

# Mexico City Case Study



Dra. Andrea González



October 11-13, 2022 | Barceló Sevilla Renacimiento

**NO8DO**

AYUNTAMIENTO DE SEVILLA

**IATAC**  
INTERNATIONAL ASSOCIATION  
OF PROVIDERS OF AIDS CARE

 **FAST-TRACK CITIES**  
INSTITUTE

Clínica Especializada Condesa is an **outpatient** and **community** health unit dedicated to the care of **PLWHA** and key populations.

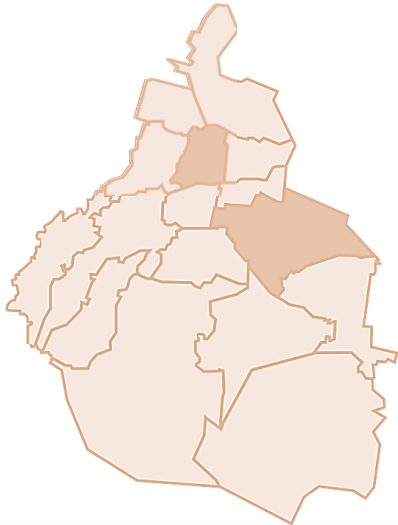


GOBIERNO DE LA  
CIUDAD DE MÉXICO



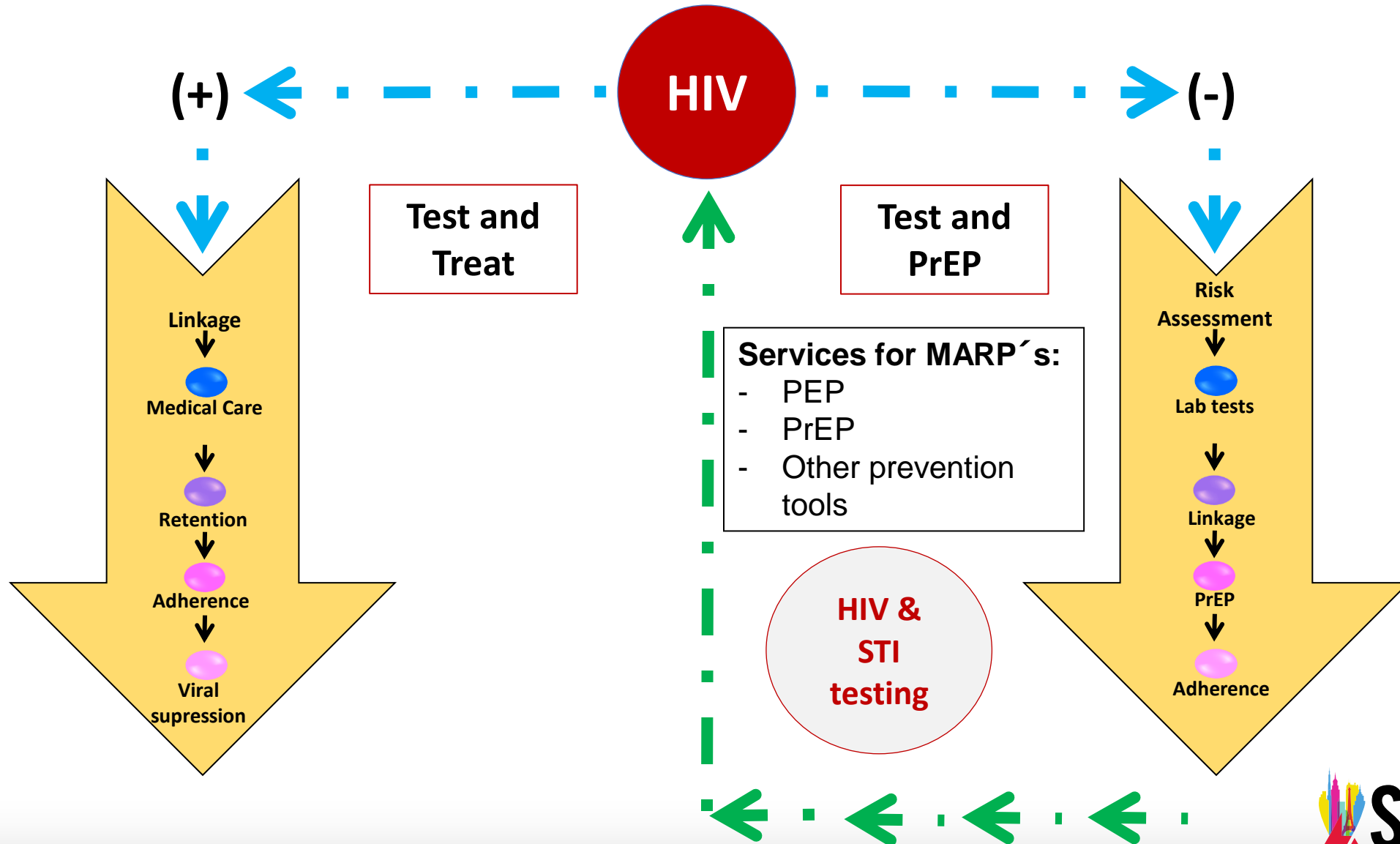
Clínica Especializada  
**CONDESA**

Clínica Condesa provides care in  
2 municipalities at Mexico City:  
**Cuauhtémoc** and **Iztapalapa**.

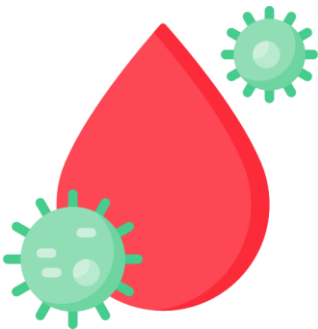
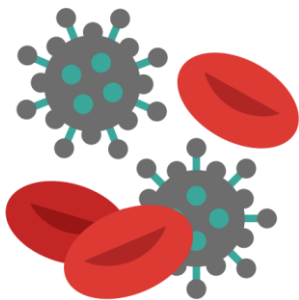


## Differentiated care in key populations in the Mexico City HIV/AIDS Program

Key population	Program
<b>High prevalence</b>	
Male sex workers	“Punto Seguro”
Transgender women	Comprehensive Transgender Clinic
MSM	All programs por Men
HIV discordant couples	Serodiscordant Couples Program
Acute HIV infection	Acute HIV Infection Program
MSM, Male sexworkers, Trasgender women and HIV discordant couples	Post-Exposure Prophylaxis (PEP) and Pre-Exposure Prophylaxis (PrEP)
<b>Low prevalence</b>	
Women	Sexual and Reproductive Health and STIs
Female sex workers	Sexual and Reproductive Health and STIs
Pregnancy	Sexual and Reproductive Health, STIs, and MTCT Prevention
Persons deprived of liberty	“Ponte a Prueba”, Counseling, Opt-Out Testing and Treatment
Socially marginalized people with drug use	Harm-reduction Programs
Crystal consumers	Comprehensive Prevention in Methamphetamine Users
Mexican migrants, refugees and returnees	“Clínica Santuario”, Counseling, Opt-Out Testing and Treatment
Survivors of sexual violence	Sexual and Reproductive Health, STIs, and PEP







People HIV+ on treatment

**23,035**

Percentage of patients in virological control  
<1,000 copies/ml

**97.0%**

Diagnostic testing and Counseling service

**30,344**  
Jan - Dec 2021

New HIV diagnoses

**3,827**  
Jan – Dec 2021

Positive results

**41,651**  
Accumulated since 2011

Data includes Clínicas Especializadas Condesa, Gea Gonzalez Hospital (**GeaGonzalez**), National Cancer Institute (**INCAN**), National Institute of Neurology and Neurosurgery (**INNyN**), National Institute of Respiratory Diseases (**INER**), and National Institute of Medical Sciences and Nutrition (**INCMNSZ**)



