# **Research Paper**

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# Public Health and HIV/AIDS in Cambodia

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#### **Acronyms and Abbreviations**

AIDS – Acquired Immune Deficiency Syndrome

ANC – Antenatal Care

ART – Antiretroviral Therapy

CVD – Cardio Vascular Disease

FEW – Female Entertainment Workers

GFAMT – Global Fund for AIDS, Malaria, and Tuberculosis

HACC – HIV/AIDS Committee of Cambodia

HIV – Human Immunodeficiency Virus

HSP – Health Strategic Plan

MARP – Most At Risk Population

MDG – Millennium Development Goals

MoH – Ministry of Health

MSM – Men who have Sex with Men

NAA – National AIDS Authority

NASA – National AIDS Spending Assessment

NCHADS – National Centre for HIV/AIDS, Dermatology, and STDs

NDC – Non-Communicable Disease

NGO – Non-Governmental Organization

NSP – National Strategic Plan

PLHIV – People Living with HIV

RGC – Royal Government of Cambodia

RH – Regional Hospital

TB - Tuberculosis

UN – United Nations

UNAIDS – Joint United Nations Programme on HIV/AIDS

WHO – World Health Organization

#### **EXECUTIVE SUMMARY**

Cambodia has excelled in addressing the reduction of HIV amongst its population. Following its reduction of HIV rates from 2% of the adult population in 1998 to less than 0.9% in 2006, Cambodia is recognised as both a regional and world leader in reducing HIV prevalence.

The Ministry of Health's current '3.0' strategy aims to achieve practically zero new infections by 2020, through implementing a 'linked approach', recognised as an international best practice. This strategy introduces HIV testing, education, treatment and counselling as a routine process within maternal healthcare. This has the dual advantage of preventing most mother-to-child transmissions, thus reducing the HIV rate, and as Cambodia expands its maternal health care services, eventually screening practically every mother and child for HIV and providing treatment if necessary.

However, according to experiences in other countries, Cambodia's continued success depends upon reducing HIV transmissions amongst its most at risk populations, such as those involved in the sex industry and injecting drug users. This is crucial, as these high risk persons can transfer HIV to those considered low risk, through occurrences such as a man contracting HIV from a sex worker, and then passing it onto his wife. Addressing this issue has become more difficult since brothels were shut down, as sex workers are more difficult to target with crucial health services and education campaigns.

This paper examines: the present situation in Cambodia regarding HIV/AIDS; how HIV/AIDS issues vary across Cambodian society; Cambodia's public health policies towards this issue; best practices in dealing with this issue; and what Cambodia can do to continue its success in dealing with HIV/AIDS.

# I. INTRODUCTION

Public health involves viewing health issues from a general population level perspective, rather than from an individual level. From this perspective, health problems are examined in terms of the costs and benefits that can be brought to enhance the quality of life for all people rather than to a specific individual. As such, efficiency and cost benefits are of crucial importance in public health, because such factors will determine how much of the population can be covered by a certain policy<sup>1</sup>.

Public health policy aims to improve the health of families and communities through promotion of healthy lifestyles, disease and injury prevention programmes and by the detection and control of infectious diseases. Overall, public health is concerned with protecting the health of entire populations, and deals with health issues from a population based perspective. Populations can be as small as a local neighbourhood, or as big as an entire country or region of the world<sup>2</sup>.

Health has a significant impact on development. When large portions of a population are in poor health, this can result in: their reduced ability to work; family members missing work to take care of them and; increased expenditures to support sick family members. Public health initiatives target the health of large groups and addresses the most critical health issues affecting them. By reducing disease among large groups of people they are better able to attend work and school, and to invest and contribute to the economic and social development of a country.

Cambodia has received international recognition for its success in reducing Human Immunodeficiency Virus (HIV) rates. Cambodia has more than halved the HIV rate in the country

<sup>&</sup>lt;sup>1</sup> CDC Foundation. "What is Public Health?" Accessed: July 10, 2013. <u>http://www.cdcfoundation.org/content/what-public-health</u> <sup>2</sup> Ibid.

since it peaked at 2% of the adult population in 1998 to less than 0.9% in 2006<sup>3</sup>. The Royal Government has set a goal of having no new HIV infections in country by 2020<sup>4</sup> and is currently a regional leader in the provision of HIV/AIDS programmes.

Cambodia faces challenges in addressing HIV rates among "at risk" populations, such as sex workers, gay men and injecting drug users. Cambodia will need to continue to build on the advances it has made in health care improvement, and address emerging public health issues in order to continue to increase development and to meet its health related goals<sup>5</sup>.

In Cambodia, the health system has undergone several periods of change. The current health system began to develop in 1993 with contributions from private donors and international non-governmental organizations (NGO). Malnutrition, malaria, tuberculosis, and diarrheal diseases were seen as the most important public health problems in the early 1990s<sup>6</sup>. In the last decade Cambodia has made substantial progress on improving the health care system and addressing public health issues in the country. Cambodia is expected to meet or exceed all of its health related Millennium Development Goals (MDG)<sup>7</sup>. The most significant progress has been made on MDG4, child mortality, and MDG6, HIV/AIDS, malaria, dengue fever and tuberculosis<sup>8</sup>.

Despite these improvements, Cambodia continues to face challenges in public health. Although Cambodia's health indicators currently rank ahead of other low-income countries, the country lags behind many of its regional counterparts<sup>9</sup>. For example, Cambodia has one of the highest levels of maternal mortality in the region, and infant mortality rates have remained stagnant over the last five years<sup>10</sup>.

This paper will offer an overview of Cambodia's public health policy regarding HIV/AIDS and applicable lessons from international experience in the following sections. Section III will offer an overview of the historic and current status of HIV/AIDS in Cambodia. It will also provide a brief summary of other significant public health concerns in the country such as: malaria, dengue fever tuberculosis and diabetes. Section IV will examine how HIV/AIDS differs between different sectors of Cambodia's communities, and how the public health response needs to be tailored to this accordingly. Section V will investigate Cambodia's public health response to HIV/AIDS. Section VI will detail global and regional best practice public health policy for dealing with HIV/AIDS. Finally, section VII will include a series of recommendations to further improve Cambodia's public health policy towards HIV/AIDS.

