

# COST OF INACTION:

*A report on how inadequate investment in the Global Fund to Fight AIDS, Tuberculosis and Malaria will affect millions of lives*

This document has been developed by International Civil Society Support to support the Global Fund Advocates Network, in close consultation with the Global Fund Secretariat and its technical partners (UNAIDS, the STOP TB Partnership and the Roll Back Malaria Partnership).



## A GLOBAL CALL TO ACTION

Advocates call on donors to ensure at least \$15 billion USD for the 2013 replenishment pledging meeting and ask them to commit to a subsequent collective resource mobilization effort in the following years to provide additional support, including from new donors and innovative financing mechanisms, to the Global Fund and via other funding streams to address the remaining funding gap so that we can fully realize the opportunity we have to defeat these diseases.

*Call to Action issued by Global Fund Advocates Network at the First Replenishment Meeting April 7th 2013.*





## BENEFIT OF ACTION

For the first time in our lifetimes, we are nearing a tipping point in the fight against HIV, TB and malaria, and the ultimate goal of defeating these three diseases is a real possibility. The humanitarian and moral case for a fully replenished Global Fund is compelling, but there is also an undeniable value for money and economic rationale for rapid scale-up. Scale-up would be much more cost-effective than continuation of the current funding path, returning substantially greater health and economic benefits. We know that the return on investment for every dollar spent on these diseases is enormous. (*Basu, et al 2009*)

### HIV / AIDS

\$1 investment in HIV combination prevention delivers a return of \$12\*

### TB

\$1 investment in TB case finding delivers a return of \$30\*

### MALARIA

\$1 investment in malaria prevention and treatment delivers a return of \$20\*

---

## COST OF INACTION

However, if global funding for HIV / AIDS and TB were to flat-line some of the consequences would include:

### HIV / AIDS

2.6 million new HIV infections every year, of which 1.3 million could be averted through scale-up

In total 3.9 million HIV infections in 2014-2016 and \$47 billion\* of costs throughout the lifetimes of those additional people infected

### TB

3 million less people will be treated for TB and 1 million lives would be unnecessarily lost

Uncontrollable multi-drug resistant TB (MDR-TB) if we don't treat TB now for as little as \$30\* per patient because MDR-TB can cost up to 1000 times more to treat

### MALARIA

196,000 lives lost per year and 430 million malaria cases that could have been prevented  
A loss of \$20 billion\* in increased GDP

*\*All dollar values are USD*



# PROGRESS

Over the last decade, tremendous progress has been made in the fight against the three diseases, achieving life-saving impacts that were unthinkable at the turn of the millennium. In 2000, just 50,000 people were receiving antiretroviral (ART) therapy in sub-Saharan Africa. By 2011, it had climbed to over 7 million. Just over a decade ago, TB case detection rates were 43 percent, and the treatment success rate was just 67 percent among the 22 countries with the highest TB burden. By 2011, the TB case detection rate rose to 66 percent and the treatment success rate to 87 percent (*Global Fund 2013*). In sub-Saharan Africa, fewer than 5 percent of households owned an insecticide-treated net in 2000. By 2010 this had increased to 53 percent with hundreds of millions of more nets distributed since then.

In the case of malaria, perhaps more telling than mortality rates alone, is that 90 percent of these lives were saved in the five years 2006-2010 alone, the same time period during which funding for malaria intensified nine-fold.

If resources for malaria had not been increased, 274 million more cases would have occurred between 2001 and 2011. (*WHO 2013 C & Newman 2013*) The results suggest that funding for malaria prevention in Africa over the past decade has had a substantial impact on decreasing child deaths due to malaria.

Successful scale-up in many African countries will contribute substantially to meeting MDG 4, as well as succeed in meeting the sixth Millennium Development Goal 6 (Target 1) to halt and reverse malaria incidence by 2015. Investing in global health pays off and

incrementally increasing investments builds on previous investments getting increasingly more results per dollar invested.