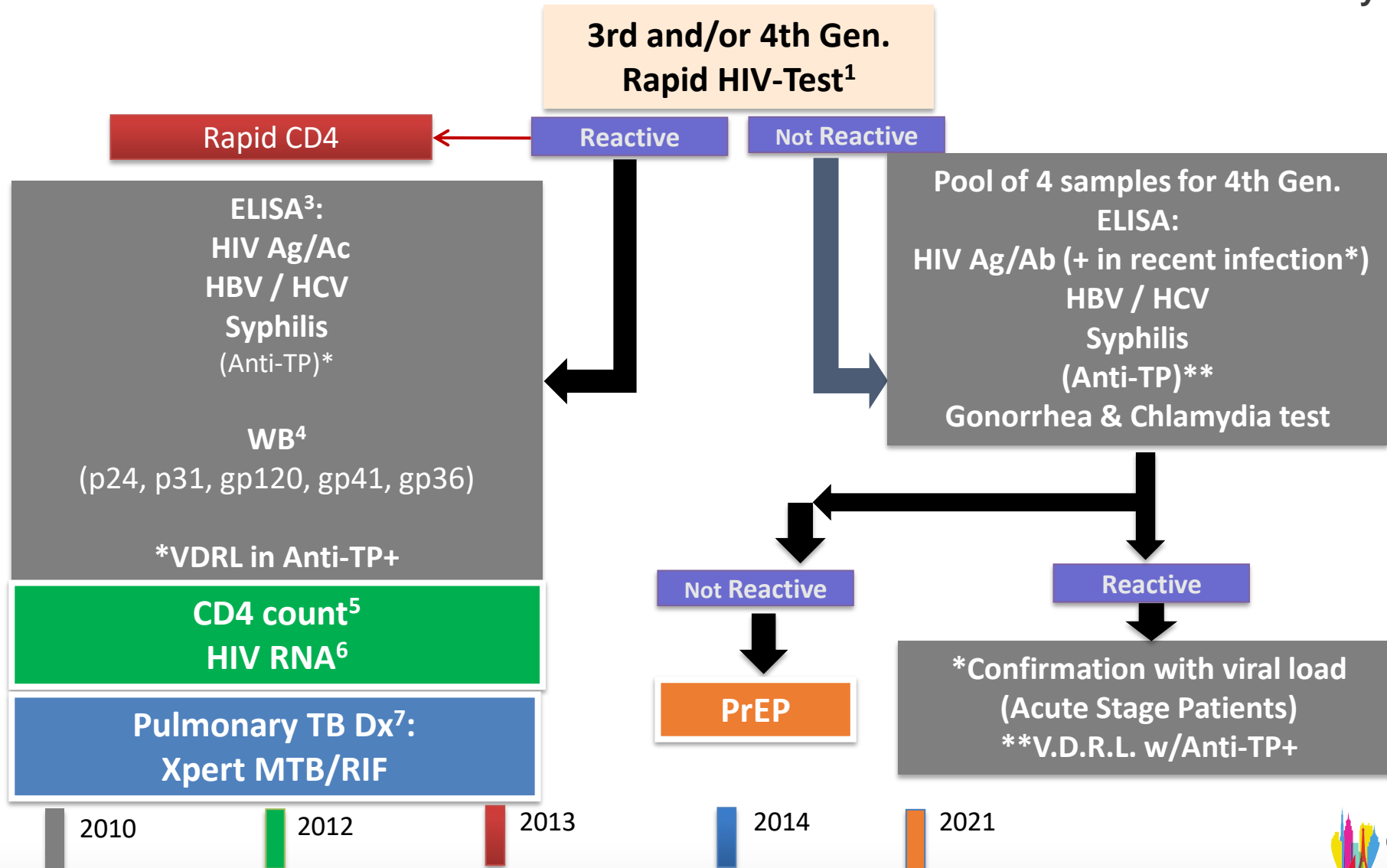
People on PrEP

**4,137**

People who received PEP

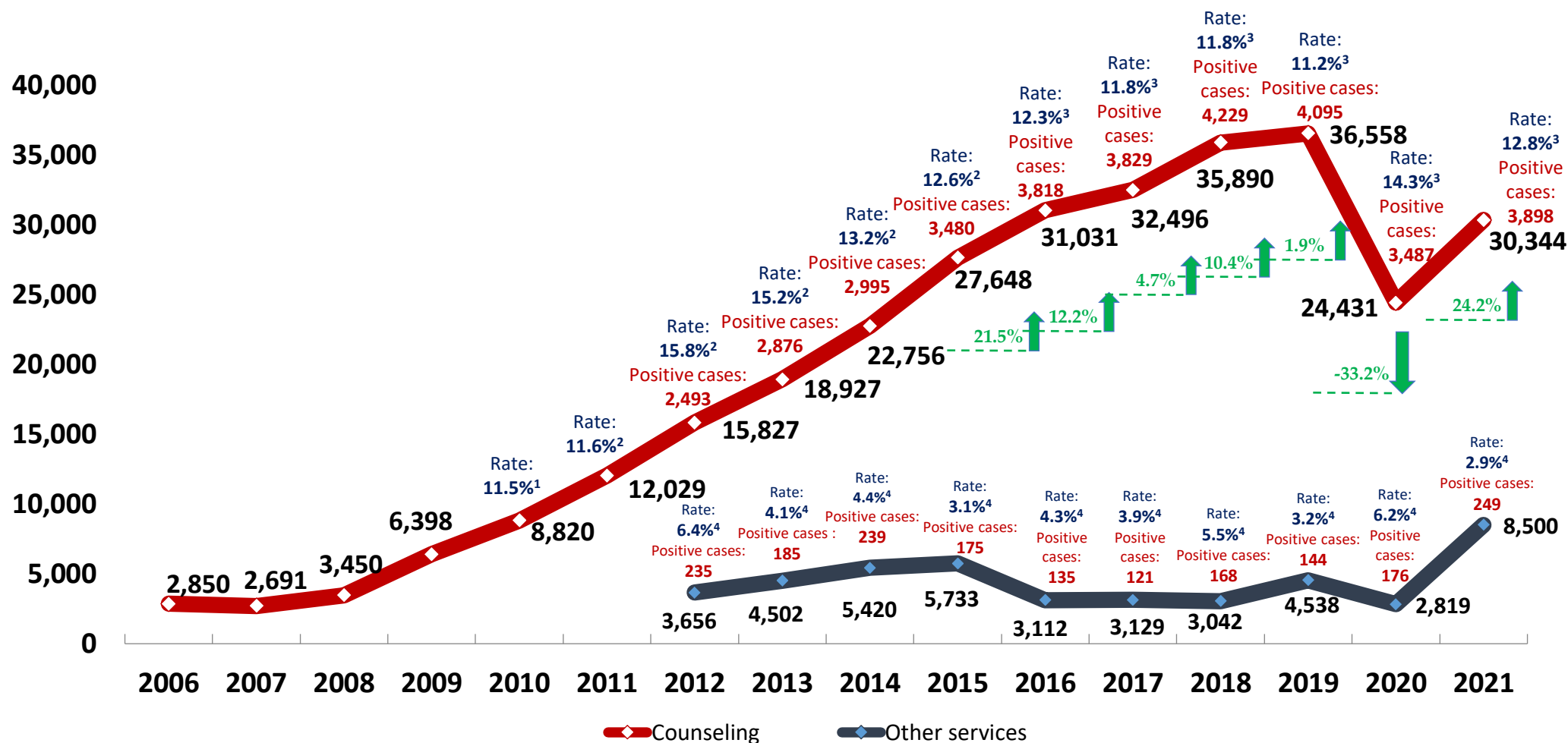
**1,386**

## Comprehensive Specialized Diagnostic Laboratory Algorithm



## HIV tests applied at Clínica Especializada Condesa

December 31st, 2021



**41,651**  
Accumulated  
positive results since  
2011

**2020**  
National diagnosis  
reduction: **70%**  
**vs**  
CDMX diagnosis  
reduction: **33.2%**

Source: Monitoring and Evaluation Unit of the Condesa Specialized Clinic

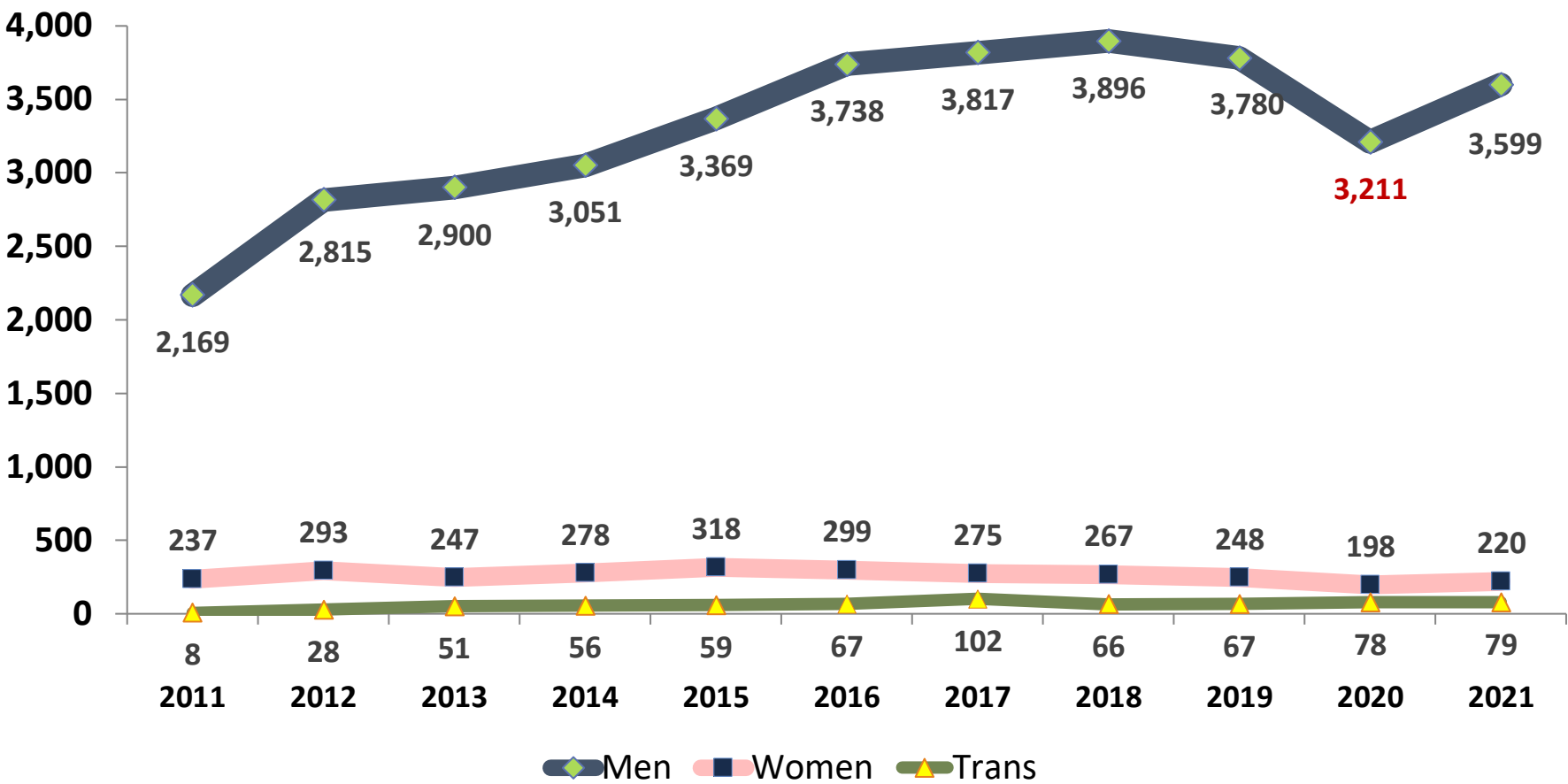
1. Sum of tests performed on Men and Women among the total of Positives. Abstract THPE0288 "Towards the diagnosis of HIV / STIs in real time in the HIV / AIDS program of Mexico City". L. Juárez-Figueroa; J. Arellano; P Iracheta; A. Gonzalez. XVIII AIDS Conference.

2. Data 2011, 2012, 2013, 2014 and 2015: Information systems. Countess Specialized Laboratory. (Counseling and PPE)

3. Data 2016 to 2021 Information systems. Condesa Specialized Laboratory, and Condesa Iztapalapa Specialized Laboratory (Counseling and PPE)

4. Hospitals, Drug Users, Prisons, Transgender Clinic, PrEP, Sex Workers, Externs, Mosaic

Tests with positive results applied by Counseling\* (by gender)  
Clínicas Especializadas Condesa - December 31st, 2021



Source: Monitoring and Evaluation Unit of the Condesa  
Specialized Clinic, HAP System. \*Test by Counseling and PEP

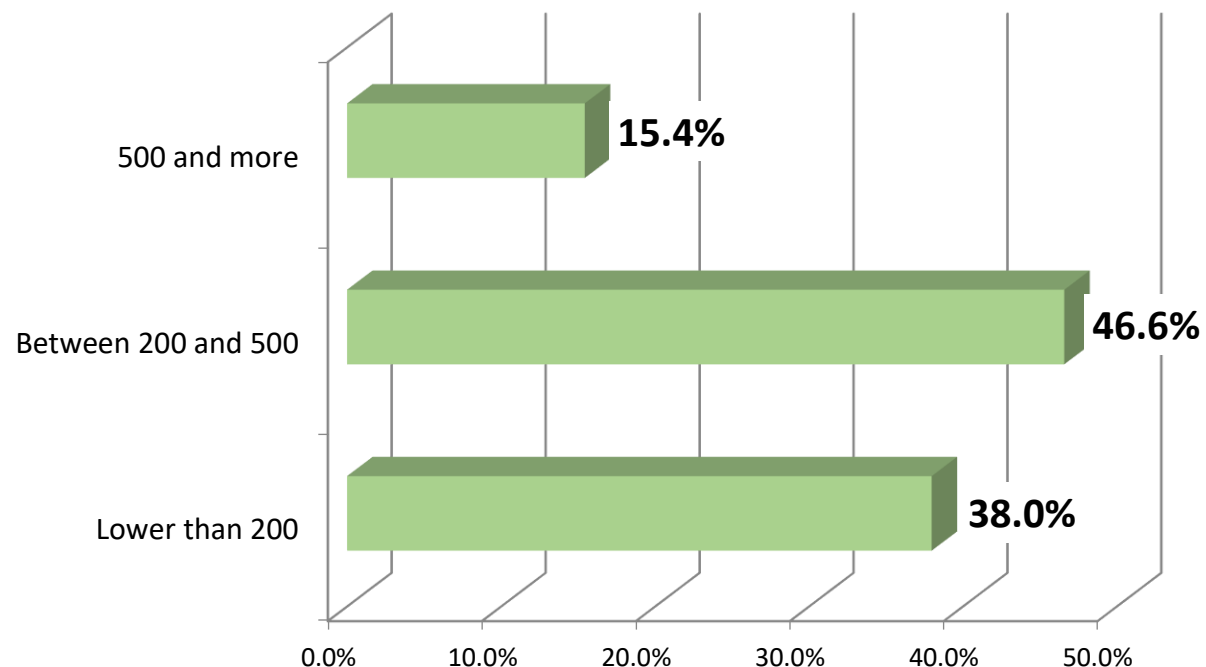
Test	Negatives	Positives	Total	% positives
Tests performed*	26,446	3,898	30,344	12.8%
Diagnosed people**	21,149	3,826	24,975	15.3%



