

L'esperienza di DREAM

**Dai programmi di cura alla ricerca
operativa**

Dott. Giovanni Guidotti



La presenza di DREAM oggi in Africa

DREAM program è presente in 10 paesi

50 centri di cura

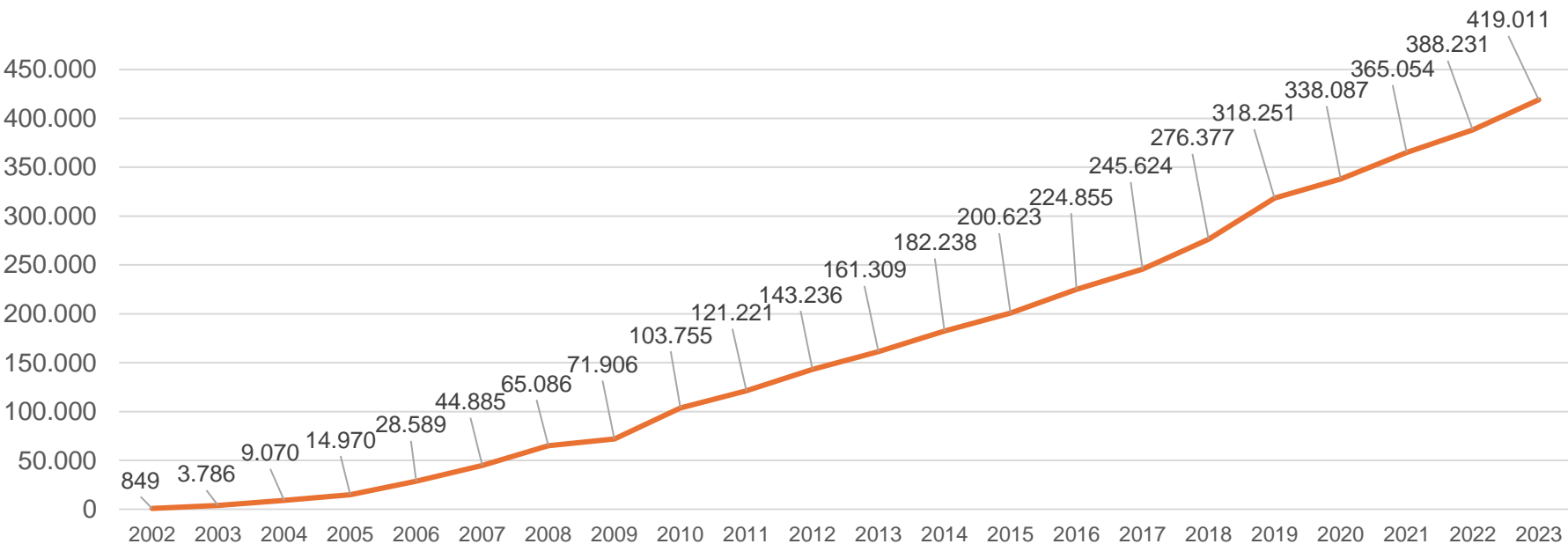
28 laboratori di biologia molecolare



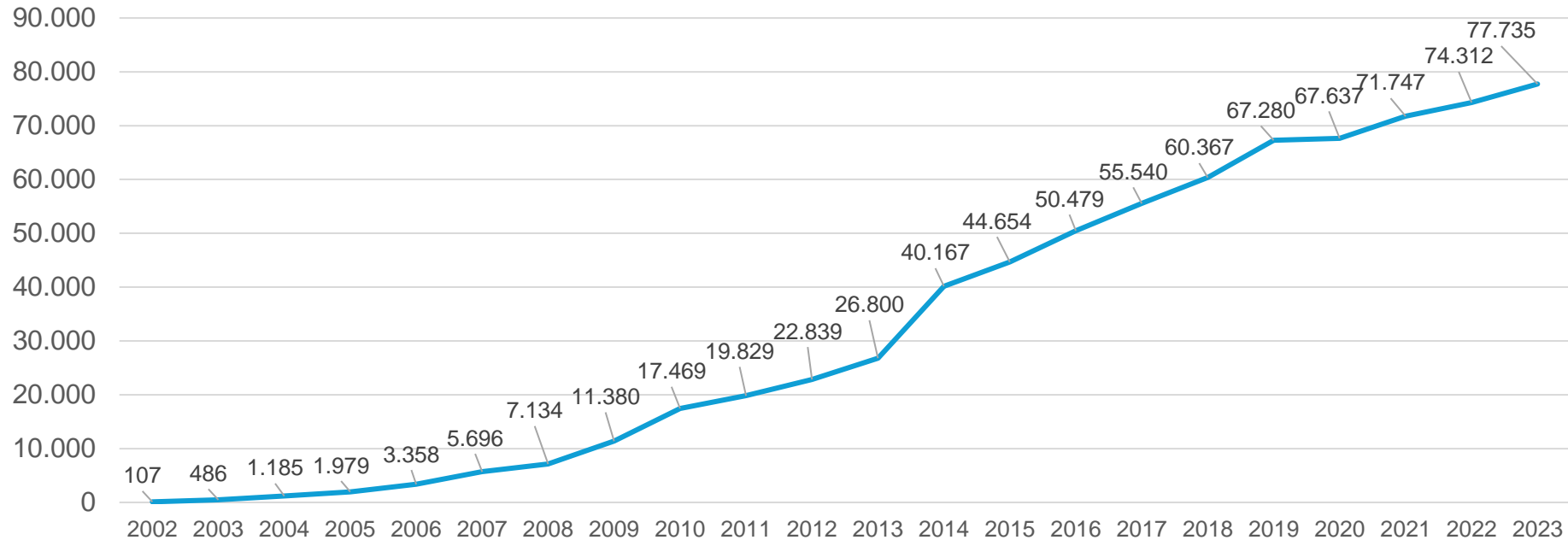