<sup>&</sup>lt;sup>3</sup> WHO, "THE WORK OF WHO IN THE WESTERN PACIFIC REGION, 2007–2008" (Geneva: WHO, 2008), http://www2.wpro.who.int/NR/rdonlyres/69F4E71F-9705-446B-8578-CD51AC11B71A/0/04dcc.pdf.p. 15.

<sup>&</sup>lt;sup>4</sup> National Center for HIV/AIDS, Dermatology and STD (NCHADS), "Conceptual Framework on Virtual Elimination of New HIV Infections in Cambodia by 2020 Cambodia 3.0" (Phnom Penh: NCHADS, 2010),

September%202012.pdf. p. 22.

<sup>&</sup>lt;sup>5</sup> UNAIDS Efficient and sustainable HIV responses: Case studies on country progress." (Switzerland, January 2013).

<sup>&</sup>lt;sup>6</sup> McGrew, Laura, "Health Care in Cambodia," Cultural Survival Quarterly, 14(3): 1990, accessed September 3, 2013. <u>http://www.culturalsurvival.org/publications/cultural-survival-quarterly/cambodia/health-care-cambodia</u>

<sup>&</sup>lt;sup>7</sup> Royal Government of Cambodia, Ministry of Planning, "Achieving Cambodia's Millennium Development Goals," (Phnom Penh, Cambodia, 2010), 7.

<sup>&</sup>lt;sup>8</sup> Ibid.

<sup>&</sup>lt;sup>9</sup> National Institute of Public Health, "Literature Review of the Cambodian Health Care System: Strengths, weaknesses, and future research opportunities," September 23, 2012, accessed: June 15, 2013, <u>www.niph.org.kh/niph/images/publications/sep-2012/literaturereview-of-healthcaresystem-in-cambodia.pdf</u>. pp. 15-6.

<sup>&</sup>lt;sup>10</sup> USAID and CDC Foundation, "Cambodia Global Health Initiative Strategy," (Phnom Penh, Cambodia, September 9, 2011), accessed: August 13, 2013, <u>http://www.ghi.gov/whereWeWork/docs/CambodiaStrategy.pdf</u>, 2.

#### II. THE STATUS OF PUBLIC HEALTH CONCERNS AND HIV/AIDS IN CAMBODIA

#### 1. THE CAMBODIAN HEALTH CARE SYSTEM

The Cambodian health care system continues to grow and develop with investments from the Cambodian Government and external donors. It remains a complex mix of private and public health care options, and the unevenness in the quality of service can make it challenging for citizens to navigate the system and access the care they need.

Cambodian health care services and funding is delivered through three major channels: government, Non-Governmental Organizations and system level donors, and the private sector (private clinics, shops and pharmacies, and traditional healers). Health care spending by the Cambodian Government is 5.9% of GDP<sup>11</sup>. Access to health service has been improved since the late 1990s by increasing the number of health clinics and hospitals, improving referrals between clinics and hospitals, and increasing the number of trained health care providers (doctors, nurses, and community health volunteers)<sup>12</sup>. However, at present, only 21.3% of health expenditures are from the government<sup>13</sup>, down from 32% in 2004<sup>14</sup>, while 73.3% of national health expenditures are out of pocket payments from patients<sup>15</sup>. A lack of trained health care professionals also presents a challenge – Cambodia has only 0.23 physicians per 10,000 of population, a ranking of 148 out of 192 countries<sup>16</sup>.

Key issues continue for the Cambodian health care system due to the challenges of: effectively integrating the wide variety of health service options available at different jurisdictional levels; providing effective regulation of health service providers at all levels; and the disparity in access to quality services across a large country with a highly rural population. Though access to publicly funded health services is growing slowing – there was a 7.3% increase in Cambodians using publicly funded health services for first treatment between 2005 and 2010 – the role of NGOs and private practitioners continues to present challenges<sup>17</sup>. NGOs and other donors often focus their programmes and funding on particular diseases and health issues which can result in difficulties integrating these programmes into the wider system. There are currently an estimated 100 donors and NGOs supporting health services in Cambodia through either direct programme delivery or technical cooperation<sup>18</sup>.

Represented in figure 1 below, the 2010 Cambodian Demographic and Health Survey (DHS) noted that 28.9% of the population sought first treatment at public facilities, whereas 56.8% accessed private care, and 5.4% used non-medical services such as shops or markets<sup>19</sup>. This is a noteworthy change from the 2005 DHS in which only 21.6% of the population sought first treatment at public facilities, 48.2% accessed private care, and 20.8% used non-medical services such as shops or markets<sup>20</sup>. Within the public sector, people in rural areas primarily utilised health centres or health

<sup>&</sup>lt;sup>11</sup> National Institute of Public Health, "Literature Review of the Cambodian Health Care System: Strengths, weaknesses, and future research opportunities," September 23, 2012, accessed: www.niph.org.kh/niph/images/publications/sep-2012/literaturereview-of-healthcaresystem-in-cambodia.pdf, 3.

<sup>&</sup>lt;sup>12</sup>Ibid.

<sup>13</sup> Ibid.

<sup>&</sup>lt;sup>14</sup> World Bank, "World Bank Data Bank," 2014, http://databank.worldbank.org/data/home.aspx.

<sup>&</sup>lt;sup>15</sup> ibid. 15-16.

<sup>&</sup>lt;sup>16</sup> ibid., 4.

<sup>&</sup>lt;sup>17</sup> The provision of know-how in the form of personnel, training, research and associated costs... covering contributions to development primarily through the medium of education and training... whose primary purpose is to augment the level of knowledge, skills, technical know-how or productive aptitudes of the population (Land, p4); Land, Anthony M., "Developing Health Sector Capacity in Cambodia: The Contribution of Technical Cooperation - Patterns, Challenges and Lessons," Council for the Development of Cambodia, May 2008,12.

<sup>&</sup>lt;sup>18</sup> The provision of know-how in the form of personnel, training, research and associated costs... covering contributions to development primarily through the medium of education and training... whose primary purpose is to augment the level of knowledge, skills, technical know-how or productive aptitudes of the population (Land, p4); Land, Anthony M., "Developing Health Sector Capacity in Cambodia: The Contribution of Technical Cooperation - Patterns, Challenges and Lessons," Council for the Development of Cambodia, May 2008,12.