## CD4+ count at HIV Diagnosis 2018 vs 2021

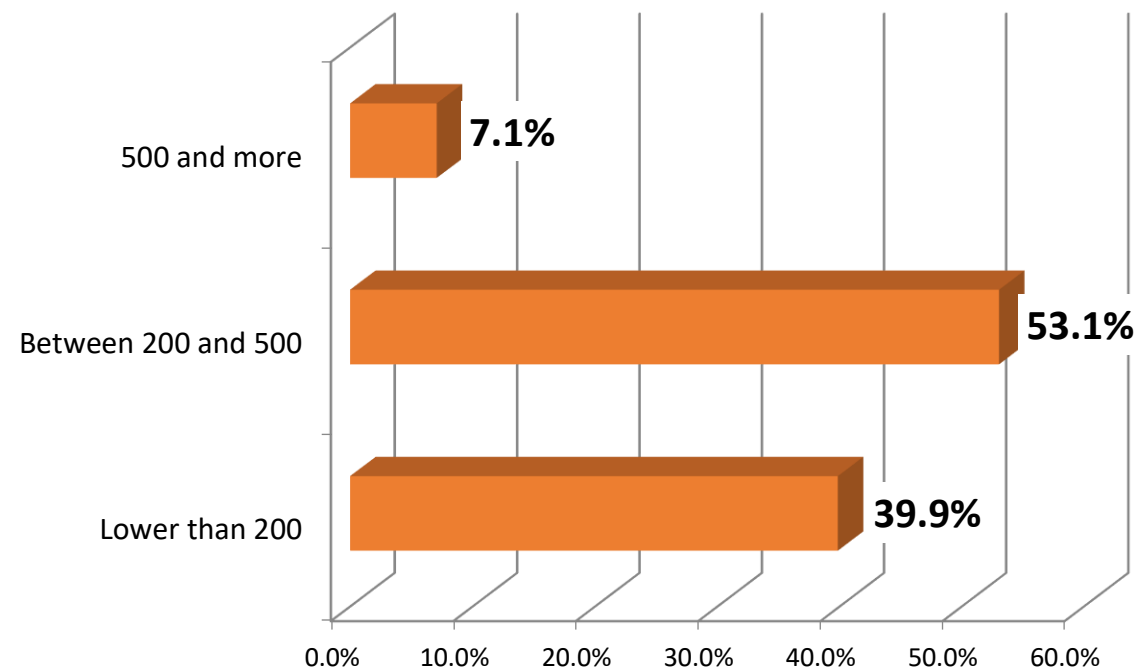
**2018**

**n= 1,056 detections**



**2021**

**n= 3,038 detections**



*Source: Monitoring and Evaluation Unit of the Condesa Specialized Clinic, HexaLIS System.*

*2021 - CIENI-INER Protocol NETWORKS*

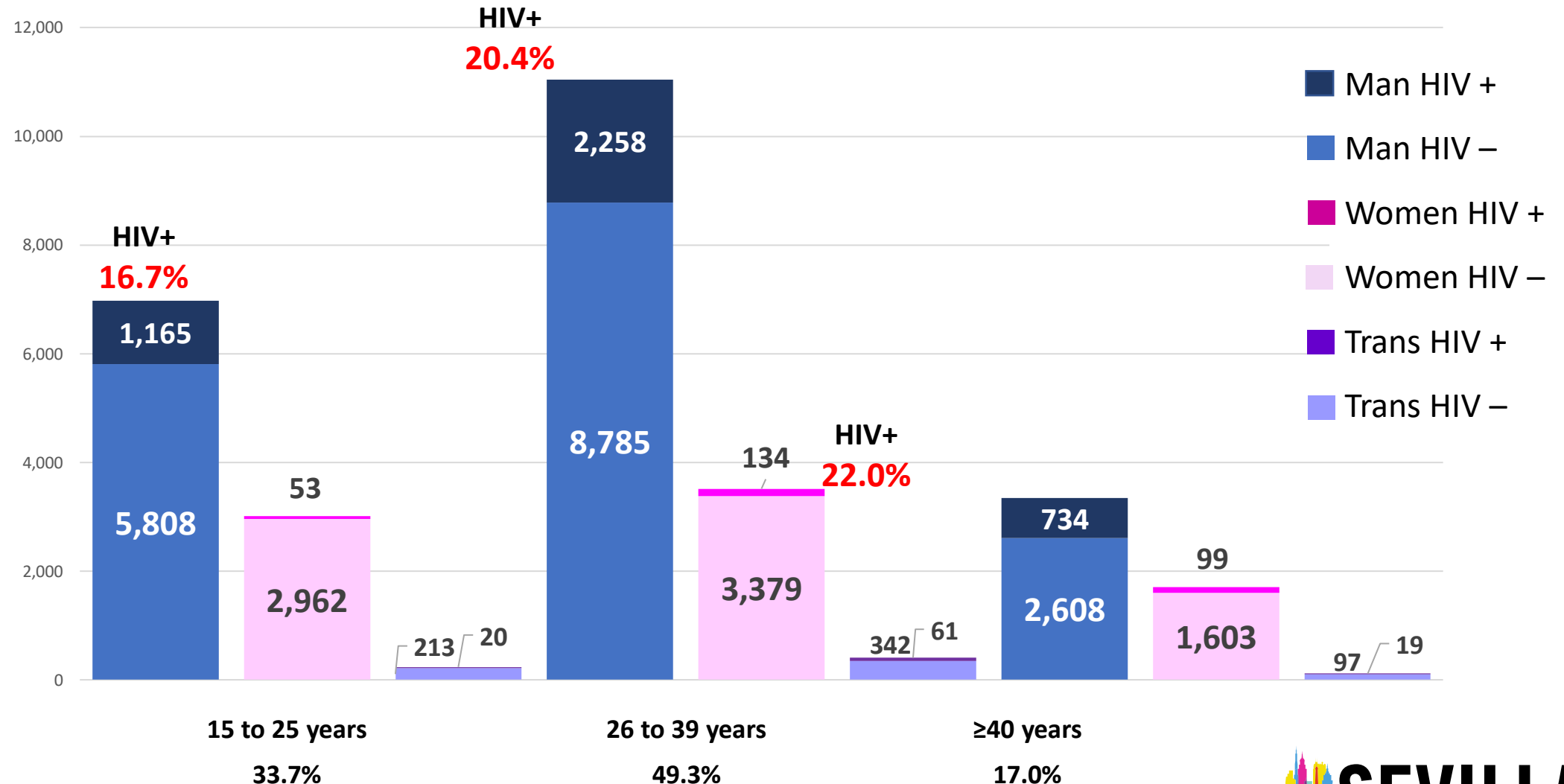
*2019 and 2020 - Naïve patients could not be determined*

**n= 21,358**  
Men

**n= 8,230**  
Women

**n= 752**  
Trans Women

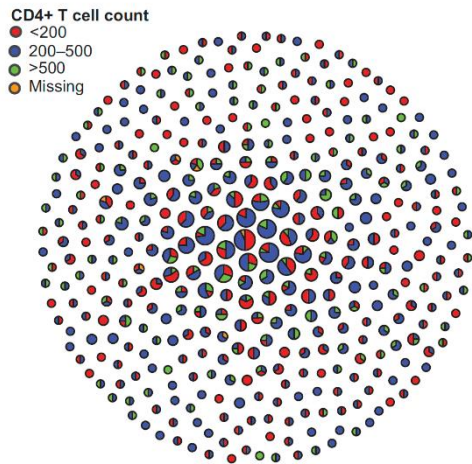
**HIV outcomes in men\* (by age groups)**  
Clínicas Especializadas Condesa - December 31st, 2021



Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, HAP System. \* Different people (Men, Women and Trans Women) from all programs

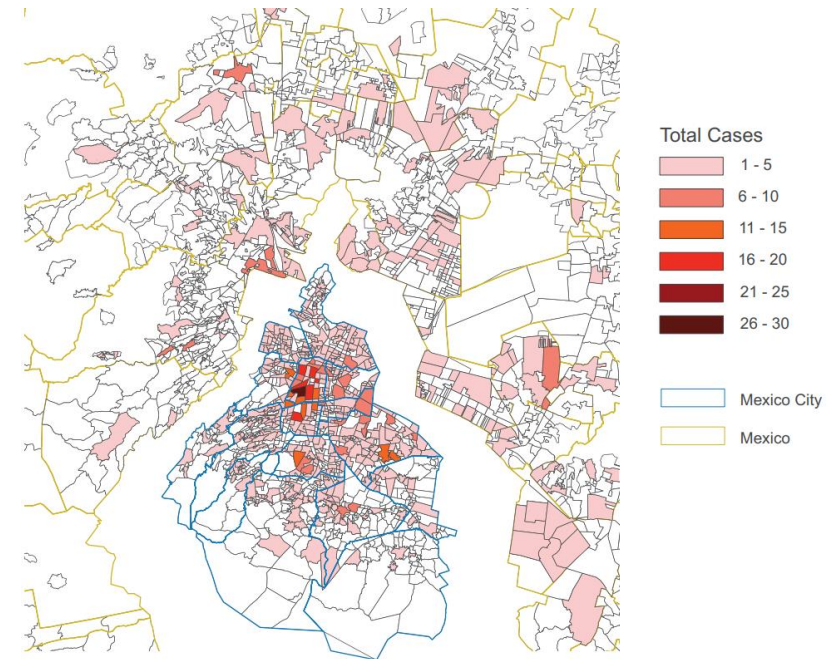
- The study allows the implementation of a Molecular-based Epidemiological Surveillance System, which generates information on the dynamics of HIV transmission in Mexico City, identifying transmission *clusters*, to focus strategies in geographic areas, aiming to improve HIV testing and continuum of care.
- **3,168** samples of people with HIV have been sequenced, of which **1,361** (36%) are associated with **386** transmission clusters that include from 2 to 14 individuals.

General characteristics of the HIV molecular network of Mexico City, 2019-2020

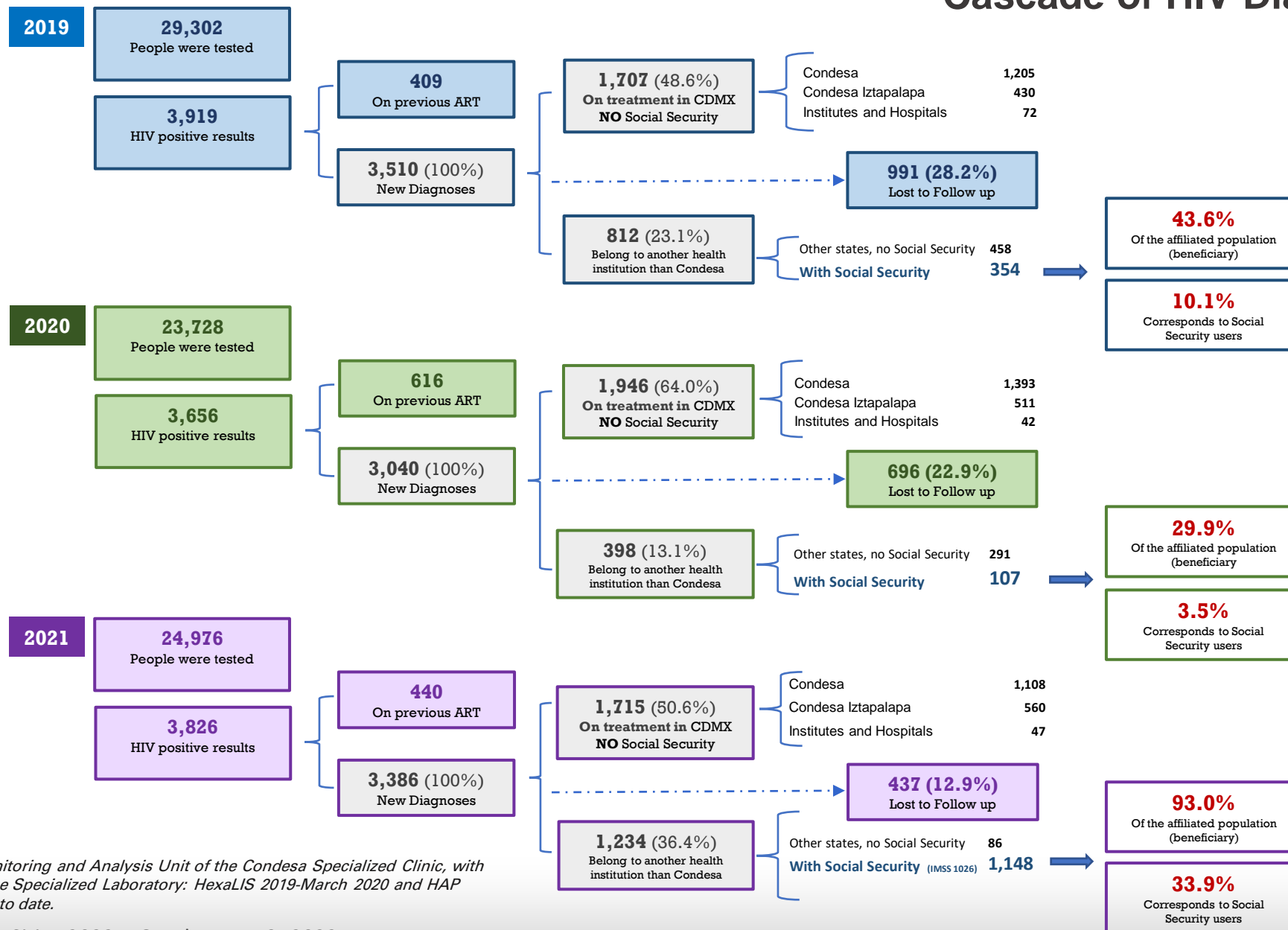


- **10** clusters with constant growth were identified, of which 7 involve only cisgender men, 2 include men, and 1 made of cis men and cis women, as well as trans women, suggesting an intersectional growth in the risk of sexual exposure.
- HIV transmission in Mexico City is characterized by a predominance of young men who have sex with men with a high educational level and recent infection (high viral load and cd4 counts >200).

