

BRIEF REPORT

Serving the underserved: an HIV testing program for populations reluctant to attend conventional settings

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Abstract

Objectives We assess the contribution of a rapid-HIV testing program run by Médicos del Mundo and oriented to vulnerable populations reluctant to attend conventional settings.

Methods We compare the program outcomes with a network of 20 HIV/STI clinics (EPIVIH) and the Spanish National Surveillance System (SNHSS).

Results 33.3 % of the new diagnoses were women (8.6 % EPIVIH and 17.7 % SNHSS). Transsexuals were 6.9 % (1.9 % EPIVIH), female sex workers 23.6 % (2.0 % EPIVIH) and 19.4 % Sub-Saharan Africans (3.8 % EPIVIH and 7.8 % SNHSS). HIV prevalence in men was slightly higher than in the EPIVIH and almost twice among women.

Conclusions This program is contributing substantially to the promotion of HIV diagnosis in female sex workers, sub-Saharan Africans and transsexuals, which are less present at clinical settings.

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Introduction

The number of people infected with HIV continues to rise across Europe, with the epidemic largely concentrated in certain subpopulations (European Centre for Disease Prevention and Control 2011). Screening strategies are critical to reduce the number of undiagnosed persons and the proportion of late diagnoses to modify the course of the epidemic (European Centre for Disease Prevention and Control 2012; WHO Regional Office for Europe 2010). Consequently, facilitating access to HIV testing and counseling to increase its coverage is a priority in developed countries (Branson et al. 2006; European Centre for Disease Prevention and Control 2011).

Until recent times, in Spain, HIV testing and counseling were offered universally, confidentially and free of charge

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at all levels of the national health system. However, since September 2012, migrants with irregular administrative status have had limited access to the regular health services (Royal Decree-Law 16/2012 2012). Besides, in some cities, HIV/STI clinics and community pharmacies also perform the test confidentially and, sometimes, free of charge.

Alongside the clinical context, many rapid testing programs in non-clinical settings have been implemented (de la Fuente et al. 2009; Meulbroek et al. 2013). Despite their expansion in recent years, there is a lack of external evaluations of the outcomes of those programs in terms of type of populations reached, seropositivity rates and if they are truly complementary to the clinical settings, with which they are hardly ever compared (Xiao et al. 2014).

Médicos del Mundo (MdM) is an independent humanitarian organization that provides emergency and long-term medical care to vulnerable populations such as those who live in conditions of poverty, gender inequality, suffer social exclusion, or are victims of humanitarian crises while fighting for equal access to healthcare. With this aim, MdM has been performing traditional HIV tests since 2003 and rapid testing since 2007. Information on people attending for testing has been collected systematically since 2008.

In the Spanish context, where HIV testing is offered for free in a wide range of settings, this study aims to assess the added value of a program oriented to vulnerable populations reluctant to attend conventional settings that offered, free of charge, rapid HIV testing, and counseling in 15 Spanish cities between 2008 and 2012.

Methods

The program took place between 2008 and 2012 at the branches that the Organization MdM has in various cities in Spain. The program is aimed primarily at those at high risk of infection and socially marginalized or underserved: mainly prostitutes, drug users, and irregular migrants. That being said, anyone claiming for help was assisted.

Médicos del Mundo always tries to prioritize the use of the services of the National Health System providing information, support, and accompaniment to all who came to the centers. Only those who were reluctant to use public structures underwent testing in the program. Blood and saliva-based tests were performed for free alongside with pre and post-test counseling.

Individuals with reactive results were referred to the HIV/AIDS units of different hospitals from the public network for confirmation and linkage to care. In the case of migrants with irregular administrative status, MdM provided advice and support throughout the process of effective incorporation to the National Health System.

Basic sociodemographics, information on risk behaviors and on HIV testing history were gathered by a data collection sheet just before performing the test. Confidentiality was always ensured and the Spain's data protection law was closely followed.

A descriptive analysis of the participants' characteristics was performed stratifying results by sex: women, men, and transsexuals. The prevalence of infection and the characterization of those who tested positive are showed.