The progress against AIDS, TB and malaria mentioned above has been possible because over the past decade, we have seen a significant increase in donor resources, mainly (but not only) through the Global Fund and in domestic resources invested in these areas. Low- and middle-income countries – in particular after the global economic downturn – are driving the global increase in spending on the three diseases. This increase in domestic outlays has not only provided essential new funding for programs but also clearly indicates the growth in country ownership of national responses. For example, in the case of HIV, domestic spending rose from \$3.9 billion USD in 2005 to almost \$8.6 billion USD in 2011 (*Global Fund 2013*)



Mortality patterns provide further evidence of the dramatic progress achieved against the three diseases:

The TB mortality rate declined by 41 percent from 1990 to 2011. This means about 35 million people were successfully treated and 15 million lives saved.

Between 2005 and 2011 an estimated 1.5 million lives were saved through aligning and integrating TB and HIV interventions – integrated approaches

are leading to significant gains in health. *(Global Fund 2013)*

AIDS-related mortality decreased by 24 percent between 2005 and 2011.

For malaria, the global mortality rate is estimated to have decreased by 26 percent between 2000 and 2010; during this period, 1.1 million lives were saved; more than half of the deaths averted were in the ten countries who had the highest malaria burden in 2000. *(WHO 2013 C & Newman 2013)*



# THE CHALLENGE WE FACE

The Global Fund and technical partners estimate that \$87 billion USD (\$58 billion for HIV, \$15 billion for TB, and \$14 billion for malaria) will be required from 2014 to 2016 to reach all vulnerable populations in Global Fund-eligible low- and middle-income countries with essential services to bring all three diseases under control. (*Global Fund 2013*) This level of financing requires a joint effort of all partners and must be seen as a shared responsibility of implementing countries and the international community.

A contribution of \$15 billion USD to the Global Fund combined with external and increased domestic commitments would allow the global community to cover 87 percent of the total funding needed to effectively fight the three diseases in 2014-2016. A remaining \$11 billion USD will still need to be mobilized to fill the global funding gap.

While Global Fund advocates fully support the \$15 billion USD funding request for the Global Fund, there are a number of assumptions and caveats included in the methodology that was used to assess this need that reveal why this target should be considered an absolute minimum, including:

- Reaching the tipping point requires additional investments in the short-term that will deliver gains in the longer term through, for example, savings incurred from avoiding future treatment costs. Insufficient investments could mean that we risk not reaching the critical level of resources needed to dramatically bring down the level of new infections and

deaths—allowing the intensifying spread of deadly and drug-resistant strains of MDR-TB, for example.

- While advocates support expanded domestic investment, the assumed level of domestic funding – i.e. \$37 billion USD or 42 percent of the total of \$87 billion USD targeted - means an increase of \$14 billion USD compared to the current level of \$23 billion USD. This is extremely ambitious and suggests that domestic funding will outpace recent trends for investment as well as projected growth in general government expenditure. Overall financial resources per capita for health at the country level are a function of a country's GDP per capita, so predicting total health expenditures to grow alongside or slightly faster than GDP is more realistic and closer to the "low" rather than the "medium" scenario for domestic funding described in the Global Fund's Needs Assessment paper
- Additionally, the assumptions in the Needs Assessment that increased funding from

other funding streams for synergistic efforts in broader development areas (in the case of HIV), and the level of non-Global Fund funding for AIDS, TB and Malaria will continue at \$24 billion USD over the next three year period is also very optimistic, considering the fact that some donors are freezing or implementing cuts to their development aid budgets.

- Finally, the methodology assumes that efficiencies and drastically decreased treatment costs will cover the full additional costs associated with country implementation of the new WHO treatment guidelines for HIV as well as enable the scale up of new diagnostic and treatment tools for tuberculosis. Advocates argue that this is most likely too optimistic.

# IMPACT OF FLAT-LINED INVESTMENTS

The global community has the opportunity and the tools to end three of the largest epidemics through a smart combination of strategic investments in prevention and treatment, care and support, advocacy, human rights and community mobilization efforts. Increasing the funding is imperative to sustain the gains achieved over the last decade, and the last few years in particular, and bring us to the tipping point in order to defeat the three diseases.

It is important that the global community prevent the epidemics from reversing the gains of the past ten years. Continuation of current levels of funding will not lead to a steady maintenance state, but would in fact take us backwards. A resurgence of these diseases will result in costs that will grow beyond any affordable range. Both from an economic as well as a moral perspective, this is irresponsible and irrational.

