



Impact of COVID on HIV care in Belgium in 2020

30 November 2021

For BREACH

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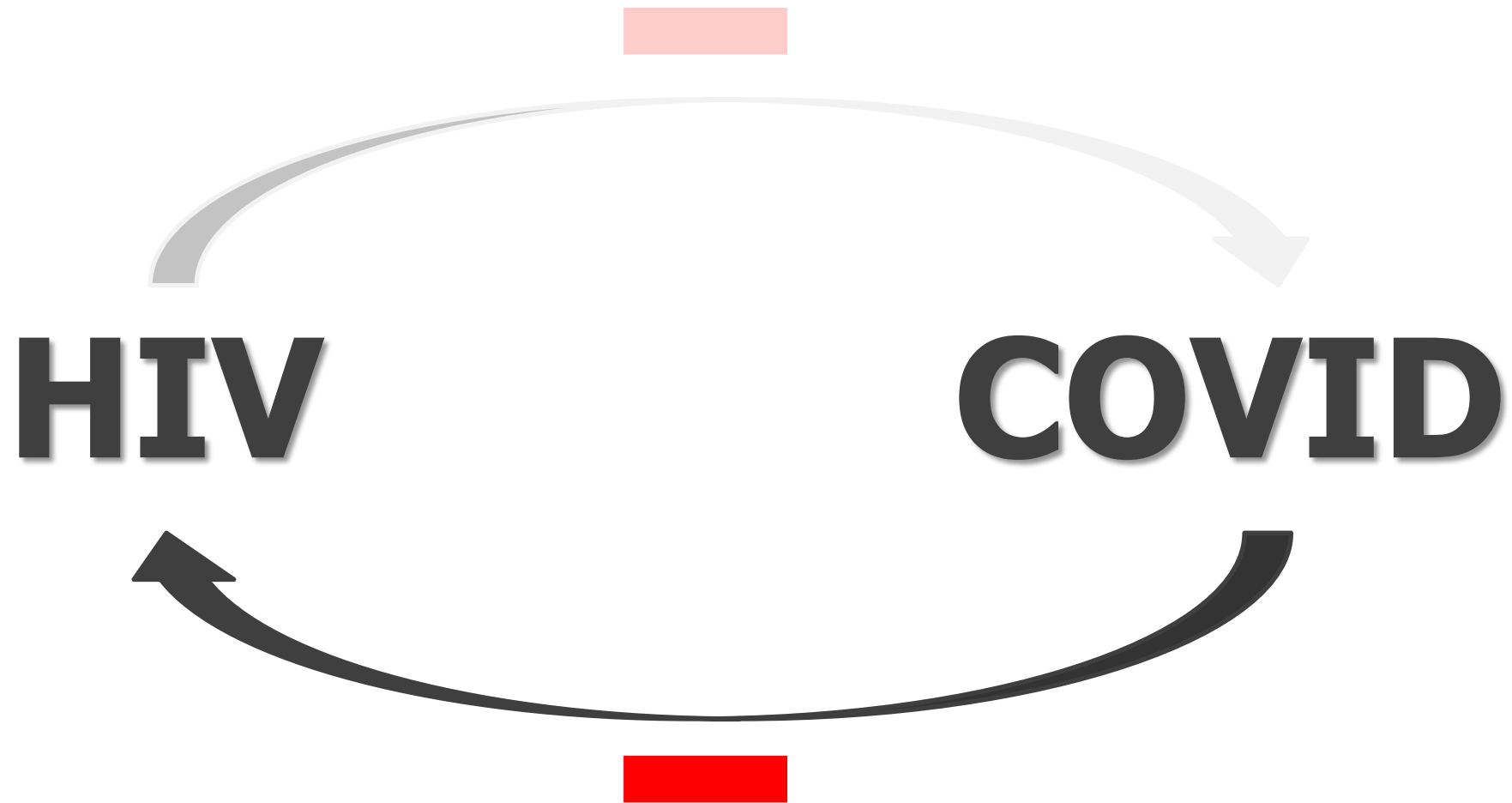
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Content:

- 1. Background: impact of COVID on HIV**
2. Situation in Belgium: the Liege paper
3. BREACH project: impact of COVID on HIV



1. Impact of COVID on HIV: retention in care

Challenges in care engagement



Setting	Context	Engagement Findings
HOPS ¹	1/2010 to 6/2020	26% decline in office visits between 12/2019 and 6/2020 (despite 2% increase in TM visits)
Nebraska ²	FY2020 v 3-6/2020	Retention in care down from 69% to 40%, no visits >6 mos up from 14% to 25%
Boston ³	2019 v 3-4/2020	Drop in in-person visits but increase in telemedicine led to mean visits/mo higher than same months in 2019
Baltimore ⁴	14 wks pre and post 3/16/2020	Visit completion: 79% pre and 82% post, 82% of visits were TM and 70% of TM via phone
San Francisco ⁵	12/2019-2/2020 v 4/2020	Visit completion unchanged: pre-COVID 69%, COVID 70% (54% TM)
Belgium ⁶	2019 v 2020	3 medical visits/patient/year in 2019 down to 2/year in 2020
AFRICOS ⁷	1/2019-3/2020 v early 5-8/2020 v late 9/2020-2/2021	Visit completion v pre-COVID: early aOR 0.64 (95% CI: 0.45-0.91) late aOR 0.82 (95% CI: 0.57-1.19)

¹Tedaldi E. CROI 2021 Abstract 752.

²Fadul N. ID Week 2020 Abstract 112.

³Mayer K. ID Week 2020 Abstract 541.

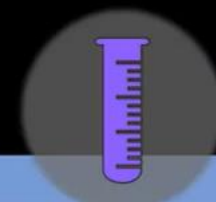
⁴El-Nahal W. CROI 2021 Abstract 734.

⁵Spinelli M. *AIDS*. (2020) 34:2328-2331.

⁶El Moussaoui M. *HIV Res Clin Prac*. eAOP Jul 25 2021.

⁷Dear N. *CID*. eAOP Apr 27 2021.

Selected viral suppression studies



Setting	Context	Engagement	Viral suppression
San Francisco ¹	12/2019-2/2020 v 4/2020	↔	Odds of detectable VL 31% higher during COVID
Boston ²	2019 v 3-4/2020	↑	No difference in viral suppression preCOVID (77%) and during COVID (74%) p 0.209
Nebraska ³	FY2020 v 3-6/2020	↓	No difference in viral suppression pre and during COVID (both 91%)
Belgium ⁴	2019 v 2020	↓	Detectable VL 9% preCOVID v 5% during COVID
AFRICOS ⁵	1/2019-3/2020 v early 5/2020-8/2020 v late 9/2020-2/2021	Early ↓ Late ↔	Viral suppression in late COVID: aOR: 3.29; 95% CI: 1.81–6.00 compared with preCOVID
Italy ⁶	3-11/2019 v early 3-5/2020 v late 6-11/2020	-	Detectable VL 7% preCOVID decreased to 5.5% early COVID, 1.2% late COVID
Guatemala ⁷	2019 v 2020	-	No VL data but deaths from OIs 16.6% preCOVID and 27.3% during COVID (p 0.05)

¹ Spinelli M. *AIDS*. (2020) 34:2328-2331.

² Mayer K. ID Week 2020 Abstract 541.

³ Fadul N. ID Week 2020 Abstract 112.

⁴ El Moussaoui M. *HIV Res Clin Prac*. eAOP Jul 25 2021.

