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Awareness and perception of accuracy of the Undetectable=Untransmittable (U=U) message in people living with HIV/AIDS (PLWHA), in Italy and correlation with the level of confidence in reference physicians

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BACKGROUND

The efficacy of ART on HIV transmission has been widely demonstrated (1-7).

As a consequence, the Prevention Access Campaign has been set up to spread the slogan "Undetectable = Untransmittable" (friendly reported within online social media as #UequalsU) with the purpose of raising HIV prevention awareness and reducing HIV stigma.

At present, a considerable number of studies have demonstrated a low level of awareness of the message among those involved, never more than 15%, with higher percentages in the case of people living with HIV (8-10).

Purpose of this study was to evaluate the perceived accuracy of U=U message among PLWHA, HIV-negative people with sexual risky behaviors (PWSRB) and infectious diseases physicians, to guide subsequent efforts and implementation of HIV prevention strategies.

METHODS

An Italian nationwide web-survey among ICONA cohort centers, Community-based voluntary test&counselling centers (CBVTC) and fast-track cities websites has been conducted.

Three different anonymous questionnaires (for physicians, PLWHA and PWSRB) were set-up.

In this analysis the awareness of U=U ("have you ever heard of") and the perception of accuracy of U=U [Likert scale from 1=completely inaccurate (low) to 4=completely accurate (high) were analyzed.

Logistic regression models have been fitted to investigate factors associated with the binary outcomes (i)awareness of U=U (Y/N) and (ii)perceived high accuracy of U=U (Y/N).

RESULTS

1121 participants filled the questionnaires: 397 PLWHA, 90 physicians, 634 PWSRB. Participants' characteristics are shown in Table1. Awareness of U=U message has been reported in 74%, 46% and 92% of PLWHA, PWSRB and physicians.

Accuracy of U=U message has been reported as 'high' in 80% of PLWHA, 66% of PWSRB and 79% of physicians. Physicians perceived that 11% of PLWHA have a high perception of U=U; 34% of PLWHA reported a definitive positive messages received from physicians. Among PLWHA, factors associated with the awareness of U=U were level of education (university vs lower AOR=1.77, 95%CI 1.03-3.04), being MSM/bisexual (vs heterosexual AOR=3.16, 95%CI 1.03-3.04), being on cART for 5-10ys (vs <5ysAOR=2.71, 95%CI 1.32-5.55) and age (40-50ys vs <40y AOR=0.47, 95%CI 0.24-0.93). Factors associated with perception of accuracy of message in the three groups are reported in Figure1.

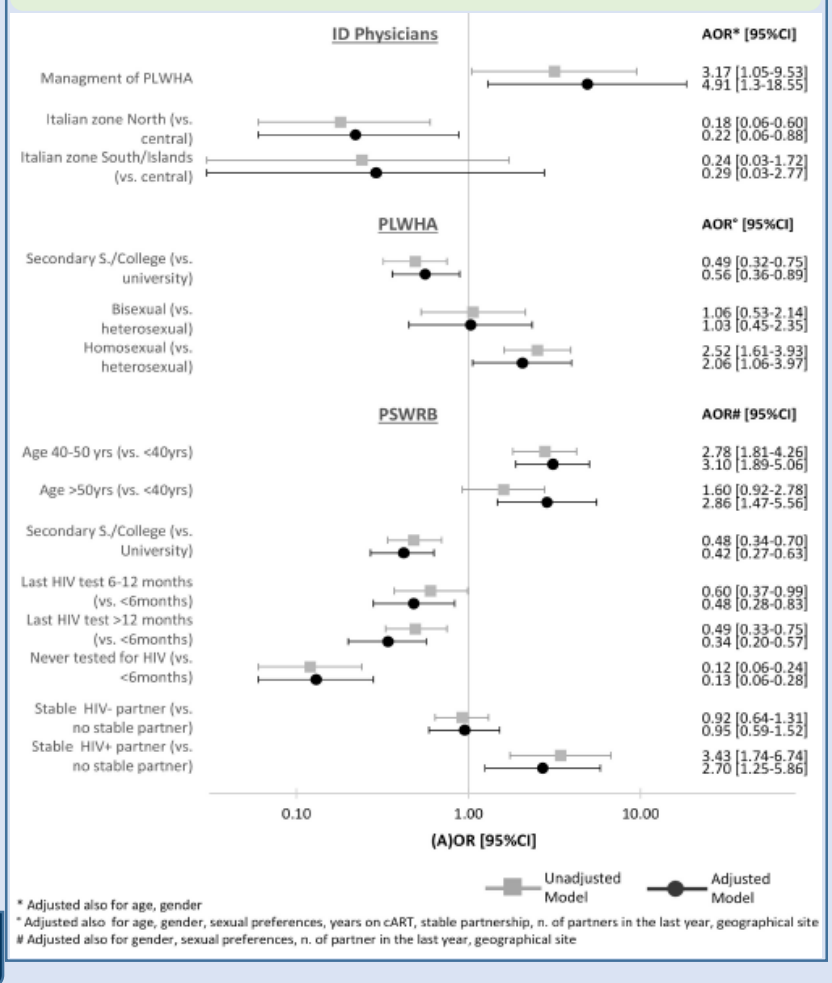
Table 1 – Main Partecipants' characteristics; A) ID (Infectious Diseases) physicians; **B)** PLWH (people living with HIV/AIDS) **C)** PWSRB (people with sexual risky behaviors)