Inadequate levels of funding will cause:

- Continued disease transmission that will lead to higher prevalence rates and require much longer and more expensive efforts.
- Gaps in control efforts which can lead to large resurgences of consequences in terms of mortality as has been seen historically with malaria. A recent review of malaria resurgence events in 61 countries, occurring from the 1930s through the 2000s, has shown that the weakening of malaria control programmes was a key factor in almost all resurgences, and resource constraints was the most common cause (*Cohen, et al 2013*).
- In addition, inadequate levels of funding will cause a decrease in vigilance which will result in increased drug resistance in all 3 diseases. In 2011 alone there were an estimated 630,000 cases of multi-drug resistant TB – more difficult and expensive to both find and treat.
- Waning confidence in the Global Fund and a lessening of public belief that the fight against HIV, TB and malaria is winnable.



## MALARIA: THE IMPACT OF DRUG AND INSECTICIDE RESISTANCE

Resistance to malaria drugs and insecticides is another case in point. Resistance to artemisinins (part of the preferred, first-line treatment for malaria) has been detected so far in four countries of South-East Asia, while mosquito resistance to insecticides has been found in 64 countries around the world. If artemisinin resistance emerges in other regions, the costs of managing it will increase dramatically, particularly if the affected region has high malaria transmission. In order to contain resistance successfully, the funding gap must be reduced, requiring greater global and country engagement and more focus and cooperation among stakeholders. The failure of pyrethroids insecticides against malaria could result in about 259,000 additional deaths among children in the WHO African Region every year.



## WHY WE NEED TO INVEST NOW

If we are to protect the gains achieved and advance the fight against HIV, TB and malaria, the Global Fund must be fully replenished, which means an investment for 2014-2016 of at least \$15 billion USD.

# HIV / AIDS

If HIV funding were to remain constant at today's levels, there would be a total of 2.6 million new HIV infections per year, corresponding to an average of 1.3 million more infections annually over 2014-2016 (compared to if full scale-up were achieved). Essentially, the cost of not making this investment now is a reduction in long term net savings, as the funding required in 2014-2016 is largely offset by savings incurred from avoiding future treatment costs of the excess or additional infections averted during the 2014-2016 time period. (*Global Fund 2013*) At \$515 USD per patient per year and 22 years of survival the lifetime cost of treatment (discounted at 3 percent) would be an additional cost of \$12,000 USD per patient.<sup>2</sup> (*Stover, et al 2013 & Schwartländer et al 2011*) At current cost levels then, total lifetime treatment costs for the 3.9 million infections that can be averted between 2014 and 2016, would be almost \$47 billion USD.<sup>3</sup>

There will also be gains due to the effect of ART on reducing infectiousness and averting transmission to uninfected individuals. If, as recent studies show, ART reduces infectiousness by about 70 percent then the annual number of infections averted by ART per HIV infected person becomes 0.052 compared to 0.074 if treatment is withheld. (*Stover, et al 2013*) Averting

unnecessary infections combined with decreased transmission rates will have a tremendous impact in the overall fight against AIDS – both in humanitarian and economic costs.

Over the long run, AIDS treatment will become increasingly affordable as prices decrease and economies, particularly in Africa, grow.

---

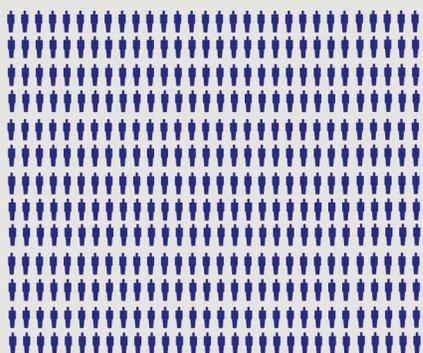
2. The calculation is based on the working paper by Stover et al. (2013) on "How can we get to zero?" The role of new technologies and strategic investment approaches for an effective response to AIDS. They used a cost per patient year of treatment of \$515 based on a weighted average median price in 2011 of \$145 for first and second line ARVs, (*WHO 2011*) \$222 for average service delivery and monitoring cost (*Menzies 2012*) plus an additional 40% for costs above the facility level for administration, logistics, training, planning etc. The cost per patient treated may decline in the future if treatment can be made even more efficient by reducing visits and lab tests but these reductions could be offset by increases in salary and other health system costs particularly in countries with strong economic growth.