 <sup>&</sup>lt;sup>19</sup> National Institute of Statistics, Directorate General for Health, and ICF Macro, "Cambodia Demographic and Health Survey 2010," Phnom Penh, Cambodia and Calverton, Maryland. USA: National Institute of Statistics, Directorate General for Health, and ICF Macro, 2011, 32.
 <sup>20</sup> National Institute of Statistics, Directorate General for Health, and ICF Macro, "Cambodia Demographic and Health Survey 2010," Phnom

Penh, Cambodia and Calverton, Maryland, USA: National Institute of Statistics, Directorate General for Health, and ICF Macro, 2011, 34.

clinics (18% of total)<sup>21</sup>, whereas in urban areas people more often sought treatment in national hospitals (12% of total). Within the private sector, private clinics were most frequently used for care in both urban and rural areas<sup>22</sup>.



Figure 1 – Percentage of treatment accessed by the ill or injured<sup>23</sup>

As part of the government's decentralization work the MoH has adopted a stewardship role – one of setting the overall strategic directions and priorities of the health system while giving increasing responsibility for health services, including health promotion, education and delivery to provincial and commune level partners. The Health Strategic Plan 2 (HSP2) outlines the broad health system priorities of providing health prevention, cure, and promotion of health care that are aligned with "nationally accepted principles, standards and clinical guidelines"<sup>24</sup>. A prescribed set of services are provided at the local level through health centres which cover population bases ranging from 8,000 to 12,000 people<sup>25</sup>.

# 2. HIV/AIDS AND AVAILABLE TREATMENT PROGRAMMES

The human immunodeficiency virus (HIV) infects cells of the immune system, destroying or impairing their function. Infection with the virus results in the progressive deterioration of the immune system, leading to "immune deficiency." The immune system is considered deficient when it can no longer fulfil its role of fighting infection and disease. Infections associated with severe immunodeficiency are known as "opportunistic infections", because they take advantage of a weakened immune system. Though HIV cannot be cured, it can be managed effectively over the long-term with the use of Antiretroviral Therapy (ART)<sup>26</sup>.

HIV is most commonly treated with antiretroviral therapy (ART) which inhibits the HIV virus from growing and spreading. ART is most effective when started as soon as possible after diagnosis. It is

<sup>&</sup>lt;sup>21</sup> Health centres are primarily responsible for delivering primary care, and work closely with Village Health Volunteers who are responsible for outreach activities and supporting access to primary care services. Health centres also provide referrals to higher-level health service facilities, such as Regional Hospitals (RH) that offer more comprehensive and complex health services. The HSP2 also aims to more fully integrate private health care providers into the local and national systems. This effort is focused on ensuring that these providers meet consistent and reliable clinical service delivery standards. See National Institute of Public Health, 22.

<sup>&</sup>lt;sup>22</sup> National Institute of Public Health, op. cit. p 25.

<sup>&</sup>lt;sup>23</sup> National Institute of Statistics, Cambodia Demographic and Health Survey 2010.

<sup>&</sup>lt;sup>24</sup> Health Strategic Plan, xi.

<sup>&</sup>lt;sup>25</sup> National Institute of Public Health, 22.

<sup>&</sup>lt;sup>26</sup> "WHO | 10 Facts on HIV/AIDS," WHO, accessed January 21, 2014, http://www.who.int/features/factfiles/hiv/en/index.html.

given as a combination of two or three drugs. With good ART treatment, patients can lead much longer and healthier lives and are much less likely to transmit the HIV virus, which

is especially important for pregnant women who often pass the virus to their child. With proper management, HIV is increasingly being treated as a chronic medical condition rather than as a life threatening disease. In Cambodia data shows that up to 95% of HIV and AIDS patients are receiving ART<sup>27</sup>. This has led to a decrease in transmission rates, especially from mothers to children due to the incorporation of HIV screening and ART treatment in antenatal care (ANC) clinics<sup>28</sup>.

As can be seen by the decrease in the prevalence of HIV amongst the adult population to less than 1%<sup>29</sup>, the Cambodian Government has made significant efforts to address the HIV epidemic in Cambodia. The quality of care and access to care have improved, and the Cambodian public has much better awareness regarding HIV and how it is transmitted than they did 10 years ago<sup>30</sup>. Under the MoH several agencies have been established to improve awareness of HIV and AIDS in Cambodia, including the National AIDS Authority (NAA), and the National Centre for HIV, AIDS, Dermatology and STIs (NCHADS). NGOs also play a significant role in delivering HIV and AIDS care and in monitoring the spread of the disease in Cambodia. Significant funders include the World Health Organization, the Global Fund, the American Centre for Disease Control, and the UNAIDS program.

The HSP2 outlines the following HIV-related goals:

- 75% of HIV positive pregnant women receiving ART by 2015<sup>31</sup>; and
- More than 85% of HIV positive people receiving antiretroviral combined therapy by 2015<sup>32</sup>.

#### 3. CURRENT HIV/AIDS RELATED CHALLENGES

Cambodia is faced with a variety of challenges in their efforts to continue to reduce the spread of HIV and its associated mortality rates in order to reach its goal of no new HIV infections by 2020<sup>33</sup>. These challenges include: the health and socio-economic obstacles faced by patients and their families; and the lack of reduction of HIV amongst high-risk population groups.

A significant challenge to the management of HIV is the high presence of tuberculosis (TB) as a comorbidity factor (one patient with 2 or more diseases at the same time). People living with HIV are between 20-37% more likely to contract TB than the general population<sup>34</sup>. TB is the most common cause of AIDS-related deaths accounting for one quarter of all deaths among HIV-infected persons. 2011 data shows that 32.7% of Cambodians with both diseases are receiving treatment for both conditions<sup>35</sup>. Increased attention to this problem has yielded positive results – in 2009 6.1% of Cambodian TB patients were HIV positive, a reduction from 10% in 2005 and 7.8% in 2007<sup>36</sup>. An ongoing challenge with this particular co-morbidity is the complexity of the drug regimen. The more complex the drug regimen, the higher the rates of non-compliance (i.e., patients taking drugs for more than condition have more difficulty adhering to the drug regime), which increases the difficulty in addressing this problem<sup>37</sup>.

<sup>&</sup>lt;sup>27</sup> WHO, "Data on the HIV/AIDS Response: Antiretroviral Therapy Coverage by Country" (Genva: WHO, 2013), http://apps.who.int/gho/data/node.main.574?lang=en.

<sup>&</sup>lt;sup>28</sup> UNAIDS. 2013. UNAIDS Report 2013: HIV in Asia and the Pacific. Geneva: UNAIDS. Accessed 17/12/2013 from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2013/2013 HIV-Asia-Pacific en.pdf. p. 85.

