
Audit on HIV Testing in patients
diagnosed with a defining or related
to AIDS illness and/or an indicator
condition for HIV in Primary Care in
Catalonia, Spain

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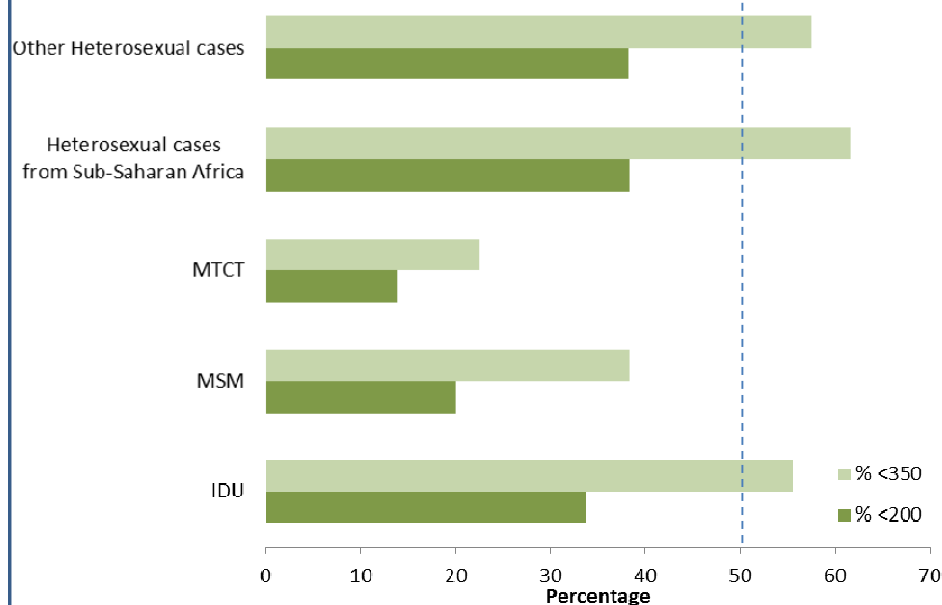
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There is no conflict of interest on the data presented

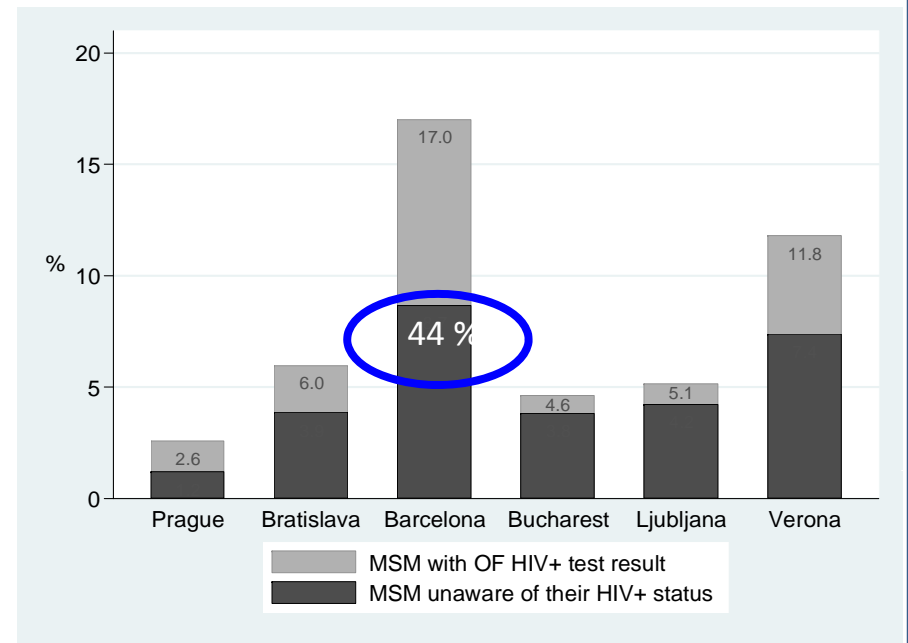
Early diagnosis of HIV –provided that appropriate treatment is given- improves prognosis of the infection at the individual level and contribute at reducing incidence at the population level.

