

CONTRACEPTIVE SECURITY:
TOWARD A FRAMEWORK FOR A GLOBAL ASSESSMENT

MEETING THE CHALLENGE



THE INTERIM WORKING GROUP ON REPRODUCTIVE HEALTH COMMODITY SECURITY (IWG) is a collaborative effort of John Snow, Inc. (JSI), Population Action International (PAI), the Program for

Appropriate Technology in Health (PATH) and Wallace Global Fund. The IWG was formed in response to a meeting of the Working Group of the Global Initiative on Reproductive Health Commodity Management of UNFPA in January of 2000. At the meeting, UNFPA called for the participation of a wide variety of stakeholders to address the looming crisis represented by the shortfall in contraceptives around the world. The IWG's objective is to further the goals of the 1994 Programme of Action by raising awareness about the importance of securing reproductive health supplies. The IWG seeks to identify the causes of failures and weaknesses in commodity systems and to spur actions that will contribute to securing essential supplies for the delivery of reproductive health care.

The IWG understands the importance of addressing the full range of reproductive health commodities. The group is focusing on contraceptives first, however, due to the widespread lack of consensus within the population and reproductive health field regarding which commodities to include in an essential list of supplies. Moreover, there is little information on donor contributions for non-contraceptive reproductive health commodities. Through its efforts on contraceptive security, the IWG is working to bring together stakeholders to develop strategies for addressing the broader issues of reproductive health commodity supplies in the future.

ACKNOWLEDGMENTS

Contraceptive Security: Toward a Framework for a Global Assessment was authored by Clea T. Finkle, Jane Hutchings, and Janet Vail of PATH, the Program for Appropriate Technology in Health. The authors would like to thank Jesse Brandt, Barbara Crane, John Crowley, Joanne Epp, Patrick Friel, Dana Gelfeld, Tom Merrick, Rich Owens, John Ross, and Jayanti Tuladhar for their thorough review of the paper. The opinions expressed in this paper are not necessarily the opinions of the reviewers.

This material may be reproduced provided the source is acknowledged.

ISBN: 1-889735-10-8

April 2001

CONTRACEPTIVE SECURITY: TOWARD A FRAMEWORK FOR A GLOBAL ASSESSMENT

Since 1996 it has been increasingly difficult for donors to keep pace with the rising demand for contraceptives, raising concerns about the future ability of family planning programs to fulfill their contraceptive requirements and of men and women to receive the products and services they need to achieve and maintain good reproductive health. In the face of this uncertainty, donors and programs are evaluating models of sustainability as an alternative to ongoing donor support.

Part I of *Contraceptive Security: Toward a Framework for a Global Assessment* describes a general framework for assessing a country's preparedness for contraceptive self-reliance, or contraceptive commodity security. Contraceptive commodity security is defined as the local capacity to forecast, finance, procure, and deliver good-quality and reliable contraceptives to all men and women who need them. Ensuring and maintaining a regular and ongoing supply of contraceptives requires an enabling national legal and socioeconomic environment, including a dynamic commercial sector, an ongoing government commitment to family planning and contraceptive supply, and the ability to provide free or subsidized products to low-income segments of the population.

The assessment framework consists of 12 indicators that contribute to, or are markers of progress achieved towards, contraceptive commodity security. A country's performance across indicators suggests its level of contraceptive security and a general timeframe for donor assistance. Assessment of contraceptive commodity security can be useful for countries to identify areas of strength and weakness so that donor and in-country resources can be most effectively and appropriately directed to achieve a more secure supply of good quality contraceptives.

Because internal context differs dramatically across countries and programs, this framework should be seen

as laying the groundwork and as a starting point for a more refined country-specific assessment. In an era when donors are increasingly concerned about the impact of their assistance on national prospects for sustainability, it is crucial that they and their in-country counterparts understand the work required to create a sustainable program so that donor withdrawal signals self-reliance rather than a crisis for the program.

Part II of this paper is an application of the assessment framework to 31 countries, all of which are presently receiving some form of international assistance. The findings of this application are:

- The majority (22 of 31) of the countries in the sample has a “very weak” or “weak” contraceptive security level. For those countries with a “very weak” security level donor support at significant levels will be required for 10-15 or more years. Those countries with a “weak” security level will likely require at least 8-10 years of some level of outside assistance if the national program is to maintain viability.
- With few exceptions, the 31 countries achieve their highest scores on the government commitment indicators. Few countries have overall contraceptive security scores that are high without also achieving high scores on government commitment. The small number of countries that do achieve high overall scores without high commitment scores have robust commercial sectors as well as relatively low poverty rates, which together may make government commitment less critical for these national family planning programs.
- Financial constraints may pose the greatest challenge to contraceptive self-reliance. On the other hand, except for the poorest countries, in-country budget sources for family planning have not likely been exhausted. In this context, a greater partnership among donors and national programs may have a positive role to play, with donors providing incentives, such as matching funds, to encourage greater in-country financing.
- The broad area of greatest overall need is the programmatic area, which for purposes of this paper refers to logistics functions.

Part III is a brief discussion of HIV/AIDS and its impact on contraceptive security. High HIV/AIDS prevalence rates dramatically alter the dynamic of commodity supply systems. High infection rates pose an enormous financial burden on health systems and thereby limit the resources for other health or social programs. The need for vast numbers of HIV/AIDS condoms also may overwhelm a supply system and considerably lengthen the timeframe for donor assistance. Of the 31 countries included in the sample, those with the highest incidence of HIV/AIDS all have very weak or weak levels of contraceptive security.

This paper focuses on contraceptive commodity security because data on contraceptives are available and good. However, the general tool could be applied to reproductive health commodity security when and if comparable data on reproductive health commodities become available.

A reliable supply of high-quality contraceptives is a critical component of successful family planning programs. This principle achieved heightened recognition with the 1994 International Conference of Population and Development (ICPD) in Cairo. The Programme of Action agreed upon at the ICPD made universal access to a range of safe, affordable, and high quality contraceptives and other essential reproductive health commodities a fundamental right of all citizens throughout the world. The immediate outcome of ICPD included an expansion of international support for reproductive health programs in the form of contraceptive purchases and assistance for expanded and improved family planning service delivery programs.