DREAM Program: Patients in care



DREAM Program: HIV+ pregnant women enrolled

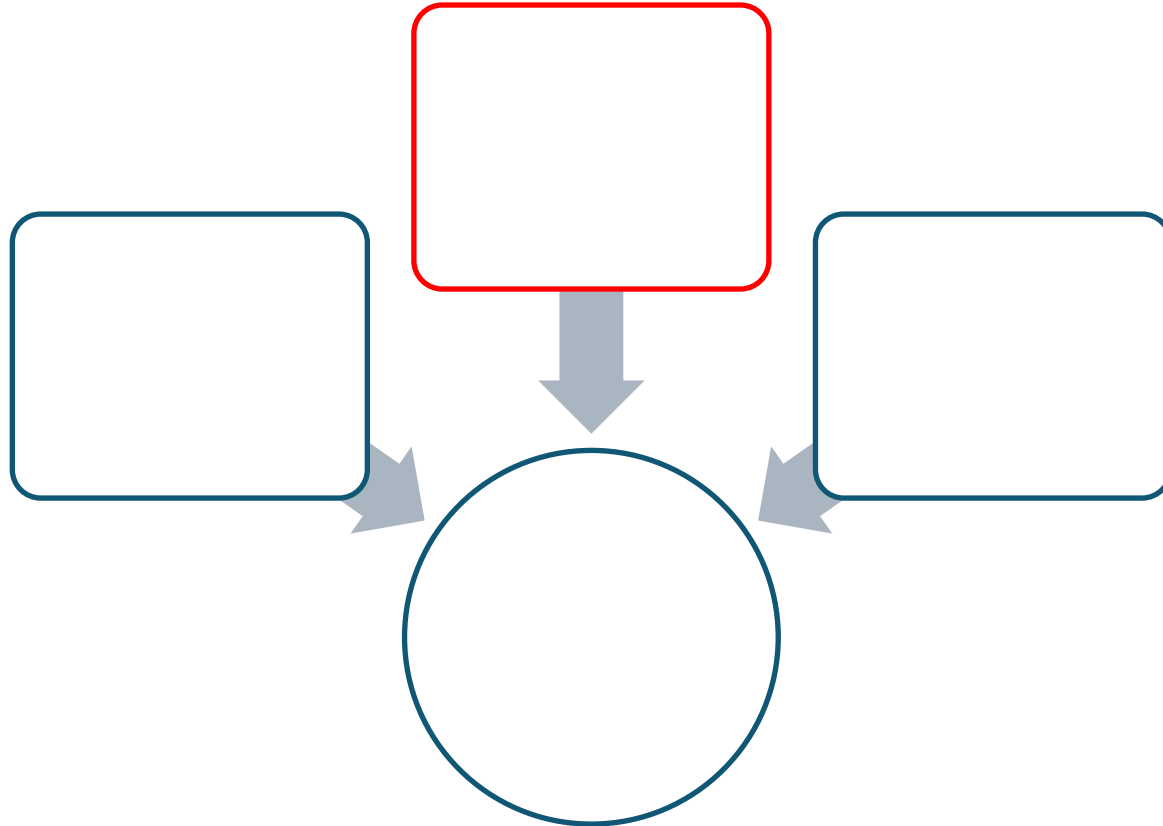


Patients with TB in care in DREAM program

Country	TB pts in care
Mozambico	14.208
Malawi	1.108
Kenya	2.652
Tanzania	879
Repubblica di Guinea	878
RDC	1.246
Cameroon	393
Nigeria	155
Swaziland	198
Centrafica	68
TOTALE	21785