## HIV Transmission Network: characteristics and growth Data from 2019 to 2020



## Cascade of HIV Diagnosis 2019-2021



**NOTE:**  
Since the end of March 2020, the specialized laboratory system includes the variable "Social Security Beneficiary" registered by the service applicant

Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, with data from the Specialized Laboratory: HexaLIS 2019-March 2020 and HAP March 2020 to date.

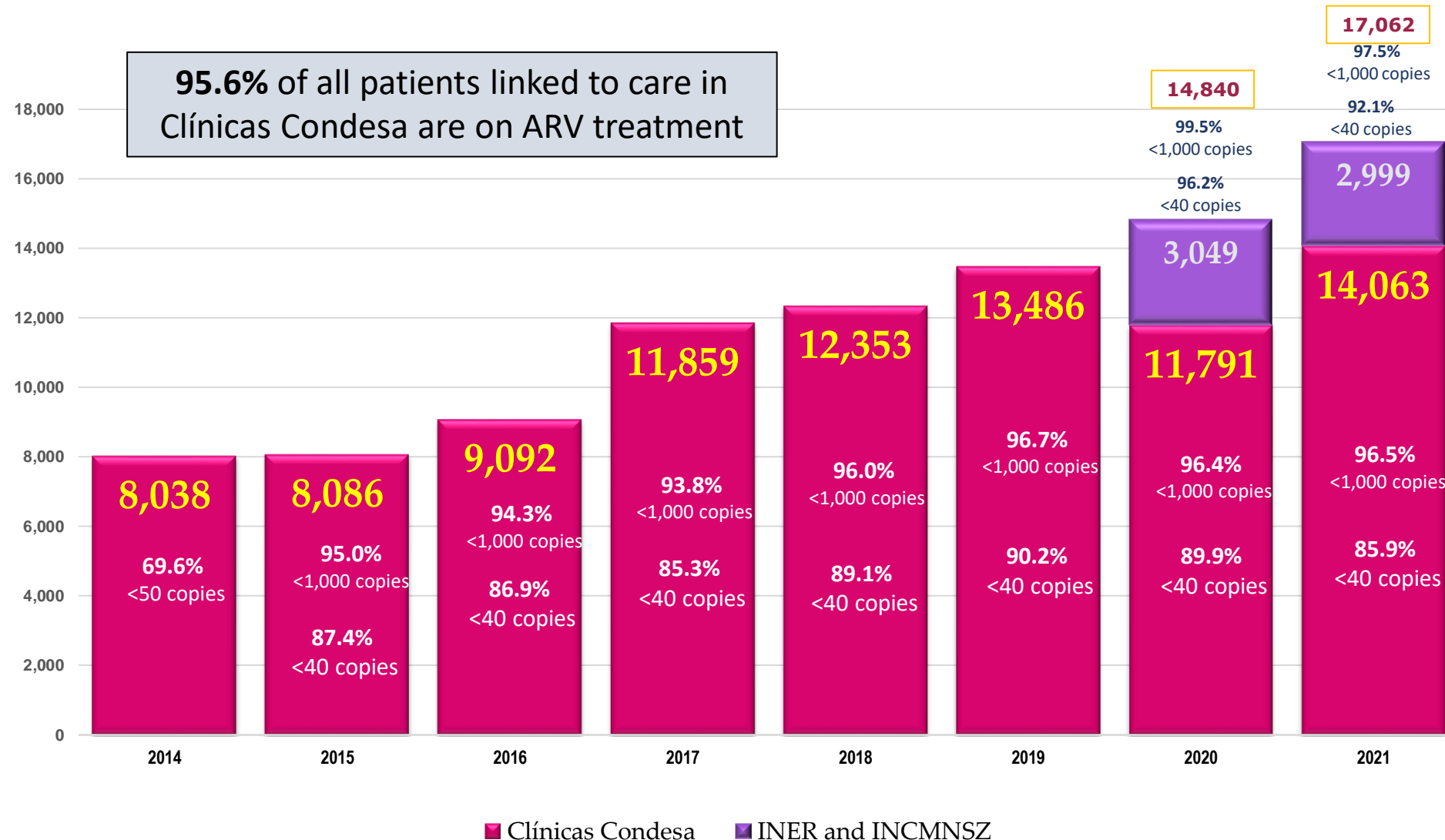
- In Mexico, people with formal employment or in the public education system receive medical care in Social Security institutions. Population without Social Security receives medical attention at the Ministry of Health.
- Social Security is not a permanent benefit; most of our population is young, so they frequently change health institutions.
- According to the information systems of the two most important institutions of Social Security, we calculate that each year **7,300 people become affiliated** → **36.5%** of patients in antiretroviral treatment at Clínicas Especializadas Condesa, **transit at some point of the year to a social security institution.**
- Social Security institutions do not measure the cascade indicators, user information is not shared, and there is no coordination to verify references (missing data).

**36.5%**

Of users  
transit  
between  
health  
institutions



## Patients on ART for 6 months or more without Social Security Clínicas Especializadas Condesa, 2014 - 2021



Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, with data from the SALVAR System

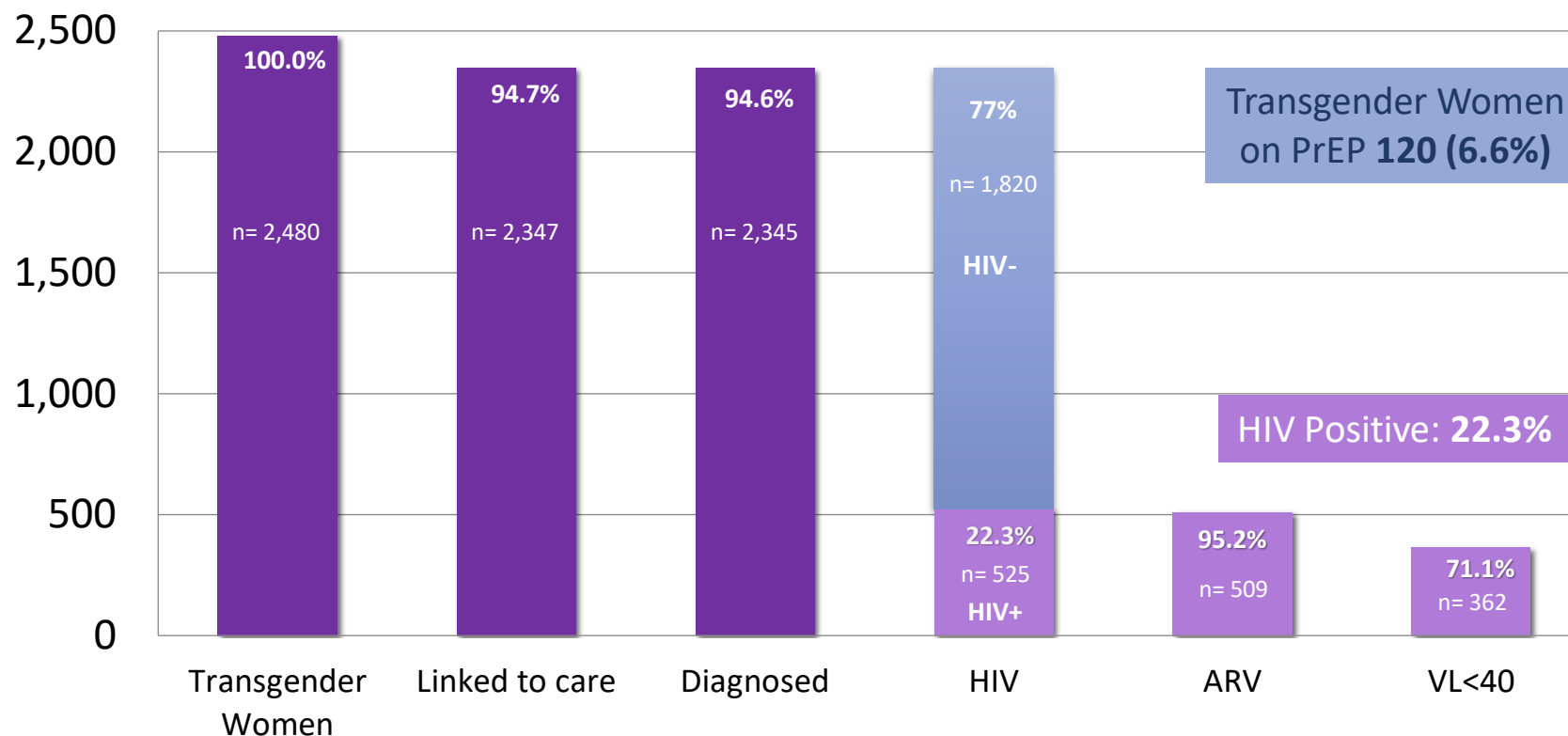
Fast-Track Cities 2022 • October 11-13, 2022

- National Institute of Respiratory Diseases (INER)
- National Institute of Medical Sciences and Nutrition (INCMNSZ)