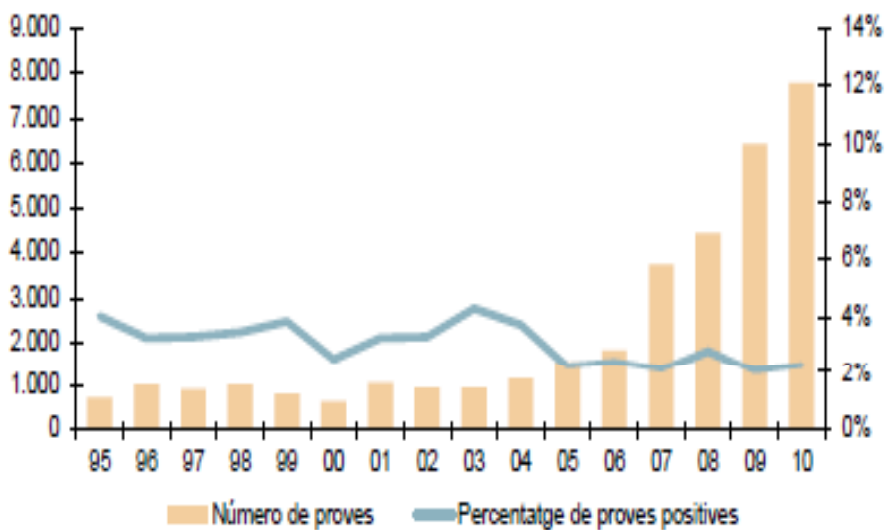
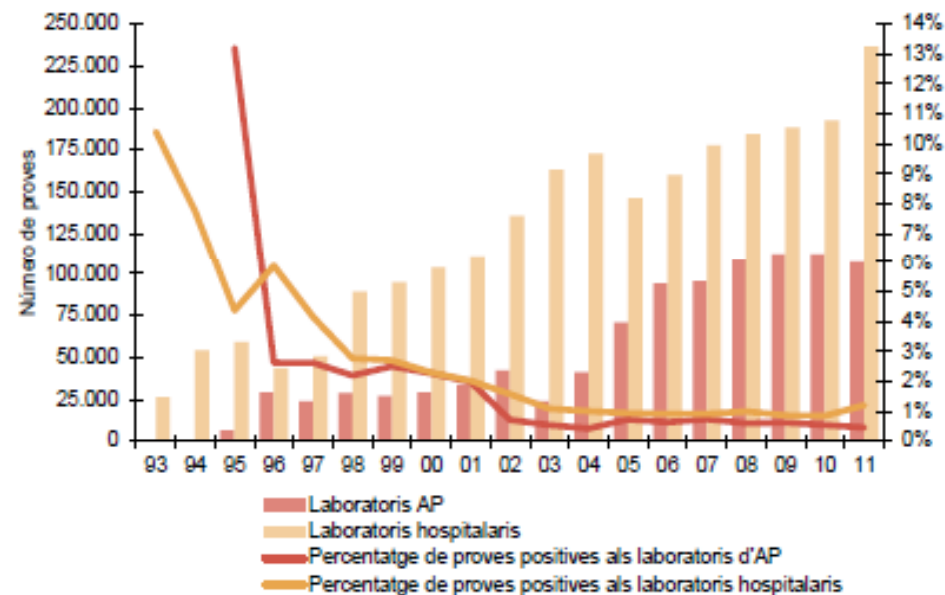
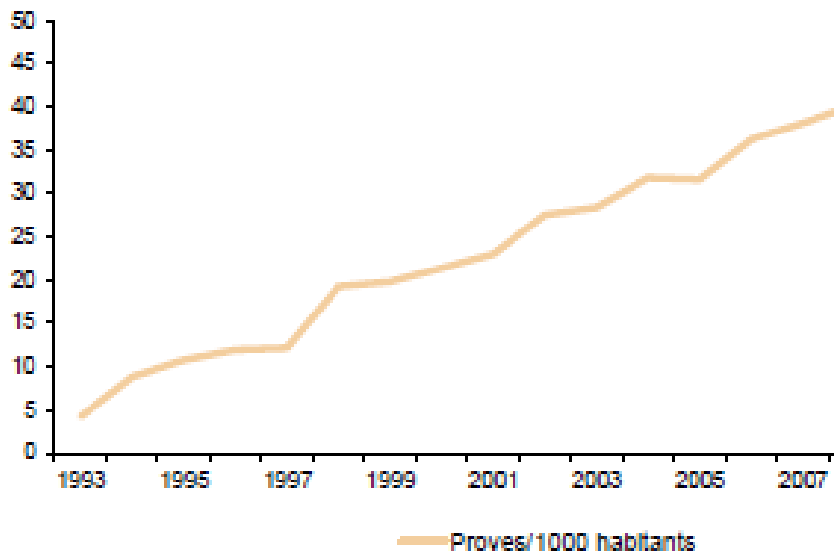
To increase the proportion of people HIV+ that are aware of their seostatus is a priority public health objective.