Since 1996, however, it has been increasingly difficult for donors to keep pace with the rising demand for contraceptives. The next decade is projected to be a time of ever-more rapid growth in demand for contraceptive services and supplies due to increasing numbers of couples of reproductive age as well as increasing rates of contraceptive use. The number of contraceptive users in all developing countries is expected to increase by 40 percent in the next 15 years, according to projections of the United Nations Population Fund.¹ For donor-dependent countries, the situation is more grave. In these countries, the projected increase in demand for contraceptives (including HIV condom needs) is a full 79 percent.² While recent reports suggest that the overall trend in donor assistance may again be turning upward,³ the gap between identified resources and demand for contraceptive supplies continues to widen. Between 1992 and 1996, donor support for contraceptive commodities covered, on average, approximately 41 percent of overall estimated requirements. Since 1996, that proportion has been in decline, reaching some 24.7 percent in 1999.⁴ The Futures Group International projected the amount required to meet the “gap” between demand for *subsidized* contraceptives and HIV/AIDS condoms (i.e., demand that will not likely be met by the private commercial sector⁵), on the one hand, and projected donor support, on the other, to be between US \$65 million and \$87 million annually by 2005, additional to currently projected spending. This annual shortfall is projected to increase to between \$140 million and \$210 million by 2015.

The Programme of Action agreed upon at the ICPD made universal access to a range of safe, affordable, and high quality contraceptives and other essential reproductive health commodities a fundamental right of all citizens throughout the world.

Poorer countries are unlikely to maintain viable family planning programs at all without continued, generous, and system-wide external assistance.

Faced with these uncertainties, family planning programs are considering a range of options to ensure the long-term security of supplies and services. Increasingly, donors and programs are looking at models of sustainability as an alternative to ongoing donor support. (A program is commonly described as “sustainable” when external assistance is not needed to provide goods and services.) The emphasis on program sustainability results in part from a perception that donor-driven programs have encouraged dependence and undermined country-level commitment and capacity development. For family planning programs specifically, sustainability also has become a response to the rise in anticipated demand for contraceptives in the years ahead, coupled with the uncertain ability of donors to meet that demand through contraceptive donations or financial assistance alone.

Historically, some countries—particularly those that have made significant economic gains (e.g., Taiwan, South Korea, and Thailand)—have been able to assume the full responsibility for contraceptive supplies by strengthening local institutions and relying on government, private, and commercial sources to meet needs. However, for many developing countries currently receiving donor support, the attainment of anything like a sustainable program in the foreseeable future is not feasible. A close examination of the range of institutions and other factors that determine contraceptive commodity security suggests that some countries may be able to assume partial responsibility for their programs while other, poorer countries are unlikely to maintain viable family planning programs at all without continued, generous, and system-wide external assistance. For countries facing high or even moderate HIV/AIDS prevalence rates, the need for donor support, both in terms of amount and length of time, will be compounded.

◀ INTRODUCTION ▶

This paper provides a basic framework for assessing a country’s national family program’s prospects for self-reliance, or contraceptive commodity security. Contraceptive commodity security is defined as a program’s ability to meet all its contraceptive requirements self-reliantly—that is, providing high-quality products to all men and women who need them, when and where they need them. A family planning program that possesses contraceptive commodity security is one that has the independent capacity to **estimate** its current and future contraceptive requirements, consistently **secure funding** necessary to meet its contraceptive requirements, **procure** the required contraceptives, and **deliver** the contraceptives to the individuals seeking services.

The paper identifies the key elements that contribute to contraceptive security and provides a tool for a general assessment of a country’s current status in relation to these elements. When the contraceptive security of a “country” is discussed here, we refer to that country’s primary family planning program, whether governmental or nongovernmental (NGO). The purpose of the tool is to:

- Underscore the need for a broad view of contraceptive supply, taking into account the wide range of factors that determine contraceptive commodity security;
- Provide a basis for a preliminary and rough assessment of a specific program’s contraceptive security;
- Identify areas of relative and general strengths and weakness in order to generate local and external support to build a more secure supply of high-quality commodities and to guide donor assistance and coordination to this end; and

- Provide a rough timeline of a program's prospects for sustainability.

The ability to independently secure and manage commodities varies dramatically across countries and organizations, depending on the particular political, economic, and social circumstances. Nonetheless, all secure supply systems have certain essential features. The framework laid out in this paper identifies these features broadly so that, for any given country, problems can be isolated and investigated systematically and with a greater degree of depth and specificity. Spotlighting those elements that are most significant to a secure supply system is important for understanding the source of problems as well as for determining whether or not a

donor commitment almost always extends beyond contraceptives to reproductive health more generally, including, critically, supplies for HIV/AIDS prevention. Within this broader context of reproductive health, the time required for programs to achieve sustainability levels naturally will be longer and hence so too will the time required for donor support. (For a discussion of HIV/AIDS and its impact on contraceptive security, see Part III.)

The timeframe proposed here should be seen as a very general estimate of time required before a country with a given contraceptive security level is able to achieve contraceptive self-reliance, assuming the identified weaknesses are addressed or treated—for example, skills

In practice, the period required for any specific country to achieve self-reliance will depend upon the sources of program strengths and weaknesses, the economic and political milieu in which the program operates, and the external support available.

phased-in, sustainable program is feasible, and what types of interventions are required to make it more feasible. In this way, the tool suggests how limited resources can be appropriately channeled to achieve long-term client-centered goals of accessible and high-quality services and products. Given the high competition for scarce resources, donors and their host country partners need to take a *broad and systematic* approach to commodity supply to achieve an assistance program that is tailored to the needs of each individual country, to strengthen systems for self-reliance, and to achieve the greatest impact on ensuring that contraceptive supplies reach the women and men who need them in a consistent and reliable way.

This assessment tool, which involves desk-based research and secondary data sources, is conceived as a starting point for a more detailed and refined on-site assessment of those countries currently receiving donor assistance. A rigorous assessment would require primary data sources and the participation of in-country program managers, policymakers and others with experience in the specific country or program to provide a fuller account of problems and their causes, and to design appropriate and effective interventions. The more general assessment tool presented here, on the other hand, is intended to provide donors with a global sense of their financial commitments to contraceptive supplies and a general timeframe in which those commitments may be lightened, or made unnecessary. Of course,

transferred, national capacity created, and political will strengthened. In practice, the period required for any specific country to achieve self-reliance will depend upon the sources of program strengths and weaknesses, the economic and political milieu in which the program operates, and the external support available.

While this assessment suggests a timeframe for donor assistance, we do not mean to imply that donors alone or even primarily should meet the supply shortfall (broadly construed) of all developing country family planning programs. In fact, a central premise of this contraceptive security tool is that contraceptive security requires that national programs increasingly assume the responsibility for financing, forecasting, procuring, regulating, and delivering high-quality products to their clients. What the tool does is ask—and establish a starting point for discussion around—the following questions:

- Given the existing and anticipated capacities, resources, and needs of any given country, how reasonable is self-reliance after what period of time?
- How can weaknesses that impede the contraceptive security of a given national program be identified and eliminated?
- Are there sufficient resources and skills available within the country to build a more secure contraceptive supply without external aid?

These are questions that must be addressed when countries move from donor dependence to self-reliance. In an age when donors are increasingly concerned about

the impact of their support on national prospects for sustainability, it is crucial that they and their in-country counterparts understand the work required to create a sustainable program so that donor withdrawal signals self-reliance rather than a crisis for the program.