<sup>&</sup>lt;sup>29</sup> WHO, "THE WORK OF WHO 2007-2008." p. 15.

<sup>&</sup>lt;sup>30</sup> Oum Sopheap, interview by Malika Chea, Khana Offices, Phnom Penh, August 14, 2013.

<sup>&</sup>lt;sup>31</sup> Ministry of Health. 2009. "Health Strategic Plan: 2008-15," Ministry of Health, Phnom Penh, Cambodia, 2008. p.24.

<sup>&</sup>lt;sup>32</sup> ibid, 25.

<sup>&</sup>lt;sup>33</sup> Oum Sopheap.

<sup>&</sup>lt;sup>34</sup> Reuben Granich et al., "Prevention of Tuberculosis in People Living with HIV," *Clinical Infectious Diseases: An Official Publication of the Infectious Diseases Society of America* 50 Suppl 3 (May 15, 2010): S215–222, doi:10.1086/651494.

<sup>&</sup>lt;sup>35</sup> Cambodia Country Progress Report, 33.

<sup>&</sup>lt;sup>36</sup> ibid.

<sup>&</sup>lt;sup>37</sup> Martin, Leslie R. et al. "The challenge of patient adherence," Therapeutics and Clinical Risk Management 1(3), 2005, 189-199, 190.

NGOs such as Médecins Sans Frontières have been on the leading edge in Cambodia in developing programmes to support these patients and thereby reduce the risk of the spread of drug-resistant diseases and increased spread of both tuberculosis and HIV by patients not taking their medicines correctly.

In addition to difficulties associated with HIV treatments, economic challenges are faced by households living with HIV. A 2010 study in Preah Sihanouk Province revealed that HIV positive households when compared with HIV negative households were more likely to have lower household incomes (41% lower), lower household expenditures (33% lower), lower assets, and education costs (42% lower)<sup>38</sup>. The provision of free anti-retroviral medication and related HIV health services means that although households with an HIV positive member are substantially poorer than the general population, their medical expenditure is also lower than average. However, the costs of transport to receive medical services, and funeral costs, are significantly higher for households with an HIV positive member<sup>39</sup>. Even when free ART was available for patients, this group of people in the study were still in a worse financial situation than households without HIV. This could be due to poorer health and a lower work status due to HIV. It is suggested that government and related agencies must go beyond supporting medical costs for HIV patients and "support living beyond health"<sup>40</sup> (e.g., where families are provided support to gain education and better job opportunities). Additionally, HIV positive patients tend to be less educated than people without HIV, which could further increase their poverty and difficulties in gaining treatment<sup>41</sup>.

## III. HOW DO HIV/AIDS ISSUES VARY ACROSS DIFFERENT SECTORS OF CAMBODIAN SOCIETY?

## 1. ABSENCE OF COMPARATIVE DATA FOR HIV RATES BETWEEN PROVINCES

Reliable and comparable data on HIV rates for each province has not been collected for over five years in Cambodia. The reason for this is that current best practice approaches emphasize viewing HIV rates for each sector of society, rather than on a geographical area. This is because research over the last 20 years has found that a person's social status, such as their levels of education, their job, their migration status or their levels of poverty, are what puts a person at a higher risk of contracting HIV, rather than which province they live in<sup>42</sup>. This has shown HIV/AIDS to affect at risk populations or sectors of society rather than affecting specific provinces or regions. This is because people in certain occupations and life styles find themselves at a higher risk of contracting HIV/AIDS, regardless of their geographical location<sup>43</sup>.

Because of this, conducting a province by province survey of HIV rates would be an inefficient use of resources, which would be more effectively utilised by targeting specific at-risk population groups, such as sex workers, or pregnant women who can receive treatment to prevent HIV being passed on to their child.

Therefore, it is more productive to asses HIV/AIDS issues through their affect upon different sectors of society, rather than across different locations. That being said, as some groups such as sex workers and injecting drug users, tend to be concentrated in cities, it is often the case that big cities have worse HIV/AIDS problems than other locations<sup>44</sup>.

<sup>38</sup> Nomoto, Marino, et al., "Socioeconomic Impact of HIV/AIDS on Households under Free Antiretroviral Therapy in Preah Sihanouk Province, Cambodia," Journal of Antiviral & Antiretroviral 5(1), 2013, 3.

<sup>41</sup> ibid., 2.

<sup>&</sup>lt;sup>39</sup> Ibid. <sup>40</sup> Nomoto, 5.

<sup>&</sup>lt;sup>42</sup> UNAIDS. 2013. UNAIDS Report 2013 : HIV in Asia and the Pacific. Geneva: UNAIDS. Accessed 17/12/2013 from: <u>http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2013/2013 HIV-Asia-Pacific en.pdf.</u> p. 13-15

<sup>&</sup>lt;sup>44</sup> Ibid. p, 15.

## 2. HIV RISKS FOR THE MOST AT RISK POPULATIONS (MARPS)

While the Cambodian Government has been successful in reducing the HIV prevalence and transmission rates amongst the general population, marginalized and at risk populations remain problematic. There has not been a comparable reduction in the HIV rates among at risk populations, which stands at 24.4% among people who inject drugs and at 13.9% among high risk entertainment workers<sup>45</sup>.

Most at risk populations (MARPs) are those individuals and groups whose behaviours and practices heighten their vulnerability to HIV/AIDS. These groups also have less access to HIV related care and education. MARP groups include sex workers, men who have sex with men (MSM), and drug users. These sub-populations exist in all societies and due to behavioural patterns they are at an increased risk of both acquiring and transmitting not only HIV, but also other associated illnesses such as hepatitis, and other sexually transmitted infections. Female entertainment workers (FEW) (including karaoke girls, and beer girls) - often referred to as "indirect sex workers" - are often engaged in sexual activity with clients as a bi-product of their work<sup>46</sup>. The pressures put on them to engage in sexual activity, high rates of alcohol and drug consumption, and multiple sexual partners who are less likely to practice safe sex (e.g. using condoms) increases the spread of HIV. Direct sex workers prostitutes - have larger numbers of sexual partners which increases HIV spread. MSMs also have higher rates of HIV often associated with a higher number of sexual partners and low condom use with those partners. MSM also demonstrate lower rates of HIV knowledge and lower HIV testing rates. Drug users, especially injecting drugs users, experience higher HIV rates due to engaging in sexual activities while under the influence of drugs and therefore taking fewer precautions, or in the case of injecting drug users, sharing needles which represent another method of HIV transmissions. All of these sub-populations are also marginalized. This means that due to social stigma and income inequality they have less access to HIV education, testing, and treatment. Additionally, tracking health data amongst these populations is challenging because it is often harder to find them. In addition, the stigma associated with their lifestyles can cause inaccurate reporting of their behaviours to health professionals (such as rates of condom use)<sup>47</sup>.