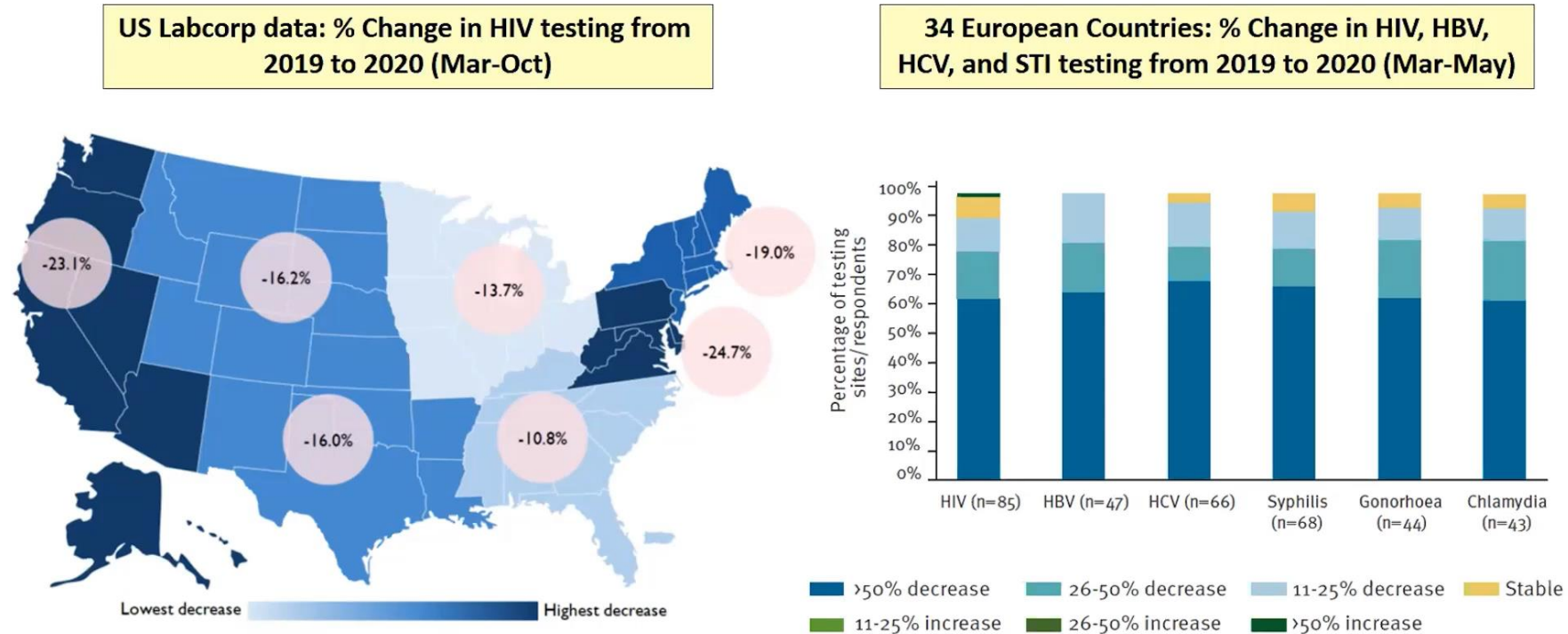
⁵ Dear N. *CID*. eAOP Apr 27 2021.

⁶ Izzo I. *AIDS Res Ther*. (2021) 18:31.

⁷ Medina N. *Int J ID*. (2021) 108:422-427.

2. Impact of COVID on HIV: HIV testing

Declines in HIV/STI Testing in US and Europe, 2019 to 2020



Curanovic D, IAS 2021; Simoes D, European Journal of Infectious Diseases 2020

HIV Testing Declined in both Medical Facilities and Community Testing Sites: San Francisco

Figure S.1 HIV screening tests at select medical facilities during January 2020 to March 2021 compared to 2019, San Francisco

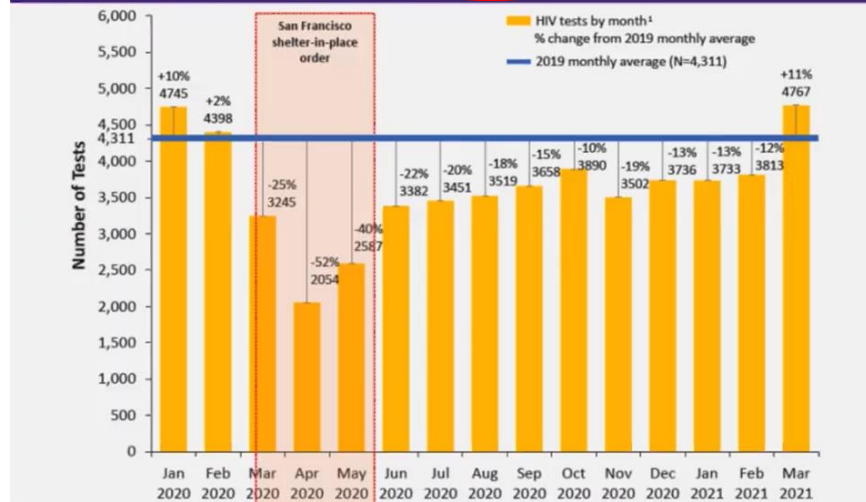
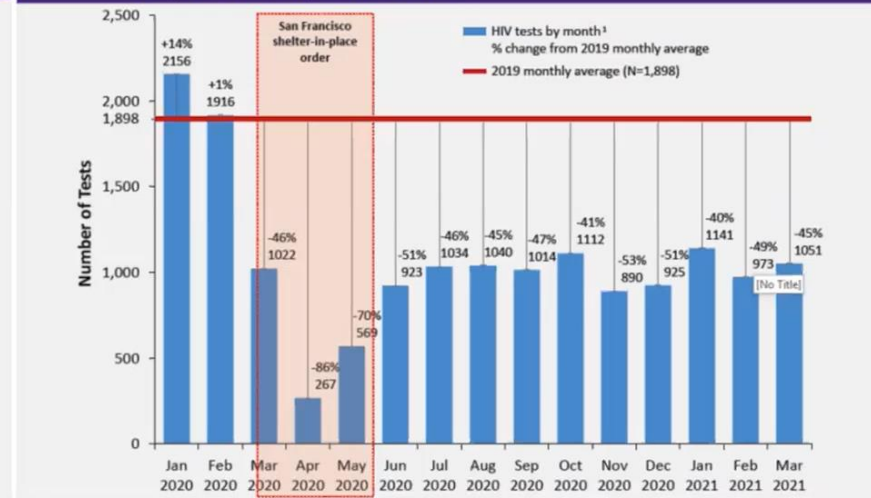


Figure S.2 HIV screening tests at community sites during January 2020 to March 2021 compared to 2019, San Francisco



SF Department of Public Health HIV Epidemiology Annual Report 2020

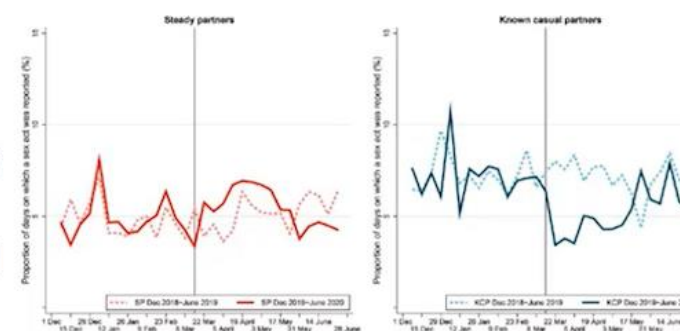
3. Impact of COVID on HIV: sexual behavior

Trends in sexual behavior during COVID

Several studies report transient declines in casual partners, but same/increase in steady partners

- MSM in South: 82% reported decreases in casual partners, but fewer w/ steady partners
- MSM in Amsterdam: anal sex acts decreased w/ casual partners but increased with steady partners (OR 1.26)
- Shifts in sexual behavior were generally short lived (8 weeks in Amsterdam study)

AMPrEP Study (n=136)



