Factors Associated with ART Adherence among MSM Living with HIV in Care in the Texas Medical Monitoring Project

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As of 2017, 71,515 men and 19,185 women were living with HIV in Texas. Adherence to antiretroviral therapy (ART) is essential for achieving viral suppression and preventing HIV transmission. Men who have sex with men (MSM) are disproportionately affected by HIV and despite antiretroviral therapy (ART) is essential for achieving viral suppression and preventing HIV transmission.

Methods

The Medical Monitoring Project (MMP) is an ongoing surveillance system that assesses behaviors and clinical characteristics of people living with HIV receiving medical care.

MMP used a three stage cluster sampling method to randomly select 23 city/state project areas, healthcare facilities within those areas, and patients within facilities.

During the 2009-2014 data collection cycles, 1,617 MSM from the Texas and Houston MMP facilities participated in the survey and were included in these analyses.

Behavioral and clinical data were collected using an in-person interview and medical record abstraction (MRA). ART adherence was determined if participants took all doses of their ART medication within the past three days.

Associations between sociodemographic characteristics, risk behaviors, mental health, unmet needs and ART adherence were assessed using Rao-Scott chi-square tests with \( p < 0.05 \) as the significance threshold. The odds of ART adherence related to independent factors were calculated using multivariable logistic regression models.

Results

Majority (88%) of 1,475 MSM, participants were 100% ART adherent. Older MSM (55+) had a higher proportion (88%) of adherent participants vs. younger (18-34) MSM (78%, Fig. 1). Black MSM had the lowest proportion of adherent participants (77%) compared to white (86%) and Hispanic (85%) MSM \( (p < 0.01) \).

Those who reported being ever homeless (65%) or have been depressed (72%) had a lower proportion of adherent MSM participants compared to those who were never homeless (85% adherent) or were not depressed (87%, \( p < 0.001 \) for both).

Those who had a detectable viral load \( (\geq 200 \text{ copies/ul}) \) had a lower proportion of adherent participants (73%) compared to those who were undetectable (86%, \( p < 0.001 \)).

A significant inverse linear trend was observed between increasing number of unmet needs and decreasing proportion of ART adherence \( (p < 0.001) \).

Drug use, depression, binge drinking rate, and unmet needs were significant predictors of lower ART adherence \( (p < 0.05 \text{ for all}) \).

Blacks had a 70% increased odds of not being 100% ART adherent compared to whites; those who had \( \geq 2 \) unmet needs had a 2.2 times increased odds of not being 100% ART adherent compared to those with no unmet needs. And finally, compared to non-drug users, non-binge drinkers and those without depression, drug users within the past year, binge drinkers, and those who were depressed had a 1.7, 2.2, and 1.9 higher odds of not being 100% adherent to ART \( (p < 0.001 \text{ for all three, respectively}) \).

Conclusions

Texas MMP data suggest that among MSM living with HIV, significant differences exist between those who are 100% ART adherent and those who were not. Race, unmet need, drug use, depression, and binge drinking were found to be significant predictors of ART adherence. In addition to using these data for program planning and resource allocation, these results illustrate the need for HIV care and social services with a focus among MSM living with HIV that addresses barriers to care and empowerment. Such efforts may enhance better outcomes and reduce the current ART adherence disparity among MSM.

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