The outcomes of the program are compared with those of two surveillance systems: a network of Spanish HIV/STI clinics (EPIVIH) and with the Spanish National HIV Surveillance System (SNHSS). The EPIVIH is a sentinel surveillance system based on a network of 20 HIV/STI clinics. There, voluntary, confidential and free HIV testing is offered (Grupo EPI-VIH 2012). The SNHSS collects data of the new HIV diagnoses with a current coverage of 71 % of the Spanish population (Centro Nacional de Epidemiología 2013). When comparing our results with those of both surveillance systems, we took into account available data from the years when the program was implemented: from 2008 to 2010 in the case of the EPIVIH and from 2008 to 2012 in the SNHSS using their published data. However, our data on transsexuals and female sex workers could not be compared against the SNHSS since their results do not include these two variables/categories. Furthermore, the age intervals chosen by the SNHSS to present their results are not the same to the ones provided by the program responsables and this comparison was not performed either. Statistical significance was analyzed using the χ^2 test and by calculating 95 % CI. MdM authorized the data analysis.

Results

A total of 3251 people tested, out of which 2253 (69.3 %) were women, 897 (27.6 %) were men, and 101 (3.1 %) were transsexuals.

Although altogether most of the participants were foreigners and mostly from Latin-America (41.6 %) there were notorious differences between sex. Among women 49.8 % were from Latin-America, 18.8 % Eastern European, 15.3 % sub-Saharan Africans, and only 12.4 % were Spanish. For men, over half (52.1 %) were Spanish, 16.6 % Latin-Americans, and 14.0 % sub-Saharan Africans. Transsexuals were mainly Latin-Americans (70.3 %).

Only 1 % were injecting drug users, although this percentage was 2.7 % for men. The vast majority of women (87.4 %) and transsexuals (90.1 %) were sex workers, while this percentage was 16.4 % among men. Only the 32.3 % had never been tested previously, with men being the most likely to be previously untested (49.6 %) followed

Table 1 Main characteristics of attendees, newly diagnosed individuals and prevalence of infection at the Médicos del Mundo (MdM) HIV rapid testing programme