Several studies report ongoing/increasing rates of HIV risk

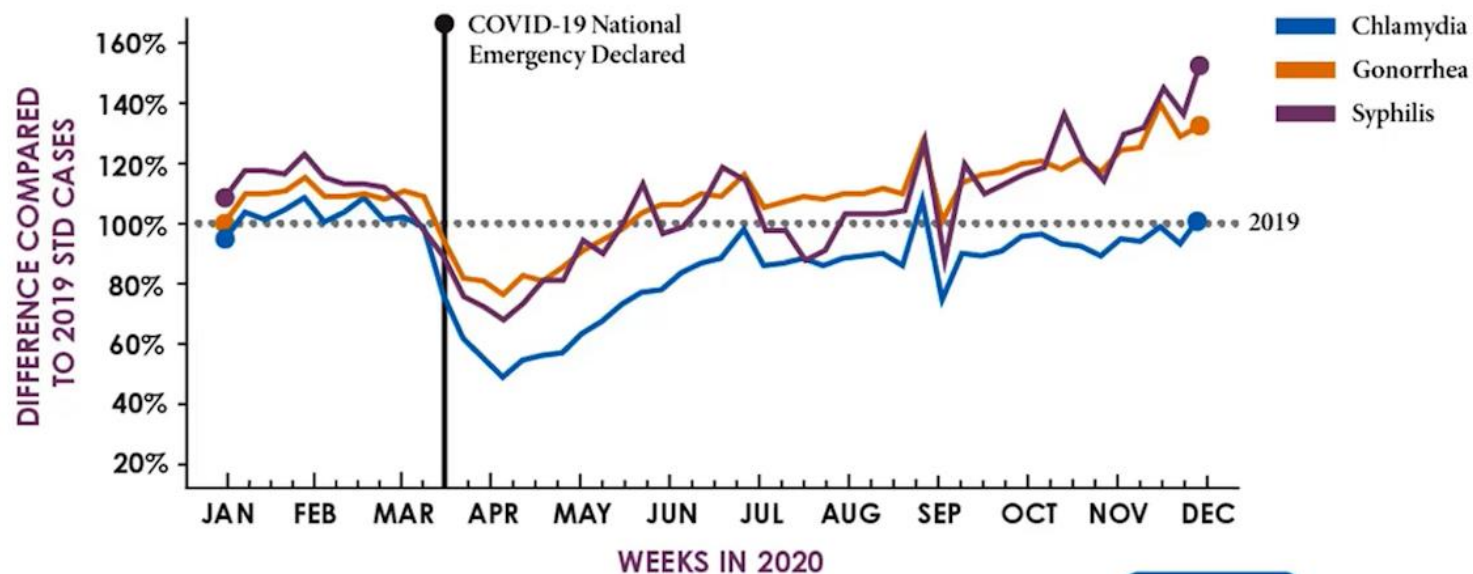
- GBMSM in US: Mean increase of 2.3 sex partners during COVID-19: more common in those reporting substance use and experiencing homelessness
- MSM in UK: 75% reported sex outside household, triggered by isolation/loneliness (48%), feeling bored (29%) or anxious/stressed (27%)

Pampati S, JAIDS 2021; Jongen VW, JAIDS 2021; Stephenson R, AIDS and Behavior 2021; Hyndman I, BMJ 2021

WEEKLY REPORTED U.S. STD CASES: 2020 VS. 2019

AFTER COVID-19 STAY-AT-HOME ORDERS, WEEKLY STD CASES DROPPED ▼
to 50% (chlamydia), 71% (gonorrhea), and 64% (syphilis) compared to their 2019 levels.

AT THE END OF 2020, REPORTED STD CASES RESURGED ▲



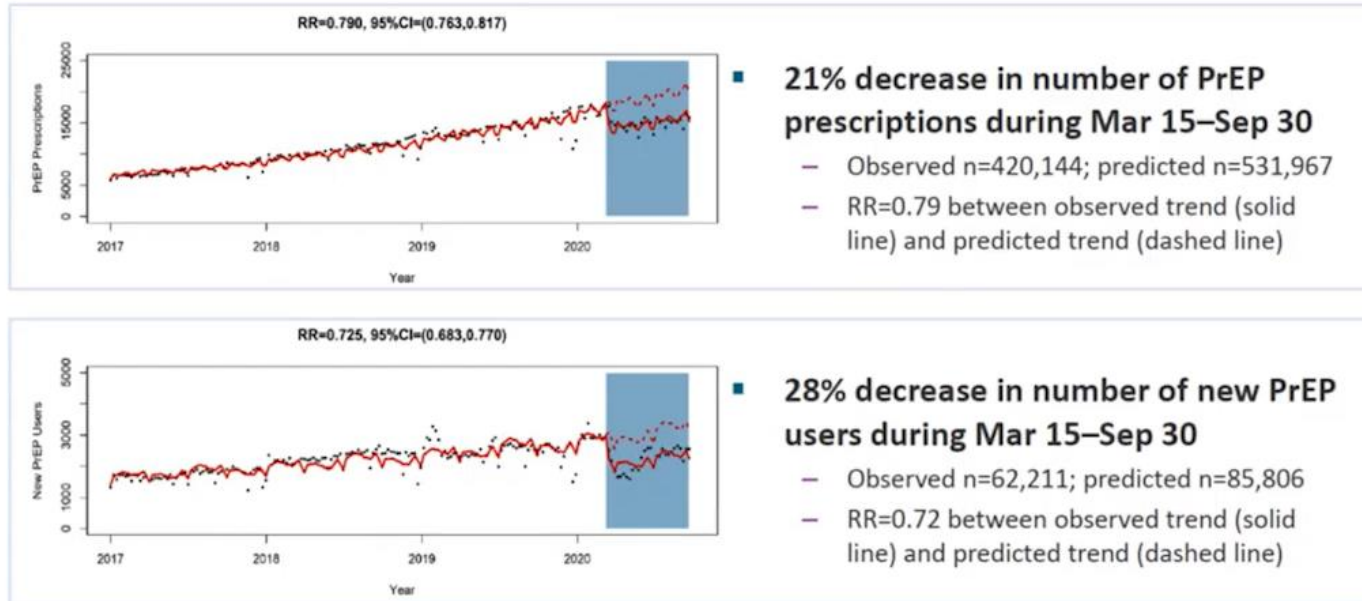
For more information, visit
cdc.gov/nchhstp/newsroom



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

4. Impact of COVID on HIV: PreP

Trends in PrEP prescriptions and new PrEP users during COVID (2017-2020)

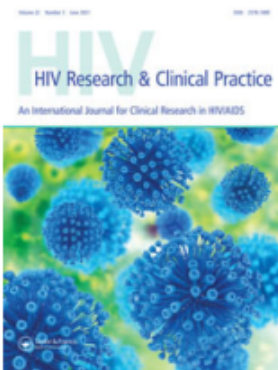


- Decreases in new PrEP use seen across multiple geographic areas and race/ethnicity groups – most pronounced among white individuals in the South

Huang A CROI 2021; Tao L, IAS 2021

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HIV Research & Clinical Practice



Taylor & Francis
Taylor & Francis Group

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/yhct21>

Impact of the COVID-19 pandemic situation on HIV care in Liège, Belgium

Majdouline El Moussaoui, Nicolas Lambert, Nathalie Maes, Karine Fombellida, Dolores Vaira, Michel Moutschen & Gilles Darcis

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1. Impact of COVID on HIV: retention in care

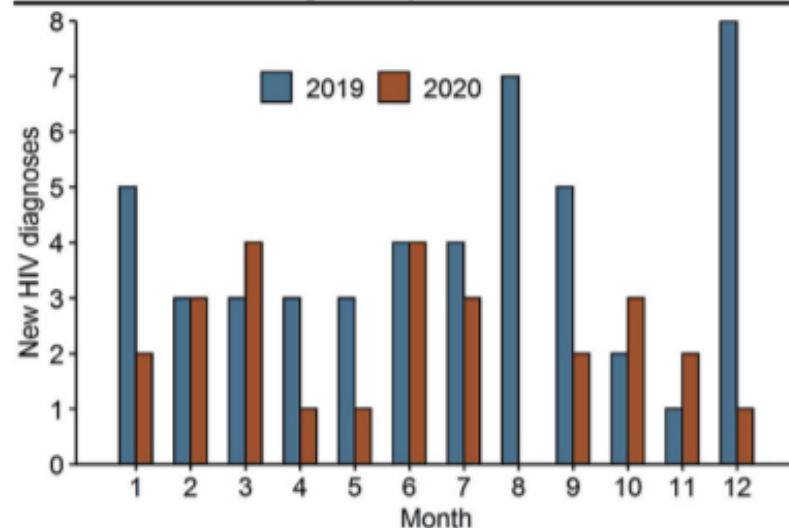
Table 4 Evolution of the total number of outpatient follow-up visits to a specialist in infectious diseases

