Late HIV Diagnosis in CoRIS 2012-2022, and Impact of a Formative Session in 20 Primary Care Centers

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BACKGROUND

- Late HIV diagnosis is one of the main drivers of ongoing HIV transmission.
- We aimed to evaluate the evolution of late HIV diagnosis in CoRIS, a Spanish multicenter prospective HIV cohort, between 2012 and 2022.
- We evaluated the impact of a wide formative intervention at primary care centers assigned to Ramón y Cajal Hospital (RyC) in Madrid, Spain.

METHODS

- We conducted two training sessions to encourage HIV screening among primary care providers in 20 primary care centers assigned to RyC.
- 454 out of a total of 630 (72%) primary care providers attended the sessions.
- We compared the rates of late HIV diagnosis (CD4 <350 cells/μL and/or AIDS-defining illness, excluding documented recent infection) and advanced HIV disease (CD4<200/μL or AIDS-defining illness) between the centers with intervention (intervention group) and the remaining centers included in CoRIS (control group) before (2012-2017) and after (2017-2022) the intervention.
- Association measures (adjusted odds ratio [AOR]) were obtained using a logistic regression. Covariates included age, sex, geographical origin, mode of transmission, and educational level.

RESULTS

- A total of 10,184 patients newly diagnosed with HIV were included, 341 of whom belonged to centers with intervention. 88.4% were male, the mean age at diagnosis was 36.45 years, 70.4% were men who had sex with men (MSM) and 51.8% were Spanish (Table 1).

A **training intervention** to **primary care providers** in a health area significantly **reduced** the proportion of **late and advanced HIV diagnoses** compared to a nationwide control group.

Table 1	Intervention		Control	
	2012-2016	2017-2022	2012-2016	2017-2022
HIV diagnoses, n	146	195	4838	5005
Male sex, n (%)	125 (85.6)	175 (89.8)	4270 (88.3)	4431 (88.5)
Age, mean (SD)	37.9 (11.1)	36.8 (11.3)	36.3 (10.7)	36.5 (11.1)
Mode of transmission, MSM, n (%)	96 (65.8)	160 (82.1)	3383 (69.9)	3527 (70.5)
Origin, Spain, n (%)	96 (65.8)	94 (48.2)	2702 (55.9)	2383 (47.6)

Table 2	Intervention		Control	
	2012-2016	2017-2022	2012-2016	2017-2022
Enrolled CoRIS, n	146	195	4838	5005
Late Diagnosis, n (%)	86 (58.9)	95 (48.7)	1930 (39.0)	2274 (45.4)
Advanced HIV disease, n (%)	52 (35.6)	47 (24.1)	1004 (20.8)	1138 (22.7)

LATE HIV DIAGNOSIS

- Control group: late diagnosis significantly increased between both periods (39.0% before, 45.4% after; AOR 1.22 [95%CI 1.13–1.33], p<0.001) (**Table 2, Figure 1**).
- Intervention group: non-significant decrease in late HIV diagnosis rates between both periods (58.9% before, 48.7% after; AOR 0.70 [95%CI 0.45–1.09], p=0.121) (**Table 2, Figure 1**).
- The intervention had a significant effect on reducing late diagnoses when comparing both groups (p = 0.017) (**Figure 1**).

ADVANCED HIV DISEASE

- Control group: the proportion of advanced HIV disease increased from 20.8% before the intervention to 22.7% after (AOR 1.10, [95%CI 1.00-1.22], p=0.061) (**Table 2, Figure 2**).
- Intervention group: non-significant reduction in the proportion of advanced HIV disease (35.6% vs. 24.1%; AOR 0.66 [95%CI 0.40-1.08], p=0.095) (**Table 2, Figure 2**).
- The intervention had a significant effect on reducing advanced HIV disease when comparing both groups (p=0.044) (**Figure 2**).

Figure 1: % of late HIV diagnosis per group and period

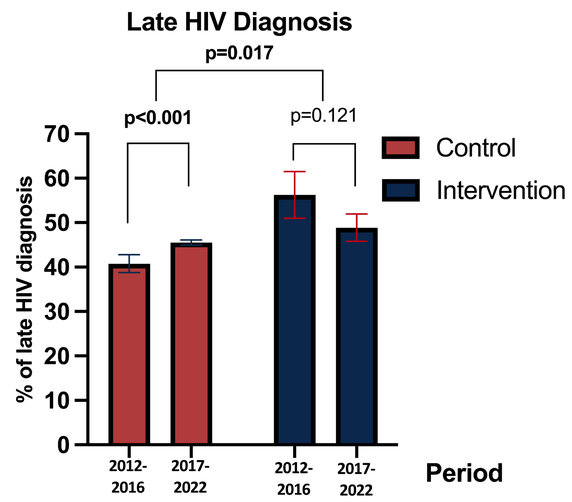
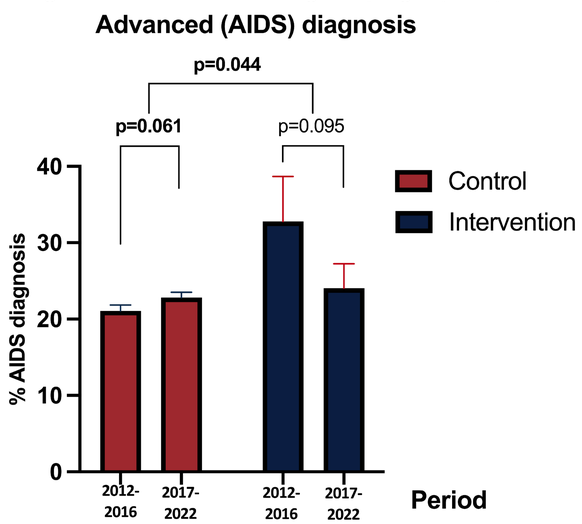


Figure 2: % of advanced HIV diagnosis per group and period



CONCLUSIONS

- **A training intervention regarding HIV screening delivered to a majority of primary care providers in a health area significantly reduced the proportion of late and advanced HIV diagnoses compared to a nationwide control group.**

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