	Women						Men						Transexuals						Total					
	HIV + (N = 24)			HIV + (N = 43)			HIV + (N = 5)			HIV + (N = 72)			HIV + (N = 5)			HIV + (N = 72)			HIV + (N = 72)			HIV + (N = 72)		
	N	%	P ^a	N	%	(95% CI)	N	%	P ^a	N	%	(95% CI)	N	%	P ^a	N	%	(95% CI)	N	%	P ^a	N	%	(95% CI)
Total	2,253	100.0	100.0	1.1	(0.6–1.5)		897	100.0	100.0	4.8	(3.3–6.3)		101	100.0	100.0	5.0	(1.6–11.2)		3251	100.0	100.0	2.2	(1.7–2.7)	
Age																								
≤ 24	460	20.6	12.5	0.7	(0.1–1.9)		179	20.3	11.6	2.8	(0.9–6.4)		25	25.0	0.0	0.0	(0.0–13.7)		664	20.7	11.1	1.2	(0.3–2.1)	
25–34	1,064	47.6	54.2	1.2	(0.5–1.9)		410	46.5	58.1	6.1	(3.7–8.5)		54	54.0	60.0	5.6	(1.2–15.4)		1,528	47.5	56.9	2.7	(1.8–3.5)	
35–44	520	23.3	29.2	1.3	(0.3–2.4)		213	24.2	25.6	5.2	(2.0–8.4)		17	17.0	40.0	11.8	(1.5–36.5)		750	23.3	27.8	2.7	(1.4–3.9)	
≥ 45	190	8.5	0.0	0.0	(0.0–1.9)		79	9.0	4.7	2.5	(0.3–8.8)		4	4.0	0.0	0.0	(0.0–60.2)		273	8.5	2.8	0.7	(0.1–2.6)	
Place of birth																								
Spain	273	12.4	12.5	1.1	(0.2–3.2)		435	52.1	67.4	6.7	(4.2–9.1)		21	20.8	0.0	0.0	(0.0–16.1)		729	23.2	44.4	4.4	(2.8–5.9)	
Western Europe	13	0.6	0.0	0.0	(0.0–24.7)		18	2.2	4.7	11.1	(1.4–34.7)		0	0.0	0.0	0.0	–		31	1.0	2.8	6.5	(0.8–21.4)	
Eastern Europe	415	18.8	12.5	0.7	(0.1–2.1)		25	3.0	0.0	0.0	(0.0–13.7)		8	7.9	0.0	0.0	(0.0–36.9)		448	14.3	4.2	0.7	(0.1–1.9)	
Latin-America	1,097	49.8	25.0	0.5	(0.1–1.0)		139	16.6	16.3	5.0	(1.0–9.0)		71	70.3	100.0	7.0	(2.3–15.7)		1,307	41.6	25.0	1.4	(0.7–2.0)	
Sub-Saharan Africa	337	15.3	50.0	3.6	(1.4–5.7)		117	14.0	4.7	1.7	(0.2–6.0)		1	1.0	0.0	0.0	–		455	14.5	19.4	3.1	(1.4–4.8)	
Others	68	3.1	0.0	0.0	–		101	12.1	0.0	0.0	–		0	0.0	0.0	0.0	–		169	5.4	0.0	0.0	–	
Injecting Drug Users																								
Yes	9	0.4	4.2	11.1	(0.3–48.2)		24	2.7	7.0	12.5	(2.7–32.4)		1	1.0	20.0	100.0	–		34	1.0	6.9	14.7	(4.9–31.0)	
No	2,224	99.6	95.8	1.0	(0.6–1.5)		873	97.3	93.0	4.6	(3.1–6.0)				80.0	4.0	(1.1–9.9)			93.1	2.1	(1.6–2.6)		
Sex worker																								
Yes	1,969	87.4	70.8	0.9	(0.4–1.3)		147	16.4	18.6	5.4	(1.4–9.4)		91	90.1	80.0	4.4	(1.2–10.9)		2,207	67.9	40.3	1.3	(0.8–1.8)	
No	284	12.6	29.2	2.5	(0.5–4.4)		750	83.6	81.4	4.7	(3.1–6.2)				20.0	10.0	(0.3–44.5)			59.7	4.1	(2.9–5.4)		
Ever tested for HIV																								
Yes	1,603	72.3	75.0	1.1	(0.6–1.6)		428	49.4	62.8	6.2	(3.8–8.5)		86	86	80.0	4.7	(1.3–11.5)		2,117	66.5	68.1	2.3	(1.6–2.9)	
No	583	26.3	25.0	1.0	(0.1–1.9)		430	49.6	32.6	3.3	(1.5–5.0)		14	14.0	20.0	7.1	(0.2–33.9)		1,027	32.3	29.2	2.0	(1.1–3.0)	

Spain 2008–2012

^a P Prevalence of HIV

Table 2 Characterization and prevalence of infection of those who tested positive at Médicos del Mundo rapid HIV testing programme (2008–2012); comparison with EPIVIH and SNHSS

