the period January 2020 to August 2022.

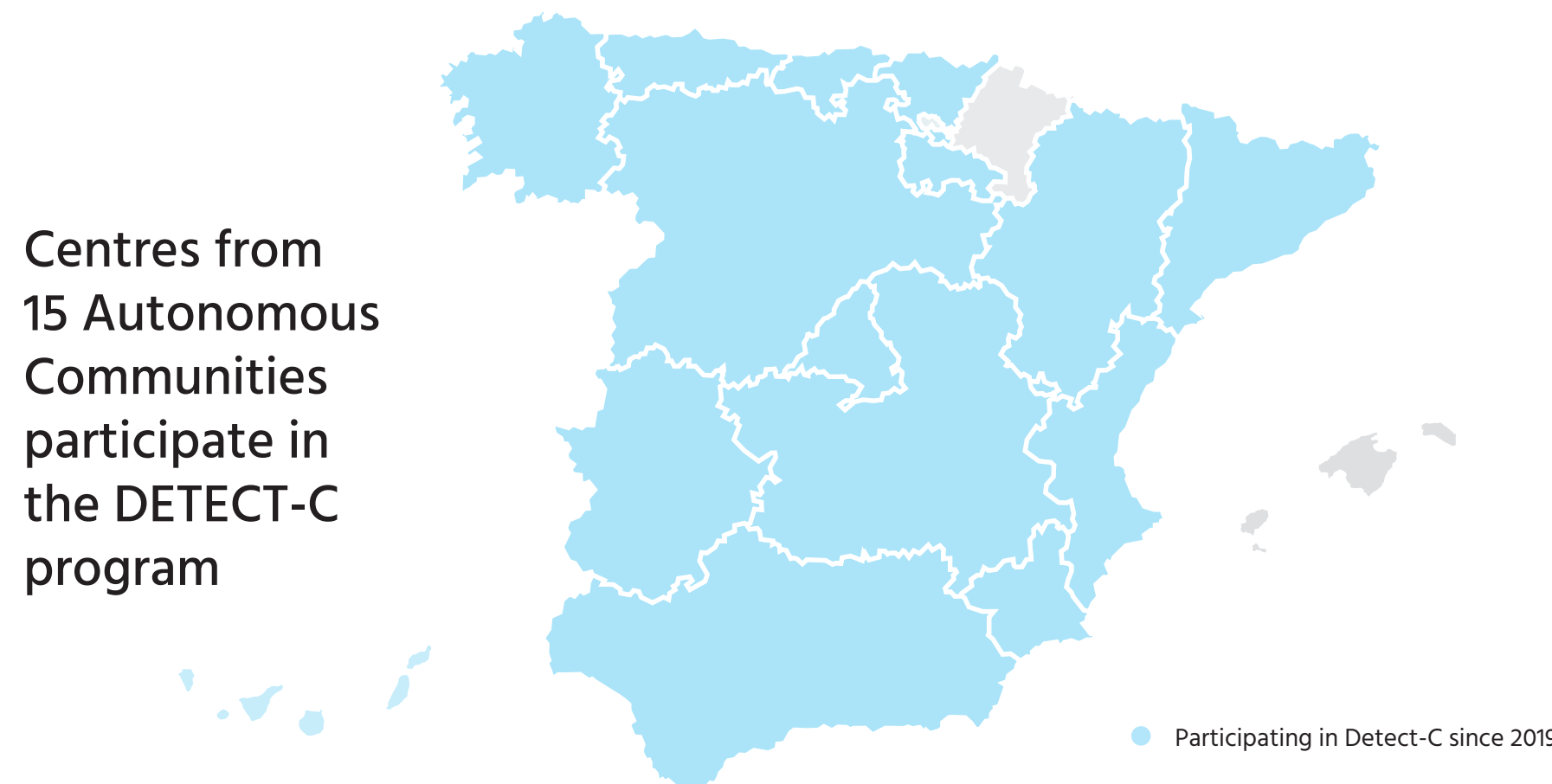
2. Results of RNA analysis using the GeneXpert system at the PoC in the Bizkaia harm reduction centre. Users underwent Oraquick tests. Those positive for HCV antibody (anti-HCV positive) had a finger prick blood sample taken and analysed for the presence of HCV RNA using the GeneXpert

system. Data were collected on demographic characteristics, antibody and RNA prevalences, status in terms of connection to specialized care, substance use habits, and mono/coinfection and reinfection status.