Percentage of cases presenting with CD4 cell count $<350/\text{mm}^3$ and $<200/\text{mm}^3$, by mode of transmission, EU/EEA, 2012



Prevalence of HIV-positive oral fluid samples and percentage of undiagnosed infection in each city. SIALON I Project.





HIV Prevalence

Saunas 9 %

CBVCT services Network 2.9%

Health settings 1.5 %

Pharmacies 0.9 %

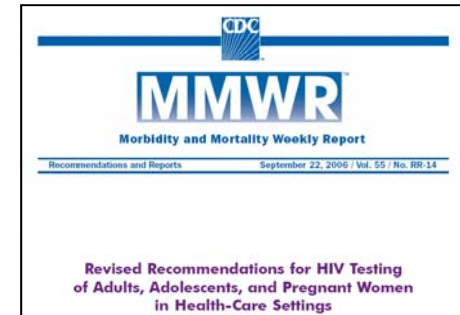
TESTING STRATEGIES

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Excepcionalitat

Normalization

Universalization



Technical Public Health Criteria for screening strategies
(cost-effectiveness)

..., test populations with the highest risk of being infected

1. Conditions which are AIDS defining among PLHIV*

Neoplasms:

- Cervical cancer
- Non-Hodgkin lymphoma
- Kaposi's sarcoma

Bacterial infections:

- Mycobacterium tuberculosis
- Mycobacterium disseminated
- Mycobacterium non-tuberculous
- Pneumonia, recurrent
- Salmonella sepsis

Viral infections:

- Cytomegalovirus
- Herpes simplex
- Progressive multifocal leukoencephalopathy

Parasitic infections:

- Cerebral toxoplasmosis
- Cryptosporidiosis
- Isosporiasis, chronic
- Atypical disseminated toxoplasmosis
- Reactivation of toxoplasmosis (meningoencephalitis)

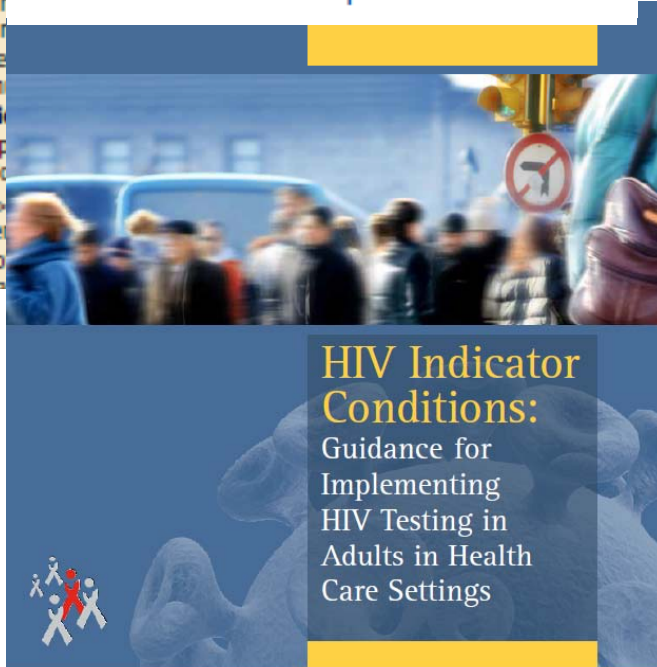
Fungal infections:

- Pneumocystis pneumonia
- Candidiasis, oral
- Candidiasis, esophageal
- Cryptococcosis
- Histoplasmosis
- Coccidioidomycosis
- Penicilliosis, CNS



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HIV Indicator Conditions:

Guidance for
Implementing
HIV Testing in
Adults in Health
Care Settings



Strongly recommend testing:

2a. Conditions associated with an undiagnosed HIV prevalence of >0.1%**

Strongly recommends testing:

- Sexually transmitted infections
- Malignant lymphoma
- Anal cancer/dysplasia
- Cervical dysplasia
- Herpes zoster
- Hepatitis B or C (acute or chronic)
- Mononucleosis-like illness
- Unexplained leukocytopenia/ thrombocytopenia lasting >4 weeks
- Seborrheic dermatitis/exanthema
- Invasive pneumococcal disease
- Unexplained fever
- Candidaemia
- Visceral leishmaniasis
- Pregnancy (implications for the unborn child)

2b. Other conditions considered likely to have an undiagnosed HIV prevalence of >0.1%

Offer testing:

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

Objectives

1. To estimate the percentage of patients diagnosed with an indicator condition (IC) in the primary health system of Catalonia, who have been tested for HIV.
2. To estimate the prevalence of HIV infection among patients with an IC who have been tested.
3. To assess factors associated to get tested for HIV among patients with an IC.

Methods

- **Study design:** cross sectional.
- **Study period:** January 2010-September 2012.
- **Data source:** the Sistema pel Desenvolupament de la Investigació a Atenció Primària (SIDIAP), which systematically collects all relevant clinical and laboratory data from the main primary health provider in Catalonia, Institut Català de la Salut (ICS), including 285 Primary Health Centers (CAPs) and covering more than 80 % of the sector.
- **Inclusion criteria:** all patients between 16 and 65 with a diagnosis of at least one assigned to PCT that appear in the shared clinical database presenting at least one indicator condition (IC) for HIV infection (ICD10) without a previous diagnosis of HIV.
- **Definition of “episode:** any diagnosis of one or more IC during the same visite.
- HIV tests were considered to be originated because of the IC episode if they were performed within 4 months from its diagnosis.

Results

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74271 patients (1.9 % of the attended population) were diagnosed with at least one IC. Out of them 49.1% were men and 50.9% women, being the mean age at diagnosis 39 years.

Overall occurred 76478 episodes of IC. Most of the episodes included only one IC and only 652 (0.9 %) of them included more than one IC.