	Médicos del Mundo (2008–2012)				EPIVIH ^a (2008–2010)				<i>p</i> value (MdM vs. EPIVIH)	SNHSS ^b (2008–2012)		<i>p</i> value (MdM vs. SNHSS)
	Prevalence				Prevalence							
	N	%	VIH+	(95 % IC)	N	%	VIH+	(95 % IC)		N	%	
Total	72	100.0	2.2	(1.7–2.7)	2,208	100.0	2.9	(2.8–3.0)	<0.0001	13,928	100	<0.0001
Men	43	59.7	4.8	(3.3–6.3)	1,780	80.6	4.0	(3.8–4.2)		11,472	82.4	
Women	24	33.3	1.1	(0.6–1.5)	189	8.6	0.6	(0.5–0.7)		2,465	17.7	
Transsexuals	5	6.9	5.0	(1.6–11.2)	41	1.9	11.4	(7.9–14.8)				
Age									<0.0001			
≤24	8	11.1	1.2	(0.3–2.1)	350	17.4	2.2	(1.9–2.4)				
25–34	41	56.9	2.7	(1.8–3.5)	916	45.5	2.7	(2.5–2.9)				
35–44	20	27.8	2.7	(1.4–3.9)	517	25.7	2.9	(2.7–3.2)				
≥45	2	2.8	0.7	(0.1–2.6)	230	11.4	2.9	(2.5–3.3)				
Injecting drug users	5	6.9	14.7	(4.9–31.0)	104	4.7	10.7	(8.7–12.7)	0.3819	942	6.8	0.9513
Female sex workers	17	23.6	0.9	(0.4–1.3)	45	2.0	0.4	(0.3–0.5)	0.0023			<0.0001
Place of birth									<0.0001			0.0023
Spain	32	44.4	4.4	(2.8–5.9)	1304	67.2	2.6	(2.5–2.8)		8,415	60.4	
Western Europe	2	2.8	6.5	(0.8–21.4)	52	2.7	2.5	(1.8–3.2)		646	4.6	
Eastern Europe	3	4.2	0.7	(0.1–1.9)	87	4.5	2.7	(2.1–3.3)		459	3.3	
Latin-America	18	25.0	1.4	(0.7–2.0)	388	20.0	2.2	(2.0–2.5)		3,010	21.6	
Sub-Saharan Africa	14	19.4	3.1	(1.4–4.8)	74	3.8	3.2	(2.5–4.0)		1,091	7.8	
Others	0	0.0	0.0	(0.0–1.8)	36	1.8	2.3	(1.5–3.1)		307	2.2	

It was not possible to establish a comparison with SNHSS on transsexuals and age

^a Network of 20 HIV/STI diagnostic clinics

^b Spanish national HIV surveillance system

by women (26.3 %) and transsexuals (14 %) (Table 1). The 43 % of the women, 26.8 % of the men, and 54 % of the transsexuals took their last HIV test less than 12 months ago (Data not showed).

Women who tested positive were mainly from sub-Saharan Africa (50 %) followed by Latin-Americans (25 %) and only 12.5 % were Spanish. Two out of three (66.7 %) were younger than 35 years old. The 70.8 % were sex workers and 75 % had a previous HIV test. Furthermore, 67.4 % of the men who tested positive were Spanish and 16.3 % were Latin-Americans and the seventy percent were younger than 35 years old. Some 18.6 % were sex workers and the 62.8 % had a previous HIV test. All the positive transsexuals were from Latin-America; the majority (80 %) was sex workers and had a previous HIV test (Table 1).

Overall, the program uncovered 72 new diagnoses (prevalence of infection 2.2 vs. 2.9 % in the EPIVIH). Of the new diagnoses, 59.7 % were men (vs. 80.6 % in EPIVIH and 82.4 % in SNHSS), 33.3 % were women (vs. 8.6 % in EPIVIH and 17.7 % in SNHSS), and 6.9 % were transsexuals (vs. 1.9 % in EPIVIH). The 23.6 % of the new

diagnoses were female sex workers (prevalence of infection: 0.9 %), more than 10 times the percentage showed by EPIVIH (2.0 %). The Spanish accounted for 44.4 % of new diagnoses, vs. 67.2 % in the EPIVIH and 60.4 % in SNHSS. The program showed a greater percentage of new diagnoses from sub-Saharan Africa (19.4 %) than the EPIVIH (3.8 %) and the SNHSS (7.8 %) (Table 2).

Discussion

Although in Spain HIV testing is offered free of charge in a wide range of settings, this program has proved its capacity to contribute substantially to the promotion of HIV diagnosis among some vulnerable and socially marginalized populations such as sub-Saharan Africans, female sex workers, and transsexuals, which are less present at clinical settings also frequented by high risk individuals. This study is one of the very few that presents an external and independent evaluation of a community-based testing program. By comparing its outcomes with those of two surveillance systems it put into perspective the added value of the

program, which is something that has rarely been done before.