RESULTS

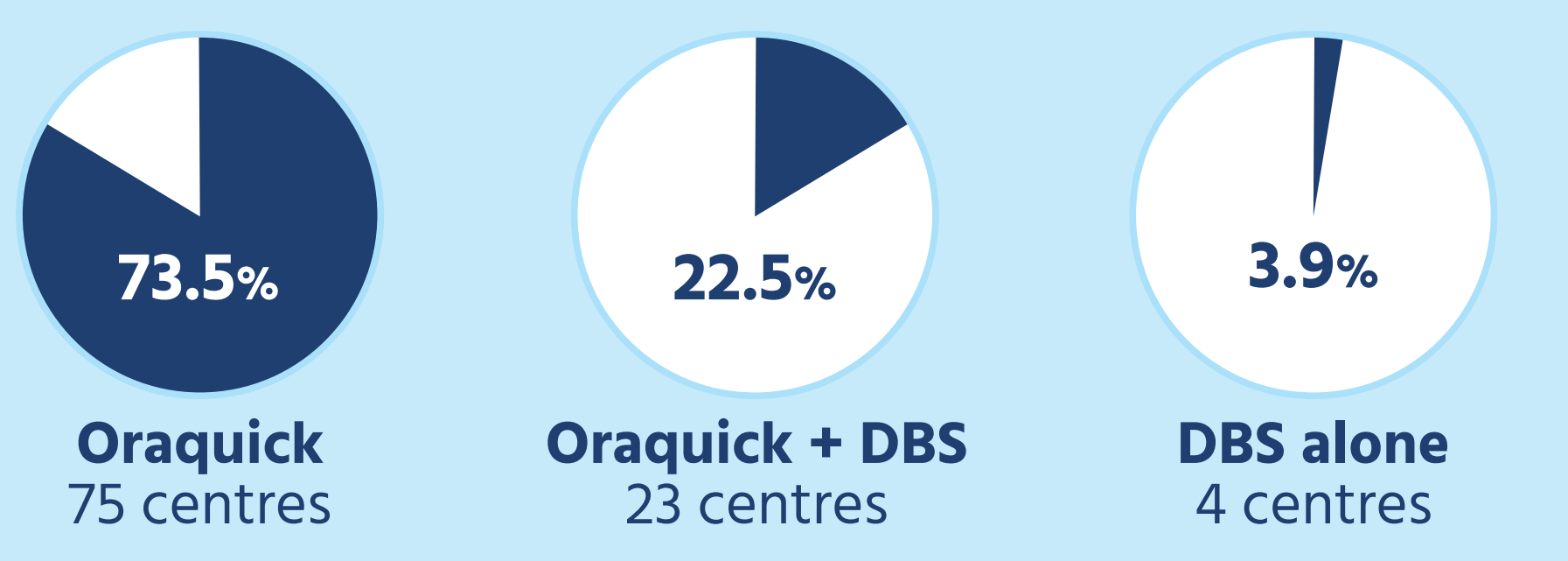
1. Results for the global program for the provision of Oraquick and dried blood devices and referrals to specialized care.

To date, 102 centres have participated; 73.5% (75 centres) requested and received Oraquick devices; 22.5% (23 centres) Oraquick + DBS; and 3.9% (4 centres) only DBS or Cobas Plasma Separation Card. Overall, Oraquick was requested more than DBS (83% Oraquick vs. 17% devices for testing samples for dried blood). The pandemic impacted screening, resulting in a decrease in the number of requests and/or use of diagnostic tests. **The Autonomous Communities with the highest number of participating centres were Andalusia (41%), Catalonia (14%), and Madrid (9%).**

