

THE HIV TREATMENT CASCADE. L'EMILIA ROMAGNA DOPO ICAR 2018

Bologna, 28 Giugno 2018 AOU Policlinico S. Orsola Malpighi Aula Clinica Malattie Infettive

Il sommerso e la diagnosi tardiva

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Numero di nuove diagnosi di infezione da HIV per classe di età e per genere (2016)



	Ν	Maschi Femmine			Totale ^a	
	n.	% di riga	n.	% di riga	n.	% di colonna
0-2	2	50,0	2	50,0	4	0,1
3-14	5	83,3	1	16,7	6	0,2
15-19	45	72,6	17	27,4	62	1,8
20-24	206	67,8	98	32,2	304	8,8
25-29	361	75,1	120	24,9	481	13,9
30-39	766	76,4	237	23,6	1.003	29,1
40-49	680	78,7	184	21,3	864	25,0
50-59	399	80,3	98	19,7	497	14,4
60-69	153	81,0	36	19,0	189	5,5
≥ 70	37	92,5	3	7,5	40	1,2
Totale	2.654	76,9	796	23,1	3.450	100,0

Conta dei Linfociti CD4+ alla diagnosi di HIV nel 2016



<mark>■</mark> Linfociti CD4>350/mL ■ Linfociti CD4 ≤350/mL o AIDS



% delle persone con CD4<200= 36%

Conta linfociti CD4 alla diagnosi di infezione da HIV Italia 2010-2016



Proporzione di diagnosi di infezione da HIV con linfociti CD4 <200/mmc Italia 2010-2016



ISS – COA 2017

Motivo di esecuzione del test delle nuove diagnosi di infezione da HIV (2016)

(2.592 nuove diagnosi di infezione da HIV che riportano il dato)





Tempo intercorso tra il 1° test HIV+ e la diagnosi di AIDS

	< 6 mesi		≥ 6 mesi	
Anno di diagnosi	n. casi	% di riga	n. casi	% <mark>di riga</mark>
2010	700	66,2	357	33,8
2011	611	62,2	371	37,8
2012	670	66,1	344	33,9
2013	685	68,0	322	32,0
2014	612	71,3	246	28,7
2015	587	74,4	202	25,6
2016	558	76,3	173	23,7

The persistent problem of late HIV diagnosis in people with AIDS: a population-based study in Italy, 1999–2013

Among 20,753 adult PWA, 50.8% were LTs. Italian PWA showed a lower proportion of LTs than non-Italian PWA (46.5% vs 68.2%).



Year at AIDS diagnosis

The risk of late or advanced presentation of HIV infected patients is still high, associated factors evolve but impact on overall mortality is vanishing over calendar years: results from the Italian MASTER Cohort

MASTER Cohort: 19,391 patients were included (54 % were late presenters and 37.6 % were advanced presenters). Factors positively associated with late presentation were:

- male gender (OR = 1.29)
- older age (≥55 years vs. <25 years; OR = 7.45)
- migration (OR = 1.54)
- heterosexual risk factor for HIV acquisition (OR = 1.52) or IDU (OR = 1.27) compared to homosexual risk.
- Survival rates at year-5 increased steadily and reached 92.1 % for late presenters vs. 97.4 % for non-late presenters enrolled in the period 2004–2009

Raffetti et al. BMC Public Health (2016) 16:878



Epidemiological and clinical characteristics of newly diagnosed HIV infected patients: a single center study in Northern Italy

Ilaria Izzo¹, Martina Properzi¹, Anna Celotti¹, Barbara Saccani¹, Emanuele Focà¹, Evelyn Van Hauwermeiren¹, Maria Antonia Forleo¹, Issa El-Hamad¹, Filippo Castelnuovo¹, Francesco Castelli¹ 1: Department of Infectious and Tropical Diseases, University of Brescia and Spedali Civili Hospital, Brescia, Italy

863 patients were diagnosed with HIV infection between 2010 to 2017:Mean CD4+ cells count at the time of diagnosis was 354 cells/microL (SD 282) and 33.8% of patients presented HIV-RNA >100.000 copies/mL. The proportion of late testers (CD4+ cells <200 at diagnosis) was 36%.

Figure 1

Number of new HIV diagnosis, according to calendar year, gender and mode of HIV acquisition.

IVDU: Intravenous drug users; HF: heterosexual females; MSM: men

who have sex with men; HM: heterosexual males



Figure 2

Number of new HIV diagnosis, according to calendar year, gender and geographical origin.

