TABLE OF CONTENT

EXECUTIVE SUMMARY

In its third decade of having penetrated human populations, Acquired Immunodeficiency Syndrome (AIDS) is prevailing globally leaving no region or country intact. According to estimations in 2008, some 33.3 million people around the world were HIV+. AIDS accounts for 84.5 million disability adjusted life years (DALY) at a global scale placing a sizeable economic burden on human societies both directly and indirectly.

It is estimated that a total of 460,000 (+98,000 in Pakistan) people who live with HIV (PLHIV) are in the Middle East and North Africa (MENA) region with the majority of them concentrated in the three countries of Sudan, Pakistan (although currently categorized in the Southeast Asia region), and Iran; furthermore, 76,000 were infected with HIV in 2009. The prevalence rate of HIV/AIDS in Iran has currently gone up from a low to a concentrated epidemic.

Different studies reveal that one of the prime factors at work in the extension of this disease is risky behaviors within communities. Unfortunately, various political, social, ethical, economic, and methodological restrictions make data gathering on these behaviors immensely laborious. Consequently, there is inadequate information on the conditions of these groups while the main means to control the HIV infection in the country is the effective implementation of prevention programs among high-risk groups; this of course would not come about without the comprehensive understanding of the features and behaviors of these groups.

Since one of the efficient and effective methods in contexts where there is inadequate data is modeling programs of diseases, this study sought to adopt the modes of transmission (MOT) model which is among those recommended by the Joint United Nations Programme on HIV/AIDS (UNAIDS). MOT is a mathematical model designed on an Excel spreadsheet which predicts the expected number of HIV infections for the subsequent year based on the current distribution of the infection and the risk pattern in subgroups exposed to HIV. In certain studies, this model is also named the UNAIDS incidence model.

As the quality of the results is hugely dependent upon the quality of the inputted data, using valid data in the MOT model is necessary. To obtain precise data on the parameters required for this model, all the published and unpublished documents were systematically reviewed. Subsequently, the inputted data of the HIV/AIDS modeling project in Iran was also reviewed which led to the identification of the values relevant to the necessary parameters. In addition, to obtain more information on those parameters which are not accurately documented in Iran such as data on men who have sex with other men (MSM), international documents which are mostly pertinent to the MENA states were reviewed.

To find alternative solutions for the lack of adequate and reliable data on certain parameters of these communities, group discussions and in-depth interviews were conducted in the presence of