The overall prevalence of infection (2.2 %) was slightly lower than in the EPIVIH (Grupo EPI-VIH 2012). However, the proportion of diagnosed women (33.3 %) was almost 4 times higher than in the EPIVIH (8.6 %) and two times higher than in the SNHSS (17.7 %) (Centro Nacional de Epidemiología 2013; Grupo EPI-VIH 2012). With seven women of every ten attendees, this program showed a greater capacity to attract them than other services oriented both to general and to high-risk populations. (de la Fuente et al. 2009; Fernandez-Lopez et al. 2010; Gorostiza et al. 2013; Grupo EPI-VIH 2012; Guayta-Escolies et al. 2013). Moreover, the vast majority of the women were sex workers and migrants, groups most vulnerable to infection (Dias et al. 2011). It is known that, in Spain, many of the female sex workers (FSWs) come from either Latin America or sub-Saharan Africa and that they show a low prevalence for HIV, which generally ranges from 0.2 to 1.0 % (Belza 2004). Nevertheless, this study has managed to find a higher prevalence in this group than that reported by the EPIVIH. (Grupo EPI-VIH 2012) Additionally, half of the diagnosed women were from sub-Saharan Africa, which is especially hard to reach population and the most affected by delayed diagnosis among women. (Aghaizu et al. 2014) The fact that almost none of them were IDU reflects that HIV transmission has been most probably acquired by sexual contact.

Only a quarter of the women reported having never been tested before which is a lower percentage than previously published data (Belza 2004). However, only 4 out of ten had their last test within the last year, as it's recommended by international guidelines. (Branson et al. 2006) FSWs constitute an important core group for HIV transmission and might be acting as a bridge with general population. (Pruss-Ustun et al. 2013) Therefore helping to increase both the number and the frequency of testing in this group is extremely important, even when the prevalence found may not be too high.

It is important to emphasize the great appeal that the program has had for transsexuals, accounting for 3 % of the total attendance which is way above than the 0.5 % reported by EPIVIH (Grupo EPI-VIH 2012). Transsexual sex workers constitute a small population group, marginalized, discriminated, stigmatized, and exposed to violence in the workplace. They are neither visible nor easy to access and they have been disproportionately affected by HIV (Schulden et al. 2008; Shrestha et al. 2011). Notwithstanding, the prevalence in this group is half than the one reported by EPIVIH (Grupo EPI-VIH 2012). It is also much lower than what has been described in other studies (Belza 2005; Dos Ramos Farias et al. 2011; Spizzichino et al. 2001). The lower prevalence found in our study can

be explained by the fact that there are virtually no IDU transsexuals. Consequently, prevalence of infection is very similar to that of the MSM group. Taking into consideration that most of their clients are men who consider themselves heterosexuals and have female partners (Dos Ramos Farias et al. 2011), they may act as an epidemiological link between them and the female population which is why they should be considered a priority for prevention and early diagnosis.

This study has some limitations that must be kept in mind. Among them, is the fact that MdM is a strongly action oriented non-governmental organization, thus the information collected had several limitations. Given that sex between men is the main transmission route in Spain (Centro Nacional de Epidemiología 2013), probably the most relevant unavailable information is not having collected data on risk behaviors between men. Although it could not be evaluated formally, the perception of the program staff was that a substantial proportion of the men who attended the program were indeed MSM. This assessment is supported by the fact that the prevalence within the men in our study (4.8 %) is closer to the prevalence reported by the EPIVIH (Grupo EPI-VIH 2012) for the MSM (8.0 %) than for the heterosexual men (0.7 %).

This very low threshold program constitutes a clear complement to traditional HIV testing programs. It has proven a great capacity to contribute to the promotion of HIV diagnosis in some of the most vulnerable and at risk populations, such as female sex workers, sub-Saharan Africans, and transsexuals. It is worth mentioning that, during the study period (2008–2012) no legal documents were required to access to the National Health System. But since September 2012, migrants with irregular administrative status only receive emergency medical care, forfeiting free access to regular health services. Although it is not clear what impact this may have on HIV testing, it is reasonable to assume that new hurdles will arise and that programs such as the one presented here will gain even greater importance in promoting early diagnoses.

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Conflict of interest The Spanish law has been followed thought the whole study.

Ethical standard The authors declare that they have no conflict of interest.

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