## Cascade of HIV Care 2009-2022 in Transgender Women Clínicas Especializadas Condesa -Transgender Center



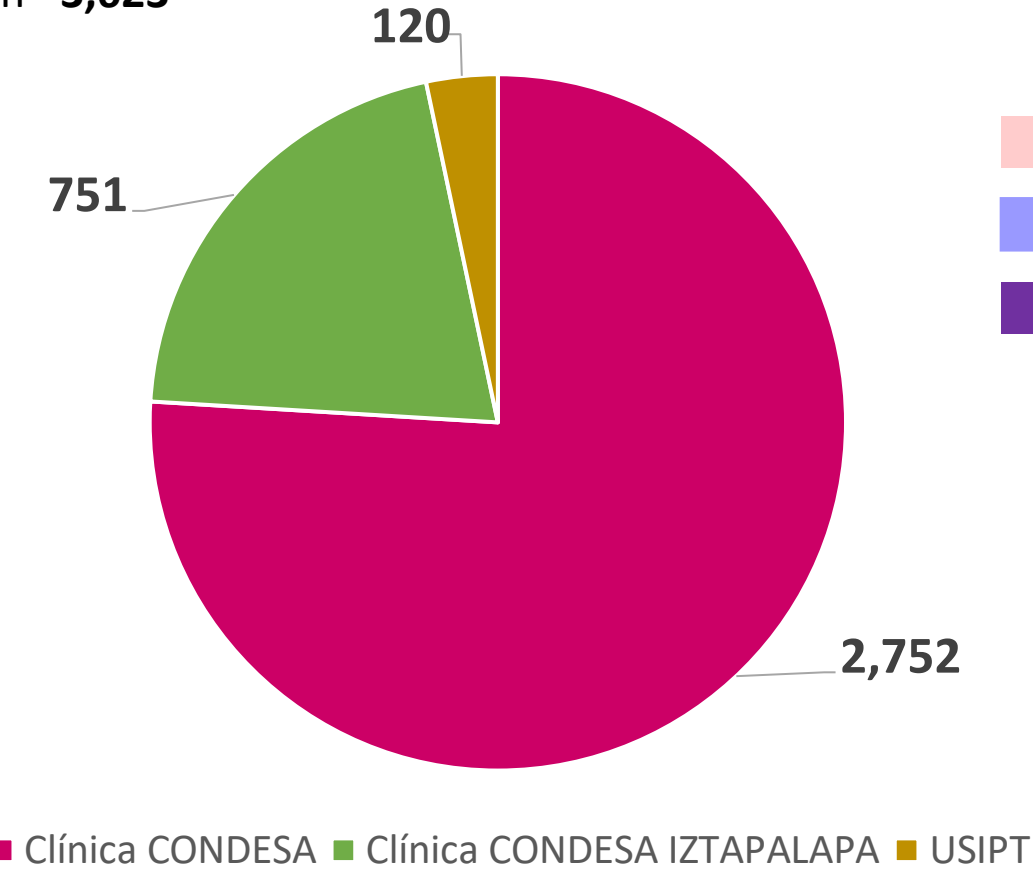
Transgender Women n= 2,480



Non-adherence to HIV treatment and hormonal therapy has been observed during the COVID-19 pandemic

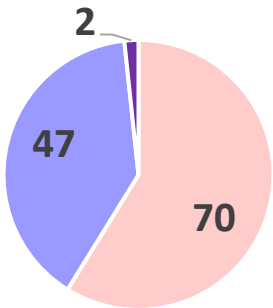
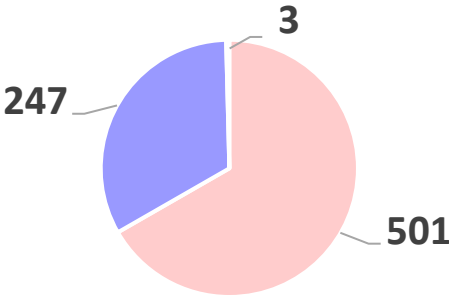
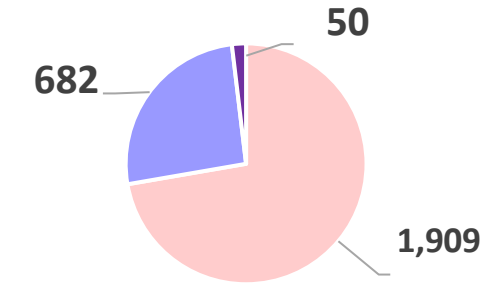
Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, with data from the Center for Care of Transgender People CEC, CECI & USIPT, 2022

n= 3,623



Transgender population in Mexico City

- Transgender women
- Transgender men
- Non binary



Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, with data from the Center for Care of Transgender People CEC, CECI & USIPT, 2022

### AUGUST 2022 IN BOTH CLINICS

#### Prevalence in **MEN**

<b>VIH+</b>	<b>HBsAg+</b>	<b>Anti-VHC+</b>
<b>12.20%</b> n=2,932	<b>0.98%</b> n=1,920	<b>2.07%</b> n=3,278

#### Prevalence in **WOMEN**

<b>VIH+</b>	<b>HBsAg+</b>	<b>Anti-VHC+</b>
<b>3.20%</b> n=1,123	<b>0.00%</b> n=846	<b>0.36%</b> n=3,278

#### Coinfection with Hepatitis B, Hepatitis C and Syphilis in the total of patients diagnosed in both Clínicas Condesa August 2022

<b>VIH+, HBsAg+</b>	<b>VIH+, Anti-VHC+</b>	<b>VIH+, Anti- TP+, V.D.R.L.+</b>
<b>1.49%</b>	<b>3.48%</b>	<b>24.40%</b>

#### Hepatitis C Virus n= 4,891 (August 2022)

People negative to HCV = **4,834**

People HCV(+) incorporated into treatment (August 2022): **57**

Coinfected patients (HIV+, HCV+)

Incorporated into treatment (August 2022): **50**

## Prevalence in Most at Risk Populations (MARPs)

Clínicas Especializadas Condesa – December 31st, 2021

Population Group	Prevalence
<b>Transgender Women*</b> n= 2,480	<b>22.3%</b>
<b>Male Sex Workers**</b> n= 627	<b>37%</b>
<b>MSM</b> n= 17,521	<b>20.2%</b>
<b>Men deprived of liberty***</b> n= 33,000	<b>1%</b>
<b>Women deprived of liberty***</b> n= 3,000	<b>1.10%</b>
<b>Socially marginalized people with drug use****</b> n= 30,212	<b>0.62%</b>

\* Trans Continuum of care, 2022

\*\* Program "Punto seguro"

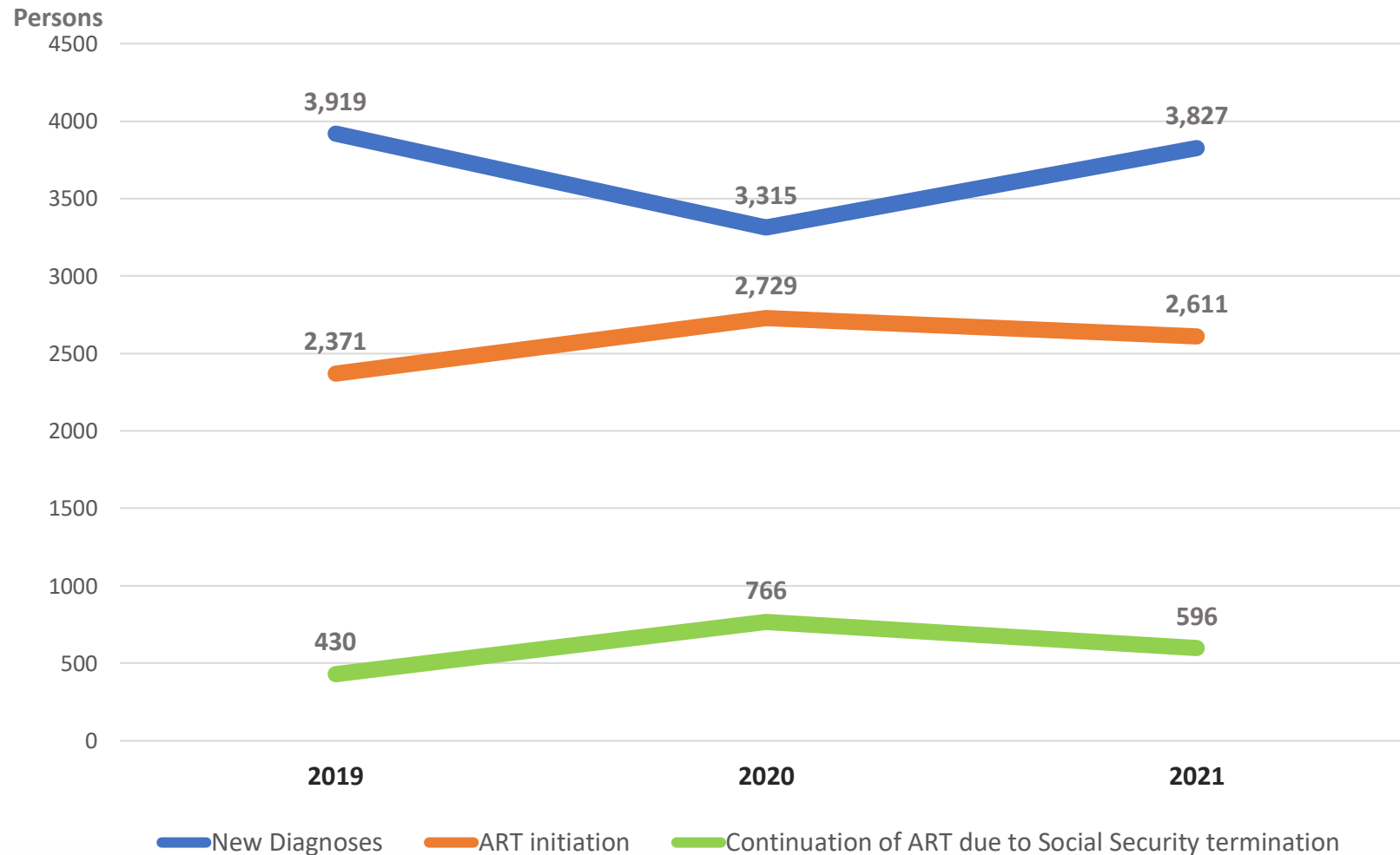
\*\*\* Penitentiary centers of Mexico City

\*\*\*\* Users of the Harm-reduction Program of Mexico City



## New Diagnoses, ART initiation, and Continuation of ART due to Social Security termination (*care reentry*) 2019-2021

Clínicas Especializadas Condesa – **December 31st, 2021**

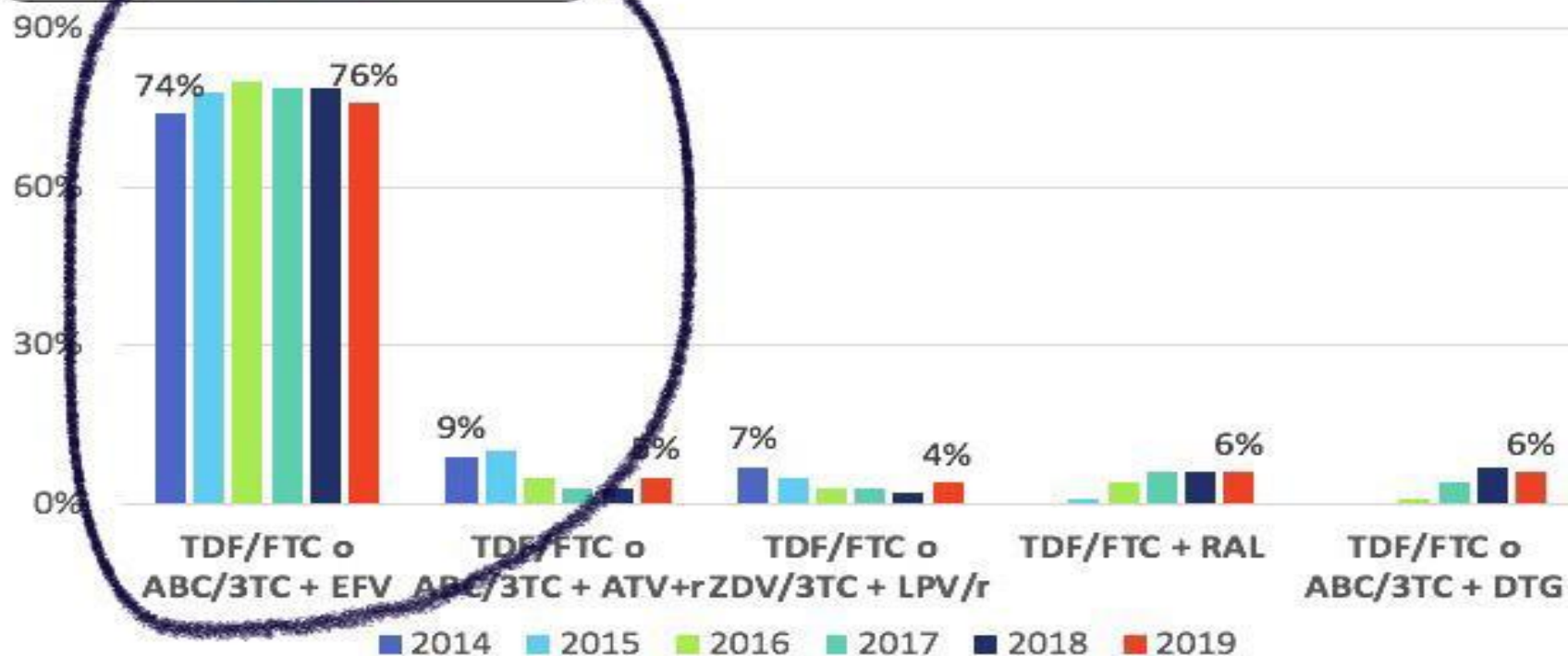


Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic, with data from the ARV treatment allocation area

