CONVEGNO NAZIONALE





Hotel Savoia Rimini 2-3 aprile 2019

Focus sulla popolazione migrante: il trattamento

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Clinica delle Malattie Infettive



Outline

- ART access for migrants
- ART adherence and/or retention in care
- ART outcome in the migrant population
 - Choice of the ART regimen (PDR, convenience, women chilbearing age,)
- Prep for migrants?

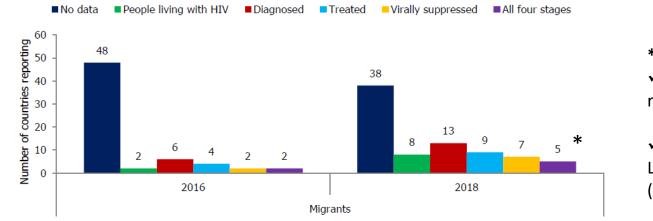


HIV treatment cascade in migrants and mobile populations

"Mobility" is associated with:

- higher likelihood to enter into the healthcare system late and initiate ART late
- increased risk of ART non-adherence,
- lost to follow-up,
- deterioration in CD4 count,
- HIV-related death,
- development of drug resistance and general non continuity of HIV care.

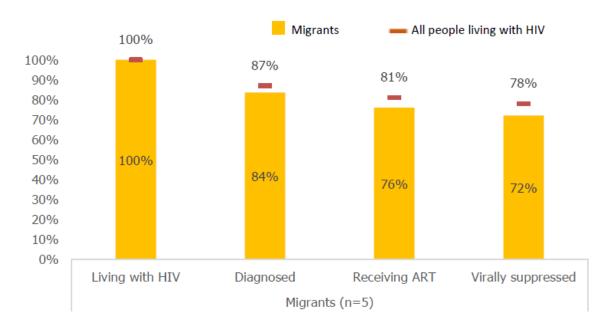
Number of countries reporting data for different stages of the HIV continuum of care for migrants, Europe and Central Asia in 2016 and 2018



*Countries:

- ✓ Czech Republic (Central region)
- ✓ Austria, France, Luxembourg and the UK (West sub-region)

Comparison of the continuum of HIV care for migrants against the national continuum of all people living with HIV, Europe and Central Asia, reported in 2018





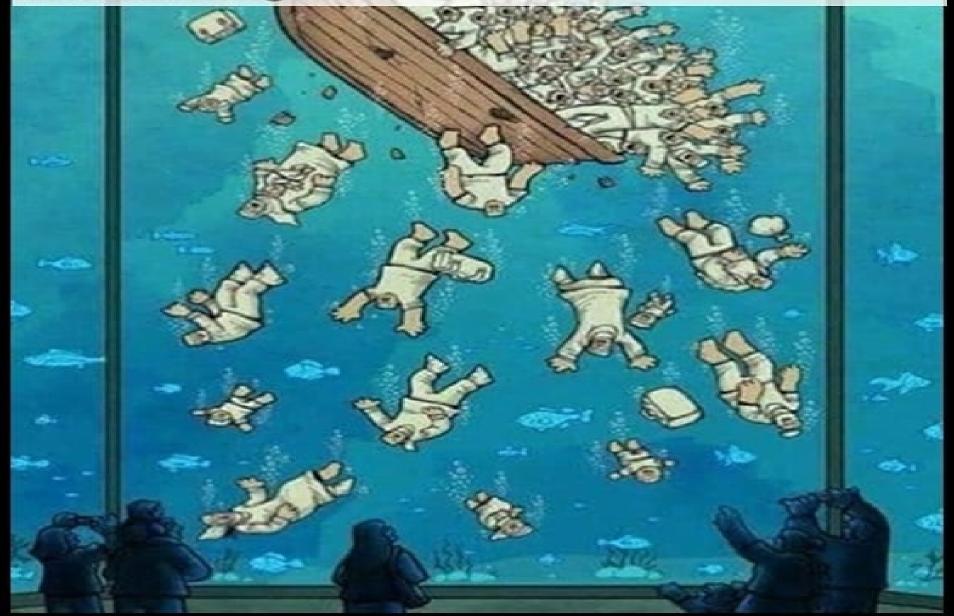
HIV treatment cascade in migrants and mobile populations

Migrants' slow progression through the HIV treatment cascade can be attributed to:

- feelings of confusion, helplessness;
- inability to effectively communicate in the native language;
- poor knowledge about administrative or logistical requirements of the healthcare system;
- possibility of deportation or expulsion based on the legal status of the undocumented migrant;
- fear of disclosure and social isolation from the exile or compatriot group.