3. The benefit-cost ratios for treatment are 3.3 when a year of life is valued at US\$ 1000 and 16 when a year of life is valued at US\$ 5000 (*Stover, 2011*).

Simulations show that after the year 2020 AIDS treatment spending will begin to decline as a portion of African health budgets, which

will make it possible for African countries to assume responsibility for funding its own citizens' AIDS care. (Over and Garnett 2011)

If global funding were to flat-line there would be 3.9 million HIV infections more than if full scale-up were achieved.



10,000 individuals

The total lifetime treatment costs for the 3.9 million unnecessary infections that could be averted between 2014 and 2016 would be almost \$47 billion\*.



\$1 billion\*

\*All dollar values are USD.

# TUBERCULOSIS

The Global Fund represents more than 80 percent of all external (donor) funding for TB. In the absence of any other major streams of international donor funding for TB, the Global Fund has a crucial role in sustaining and ensuring further progress in the fight against TB worldwide. *(Global Fund 2013)*



## THE UNITED NATIONS ON NEW YORK CITY AND TB: DECREASED FUNDING LED TO INCREASED TB RATES

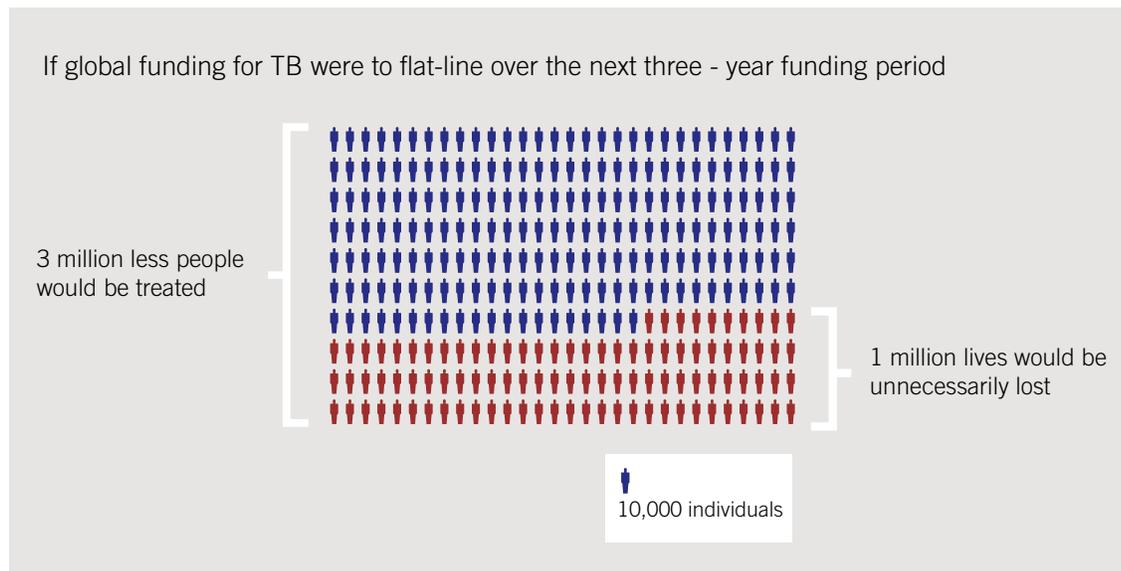
“We would do well to remember New York City in the late 1980’s where a dramatic resurgence of TB was brought on by a steep decline in funding and massive inattention to the disease. *(BMJ 1998)* In only 7 years from 1984 to 1991 the TB incidence rate more than doubled across the city causing substantial human suffering. This underinvestment cost the city over US\$ 1 billion to bring the situation under control. Even in affluent nations, fragmented health infrastructures combined with reduced investments and lack of focus and prioritization can lead to disastrous consequences. Although the TB problem in New York City was worsened by homelessness, poverty, and substance abuse, we also learned that by directing resources into targeted programs and vulnerable groups it was possible to bring the disease under control and prevent further suffering. Poverty continues to be one of the main drivers of the disease today around the world.” *(United Nations, 2013)*



Although at a global scale, approximately 65 percent of total TB funding comes from domestic sources, of the 18 high burden TB countries eligible for Global Fund funding, 10 currently have more than 60 percent of their TB budgets covered by Global Fund funding. *(Global Fund 2013)* The new funding to come through the

replenishment should be used to leverage the domestic investments further on.