### Guía de manejo ARV, monitoreo de la calidad de la atención y capacitación

**Resultados del algoritmo y el Comité de Inicio en la Secretaría de Salud**

- Simplificación de los esquemas: 97% de las personas han iniciado TAR con alguno de los esquemas de la gráfica



Fuente: Base de datos SALVAR al 31 de marzo de 2019

## Optimization and Simplification of Antiretroviral Therapy

May to August 2019

ART combinations switched to BIC/TAF/FTC		
Current ART	% switched to Biktarvy	# of patients nationwide
Triumeq	Biktarvy 100%	9,984
Stribild	Biktarvy 100%	1,575
<b>Dolutegravir</b> con: • Combivir • Kivexa • Truvada	Biktarvy 100%	7,147
<b>Efavirenz</b> con: • Combivir • Kivexa • Truvada	Biktarvy 100%	7,089
<b>Kaletra</b> con: • Combivir • Kivexa • Truvada	Biktarvy 65%	3,918 (6,027)
<b>Atazanavir</b> con: • Combivir • Kivexa • Truvada	Biktarvy 85%	2,750 (3,235)
<b>Raltegravir</b> con: • Combivir • Kivexa • Truvada	Biktarvy 40%	656 (1,639)
<b>Nevirapina</b> con: • Combivir • Kivexa • Truvada	Biktarvy 100%	558
<b>TOTAL</b>		<b>33,676</b>

DOLUTEGRAVIR + other ARV	
TRUVADA+DOLUTEGRAVIR	5,667
KIVEXA(A/L)+DOLUTEGRAVIR	1,468
ABACAVIR+LAMIVUDINA+DOLUTEGRAVIR	59
COMBIVIR(L/Z)+DOLUTEGRAVIR	12
EMTRICITABINA+TENOFIVIR+DOLUTEGRAVIR	1
<b>TOTAL</b>	<b>7,147</b>

RALTEGRAVIR + other ARV	
TRUVADA+RALTEGRAVIR	1530
KIVEXA(A/L)+RALTEGRAVIR	104
ABACAVIR+LAMIVUDINA+RALTEGRAVIR	16
COMBIVIR(L/Z)+RALTEGRAVIR	5
EMTRICITABINA+TENOFIVIR+RALTEGRAVIR	1
<b>TOTAL</b>	<b>1,639</b>

ATAZANAVIR + other ARV	
ATAZANAVIR+TRUVADA+RITONAVIR(tabletas)	2,733
ATAZANAVIR+KIVEXA(A/L)+RITONAVIR(tabletas)	445
ATAZANAVIR+COMBIVIR(L/Z)+RITONAVIR(tabletas)	38
ATAZANAVIR+RITONAVIR(frascos)+TRUVADA	8
ATAZANAVIR+RITONAVIR(frascos)+TRUVADA+RITONAVIR(tabletas)	6
ATAZANAVIR+TRUVADA	5
ABACAVIR+ATAZANAVIR+LAMIVUDINA+RITONAVIR(tabletas)	4
ATAZANAVIR+COMBIVIR(L/Z)	1
ATAZANAVIR+COMBIVIR(L/Z)+RITONAVIR(frascos)	1
ATAZANAVIR+RITONAVIR(frascos)+KIVEXA(A/L)	1
ATAZANAVIR+RITONAVIR(frascos)+KIVEXA(A/L)+RITONAVIR(tabletas)	1
KIVEXA(A/L)+ATAZANAVIR+RITONAVIR(tabletas)	1
TRUVADA+ATAZANAVIR+RITONAVIR(tabletas)	1
<b>TOTAL</b>	<b>3,235</b>

EFAVIRENZ + other ARV	
EFAVIRENZ+KIVEXA (A/L)	6,684
COMBIVIR(L/Z)+EFAVIRENZ	327
EFAVIRENZ+TRUVADA	78
ABACAVIR+EFAVIRENZ+LAMIVUDINA	74
EFAVIRENZ+EMTRICITABINA+TENOFIVIR	1
<b>TOTAL</b>	<b>7,089</b>

KALETRA 200/50 + other ARV	
KALETRA(L/R)+TRUVADA	4,390
COMBIVIR(L/Z)+KALETRA(L/R)	834
KALETRA(L/R)+KIVEXA(A/L)	803
ABACAVIR+KALETRA(L/R)+LAMIVUDINA	61
EMTRICITABINA+KALETRA(L/R)+TENOFIVIR	3
<b>TOTAL</b>	<b>6,027</b>

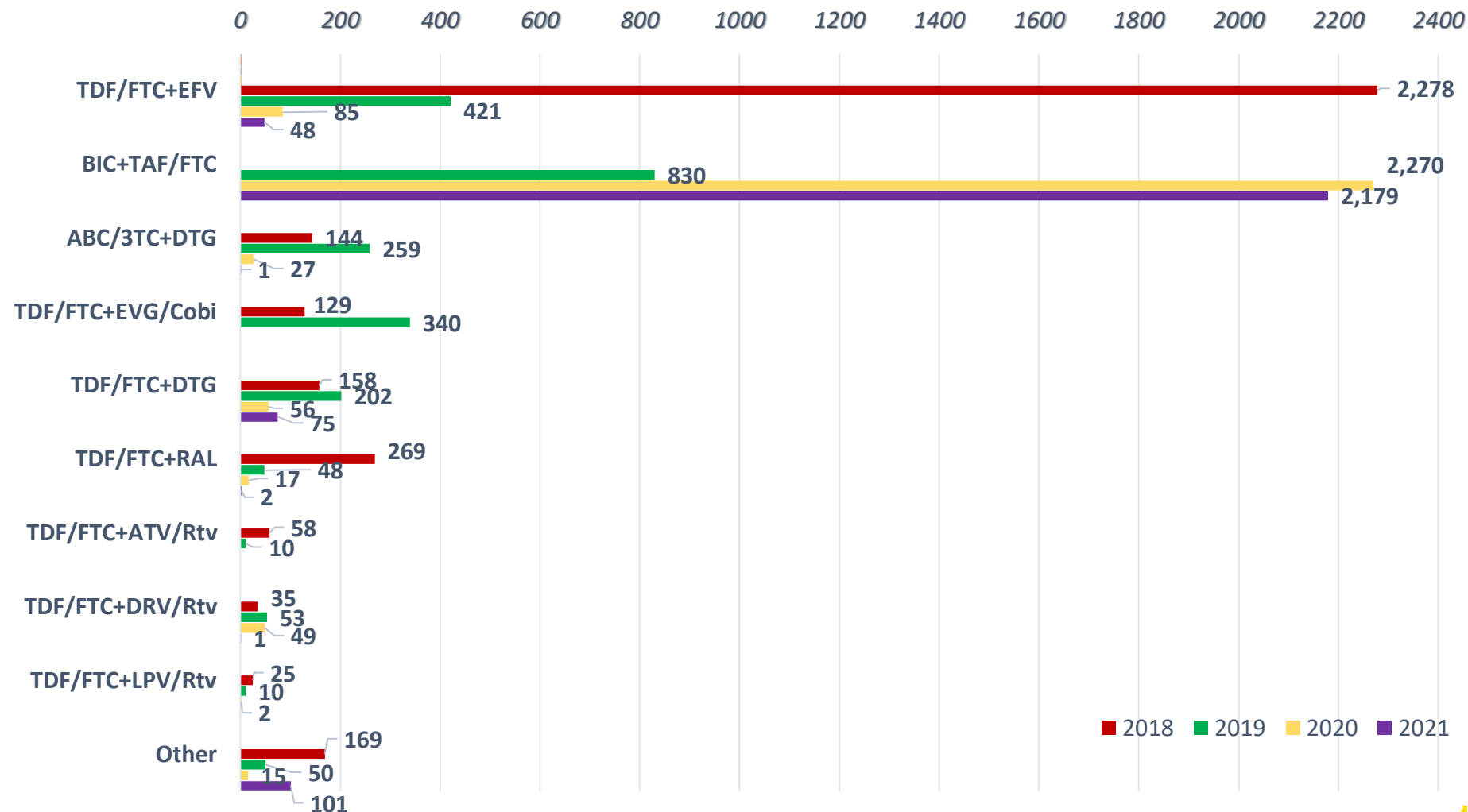
NEVIRAPINA + other ARV	
NEVIRAPINA+TRUVADA	424
NEVIRAPINA+KIVEXA(A/L)	93
COMBIVIR(L/Z)+NEVIRAPINA	41
ABACAVIR+LAMIVUDINA+NEVIRAPINA	2
<b>TOTAL</b>	<b>558</b>

Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic with data from the SALVAR National System

\*Shaded schemes not added

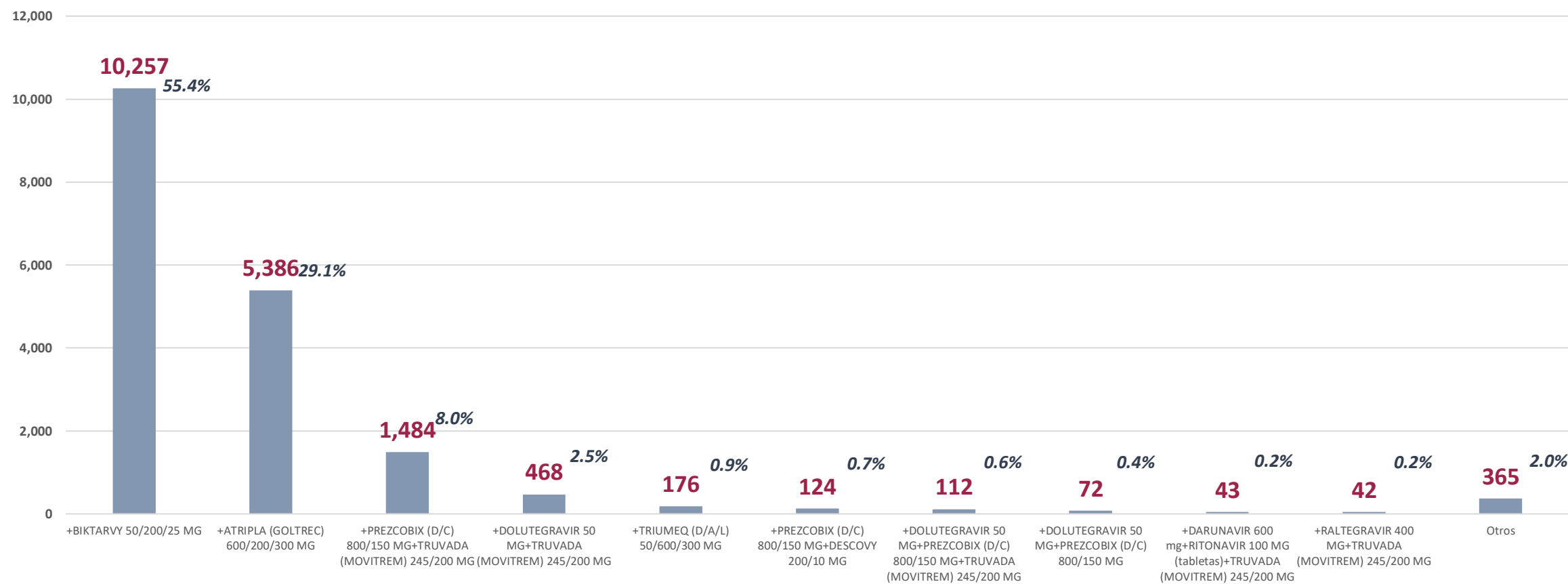
## First line Antiretroviral Therapy

Clínicas Especializadas Condesa - From 2015 to **December 31st, 2021**



Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic with data from the SALVAR System as of December 31, 2021