FF: foreign females; IF: Italian females; FM: foreign males; IM: Italian males



Late presentation for HIV care across Europe: update from the Collaboration of Observational HIV Epidemiological Research Europe (COHERE) study, 2010 to 2013

Changes over time in stages of late presentation and CD4 count at HIV diagnosis, COHERE study, 2010-2013 (N=30,454)



COHERE, Eurosurveillance 2016

Changes over time in late presentation by HIV exposure groups, COHERE study, 2010–2013 (n=30,454)



COHERE, Eurosurveillance 2016

Causes of death distribution according to late presenters (LP) or not late presenters (nLP)

7165 new HIV diagnoses, 46.9% (CI95%:45.7e48.0) were LP, 240 patients died



The groups most affected by LP are low educated, non-Spanish and heterosexual women



Journal of Infection (2016) 72, 587e596

Delayed HIV diagnosis and initiation of ART: inequalities by educational level, COHERE study



AIDS 2014, 28:2297–2306

Implications of Late Presentation



Higher risk of mortality in the 1st year ART CC and ART LINC, Lancet 2006; 367: 817–24

Reduced chance of viral supression Waters L, HIV Med 2011 12(5), 289–298.

Increased risk of hospitalization Sabin CA, AIDS 2004; 18:2145–2151

More potential drug-drug interaction Rockstroh JK, Antivir. Ther 2010.15 (S1), 25-30

More likely to have IRIS Barber D, Nature Rev 2011 vol 10: 150



Increased risk of non-AIDS events Reekie, AIDS. 2011;25(18):2259-68

Increased risk of neurocognitive impairment Ellis RJ, AIDS 2011;25(14):1747-51

Potentially increased risk of HIV transmission Cohen MS, N Engl J Med. 2011;365(6):493-505

Higher direct cost of care RY Chen, et al; Clin Infect Dis 2006

Adapted from: Waters and Sabin, Expert Rev Anti Infect Ther. 2011; 9(10), 877-889

Percentage of People Living with HIV and Percentage of HIV Transmissions at Each Stage of the Care Continuum, United States and Puerto Rico, 2012



Frieden T et al , NEJM 2015

WHAT CAN WE DO?



INCREASE ACCESS TO TESTING

Obiettivi specifici del PNAIDS

- Ridurre il numero delle nuove infezioni, con interventi preventivi specificamente rivolti alle popolazioni chiave.
- • Facilitare l'accesso al test e l'emersione del sommerso
- Assicurare l'accesso alle cure e il mantenimento in cura, con particolare riguardo alle popolazioni fragili e svantaggiate.
- Migliorare la qualità di vita e il benessere fisico delle persone con HIV/AIDS.
- Coordinare gli interventi sul territorio nazionale, superando le disparità
- Garantire i diritti delle persone con HIV/AIDS in ambito sociale e lavorativo

HIV Continuum of Care in Italy

- CARPHA 2 survey ≈100,000 patients in care in 2014 in 176 clinics
- Estimate of HIV undiagnosed in 2014 ≈13,400 (Mammone et al, AIDS 2016)
- Estimate of diagnosed not retained in care ≈ 18,000 (≈100,000 x 0.18)



Strategie per incrementare l'accesso al test per HIV

- Campagne sui media
- Normalizzazione del test HIV
- Formazione degli operatori sanitari
- Procedure semplificate per il consenso
- Strategie alternative di counselling
- Impiegare diverse metodiche per il test (incluso testrapidi/community based/self test)
- Assicurare l'accesso alle cure

ECDC. HIV testing: Increasing uptake and effectiveness in the European Union. 2010.

KEY POPULATION

- MSM
- Persone che utilizzano sostanze
- Detenuti
- Sex workers
- Transgenders
- Utenti centri IST

Figura 21. Percentuale di soggetti con IST testati per HIV e prevalenza HIV: intero periodo



(Sistema di Sorveglianza Sentinella delle IST basato su centri clinici, 1991-2013, 103.028 soggetti con IST)



[🗕] Prevalenza HIV (%)

Utenti SerD con test HIV 2016



Fonte .Relazione al Parlamento 2017

Carceri Toscana 2012: tre detenuti su quattro sono malati

La salute dei detenuti nelle carceri toscane.

l risultati 2012

Fabio Voller, Caterina Silvestri e Stefano Bravi

Osservatorio di Epidemiologia – Settore sociale

STATO DI SALUTE Detenuti VS Popolazione generale

Tossicodipendenza	21,5%	VS	2,1%
Disturbi del cavo orale:	15,3%	VS	4,5%
Epatopatia:	10,2%	VS	4,2%
Depressione:	9,9%	VS	3%
Patologia infettiva:	6,6%	VS	1,1%
HIV+:	2,8%	VS	0,2%