KEY DETERMINANTS OF CONTRACEPTIVE COMMODITY SECURITY

Contraceptive commodity security assumes the existence of certain core institutional capacities. Whether commodities are imported or manufactured domestically, a sustainable program has the autonomous capacity to routinely forecast, procure, regulate, and deliver commodities on an ongoing and long-term basis. While interconnected, these institutional capacities need to be assessed separately because they are located at distinct points along the supply chain and are (or should be) managed by individual dedicated personnel with distinct skills. These programmatic capacities need to be determined rather than assumed because a weakness in any one of these capacities can seriously jeopardize an entire program.

A program with a secure contraceptive supply also is financially stable, having assumed an ever-increasing portion of its costs. To advance financial self-reliance, a national family planning program typically increases its line-item budget for family planning, while lessening the public burden through a variety of strategies such as shifting contraceptive users from the public to the private commercial sector when they can afford to pay commercial prices, initiating income-generating and cost-sharing schemes, and forging partnerships between the public sector and non-governmental organizations, on the one hand, and the private (for-profit) sector, on the other (e.g., social marketing and employer-based family planning services). Financial self-reliance in contraceptive supply assumes that a number of conditions have been met: the government is committed to family planning in general and contraceptive commodities in

particular; middle- and upper-income consumers are able and willing to purchase services and commodities at commercial prices, and the commercial sector is vibrant enough to take on an increasing share of the overall contraceptive market and thereby alleviate the public burden.

Finally, a program with a secure contraceptive supply is one where services and products are widely available, especially to the poor, adolescents, rural, and other segments of the population least likely to be served by the commercial market. A successful and sustainable family planning program provides the necessary services and products to men and women who need them, *regardless of their ability to pay*. Progress toward fulfilling these social goals should always inform assessments about the success, progress, strengths, and weaknesses of a given reproductive health program and its prospects for sustainability.

◀ PART I ▶

A TOOL TO ASSESS CONTRACEPTIVE COMMODITY SECURITY

Based upon the key determinants of contraceptive security, the contraceptive security assessment tool is composed of 12 indicators organized into 3 classes for descriptive purposes: programmatic capacity, policy and economic environment, and needs. What follows is a brief description of each of the indicators and the rationale for their inclusion in the assessment tool.

Programmatic Capacity

1. Forecasting. To enable a logistics system to have the right quantities of the right products at the time and place where clients need them, it is necessary that a program be able to estimate the use and losses that will occur for each method and brand of contraceptives required. This indicator assesses a program's capacity to forecast contraceptive needs independent of external assistance.

Whether commodities are imported or manufactured domestically, a sustainable program has the autonomous capacity to routinely forecast, procure, regulate, and deliver commodities on an ongoing and long-term basis.

2. Procurement. An effective procurement process positively affects product availability, quality, and affordability. This indicator assesses a program's capacity to procure contraceptives independent of external assistance.

3. Warehousing and delivery. An effective warehousing and delivery system ensures that the products clients need are adequately stored and delivered in a timely manner. This indicator assesses a program's capacity to warehouse and deliver contraceptives independent of external assistance.

4. LMIS (logistics management information system). A well-run LMIS effectively manages and tracks contraceptives in the supply chain and assures accountability for products within the system. This indicator assesses a program's capacity to operate a LMIS independent of external assistance.

Policy and Economic Environment

5. In-country budget for program. The proportion of the total family planning budget financed by in-country sources provides a measure of a country's independence from donors to financially sustain family planning activities. As a program becomes more independent, this proportion increases.

6. Evidence of top-level commitment to family planning. Effective family planning policy implementation requires the support of top political leaders. The degree to which a government is committed to family planning indicates the likelihood that the public sector will shoulder the

capita GNP, the easier it should be for the commercial sector to capture a greater share of the contraceptive market⁶ and thereby help reduce the burden on the public sector. Similarly, it should be easier for the government or private nonprofit organizations to financially support contraceptive supply and distribution through local resources and easier access to the greatest number of people in need of publicly subsidized products.

9. Commercial sector capacity. The share of the commercial sector in the contraceptive market indicates its present and likely future role for supplying products to consumers who can afford to pay for competitively priced services and commodities. High commercial sector capacity also indicates a public policy environment that supports the expansion of the commercial sector, by implementing, for example, effective market segmentation.

Needs

10. Safety-net burden. The poverty line indicates the proportion of the population that lacks the necessary income to purchase contraceptives at commercial prices and therefore the minimal burden that the public sector and/or donors will have to bear to ensure universal access. The higher the proportion of the population below the poverty line, the greater the safety-net burden and hence the greater the need for free or heavily subsidized products to ensure universal access.

11. Level of unmet need for services and supplies. The extent to which the existing program serves women

Some countries that are typically identified as “self-reliant” with regard to contraceptive provision may be found to have less secure contraceptive supply systems when measured against this comprehensive set of indicators.

increased burden of family planning costs—or make efforts for other in-country sectors to do so—resulting from expanding service provision and/or declining donor support.

7. Evidence of top-level commitment to contraceptive supply. One manifestation of commitment to commodities is the presence of import laws and legal regulations that facilitate the importation of contraceptive supplies that are not produced locally.

8. Per capita Gross National Product (GNP). Per capita GNP indicates the general purchasing power of the population as well as a potential program source of revenue, and hence the extent to which local resources are sufficient to replace donor contributions. The higher the per

who desire to limit or space their births indicates the distance the program must travel to achieve universal access. The greater the unmet need, the greater the need for the improvement and extension of program services.

12. Availability and accessibility of family planning methods. The extent to which the existing program serves poor and underserved populations is an indicator for measuring equity and the distance the program must travel to achieve universal access. The lower the availability and accessibility of methods, the greater the need for the improvement and extension of program services.

Through the use of these 12 indicators, the assessment tool measures the performance and sustainability of a program's logistics functions, the larger political and

economic environment that profoundly affects the operations of those functions, and the scope of a program's current activities relative to national demand and need. All three of these areas need to be included in any assessment that seeks to understand the degree to which a given family planning program will succeed without donor assistance. One important consequence of including all these variables into the contraceptive security

A Note on Data Sources

Two principles governed the selection of indicators: *significance* (the indicators must measure key factors that shape a national program's contraceptive commodity security) and *data availability* (information for the indicators must be available to a knowledgeable researcher without requiring additional in-country interviews, research, and/or surveys).

A country, for instance, that receives no donations or funding for contraceptives from donors and yet is unable to effectively manage a LMIS or serve significant segments of its population does not possess strong contraceptive security, although it may be nominally "self-reliant."

tool is that some countries that are typically identified as "self-reliant" with regard to contraceptive provision may be found to have less secure contraceptive supply systems when measured against this comprehensive set of indicators. A country, for instance, that receives no donations or funding for contraceptives from donors and yet is unable to effectively manage a LMIS or serve significant segments of its population does not possess strong contraceptive security, although it may be nominally "self-reliant."

