Combat the “Big Three” infectious diseases in the Philippines

Tuberculosis (TB), malaria and HIV/AIDS are infectious diseases of both global and local importance. These “big three” infectious diseases kill around six million people worldwide each year. As of 2007, the Philippines has been ranked 9th among 22 countries worldwide with high burden of TB (WHO, 2008). TB is the country’s 6th leading cause of mortality and morbidity while malaria ranks 9th in terms of morbidity (DOH, 2006a). There has also been a steady increase in HIV/AIDS cases in the Philippines, with a total of 3,101 HIV/AIDS registered cases from January 1984 to January 2008 (NEC, 2008).

As part of its commitment to the UN Millennium Declaration, the Philippines is tracking its progress in the control of these major diseases up to 2015 in pursuit of Goal 6, specifically targets 7 and 8 (see Table 1). In line with these, more specific targets have been set in the National Objectives for Health (NOH) for 2005–2010.

### Table 1. MDG 6 and NOH targets for HIV/AIDS, malaria, and tuberculosis

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<tr>
<td>Target 7: Halt and begin to reverse the spread of HIV/AIDS by 2015</td>
<td>Contain the prevalence of HIV/AIDS among the general population</td>
<td>&lt;1%</td>
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<td>Contain the prevalence of HIV/AIDS among the high-risk or more vulnerable population</td>
<td>&lt;3%</td>
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<tr>
<td>Target 8: Halt and begin to reverse the incidence of malaria and other major diseases</td>
<td>Malaria</td>
<td>per 100,000 population</td>
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<td>70% reduction of morbidity in the Category A provinces</td>
<td>15</td>
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<td>50% reduction of mortality in the Category A provinces</td>
<td>0.05</td>
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<td>50% reduction of morbidity in the Category B provinces</td>
<td>2.6</td>
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<td>50% reduction of mortality in the Category B provinces</td>
<td>0.04</td>
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<td>TB</td>
<td>per 100,000 population</td>
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<td></td>
<td>Decrease TB mortality rate</td>
<td>19.6</td>
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<td></td>
<td>Decrease TB morbidity rate</td>
<td>137.3</td>
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<td></td>
<td>Increase case detection rate (CDR) for smear positive TB</td>
<td>70%</td>
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<td>Increase cure rate of smear-positive TB</td>
<td>&gt; 85 %</td>
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Source: DOH, 2005.

The following three strategic interventions, which have been found to be effective in combating malaria, are currently being implemented (Barat, 2006; MCP, 2008).

1. Early diagnosis through quality microscopy and rapid diagnostic tests in hard-to-reach areas, and prompt treatment with chloroquine + sulfadoxine-pyrimethamine (SP) combination as first-line drugs (DOH, 2002). In the face of increasing chloroquine and SP drug resistance, artemisinin-based combination therapy is being used in Global Fund malaria project sites and considered for scale-up nationwide (MCP, 2008).
2. Vector control through insecticide-treated nets (ITNs) and indoor residual spraying (IRS) for focal areas in endemic provinces (WHO, 2008).

3. Strengthening of local capacities on sustainable community-based control. This includes training of health personnel on social mobilization, advocacy with LGUs, resource mobilization, and instituting a local malaria surveillance system.

Malaria remains endemic in 57 of the 79 provinces in the country.

Despite the scaling-up of efforts to control malaria, malaria remains endemic in 57 of the 79 provinces in the country (Baquilod, 2008). Some NOH targets may not be achieved if efforts are not sustained.

While there are wide variations in the epidemiology of malaria and its vector across the country, socioeconomic and political conditions must also be considered. Specifically, the following factors have been determined to hinder control efforts:

1. Poor service delivery and low utilization of care remain as top challenges in controlling malaria in the country (Hanson et al., 2004). The general state of affairs is marked by minimal access to quality diagnosis and the poor compliance to treatment. One major factor contributing to this situation is the inadequate human resources, hobbled by the rapid turnover of health workers, and the limited training of field malaria personnel contribute to these challenges. Moreover, the inadequate health facilities, the high cost of logistics and poor distribution of supplies specifically in far-flung areas hinder service delivery (Belizario, et al. 2008). Misconceptions and poor community awareness on malaria also affect health-seeking behavior.