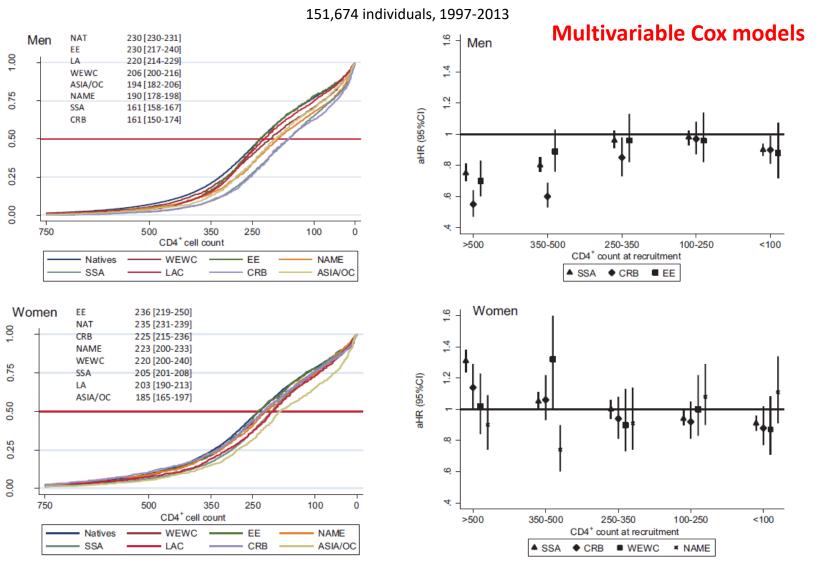
Travel or transition to the host country commonly makes it difficult for migrants to remain enrolled in ART programs and to maintain adherence to treatment.

"Ricorda, non sei straniero, sei solo povero. Se fossi ricco non saresti straniero in nessun luogo."



ART access

Timing of combined antiretroviral treatment initiation in male and female migrants living with HIV in Western Europe



Migrant status associated with a reduced probability of ART initiation in ICONA

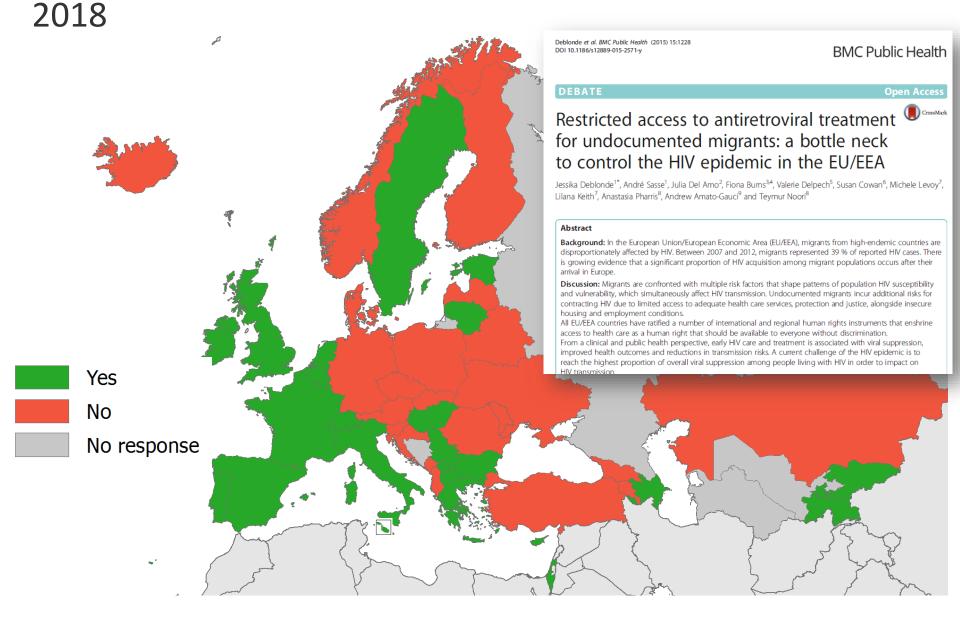
Logistic regression analysis of factors associated with ART initiation

4126 patients (71.5%) on ART at the time of analysis, including 842 migrants (71.7%) and 3284 (71.4%) Italian-born patients.