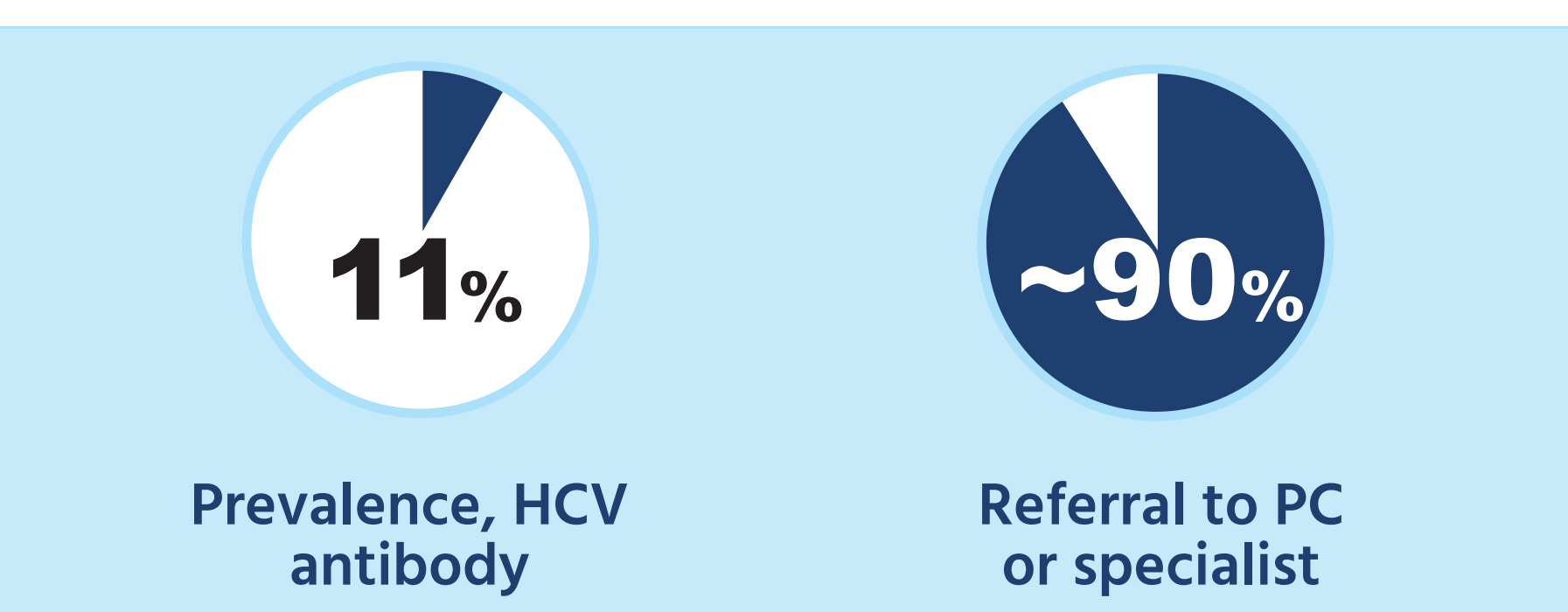


START November 2019

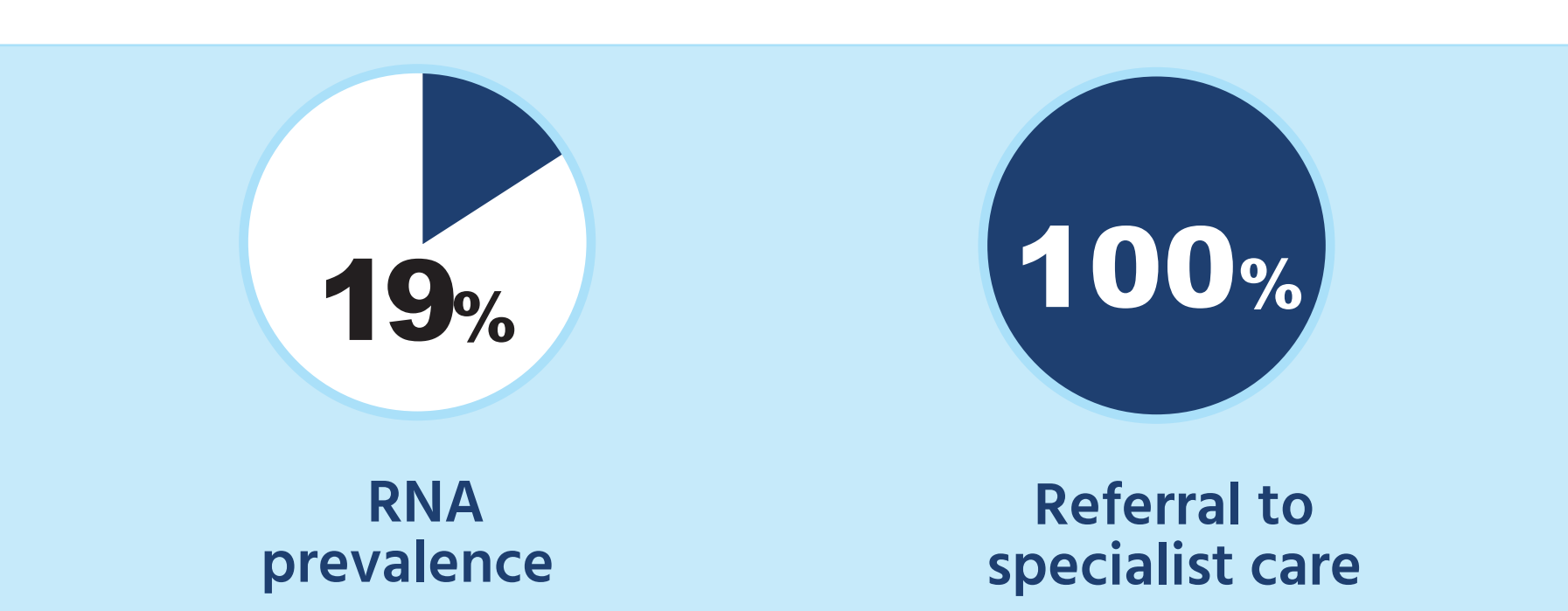
102 CENTRES (type of test requested by centre)