2. LGU ownership of the malaria program is a major issue. With the devolved setup, political commitment to support the services, supplies and reagents at the local levels is minimal. Interventions are usually donor-supported (Hanson et al., 2004; DOH, 2008).

3. Private involvement in malaria control, if present, is on a limited scale (WHO, 2006).

4. Resources are limited despite external support. In 2008, for instance, only 7% of the projected program requirements will be provided by GOP and 31% will be provided by external sources. LGUs should likewise provide minimal support.

5. There are also inconsistencies between the data reported by the Field Health Statistical Information System (FHSIS) and the WHO, which could confuse target setting and undermine current efforts (Figure 3).

The way forward: unevenness in the distribution of malaria burden can be approached through interventions adapted to the local situation.

Service delivery. Given variations in the distribution of malaria, as well as in the intensity and risk factors across and within provinces, there is a need to establish packages of interventions adapted to the local situation (Hanson et al., 2004). An area-based approach could be developed. Microstratification within the municipalities or barangays could improve the targeting and efficiency of interventions, particularly in the face of limited resources, this strategy should thus be strengthened.

In areas with poor coverage or limited resources, the task of improving service delivery could be facilitated by a stronger integration with other health programs (e.g., Integrated Management of Child Illness) and with school curricula (Belizario, 2008). LGUs can be empowered through capability-building of health workers on early detection and treatment. Intensive and innovative information, education and communication (IEC), as well as case-finding techniques (similar to the “suyod” strategy done in Agusan del Sur) can be replicated. Efforts must be focused on Category A provinces as these contribute to almost 90% of the malaria burden in the country.
evolved from The understanding of and approach to HIV/AIDS control has sexual transmission of HIV/AIDS, while 38% are men (MSM).

MARGs, the prevalence is less than 1%, of which 48% are transmigrant sex workers (MTWs) and 52% are men (MSM). Among MARGs, the prevalence is less than 1%, of which 48% are overseas Filipino workers (OFWs), while 38% are men-having-sex-with-men (MSM).

The understanding of and approach to HIV/AIDS control has evolved from a biomedical issue to a social development concern that demands multisectoral and inter-agency collaboration. This has led to the creation of the Philippine National AIDS Council (PNAC) in 1992, which oversees the country’s response to the HIV/AIDS problem. The PNAC is the planning, and policy-making body for the comprehensive and integrated HIV/AIDS prevention and control program in the Philippines. Policy guidelines have been developed and strengthened by the passage of the 1998 AIDS Law (Republic Act 8504) (DOH, 2008).

The National AIDS and STI Prevention and Control Program (NASPCP) of the DOH was established in 1988 to contain the transmission of HIV/AIDS and other reproductive tract infections, and mitigate their impact among the general population and the vulnerable groups (Baquilod, 2008b).

The AIDS Medium-Term Plan for 2005–2010 (AMTP IV) pursues the following strategies (PNAC, 2005):

1. Scaling-up and quality improvement of preventive interventions targeted to identified highly vulnerable groups;
2. Strengthening institutional and general public preventive interventions;
3. Scaling-up and quality improvement of treatment, care, and support services for people infected and affected with HIV/AIDS;
4. Integrating stigma reduction measures in the preventive treatment, care, and support services and in the design of management systems; and
5. Strengthening and institutionalization of management systems to support the delivery of HIV/AIDS information and preventive services.

HIV/AIDS prevention and control activities are funded largely through external sources. In 2005, only PhP 33.3 M of funds spent on HIV were from domestic sources (i.e., from the GOP and LGUs).