The following sections provide a detailed review of the 12 indicators, followed by a discussion of the overall assessment tool and its implications for donor financial and/or technical assistance. Before addressing the indicators, it should be noted that many other factors also influence a program's performance, including managerial accountability and practices, quality of care, method mix, worker morale and training, and the capacity to identify and correct problems independently with a view to an ongoing improvement in services. While these factors are important to overall program success at meeting clients' reproductive needs, the set of indicators included here reflects a useful set of critical factors for determining a country's contraceptive security and preparedness for sustainability in this area. Finally, Part II of this paper includes the data and conclusions obtained through the application of this assessment framework to 31 countries while Part III is a brief discussion of HIV/AIDS and its implications for contraceptive security.

National statistics on the following indicators are readily available for most countries:

- Per capita GNP
- Unmet need
- Commercial sector capacity (share)
- Safety-net burden (poverty line)

For the remaining indicators, usable data for a broad range of countries have not been compiled in published form. However, a principal author of the most recent cycle of the Program Effort survey has made available the 1999 database to prospective program evaluators.⁷ The Program Effort study is a well-established and periodic cross-national survey-based investigation into the strength of national family planning program "efforts." The 1999 database includes scores for 89 countries across the four indicators adopted from the Program Effort study:

- In-country budget for program
- Evidence of top level commitment to family planning
- Import laws and legal regulations regarding contraceptives
- Availability and accessibility of family planning methods

Finally, no readily available database exists for the following four remaining indicators, all of which treat elements of logistics systems:

- Forecasting
- Procurement
- Warehousing and Delivery
- LMIS

In this respect, the contraceptive security tool assumes that an individual undertaking an assessment of the logistics components of a given national family planning program has a fairly deep knowledge of that program, and/or also has access to individuals who have knowledge of the program.

The following section outlines scoring procedures for each of the 12 indicators. Scores ranging from 0 to 3 are calculated for all indicators except those adopted from the 1999 Program Effort database. (For an explanation of how the scores for Program Effort indicators can be easily adapted for use by the present assessment tool, see the Appendix.) The criteria for scoring are listed in bold and described. A score of 0 represents the lowest possible score (although a 0 does not necessarily imply an absence of effort and/or independent capacity), and a score of 3 represents the highest possible score. The composite (final) score of a given country's national family planning program is the percent of the maximum of all 12 indicator scores. As described later, this final score will roughly translate into the country's overall contraceptive commodity security level.

PROGRAMMATIC CAPACITY

1. Forecasting.

- **Periodic forecasts of consumption are prepared, updated, and validated.** Forecasts of consumption are properly prepared for each program, method, and brand. Both short-term (e.g., annual) and longer-term (e.g., three years) forecasts are prepared in accordance with program needs of local budgeting and procurement cycles. Forecasts are prepared and updated using the most recent and appropriate data. Forecasts take into account programmatic plans (e.g., expansion of service outlets, training, AIDS advertising, etc.). Forecasts are validated by comparing forecasted consumption with reported consumption for past years.
- **Forecasts are incorporated into cost analysis and budgetary planning.** Costs and budgets include not only goods, but also warehousing and transport costs.

0 = no independent forecasting of consumption, and 3 = local capacity and high performance for all criteria.

Reference: Adapted from EVALUATION Project. *Composite Indicators for Contraceptive Logistics Management: Guidelines for Scoring the Composite Indicators* (Arlington, Virginia: JSI/FPLM, April 2000).

2. Procurement.⁸

- **Contraceptive consumption forecasts are used to determine short-term procurement plans.** Procurement requirements take into account inventory levels, coordination of suppliers/donors, shipment and handling schedules, and anticipated changes in program activity. Program actively monitors/manages coordination among suppliers/donors. Program addresses need to maintain continuity of brands (particularly hormonal formulations).

- **Right amount of contraceptives are obtained in appropriate timeframe.** Program knows and complies with procedures and timeframes for ordering commodities from suppliers and donors, including trade, regulatory, and currency restrictions.

0 = no independent capacity to procure, and 3 = local capacity and high performance for all criteria.

Reference: Adapted from EVALUATION Project. *Op. Cit.*

3. Warehousing and delivery.

- **Storage capacity and conditions are adequate.**
- **At least one physical inventory of contraceptives is conducted per year at each level in the local supply chain.**
- **Standards for maintaining product quality are known and met.** Program has procedures for ensuring that the products received meet standards, visual inspection of goods takes place, products can be sampled and tested for quality, and unfit and expired products are destroyed. Program has procedure for capturing client complaints regarding product quality.
- **Stock is issued according to first expiry/first out (FEFO) inventory control procedures.**
- **Program has an appropriate distribution system and schedule for stocking each level.** Procedures should specify what type of distribution system (e.g., min/max, topping up) is being used. The system should have a documented distribution schedule.
- **Each level is stocked adequately.**
- **Minimal stockouts have been experienced during the previous year.**
- **A system for tracking and documenting system losses exists.**
- **Adequate transportation system for moving supplies exists.**

Scoring from 0-3, where 0 = no independent warehousing and delivery capacity, and 3 = local capacity and high performance for all criteria

Reference: Adapted from EVALUATION Project. *Op. Cit.*

4. Logistics Management Information System (LMIS).

- **Basic elements of LMIS exists.** LMIS contains beginning inventory balance, supplies received, supplies issued, ending inventory balance, and system losses. LMIS also contains a contraceptives component, keeps appropriate records throughout the system for contraceptives, and is documented in writing.
- **LMIS information is used in management decision-making.** Data are used for continuous monitoring of supply situation as well as periodic forecasting and ordering.

- **LMIS information is fed back to all levels in the distribution system.** Summary data are periodically provided to regional and subregional distribution facilities.
- **Commodities data are validated by cross-checking with other data sources.** Commodities data are periodically cross-checked against supplies received, service statistics, survey data, and field audit data.

**0 = no independent LMIS capacity, to
3 = local capacity and high performance for all criteria.**

Reference: Adapted from EVALUATION Project. *Op. Cit.*

POLICY AND ECONOMIC ENVIRONMENT

5. In-country budget for program.

- **Percentage of the total family planning/population budget available from in-country sources.**

Reference: Ross J. A. and Stover J. *Effort Indices for National Family Planning Programs, 1999 Cycle* [MEASURE Evaluation working paper] (Chapel Hill: University of North Carolina, May 2000); available from <http://www.cpc.unc.edu/measure/publications/workingpapers/wp0020.pdf>; Internet; accessed 2 March 2001.