MARPs present challenges for Cambodia both in terms of retaining the accomplishments of the past decade in reducing HIV transmission rates and mortality, and in meeting the country's stated goals of having no new HIV infections by 2020 and having no HIV-related deaths<sup>48</sup>. The combination of continuing high risk behaviour among at-risk populations, recent changes in Cambodian legislation that reduces access to these populations by HIV programme staff, and a lack of direct programming to address HIV education, reduction and treatment all contribute to the HIV rates for these groups. Since the closing of brothels in 2008, direct sex workers have been pushed underground. Following the adoption of Cambodia's law on the prevention of human trafficking and sexual exploitation, a number of HIV service delivery NGOs reported sharp declines in the use of their anti-HIV services by sex workers<sup>49</sup>. Use of these services is seen as critical to controlling HIV rates and the Royal Government's National AIDS Authority is of the opinion that targeting entertainment workers through HIV testing and the provision of condoms and lubricant is the single more cost effective

<sup>49</sup>PREPFAR *Cambodia Operational Plan Report FY 2012* (Washington

http://www.pepfar.gov/documents/organization/212133.pdf. pp. 2-3.

DC.

2013),

<sup>&</sup>lt;sup>45</sup> UNAIDS. Efficient and sustainable HIV responses: Case studies on country progress. Switzerland, January 2013, 4. Accessed March 27, 2014. <u>http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2013/JC2450</u> case-studies-country-

progress en.pdf. Also see: National Centre for HIV/AIDS Dermatology and STDs (NCHADS) *HIV Sentinel Surveillance Survey.* s.l. :Ministry of Health, Kingdom of Cambodia, 2011.

 <sup>&</sup>lt;sup>46</sup> The National AIDS Authority, "Cambodia Country Progress Report: Monitoring the Progress towards the Implementation of the Declartion of Commitment on HIV and AIDs" (Phnom Penh: The National AIDS Authority, 2012), http://www.unaids.org/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/ce\_KH\_Narrative\_Report[1].pdf. p. 27.
 <sup>47</sup> UNAIDS, "Global Report: UNAIDS Report on the Global AIDS Epidemic of 2013" (Geneva: UNAIDS), accessed January 21, 2014, http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/UNAIDS\_Global\_Report\_2013\_en.pdf.
 <sup>48</sup> National Centre for HIV/AIDS, Dermatology and STD (NCHADS), *No New HIV Infections in Cambodia by 2020*. p. 28.

measure to control the epidemic<sup>50</sup>. The implementation of the new village and commune safety policy aimed at ridding communities of crime is having a similar effect. Fears of harassment or arrest are causing individuals at high risk of HIV infection to relocate to new and less visible locations, and ones with fewer services<sup>51</sup>. The lack of renewal of needle-exchange programmes<sup>52</sup> in 2011 caused a marked reduction in international funding for needle-exchange and other similar programmes to reduce HIV transmission amongst injecting drug users<sup>53</sup>.

Data on the rates of condom use among female entertainment workers are conflicting. While a 2010 UN report suggests that national usage rates among males are roughly 6%, and can reach rates as high as 15% in Phnom Penh<sup>54</sup>, a 2013 UN Women's report suggests that usage rates are as high as 50%<sup>55</sup>. The issue is further complicated by the distinction drawn within the broad category of female entertainment workers and direct sex workers (prostitutes) and indirect ones (beer girls, karaoke girls). The prevalence of HIV amongst each category is displayed below in figure 3. Additionally, as brothels in Cambodia have been closed, HIV programmes are finding it increasingly challenging to locate and provide services to direct sex workers. This group is at the highest risk of developing HIV and acquiring other STIs and passing them on to their clients<sup>56</sup>. Indirect entertainment workers have not been criminalized, nor have their work places been closed and therefore they still have access to HIV education and health services<sup>57</sup>. However, indirect sex workers average a lower number of clients per week and therefore have lower HIV and STI rates<sup>58</sup>. The threshold of seven or more clients a week dramatically increases the rates of HIV transmission<sup>59</sup>.



HIV Prevalence among FEW with More than 7 Clients per week, Compared to FSW by Duration of Work

FSW: Female sex worker FEW: Female entertainment worker

Figure 2. HIV rate among Female Entertainment Workers (FEW) and Female Sex Workers (FSW)<sup>60</sup>

There is a risk that indirect sex workers are less likely to report condom use and are potentially more susceptible to lower condom use due to clients paying extra for unprotected sex and due to the high

<sup>54</sup> UNAIDS, Sex Work and HIV. Accessed: www.aidsdatahub.org/dmdocuments/sex\_work\_hiv\_cambodia.pdf.

55 Henderson, Simon, "UN Report Says 1 in 5 Cambodian Men Have Raped, Cambodia Daily," September 11, 2013, accessed: http://www.cambodiadaily.com/archive/un-report-says-1-in-5-cambodian-men-have-raped-

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<sup>56</sup> Oum Sopheap.

<sup>&</sup>lt;sup>50</sup> The National AIDS Authority, "Cambodia Country Progress Report." p. 40.

<sup>&</sup>lt;sup>51</sup> PEPFAR, 8.

<sup>&</sup>lt;sup>52</sup> Cambodia previously had 2 needle exchange programmes that targeted roughly 1,200 of the country's estimated 2,000 injection drug users. Needle exchange programmes enable injection drug users to trade in their used needles for new and clean ones, while also accessing counselling and support services. The use and sharing of dirty needles is a major contributor to the spread of HIV among injection drug users. <sup>53</sup> PEPRAF, 8 UNAIDS, 2010. Sex Work and HIV. Cambodia. Accessed August 2012 from:

<sup>57</sup> ibid.

<sup>&</sup>lt;sup>58</sup> National Center for HIV/AIDS Dermatology and STD, 7.

<sup>59</sup> Ibid.

