

# HIV in the Philippines: A Prime Target for Elimination through Test-and-Treat

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## ABSTRACT

While the Philippines has one of the lowest HIV prevalence rates in the world, an unprecedented increase in recent years seems to indicate that a large epidemic is only a matter of time. Multiple factors including poor condom use, increasing rates of casual sex, and misinformation, are ingredients for the widespread emergence of HIV. Financial consequences will be significant since the Philippine economy is increasingly driven by industries employing young people who are at risk. Recent research showing better clinical outcomes for early treatment with antiretrovirals (ARVs), coupled with data demonstrating a drastic reduction in transmission with early therapy, provide a compelling argument for a universal test and treat strategy. With just over 7,000 confirmed cases, this approach is financially feasible, and is an efficient model for proof-of-concept.

*Key Words: antiretroviral therapy; prevention and control; Philippines; occupational health; opt-in testing*

## Introduction

HIV in the Philippines has historically been described as "low and slow".<sup>1</sup> Only 7,031 confirmed cases have been reported between 1984 and the end of June 2011.<sup>2</sup> While Philippine rates of gonorrhea and *Chlamydia* in female sex workers have been found to be similar compared to other Southeast Asian countries, the number of cases of HIV has lagged far behind.<sup>3</sup> A possible reason for this lag is the culturally high rate (92.5%) of circumcision among Filipino males,<sup>4</sup> which has been shown to decrease risk of heterosexual transmission by up to 60%.<sup>5</sup> Other factors, including geography, relative sexual conservatism, and minimal IV drug use have been cited as possible reasons for the low prevalence.<sup>1</sup>

An unprecedented acceleration in the number of cases has decreased doubling time from ten years (1996 to 2006), to one year (2009 to 2010).<sup>2</sup> UNAIDS in its 2010 report noted

that the Philippines was one of only seven countries in the world to have seen an increase of over 25% in HIV incidence in the past decade.<sup>6</sup> New cases annually are up more than 800% from 2001, and more than half of the total cases since 1984 were diagnosed in the last four years.<sup>2</sup> In a recent review of the HIV situation in the Philippines, Farr and Wilson noted that this type of epidemiology, coupled with increasing casual sex activity, poor condom use, poor education and an inadequate public health response, make the occurrence of a large HIV epidemic just a matter of time.<sup>1</sup> This paper examines the potentially catastrophic economic and social impact of HIV in the Philippines, underlines the urgency for action, and proposes a state-of-the-art, evidence-based strategy for elimination.

## Transmission and Prevention

More than 90% of HIV transmission in the Philippines is through sexual contact.<sup>2</sup> Demographics have changed substantially over the last decade. From a majority of cases from heterosexual transmission, over 80% of new cases diagnosed in 2011 were in men-who-have-sex-with-men (MSM).<sup>2</sup> This shift from heterosexual to MSM transmission may have exacerbated the increase in numbers due to the fact that circumcision has a minimal predicted impact on MSM transmission in contrast to heterosexual transmission.<sup>7</sup> Age at time of diagnosis has likewise declined from a majority in the 30-34 age group, down to the 25-29 age group.<sup>2</sup>

Prevention of HIV in the Philippines is severely hampered by low condom use.<sup>1</sup> This is in part due to religious pressure from the Catholic Church.<sup>8</sup> 81% of Filipinos are Roman Catholic.<sup>9</sup> Attempts to pass a reproductive health bill in the local legislature were met with widespread protests, including threats to excommunicate the president.<sup>8</sup> Because condoms are part of artificial contraception strategies in the Philippines, efforts to prevent HIV through its use have suffered. One village council required prescriptions for persons seeking to buy condoms,<sup>10</sup> and lawmakers cut out all government funding in the 2011 budget for family planning, including money allocated for the purchase of condoms.<sup>11</sup> These and other cultural factors including machismo and misinformation have led to the lowest rate of condom use in Asia.<sup>1</sup>

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### BPOs and Call Centers

The rise in HIV transmission has been linked to the local call center industry.<sup>12</sup> The Philippines overtook India as the largest provider of workers for business product outsourcing (BPOs), and a substantial number of young Filipinos are working in what has been locally termed a “sunshine industry”.<sup>13</sup> Because the BPO sector is seen as a high growth area of the economy, linking the HIV problem with it has been a politically thorny issue.<sup>12</sup> Three studies have looked at this phenomenon;<sup>14,15,16</sup> only one of which performed prospective HIV testing on the subjects.<sup>16</sup>

An International Labour Organization-funded cross-sectional study on risk behaviors in call centers found a high prevalence of risky behaviors among call center workers including early sexual activity, low condom use, and promiscuity. 25% of male call center respondents admitted paying for sex; while 10% were paid for sex. In the youngest age group from 15 to 24 years of age, 70% of women and 90% of men were sexually active; and 73% of males and 80% of females did not use condoms in their last sexual encounter.<sup>14</sup>