Medical visits per year (N = 1162 HIV patients followed in 2019 and in 2020)

Year	Total number of medical visits	Number of medical visits / patient	Total number of medical visits / month
2019	3088	3 (2; 3)	250 (239; 281)
2020	2548	2 (2; 3)	210 (186; 272)
Comparison, <i>p</i> -value ^(a)		<0.0001	0.088
Medical visits per wave (N = 1162 HIV patients followed in 2019 and in 2020)			
	Total number of medical visits/ number of months	n(%) telemedicine	Total number of medical visits/ month
2020, first Wave : Mar-May	347/3 months	47 (13%)	131 (25; 191)
2020, between Waves: Jun-Sept	1026/4 months	34 (3%)	253 (199; 314)
2020, second Wave : Oct-Dec	631/3 months	82 (13%)	203 (193; 235)
Comparison, <i>p</i> -value ^(b)			
First vs (between and second)			0.030
Between vs second			0.48

Results are expressed as median (IQR) and ^(a) *p*-value signed rank test for repeated measures or ^(b) Kruskal-Wallis test. Significant *p*-value < 0.05.

Table 2 New HIV diagnoses per month in 2019 and 2020



- Less new patients
- Less consultations/patient
- More patients suppressed (95 versus 91 %)

2. Impact of COVID on HIV: 'quality' in care

Table 3 Delay between the diagnosis and the management

No delay in treatment initiation

New HIV diagnoses per year

Year	Days between first known test and first visit	Days between first visit and treatment initiation	Days between first known test and treatment initiation
2019	14 (9; 31)	7 (1; 12)	22 (14; 44)
2020	16 (12; 30)	5 (0; 12)	28 (17; 37)
Comparison, <i>p</i> -value	0.39	0.42	0.61
New HIV diagnoses per wave			
First wave: March-May 2020	16 (13; 29)	1 (0; 8)	20 (16; 34)
Between the waves: June-September 2020	20 (7; 33)	2 (0; 10)	20 (14; 37)
Second wave October-December 2020	16 (14; 28)	4 (1; 14)	28 (19; 30)
Comparison, <i>p</i> -value	0.99	0.60	0.69

Results are expressed as median (IQR) and *p*-value Kruskal-Wallis test.

Table 6 Coinfections and comorbidities screening

Slightly decrease in comorbidity screening

Morbidity screening: impact of coronavirus pandemic situation

n(%) patients screening	2019 (N = 1278)	2020 (N = 1292)	<i>p</i> -value
PCR Chlamydia	184 (14%)	280 (22%)	<0.0001
PCR Gonococci	185 (14%)	281 (22%)	<0.0001
Serology HCV	781 (61%)	717 (56%)	0.0039
Serology HBV	352 (28%)	626 (49%)	<0.0001
Serology Syphilis	854 (67%)	783 (61%)	0.0010
Colonoscopy/rectoscopy	51 (4%)	21 (2%)	0.0003
Lipid profile	947 (74%)	868 (67%)	0.0001

Decrease in psychology and sexology consultations

Table 5 Psychology and sexology consultations

Psychology and sexology consultations: impact of coronavirus pandemic situation per year

Year	Number patients followed	Total number Psy/sexo consults	Number Psy/sexo consults/month
2019	1278	858	73 (69; 83)
2020	1292	480	52 (30; 61)
Comparison, <i>p</i> -value			0.0004

Psychology and sexology consultations: impact of coronavirus pandemic situation per wave

First Wave: March-May 2020	1292	49	20 (0; 29)
Between Waves: June-September 2020	1292	235	61 (57; 61)
Second Wave : October-December 2020	1292	129	32 (32; 65)
Comparison, <i>p</i> -value			
First vs (between and second)			0.015
Between vs second			0.46

Results are expressed as median (IQR) and *p*-value Kruskal-Wallis test.

Content:

1. Background: impact of COVID on HIV
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3. **BREACH project: impact of COVID on HIV**

1. Data source, methods & objectives

Data source: National HIV surveillance data, collected from HRCs and ARL, by Sciensano

- Coverage: All HIV diagnoses, all patients with a VL (ARLs) and >80% care data from HRCs

Methods:

Comparison of indicators & trends by

- year (2020 vs previous years)
- month (lock-down periods vs other periods)

Objectives

Identify COVID-19 impact on various aspects of the HIV epidemic and care

1. Impact of the COVID epidemic on the key indicators of HIV care (including the 90-90-90 goals):

1. **Number of test** for HIV: monthly trend & comparison with previous years 
2. Nr of **new HIV diagnoses**: monthly trend & comparison with previous years 
3. Nr of **acute infections** diagnosed: monthly + comparison with previous years 
4. Number of patients in **medical follow-up**, defined as a blood test for VL, CD4 or medical visits + comparison with previous years 
5. Number of **VL per patient** + comparison with previous years 
6. Nr of PLWH with measured VL: monthly + comparison with previous years 
7. Number of **CD4 per patient** + comparison with previous years 
8. Number of patients with **HIV care interruption** (>=365 days without HIV care record): comparison by year 
9. Patients mortality adjusted for age 
10. Proportion of patients with an **undetectable viral load** + comparison with previous years 
11. Last CD4 value + comparison with previous years 
12. **Number initiating ART**: monthly + comparison with previous years 
13. Time from diagnosis to HIV care entry: monthly + comparison previous years 

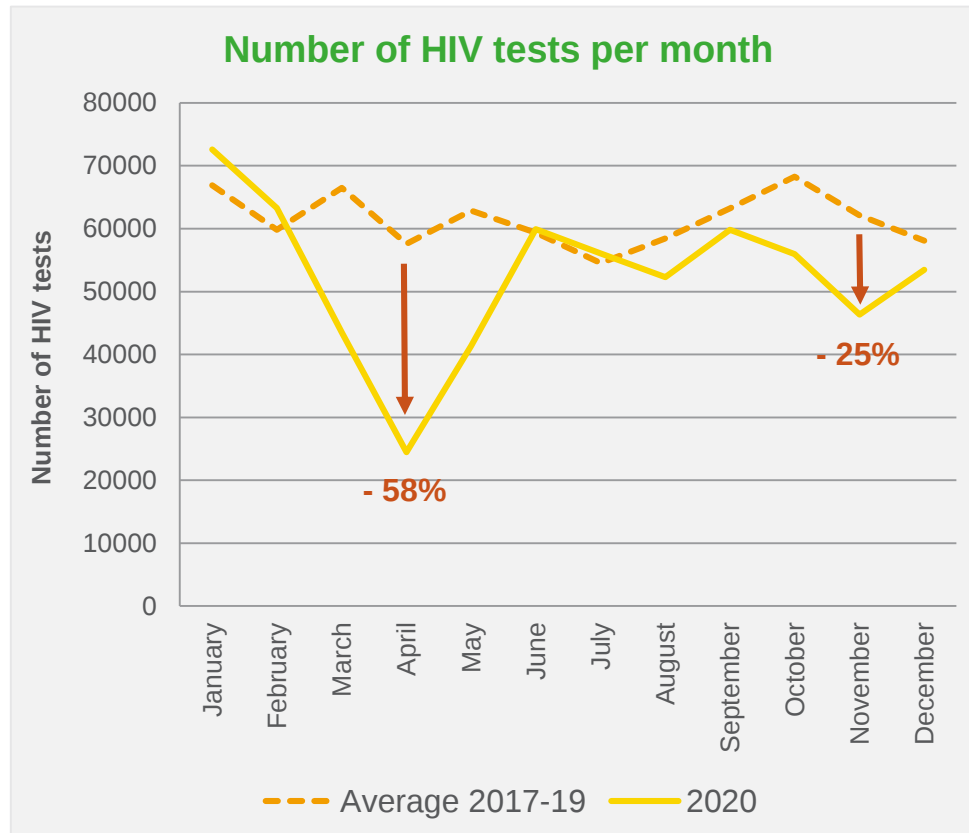
2. Impact of the COVID epidemic on PreP consultation:

1. Number of PrEP starters per month (based on PrEP reimbursement data Pharmanet) 
2. Number of PrEP purchase per month (based on PrEP reimbursement data Pharmanet) 

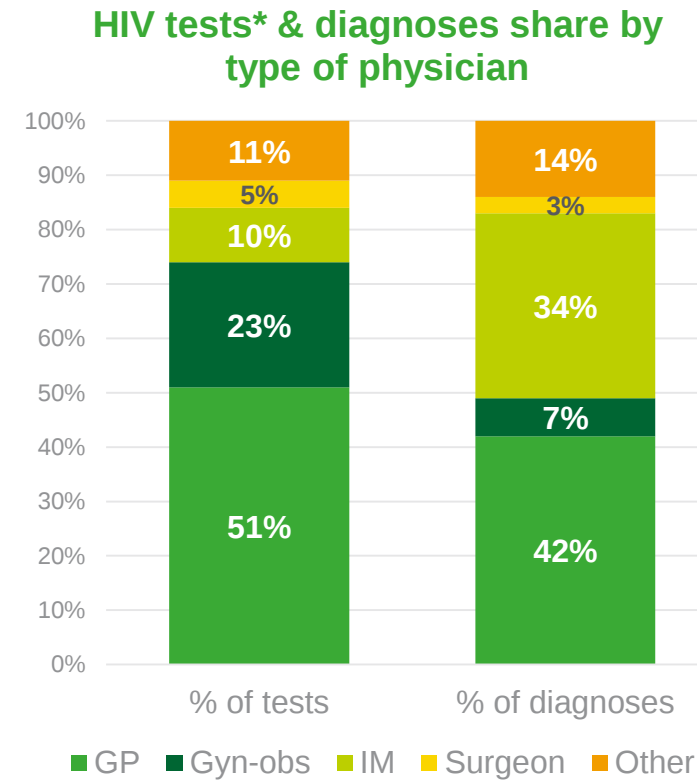
HIV testing

N° of HIV tests : 18 % decrease

56 HIV tests performed per 1000 inhabitants in 2020 (62/1000 in 2017-19)



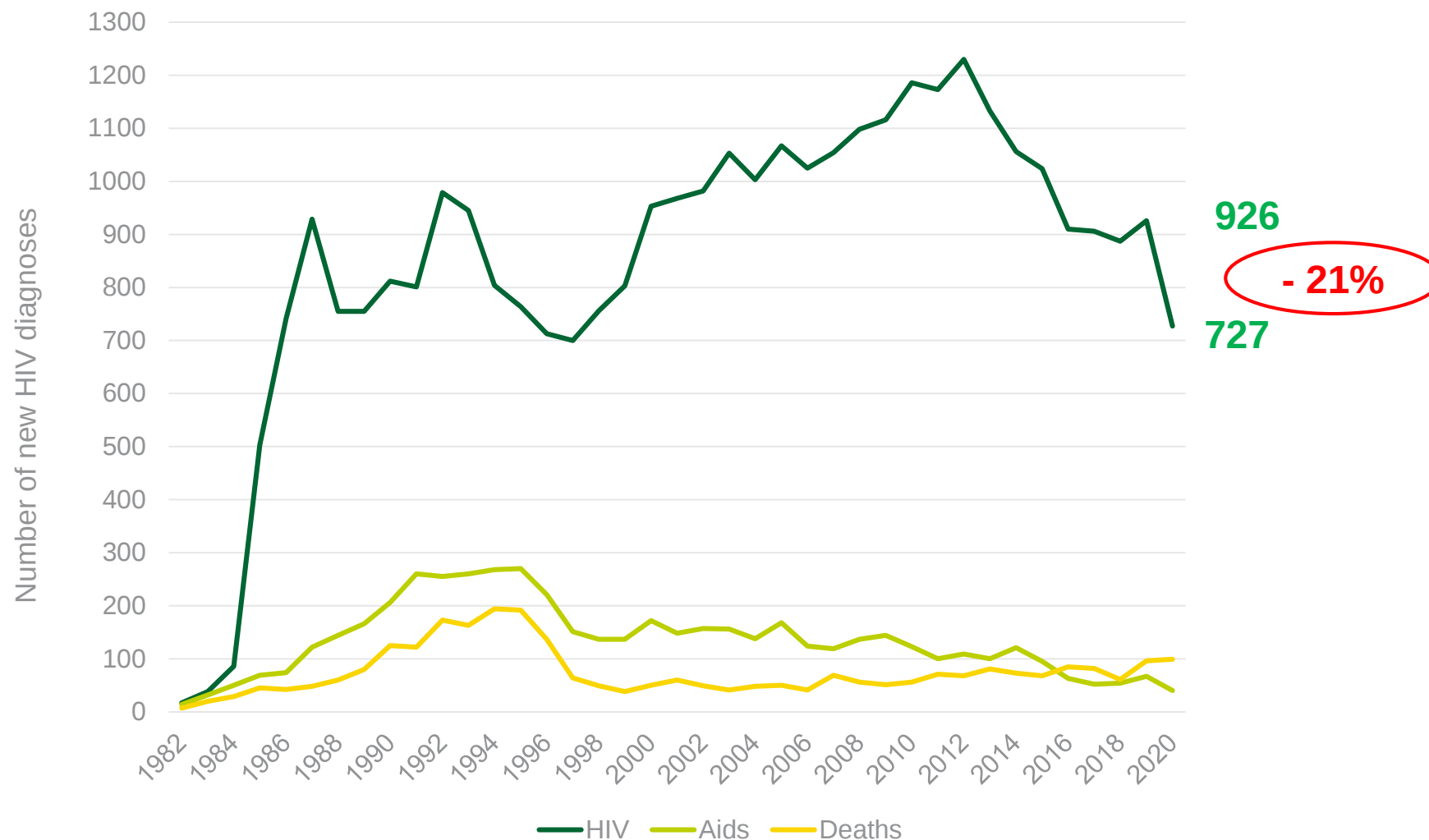
Source: RIZIV/INAMI



* Reimbursed tests

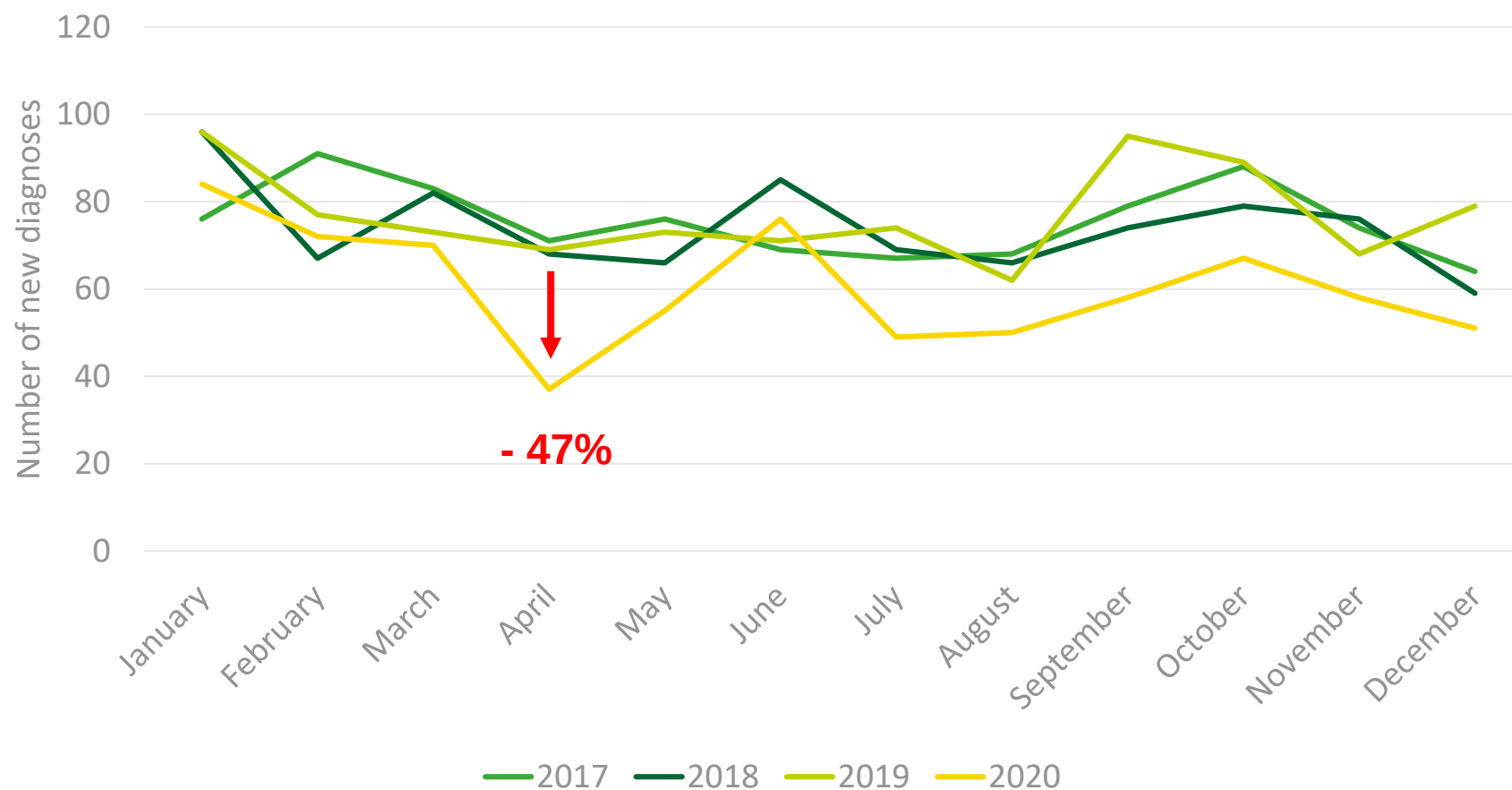