Current Antiretroviral Therapy  
Clínicas Especializadas Condesa – To December 31st, 2021

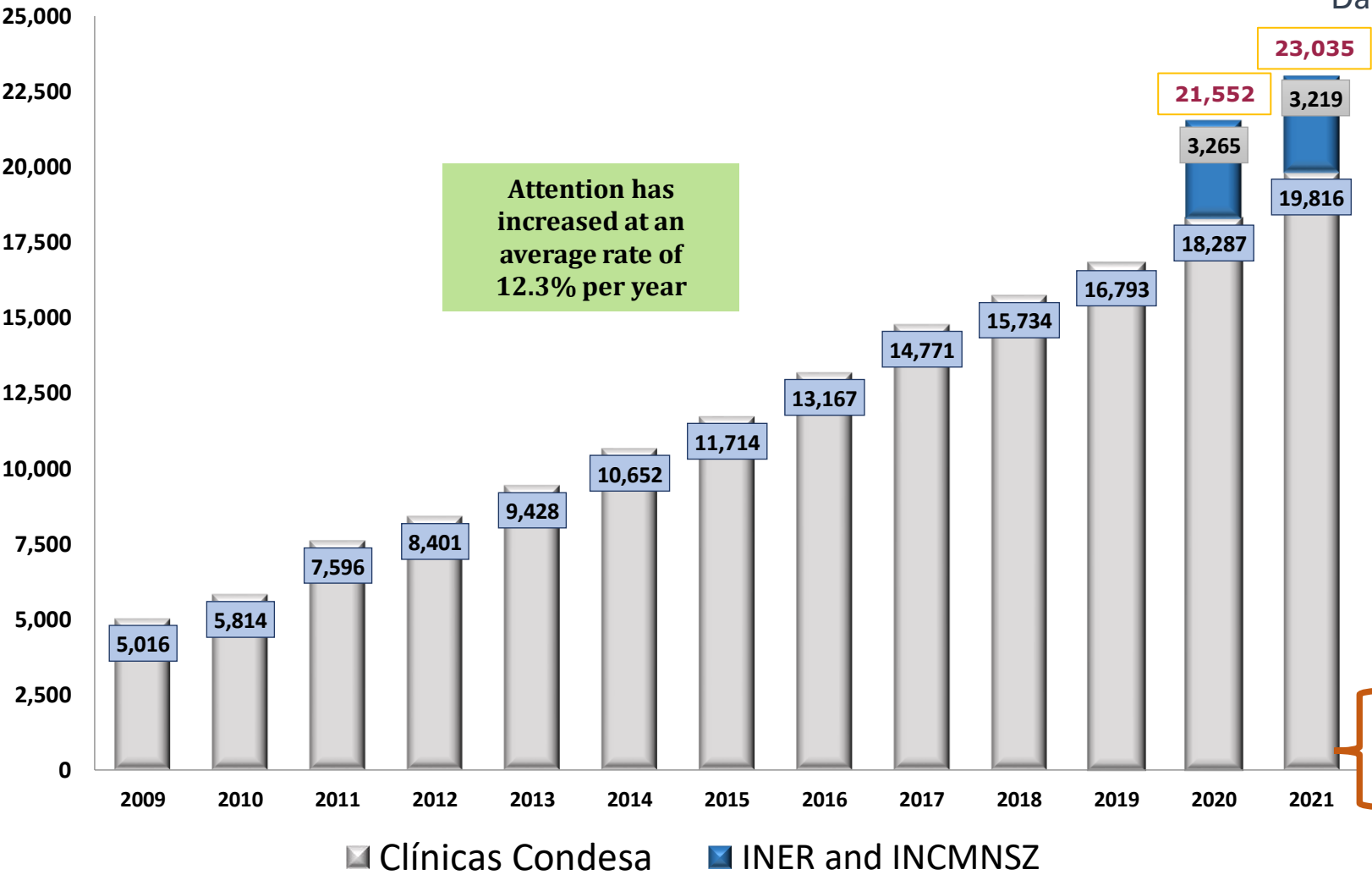


Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic with data from the SALVAR System as of December 31, 2021





Patients attended per year  
Clínicas Especializadas Condesa  
Data from 2009 to **December 31st, 2021**



Year	Patients	% Increase
2009	5,016	
2010	5,814	15.9%
2011	7,596	30.7%
2012	8,401	10.6%
2013	9,428	12.2%
2014	10,652	13.0%
2015	11,714	10.0%
2016	13,167	12.4%
2017	14,771	12.2%
2018	15,734	6.5%
2019	16,793	6.7%
2020	18,287	8.9%
2021	19,816	8.4%
Average =====>		12.3%

Condesa: 15,341  
Condesa Iztapalapa: 4,049  
Gea, INCAN, INNyN: 426

36.5%  
Of users transit between health institutions

HIV-positive patients in care without ART, and patients receiving antiretroviral treatment are included.  
Since 2016, data from the Condesa Iztapalapa Clinic has been included.  
Source: Monitoring and Analysis Unit of the Condesa Specialized Clinic

- National Institute of Respiratory Diseases (INER)
- National Institute of Medical Sciences and Nutrition (INCMNSZ)

- Clínicas Especializadas Condesa (Condesa y Condesa Iztapalapa)
- Gea Gonzalez Hospital (GeaGonzalez)
- National Cancer Institute (INCAN)
- National Institute of Neurology and Neurosurgery (INNyN),



## PrEP - Pre-Exposure Prophylaxis on Key Populations


Latest current data: September 23<sup>rd</sup>, 2022 (active PrEP users)


Key population	Gobierno CIUDAD DE MÉXICO			Organizaciones civiles CIUDAD DE MÉXICO			Organizaciones civiles JALISCO, Mx		Gobierno OAXACA, Mx	Total
	CEC	CECI	USIPT	México Vivo*	Inspira*	VIHve Libre*	CHECCOS* Jalisco	SETAC* Vallarta	COESIDA Oaxaca	
Gay men and other MSM	1,170	268	0	252	153	46	546	233	12	2,677
HIV-discordant couple women	11	4	0	0	0	0	0	1	0	16
HIV-discordant couple men	128	116	0	2	21	18	21	36	0	342
Teenagers	19	1	0	8	3	0	0	1	0	32
Chemsex users	130	69	0	32	52	5	62	31	0	381
Transgender women	41	9	70	0	1	2	11	4	0	125
Transgender men	4	1	1	0	1	0	6	0	0	29
Non binary people	1	0	5	0	1	1	0	0	0	8
Male sex workers	308	70	0	3	28	9	63	19	0	500
Female sex workers	8	1	0	0	0	1	0	12	0	22
Women victims of violence	2	0	0	0	2	0	0	1	0	5
<b>TOTAL</b>	<b>1,822</b>	<b>539</b>	<b>76</b>	<b>297</b>	<b>262</b>	<b>82</b>	<b>709</b>	<b>338</b>	<b>12</b>	<b>4,137</b>
Date of PrEP initiation	ago-21	sep-21	abr-22	sep-21	ago-21	ago-22	sep-21	nov-21	ago-22	
Provided in CDMX 3,078						Monitored from CDMX 1,059				


## HIV Diagnoses

- **Total Users:** 4,137 (*Accumulated*)
- **Users that tested positive for HIV:** **23** (*Acute infection at baseline*)
- **Incidence:** **0.56%** (*1 user*)

## STI Diagnoses

- **Syphilis Diagnoses**
  - Active syphilis: **15.6%**

<b>24.4%</b> of users who attend Clínicas Especializadas Condesa for diagnosis are <b>positive for active syphilis</b>
--
- **Hepatitis C Antibody Test**
  - Positive: **2.4%**

<b>3.48%</b> of users who attend Clínicas Especializadas Condesa for diagnosis are <b>positive for HCV antibodies</b>
---
- **Hepatitis B Diagnoses**
  - Hepatitis B: **0.53%**

<b>1.49%</b> of users who attend Clínicas Especializadas Condesa for diagnosis are <b>positive for Hepatitis B</b>
--

## PEP - Post-Exposure Prophylaxis for HIV and other STI

Latest current data: December 31st, 2021

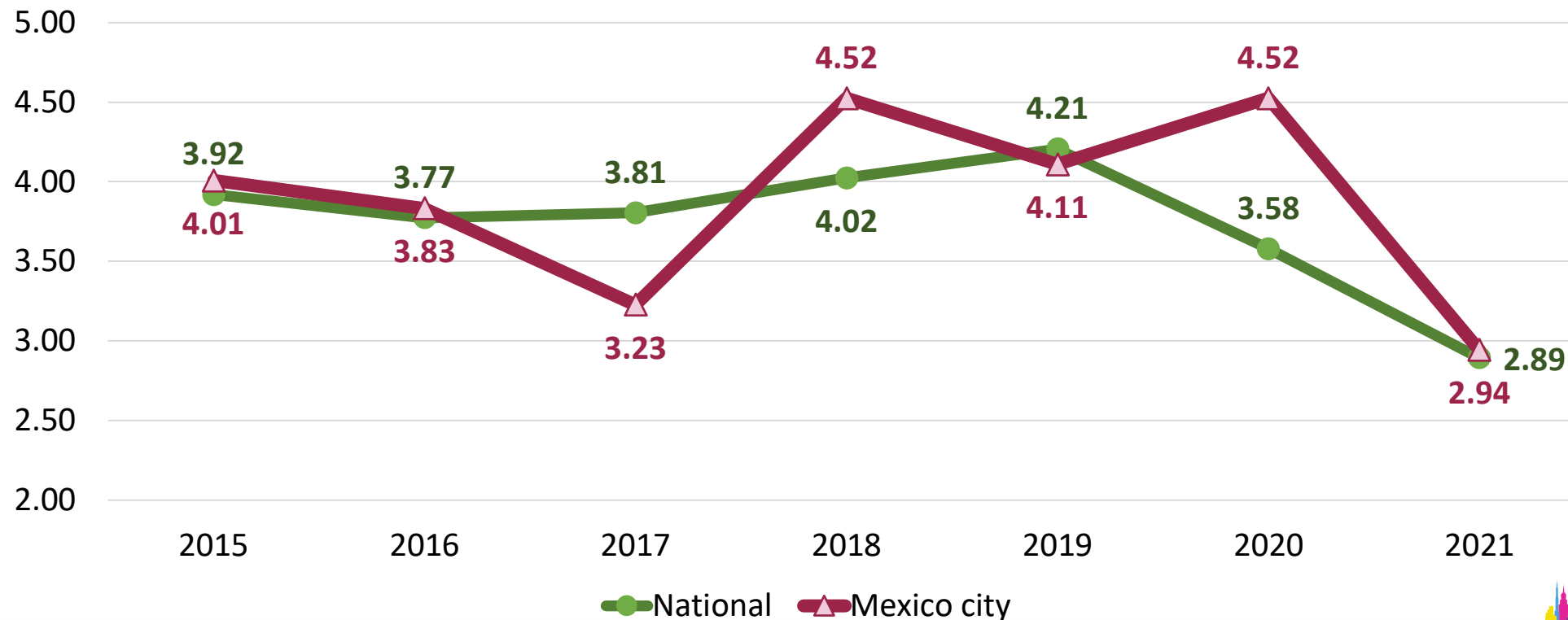


- **2,520** people assessed for Post-Exposure Prophylaxis (PEP) due to risk practices, with follow-up for prevention and treatment of other sexually transmitted infections, and linkage to care.
- **1,386** people received PEP (55% of the assessments).