Le caratteristiche di DREAM



Le sfide di oggi

Il cancro della cervice uterina

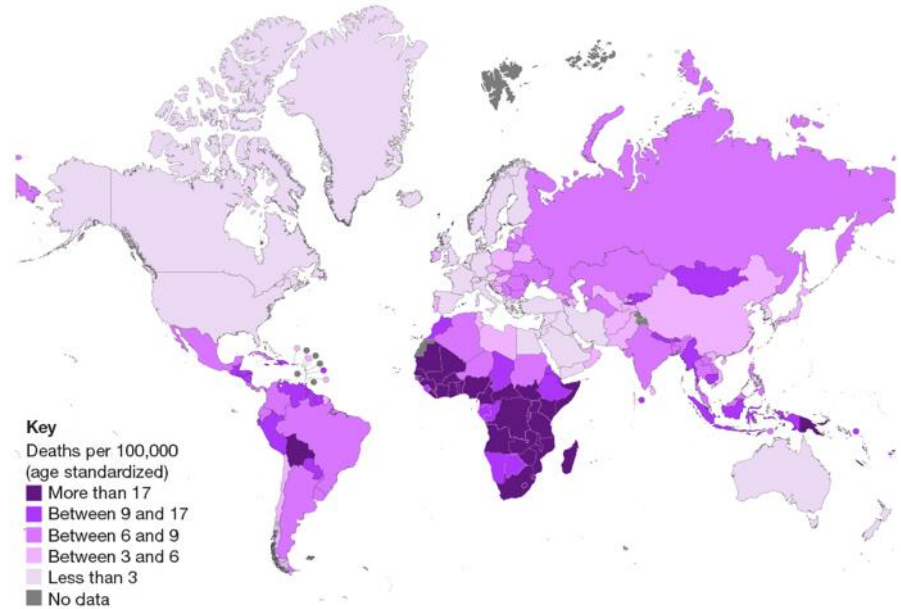


Il cancro del collo dell'utero nel mondo

- è il quarto tumore più diffuso tra le donne di tutto il mondo
- Circa 650 000 nuovi casi per anno
- Nell'Africa Sub Sahariana è la causa più comune di morte per cancro tra le donne
- 342.000 morti nel 2022(WHO)

Cervical cancer deaths in 2018

Incidence and mortality rates for women in Africa are up to **10 times higher** than other continents



Source
WHO

WHO Global Strategy 2030 Targets to eliminate the Cervical Cancer : 90-70-90

Figure 1

The architecture of the WHO Global Strategy to Accelerate the Elimination of Cervical Cancer.

Proposed Elimination Threshold and Targets

Threshold for Elimination as a Public Health Problem:
Age-adjusted incidence rate < 4 / 100,000 women

2030 Targets



SDG 2030 Target 3.4:
30% reduction in mortality from NCDs

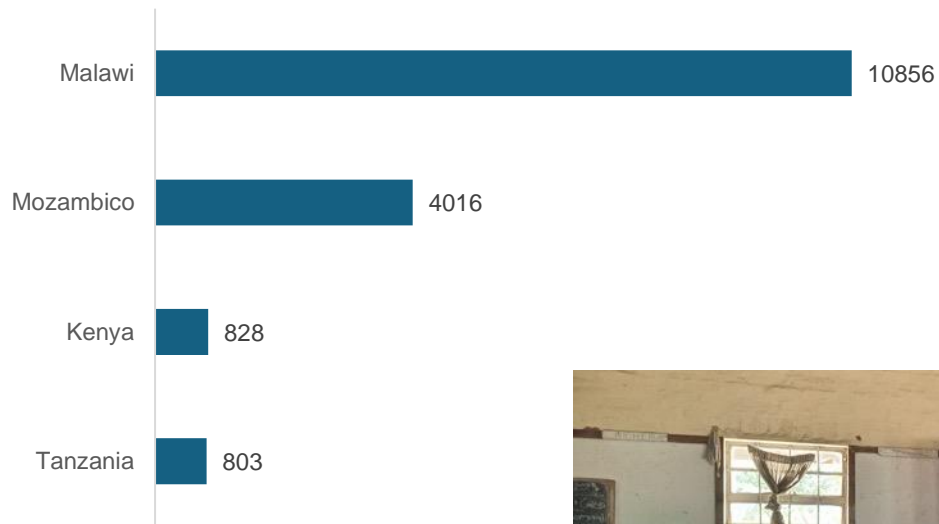


SDG: Sustainable Development Goals; NCDs: Non-Communicable Diseases

Prevenzione



Vaccinazioni HPV



HPV DNA Testing in Mozambique

Table 1 General characteristics and screening results in the total sample and in HIV positive and negative women

	Total		HIV positive		HIV negative		OR [CI] (positive vs negative)
	n.	%/ IQR	n.	%/ IQR	n.	%/ IQR	
V. patients	1207		577		630		
Median age, years	43	38–48	43	38–47	44	37–48	
VIA result							
Negative	1083	89.7	513	88.9	570	90.5	1.19 [0.82–1.72]
Positive	124	11.4	64	11.1	60	9.5	
<75%	111	10.2	58	10.1	53	8.4	
>75%	1	0.1	1	0.2	0	0.0	
Cancer suspect	12	1.1	5	0.9	7	1.1	
hrHPV test result							
Negative	881	73.0	365	63.3	516	81.9	2.65 [2.04–3.46]
Invalid	1	0.1		0.0	1	0.2	
Positive	325	26.9	212	36.7	113	17.9	
HPV-16 alone	32	2.7	21	3.6	11	1.7	
HPV-16 + other serotypes	32	2.7	25	4.3	7	1.1	
HPV-18 alone	12	1.0	8	1.4	4	0.6	
HPV-18 + other serotypes	22	1.8	16	2.8	6	1.0	
HPV-16 + HPV-18	3	0.2	3	0.5	0	0.0	
HPV-16 + HPV-18 + other serotypes	3	0.2	2	0.3	1	0.2	
Other serotypes	221	18.3	137	23.7	84	13.3	

CI, confidence interval; HPV, human papillomavirus; hrHPV, high-risk HPV; IQR, interquartile range; OR, odds ratio; VIA, visual inspection with acetic acid.