A)	*ID physicians (N=90)*
Age, years, n(%)	
<40 years	49 (54.4)
40-50 years	18 (20.0)
>50 years	23 (25.6)
Gender, Male, n(%)	37 (41.1)
Nationality, Italian, n(%)	.
Italian Geographical Zone, n(%)	
Northern	46 (51.1)
Central	38 (42.2)
Southern/Islands	6 (6.7)
Education, University, n(%)	90 (100.0)
Management of PLWHA, Yes, n(%)	73 (81.1)
Yrs. management of PLWHA, n(%)	
<10 years	39 (53.4)
10-20 years	15 (20.6)
>20 years	19 (26.0)
Number of PLWHA in care, n(%)	
<100	36 (49.3)
100-400	15 (20.6)
>400	22 (30.1)

B)	*PLWHA (N=397)*
Age, years, n(%)	
<40 years	122 (30.79
40-50 years	124 (31.2)
>50 years	151 (38.0)
Gender, Male, n(%)	324 (81.6)
Nationality, Italian, n(%)	375 (94.5)
Italian Geographical Zone, n(%)	
Northern	235 (59.2)
Central	117 (29.5)
Southern/Islands	45 (11.3)
Education, University, n(%)	157 (39.6)
Years with HIV infection	
<5 years	112 (28.2)
10-5 years	98 (24.7)
>10 years	187 (47.1)
Years of cART	
<5 years	125 (31.5)
10-5 years	113 (28.5)
>10 years	159 (40.0)
HIV-RNA undetectable, Yes, n(%)	372 (95.6)
N. of sexual partners, median(IQR)	2 (1-10)
Sexual Orientation, n(%)	
Heterosexual	131 (33.0)
Bisexual	41 (10.3)
Homosexual	225 (56.7)
Stable Sexual Partner, n(%)	
Yes, HIV-pos	53 (13.3)
Yes, HIV-neg	154 (38.8)

C)	*PWSRB (N=634)*
Age, years, n(%)	
<40 years	461 72.7
40-50 years	110 17.3
>50 years	63 9.9
Gender, Male, n(%)	431 68.0
Nationality, Italian, n(%)	610 96.4
Italian Geographical Zone, n(%)	
Northern	415 (65.7)
Central	115 (18.2)
Southern/Islands	102 (16.1)
Education, University, n(%)	392 (61.8)
Management of PLWHA, Yes, n(%)	
N. of sexual partners, median(IQR)	2 (1-10)
Sexual Orientation, n(%)	
Heterosexual	224 (35.3)
Bisexual	42 (6.6)
Homosexual	368 (58.0)
Stable Sexual Partner, n(%)	
Yes, HIV-pos	40 (6.3)
Yes, HIV-neg	272 (42.9)
Last HIV test, n(%)	
<6 months	242 (38.2)
6-12 months	95 (15.0)
>12 months	176 (27.8)
Never done	121 (19.1)

Figure 1. Factors associated with perceiving accuracy of U=U message as 'high' identified by multivariable logistic regressions analyses separately for each group



CONCLUSIONS

- A low concordance between awareness and perception of accuracy in PLWHA and physicians, suggesting still insufficient certainty was reported
- More efforts should be implemented to spread the U=U message among subgroups who might benefit from targeted educational campaigns
- Dissemination of the message among PWSRB is far from being efficaciously implemented and should represent a priority for increasing knowledge and decreasing HIV stigma
- Selection bias of web-surveys cannot be overlooked.

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