<sup>&</sup>lt;sup>60</sup> PEPRAF, UNAIDS, Sex Work and HIV.

rates of alcohol and drug use associated with their work<sup>61</sup>. Alcohol and drugs are prevalent in direct and indirect sex work in Cambodia, which also calls into question the accuracy of already suspect self-reported data on condom use<sup>62</sup>. Additionally, pregnancy rates among sex workers are as high as 31%<sup>63</sup> making it unlikely that the reported 98% condom use among female sex workers<sup>64</sup> is accurate.

While MARPs, such as sex workers, drug users, and MSM, are the "main drivers of the "epidemic" they are not in any way isolated from transferring HIV to the wider population<sup>65</sup>. An example of this could be a man who visits sex workers then passing HIV onto his wife. Furthermore, data indicates that there are those in the general population who are clients of entertainment workers, occasional drug workers, and MSMs. Therefore, according to UNAID's analysis, unless programmes that target at risk populations are aggressively pursued, Cambodia will not be able to meet its 2020 HIV commitments even among the general population as the disease will continue to spread between the general and at risk populations<sup>66</sup>.

High-risk urban males, such as those who engage in multiple sexual partnerships , are also a population that may help re-fuel the HIV epidemic by serving as a "bridge" for HIV transmission between entertainment workers and lower-risk women (such as wives) in the general population. As men have begun to recognize the risks associated with brothel-based sex, and with the Royal Government's efforts to close brothels, men are now seeking sex from an expanding population of entertainment workers in a variety of settings – including massage parlours, karaoke clubs, beer gardens, and on the streets<sup>67</sup>.

There has also been a rise in HIV transmissions in two population groups traditionally not considered "at risk" – youth, and long-term heterosexual couples. A 2013 report by KHANA, a prominent NGO providing HIV related services in Cambodia<sup>68</sup>, stated that recently there has been a noticeable rise in HIV transmission among young Cambodian people<sup>69</sup>. A variety of factors are contributing to the increase , including their increased use of alcohol and drugs<sup>70</sup>. Additionally, while Cambodia has been successful in promoting the use of condoms by commercial sex/entertainment workers and those who procure their services (87%)<sup>71</sup>, among heterosexual partners in stable relationships condom use remains at roughly 50%, which is depicted below in figure 3. There continues to be increases in HIV transmission between heterosexual partners<sup>72</sup>. It is worth noting that women are twice as likely (80%) to report condom use in their last sexual encounter as men (39.4%)<sup>73</sup>.

- <sup>65</sup> UNAIDS, "Global Report: UNAIDS Report on the Global AIDS Epidemic of 2013." p. 43.
- 66 Ibid.
- <sup>67</sup> PEPFAR, 3.

- <sup>69</sup> Oum Sopheap.
- 70 ibid.
- <sup>71</sup> ibid.

<sup>&</sup>lt;sup>61</sup> Oum Sopheap.

<sup>&</sup>lt;sup>62</sup> Weinhard, Lance, et al. "Reliability and Validity of Self-Report Measures of HIV-Related Sexual Behavior," Archives of Sexual Behavior, 27(2): 1998, 155–180.

<sup>&</sup>lt;sup>63</sup> Oum Sopheap.

<sup>&</sup>lt;sup>64</sup> Ministry of Health (MoH). 2011. Evaluation of the STI Management Protocol for Female Sex Workers in Cambodia. Accessed 27/02/2014 from: https://www.nchads.org/Publication/Others/STI%20validation%20study%20report%20en-v3.pdf

<sup>&</sup>lt;sup>68</sup> http://www.khana.org.kh/page.php?mainid=26

<sup>&</sup>lt;sup>72</sup> National Center for HIV/AIDS Dermatology and STD. p. 17.

<sup>&</sup>lt;sup>73</sup> National AIDS Authority. p. 25.



Figure 3. National Centre for HIV/AIDS Dermatology and STD, 2011<sup>74</sup>

#### IV. CAMBODIA'S PUBLIC HEALTH POLICIES TOWARDS HIV/AIDS

#### 1. FUNDING OF HIV RELATED PROGRAMMES

Under the guidance of the MoH, Cambodia has numerous prominent actors in the HIV field. These include the government run National AIDS Authority (NAA), and NCHADS. Local NGOs include Khana, and the HIV/AIDS Committee of Cambodia (HACC). Additionally, significant funding and programming is provided by international organizations such as UNAIDS, the Global Fund, and the World Health Organization (WHO). In Cambodia \$58,059,469 USD was spent on addressing HIV and AIDS in 2010<sup>75</sup>.

The NAA is the primary government-wide institution that leads and implements programmes for the prevention and control of AIDS in Cambodia. They are responsible for the development of all national policies and guidelines on HIV and AIDS, developing the national strategic plan for HIV/AIDS, and the overall coordination among all ministries, agencies, NGOs and funders<sup>76</sup>.

The NCHADS is the unit along with the MoH which is responsible for all health sector-specific HIV/AIDS and STD policies and strategies. They are responsible for programme management, provincial support, coordination with other partners in the health sector, guideline development for HIV/AIDS components, national health sector plan evaluation and dissemination of epidemiology, behaviour and effective STD/HIV/AIDS prevention and care information.<sup>77</sup>.

The Royal Government is the largest fund manager for HIV related services in Cambodia through the National AIDS Spending Assessment mechanism through which, in 2012, they made funding allocation decisions four roughly 50% of the total HIV-related spending in the country<sup>78</sup>. The Royal Government HIV-funding has increased from \$1.7 million in 2009 to \$5.6 million in 2011 and 2012. 45% of the Government's contribution finances the salaries of health care workers<sup>79</sup>. Despite this increased, Cambodia remains very dependent on international donors who still provide 89% of the total funding. The funding of Cambodia's HIV programmes and the expenditure of Cambodia's HIV budget, according to NCHADS data, are illustrated respectively in figures 5 and 6 below<sup>80</sup>.

<sup>&</sup>lt;sup>74</sup> National AIDS Authority.

<sup>&</sup>lt;sup>75</sup> Anastasiya Nitsoy, "National AIDS Spending Assessment: 2011-2012." National Centre for HIV/AIDS Dermatology and STDs, National AIDS Authority, and UNAIDS, (Phnom Penh, Cambodia, April 8, 2013). p. 5.

<sup>&</sup>lt;sup>76</sup> National AIDS Authority, accessed: <u>http://www.naa.org.kh/</u>.