		95% CI				95% CI		
Characteristic	OR	Upper	Lower	Р	AOR	Upper	Lower	р
Male gender vs. female	0.87	0.75	1.00	0.057	1.11	0.91	1.36	0.307
Age (per 10-year increase)	1.27	1.20	1.35	<0.001	1.01	1.01	1.02	0.001
Migrants vs. natives	1.01	0.87	1.17	0.912	0.80	0.67	0.95	0.012
Years from first HIV test to enrolment	0.97	0.96	0.99	<0.001	0.98	0.97	1.00	0.071
Education								
Elementary school	1.00				1.00			
Junior high school	0.86	0.64	1.16	0.333	1.06	0.75	1.49	0.750
High school	0.71	0.53	0.94	0.017	0.97	0.70	1.36	0.872
University	0.54	0.40	0.74	<0.001	0.85	0.59	1.23	0.396
Missing data	0.60	0.45	0.79	<0.001	0.89	0.64	1.23	0.470
Occupation								
Full-time worker	1.00				1.00			
Unemployed	1.00	0.83	1.20	0.978	0.90	0.72	1.12	0.341
Self-employed	0.80	0.68	0.96	0.015	0.77	0.63	0.93	0.007
Temporary employed	0.88	0.63	1.24	0.467	0.85	0.57	1.25	0.402
Housewife	1.28	0.87	1.89	0.214	0.92	0.59	1.46	0.732
Retired	1.72	1.14	2.60	0.009	0.85	0.52	1.37	0.503
Student	0.49	0.37	0.66	<0.001	0.76	0.54	1.05	0.096
Other/missing	0.71	0.61	0.82	<0.001	0.72	0.59	0.87	0.001
Mode of HIV transmission								
Heterosexual contacts	1.00				1.00			
Homosexual contacts	0.57	0.50	0.65	<0.001	0.77	0.65	0.91	0.002
Intravenous drug use	0.69	0.55	0.86	0.001	0.67	0.51	0.88	0.004
Other/unknown	0.74	0.59	0.93	0.010	0.78	0.60	1.01	0.058

Saracino A. et al, CMI 2017

Availability of ART for undocumented migrants



Access to Highly Active Antiretroviral Therapy in HIV-Infected Immigrants: A Retrospective Multicenter Italian Study AIDS PATIENT CARE and STDs

A. SARACINO,^{1,2} I. EL-HAMAD,^{1,3} R. PRATO,⁴ D.C. CIBELLI,² A. TARTAGLIA,² E. PALUMBO,² M.C. PEZZOLI,³ G. ANGARANO,² G. SCOTTO,^{1,2} and the SIMIT STUDY GROUP*

Volume 19, Number 9, 2005

ANALYSIS OF FACTORS INFLUENCING THE PROBABILITY OF BEING TREATED WITH HAART

Univariate analysis	OR	(95% CI)	p value
Male gender	1.37	(0.74–2.54)	0.2
Country of origin		` ,	
Africa	0.55	(0.27-1.13)	0.08
Asia	0.98	(0.20–6.37)	0.9
Eastern Europe	1.74	(0.38–10.94)	0.4
Central-South America	1.83	(0.80–4.36)	0.1
Risk factor		,	
Heterosexual	0.68	(0.32-1.39)	0.2
Homosexual	3.57	(0.82–21.89)	0.06
Legal status (legal vs undocumented)	2.09	(1.07–4.08)	0.01
Registration in the National Health System	2.22	(1.10-4.47)	0.01
Years in Italy (≤10 yrs vs. >10 yrs)	0.62	(0.22–1.64)	0.3
Profession (employed vs. unemployed)	2.05	(0.92–4.51)	0.05
Use of intercultural mediator	2.11	(0.69–7.16)	0.1

ART outcome

Immunological and virological response to antiretroviral treatment in migrant and native men and women in Western Europe; is benefit equal for all?