![Figure 4. Number of new HIV cases reported, Philippines, 1984–2007](Source: NEC, 2008.)
This amount represents only 18.6% of the total PhP 179.3 M spent on HIV for that year (PNAC, 2005a). Following this trend, the support from the GOF was only PhP 41 M in 2007 (15.27%) while PhP 228 M (84.76%) came from external assistance (i.e. from WHO, UNICEF, UNAIDS, UNFPA, and the Global Fund (GF) for TB, Malaria, AIDS). In particular, the total budget for three rounds of GF HIV projects is USD 20 M, broken down into: USD 6.7 M for Round 3 (2004–2009); USD 6 M for Round 5 (2006–2011); and USD 7.29 for Round 6 (2007–2012). Round 6 has the DOH as the principal recipient, for the first time, and involves the scaling-up of HIV efforts through enhanced voluntary counseling and testing, improved blood safety strategies, and treatment and care of people living with HIV/AIDS.

Failure to address the needs of the MARGs increases the country’s risk of an HIV/AIDS epidemic.

Despite multisectoral efforts and steady international support, the country is under continuing threat of an HIV/AIDS epidemic, breaking into the general population. The increasing number of MARGs has been attributed to the following causes (Baquilod, 2008b):

1. a thriving and largely unregulated sex industry, aggravated by low rates of condom use and high rates of sexually transmitted infections (STIs) among people-in-prostitution (PIP) and MSM;
2. an increasing number of infected returning OFWs, with limited interventions available to address this risk group; and
3. a rise in the number of injecting drug users (IDUs) who share needles, and reported cases of HIV infections among IDUs.

Failures in the interventions targeting MARGs may have resulted from the following (DOH, 2008):

1. Low level of awareness among MARGs. The 2005 Philippine Country Report to the UN General Assembly Special Session (UNGASS) has identified the urgent need to improve HIV/AIDS awareness among the MARGs. The NEC’s 2003 Technical Report established that only 66% of registered female sex workers, 55% of freelance female sex workers, 61% of MSM and 49% of IDUs can be described as HIV-knowledgeable (i.e., being able to "correctly identify five ways of preventing the sexual transmission of HIV and reject major misconceptions about HIV transmission," according to the UNAIDS criteria). This low level of knowledge on HIV/AIDS extends to the general population, particularly among the youth. (PNAC, 2006).

The 2002 Young Adult Fertility and Sexuality Study found that up to 27.8% of the respondents believed that AIDS was curable (PNAC, 2005b). Compared to previous years, there has been an upsurge in sexual risk behaviors among people in the 15-24 year old age group. These risky behaviors include earlier sexual initiation, unprotected sex, having multiple sexual partners, and paying or engaging in paid sex.

2. Limited HIV/AIDS surveillance efforts in the country, confined to sentinel sites. Hence, available data may not be reflective of the true magnitude and distribution of the problem.

3. Poor service delivery, mainly due to the limited capacity of service providers, and the inadequate facilities. These have severely limited the access of MARGs to preventive interventions.

4. Lack of effective governance. Despite the high HIV National Composite Policy Index of the Philippines (91.66% in 2005), the PNAC, as the HIV/AIDS highest policy-making body, faces many challenges in the implementation of the AIDS Law and the 4th AMTP. Among these are: the lack of visible champions; inefficient coordination among various agencies; the lack of focus in strategic direction; and the unclear roles of the PNAC members, the secretariat, and working committees.

The level of commitment of key stakeholders, particularly local chief executives, is poor. There are very few functional local AIDS councils to champion, fund, and oversee HIV prevention and control efforts at the local levels. This may be due to the misperception that HIV/AIDS is only a national concern and that LGUs are not expected to be actively involved.

There are severe resource limitations owing to the lack of a coherent financing strategy for the HIV program. The AMTP IV has a projected budget of PhP 116.5 M for 2008. However, the National Center for Disease Prevention and Control (NCDPC) allocated only PhP 10.7 M to NASPCP for 2008. From 2004 to 2007, PNAC’s annual budget remained unchanged at PhP 9.4 M, in spite of increasing resource requirements. The overall combined LGU budgets for HIV-AIDS in 2005 amounted to PhP 5.2 M, representing only 15.5% of the total domestic sources for that year (PNAC, 2005b). The budgets of Local AIDS Councils remain limited. For example, the cities of Dagupan, Laoag and La Union, identified as “model LACs” in 2005, had meager annual budgets of PhP 0.5 M, 0.1 M and PhP 0.2 M, respectively (PNAC, 2005a).

