

The SPECTRUM Suite of Policy Models

Futures Group develops approaches to increasing leadership support for effective policies and programs that have been applied in the areas of family planning/reproductive health, maternal health, and HIV/AIDS. A key element of many of these approaches is the analysis of existing information to determine the future consequences of today's programs and policies. Computer modeling is an important tool in this work. The POLICY Project and its predecessor projects have developed a number of computer models for this purpose.

SPECTRUM is a suite of policy models that make use of a unified set of Windows-based commands that can be easily learned. The models comprising SPECTRUM are used to project the need for family planning/reproductive health, maternal health, and HIV/AIDS services and the consequences of not addressing needs in these areas. Most models are available in English, French, and Spanish. Some are also available in Portuguese, Arabic, and Russian. Each model includes a detailed user's manual that not only describes how to use the software but also includes sections on data sources, interpreting and using the results, a tutorial, and a description of the methodology.

Currently, SPECTRUM includes seven modeling programs:

- **Demography (DemProj)** makes national or regional demographic projections based on current population data and assumptions about fertility, mortality, and migration rates. A full set of demographic indicators can be displayed for up to 50 years into the future. Urban and rural projections can also be prepared. A companion model, EasyProj, supplies the data needed to make a population projection from the estimates produced by the Population Division of the United Nations.
- **Family Planning (FamPlan)** projects family planning requirements in order for programs and/or countries to reach their goals of contraceptive prevalence or desired fertility. It can be used to set realistic goals and to plan for the service expansion required to meet program objectives. The program uses assumptions about the proximate determinants of fertility and the characteristics of the family planning program (method mix, source mix, discontinuation rates) to calculate the cost and the number of users and acceptors of different methods by source. Various strategies can be simulated as a way to evaluate alternative methods of achieving program goals.
- **Benefit-Cost (BenCost)** compares the monetary cost of family planning programs to the monetary benefits in terms of reduced levels of social services required at lower levels of fertility. Benefits are defined as savings in government expenses on social services. BenCost is a module that allows planners to add the cost of health, education, and other social services to population projections created with the DemProj and FamPlan modules. BenCost can be used to study the long-term economic costs and benefits to society resulting from changes in family planning programs.

- **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.
- **Resources for the Awareness of Population Impacts on Development (RAPID)** shows the social and economic consequences of high fertility and rapid population growth on the labor force, 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.
- **Prevention of Mother-to-Child Transmission (PMTCT)** evaluates the costs and benefits of intervention programs to reduce transmission of HIV from mother to child. Three different sets of interventions are included in the model: drug treatment (seven possible options); type of delivery (vaginal or Cesarean section); and type of infant feeding (formula, breastfeeding, or mixed). Outputs include a benefit-cost ratio as well as cost-effectiveness measures such as cost per HIV infection averted.
- **Adolescents (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.

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To download software, please visit www.policyproject.com.



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