Time to virological response from combination cART initiation according to geographical origin, in men and women

32 817 individuals

	Men			Women				
	Univariable analysi	is	Multivariable analysis*		Univariable analysis		Multivariable analysis*	
	sHR (95% CI)	<i>P</i> -value	sHR (95% CI)	P-value	sHR (95% CI)	<i>P</i> -value	sHR (95% CI)	<i>P</i> -value
NAT	1.00		1.00		1.00		1.00	
WEWC	0.98 (0.90; 1.06)	0.60	0.98 (0.87; 1.10)	0.71	0.90 (0.73; 1.11)	0.32	0.90 (0.0.74; 1.09)	0.29
EE	1.05 (0.96; 1.15)	0.31	1.06 (0.96; 1.17)	0.24	1.17 (1.00; 1.37)	0.055	1.17 (0.98; 1.39)	0.09
NAME	0.85 (0.76; 0.95)	0.005	0.91 (0.86; 0.97)	0.004	1.00 (0.86; 1.17)	0.98	1.00 (0.90; 1.11)	0.94
SSA	0.80 (0.76; 0.84)	< 0.001	0.88 (0.82; 0.95)	0.001	1.05 (0.98; 1.12)	0.18	1.04 (0.96; 1.12)	0.30
LA	1.00 (0.90; 1.11)	0.98	0.95 (0.87; 1.03)	0.23	1.08 (0.95; 1.24)	0.23	1.08 (0.94; 1.25)	0.27
CRB	0.90 (0.61; 1.32)	0.58	0.95 (0.73; 1.24)	0.71	0.79 (0.65; 0.96)	0.02	0.77 (0.67; 0.89)	<0.001
ASIA/OCE	1.09 (0.94; 1.27)	0.24	1.07 (0.93; 1.23)	0.33	1.17 (0.95; 1.44)	0.14	1.14 (0.90; 1.45)	0.27
Overall P-value		<0.001		< 0.001		< 0.001		<0.001

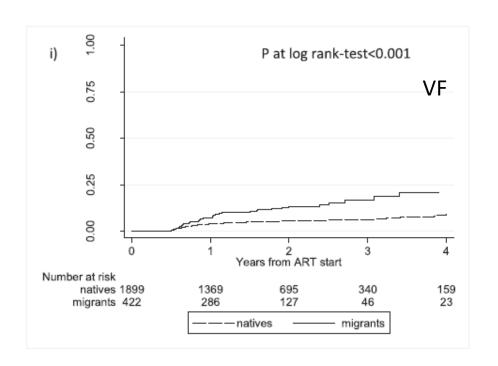
Lower VR in North and Sub-Saharan African men and in Caribbean women

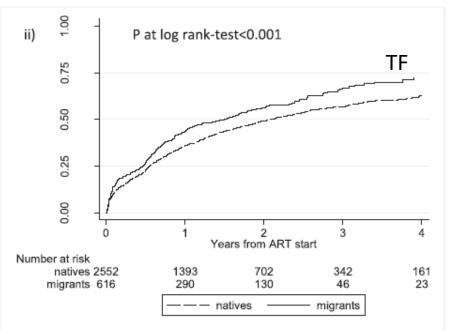
Increased risk of virologic failure to the first antiretroviral regimen in HIV-infected migrants compared to natives: data from the ICONA cohort

A. Saracino¹, P. Lorenzini², S. Lo Caputo³, E. Girardi⁴, F. Castelli⁵, P. Bonfanti⁶, S. Rusconi⁷, P. Caramello⁸, N. Abrescia⁹,

C. Mussini¹⁰, L. Monno¹ and A. d'Arminio Monforte¹¹, for the ICONA Foundation Study Group

Clin Microbiol Infect 2016; 22: 288.el -288.e8





✓ Virological failure (VF)	migrants	6.4 per 100 PYFU	(95% CI 4.8–8.5)	
	natives	2.7 per 100 PYFU	(95% CI 2.2-3.3)	p<0.001
√Treatment discontinuation (TD)	migrants	38.4 per 100 PYFU	(95% CI 34.4–42.8)	
	natives	30.8 per 100 PYFU	(95% CI 29.2-32.6)	p<0.001
√ Treatment failure (TF)	migrants	44.9 per 100 PYFU	(95% CI 40.4–49.9)	
	natives	33.2 per 100 PYFU	(95% CI 31.5-35.1)	p<0.001

Does region of origin influence the timing and outcome of first-line antiretroviral therapy in France?

C Gatey, A Brun, G Hamet, S Diamantis, P Sellier, O Bouchaud, 6 V Garrait, W Rozenbaum, 12 JM Molina, and S Abgrall 6, 101, 101 for the COREVIH IIe de France Est Research Group*

HIV Medicine (2019), 20, 175–181

Objectives

The aim of the study was to assess whether the timing of combination antiretroviral therapy (cART) initiation, the choice of cART and virological response differ in migrants versus European natives in the north and east of Paris area, after dissemination of French recommendations for universal treatment.