Until August 2022, Of the 3,236 results from Oraquick tests for HCV provided by 58 centres, 358 were positive result, indicating a prevalence of HCV antibodies of 11%; 10 times higher than the seroprevalence in the general population (0.85%) recorded in the Results of the 2nd Seroprevalence Study in Spain (2017-2018) carried out by the Ministry of Health, Consumption and Social Welfare. About 90% (308) of anti-HCV patients were referred to primary care (PC) or specialized care.



In the case of devices for dried blood samples, the results coming from the 4 centers that requested these devices show an RNA prevalence of 19% (52/273) and 100% (52) of referral to specialized care.

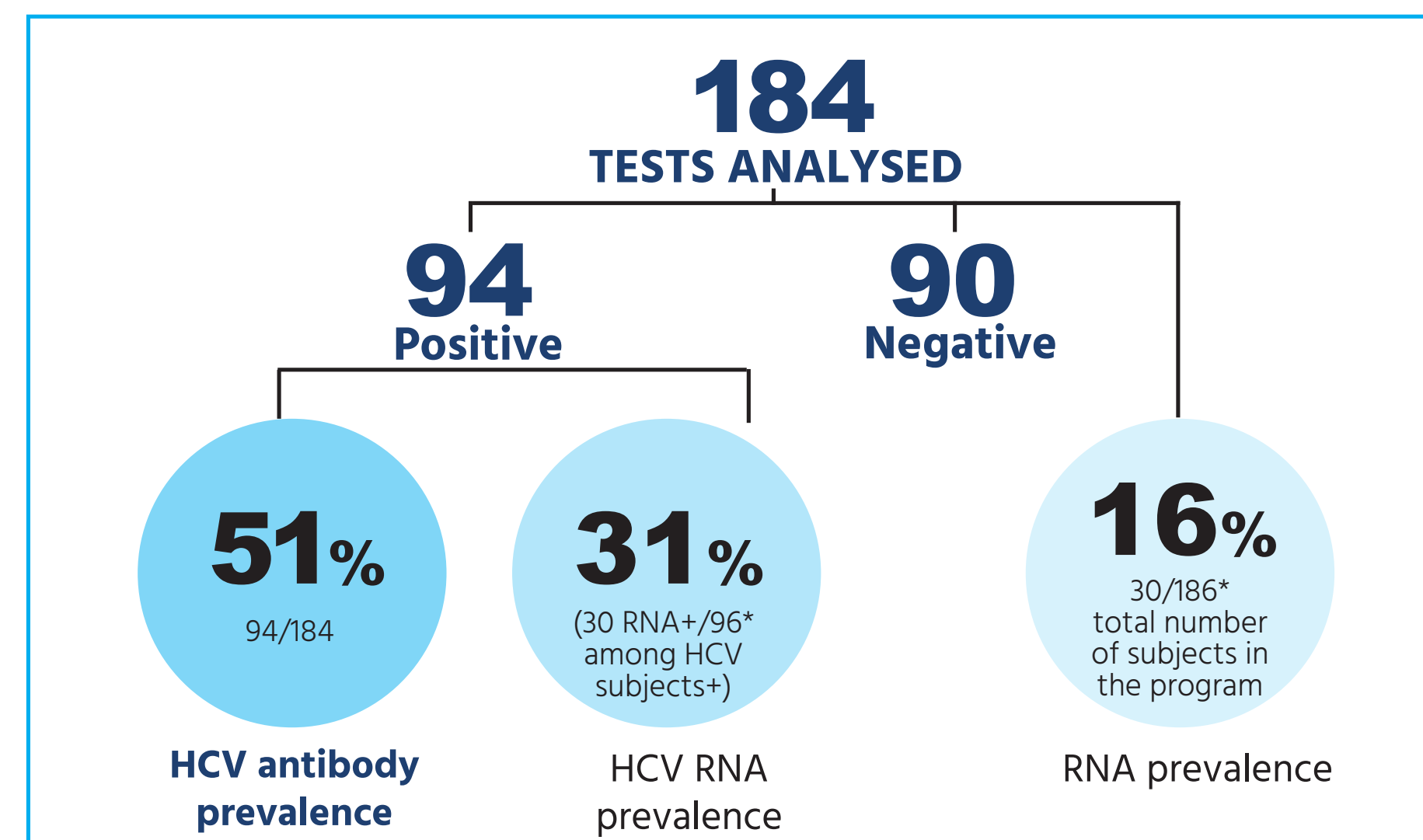


Data updated August 2022

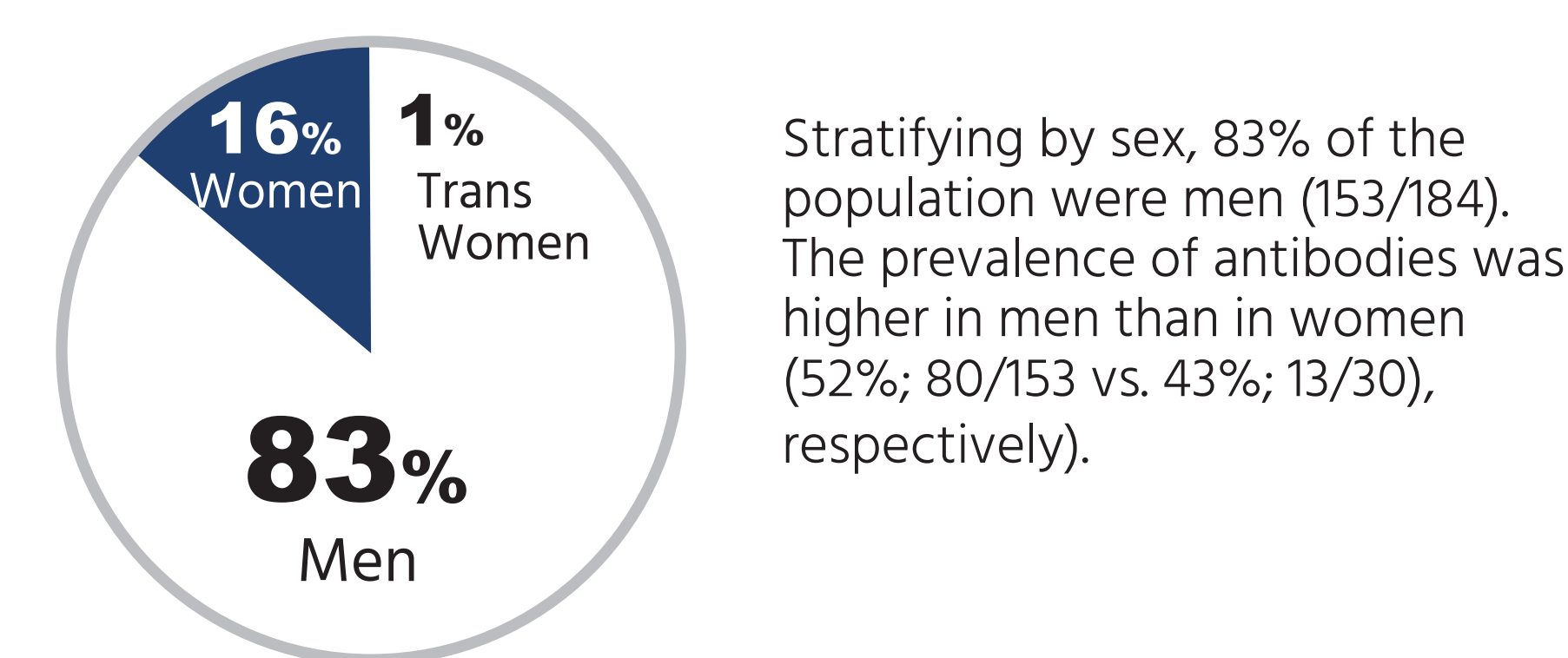
2. Results of RNA analysis by GeneXpert at the PoC.

From May 2021 to March 2022, 184 Oraquick tests were performed, of which 94 showed positive results for HCV (51% antibody prevalence), also tested for HIV. There were 30 cases with active HCV viraemia, indicating an RNA prevalence of 31% (30/96) in anti-HCV positive subjects (including 2 previously anti-HCV positive subjects, for a total of 96 patients). The prevalence in the total population was 16% (30/186).