Data Source: Country data for this indicator are available from The Futures Group International. These scores were originally scaled from 0 to a maximum of 4; each one is intended to measure the concept indicated by its title, and is based upon one or more questions that are weighted and coded to produce the score.⁹ See the Appendix for converting Program Effort scores to a four-point scale.

6. Evidence of top-level commitment to family planning.

- **Existence and type of official policy:** to reduce the population growth rate, to support family planning activities for other than demographic reasons, to allow private and/or commercial family planning activities in the absence of government-sponsored activity, or to discourage family planning services.

Reference: Ross J. A. and Stover J. *Op. Cit.*

Data Source: Country data for this indicator are available from The Futures Group International and scored as in 5 (above).

7. Evidence of top-level commitment to contraceptive supply.

- **Extent to which import laws and legal regulations facilitate the importation of contraceptive supplies that are not manufactured locally, or the extent to which contraceptives are manufactured within the country.**

Reference: Ross J. A. and Stover J. *Op. Cit.*

Data Source: See under 5.

8. Per-capita GNP.

0 = \$760 or less; 1 = \$761 to \$3,030; 2 = \$3,031 to \$9,360; 3 = \$9,361 or more

Data Source: World Bank. *Entering the 21st Century: World Development Report 1999/2000* (New York: Oxford University Press, 2000), Table 1.

9. Commercial-sector capacity.

- **Percentage of all contraceptives provided by the commercial sector.¹⁰**

**0 = < 15%; 1 = 15% to 30.9%;
2 = 31% to 45%; 3 = > 45%**

Data Source: *Demographic and Health Surveys* (Calverton, Maryland: Macro International, various dates); available from <http://www.macrint.com/publications/default.asp> and <http://www.measuredhs.com/pubs/start.cfm?CFID=48530&CFTOKEN=48584426>; Internet; accessed 2 March 2001.

NEEDS

10. Safety-net burden.

- **Percent of population below the (national) poverty line.**

**0 = > 35%; 1 = 25% to 35%;
2 = 15% to 24.9%; 3 = < 15%**

Data Source: World Bank. *Op. Cit.*, Table 4.

11. Level of unmet need for services and supplies.

- **Percent of married women of reproductive age with unmet need for limiting or spacing of births.**

**0 = > 30%; 1 = 20% to 30%;
2 = 10% to 19.9%; 3 = < 10%**

Data Source: Ross J.A., Stover J. and Willard A. *Profiles for Family Planning and Reproductive Health Programs: 116 Countries* (Glastonbury, Connecticut: The Futures Group International, 1999).

12. Availability and accessibility of family planning methods and abortion.

- **Percentage of population having ready and easy access to male and female sterilization,¹¹ pills and injectables,¹² condoms¹³ and spermicides, IUDs, and abortion¹⁴ and menstrual regulation.** *Ready and easy access* means that the recipient spends no more than an average of two hours per month obtaining contraceptive supplies and services. Easy access also implies that the cost of contraceptive supplies is not burdensome, i.e., to meet this criterion, a one-month supply of contraceptives should cost less than 1 percent of a month's wages. (The greater the availability and accessibility of family planning methods, the higher the score)

Reference: Ross J. A. and Stover J. *Effort Indices...* May 2000.

Data Source: See under 5.

INTERPRETING SCORES AND CORRESPONDING CONTRACEPTIVE COMMODITY SECURITY LEVELS

The final score—a given country’s percent of the maximum attainable score—suggests its general contraceptive security level. For purposes of grouping countries by needs, roughly speaking,

- a score of 30 percent or less represents “very weak” contraceptive security;
- a score between 31 and 50 percent represents “weak” contraceptive security;
- a score between 51 and 80 percent represents “moderate” contraceptive security; and
- a score over 80 percent represents “strong” or comprehensive contraceptive security.¹⁵

While these divisions are somewhat arbitrary, each level generally suggests a different degree of contraceptive self-reliance and a different timeframe for continued donor dependence.

Only those countries at the “strong” contraceptive security level, with scores greater than 80 percent, can be assumed to have a national family planning program that is capable of operating self-reliantly. These countries have the capacity to function without any type of donor support—including donations and financial and technical assistance. In contrast, programs at the “very weak” and “weak” security levels will require long-term donor assistance and heavy government maintenance to sustain the most elementary levels of contraceptive security. Weak security countries are capable of achieving a larger degree of self-reliance but are at varying levels of independence, have varying needs, and require various durations of assistance, from 8 to 10 years at a minimum. While a country’s overall score can help determine a rough timeframe for donor assistance, it does not indicate the specific areas or institutions in need of capacity-building or strengthening in other ways. Only by looking at the individual, specific indicators can institutional weaknesses be highlighted. A more refined assessment of these institutions should then follow. Nonetheless, the contraceptive security tool does suggest generally how both very weak and weak security countries can profit from specific interventions by donors, national governments, and family planning programs that strengthen institutions and make them more effective and less donor-dependent in the long run.

Very weak security programs need to acquire the most rudimentary institutional capacities and basic family planning infrastructure. Coordinated donor efforts can aid in their development, ongoing support, and monitoring. If these programs are to succeed, donors will need to commit to long-term assistance, invest in all aspects of the program to ensure high performance, and contin-

ue to provide contraceptive donations to nurture the market and expand coverage. For their part, national governments can work to reduce import controls and tariffs of all sorts, while promoting broad-based access to highly subsidized products. Both activities assume a fairly strong level of government financial commitment to family planning, which itself may require heavy national and international advocacy efforts, and the funds to support them.¹⁶ At the weak security level, however, donors need to continue full-system support, including direct contraceptive donations. Regardless of a country’s level of contraceptive security, however, donors and governments must be alert to the possible negative effects that any infusion of free and subsidized contraceptives may have on the private commercial sector.¹⁷

The strengthening of local institutional capacities can continue with a **weak security** program. In addition, governments and donors can begin to encourage greater private-sector participation by supporting marketing and advertising costs. Governments will also need to mobilize resources, promote demand-generation and information, education, and communication (IEC) activities, and develop a regulatory agency to ensure quality control of contraceptives. Family planning programs with weak security can begin to extend their services to underserved groups and initiate selective cost recovery through user fees and social marketing to lessen the burden of expanded family planning subsidies on the government or program budget. Programs also can continue to encourage donor input while lobbying the government for a favorable tariff and tax environment. Governments and program managers also might consider alternative financing and provision options, such as community financing.¹⁸