Methods

Antiretroviral therapy-native HIV-1-infected adults with at least two follow-up visits at one of 15 participating centres between 1 January 2014 and 31 March 2015 were included in the study. Factors associated with cART initiation before 31 March 2015, with protease inhibitor (PI)-containing cART among individuals initiating cART, and with 1-year virological success after cART initiation were assessed using multivariable logistic regression models. Sex, age, region of origin [Western Europe, sub-Saharan Africa (SSA) or other], HIV transmission group, baseline AIDS status, CD4 cell count and plasma viral load (VL), and hepatitis B and/or C virus infection were considered in the analyses.

Results

Among 912 individuals, only 584 (64%) started cART during the study period. After adjustment, migrants from SSA were half as likely to initiate cART and to have a subsequent virological response compared with individuals from Western Europe [adjusted odds ratio (aOR) 0.54; 95% confidence interval (CI) 0.36–0.82; and aOR 0.52; 95% CI 0.28–0.98, respectively]. PI-containing cART was more frequently prescribed in migrants from SSA, in people with lower CD4 cell counts and in people with higher VL

Condusions

Even in the context of universal cART recommendations and of free access to care, migrants from SSA still have delayed access to cART and a lower virological response. Efforts are still necessary to provide immediate cART to all people living with HIV.

ART adherence and/or retention in care

Linkage to Care Is Important and Necessary When Identifying Infections in Migrants

- Collaboration between primary care, public health, and specialist care in order to ensure continuity of care tailored to all the needs of the person involved.
- 2. Single point-of-referral to a migrant-friendly clinical service with culturally competent staff that deal with migrants and infectious diseases (as well as other health needs). This clinic could be facilitated by being staffed by specialists with a broad range of skill-sets who can manage all infections alongside interpreters and other support services to support treatment adherence and completion.
- Robust data collection to facilitate sharing of best practice with respect to linkage to care and treatment completion for migrants with infectious diseases.

Evidence-based guidance emphasising methods of implementation supported by appropriate resources and migrant communities' views

Effect of Legal Status on the Early Treatment Outcomes of Migrants Beginning Combined Antiretroviral Therapy at an Outpatient Clinic in Milan. Italy

Anna L. Ridolfo, MD, Letizia Oreni, BS, Paolo Vassalini, MD, Chiara Resnati, MD, Giorgio Bozzi, MD, Laura Milazzo, MD, Spinello Antinori, MD, Stefano Rusconi, MD, and Massimo Galli, MD

TABLE 2. Adjusted Logistic Regression Model Assessing the Effect of Undocumented Status on the Probability of Being LTFU 12 Months After Starting cART

Variable	Adjusted OR (95% CI)	P
Age, each year more	0.99 (0.96 to 1.02)	0.552
Gender		
Women	1	
Men	0.97 (0.41 to 2.26)	0.936
Transgender women	1.03 (0.22 to 4.87)	0.975
Region of origin		
Italy	1	
Latin America	0.74 (0.21 to 2.56)	0.631
Sub-Saharan Africa	1.62 (0.50 to 5.26)	0.427
Other regions	0.44 (0.07 to 2.77)	0.380
Type of health card used		
SSN	1	
STP	8.05 (2.51 to 25.84)	< 0.001
HIV risk factor		
Heterosexuals	1	
IVDUs	5.98 (2.30 to 15.54)	< 0.001
MSM	0.96 (0.35 to 2.64)	0.930
Other/unknown	3.41 (1.11 to 10.51)	0.033

AIDS diagnosis		
No	1	
Yes	0.82 (0.35 to 1.90)	0.640
CD4 cell counts, cells/µL		
<350	1	
>350	1.65 (0.77 to 3.55)	0.201
HIV-RNA copies/mL, each log10 more	0.95 (0.67 to 1.34)	0.777
HBV-Ag and/or HCV-Ab status		
Negative	1	
Positive	0.45 (0.17 to 1.22)	0.118
Initial cART regimen		
NNRTI-based	1	
PI-based	1.32 (0.64 to 2.72)	0.447

Risk factors for non adherence in immigrant PLWHIV

Univariable and multivariable logistic regression analyses were conducted among 301 participants who had used cART ≥6 months prior to inclusion.