Source: System of Prevention Interventions (SIP) and Laboratory of the Condesa Specialized Clinics of Mexico City

## HIV mortality rate National vs Mexico City

- The **National** HIV mortality rate has remained constant with an **average of 3.74** and a **decreasing trend** since 2020.
- In **Mexico City**, an irregular variation is observed, with an **average of 3.88** and a **growing trend** since 2019, probably as a result of the hospital reconversion due to the COVID-19 pandemic.



Source: National Institute of Statistics and Geography (INEGI)

Fast-Track Cities 2022 • October 11-13, 2022



- The **first case of monkeypox virus in Clínica Condesa** was detected on **June 11th, 2022** and accounted for the first case of local transmission in Mexico City.
- **630 persons** have been assessed:
  - **539** confirmed cases (508 men, 1 cisgender woman, and 2 trans women)
  - 48 probable cases (all men) with pending PCR results
  - 53 cases were ruled out by laboratory (51 men, 2 cisgender women, and 2 trans women)
- Since the first case was detected, the flow of patients has had an average weekly increase of 19%.
- The average age of the cases is 34.6 years with a range of 17 to 59.
- 80% of confirmed cases are people living with HIV.
- In September, more monkeypox cases were diagnosed per month than HIV in our units (the ones that detect the highest number of HIV cases in the entire continent).

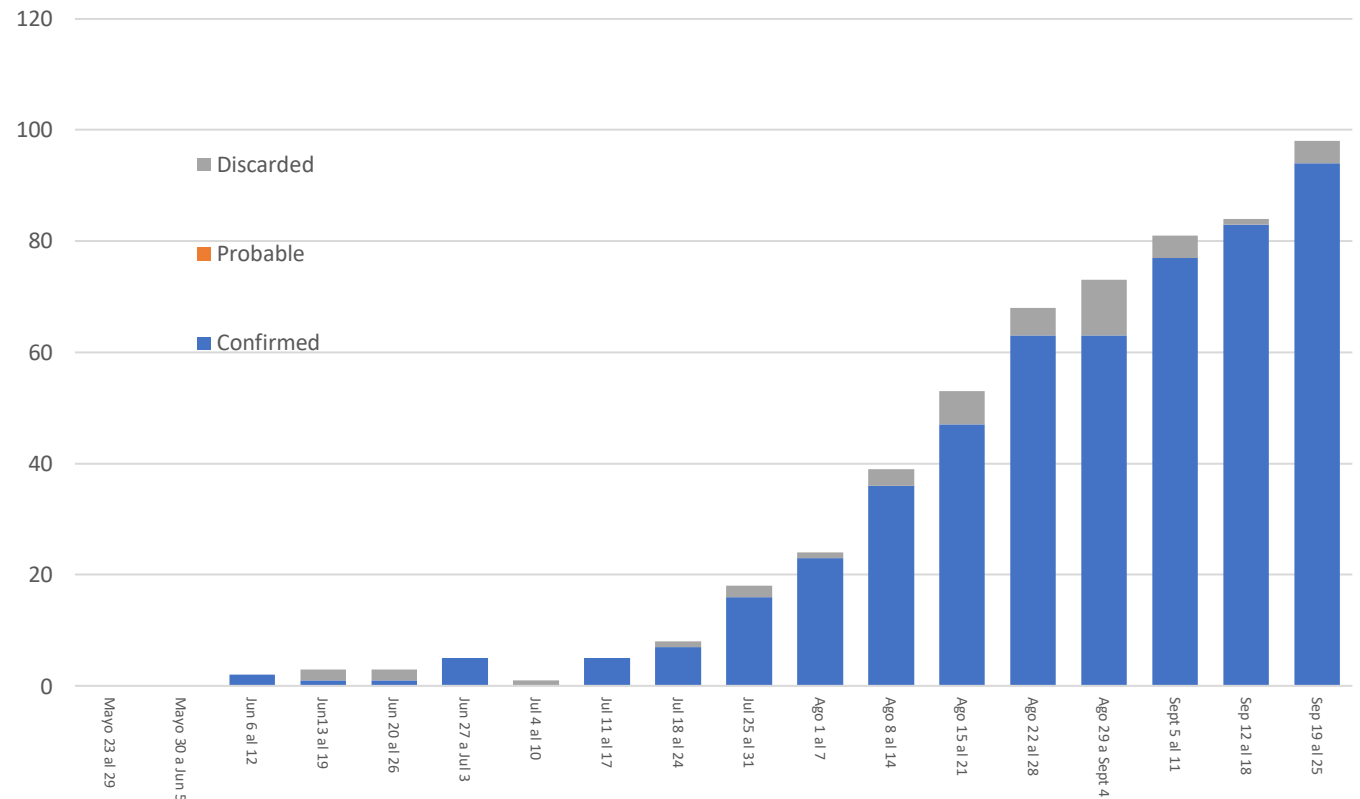
Source: Monkeypox Diagnosis of the Condesa Specialized Clinics

Fast-Track Cities 2022 • October 11-13, 2022

## Monkeypox

Data from June 11th to September 28th, 2022

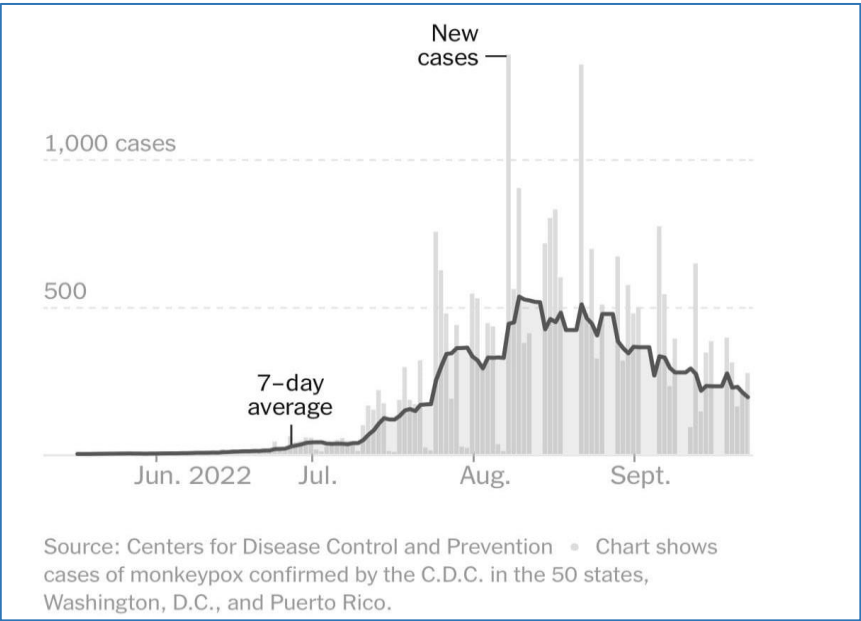
Flowchart of monkeypox cases



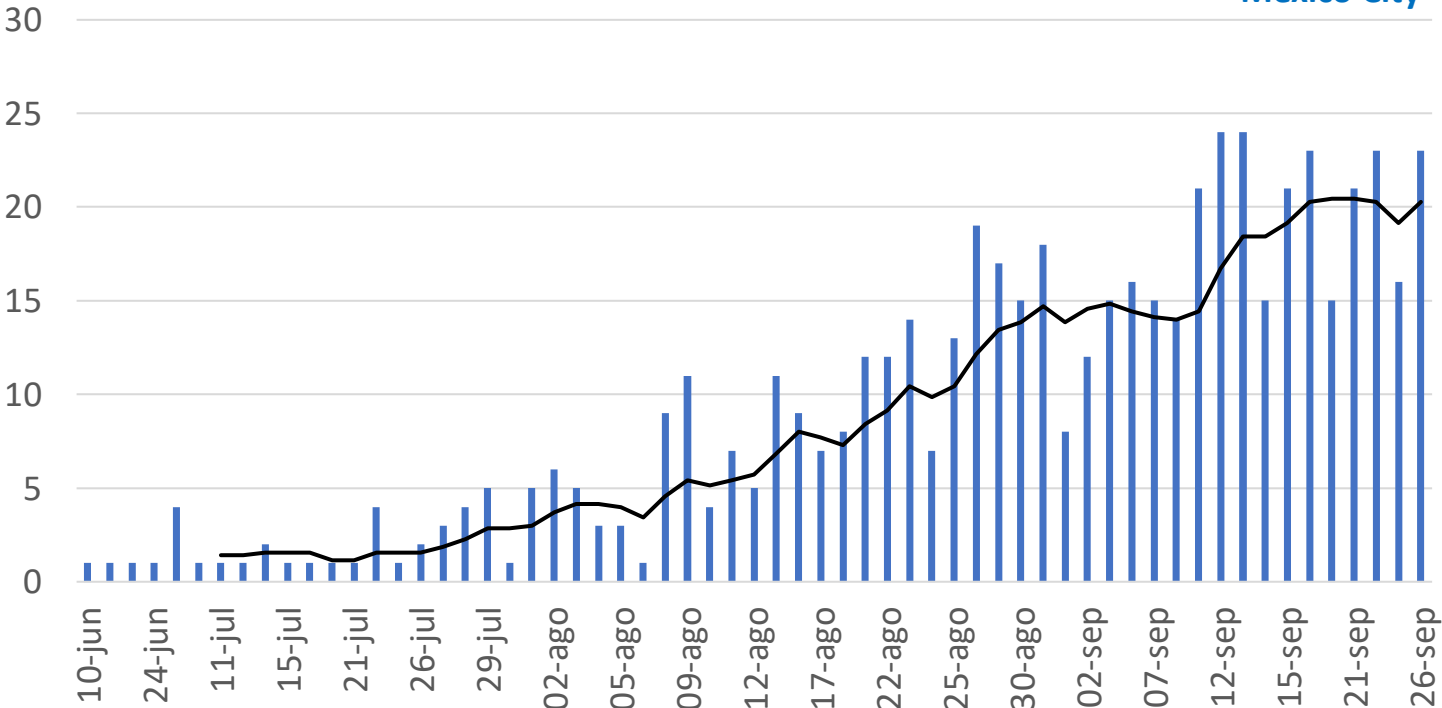
Monkeypox virus - New cases

It is important to mention that in the United States the trend of new cases has begun to decline since September, due to the extensive vaccination actions, while in Mexico City the trend has continued to rise.

United States



Mexico City



Source: Monkeypox Diagnosis of the Condesa Specialized Clinics and CDC data



## Conclusions

1. The fragmentation of the health system in Mexico generates interruptions in the continuum of care for people with HIV, since it delays the treatment initiation and represents a relevant factor for attrition.
2. The lack of integrated information systems limits the follow-up of people and makes it impossible to obtain valuable information to estimate the components of the care cascade.
3. In the first year of the program, we were able to include one person in PrEP for each new case of HIV; however, it is necessary to expand coverage and focus the intervention on the populations with the highest transmission rates (young MSM).
4. The COVID-19 pandemic had an **impact on the response to the HIV epidemic** (specifically, an increase in mortality, probably due to hospital reconversion), **in the reduction of diagnosis** -particularly in women and adolescents- and **a greater number of people lost social security**.
5. Given the increase in monkeypox cases, the use of vaccination is necessary to stop the outbreak.

Universal care and integrated service networks are essential to  
meet the goals of care for people living with HIV

**95 - 95 - 95 - 95**

## Collaborated on the creation of this presentation

- **Andrea González Rodríguez**
- **Eduardo Rodríguez Nolasco**
- **Ricardo Samuel Niño Vargas**
- **Mario Gómez Zepeda**
- **Carlos Alberto Hernández Guzmán**
- **María Eugenia Zghaib Rivero**
- **Luis Gerardo García Demuner**
- **Jezer Iván Lezama Mora**
- **Nathalie Gras Allain**
- **Luis Manuel Arellano Delgado**
- **Raúl Adrián Cruz Flores**
- **Ubaldo Ramos Alamillo**
- **Verónica Ruiz González**

Special thanks to Santiago Avila-Rios, from Centre for Research in Infectious Diseases, National Institute of Respiratory Diseases (CIENI-INER)