Number of HIV diagnoses, AIDS and deaths per year, 1982-2020

N° of HIV diagnosis : 21 % decrease

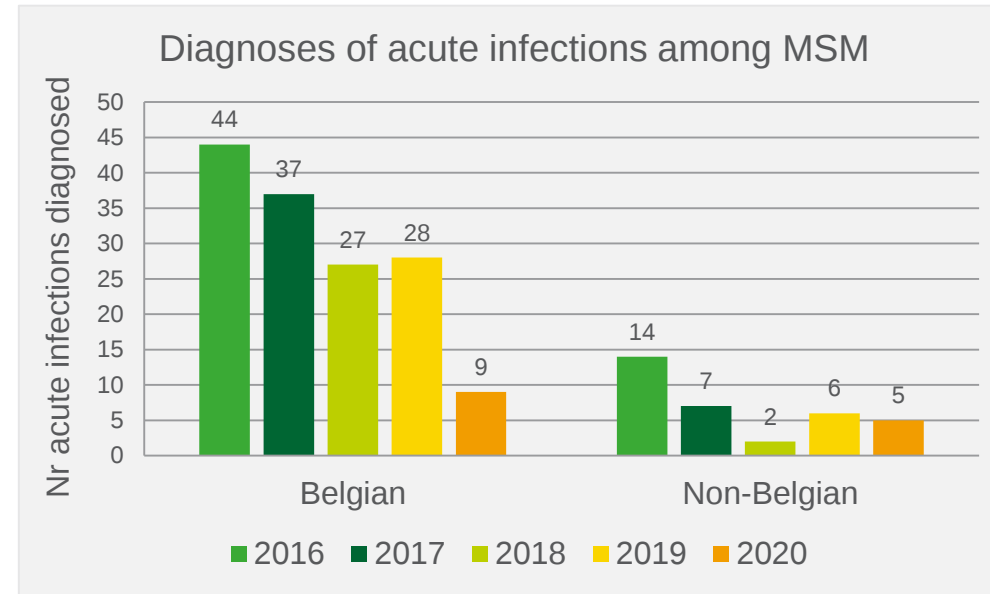
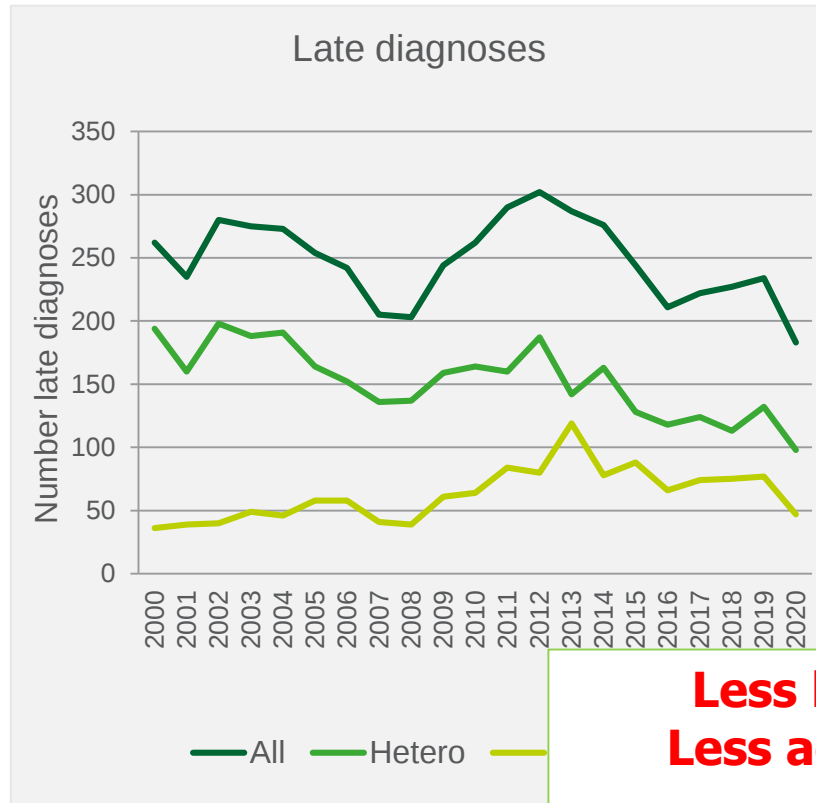


Number of HIV diagnoses per month, 2017-2020

dip in diagnosis during first lockdown



Earliness of HIV diagnoses: late diagnoses (<350 CD4/mm3) & acute infection



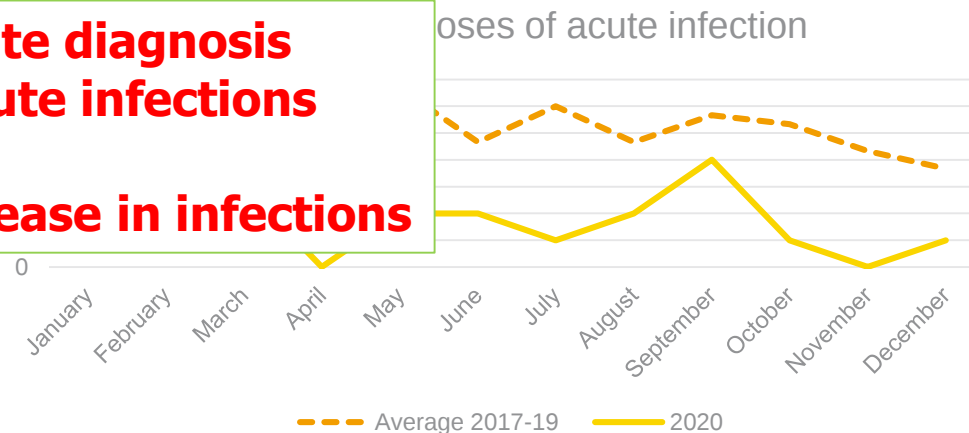
**Less late diagnosis
Less acute infections**

