
RATIONALE
The Ghana National HIV & AIDS Strategic Plan (2011-2015) will provide a framework to guide the national response to HIV and AIDS. As part of the process of developing the new plan, the USAID | Health Policy Initiative estimated the level of resources required to achieve various levels of target coverage of interventions and analyzed the expected impact of achieving those goals. This brief describes the methodology, assumptions, and results of that analysis.

METHODOLOGY
For most interventions that provide services or information to the population, the resources required are estimated by multiplying the population in need of the service by the coverage (the percent of the population in need receiving the service) to determine the number of people using each service, and then multiplying this number by the unit cost (the cost to provide the service to one person).

To estimate the impact of prevention interventions, the Goals Model was used. This model estimates the impact of prevention interventions on behaviour change and then simulates the effects of behaviour change on the number of new infections. The impact on behaviour change is estimated through a matrix that summarises all the impact studies conducted in sub-Saharan Africa and elsewhere.

RESULTS
The resources required to achieve the universal access targets for HIV and AIDS prevention, care and treatment, and mitigation interventions will increase from US$ 131 million in 2011 to US$ 268 million by 2015, as seen in Figure 1.

Figure 1. Resources required for universal access
Figure 2 shows the expected new infections among 15 to 49 year olds, if universal access coverage targets were achieved. The number of new infections could decline by about half by 2015. Despite this reduction in new infections, prevalence would decline only slightly because the increased coverage of ART would reduce the number of deaths significantly.

Figure 2: New HIV infections and AIDS deaths (15-49)

If it is not possible to increase funding to $US 131 million by 2011 and $US 268 million by 2015, then it will be necessary to make difficult decisions about how to allocate the resources that are available, by prioritizing among prevention, care and treatment, and mitigation interventions.

Resource Gap Implications
A recent analysis of resources committed to the HIV/AIDS program found that funds are expected to flatline around 44.5 million dollars annually. If these estimates are accurate and the trend continues through 2015, Ghana will face a cumulative 781 million dollar shortfall in funding universal access to HIV/AIDS prevention, care and treatment, and impact mitigation over the years 2011-2015. As seen in Figure 3 the annual gap will grow from US$ 87 million dollars in year one of the plan to US$ 223 million dollars by 2015.

Prioritizing Interventions
Analysis of other scale-up scenarios found that even maintaining current levels of coverage would require US$ 68 million by 2015 (due to the growing population). Allocating those resources to the most cost effective prevention programs (such as MSM and sex worker outreach, PMTCT, workplace programs, and condom promotion) along with care and treatment and impact mitigation will allow Ghana to continue to reduce new HIV infections and expand care and treatment, while
also providing support for orphans and vulnerable children (OVCs). As seen in Table 1, by prioritizing cost effective prevention interventions Ghana would be able to scale up treatment and mitigation efforts and thus improve coverage in these areas while reducing new infections by 35%; a larger reduction than any of the other options except the costly and unaffordable universal access option.

Table 1: Outcomes by funding and resource allocation

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Universal access</th>
<th>Prevention Priority</th>
<th>Treatment Priority</th>
<th>Cost effectiveness Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding level</td>
<td>US$263 million</td>
<td>US$130 million</td>
<td>US$130 million</td>
<td>US$130 million</td>
</tr>
<tr>
<td>New infections</td>
<td>-52%</td>
<td>-9%</td>
<td>-25%</td>
<td>-35%</td>
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<td>(15-49)</td>
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<tr>
<td>ART coverage</td>
<td>85%</td>
<td>40%</td>
<td>85%</td>
<td>60%</td>
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<tr>
<td>(2015)</td>
<td></td>
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<tr>
<td>OVC coverage</td>
<td>20%</td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>(2015)</td>
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CONCLUSIONS AND RECOMMENDATIONS

A significant resource gap exists for Ghana’s HIV and AIDS program. In response to this situation, the country will need to:

- Advocate for additional resources from both domestic and international sources
- Invest in the most cost effective interventions, such as MSM and sex worker programs, PMTCT, and condom promotion
- Seek efficiencies in service delivery

In order to achieve the goals that the country has established for reducing new infections and increasing care and support, it will be necessary to both obtain additional resources, and to invest those resources in key interventions. By doing this Ghana will take advantage of the opportunity to make the desired progress toward improved health indicators and the MDGs.

1For more detail on the methodology and inputs, please see the longer GOALS report, available at www.healthpolicyinitiative.com

2The Goals and Spectrum models are available for downloading at www.healthpolicyinitiative.com (under Resources)