Strategies must focus on harmonizing Interventions to avert an impending epidemic.

Concerted efforts from various stakeholders need to be harmonized to fully implement the key strategies proposed in AMTP IV. Specifically, interventions must be directed to MARGs and in the areas where an HIV/AIDS epidemic is most likely to start (DOH, 2008).

Governance. For PNAC to be effective it needs strong and visible champions and leaders to take strategic action, mobilize resources, and coordinate agencies. PNAC, NASPCP and the National Epidemiology
Center (NEC) needs to discuss and clarify their respective roles. The PNAC secretariat should ensure regular communication and coordination of all agencies involved with respect to AMTP IV strategies, and push them to the proper direction to achieve the country’s goals. Adequate and regular staffing in these central bodies is essential.

HIV/AIDS control and prevention programs at the sub-national and local levels should be institutionalized. Local AIDS councils can be strengthened to advocate for budget support to fund local STI/HIV programs and surveillance. Ensuring that the STI/HIV programs of the provinces are prioritized in their province-wide investment plan for health (PIPH) could enhance the local ownership of the program.

Private sector efforts must be supported, integrated and harmonized into the overall strategy.

Service delivery. Intensive prevention models and surveillance among MARGs and areas identified to be at high risk should be implemented. These may include: the review and strengthening of the HIV-AIDS lectures during the pre-departure orientation seminar (PDOS) of OFWs, the conduct of in-depth social and behavioral studies among MARGs (based on the National HIV-AIDS Research Agenda and the recommendations of the Philippines HIV-AIDS country profiles), and the monitoring of HIV tests being done by private clinics mostly among OFWs, which represent 75% of tests conducted yearly in the country.

Regulation. The Philippine National AIDS Law should be reviewed and amended to address new developments in HIV testing technology (e.g., the use of rapid tests, the use of body fluids other than blood) as well as other concerns (e.g., improvements in PNAC’s structure and function).

Financing. Guided by the AMTP IV thrusts, it is essential financing recommendation is to develop an overall financing framework and strategy for the HIV/AIDS prevention and control program, which would promote sustainability of funding and reduces donor dependence. In addition to expanded surveillance activities, IEC and BCC, financing will be increasingly important in terms of the long-term drug requirements and the care of a growing pool of PLWHA.

PhilHealth’s OPD Package for HIV was already approved in 2006. This benefit package, worth Php 30,000 yearly (including anti-retroviral drugs) needs to be operationalized and fully implemented.

The LGUs should be encouraged to support the needs of social hygiene clinics and other HIV/AIDS program activities (e.g., local surveillance, IEC, behavior change communications). Local resources, including the private sector, must be mobilized to support community-based program to support IEC, trainings, and other auxiliary services.

Tuberculosis (TB)

MDG and NOH goals for TB control will most likely be achieved.

Significant achievements in TB control have been recorded in the past few years. A declining trend in TB mortality, incidence and prevalence has been observed from 1990 to 2005 (Figure 5), and WHO projections indicate that the Philippines is on track in terms of reaching the Stop TB Partnership’s challenging target of halving the TB prevalence and death rates by 2015 (Yu, 2008).

Figure 5. TB mortality, incidence and prevalence, Philippines, 1990–2005.

Note: Data from 1990-2005 are actual rates; data beyond 2005 are based on NTP/WHO projections.

The rate of DOTS coverage in the country has increased from 1996 onwards, reaching a maximum of 100% in 2003. Figure 6 shows that the case detection rate in the country has steadily increased from 1995 to 2005. The Philippines has reached the target of 85% treatment success rate and 70% case detection rate since 2004.

Improved implementation of the DOTS strategy by the National Tuberculosis Program (NTP),

Figure 6. Case detection rate, Philippines, 1995-2005

particular the reliable provision of drugs for the full course of treatment and the expansion of access to services in both public and private facilities nationwide, have accounted for these significant achievements (Alejandria and Zuniga, 2008).