SECONDARY PREVENTION & SCREENING

Screening approaches for cervical cancer in Mozambique in HIV positive and negative women

Sineque, Alberto^{a,b}; Catalao, Carlos^c; Ceffa, Susanna^{a,b}; Fonseca, Ana Maria^a; Parruque, Fernanda^a; Guidotti, Giovanni^f; Massango, Cacilda^a; Carrilho, Carla^{a,b}; Bicho, Clara^a; Rangeiro, Ricardina^a; Orlando, Stefano^a; Marazzi, Maria Cristina^a; Lorenzoni, Cesaltina^a; Ciccacci, Fausto¹

Author information 

European Journal of Cancer Prevention 32(5):p 431-437, September 2023. | DOI: 10.1097/CEJ.0000000000000802

65 out of 124 VIA (Visual inspection with acetic acid) -positive women (52.8%) were HPV-uninfected, hence unnecessarily treated with cryotherapy or referred for colposcopy; at the same time, 267 out of 1083 VIA -negative women (24.7%) were HPV-infected, but referred for further control in 1–3 years according to HIV serostatus.


Impatto di STI sullo screening cancro cervice

Clamidia Trachomatis e
Neisseria Gonorrhoeae presenti
in 9.4% delle donne con test
VIA+



52% avevano CT, NG o HPV

Original Research Article

INTERNATIONAL JOURNAL OF
STD & AIDS

International Journal of STD & AIDS
2024, Vol. 0(0) 1–6
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DOI: 10.1177/09564624241272963
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**Impact of STIs on cervical cancer screening:
Prevalence of *Chlamydia trachomatis* and
Neisseria gonorrhoeae in visual inspection
with acetic acid (VIA) positive women in
Mozambique**

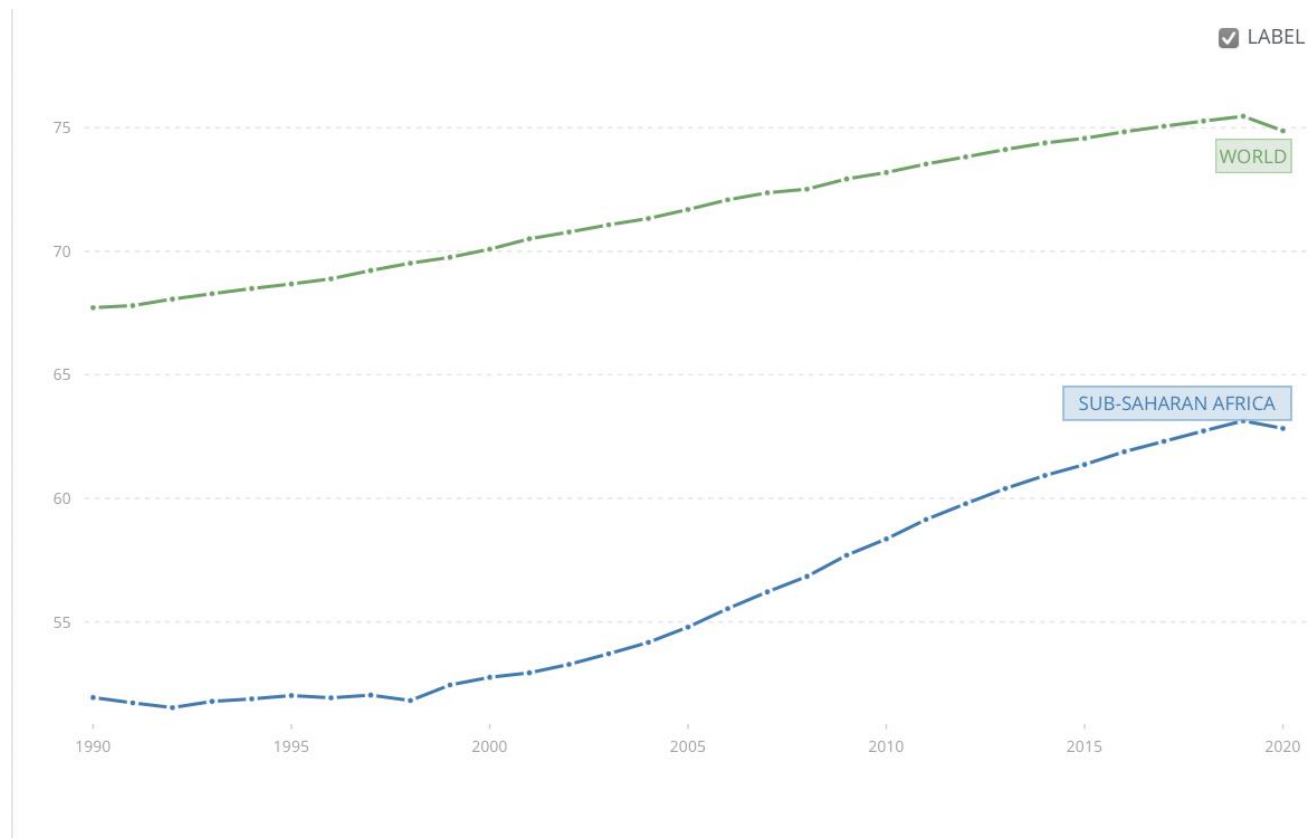
Alberto Sineque¹ , Susanna Ceffa², Fernanda Parruque³,
Giovanni Guidotti⁴, Cacilda Massango³, Zita Sidumo³, Carla
Carrilho^{5,6}, Clara Bicho⁷, Ricardina Rangeiro⁵, Stefano
Orlando⁸, Cesaltina Lorenzoni⁵ and Fausto Ciccacci⁹ 