→ **real decrease in infections**

N late diagnoses (reported):

183 in 2020

234 in 2019



Yearly number of VL among Belgian patients & of CD4 among HRC patients. 2012-2020

Decrease in the number of VL and CD4/year

Year	VL (all patients in Belgium)		CD4 (all HRC patients)	
	Mean number VL performed per year	% undetect. at end of year	Mean number CD4 performed per year *	Median last CD4 value per year
2012	2.8	73%	3.2	563
2013	2.7	77%	3.1	579
2014	2.6	81%	3.0	599
2015	2.6	84%	3.0	626
2016	2.6	87%	NA	643
2017	2.4	89%	2.5	657
2018	2.3	91%	2.5	675
2019	2.3	91%	2.1	680
2020	2.1	92%	1.9	682

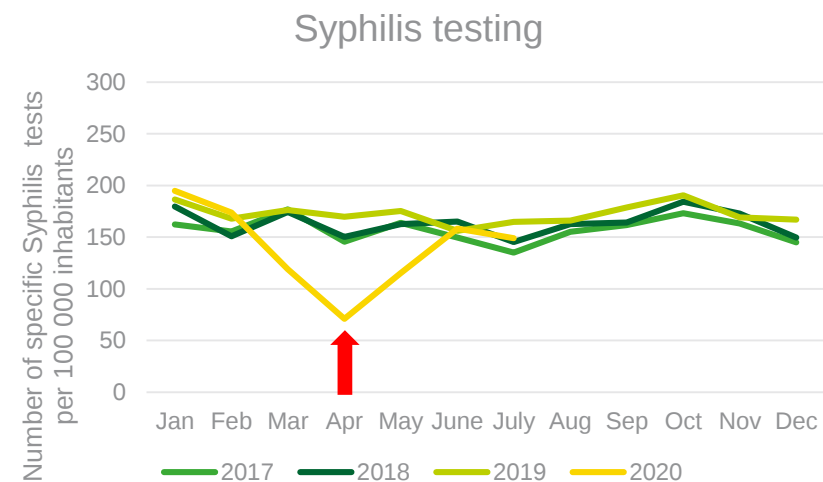
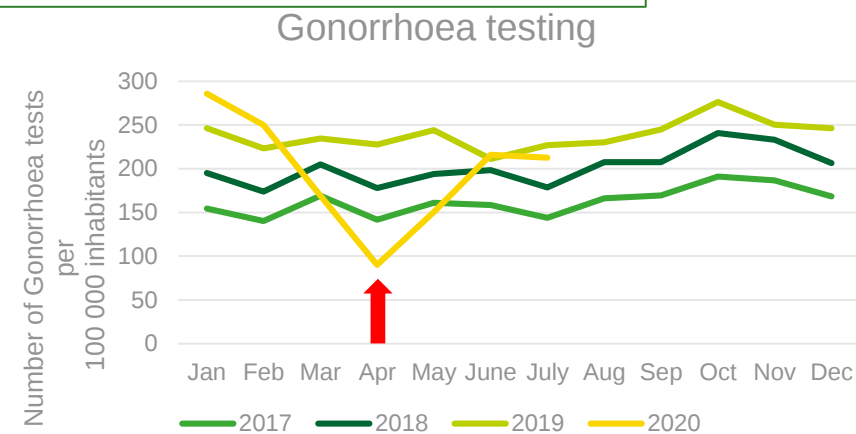
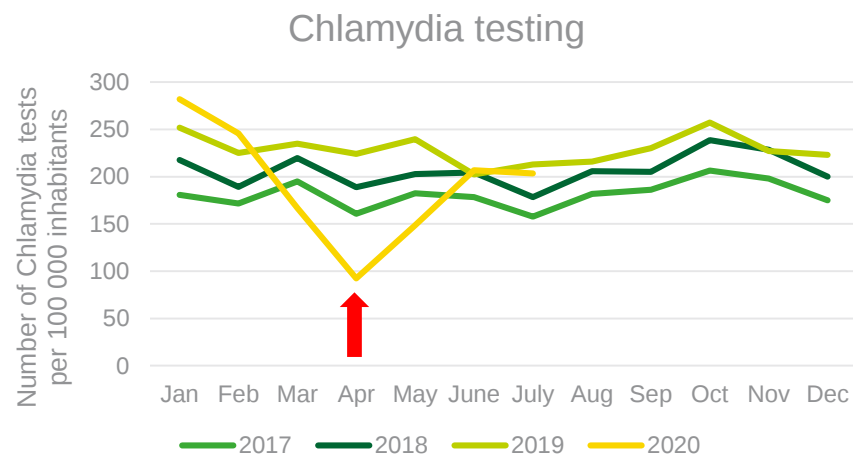
* Preliminary analyses



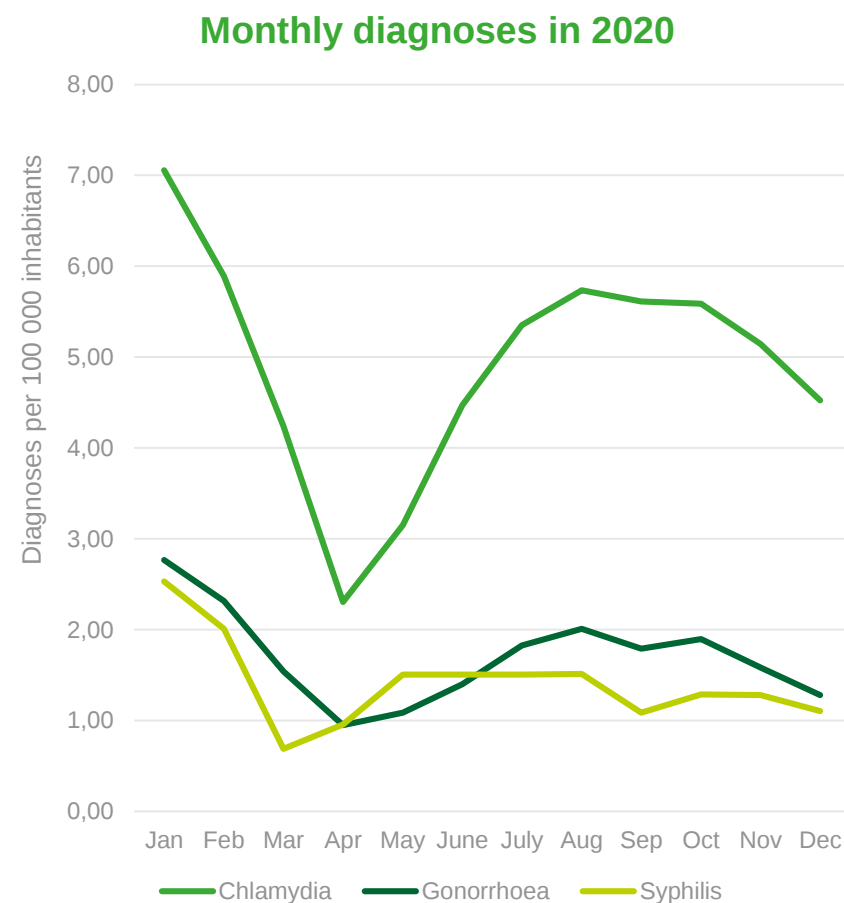
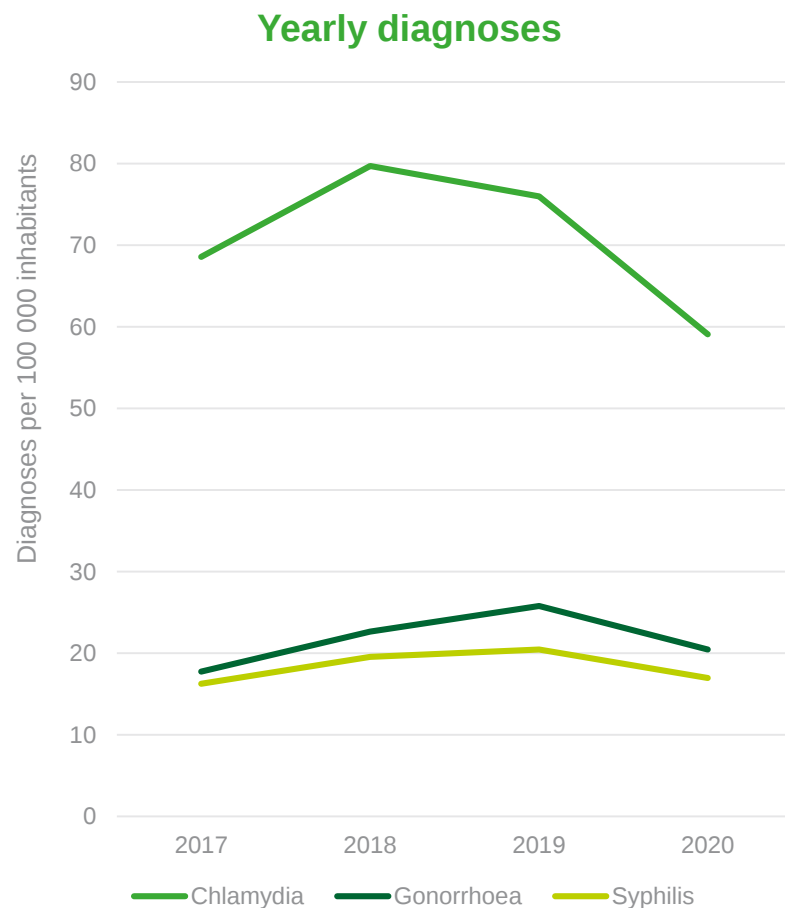
Increase in the % with undetectable VL