According to the National TB Strategic Plan (2006–2010), the following are the key elements that have contributed to the success of the NTP (NTP, 2000):
1. Centrally procured drugs;
2. DOTS treatment guidelines which became part of the Comprehensive and Unified Program for TB Control (CUP);
3. Enhanced capacity of DOTS providers through DOTS certification training programs;
4. Establishment of the Private-Public Mix for DOTS (PPMDs);
5. Strengthening of the quality of sputum microscopy under DOTS through external quality assurance (EQA); and
6. Introduction of the PhilHealth DOTS package.

Local conditions have contributed to the uneven performance in TB control.

Despite the recent significant gains, there continue to be gaps and challenges that must be filled in order to achieve effective and sustained public health control of TB in the country. Foremost of these is the disparity that exists among the different localities. Figure 7 reflects the wide local variations among provinces in terms of case detection rates and cure rates. TB afflicts twice more males than females. Studies have shown the urban poor to be 1.6 more likely to have smear positive TB than the non-poor (Yu, 2008).

The main factors that contribute to the local variations in TB control include the following:
1. Inadequate expansion and monitoring of DOTS coverage.
   While the NTP has achieved 100% DOTS coverage it does not mean that the treatment is accessible to all. An HPDP working paper cites that the basis for claiming 100% DOTS coverage is questionable since the measure of DOTS coverage is based on the readiness of public sector facilities, not the accessibility by a catchment population (Yu, 2008). Barriers in accessibility may be due to the non-utilization of services despite being present. Also, DOTS readiness in public facilities is mostly limited to the training of RHU staff and the upgrading of microscopy facilities.

It is also important to note that there are other public providers of TB services, including devolved and national regional hospitals, the Department of Education (DepEd), etc., many of which are non-DOT-compliant. In 2005, the CUP standardized the use of DOTS in these sectors although the status of ongoing efforts has not been fully reported and monitored. Finally, there is a need to clarify the role of the DOH vis-à-vis other government agencies (Yu, 2008).

2. Limited private sector participation in DOTS. Although PPMDs have contributed to the increased accomplishments in case detection rate (CDR) and cure rate (CR) in recent years, the non-conformity by some segments of the private sector with the NTP guidelines continues to be one of the weakest links in the control of TB in the country. The 1997 National TB Prevalence Survey (NTPS) and various private provider surveys showed that 12–60% of TB patients initially consult a private provider (Auer et al., 2000; Tupasi et al., 2000) because of perceived better quality of services, guaranteed confidentiality, and flexibility of treatment. However, some private providers do not adhere to the international standards of TB care, with variable case-finding and case-holding practices leading to increased transmission, treatment failures and drug resistance.

3. Health-seeking behavior, knowledge and attitudes to TB. Generally, the level of basic knowledge about TB continues to vary despite numerous information campaigns. Stigma, the lack of proximity to a health care facility, and the perceived high costs of TB care are still barriers to timely health-seeking and treatment completion. The low regard for services in public health centers further compounds the problem.

4. Inadequate LGU capacity and ownership. Among the weaknesses at the LGU level are: the lack of ownership of the program in some LGUs; their lack of capacity to use financing, regulatory and governance instruments to implement appropriate interventions, and poor inter-LGU partnerships for TB control have been observed (Yu, 2008).
5. **Financing issues.** The available funds for TB control are estimated to be only be a third of the overall estimated requirements for TB prevention, control and management (Yu, 2008). For example, the NTP budget does not cover all categories of TB. LGUs are expected to purchase drugs for Category 3 patients, but many LGUs do not provide sufficient budgets for TB drugs. In all likelihood, the specter of multi-drug resistant (MDR) TB will tremendously increase drug requirements, facility care, and monitoring in the future. In 2005, the estimated amount needed to treat the 5,000 estimated cases of MDR TB was around PhP 1.35 B. NTP allocated only 9.4% of its 2007 budget to treat MDR TB cases (Yu, 2008).