Le sfide di oggi

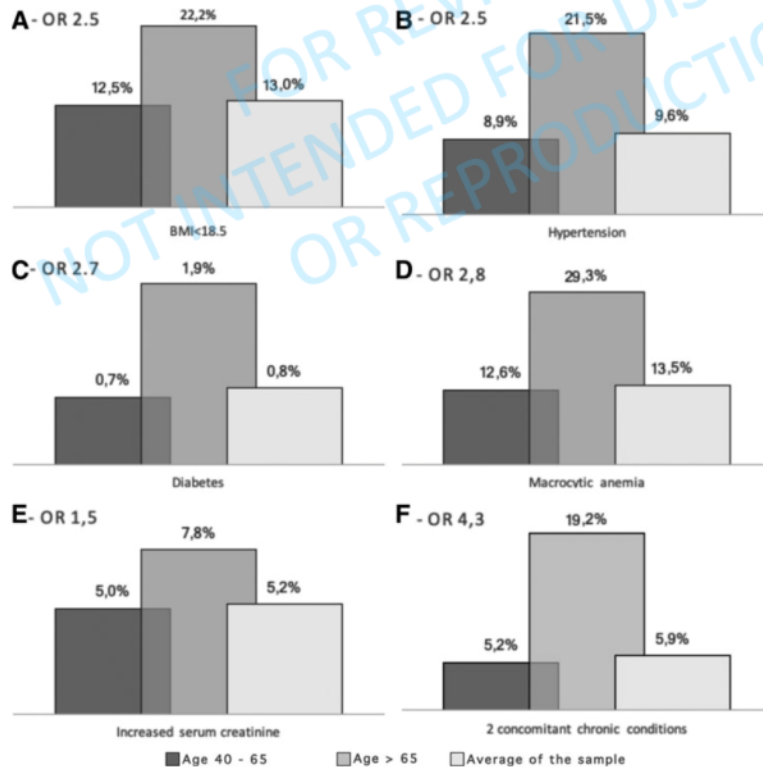
Invecchiamento e HIV, nuove sfide



Life expectancy in Africa



NCDs comorbidities in HIV adults/elderly in Malawi



AIDS Research and Human Retroviruses > Vol. 35, No. 11-12

Research Article | NO ACCESS | Published Online: 13 November 2019



Noncommunicable Diseases Burden and Risk Factors in a Cohort of HIV+ Elderly Patients in Malawi

Authors: Fausto Ciccacci, Victor Tamba Tolno, Aanna Maria Doro Altan, Giuseppe Liotta, Stefano Orlando, Sandro Mancinelli, Leonardo Palombi, and Maria Cristina Marazzi | [AUTHORS INFO & AFFILIATIONS](#)

Publication: AIDS Research and Human Retroviruses • <https://doi.org/10.1089/aid.2019.0125>

FIG. 1. Comorbidities according to age groups. (A) Malnutrition, (B) hypertension, (C) diabetes, (D) macrocytic anemia, (E) increased serum creatinine, (F) 2 concomitant chronic diseases.

Le sfide di oggi

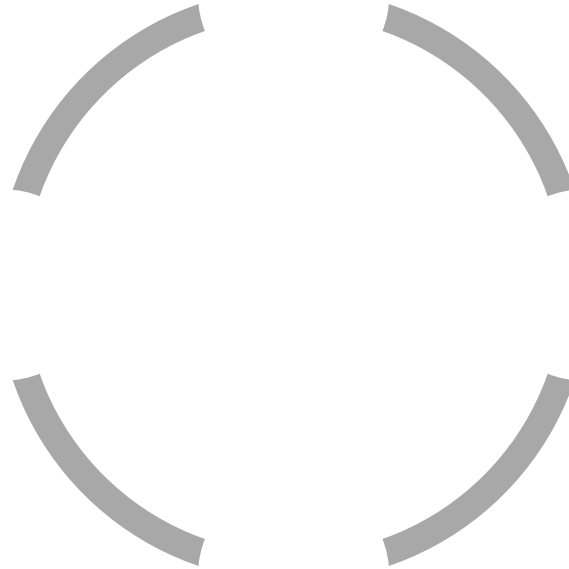
Gli adolescenti



Differentiated Service Delivery - Adolescenti

Incontri dedicati solo agli adolescenti alcuni esempi:

- Aderenza
- rete di supporto, stigma
- Paura
- rapporto con la famiglia e la scuola
- rifiuto e abbandono