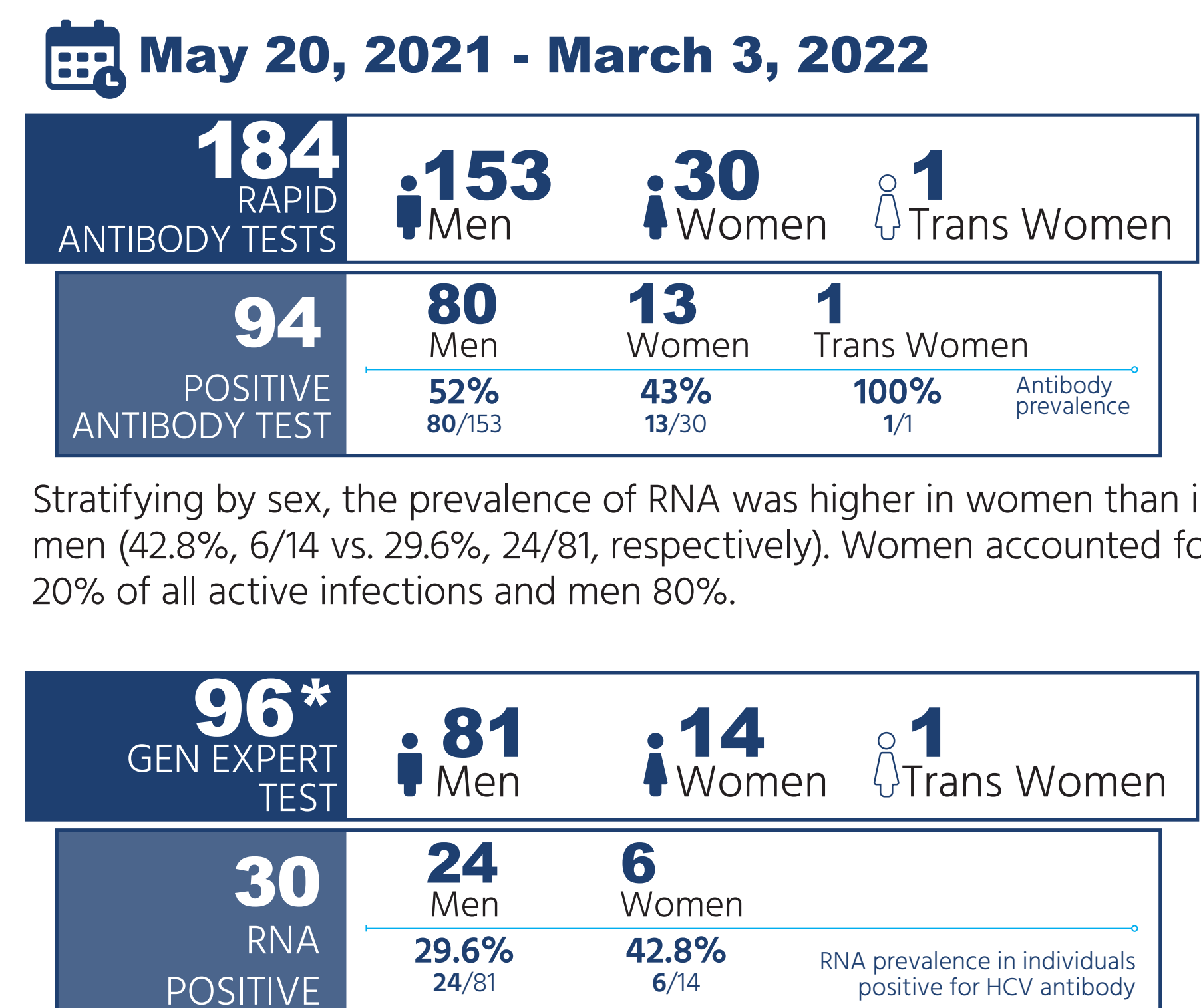
Oraquick Results



Population tested by sex (N=184)



Prevalences of HCV (Antibody and RNA)



