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EBM COMMENTARY

IS HIV SCREENING IN THE GENERAL POPULATION COST EFFECTIVE?

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Case scenario
Ms RK, a 24 year old Muslim female clerk, presented to the Health Clinic for a medical check up. She was getting married and asked for pre-marital screening. As a Muslim, she needed to undergo Human Immunodeficiency Virus (HIV) screening before registering her marriage. Pre-testing counselling revealed no risk factor for HIV infection. Her HIV test was negative (using the rapid test SD Bioline HIV-1/2 3.0). The HIV test of her fiance (done elsewhere) was also negative.

Question
Is it cost effective to screen for HIV infection in the general population of Malaysia?

EBM commentary

Johor was the first state in Malaysia to require Muslim couples to undergo pre-marital HIV testing in 2001.[1] This was in response to the increasing incidence of HIV infection due to heterosexual transmission, especially among the women in the state.[1] Despite the initial opposition from the Malaysian Ministry of Health and Non-governmental organizations (NGOs), mandatory HIV testing is now required in most Malaysian states.[2]

In the United States, the Center for Disease Control (CDC) in 2006 has recommended routine testing of all adults in healthcare setting, unless they choose to opt out. This revised recommendation took in account the improved survival of HIV positive patients receiving the highly active antiretroviral therapy (HAART), as well as the inability of voluntary HIV testing to reach all at-risk adults (especially those acquired heterosexually).[3] The recommendation is supported by two cost-effectiveness analyses showing that routine testing is justifiable if the HIV prevalence in the general population is 1% or above.[4,5]

In the Malaysian setting, the prevalence of HIV infection as of 2005 is 0.5% in the general adult population between the ages of 15-49. [6] Pre-marital screening done in Johor from 2002-2004 reported HIV prevalence of only 0.17%.[1] Although there is no formal economic analysis in Malaysia, the low prevalence of HIV in our general population raise sufficient doubt about the cost-effectiveness of the current pre-marital HIV screening programme for Muslim couples.

Previously HIV testing has been focused on the well-known high risk groups (injecting drug users, prisoners, sex workers and those with sexually transmitted infections), but it may now be necessary to focus also on those who do not belong to the above groups but are at higher risk of being infected. They may have acquired the infection from heterosexual contact but are asymptomatic. Other high risk groups which are neglected are males who have sex with males (MSM). Anonymous HIV testing has been available in most public primary care clinics for sometime, but the response to date has been rather poor.[7] In addition to the anonymous testing, primary care doctors need to find ways to discuss HIV risk behaviour with adult patients irrespective of the presenting complaints, and if necessary, to encourage them to undergo HIV testing. Philips *et al* has shown that patients are likely to accept HIV test if it was offered as part of a routine care.[8] This approach will de-stigmatize HIV testing thus prompting patients who have high risk to accept testing.

Compulsory pre-marital HIV testing for Muslims aims to prevent the transmission from spouse to spouse or to future offspring. However, the HIV test is only useful at that point in time; it does not guarantee one or both parties will not be exposed to future risk of HIV. There is high possibility that testing in this way may result in the breaching of confidentiality. This may happen as the test results are processed by too many people, from the staff who carry out the test to the officers at the religious department. Also in a Muslim wedding, the woman must obtain the consent of the father to marry, who may want to know the result of the test. The result would inadvertently be known by other family members as well.

In conclusion, a local study should be done to assess the cost-effectiveness of HIV screening in the Malaysian general population. Although studies done in the United States suggest that screening the general population is cost effective, many other factors mentioned above will need to be taken into consideration. Limited healthcare funds may be better used for screening target populations with high risk as well as more effective health education.

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Note: red ribbon downloaded from wikepedia, text added