From a global perspective, the most affected countries of a flat-lining of GF replenishment will be African countries. Over the last 10 years, the Global Fund contributed



\$2.4 billion USD to TB programmes in this region. The recent work done for the Needs Assessment shows that out of the \$1.6 billion USD needed per year for TB in GF eligible countries, \$900 million USD alone is needed in African countries meaning a four-fold increase over current funding is necessary. We must fill this gap and support this region, which sees 40 percent of all TB related deaths.

Of the 9 million estimated cases of TB worldwide in 2012, only 6 million were diagnosed and treated; this left an estimated 3 million people with TB who went undiagnosed, untreated or unreported. These 3 million people are also estimated to

have been infecting others at a rate of up to 10 cases per person per year. (*Styblo 1985*)

Increased funding for TB would result in 17 million TB and multidrug-resistant patients receiving care and treatment in Global Fund-eligible countries between 2014 and 2016. With greater access to TB and multidrug-resistant treatment, almost 6 million lives would be saved over this three-year period. If, however, global funding were to flat-line over the three year period, only around 14 million people would be treated for TB and multi-drug resistant TB – and consequently 1 million fewer lives would be saved. (*Global Fund 2013*)



## TB: THE IMPACT OF DRUG RESISTANCE

With drug resistant TB the numbers are staggering. It was estimated that there were 630,000 cases of MDR-TB in 2012. However, less than 60,000 people were diagnosed and treated for MDR-TB leaving approximately 570,000 people with MDR-TB spreading the disease to others at a rate up to 4 cases per person per year. (*Lengeler 2009*) One should also note that there is a pool of 2 billion latent TB infected people in the world who are at risk of active TB disease.

If we allow the proliferation of inadequate TB-treatment services, unsupported family care practices and incorrect self-treatment, we face an even greater humanitarian disaster in the rise of MDR-TB. In industrialized countries, TB treatment costs about \$2,000 USD a patient, but rises more than one-hundredfold to up to \$250,000 USD a patient with drug-resistant TB. In other parts of the world facing multi-drug resistant TB, average costs are \$50,000 USD to successfully treat one MDR-TB patient.<sup>4</sup>

Whilst the cost to treat one drug resistant TB case is enormous, it costs as little as \$30 USD for a six months supply of drugs to effectively treat a regular case of TB. However, the biggest saving is that the \$30 USD treatment can prevent the much more costly and deadly MDR-TB. The choice for action is clear.

Either we ensure proper scale up and coverage of TB treatment and prevention, or we risk a virtually uncontrollable Multi Drug Resistant TB future.



---

4. Globally the cost per DALY averted is up to \$50 USD TB patients under DOTS and goes up \$800 USD per DALY averted for drug resistant TB. (*Raviglione 2013*)

# MALARIA

In comparison to the current funding trajectory, rapid scale-up could save 196,000 lives per year prevent more than 430 million additional malaria cases, free up 427,000 hospital beds in sub-Saharan Africa, and increase annual GDP in Africa by more than \$20 billion USD over five years. (*Global Fund 2013 and Malaria No More and McKinsey 2008*) What's more, it would save twice as many lives for every dollar spent. Rapid scale-up would provide the springboard for the ultimate goal of eradicating malaria. As with the other diseases, eradication would require an effective vaccine.