Programs with **moderate security** sometimes experience incapacitating problems that require donor funds and technical assistance until the skills have been learned and the problems have been systematically resolved. Donors can begin a phased reduction of commodity assistance combined with continued support for local institutional capacity development. Institutional support can concentrate on transferring skills and technologies and on technical and logistics training, so that local family planning staff can increasingly assume the responsibility for ensuring a reliable supply of good quality contraceptives to consumers. National governments can continue with IEC activities, update drug regulatory legislation and regulations, and eliminate remaining import and tax barriers. Family planning programs can focus on improving program efficiency and quality, expanding method mix and coverage, and ensuring that contraceptives are available to low-income

groups at no charge or heavily subsidized prices. Programs also can intensify market-segmenting activities by more directly targeting free and subsidized products. The private commercial sector, including pharmacies and private physicians, can be encouraged to maximize its role in the provision of services and products to clients who can pay. Favorable government and donor support as well as specific collaborative activities between the public and private sector can hasten greater commercial investment. Similarly, commercial participation will expand with the removal of government regulations and policies that unfairly advantage the public sector over the commercial sector, such as unnecessary restrictions on what or where contraceptives can be sold, high sales and value-added tax on commercially sold contraceptives, price controls, and other strictures.¹⁹ Finally, employers can be encouraged to institute health clinics and private insurance agencies can expand their coverage to include contraceptive goods and services as family planning becomes increasingly accepted as central to the definition of national health and welfare.

nonetheless obtain subsidized or free services and goods from the public sector in “nearly all” of these countries.²⁰ This represents an enormous and unnecessary drain on public revenues, one that would tax even relatively wealthy countries and requires significant government commitment to the provision of public health care regardless of ability to pay. Effective market segmentation and targeting strategies, coupled with demand generation activities can go a long way towards reducing revenue pressures on the public treasury—and increase the contraceptive security of a program by releasing funds for more sustainable ends.

CONCLUSION

The purpose of the contraceptive security tool is to provide a preliminary means to assess a country’s level of contraceptive security through an assessment of its national family planning program, the political and economic environment in which it operates, and the scope of a program’s current activities relative to national demand and need. As discussed earlier, the selection of

The framework presented in this paper is intended as the starting point for what the authors expect to be a continuing refinement of a means to more fully evaluate the security of a country’s contraceptive supply.

In all cases—from countries with very weak or no security to those with comprehensive security—the possibilities and opportunities available for effective interventions will depend on a host of factors including financial capacity. In low-income countries where large segments of the population are too poor to pay for services, heavily subsidized products financed by government, NGO programs, and/or donors will be an ongoing need. However, the prevalence of poverty, while setting limits to the funding market, does not preclude the possibility of a sustainable program or comprehensive contraceptive commodity security. In fact, poverty serves to further underscore the importance of the private commercial sector, an enabling economic and policy environment supportive of its expansion, market segmentation, and public-sector cost recovery as a means to increase the efficiency of public resources and relieve fiscal pressures on national governments. Examining consumption data across all the Demographic and Health Survey (DHS) countries, a recent study of contraceptive financing options found that the “majority” of clients who can afford to pay commercial prices

indicators for inclusion in this tool was informed both by their significance to contraceptive supply and the availability of data they require. A user of this tool may have access to information unavailable to the authors of this report. Alternatively, a user may require indicators to evaluate a country’s contraceptive supply that are excluded from this assessment tool. As the need to assess a national family planning program’s contraceptive security gains greater recognition in the context of heightened awareness of sustainability requirements, it is likely that data collection itself will undergo transformations to reflect the need for new or more precise indicators.²¹ The framework presented in this paper is intended as the starting point for what the authors expect to be a continuing refinement of a means to more fully evaluate the security of a country’s contraceptive supply. A more rigorous in-country assessment will require the participation of a multidisciplinary team with fairly detailed protocols to produce a comprehensive country profile. However, it is hoped that, in determining a country’s preparedness for sustainability and in identifying its specific areas of strength and weakness

in this regard, the more rigorous assessment will take into account the full range of issues that affect contraceptive security.

A further but more complex issue that needs to be addressed is the relationship of contraceptive security to reproductive health security. One of the central obstacles in this regard is the availability of information. While data on contraceptives require improvement, data for reproductive health supplies more generally are grossly deficient. The production and collection of high-quality, dependable, and relevant data on reproductive health supplies should begin by establishing a universally accepted list of essential reproductive health commodities. Without such a list, reproductive health programs will be unable to determine—much less offer their clients—the critical products and services required. The ICPD goal of universal access to safe, affordable, and high-quality reproductive health commodities will be difficult if not impossible to achieve without reliable and relevant data, which are dependent on an agreed-upon definition of what constitutes essential reproduc-

pressure to assume a greater share of the financial costs of their national programs. While governments must bear the ultimate responsibility for creating reproductive health security in their countries, the expectations of the international community must be grounded in a realistic understanding of a given country's resources, capacities, needs, and political environment. Many countries will be in need of continued donor support if their programs are to be maintained. However, the old strategies of piecemeal and uncoordinated assistance are increasingly inadequate to address the challenges posed by the changing global environment.

To meet the challenges ahead, coordinated, comprehensive, and strategic approaches are needed within the context of global partnerships and consensus decision making. Donors, international and local NGOs, and national governments need to commit to a coordinated effort for maximum efficiency and impact. At the global level, leadership is needed to provide an effective forum for donor coordination and to better target resources where they are most needed. This new global effort

In short, the security of contraceptive supplies can only be enhanced with progress toward reproductive health security more generally.

tive health commodities. Equally important, reliable data are necessary to ensure accountability in systems that are increasingly operating under deepening financial constraints. Until this information becomes available, knowledge about the range, availability, financing, and procurement of reproductive health products will continue to be insufficient for purposes of implementing and monitoring reproductive health programs and progress toward the goals laid out by ICPD. In short, the security of contraceptive supplies can only be enhanced with progress toward reproductive health security more generally. However, efforts to improve the contraceptive security of national family planning programs should not be held back by a lack of comparable data for other reproductive health supplies.

The global demographic and political environment is undergoing enormous changes. Increases in population, the numbers of couples of reproductive age, demand for modern contraceptive methods, and HIV/AIDS cases together place an enormous burden and responsibility on developing country governments. In the face of decreasing donor funding, these governments are under

requires the commitment of all partners, segmentation of effort by comparative advantage, monitoring of outcomes and, finally, accountability. At the national level, countries need to take on an increasing share of the responsibility for their reproductive health programs. To the extent that outcomes that improve reproductive health security can only enhance contraceptive security, contraceptive supply systems and the national family planning programs that operate them will benefit from this global partnership.

◀ PART II ▶

APPLICATION OF THE CONTRACEPTIVE SECURITY TOOL TO 31 COUNTRIES

For purposes of illustration, 31 countries for which data are available are measured on the 12 indicators (Table 1). For Family Planning and Logistics Management (FPLM) and Program Effort indicators, scores are derived (except where noted) from the actual databases (country scores) assigned by FPLM and The Futures Group International, respectively, with some modifica-

tion to standardize the scoring method across indicators.²² The Program Effort indicators were originally collected for the *Effort Indices for National Family Planning Programs, 1999 Cycle*. The FPLM data were collected mostly during 2000 for the “Composite Indicators for Contraceptive Logistics Management” evaluation tool. Both data sets evaluate national family planning programs. Four countries (Brazil, Egypt, India, and Turkey) included in this sample were not measured by FPLM. The logistics scores for these countries were estimated based on UNFPA Technical Reports, *Contraceptive Requirements and Logistics Management Needs* (UNFPA 1992-1995). Because all of the countries included in the sample currently are receiving some type of donor assistance, the overall distribution of scores is expected to reflect this donor-dependent status.