Differentiated Services Delivery (DSD) for HIV+ adolescents: Malawi

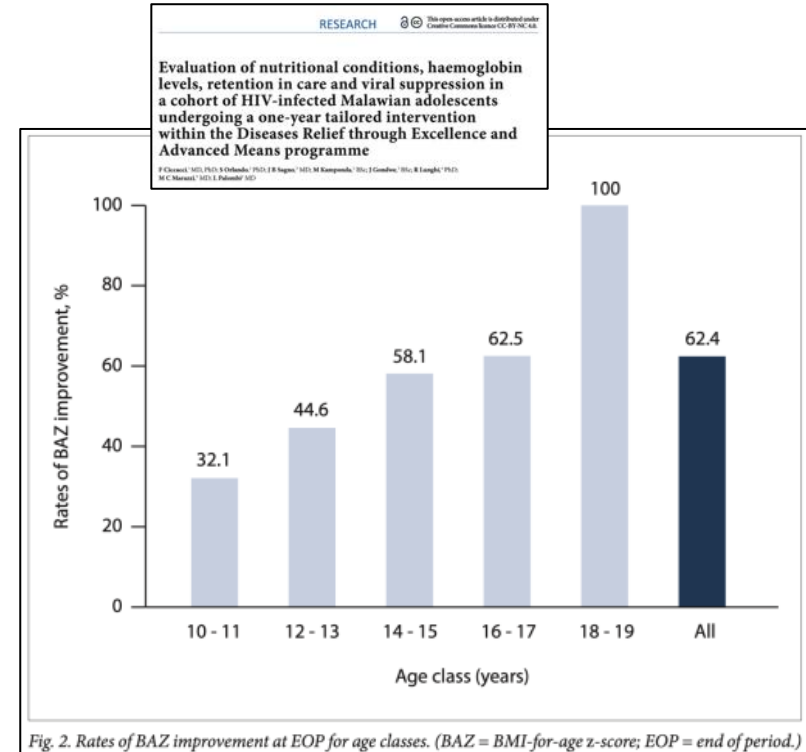
Malawi:

- **425 pazienti HIV+ 10-19 anni**
- Centro DREAM Blantyre
- Da dicembre 2016 servizio specifico per adolescenti:
 - Special day per adolescenti
 - Coinvolgimento di youth leaders (peer-to-peer)
 - Attività non cliniche incluse nel centro (teatro, teen clubs...)

Dopo 1 anno dall'inizio del servizio:

- **Retention in care 94.8%**
- **50.6% hanno migliorato lo stato nutrizionale (BAZ) (70.2% di pz inizialmente malnutriti)**
- **79.0% avevano VL undetectable**

«Data from the DREAM programme show the effectiveness of a public health approach to HIV-positive adolescents' health in Malawi. The results in terms of nutritional rehabilitation, HGB level increase, retention in care, and viral suppression highlight that specific adolescent-friendly interventions are urgently needed to reduce the burden of HIV infection in African adolescents..»



Differentiated Services Delivery (DSD) for HIV+ adolescents: Espaco Aberto Mozambique

Mozambique, Espaco Aberto (AICS 5%):

- **2,575 pazienti HIV+ 11-19 anni**
- 7 centri DREAM
- Osservazione mar 20 – mag 22
- Da marzo 21 servizio specifico per adolescenti:
 - **support groups for adolescents**
 - **the use of young men and women aged 19–24 years as counsellors**
 - **specific training for healthcare workers about adolescents**
 - **online group sessions with a psychologist.**

>>> Retention in care 94.2% -> 99.9%

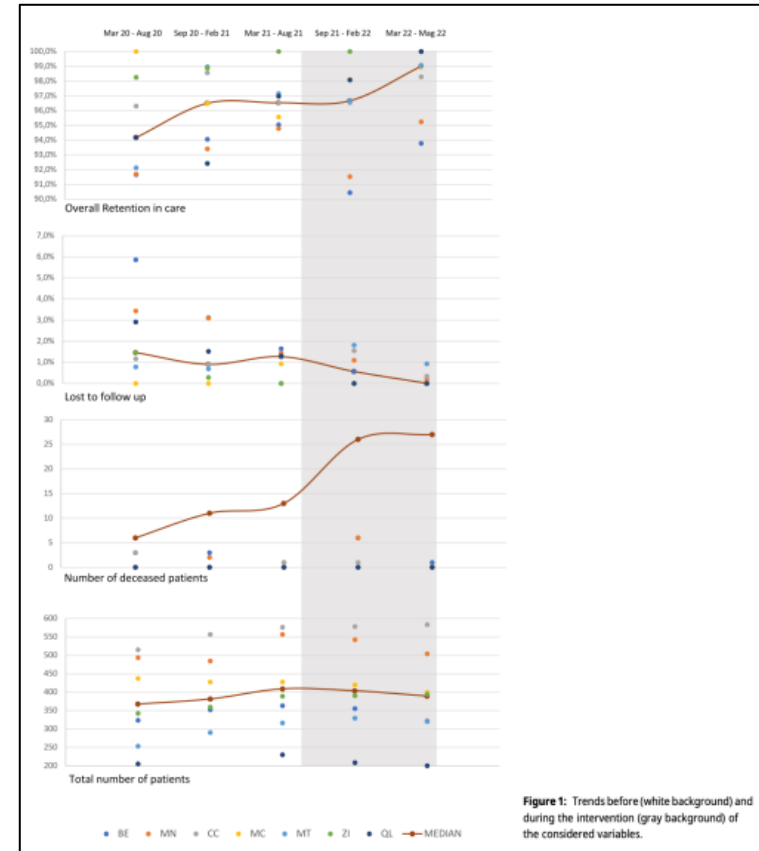
«HIV care for adolescents was affected by the (SARS-CoV-2) pandemic and its impact on health and social systems in many sub-Saharan African countries. However, our data show that specific interventions could be effective and resist external shocks.»