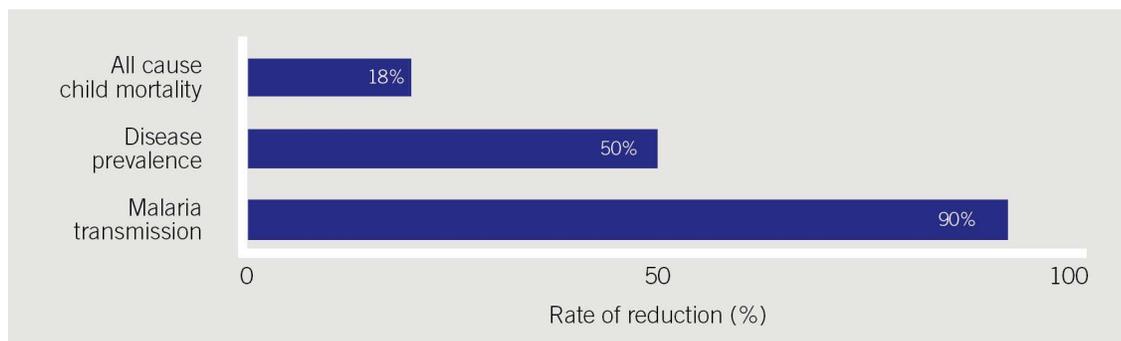
From the 1930's - 2000 the single most common suggested cause of resurgence involved a weakening of malaria programmes following funding disruptions. (*Cohen, et al 2012*)

number of insecticide-treated nets delivered in 2011 and 2012 was not sufficient to protect all populations at risk or to fully replace insecticide-treated nets delivered three years earlier. Resurgence and renewed significant increases of malaria infections and disease are likely if net coverage is not sustained and increased. (*Global Fund 2013*)



If funding is not sustained, insecticide-treated net coverage could even decrease due to population growth, because the

Continuity of coverage of preventative measures plays an important role in malaria control, as it has a direct impact on possible resurgence of the epidemic. The following beneficial effects of universal coverage with insecticide treated mosquito nets in areas of high malaria transmission have been demonstrated:



Malaria in high transmission areas is a very robust ecosystem that has shown to rebound rapidly to previous levels of malaria transmission soon after preventative measures such as indoor residual spraying (IRS) or universal long-lasting insecticide treated nets (LLIN) coverage are discontinued. It can be expected that malaria disease burden levels and mortality will rise again to the levels known before the intervention in cases where these are withdrawn and by consequence, an

important rise of child mortality must be feared. It is therefore of paramount importance to extend LLIN coverage levels to reach universal coverage and then to maintain it at this level for the foreseeable future in all areas where malaria transmission cannot be interrupted. Sustained funding in these countries is crucial or the billions of USD invested since 2002 will have been in vain. (*WHO 2013 C; Cohen, et al 2013 and; Malaria no More and McKinsey Company 2008*)

## THE IMPACT OF FLAT-LINED FUNDING FOR MALARIA

If global funding for malaria were to flat-line, it would mean:



Not saving  
196,000 lives  
per year



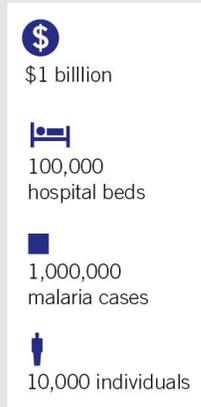
Not preventing  
430 million  
malaria cases



Not freeing up  
427,000  
hospital beds



A loss of  
\$20 billion  
in increase of GDP



*\*All dollar values are USD.*

# CONCLUSION

The humanitarian and moral case for a fully replenished Global Fund is compelling. At the same time there is an undeniable value for money and economic rationale for rapid scale-up. Due to community health effects, rapid scale-up would be much more cost-effective than continuing the current funding path, returning substantially greater health and economic benefits. *(Basu, et al 2009)*



We cannot be complacent and we cannot afford to lose the momentum we gained. Any lack of focus and investments today will lead to catastrophic expenditures and unnecessary infection and loss of life tomorrow.

The Global Fund is the central piece of the puzzle, the driver of the increasingly effective, global multi-stakeholder partnership to defeat HIV, TB and malaria. It is this comprehensive and innovative partnership that has shown results and therefore deserves and needs to be fully funded now so that we can avoid millions of unnecessary deaths and much higher investments in the future.