While the 31 countries cannot be said to comprise a random sample, they are diverse with respect to geography, income, and population size.

- Thirteen are located in Africa, three in Middle East/North Africa, five in Asia, nine in Latin America, and one in Europe.
- Nineteen are classified by the World Bank as low-income (GNP per capita of US\$760 or less), nine are classified as lower-middle-income (GNP per capita of US\$761 to US\$3,030), and three are classified as upper-middle-income (GNP per capita of US\$3,031 to US\$9,360).
- The populations of these countries range from five million (Togo) to over one billion (India). Together, the 31 surveyed countries contain just under two billion people, or about 40 percent of the developing world, 55 percent when China is excluded.²³

Figure 1 presents the 31 contraceptive security scores in descending order. The arrow at the bottom of the figure indicates the general meaning of these scores in terms of level of security, and the implications for length of donor assistance. The higher the score, the greater the contraceptive security, and the less time required for donor assistance. As illustrated by Figure 1, the majority (22 of 31) of the countries whose contraceptive commodity security is measured here has a very weak or weak security level. This may be due in part to the countries included in the sample, all of which currently receive technical assistance and/or contraceptives from donors. For these countries (scoring 50 percent or less of the maximum attainable score), full system donor support will likely be required for *at least* 8 to 10 years if the national program is to maintain viability. Those countries with scores of 30 percent or less will likely require 10 to 15 or more years of assistance.

With few exceptions, the 31 countries achieve their highest scores on the commitment indicators—evidence of top level commitment to family planning as exhibited in government policy, and to commodities as exhibited in laws and regulations relating to contraceptive imports that are not produced locally. Moreover, few countries have overall contraceptive security scores that are high without also achieving high scores on government commitment. The small number of countries that do achieve high overall scores without high commitment scores have robust commercial sectors as well as relatively low poverty rates, which together may make government commitment less critical for these national family planning programs.

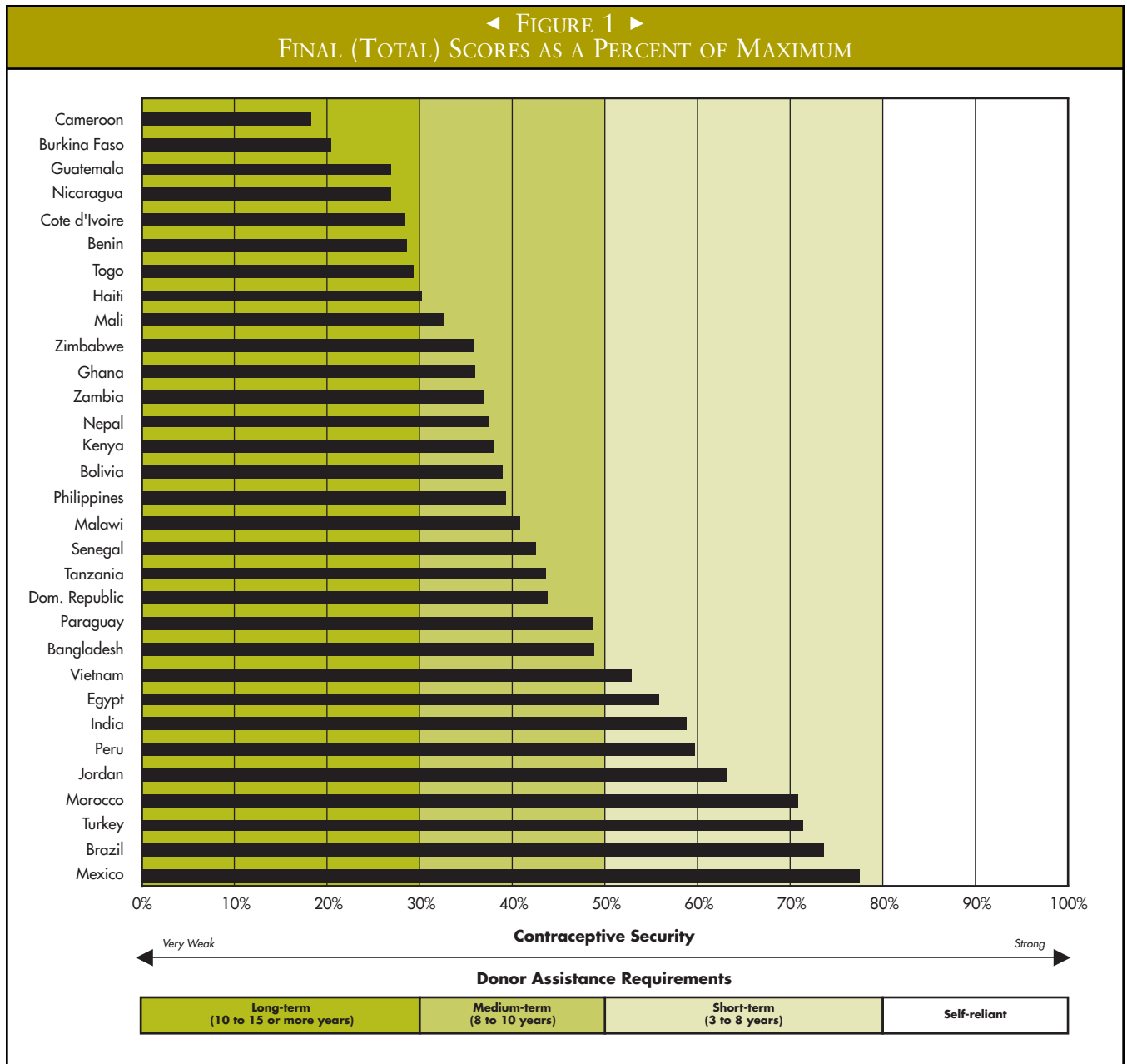
Countries perform least well on in-country budget for program, per-capita GNP, and poverty. In fact, all but 9 of the 31 countries receive a score of 0 on the budget indicator, meaning that less than 50 percent of the government family planning budget was financed from in-country sources for more than two-thirds of the countries in this sample. The fact that the lowest indicator scores all relate to issues surrounding finance suggests that achieving financial self-reliance may pose the greatest challenge to contraceptive self-reliance. On the other hand, while all three upper-middle-income countries (with a “2” score on GNP/capita) achieve high scores on the in-country budget indicator, lower-middle-income countries (with a score of 1 on GNP/capita) do not perform better on the budget indicator than lower-income countries (with a 0 on GNP/capita). This suggests that, except perhaps for the poorest countries where the financing of family planning programs may remain a persistent obstacle, in-country budget sources have not likely been exhausted. To the degree that in-country budget sources have yet to be fully tapped, there may be scope for countries to play a larger role in the financing of contraceptive supplies and supply systems. In this context, a greater partnership between donors and national programs may be valuable, with donors providing incentives, such as matching funds, to encourage greater in-country financing.