Referrals to HCV specialized care

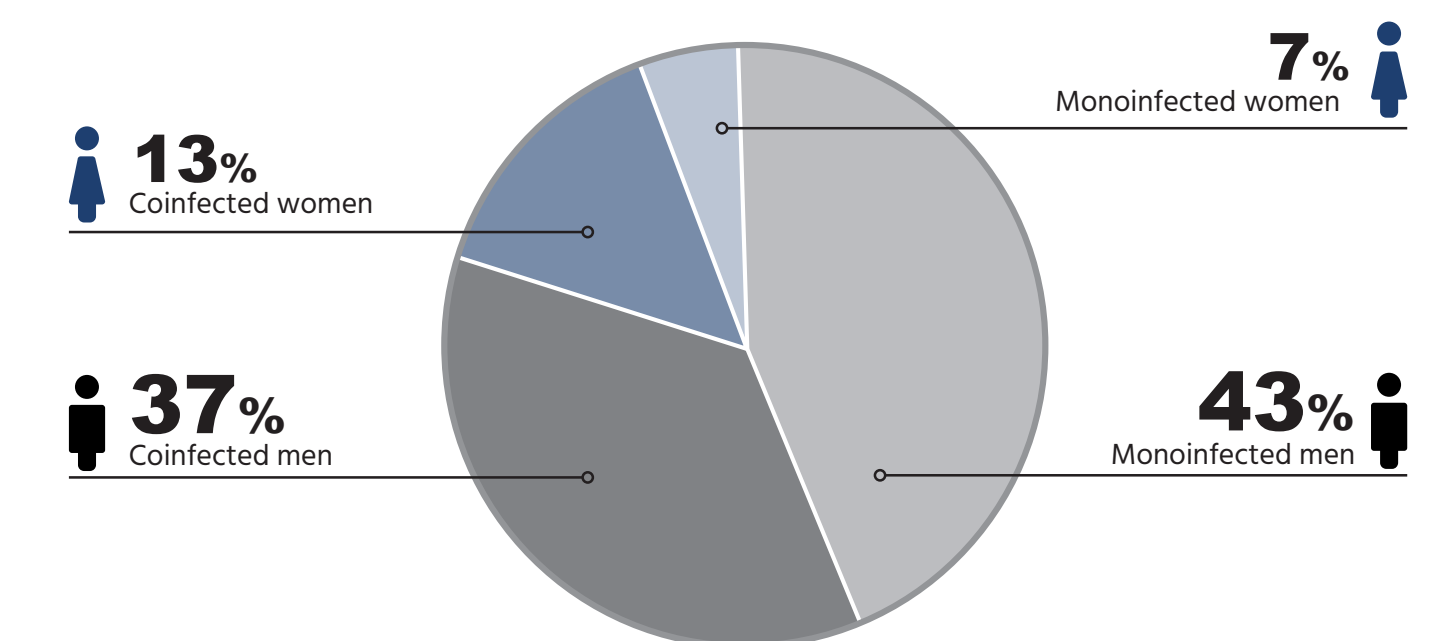
28/30 (93.3%) of RNA-positive individuals were accompanied to the health system for linkage to specialized care.



HCV Monoinfected/HIV Coinfected Patients

50% of active infections occurred in monoinfected patients and the other 50% in coinfecting patients. The graph shows the distribution by sex.

50% of users are monoinfected and 50% coinfecting (% by sex)



Analysis of reinfections

2/3 (67%) of the cases of active HCV infection (20/30) were reinfections.



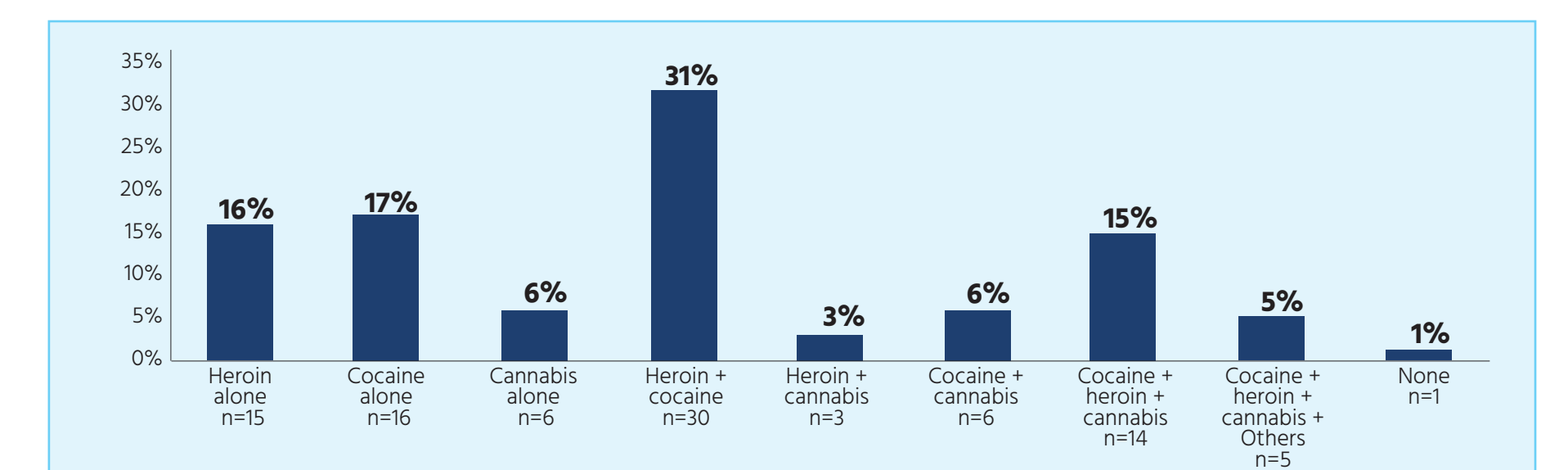
Demographic characteristics and substance use habits of individuals tested.

