

HIV/AIDS Resource Allocation and the GOALS Model:

Improving Decision Making, Expanding Participation

Responding to HIV/AIDS requires addressing a number of priorities, including preventing new HIV infections (among vulnerable groups and the general population), caring for people living with HIV/AIDS and their families, and mitigating the impacts of the pandemic. But what level of resources should be devoted to prevention programs for youth? Or to the development of new voluntary counseling and testing (VCT) sites? Or to the provision of antiretroviral (ARV) therapy? Or to support for AIDS orphans?

There is no one correct answer to these questions. Each country must consider its own needs, goals, and circumstances in order to determine the appropriate combination of interventions. And these decisions often take place in the context of constrained resources – further emphasizing the importance of allocating resources wisely. In addition, emerging needs, challenges, and

opportunities are increasingly highlighting the need to combine the best thinking from government *and* civil society stakeholders regarding HIV/AIDS resource allocation decisions.

Designing and implementing an HIV/AIDS national program is complex and important. Prevention, treatment, and palliative care costs are a significant component of the health budget. In most national strategic plans, however, although the activities to be undertaken are clearly outlined, the activities are not tied to specific prevalence goals the countries wish to attain. Millions of dollars are spent annually to prevent HIV infection without a thorough understanding of the most effective way to allocate these funds. Since the budgets are not linked to the plan's goals, there is no way for the planners to know what would happen if more or less resources were available or if resources were allocated differently.

The GOALS Model: Understanding the Basics

What is the GOALS Model?

GOALS is a computer model that is designed to enhance strategic planning by linking program goals and resource allocation levels. The model can help answer several key questions. For example:

- How much funding is required to achieve the goals of the strategic plan?

- What goals can be achieved with the available resources?
- What is the effect of different patterns of resource allocation on the achievement of program goals?

The GOALS Model does not provide all the answers. Rather, it assists government planners and civil society advocates in understanding the effects of funding levels and allocation patterns on



program impact. The model can help stakeholders understand how funding levels and patterns can lead to reductions in HIV incidence and prevalence and improved coverage of treatment, care, and support programs. It does not, however, calculate the “optimum” allocation pattern or recommend specific levels of resource allocation among prevention, care, and mitigation interventions as these decisions depend on the country’s own particular priorities.

A Promising Way Forward: **Promoting Government and Civil Society Collaboration in Resource Allocation**

Government planners and civil society representatives both have important roles to play in the HIV/AIDS resource allocation process. For example, government planners tend to have a degree of expertise in a variety of areas, including policy development, budget planning, health program management, research, and epidemiology. Given their role in the national government, their mission also involves looking at different priorities and considering what is best for the country as a whole. At the same time, civil society advocates may have a better sense of what it is really like “on the ground.” They can help government planners think about what constraints there are in the field, identify any gaps in the assumptions made during the modeling process, and highlight the needs of vulnerable groups.

To promote government–civil society partnerships in resource allocation processes, the POLICY Project developed a training curriculum and conducted a five-day workshop on advocacy and using the GOALS Model. Held in Thailand in December 2002, the training brought together multisectoral country teams from Cambodia, India, Nepal, and Viet Nam that included both government planners and civil society advocates. The workshop sought to build capacity regarding advocacy, resource allocation decision making, and collaboration. Country teams worked together to develop HIV/AIDS strategic plans and the POLICY Project is currently providing ongoing technical and financial support to help the teams collect data, carry out more comprehensive scenarios using the GOALS Model, and further explore resource needs.

GOALS is a particularly powerful tool because it brings together information on costs as well as evidence of program impacts and relates this data to trends in the country’s HIV/AIDS situation. Its user-friendly design and ability to enact different scenarios also allows for widespread participation and encourages dialogue between government and civil society.

Who is GOALS intended for?