Oral Communication

Session/Topic: Social Science, marginalized population

N. Title:

OC 34 Women and HIV in prison setting: data from the Italian ROSE network

Authors:

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Results: 1041 women were enrolled (43% of the female prison population in Italy as of 28 February 2018). The timely prevalence of HIV-Ab in this cohort was 5.0%, with 53 women being positive, of whom 32 were Italian and 21 were foreign. 16 foreign women are of African origin, 3 are from Eastern Europe, 2 from Latin America. The average age is 41 years with a different distribution depending on the country of origin: of the 30 women aged over 40 years 28 are Italian and 2 foreign; of women under the age of 40, 19 are foreign and 4 are Italian. Antiretroviral therapy was not taken by 5 patients for refusal (9%); 14 women had CD4 + <350 / mmc (26% of the observed population). Of the 48 in antiretroviral treatment 9 were viremic with HIV-RNA> 20cp / ml (19%). Therapeutic regimens were observed: 70% in treatment with PI, 20% in treatment with INI, 101% in treatment with NNRTI. The mode of transmission of HIV is predominantly parenteral in italian women while the sexual one is predominantly in foreign women. Co-infection with HCV virus was present in 16 patients (30%): genotype 3a in 4 women, genotype 1a in 8, genotype 4 in 4 women. Of the 2 patients with positive HBSAg, HBV-DNA was negative.

Tre approcci complementari per incrementare l'accesso al test per HIV

- Test per Indicator Conditions
- Community based testing
- Self-testing

Indicator Conditions

I sanitari <u>dovrebbero offrire attivamente il test</u> per infezione da HIV, <u>indipendentemente dalle</u> <u>valutazioni specifiche su comportamenti</u> a rischio, a tutte le persone per le quali venga posta la diagnosi di una patologia che:

- sia compresa nell'elenco delle patologie indicative di AIDS, o
- sia associata a una prevalenza di infezione da HIV >0,1%, o
- Ia cui gestione clinica possa essere fortemente influenzata dalla presenza dell'infezione da HIV.



Condizioni associate ad una prevalenza di infezione da HIV non-diagnosticata of >0.1 %

- Sexually transmitted infections
- Malignant lymphoma
- Anal cancer/dysplasia
- Cervical dysplasia
- Herpes zoster
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness

Strongly Recommend HIV Test

- Unexplained leukocytopenia/ thrombocytopenia lasting >4 weeks
- Seborrheic dermatitis/exanthema
- Invasive pneumococcal disease
- Unexplained fever
- Candidaemia
- Visceral leishmaniasis
- Pregnancy (implications for the unborn child)



Percentage and determinants of missed HIV testing in pregnancy: a survey of women delivering in the Lazio region, Italy

The maternity hospitals that participated (36/39) had >97% of the deliveries of the entire region in 2011. 1568 women filled out the questionnaire.

33.6% had an HIV test prior to conception,88.2% were tested during pregnancy10% missed the HIV test





Valle S. AIDS Care 2013

Altre condizioni un cui si stima una prevalenza di infezione da HIV non-diagnosticata >0.1 %

- Primary lung cancer
- Lymphocytic meningitis
- Oral hairy leukoplakia
- Severe or atypical psoriasis
- Guillain–Barré syndrome
- Mononeuritis
- Subcortical dementia
- Multiplesclerosis-like disease
- Peripheral neuropathy
- Unexplained weightloss
- Unexplained lymphadenopathy
- Unexplained oral candidiasis
- Unexplained chronic diarrhoea
- Unexplained chronic renal impairment
- Hepatitis A
- Community-acquired pneumonia
- Candidiasis



Condizioni la cui gestione clinica può essere fortemente influenzata dalla presenza dell'infezione da HIV

- Conditions requiring aggressive immuno-suppressive therapy:
 - Cancer
 - Transplantation
 - Auto-immune disease treated with immunosuppressive therapy
- Primary space occupying lesion of the brain.
- Idiopatic/Thrombotic thrombocytopenic purpura





IMPLEMENTATION OF HIV INFECTION HOSPITAL-BASED ACTIVE CASE FINDING: RESULTS FROM THE SHOT PROJECT

1 Maria Sabrina Mameli, 1 Paola Bagella, 1 Federico Melis, 2Claudio Fozza, 2Andrea Murtas, 3Maria Antonietta Montesu, 3Giovanni Deligia, 4Alessandro Giuseppe Fois, 4Silvia Negri, 5Fabiana Filigheddu, 6Noemi Manzoni, 1 Sergio Babudieri, 1 Giordano Madeddu

- SHOT project is a prospective observational study started in 2017 with an expected duration of at least 18 months. The aim of the study was to expand HIV-testing in Hospital settings when the indicator conditions occur to improve rates of earlier diagnosis.
- HIV test was offered to individual recruited from Units of Infectious Diseases (ID), Hematology, Respiratory Diseases (RD), Dermatology and Internal Medicine of University of Sassari.