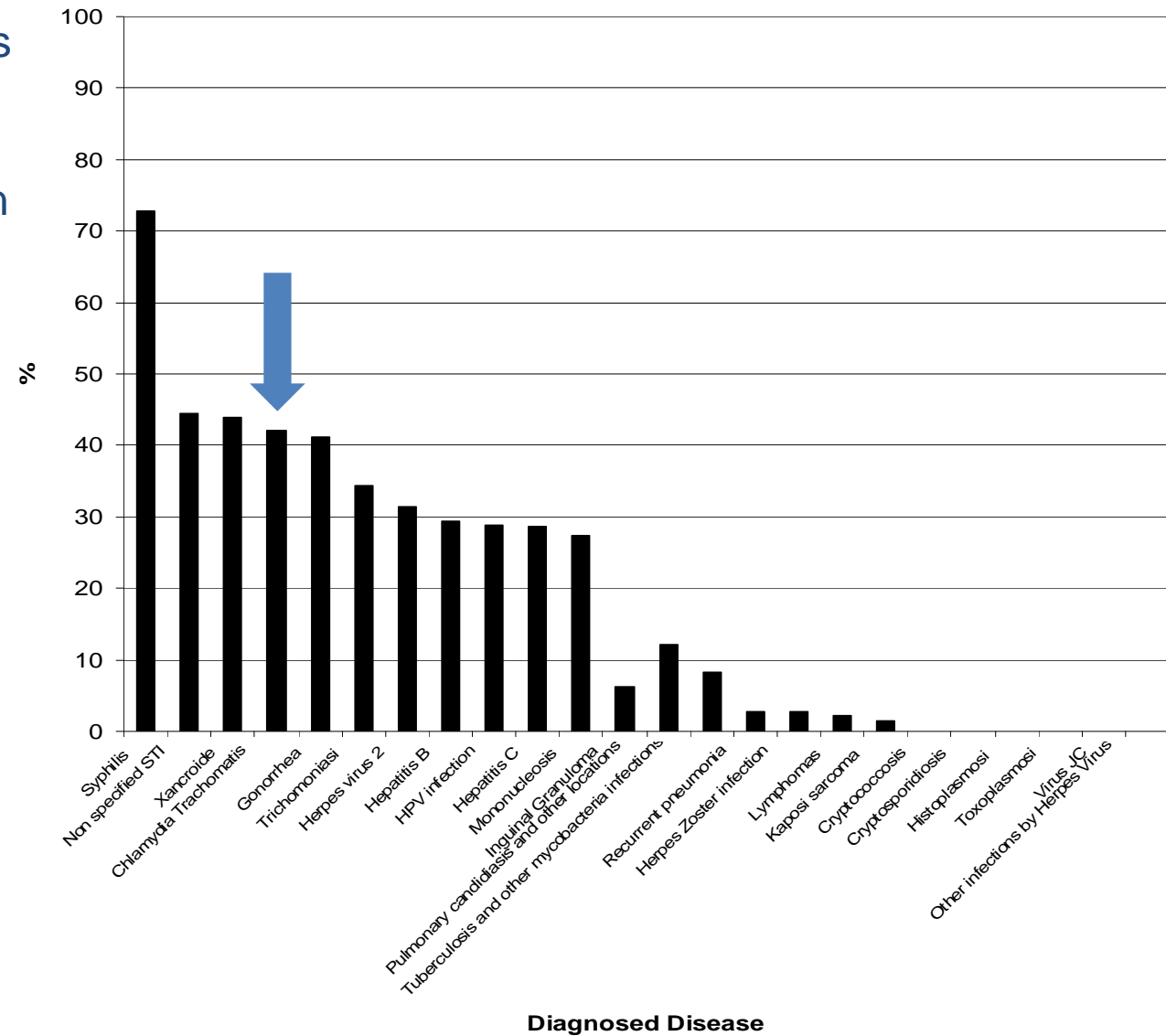
Distribution of IC diagnosed in the first episode

Diagnosed disease	n	%
Herpes Zoster infection	18459	24,64
HPV infection	12602	16,82
Hepatitis C	9829	13,12
Hepatitis B	9710	12,96
Mononucleosis	8705	11,62
Syphilis	3721	4,97
Herpes virus 2	3422	4,57
Tuberculosis and other mycobacteria infections	2116	2,82
Recurrent pneumonia	1356	1,81
Trichomoniasi	1312	1,75
Chlamydia Trachomatis	1100	1,47
Gonorrhoea	905	1,21
Non specified STI	758	1,01
Lymphomas	544	0,73
Pulmonary candidiasis and other locations	221	0,3
Kaposi Sarcoma	68	0,09
Xancroide	41	0,05
Granuloma Inguinal	16	0,02
Virus JC	8	0,01
Toxoplasmosi	7	0,01
Histoplasmosi	3	0
Other infections by Herpes Virus	2	0
Cryptosporidiosis	2	0
Cryptococcosis	1	0
Total	74908*	100

Proportion of IC (firts epidsode) tested by condition

Out of 76478 episodes with at least one IC, only 12980 (23,9 %) got and HIV test within four months.