**Scaling-up of efforts is needed to improve performance in low-performing areas (DOH-PIR, 2008).**

A catch-up strategy must be developed for provinces that lag behind in performance by adopting a province- or city-wide model of NTP implementation that integrates all elements of the CUP into a local framework. This should be used as the main mechanism for nationwide NTP implementation over medium-to long-term intervals until the public health control of TB is achieved. A province/city-wide NTP model must have the following essential elements that progress from implementation (Stage 1) to scaling-up (Stage 2): active local NTP champion/s; sufficient density of TB-DOTS outlets; full area-wide penetration (private hospitals, schools, jails, work places, military camps); add enhancements (MDR, children, non-DOTS facilities and providers); active local institutionalization (LGU support); and local advocacy, communication and social mobilization (ACSM), reporting and monitoring

At the national level, program support efforts must focus on developing and moving the local-area models from Stage 1 to Stage 2, and sustaining those that reach Stage 2.

**Private sector involvement must be strengthened.**

The Philippines has a large sector of private-for-profit and private non-profit health providers. In a country where out-of-pocket expenditures for health account for almost half of total healthcare expenditures and where private healthcare is largely fragmented and unregulated, the role of the private health sector in TB control is essential and needs to be strengthened (Alejandria and Zuniga, 2008). Possible action points include the following:

1. Mapping private providers in the priority areas and defining a referral network, including a review of referral mechanisms and policies;
2. Developing operational guidelines and manuals for implementation of the zonal strategy to be piloted in priority areas in coordination with the LGUs and the private sector;
3. Updating the guidelines for TB in the workplace;
4. Conducting a situation analysis of health programs in schools and workplaces;
5. Adopting corporate social corporate social responsibility models, HMO models, private hospital-based models rather than stand-alone PPM units in the scale-up of PPMD units;
6. Finding a champion/advocate for the pharmacy drug initiative which is an innovative approach to improve CDRs by targeting the segment of the population who self-medicate (28% based on 1997 NTPS);
7. Launching targeted, sustained IECs to increase demand for services; and
8. Conducting an analysis of the population segment served by PPMD units using the equity gauge indicators.

**A national financing framework that vigorously mobilizes and coordinates financing sources for comprehensive and sustained TB control program is essential.**

A sustained financing framework is required to serve as a mechanism to coordinate the multiple financing sources, which include donor and government funds channeled through the DOH, Philhealth, and LGUs.

As a public health problem of national importance, TB control presents legitimate grounds for the continued use of central transfers, particularly drugs. Financing for drug procurement also needs to be coordinated and rationalized. Provision of these centrally procured commodities can be linked to service-level agreements (SLAs) that leverage continued supply as well as corresponding technical assistance with local performance in TB control. In effect, the DOH will be “buying” health program outputs and outcomes in return for the commodities it supplies.

PhilHealth support can be scaled-up significantly by addressing accreditation bottlenecks, especially since he demand for this insurance support definitely exceeds current supply. While the DOTS package may improve its utility by expanding it to cover childhood TB, MDR TB treatment and adverse event care, efforts should first be focused on expanding access rather than the scope of benefits.

**References**


Synthesis

To achieve the MDG/NOH goals, current efforts must be sustained and enhanced. The following are needed to be considered to combat the “big three” infectious diseases in the country:

1. Given limited resources, it is necessary to prioritize interventions that would be likely to have the most impact.

2. Local variations must be addressed. Interventions should be appropriate for each particular setting. Targeting and micro-stratification efforts can be used to identify areas in the country and particular high-risk groups needing most attention.

3. Infectious diseases are of national concern, however, in the devolved set-up, efforts must be directed to improve LGU stewardship. Equity in the "big three" indicators will be achieved only if service provision at the lowest levels is strengthened.

4. Enhancing private-public partnerships and community participation will improve service delivery by improving access and maximizing resources.

5. Alternative financing schemes must be developed and operationalized in the face of dwindling external funds. DOH must ensure that programs are financially well-supported, both at the national and local levels. Resources could be shared and channelled effectively to where they are most needed.