In the first 10 months of observation 173 individuals were enrolled: 118 males (68%) and 55 females (32%). Median age was 42 years.





Fig 2. Unit of indicator-disease HIV testing

Point of Care HIV Testing

 Promossi da WHO/UNAIDS nel 1998 per la diagnosi in paesi con risorse limitate •Approvati da FDA in USA nel 2002 (ed in seguito in altri paesi)



Approaches to Community-Based HIV Testing and Counseling

Community-Based HTC includes:

(1) door-to-door testing, (2) mobile testing for the general population, (3) index testing (offering HTC to household members of people with HIV and persons who may have been exposed to HIV), (4) mobile testing for MSM, (5) mobile testing for IDU, (6) mobile testing for female sex workers, (7) mobile testing for adolescents, (8) self-testing, (9) workplace HTC, (10)church-based HTC, (11) school-based HTC.

ORIGINAL RESEARCH

HIV testing in community settings in resource-rich countries: a systematic review of the evidence

AC Thornton, V Delpech, MM Kall and A Nardone HIV STI Department, Health Protection Agency, London, UK

- In the majority of studies, the reported seropositivity was higher than 1/1000, the threshold deemed to be cost-effective for routinely offering testing.
- Rapid testing improved the return of HIV test results to clients.
- HIV testing in outreach settings may be important in identifying undiagnosed infections in at-risk populations, but appropriate data to evaluate these initiatives must be collected



One year on the road to Meet, Test and Treat Sex Workers in Rome: a reparative psychological experience

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HIV seroprevalence in this population was 3%

Opening of BCN Checkpoint

- BCN Checkpoint opened in January 2006
- A community center for gay men, other men who have sex with men and transgender women
- Situated in the middle of Barcelona's gay area
- Service is free, anonymous and confidential
- Peer counselors: all are gay and most are HIV+
- BCN Checkpoint introduced the use of HIV rapid tests in community centers in Europe in 2006





SHORT COMMUNICATION

BCN Checkpoint, a community-based centre for men who have sex with men in Barcelona, Catalonia, Spain, shows high efficiency in HIV detection and linkage to care

M Meulbroek,¹ E Ditzel,¹ J Saz,¹ H Taboada,¹ F Pérez,¹ A Pérez,¹ A Carrillo,¹ G Font,² G Marazzi,² J Uya,² J Cabrero,² M Ingrami,² R Marin,² J Coll² and F Pujol¹ ¹Projecte dels NOMS-Hispanosida and ²BCN Checkpoint, Barcelona, Spain



BCN Checkpoint: same-day confirmation of rapid Hiv reactive test with point of Care PCR test accellerates linkage to care and reduces anxiety



Study design: between March 2015-Sept 2016, a total of 11455 test were performed to 7163 clients. A total of 249 rapid reactive test were found (3.4%)

Results	N°	%	Serostatus HIV	interpretation
PCR positive WB positive	194	89.8%	+	Confirmed positive results
PCR negative WB negative or indeterm	14	6.5%	-	Confirmed false positive results
PCR positive WB negative or indeterminede	3	1.4%	+	Recent infection
PCR negative WB positive	5	2.3%	+	Confirmed positive results: HIV controllers
Total	216	100%		

Meulbroek M et al. HepHIV 2017; Poster PS4/03

BOLOGNA











Impact of HIV self-test (HIVST) implementation on new HIV diagnoses in Italy

Study design

multicenter study in 9 public HIV counselling and testing centers in Italy

Study population

- adult patients (>18 years old) voluntary seeking HIV testing
- newly HIV diagnosed from December 1, 2016 to November 30, 2017

RESULTS

Clinical Centers	voluntary conventional testing	self testing	rapid testing	Total
Amedeo di Savoia- TO	28	5	2	35
San Raffaele -MI	110	0	9	119
San Paolo -MI	5	0	0	5
San Martino -GE	8	2	0	10
Policlinico -MO	35	3	0	38
Careggi -FI	8	1	0	9
INMI -RM	86	21	0	107
UO M.IBO	28	1	7	36
Garibaldi -CT	29	2	0	31
Total	337	35	18	390