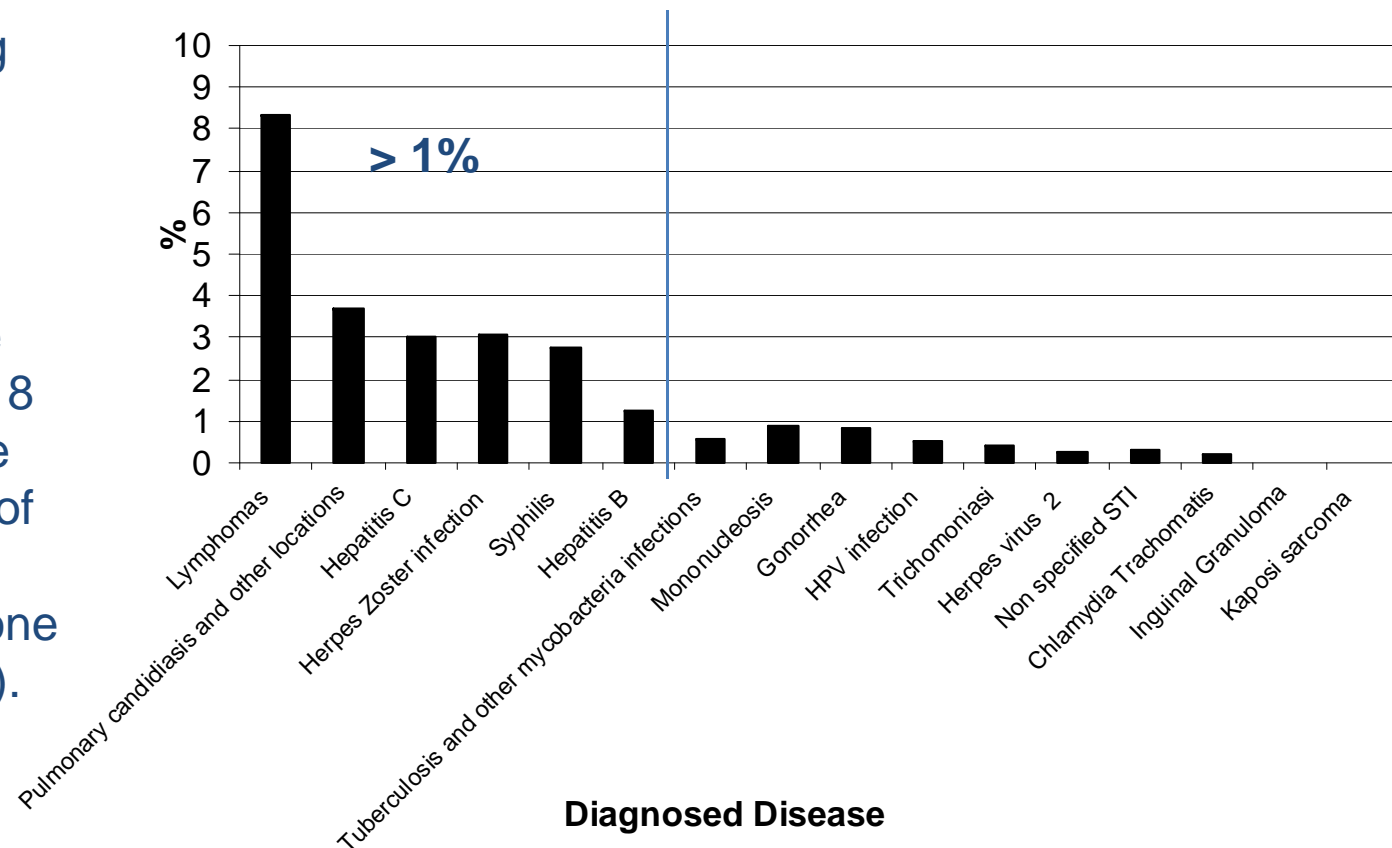
Out of 2122 patients with more than one episode during the study period, 1162 (54,76%) were not tested at the first episode (lost opportunities).