Independent risk factors for self-reported non-adherence were:

- (I) not having attended formal **education** or only primary school (OR = 3.25; 95% CI: 1.28–8.26, versus University),
- (II) experiencing low levels of **social support** (OR = 2.56; 95% CI: 1.37–4.82), and
- (III) reporting low treatment adherence **self-efficacy** (OR = 2.99; 95% CI: 1.59–5.64).
- (IV) internalized **HIV-related stigma** was marginally associated (P<0.10) with non-adherence (OR = 1.82; 95% CI: 0.97–3.43).

HIV testing history and access to treatment among migrants living with HIV in Europe



Ibidun Fakoya¹, Débora Álvarez-Del Arco², Susana Monge³, Andrew J Copas¹, Anne-Francoise Gennotte⁴, Alain Volny-Anne⁵, Claudia Wengenroth⁶, Giota Touloumi⁷, Maria Prins⁸, Henrique Barros¹⁰, Katharine EA Darling¹¹, Tullio Prestileo¹², Julia Del Amo², and Fiona M Burns^{1,13}, on behalf of the aMASE Study Team^a

2018

HIV treatment characteristics of aMASE clinic survey respondents, by gender (men separated by sexual orientation)

	Women	Heterosexual men	Gay/bisexual men
Most recent CD4 cell count ≥350 cells mm3 (n = 2011)	494 (76.8)	282 (65.4)	814 (86.9)
Undetectable viral load (<50 copies/mL) (n = 1540) ^a	409 (77.2)	290 (75.9)	489 (77.9)
Currently not on HIV treatment (n = 2090) ^b	105 (16.0)	40 (9.0)	312 (31.6)
Reason not on HIV treatment (n = 457)			
Doctor's advice or newly diagnosed	90 (85.7)	33 (82.5)	276 (88.5)
High cost or otherwise inaccessible	3 (2.9)	O (O.O)	15 (4.8)
Fear of side effects or other difficulties taking medication	9 (8.6)	5 (12.5)	25 (8.0)
Other reason	7 (6.7)	3 (7.5)	16 (5.1)
Access to primary care (n = 2076)	552 (85.1)	369 (83.5)	833 (84.6)
Government-funded HIV treatment and care (n = 972) ^{b,c}	244 (78.2)	162 (78.6)	319 (70.3)
Experienced difficulties with health service in CCOR (n = 2093)	211 (32.3)	132 (29.9)	272 (27.7)
No GP/Health card/insurance (n = 628)	33 (15.3)	18 (13.1)	58 (20.9)
Unclear of rights to access medical care (n = 629)	43 (19.9)	35 (25.5)	70 (25.3)
Long waiting times for an appointment/in the clinic (n = 628)	72 (33.3)	29 (21.2)	111 (40.1)
Does not trust the GP confidentiality (n = 628)	48 (22.2)	31 (22.6)	37 (13.4)
Difficulty communicating with staff because of language differences (n = 628)	55 (25.5)	38 (27.7)	38 (13.7)
Difficulty negotiating healthcare system (e.g. finding GP, payment, travel) (n = 629)	22 (10.2)	13 (9.5)	31 (11.2)
Missed clinical appointments because of travel expenses (n = 2071)	77 (11.9)	66 (15.1)	68 (6.9)
Delayed/forwent medication because of prescription costs (n = 2078) ^d	54 (8.3)	39 (8.8)	48 (4.9)

Which ART regimen?

Consider:

- Regimen convenience (STR?): consider pregnancy planning in women
- Genotype if available; level of PDR in country of origin

First ART Regimen in ICONA cohort

Characteristic	Migrants	Natives	р
Type of first regimen, n (%) 2 NRTIs + NNRTI		1233 (26.8%)	<0.001
2 NRTIs + PI boosted	278 (23.7%) 502 (42.8%)	1661 (36.2%)	~ 0.001
2 NRTIs + II NRTI sparing	12 (1.0%) 20 (1.7%)	94 (2.0%) 97 (2.1%)	
Other	30 (2.5%)	199 (4.3%)	

Which STR in migrant women of childbearing age?