Requires Authentication Published by De Gruyter January 30, 2023

Enhancing retention in care in HIV-infected adolescents during COVID-19 in Mozambique: results from the DREAM program

Fausto Ciccacci , Flavio Ismael, Veronica Chume, Lina Ruth, Pedro Mbula, Stefano Orlando, Noorjehan Abdul Majid and Maria Cristina Marazzi

From the journal *International Journal of Adolescent Medicine and Health*
<https://doi.org/10.1515/ijamh-2022-0107>



Le sfide di oggi

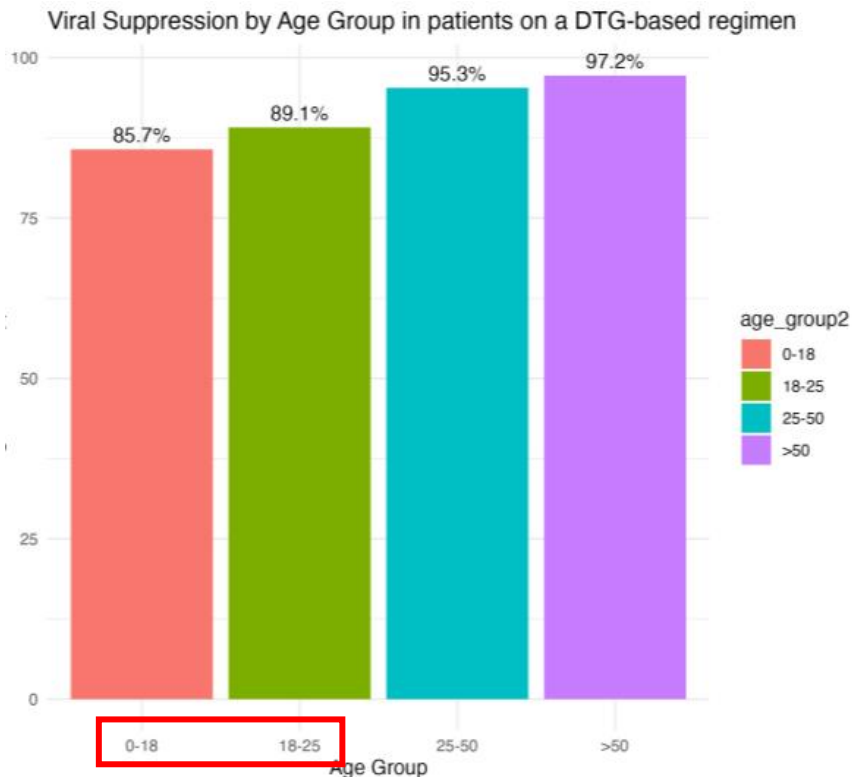
Emergenza delle resistenze al DTG



Nome dello studio	Paese	Anno	% Resistenza a DTG
Caso di Haiti	Haiti	Non disponibile	Neonato con resistenza al DTG
DTG RESIST Study	Canada, Francia, Germania, Italia, Paesi Bassi, Sud Africa, Svizzera, Regno Unito	2013-2021	4.8%
Surveys supportati da PEPFAR	Malawi	2020-2021	8.6%
	Mozambico	2021-2022	19.6%
	Uganda	2021-2022	3.9% (adulti), 6.6% (bambini)
	Ucraina	2020-2021	6.6%
Studio di Sorveglianza Nazionale in Sud Africa	Sud Africa	2021	2.7%
		2022	11.1%



DTG resistance: 29.601 patients in Mozambique



- 74 samples were tested for resistance.
- 9 had mutations that conferred resistance to DTG:
 - G118R: 4 patients
 - E138K: 5 patients
 - R263K: 3 patients
 - L74M: 2 patients
- The 9 patients with DTG resistance were:
 - predominantly male
 - between 18 and 50 years old (one >50 years old)
 - most had been in therapy for more than 5 years.

Le sfide di oggi

Migliorare la diagnosi della TB nei pazienti HIV



2017

Clinical Infectious Diseases

MAJOR ARTICLE



Tuberculosis Case Finding With Combined Rapid Point-of-Care Assays (Xpert MTB/RIF and Determine TB LAM) in HIV-Positive Individuals Starting Antiretroviral Therapy in Mozambique

Marco Florida,¹ Fausto Ciccacci,² Mauro Andreotti,¹ Archa Hassane,³ Zita Sidumo,³ Nurja A. Magid,³ Horacio Sotomane,⁴ Muhlvasse David,⁴ Elsa Mutemba,⁵ Junia Cebole,⁵ Remigio José Mugunhe,⁵ Fabio Riccardi,⁶ Maria Cristina Marazzi,⁷ Marina Giuliano,¹ Leonardo Palombi,⁶ and Sandro Mancinelli⁶


«In summary, using a combined diagnostic approach based on rapid POC tests, we showed a 10% prevalence of undiagnosed tuberculosis in a large and unselected series of HIV-infected Mozambican individuals starting ART, with a significant added diagnostic value of repeated Xpert testing and LAM urinary testing. Symptom screening was only partially effective in identifying tuberculosis-positive patients.»