An unpublished but heavily publicized University of the Philippines Population Institute study compared sexual behaviors of call center workers to non-call center workers, noting significantly higher rates of risky sexual activities in the former. This study showed 150% higher rate of engagement in risky sexual behavior in male call center workers compared to their non-call center counterparts; and a 450% higher rate of engagement in risky sexual behavior in female call center workers compared to their non-call center counterparts. Call center workers were more likely to have casual sex compared to non-call center counterparts (40% versus 27%) and male call center workers had more sexual partners versus non-call center workers (3.2 versus 2.2).<sup>15</sup>

A study involving a cross-sectional sample of 406 MSM in Manila identified employment in a call center as a significant risk factor for testing positive for HIV. 48 persons (12%) tested positive for HIV. While one-third of those tested indicated that they worked in the call center industry, one half of those who tested positive reported being call center agents.<sup>16</sup> Although more studies are needed to corroborate these findings, a generalized HIV epidemic can severely affect economic growth by disproportionately affecting the BPO sector.

### Discussion

Local guidelines for treatment of HIV are based on an administrative order from the Department of Health, and are patterned after World Health Organization and the United States Department of Health and Human Services HIV treatment guidelines. Patients are started on antiretroviral therapy at CD4 counts less than 200 cells/mL, and are offered optional therapy below 350 cells/mL.<sup>17</sup> These guidelines are not supported by local data, and are

extrapolated from foreign guidelines. These guidelines are not evidence-based.

Kitahata et al.<sup>18</sup> showed that starting highly active antiretroviral therapy (HAART) for HIV patients at CD4 counts above 500 cells/mL halves the risk of death compared to those who start below that threshold. Local guidelines are silent on starting therapy above a CD4 count of 350 cells/mL. Moreover, the recommended first-line regimen of nevirapine plus zidovudine and lamivudine are associated with high rates of adverse drug reactions, including severe anemia requiring transfusion, lactic acidosis, and Stevens-Johnson syndrome.<sup>19</sup> Actual cost of first line HAART is Philippine Peso 7,950 (US\$185) a year, while a more tolerable second-line regimen (tenofovir, lamivudine and efavirenz) costs Philippine Peso 11,520 (US\$268) a year (Department of Health, personal communication). Given the high rate of side-effects, initiating HAART at higher CD4 counts will have to take into account the cost-effectiveness of giving more patients a more toxic initial regimen. While a front-loaded strategy will be more expensive at the outset, the long-term impact on decreased morbidity and mortality will likely make early HAART cost-effective.

HPTN 052 recently showed that early treatment of HIV in sero-discordant couples leads to a decrease in relative risk of transmission by 96%, and a relative reduction of 41% in HIV-1 related clinic events.<sup>20</sup> This study provides a compelling rationale for a test-and-treat strategy in which patients diagnosed with HIV are immediately offered treatment regardless of CD4 count. Unlike the promotion of condom use, treatment for prevention is unlikely to raise strong religious objections.

Case finding is the biggest challenge for utilizing test-and-treat. The Philippine AIDS Law (Republic Act 8504) requires opt-in testing - i.e., voluntary, written informed consent during the testing process - which may adversely affect testing access and participation.<sup>21</sup> The Centers for Disease Control since 2006 has recommended an opt-out approach to HIV testing wherein testing is performed after the patient is notified of the test unless he or she specifically declines.<sup>22</sup> A socio-psychological study by Young and his colleagues looking at HIV testing procedures showed that opt-out may increase testing rates for stigmatized diseases and lessen the effects of stigma in people’s reluctance to test.<sup>23</sup>

Changes in legislation and policy are likely required to properly implement a strong treatment for prevention program, and should go hand-in-hand with aggressive case finding and increased funding for antiretrovirals (ARVs).<sup>24</sup> Aggressive case finding should include provisions for comprehensive contact tracing, and an opt-out approach. Previous approaches to screening at-risk populations may need to be reexamined with the shift from predominantly heterosexual to the current MSM-driven epidemic. Utilization of social media and MSM networks may improve

targeted case-finding, but pilot studies still need to be performed to determine the effectiveness of these approaches locally.

Global Fund funding for HIV treatment and prevention in the Philippines ends in 2012. The government insurance program Philhealth has committed to continue funding antiretrovirals (ARVs) for existing patients, but the loss of funds for prevention services and condom supplies will not be covered.<sup>25</sup>

### Conclusion

Granich et al.<sup>26</sup> demonstrated through mathematical modeling that a universal test-and-treat strategy can have a major effect on severe generalized epidemics. Since there is strong evidence for clinical benefit for starting HAART at higher CD4 counts coupled with even stronger evidence for decreasing transmission, offering universal HAART to Filipino HIV patients at this early stage of the epidemic has the potential not only to clinically benefit the recipients but can serve to reverse and even eliminate HIV in the country. Given the low but accelerating numbers of HIV in the Philippines, such an approach is financially feasible and can serve as an efficient proof-of-concept in anticipation of a larger roll-out worldwide.

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