EACS European AIDS Clinical Society		Same as non-pregnant If on RAL (400 mg bid), RPV or DRV/r: could be continued	
AIDS Clinical Society		No data on RAL 1200 mg qd: not recommended Women on EVG/c need to be informed that more monitoring of HIV-VL and	
		Women on DTG need to be switched to a different third agent, at least for the first trimester (evidence of increased risk of neural tube defect in newborns exposed to DTG from one observational cohort)	
ART in pregnancy		Among PI/r, prefer ATV/r RTV is the recommended booster for women on treatment with boosted I during pregnancy DRV/c is not recommended during pregnancy due to significant lower exposures or DRV and COBI in the second and third trimester of	
		pregnancy EFV is a suitable alternative for pregnant persons needing to start	
		treatment. It can be continued if already started before pregnancy	
		NVP not to be initiated, but continuation is possible if started before pregnancy	
		Limited experience with TAF in pregnancy: not recommended in initial	
		regimen	
		No experience with BIC in pregnancy: not recommended	
Drugs contraindicated during pregnancy		DTG (first trimester), ddl + d4T, triple NRTI combinations	

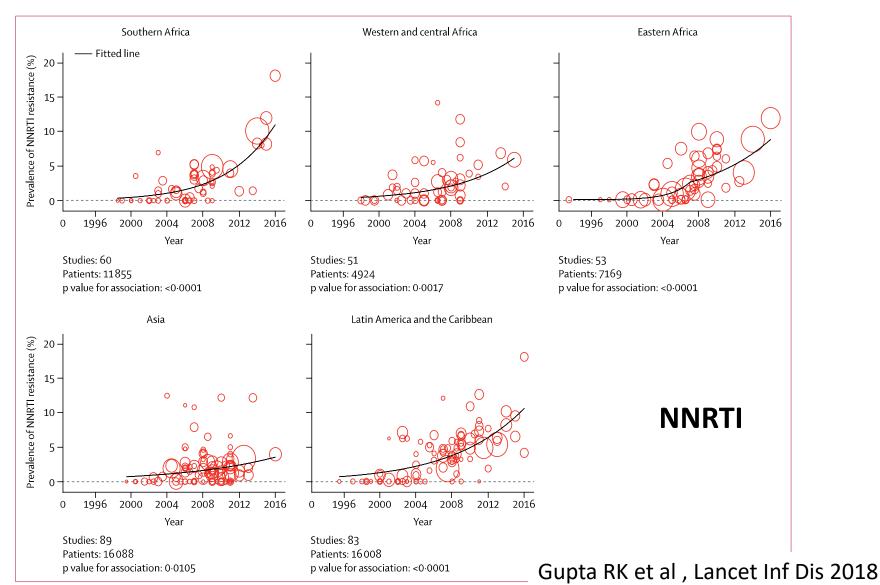
Breastfeeding

We advise against breastfeeding. In case a woman insists on

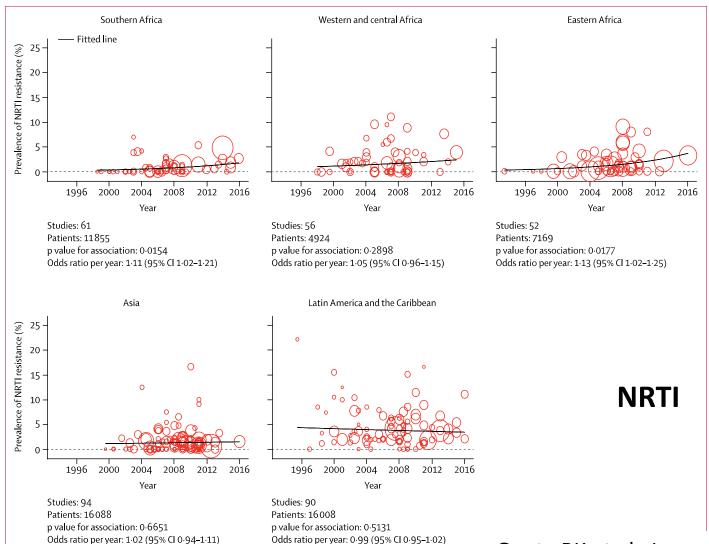
virological monitoring of both the mother and the infant