<sup>&</sup>lt;sup>77</sup> National Centre for HIV/AIDS Dermatology and STDs, "Missions, Functions and Structure," accessed at: <u>http://www.nchads.org/index.php?id=25</u>.

<sup>&</sup>lt;sup>78</sup> National AIDS Spending Assessment, 11.

<sup>&</sup>lt;sup>79</sup> National AIDS Spending Assessment, 12.

<sup>&</sup>lt;sup>80</sup> Nitsoy, National AIDS Spending Assessment. p. 5

#### FUNDING OF HIV RELATED PROGRAMMES

HIV spending in Cambodia reached its peak in 2011 with over \$58 million USD being invested – totalling \$4.10 per capita, and \$746.00 per person living with HIV. In 2012 HIV funding was reduced to \$50.9 million USD. Despite this reduction it remains among the highest per capita in the region.<sup>81</sup>

	2009		2010		2011		2012	
Royal Government of Cambodia	\$1,703,403	3%	\$2,436,832	4%	\$5,644,947	11%	\$5,671,862	11%
Private	\$36,955	<1%	\$51,540	<1%	\$963,952	<2%	\$956,837	<2%
Bilateral organizations	\$15,565,137	29%	\$15,662,527	27%	\$15,713,795	29%	\$15,872,474	31%
International NGOs	\$9,119,295	17%	\$7,516,331	13%	\$3,736,224	7%	\$2,855,882	6%
GFATM	\$19,023,377	35%	\$22,711,245	39%	\$18,030,595	34%	\$20,027,132	39%
United Nations agencies	\$7,547,437	14%	\$8,382,652	14%	\$7,128,857	13%	\$4,320,352	8%
Other Multilateral organizations (excluding GFATM and UN)	\$612,307	1%	\$1,043,168	2%	\$1,745,621	3%	\$1,165,243	2%
International Rest of the World	\$127,286	<1%	\$255,175	<1%	\$254,654	<1%	\$57,619	<1%

Figure 4 National AIDS Spending Assessment, 2012<sup>82</sup>





#### 2. FINANCIAL SUSTAINABILITY OF CAMBODIA'S HIV RELATED PROGRAMMES

<sup>81</sup> National AIDS Spending Assessment, 9.

<sup>82</sup> Nitsoy, National AIDS Spending Assessment. p. 5

<sup>&</sup>lt;sup>83</sup> Nitsoy, National AIDS Spending Assessment. p. 5

The current model appears to be financially unsustainable. As illustrated above in figure 4, the Royal Government contributes 11% of funding, with the international community and NGOs providing the rest. However, international NGOs such as the UK-based Catholic Agency for Overseas Development are in the process of phasing out their HIV work in Cambodia, and the current round of Global Fund to Fight AIDS, Tuberculosis and Malaria funding ends in 2015<sup>84</sup>. Further, a 2010 assessment forecasts a resources gap of \$244.3 million USD over 5 years beginning in 2015<sup>85</sup>. It is likely that this funding gap will need to be addressed if the Cambodian Government is to meet its goal of no new HIV infections by 2020.

# V. WHAT ARE GLOBAL AND REGIONAL BEST PRACTICES IN ADDRESSING PUBLIC HEALTH AND HIV/AIDS CHALLENGES?

# 1. GLOBAL BEST PRACTICE HIV/AIDS PUBLIC HEALTH APPROACHES

Global best practices in addressing HIV/AIDS through a public health policy advocates linking HIV/AIDS programmes with Sexual and Reproductive Health (SRH) programmes<sup>86</sup>. The World Health Organisation recommends this approach, because much of the infrastructure needed for SRH can also be used to affect better HIV/AIDS outcomes at both a minimal price, and often achieving a better overall result as SRH measures already address some of the most vulnerable population groups in terms of HIV/AIDS<sup>87</sup>. For example, organisations such as UNAIDS advocates this approach of linking SRH programmes, which support widespread and effective use of protection during sex<sup>88</sup>. UNAIDS recognises this approach as a world best practice. This is because it is cheaper to run as it makes use of existing SRH programmes, and can also more effectively reach HIV target groups, who often already utilise an SRH service<sup>89</sup> Similarly, maternal and infant care and family planning can be linked to determining a person's HIV/AIDS status, which then allows their treatment, and prevention of epidemics<sup>90</sup>. A recent UNAIDS report advocates a female-focused approach to HIV/AIDS, as women and girls are often most at risk to the disease, have lesser economic ability to access medical treatment, and due to child bearing and sex work, are important to target as transmitters of the disease<sup>91</sup>. To improve this, UNAIDS advocates the following general steps<sup>92</sup>:

- 1. ending violence and inequalities suffered by women in general;
- 2. increasing HIV/AIDS testing, treatment and support available to women;
- 3. improving the education, understanding and access to information on HIV/AIDS;
- 4. increasing the economic autonomy of women; and
- 5. empowering women to lead efforts against HIV/AIDS.

#### 2. REGIONAL BEST PRACTICES HIV/AIDS PUBLIC HEALTH APPROACHES

<sup>&</sup>lt;sup>84</sup> Lauren Donaldson, CAFOD, in email message to author, Nov. 7, 2013.

<sup>&</sup>lt;sup>85</sup> National AIDS Authority, National Spending Assessment III: The financial resources for the comprehensive% multi-sectoral response to HIV/AIDS (2011-2015) in Cambodia, (Phnom Penh, Cambodia, 2010).

<sup>&</sup>lt;sup>86</sup> World Health Organisation. 2005. Sexual and Reproductive Health and HIV/AIDS: A Framework for Priority Linkages. Geneva: World Health Organisation. Accessed 17/12/2013 from: <u>http://whqlibdoc.who.int/hq/2005/WHO\_HIV\_2005.05\_eng.pdf</u>

<sup>&</sup>lt;sup>87</sup> Ibid. <sup>88</sup> Ibid.

<sup>&</sup>lt;sup>89</sup> Ibid.

<sup>&</sup>lt;sup>90</sup> Ibid.

<sup>&</sup>lt;sup>91</sup> UNAIDS (ONUSIDA). 2013. 5 Mesures en Faveur des Femmes dans le Cadre de la Lutte Contre le VIH dans l'Espace Francophone. Geneva: UNAIDS. Accessed 17/12/2013 from: <u>http://www.unaids.org/en/media/unaids/styleassets/images/microsite/JC2477</u> Fracophonie fr.pdf

<sup>92</sup> Ibid.

