



## Reassessing HIV Detection Strategies: An Analysis of Opportunistic Screening vs. Indicator-Condition-Driven Diagnosis in Valencia, Spain

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### INTRODUCTION

There is a robust ongoing debate in Europe concerning the most effective HIV screening strategy for achieving UNAIDS goals, given that the predominantly implemented risk-based testing strategies to date have not proven effective in identifying all infected individuals. Our study assessed the characteristics of people living with HIV (PLWH) detected via opportunistic screening in various services within the Valencia General Hospital Health Department to determine potential missed diagnoses under more restrictive, indicator-condition diagnosis strategy.

### METHODS

We conducted a retrospective analysis of electronic health records for 97 PLWH diagnosed between April 2019 and August 2022.

### RESULTS

The majority (86.6%) of analyzed PLWH were male, 53.7% were Spaniards, and average age at diagnosis was 39.7±12.6 (16-74) years. Half of the study participants were diagnosed late, with an average CD4 count of 382±280 cells/μL. In terms of the setting for diagnosis, 42.2% were diagnosed in primary care centers, 16.7% in the infectious diseases department, 13.3% in the emergency department, and the remaining 27.8% in other settings. Encouragingly, 95.9% were successfully linked to care post-diagnosis.

A notable 47.8% of PLWH did not meet the criteria for indicator-condition-driven HIV diagnosis at the time of diagnosis. Furthermore, 52.2% had not received HIV testing despite averaging 5.1±6.0 healthcare visits in the 12 months prior to diagnosis. The data also reveal disparities in missed opportunities for diagnosis, with Spaniards showing a higher percentage than foreigners (64% vs. 40%, p=0.02).

#### Newly diagnosed PLWH 2019-2022 cohort observance of Spanish Emergency Medicine Society indicator-condition-driven HIV diagnosis criteria, per diagnosing clinical setting

Observed indicator-conditions	Emergency Department, n (%)	Primary Care, n (%)	Infectious Diseases, n (%)	Other Departments, n (%)	Total, n (%)
None	3 (25.0%)	18 (47.4%)	10 (66.7%)	12 (48.0%)	43 (47.8%)
One or more	9 (75.0%)	20 (52.6%)	5 (33.3%)	13 (52.0%)	47 (52.2%)
Prior STI	9 (75.0%)	20 (52.6%)	3 (20.0%)	6 (24.0%)	38 (42.2%)
Herpes Zoster	0 (0.0%)	1 (2.6%)	1 (6.7%)	5 (20.0%)	7 (7.8%)
Pneumonia	1 (8.3%)	0 (0.0%)	2 (13.3%)	1 (4.0%)	4 (4.4%)
Chemsex	1 (8.3%)	0 (0.0%)	0 (0.0%)	2 (8.0%)	3 (3.3%)
PEP	1 (8.3%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (1.1%)
Mononucleosis syndrome	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
<b>Total PLWH</b>	<b>12 (13.3%)</b>	<b>38 (42.2%)</b>	<b>15 (16.7%)</b>	<b>25 (27.8%)</b>	<b>90 (100.0%)</b>

STI = sexually transmitted infection, PEP = Post-Exposure Prophylaxis, NB: Column percentages do not add up to 100% as 6.7% (N=6) of PLWH had overlapping eligibility criteria.

### DISCUSSION

Depending solely on an indicator-condition-driven HIV diagnosis approach could miss 47.8% of cases. Including "migrants" as an additional testing criterion would lower missed diagnoses to 25.3% but might create inequities in prevention access. While it's vital to uphold the indicator-condition-driven HIV diagnosis as a baseline practice, improving screening strategies is essential to decrease late diagnoses and missed opportunities, thereby effectively curbing the epidemic.

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