Chiaradia G, et al. OC 71 ICAR 2018

	Type of test			
	Conventional facility-based testing	Self testing	Total	
	n. (%)	n. (%)	n. (%)	p-value
	337 (90.6)	35 (9.4)	372 (100)	
Age median(IQR)	34(28-44)	34(26-44)	34(28-44)	0.712
Gender				
Μ	305 (90.5)	34 (97.1)	339 (91.1)	0.343
F	32 (9.5)	1 (2.9)	33 (8.9)	
Nationality				
Italian	267 (79.2)	33 (94.3)	300 (80.7)	0.04
Foreigners	70 (20.8)	2 (5.7)	72 (19.3)	
HIV transmission risk group				
MSM	238 (70.6)	33 (94.3)	271 (72.9)	0.002
HET/Other	99 (29.4)	2 (5.7)	101 (27.1)	
Previous negative test*				
No	178 (53.0)	14 (40.0)	192 (51.8)	0.158
Yes	158 (47.0)	21 (60.0)	179 (48.2)	
Previous IST/Hepatitis				
No	220 (65.3)	18 (51.4)	238 (64.0)	0.138
Yes	117 (34.7)	17 (48.6)	134 (36.0)	
CD4 cell count*				
≥ 200 cells/mmc	265 (80.3)	31 (93.9)	296 (81.5)	0.05
< 200 cells/mmc	65 (19.7)	2 (6.1)	67 (18.5)	

 ✓ availability of HIVST over the counter may favorably impact on access to testing,

✓ possibly increase the likelihood of an earlier HIV diagnosis, especially for some subpopulations of persons at higher HIV risk.

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LILA Helplines' Data on HIV Self-testing

- **Material and methods:** For uploading data collected by its 11 helplines, LILA utilizes a centralized database allowing for data extraction, analysis and interpretation at national level. The present analysis refers to data collected from Oct 2016 to Sep 2017. In the period LILA helplines received 7.110 support requests.
- **Results:** Of the total 7.110 people (M=5.990, F=1.087, Trans=33) who contacted LILA, 3.517 reported having tested for HIV at least once. Of the 2.530 who referred having tested in last 12 months, 1.534 had taken a Combo test, 154 an Elisa test, 23 a PCR test, 107 a rapid test through finger prick, 92 a rapid test on saliva and 171 (6,8%) an HIVST; 449 did not specify.
- Of the 171 who reported having performed an HIVST, 47 (27,5%) were women, 2 were male foreigners; 45,1% were aged 30 to 49yrs, 18,7% were <30 yrs. 62% had taken an HIVST following a risky sexual behavior, 7,2% reported no exposure to HIV. 28,1% referred risky heterosexual contacts; 22,2% men had risky behaviors with sex workers, 1,2% with trans people, 7% with men. Some did not specify. Most frequent requests concerned window period (87,7%), HIV transmission modes (45%); emotional support (14,6%). Of the 171 who self-tested, 10 reported a reactive result. All of them were males; 9 were Italian, 6 were MSM. Most frequent requests were about window period (50%), emotional support (50%), HIV transmission modes (30%), progression of HIV infection (30%), cART (30%). Seven called right after having taken the HIVST requesting where to go for confirmation.

Oldrini M et al. OC 70. ICAR 2018

COMMUNITY BASED testing in Italy: from demonstration projects to routine offer

Survey on Twenty-three community organization



Organization mission / Populations targeted

- Community testing site
- NGO targeting LGBT people
- NGO targeting
 PWID
- NGO targeting migrants



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Conclusions



POSITIVE NOTES

- The number of detected HIV infections is >1% of total tests, an interesting prevalence (1,13%)
- Linkage to care of clients is effective (90,66%)
- Testing services in community organizations have been included in the new National AIDS Plan, as such interventions contribute to detect HIV infections in hard to reach populations

NEGATIVE NOTES - LIMITS OF COMMUNITY TESTING SERVICES

- Many community sites have a very limited testing offer (9 organizations offered less than 200 tests in one year); testing frequency is also limited (only 8 services can offer testing services weekly or twice a month). Community testing services need a major development in order to make a difference
- Community testing services are not organically included in regional prevention plans, nor are data reported to surveillance systems
- These services can operate mostly thanks to the contribution of volunteer staff. Funding remains a big issue, even if WHO Europe and other agencies recommend adequate funding to ensure their stability, continuity and effectiveness
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Prior to the studies...

Did your organization use to offer HIV testing services regularly or occasionally – prior to the implementation of the above mentioned experimental studies?



After the studies...

After conclusion of the studies, did your organization engage in the offer of HIV testing services on a regular basis (excluding occasional initiatives/events e.g. WAD, European Testing Week, Gay Pride)?

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Responses

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Grrazie per l'attenzione