# BIBLIOGRAPHY

- Basu, S., et al. (2009). Avering epidemics of extensively drug-resistant tuberculosis. Proc Natl Acad Sci USA, 106 (18), p. 7672 – 7
- Bill and Melinda Gates Foundation (2013). Health in the Post-2015 Development Agenda
- BMJ (1988). Lessons from New York's tuberculosis epidemic. 317 doi: <http://dx.doi.org/10.1136/bmj.317.7159.616>. Published 5 September 1998.
- CDC, 2011. Winnable Battles - HIV. Toolkit. <http://www.cdc.gov/winnablebattles/hiv/index.html>
- Cohen, J. et al. (2012). Malaria resurgence: a systematic review and assessment of its causes. <http://www.malariajournal.com/content/11/1/122>
- Eisele, T.P. et al. (2012). Estimates of child deaths prevented from malaria prevention scale-up in Africa 2001-2010 Malaria Journal 2012, 11:93. <http://www.malariajournal.com/content/11/1/93>
- Global Fund. (April 2013.) Needs Assessment: Fourth Replenishment (2014 – 2016).
- Global Fund, 2012. Strategic Investments for Impact. Global Fund Results Report 2012.
- KNCV, 2008. Tools to estimate patients' costs. Literature Review / Discussion Paper
- Lengeler, C. (2009). Insecticide-treated bed nets and curtains for preventing malaria. Cochrane review, prepared and maintained by The Cochrane Collaboration and published in 2009, Issue 2
- Malaria No More and McKinsey & Company on behalf of the Roll Back Malaria Partnership (2008). We can't afford to wait. The Business Case for Rapid Scale-up of Malaria Control in Africa Updated numbers of the report
- Menzies NA, Berruti AA, Blandford JM (2012). The Determinants of HIV Treatment Costs in Resource Limited Settings PLoS ONE 7(11): e48726.doi: 10.1371/journal.pone.0048726
- Newman, R. (2013). Presentation made in Brussels, 10 April 2013.
- Over, M. and Garnett, G. (2011). Assessment paper: Treatment. Rethink HIV Research Paper. Copenhagen Consensus Center/RUSH

- Pooran, A. et al. (2013). What is the Cost of Diagnosis and Management of Drug Resistant Tuberculosis in South Africa? PLoS One. 2013; 8(1): e54587. [10.1371/journal.pone.0054587](https://doi.org/10.1371/journal.pone.0054587)
- Raviglione, M. (2013). Tuberculosis Demand Forecast. Presentation made in Brussels, 10 April 2013
- Roberfroid, A. (2000). Tuberculosis - Women and Children Can No Longer Wait. Statement at the Ministerial Conference on TB and Sustainable Development, 24 March 2000
- Schwartländer et al (2011). Towards an improved investment approach for an effective response to AIDS; Lancet, supplementary web appendix. May 2011
- Stover, J. et al. (2013, working paper). How can we get to zero? The role of new technologies and strategic investment approaches for an effective response to AIDS.
- Stover, J. (2011). Perspective paper: Treatment. Rethink HIV Research Paper. Copenhagen Consensus Center, Copenhagen / RUSH Foundation, Switzerland
- Styblo, K. (1985) The relationship between the risk of tuberculosis infection and the risk of developing infectious tuberculosis. Bull. Int Union Tuberc Lung Dis, 1985. 60:p, 117-9
- United Nations (2013). A New Global Partnership: Eradicate poverty and transform economies through sustainable Development. The Report of the High-Level Panel of Eminent Persons on the Post-2015 Development Agenda
- WHO (2013) A. Cost-effectiveness of TB prevention, care, and control in low- and middle-income countries.
- WHO (2013) B. Global Tuberculosis Report 2012
- WHO (2013) C. World Malaria Report 2012
- WHO (2013). World Health Statistics 2013
- WHO (2011). Global HIV/AIDS response: epidemic update and health sector progress towards universal access: progress report 2011, WHO, UNAIDS, UNICEF.
- WHO (2011). The World Health Report 2010. Health Systems Financing. The path to universal coverage

## **International Civil Society Support**

Eerste Helmersstraat 17B-3  
1054 CX Amsterdam  
The Netherlands