Biomarkers for TB diagnosis and prognosis (Mozambique and Kenya)

2019

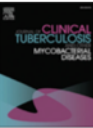
J Clin Tuberc Other Mycobact Dis 16 (2019) 100107

Contents lists available at ScienceDirect

 ELSEVIER


J Clin Tuberc Other Mycobact Dis

journal homepage: www.elsevier.com/locate/jctube




Plasma levels of CRP, neopterin and IP-10 in HIV-infected individuals with and without pulmonary tuberculosis

Fausto Ciccacci^{a,*}, Marco Florida^b, Roberta Bernardini^c, Zita Sidumo^d, Remigio José Mugunhe^e, Mauro Andreotti^b, Alfeu Passanduca^d, Noorjehan Abdul Magid^d, Stefano Orlando^a, Maurizio Mattei^{c,f}, Marina Giuliano^b, Sandro Mancinelli^a, Maria Cristina Marazzi^g




Contents lists available at ScienceDirect

 ELSEVIER


International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid



High-sensitivity C-reactive protein in HIV care: Tuberculosis diagnosis and short-term mortality in a cohort of Kenyan HIV patients in the DREAM programme

Fausto Ciccacci^{a,*}, Benjamin Welu^b, Harrison Ndoi^b, Irene Karea^b, Stefano Orlando^c, Davide Brambilla^d, Kenneth Munene^b, Piero Giglio^d, Brenda Opanga^e, Aiban Ronoh^f, Scolastica Mukwanjagi^g, Raymond Mwiraria^g, Giovanni Guidotti^h, Maria Cristina Marazziⁱ



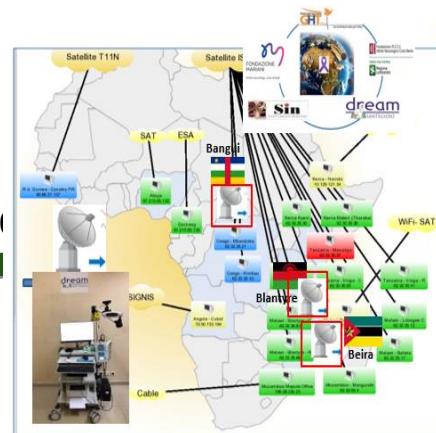
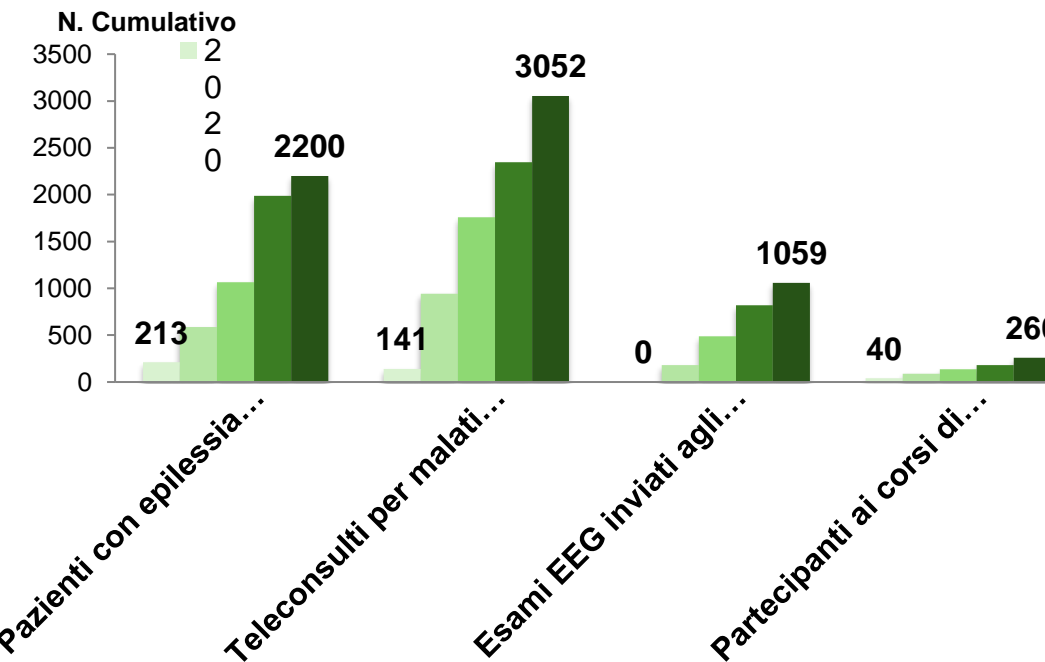
2021

Le sfide di oggi

La neurologia



La cura dell'epilessia a DREAM



Centri DREAM (HIV) dove si cura l'epilessia

- Repubblica Centrafricana 2 centri**
1. Bangui Clinique DREAM- [con videoEEG](#)
 2. Bangui, Centre National Hospitalier Universitaire
- Malawi 6 centri**
3. Blantyre - [con videoEEG](#)
 4. Kapeni
 5. Balaka
 6. Kapire
 7. Namandaknje
 8. Mtengo/Lilongwe
- Mozambico 5 centri**
9. Beira - [con videoEEG](#)
 10. Manga Chingussura
 11. Quelimane
 12. Maputo Zimpeto
 13. Maputo Crianca

Formatori in Africa e tele-neurologi



Fabio



Maria



Laura



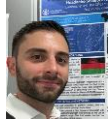
Giulia



Anna



Da remoto:



Daniele



Cristina



Manjit



Freda



Luca



Caterina



Mimma



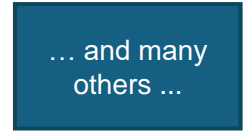
Marina



Francesco



Giuseppe



Vincere l'AIDS è possibile?

«Un vincitore è semplicemente un sognatore che non si è arreso.» *Nelson Mandela*



GRAZIE