

Contents lists available at ScienceDirect

## International Journal of Infectious Diseases

journal homepage: www.elsevier.com/locate/ijid



### Short Communication

# HIV/AIDS in Palestine: A growing concern

## Omar Hamarsheh\*

Department of Life Sciences, College of Science & Technology, Al-Quds University, P.O. Box 51000, Jerusalem, Palestine



#### ARTICLE INFO

Article history: Received 23 August 2019 Received in revised form 11 October 2019 Accepted 16 October 2019 Corresponding Editor: Eskild Petersen, Aarhus, Denmark

Keywords: HIV AIDS Palestine West Bank Gaza Strip

#### ABSTRACT

According to the United Nations AIDS reports in 2018, the Middle East and North Africa region is considered an area of increasing concern for HIV infection due to high mortality associated with AIDS. The incidence of HIV/AIDS in Palestine between 1988 and 2017 as reported by the Palestinian Ministry of Health was analyzed. A total of 98 cases were reported (79 AIDS patients and 19 HIV positives). A nationwide surveillance is needed to understand the epidemiology of HIV infection in the country. Identification of the HIV risk factors and health outreach directed to the public are essentially crucial prevention measures that should be implemented by the Palestinian Ministry of Health.

© 2019 The Author(s). Published by Elsevier Ltd on behalf of International Society for Infectious Diseases. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

In 2018, the United Nations AIDS Program (UNAIDS) reported about 220,000 people infected with HIV and living with AIDS in the Middle East and North Africa (MENA), 35% of them are children and about 18,000 are new HIV infections. Despite the low prevalence of HIV/AIDS in the MENA region, it is considered an area of increasing concern for HIV infection; 9,800 people (4.5%) died of AIDS-related illness in 2018, and there is limited knowledge about the epidemic of HIV in MENA countries (Hemelaar et al., 2019; UNAIDS, 2019). The prevalence and incidence of HIV are expected to be very low in some MENA countries, and it is believed to be underestimated due to high social stigma. It was reported that HIV risk groups are often subject to homophobia, harassment, discrimination and criminalization (Chemaitelly et al., 2019; Gökengin et al., 2016; Mumtaz et al., 2018). Religious faiths in MENA countries (Islam, Christianity and Judaism) do not support non-marital sexual behaviors, which is the main risk factor associated with HIV infection.

Palestine (the West Bank and Gaza Strip) is part of this concern; HIV incidence and AIDS-related mortality are slowly rising year after year. Between 1988 and 2017, there have been 98 cases (Figure 1); 79 AIDS and 19 HIV positive cases reported by the Palestinian Ministry of Health (PMOH, 2017). These numbers do not reflect the actual status of HIV/AIDS, and there is a shortage of information about the actual numbers in Palestine, probably due to insufficient investment in surveillance and collection and analysis of data. However, the available information has been never

E-mail address: ohamarsheh@staff.alquds.edu (O. Hamarsheh).

analyzed or synthesized at the country or regional level due to religious and cultural stigma.

The mortality rate among HIV/AIDS patients in Palestine is very high; within a short time patients become susceptible to opportunistic infections, probably due to the late diagnosis and presentation of the cases (Grangeiro et al., 2011; Singer et al., 2019). About 53 patients (54.1%) died of AIDS associated illness and 38 (38.8%) were alive, while clinical status of 7 cases (7.1%) is unknown. Despite recent progress in HIV research and surveillance in Palestine, data are only reported in the Palestinian Ministry of Health reports, and have never been analyzed and discussed publicly.

Palestinian patients were referred to the AIDS clinic at the Palestinian Ministry of Health, where they received free diagnosis, antiretroviral therapy (ART), and psycho-social support and assistance by well-trained doctors, nurses, psychologists and social specialists. It is believed that most HIV/AIDS patients do not seek medical treatment; probably they are concerned about confidentiality of their medical situation. HIV infection is socially stigmatic and HIV patients are not accepted in Palestinian society (Husseini and Abu-Rmeileh, 2007). The Palestinian Ministry of Health insists that HIV/AIDS patient's information and records are not disclosed by any means; similarly, patients do not meet or get to know each other.

Most of the HIV positive patients discovered the infection accidentally when subjected to HIV tests required for blood donation in blood banks (Maayan et al., 1993, 1994). It was found that HIV/AIDS was more frequent in males than females; 80 males and 18 females were found HIV positive or living with AIDS (Table 1). The majority of HIV/AIDS cases are among the youth; the highest incidence was found among the age group 20–39 years (61

<sup>\*</sup> Correspondence to: Department of Life Sciences, Faculty of Science & Technology, P.O. Box 51000, Jerusalem, Palestine.

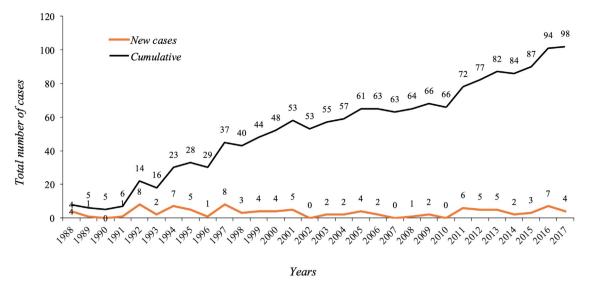


Figure 1. Total number of HIV/AIDS cases reported by the Palestinian Ministry of Health in the years 1988-2017.