Monthly STI testing, Belgium, 2017-2020

Decrease in STI testing (especially during lockdown)



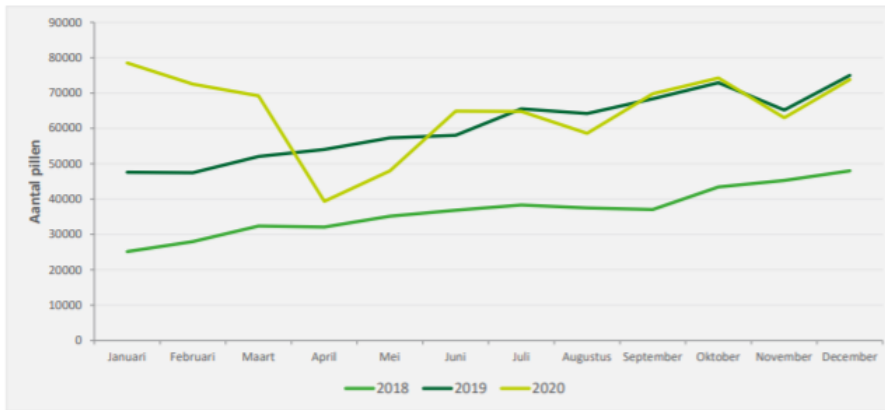
Reported STI diagnoses (/100 000 inh.), by year and by month, 2017-2020



Decrease in STI diagnosis

Prep and PEP

44. Maandelijks aantal gekochte pillen voor PrEP, 2018-2020

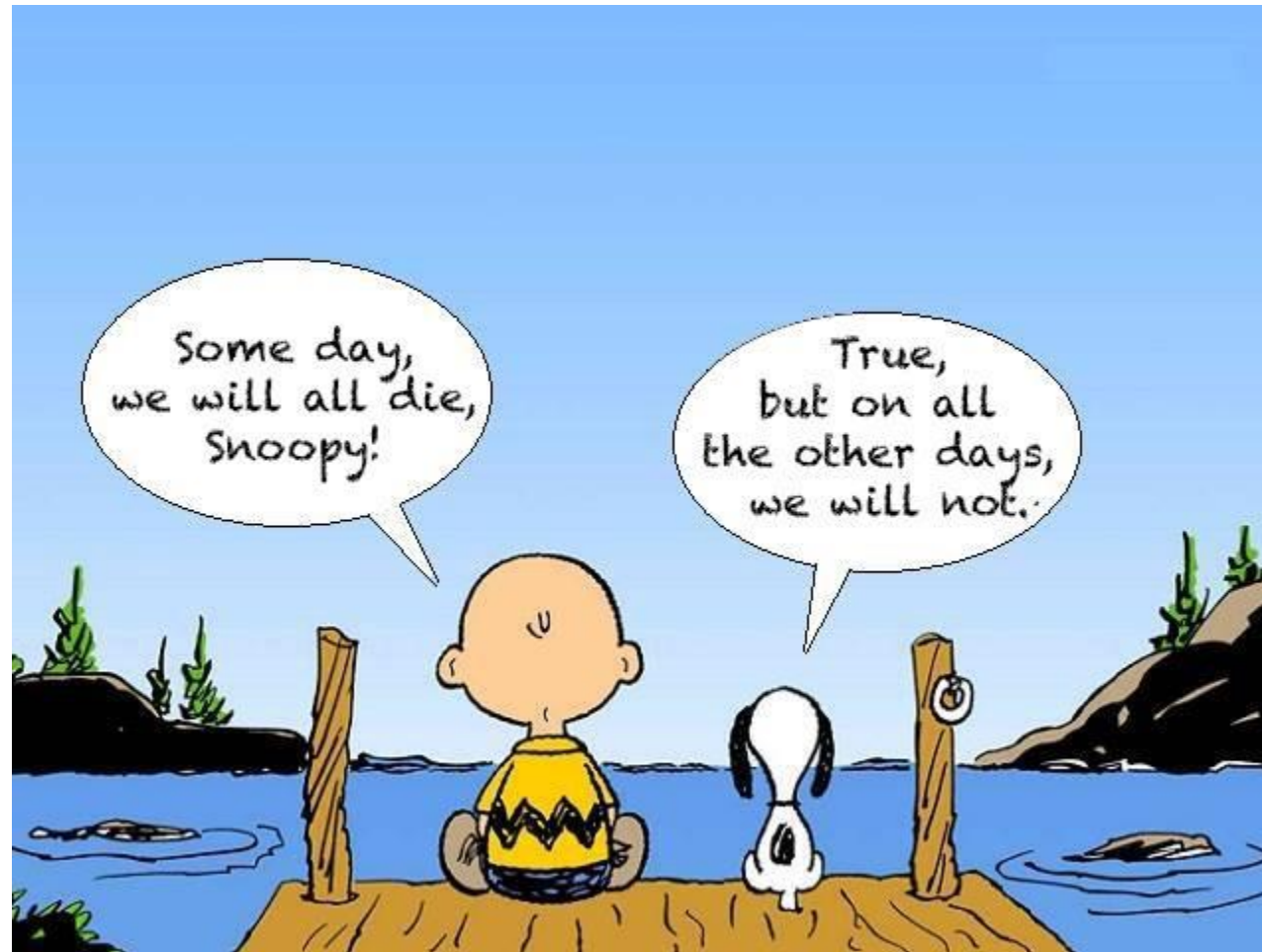


- Increase in N° PrEP users
 - Stable N° of pill use
 - More on demand use
- Jessika Deblonde on PrEP

Decrease in PrEP and PEP pill use

2. Results: impact COVID on HIV in Belgium

- 1) 18 % ↓ in the N° HIV tests
- 2) 21 % ↓ in the N° HIV diagnosis
 - Mainly during the first lockdown
 - With decrease N° late presentation/ acute infections → real decrease in infections
- 3) ↓ in N° VL and CD4 determinations/year
- 4) ↑ in the % patients UD VL (92 %)**
- 5) ↓ STI testing and diagnosis
- 6) ↓ pill use for PrEP and for PEP



Questions ?