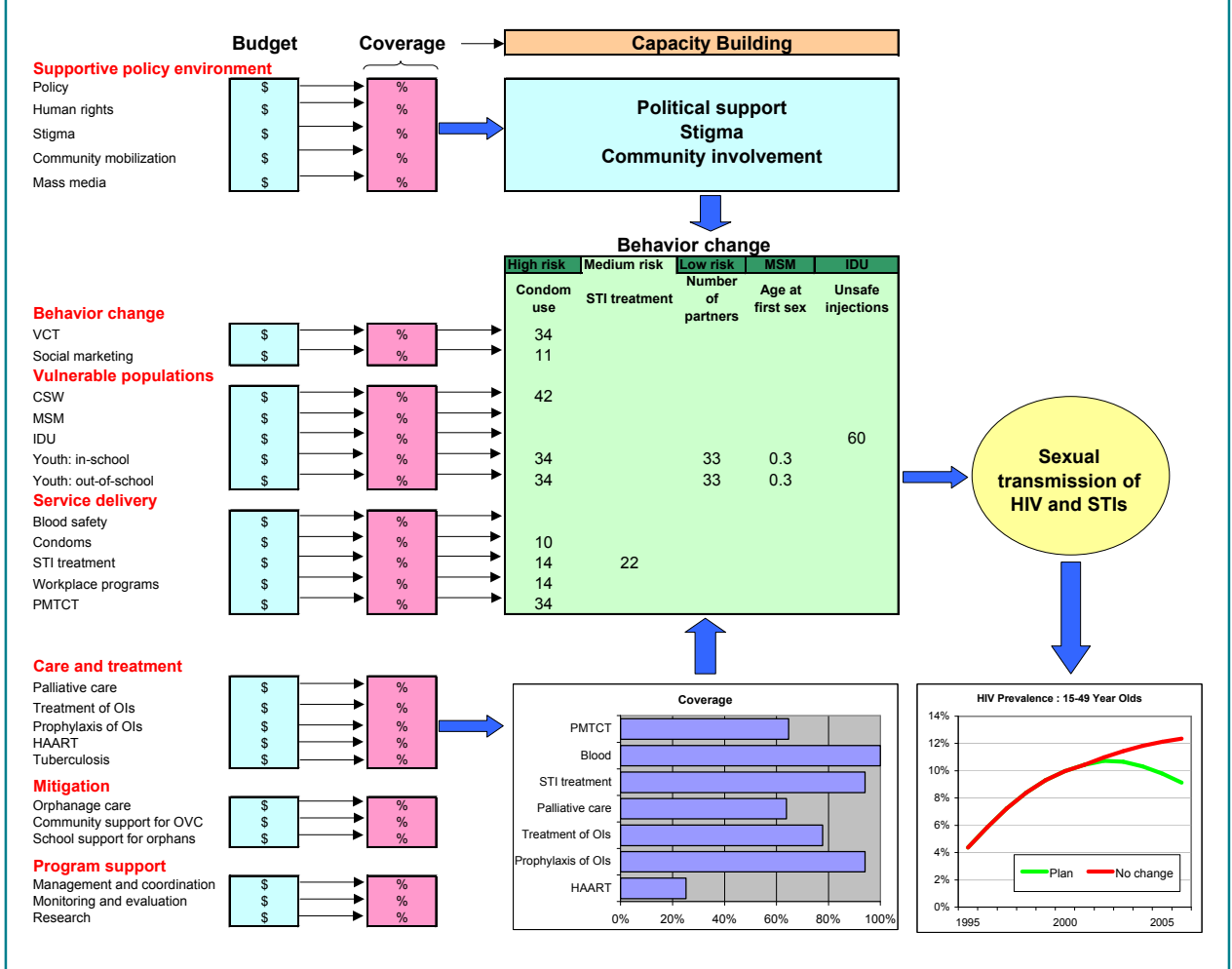
To obtain the best results, and to gain the most comprehensive picture of the country’s epidemic, the GOALS Model is generally implemented by a multi-disciplinary team composed of participants with various areas of expertise (e.g., demography, epidemiology, health, finance, planning, and community outreach) and representing different aspects of society (e.g., government, civil society, the private sector, and donors). A technical team works together to collect and input the data for the model. Then, the model is used in interactive workshops with planners and stakeholders to explore the effects of different funding configurations on the provision of care and support and the prevention of new HIV infections. Through this interaction, participants gain a better understanding of the impact of resource allocation on outcomes. This prepares them to develop realistic budgets and goals that reflect their priorities.

How does GOALS work?

The GOALS Model links budget line items to coverage of services, behavior change, and prevention of new infections, as illustrated in Figure 1. The model starts with budget line items. These are mapped to the major categories of prevention (e.g., VCT, school-based programs, and condom promotion), care and treatment (e.g., palliative care and treatment of opportunistic infections), support (e.g., orphans), and program operation (e.g., policy, advocacy, and management). For each of the prevention, care, and support categories, the model calculates



Figure I. The GOALS Model for HIV/AIDS Resource Allocation: Linking Expenditures to Prevention and Care Goals



coverage, which is the percentage of the population in need of the service that is exposed to the information or utilizes the service. This calculation uses unit costs that are based on local cost studies, if available, or on international experience. The model displays a chart of coverage for key care and support services so that the effect of budget allocations on coverage goals can be seen easily.

Coverage of prevention activities is also linked to behavior change. The model contains an impact matrix developed from over 100 studies of prevention interventions. This matrix describes how coverage of various prevention activities (e.g., VCT, school-based programs, and community

mobilization) affects four key behaviors: condom use, seeking treatment for sexually transmitted infections (STIs), number of sexual partners, and age at first sex. The impact of prevention activities is enhanced by high quality care and treatment programs and a supportive policy environment. Conversely, a lack of care and an unsupportive policy environment can reduce the effectiveness of prevention programs. A simple HIV transmission model calculates how behavior changes reduce the number of new infections. The results are displayed in terms of HIV prevalence or incidence among all adults (15–49) or young adults (15–24). The model also calculates the cost per infection averted.