breastfeeding, we recommend follow-up with increased clinical and

Pre-treatment drug resistance (PDR) in low income countries

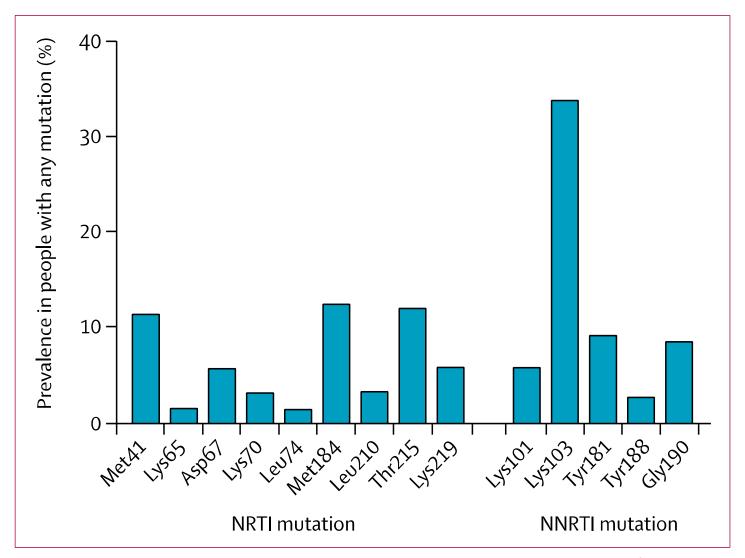


Pre-treatment drug resistance (PDR) in low income countries



Gupta RK et al , Lancet Inf Dis 2018

Pre-treatment drug resistance (PDR) in low income countries



Increase in transmitted drug resistance in migrants from sub-Saharan Africa diagnosed with HIV-1 in Sweden

n=1

n=6

Emmi Andersson^{a,b}, Agnes Nordquist^c, Joakim Esbjörnsson^{d,e}, Leo Flamholc^f, Magnus Gisslén^g, Bo Hejdeman^h, Gaetano Marroneⁱ, Hans Norrgren^j, Veronica Svedhem^{i,k}, Suzanne Wendahl^l, Jan Albert^{b,c} and Anders Sönnerborg^{a,b,i,k} Any TDR NRTI TDR only NNRTI TDR only AIDS 2018, 32:877-884 PI TDR only All NNRTI TDR Multi-class TDR % patients with TDR 2011 2012 2013 2010 2014 2015 2016

Fig. 2. Prevalence of transmitted drug resistance per drug class in patients infected in sub-Saharan Africa. *n* = absolute number of patients with any TDR per year. TDR, transmitted drug resistance.

n=2

n=7

n=11

n=6

n=7

Evolution of transmitted HIV-1 drug resistance and viral subtypes circulation in Italy from 2006 to 2016

B Rossetti , S Di Giambenedetto, C Torti, MC Postorino, G Punzi, F Saladini, W Gennari, V Borghi, L Monno, AR Pignataro, E Polilli, M Colafigli, A Poggi, M Zazzi And A De Luca, on behalf of the Antiviral Response Cohort Analysis (ARCA) Collaborative Group

HIV Medicine (2018), 19, 619-628 80 Percentage of patients TDR declined from 14.5% in 2006 to 7.3% in 2016 (p=0.003), > in B than non-B subtypes P < 0.00120% 18% 2012 2013 16% Percentage of patients 235 242 14% 12% 10% 8% 6% 4% 2% 0% Sub-Latin Other Italy Eastern Unknown Saharan America Europe Africa and Caribbean

■PI resistance

Any class resistance

■NNRTI resistance

NRTI resistance

PrEP for African migrants in Europe? A research agenda

- WHO guidelines recommend PrEP for populations with HIV incidences of 3% per year or higher
- Clinical trials and demonstration projects in Europe have focused solely on men having sex with men (MSM); so far more than 95% of people using Prep are MSM
- In Western Europe, sub-Saharan Africa migrants are the most affected group after MSM, accounting for 15.6% of new HIV diagnoses in 2014.
- In Europe, up to 31% of migrants from sub-Saharan Africa living with HIV acquired HIV in their host countries
- PrEP research should assess the eligibility of subpopulations of migrants from sub-Saharan Africa and define culturally sensitive screening questions for their inclusion

Conclusions

- Even in the context of free access to cART and universal recommendations for cART initiation, migrants still have delayed access to cART and a lower virological response on treatment.
- As they represent a significant proportion of new HIV diagnoses, efforts are still necessary to provide immediate cART
- Political and public health decisions are necessary to reduce the socioeconomic insecurity experienced by most recent migrants, who are frequently undocumented and vulnerable to HIV infection.
- Educational interventions culturally tailored to the general migrant population would also help to reduce the fear of stigmatization and improve linkage to care in order to achieve the "4"90 UNAIDS target.