**Table 1**Distribution of HIV/AIDS cases in the Palestinian districts.

District	HIV/AIDS		Total	Percent	Prevalence
				%	Rate /100,000 people
	Male	Female			
Gaza city	15	7	22	22.5	3.43
Dair Al Balah	1		1	1.02	0.37
Khan Younis	9	1	10	10.2	2.73
Rafah	1	2	3	3.06	1.28
Hebron	7	2	9	9.1	1.27
Bethlehem	9	1	10	10.2	4.65
Jerusalem	6		6	6.12	3.89
Jericho	1	2	3	3.1	6
Ramallah	15	1	16	16.3	4.97
Salfit	1		1	1.02	1.36
Qalqilyeh	1		1	1.02	0.92
Nablus	9	2	11	11.22	2.84
Tulkarem	2		2	2.04	1.09
Jenin	3		3	3.1	0.97
Total	80	18	98	100	35.77

patients), followed by the age group 40–49 years (21 patients), and the least among age group 0–9 years (5 patients) and above 50 years (8 patients).

The distribution of the total HIV patients in the Palestinian districts is shown in (Table 1); the highest total number of cases was found in Gaza city, Ramallah, Bethlehem, Khan Younis, Nablus, Hebron and Jerusalem.

Sexual behavior (68.4%) accounted for the majority of infected patients, either heterosexuality, 59 patients, or homosexuality and bisexuality, 4 patients each. Blood transfusion is considered important for HIV infection in Palestine with 14 patients (14.3%), the infection is passed to three children from their mothers, and other three patients are drug addicts and probably got the infection by use of HIV contaminated needles.

The Palestinian national surveillance indicated about 95% of the Palestinian population have previous knowledge about HIV and AIDS; 77.2% know the prevention measures that should be taken in order to avoid getting the infection. The current study highlights the status and trend of HIV/AIDS infection in Palestine. It identifies non–marital sexual behavior as the main risk factor for acquiring HIV infection in Palestine; this behavior is associated with decreasing religious values, increasing international travel especially among the youth, increasing poverty and unemployment,

and increasing costs of marriage. Better nationwide surveillance, education about the risk factors and health outreach for HIV directed to the public and adhering to religious norms and values are among the successful and effective measures that should be considered. Preventive measures advocated and used in western countries such as "safe sex" and "Needle Exchange" programs will not work and contradict the rules of Islam that basically prohibit non-marital sex as well as drug use and addiction. The number of HIV/AIDS cases in Palestine is still very low, but there is a great potential for a rapid increase. The major future challenges are to overcome the social, cultural and religious barriers that interfere with identifying the vulnerability of groups at high risk, and further information should be collected to fill the gap of the role of transactional sex in HIV prevalence.

## Conflict of interest

No conflict of interest to declare.

#### **Funding source**

None.

#### **Ethical approval**

Approval was not required.

### Acknowledgement

Palestinian Ministry of Health and Zamallah Academic Development program sponsored by Taawon Association.

## References

Chemaitelly H, Weiss HA, Calvert C, Harfouche M, Abu-Raddad LJ. HIV epidemiology among female sex workers and their clients in the Middle East and North Africa: systematic review, meta-analyses, and meta-regressions. BMC Med 2019;17(1):119. Gökengin D, Doroudi F, Tohme J, Collins B, Madani N. HIV/AIDS: trends in the Middle East and North Africa region. Int J Infect Dis 2016;44:66–73.

Grangeiro A, Escuder MM, Menezes PR, Alencar R, de Castilho EA. Late entry into HIV care: estimated impact on AIDS mortality rates in Brazil, 2003–2006. PLoS One 2011;6(1)e14585.

Hemelaar J, Elangovan R, Yun J, Dickson-Tetteh L, Fleminger I, Kirtley S, et al. Global and regional molecular epidemiology of HIV-1, 1990-2015: a systematic review, global survey, and trend analysis. Lancet Infect Dis 2019;19(2):143-55.

- Husseini A, Abu-Rmeileh NM. HIV/AIDS-related knowledge and attitudes of Palestinian
- women in the Occupied Palestinian Territory. Am J Health Behav 2007;31(3):323–34. Maayan S, Shinar E, Aefani M, Soughayer M, Alkhoudary R, Barshany S, et al. HIV-1 prevalence among Israeli and Palestinian blood donors. AIDS 1994;8(1):133-4.
- Maayan S, Shinar E, Aefani M, Soughayer M, el Khoudary R, Rahav G, et al. HIV/AIDS among Palestinian Arabs. Isr J Med Sci 1993;29:7-10.
- Mumtaz GR, Awad SF, Feizzadeh A, Weiss HA, Abu-Raddad LJ. HIV incidence among people who inject drugs in the Middle East and North Africa: mathematical modelling analysis. J Int AIDS Soc 2018;21(3)e25102.
- PMOH. Health Annual Report. Available:. Nablus, Palestine: Palestinian Health Information Center. Palestinian Ministry of Health; 2017. https://site.moh.ps;/. Singer K, Schulze-Sturm U, Alba-Alejandre I, Hollwitz B, Nguyen TTT, Sollinger F, et al. Impact of refugee influx on the epidemiology of late-presenting HIVinfected pregnant women and mother-to-child transmission: comparing a southern and northern medical centre in Germany. Infection 2019;.
- UNAIDS. HIV and AIDS in the Middle East & North Africa (MENA). 2019 Available at: https://www.avert.org/professionals/hiv-around-world/middle-east-northafrica-mena. [Accessed 31 July 2019].