Putting the GOALS Model in Action

The Futures Group International/POLICY Project and our partners have assisted in-country teams in applying the GOALS Model for strategic planning purposes in a number of countries, including Cambodia, Kenya, Lesotho, Nepal, South Africa, and Viet Nam. Plans are also underway to use the model in the Dominican Republic, Ethiopia, Guatemala, Honduras, India, Mozambique, Tanzania, and other countries. Examples of in-country GOALS applications follow below.

In **Kenya**, the GOALS Model was used in a midterm review to help the government evaluate progress made toward meeting the objectives outlined in the country's National HIV/AIDS Strategic Plan, 2000–2005. Results of the GOALS Model application in Kenya formed the basis for the National AIDS Control Council (NACC) Planning, Financing, and Budgeting Group's report for the Joint AIDS Program Review. Using GOALS, it was determined that prevention activities would require an additional \$60 million in the final two years of the strategic plan to have adequate resources to achieve the established goals (e.g., 25 percent reduction in HIV prevalence among 15–24 year olds). It was also estimated that approximately \$76 million would be required to assure significantly increased access to highly active antiretroviral therapy (HAART) for those already infected.

In 2000, the Government of **Lesotho** published a three-year National AIDS Strategic Budget (2001–2003). A multisectoral team used the GOALS Model to determine the most cost-

effective means to achieve the best combination of results in the national plan's seven goal areas. The Lesotho team used the model to develop alternative budget scenarios and examine the feasibility of achieving the stated goals at lower cost. Analysts assisted government planners in preparing a summary and detailed inventory of funding needs and goals that could be presented to potential donors. Through the modeling process, the team discovered that achieving a drop of 19 percent in HIV prevalence would require a three-year national budget of not less than US \$100 million and not more than US \$275 million. Consequently, a new budget was designed that more realistically reflected the country's capacity, goals, and proposed activities. This lower and more realistic budget was achieved through optimization of resource allocation levels, which would have been difficult to determine without a tool such as the GOALS Model.

In **South Africa**, the GOALS Model has been used to help analyze funds allocated to the country's "Enhanced Response to HIV/AIDS and Tuberculosis." The analysis helped identify a number of important funding gaps and knowledge gaps (e.g., lack of data on vulnerable groups) that hindered effective planning and implementation. GOALS served as a basis for increasing the budget with regard to programs focusing on HIV transmission through sex work, condom provision, and projected care costs. GOALS also confirmed budgetary estimates with regard to prevention of mother-to-child transmission (PMTCT) as well as current spending on care and treatment.



Get with the Program: GOALS and Related Computer Models

The GOALS Model and manual were developed by the Futures Group International with support from the USAID-funded HORIZONS Project, implemented by the Population Council. The model and manual are available in English, French, and Spanish.

Related computer models developed by the Futures Group International/POLICY Project include:

SPECTRUM: The SPECTRUM suite is a set of computer models that can be used for a variety of analyses and projections related to population, family planning, reproductive health, and HIV/AIDS. Some of the models included in the SPECTRUM suite are:

- *DemProj* – projects the population for an entire country or region by age and sex, based on assumptions about fertility, mortality, and migration. A full set of demographic indicators can be displayed for up to 50 years into the future.
- *FamPlan* – projects family planning requirements needed to reach national goals for addressing unmet need or achieving desired fertility. It can be used to set realistic goals and to plan for the service expansion required to meet program objectives.
- *RAPID* – projects the social and economic consequences of high fertility and rapid population growth for such sectors as labor,

education, health, urbanization, and agriculture. This program is used to raise policymakers' awareness of the importance of fertility and population growth as factors in social and economic development.

- *AIDS Impact Model (AIM)* – projects the consequences of the HIV/AIDS epidemic, including the number of people living with HIV/AIDS, new infections, and AIDS deaths by age and sex as well as new cases of tuberculosis and AIDS orphans. AIM is used by UNAIDS to make the national and regional estimates it releases every two years.
- *NewGen* – projects the characteristics of the adolescent population in terms of such indicators as school enrollment, sexual activity, pregnancy rates, prevalence of HIV and STIs, and marriage rates. The linkages among these indicators and the effects of policy changes can be examined.
- *PMTCT* – evaluates the costs and benefits of different intervention programs to reduce transmission of HIV from mother to child.

Resource Needs Model: This model estimates the cost of a comprehensive HIV/AIDS program given certain assumptions about the size of key population groups, the desired coverage of services, and the local unit costs of providing the services.

AIM-B: AIM-B is an economic and demographic model designed to help managers analyze how HIV/AIDS is affecting their businesses and project how it will affect them in the future.

The GOALS Model and other related computer software can be downloaded from our website at <http://www.policyproject.com/software.cfm> or can be ordered by contacting the POLICY Project.

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