Demographic characteristics

Of the 96 individuals, 46 were homeless. Also, of note, 69 had an economic income: 1 person was currently working, but the majority were recipients of some form of economic assistance (pensions, guaranteed income, or similar) and/or engaged in begging.

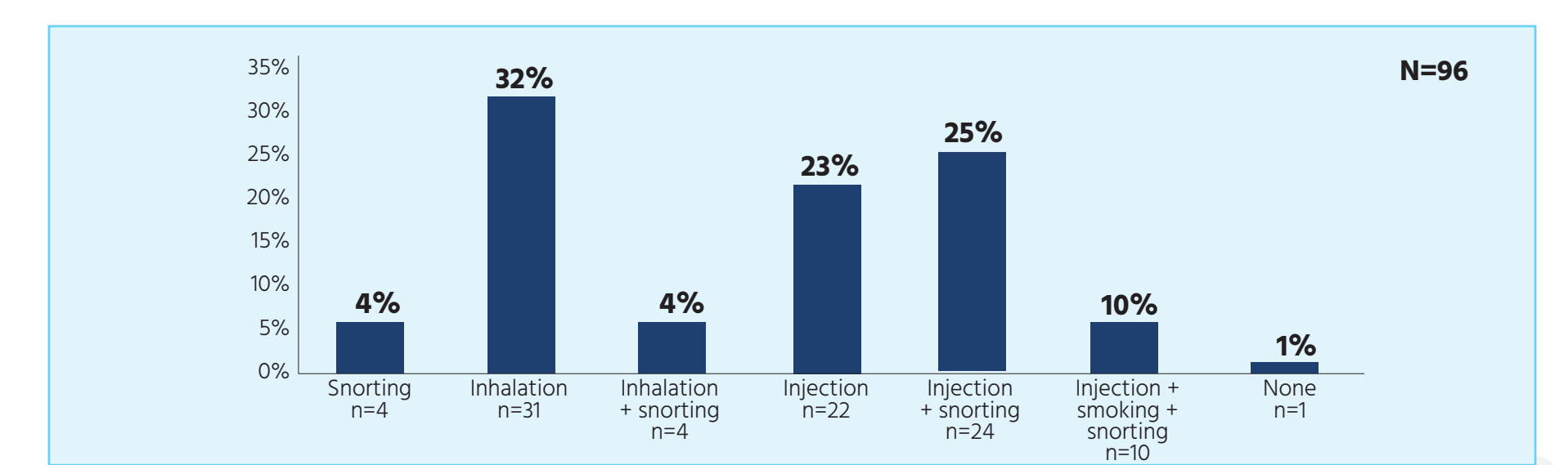
Substance use habits of individuals positive for HCV antibodies

The most consumed substances were the combination of heroin + cocaine (31%); followed by cocaine alone (17%); heroin alone (16%), or the combination of cocaine + heroin + cannabis (15%).



Routes of administration of drugs of abuse among HCV antibody-positive individuals

In general, injection was the more prevalent administration via, accounting for about 60% of cases, distributed in the following administration combinations: 23% injection only; 25% injection+snoring; 10% injection + smoking + snoring. Followed by snoring and inhalation alone or in combination with other administration routes.



CONCLUSIONS

- Facilitating HCV testing (antibody and viraemia) at the point of care, followed by accompaniment to the healthcare service and establishment of a direct referral pathway to specialized care is key to eliminate HCV in vulnerable population with high prevalence of infection.

REFERENCES

Ministry of Health. PREVALENCIA DE LA INFECCIÓN POR HEPATITIS C EN POBLACIÓN GENERAL EN ESPAÑA; 2017-2018. Results of the 2nd Seroprevalence Study in Spain (2017-2018). https://www.sanidad.gob.es/ciudadanos/enfLesiones/enfTransmisibles/sida/docs/INFORME_INFECCION_VHC_ESPAÑA2019.pdf. Accessed on: April 23, 2022.

ACKNOWLEDGMENTS

To all participating centres.

CONFLICTS OF INTEREST

Project financed by Gilead. FP: grant funded by Gilead; MM, MR and CA: employees of Gilead; MP, JR, JMFF and BC: no conflicts of interest.