According to the UNAIDS Report 2013, between 2001 and 2012, new HIV Infections have decreased by 26% in the Asia/ Pacific<sup>93</sup> This report highlights the fact that it is at risk populations, rather than geographical regions, which need to be focused on in order to address HIV/AIDS in the region. However, in the Asia/Pacific, female sex workers are 29 times more likely to have HIV compared to all women. As sex workers tend to be more concentrated in cities, this inevitability makes certain cities a geographical hot-spot for a higher prevalence of HIV/AIDS<sup>94</sup>.The UNAIDS 2013 report identified the major at risk populations in the Asia and Pacific as:

- 1. injecting drug users;
- 2. female and male sex workers and their clients;
- 3. wives of persons who visit sex workers;
- 4. gay men and transgender persons;
- 5. migrants; and
- 6. prisoners.

Given the regional success over the last decade, the UNAIDS 2013 report finds that the best practice approach to further minimising the risk and damage of HIV/AIDS will be to better assist at risk groups in terms of access to preventative measures, such as condoms and clean syringes; testing for HIV/AIDS; and treatment and support of persons with HIV/AIDS<sup>95</sup>.

Although yet to achieve full HIV/AIDS testing, care and treatment of at risk groups, Cambodia represents regional best practices in a number of respects. In the early 2000's, Cambodia is credited with achieving a successful targeted intervention amongst sex workers, largely through education on HIV/AIDS leading to the adoption of widespread consistent condom use in the sector,<sup>96</sup> which averted a possible epidemic<sup>97</sup>. In line with UNAIDS recommendations above on *Global Best Practices*, Cambodia is a regional leader in implementing a strategy which links Sexual and Reproductive Health programmes with HIV/AIDS initiatives. In 2008, Cambodia's "Linked Response" – linking reproductive health with HIV/AIDS measures, resulted in an 80% testing coverage amongst pregnant women during its first year of trial operation in five districts. The programme has been rolled out nationwide since 2009<sup>98</sup>. In addition, Cambodia is a regional leader in the strategic use of antiretrovirals to treat persons at risk to reduce the spread of HIV/AIDS<sup>99</sup>, and is also a regional leader in achieving a coverage of over 50% for preventative measures against children contracting HIV<sup>100</sup>.

Cambodia's integration of HIV/AIDS efforts into the broader health system such as linking it to its reproductive health services, is seen as a best practice approach to dealing with HIV/AIDS from a public health standpoint<sup>101</sup>. From this perspective, it would seem reasonable that any measures to ensure the financial sustainability of this programme as well as its expansion, will continue to show benefits for persons at risk.

<sup>&</sup>lt;sup>93</sup> UNAIDS. 2013. UNAIDS Report 2013: HIV in Asia and the Pacific. Geneva: UNAIDS. Accessed 17/12/2013 from: <u>http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2013/2013 HIV-Asia-Pacific en.pdf</u>. p. 10. <sup>94</sup> Ibid. pp. 13-15.

<sup>&</sup>lt;sup>95</sup> Ibid. pp. 13-15. <sup>95</sup> Ibid. p. 17. <sup>96</sup> Ibid. p. 43. <sup>98</sup> Ibid. p. 85 <sup>99</sup> Ibid. p. 22. <sup>100</sup> Ibid. p. 52. <sup>101</sup> Ibid. p. 84.

# VI. WHAT PUBLIC HEALTH APPROACHES CAN CAMBODIA TAKE TO ENSURE CONTINUED SUCCESS IN DEALING

# WITH HIV/AIDS?

# LESSONS LEARNED

- 1. The RCG has had world class success in addressing HIV rates amongst the general population. However, in order to continue this success, the continuing high prevalence of HIV amongst the most at risk populations needs to be addressed.
- 2. Drug regime compliance for HIV can be complex because of the number of drugs required to be taken. The regimen becomes even more complex if the patient has co-morbidities such as tuberculosis. The more complex the drug regime, the lower the compliance rates. Groups such as youths, migrant works, and those without access to regular health services are especially vulnerable to drug regimen compliance.

This presents two distinct risks not only for the patients, but the communities in which they live. Firstly, not taking drugs properly can lead to the development of drug-resistant viruses. This is a fast-emerging issue across Southeast Asia. Myanmar, the Philippines, Indonesia, and Vietnam are already classified by the WHO as countries with high burdens of multi-drug resistant tuberculosis<sup>102</sup>. Furthermore, poor compliance with HIV drug regimes can lead to a strengthening of the HIV virus therefore making it much easier to transmit. This dramatically increases the risk of acquiring HIV for anyone engaged in intercourse or other fluid-sharing activities (such as injection drug use) with those who are not taking their drug(s) properly, especially as they often do not realize the increased risk they present.

There are a number of approaches that could be considered to deal with this situation. One approach could be to use basic mobile telephone technology whereby users would receive reminders to take their drugs or attend their medical appointments. Such mobile health programmes can also be used to supplement other public health campaigns, such as those promoting condom use by sending text messages providing health and safe sex education to recipients.

3. A more sustainable HIV management budget will eventually become necessary. This is because the HIV management budget currently relies on donors for 70 % of its annual funding. As donors begin to withdraw from Cambodia, the country faces a risk of not being able to maintain HIV related programming thereby risking an increase rather than further reductions in HIV rates and associated mortality<sup>103</sup>.

# VII. CONCLUSION

Cambodia has made significant progress in addressing the public health issues that most significantly affected the country as rebuilding began in the 1990s. The country has also been a regional leader in addressing the HIV crisis. Public health remains a priority for the Cambodian Government, and should continue to be one in order to foster boarder national development.

In order to meet the RGC's goals of improved health and the elimination of new HIV infections by 2020, a greater focus on at risk populations will likely be required in order to effectively address HIV.

<sup>&</sup>lt;sup>102</sup> World Health Organization.

<sup>&</sup>lt;sup>103</sup> VOICE OF AMERICA – KHMER, CAMBODIA RISKS LOSING FUNDING, GAINS AGAINST HIV: DOCTORS, PHNOM PENH, 22 DECEMBER 2010, ACCESSED: <u>HTTP://www.voacambodia.com/content/cambodia-risks-losing-funding-gains-against-hiv-doctors-112326939/1357646.html</u>.

To do so, a long term approach using Cambodia's "Linked Response" strategy could provide a suitable means for addressing the medical and social issues facing the at risk population groups.

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