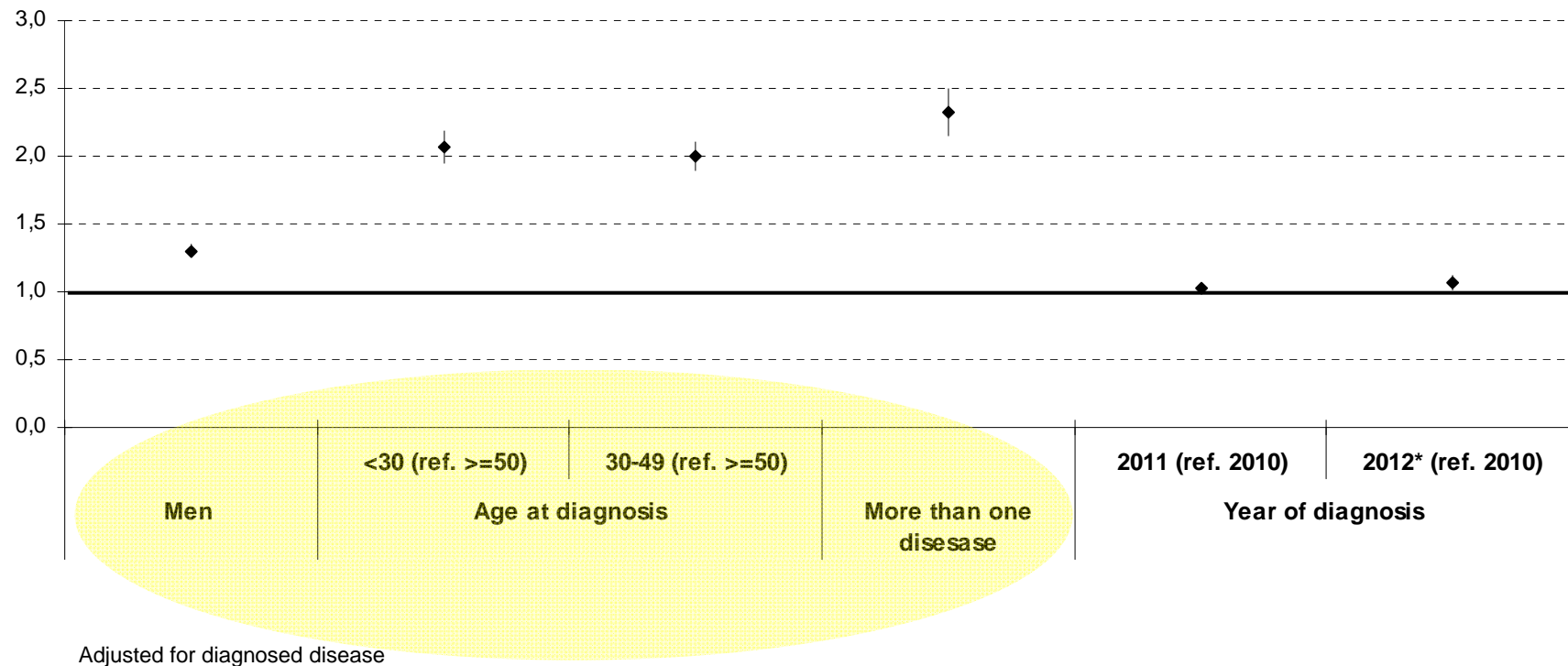
The overall HIV prevalence among patients tested for HIV was 1,5%.

Out of 23 HIV + patients with more than one episode, 8 (34,78%) got more than one episode of IC and were not tested in the first one (lost opportunities).

Prevalence HIV Infection by first diagnosed disease



Multivariate analysis of the characteristics associated to be tested during the first episode of an IC



Conclusions and recommendations

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1. Although some limitations on the exhaustivity of the data may exist, in our setting only a few proportion (23.9%) of patients diagnosed of an IC at PHC are tested for HIV.
2. Although STIs are the IC with more test, almost 60 % of gonorrhea dx are actually not tested for HIV.
3. Among IC, tested lymphomas, hepatitis C and B and syphilis have the highest HIV prevalence (above 1%).
4. Women, older patients and having only one IC seems to increase the likelihood of not being tested.
5. IC are a reliable and probably more cost-effective approach than universal screening (opt-out) to increase effectiveness of HIV testing at primary health settings.
6. IC –in conjunction with behavioral based counseling and testing- should be promoted and proactively encouraged (clinical guidelines, EMR alert, ...) among primary health care professionals.

**Many thanks
Muchas gracias
Moltes mercès**

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