Table 1 presents the 31 country scores across the three classes of indicators. Of the three classes, countries perform least well on the programmatic indicators (Table 2), although differences in the average score across classes are not large. The programmatic indicators also exhibit the widest variation in class scores (Figures 2 through 4). The range is from very weak or no independent programmatic capacity at 0, to full independent programmatic capacity at 100. When the data for the five countries with the highest overall scores (Mexico, Brazil, Jordan, Turkey, and Morocco)

are removed from the analysis, the low average score on the logistics functions (programmatic indicators) relative to the other two classes becomes more pronounced. With the elimination of the five highest scores, the average programmatic score decreases from 41 to 33, the average environment score decreases from 46 to 44, and the average need score decreases from 44 to 38.

The four logistics functions represented in the programmatic class are clearly areas for which the vast

majority of countries included in this sample require long-term assistance. In contrast to the finance indicators of GNP per capita, poverty line, and budget, which also are very weak in this sample, the programmatic indicators are all unequivocally “actionable” areas, that is, areas in which countries, through donor assistance, can significantly improve the security of their contraceptive supplies.



The four logistics functions represented in the programmatic class are clearly areas for which the vast majority of countries included in this sample require long-term assistance.

◀ TABLE 1 ▶
31 COUNTRY SCORES ACROSS ALL INDICATORS

	PROGRAMMATIC				ENVIRONMENT				NEED				Final (Percent of Maximum ^a)
	(1) Forecasting	(2) Procurement	(3) Warehouse/ delivery	(4) LMIS	(5) In-country budget ^c	(6) Commitment to family planning	(7) Commitment to contraceptive supply	(8) GNP/ capita ^b	(9) Commercial sector share ^b	(10) Safety-net burden ^b	(11) Unmet need ^b	(12) Method accessibility ^c	
Bangladesh	1	1	2	2	0	3	3	0	1	0	2	2.6	49
Benin	0	0	1	1	0	1.5	1.8	0	2	1	1	1	29
Bolivia ^a	0	1	0	1	0	1.5	2.4	1	3	--	1	2	39
Brazil ^f	3	3	2	2	1.5	1.5	1.5	2	2	2	3	3	74
Burkina Faso ^a	0	0	0	0	0	2.3	2.3	0	0	--	1	1.2	21
Cameroon	0	0	0	0	0	2.3	0	0	3	0	1	0.3	18
Cote d'Ivoire ^a	0	0	0	0	0.8	2.4	1.5	0	3	--	1	0.7	28
Dom. Republic	0	0	1	1	0	1.5	2.1	1	3	2	2	2.2	44
Egypt ^f	1	1	2	1	0	3	2.3	1	3	2	2	1.8	56
Ghana	0	0	1	0	0	3	3	0	3	1	0	2	36
Guatemala	0	0	0	1	0	0.8	3	1	1	0	1	1.9	27
Haiti	0	1	2	0	0	2.3	3	0	1	0	0	1.6	30
India ^f	2	3	2	2	2.3	2.9	2.5	0	0	1	1	2.5	59
Jordan	2	3	3	3	0	1.5	1.9	1	2	3	1	1.4	63
Kenya	2	1	2	1	0	3	2.5	0	0	0	0	2.2	38
Malawi	1	3	3	1	0	2.5	2.3	0	1	0	0	0.9	41
Mali ^a	1	1	1	1	0	2.3	2.3	0	0	--	1	1.2	33
Mexico ^a	2	2	3	2	3	2.6	2.3	2	2	3	1	3	78
Morocco	3	3	3	3	1.2	1.5	1.7	1	2	2	2	2.1	71
Nepal	2	3	1	0	0	3	2.7	0	0	0	0	1.8	38
Nicaragua ^a	0	0	2	0	0	1.5	2.3	0	1	0	--	2.1	27
Paraguay	0	0	1	0	1.5	1.5	3	1	3	2	2	2.5	49
Peru	2	3	2	2	0	2.3	2.6	1	2	0	2	2.6	60
Philippines	2	1	1	1	0	2.3	1.5	1	1	0	1	2.4	39
Senegal	2	2	2	1	0	3	1.5	0	1	1	0	1.8	43
Tanzania	3	2	2	1	0	3	3	0	0	0	1	0.7	44
Togo	0	0	1	0	0	3	3	0	1	1	0	1.6	29
Turkey ^f	2	2	2	2	2.6	2.1	2.6	2	2	--	2	2.3	72
Vietnam	2	1	2	2	1.1	3	2.6	0	0	0	3	2.4	53
Zambia	3	0	1	1	0	2.4	1.5	0	2	0	1	1.4	37
Zimbabwe	0	1	1	1	0.5	2.2	2.4	0	0	1	2	1.8	36
Average ^d	1.2	1.2	1.5	1.1	0.5	2.3	2.3	0.5	1.5	0.8	1.2	1.8	44

^aA score of zero is assigned if less than 50 percent of the budget is from in-country sources. ^bPer-capita GNP, commercial share of the contraceptive market, population below poverty line, unmet need represent currently available data, not necessarily of the same year, and hence may not be comparable across countries. ^cA score of 3 is assigned if method accessibility is equal or greater than 75 percent. ^dRounded to the nearest tenth of a percent. ^eData on poverty line unavailable. ^fFPLM (logistics) data on these countries not available. Scores estimated based on UNFPA Technical reports (UNFPA 1992-1995). ^gMexican IMMS evaluated. ^hData on unmet need unavailable.

◀ TABLE 2 ▶
 SCORES ACROSS THREE CLASSES
 OF INDICATORS AS PERCENT OF MAXIMUM

	Programmatic Scores as % of Maximum	Environment Scores as % of Maximum	Need Scores as % of Maximum
Bangladesh	50	47	51
Benin	17	35	33
Bolivia	17	53	50
Brazil	83	57	89
Burkina Faso	0	31	37
Cameroon	0	35	14
Cote d'Ivoire	0	51	28
Dom. Rep.	17	51	69
Egypt	42	62	64
Ghana	8	60	33
Guatemala	8	39	32
Haiti	25	42	18
India	75	51	50
Jordan	92	43	60
Kenya	50	37	24
Malawi	67	39	10
Mali	33	31	37
Mexico	75	79	78
Morocco	100	49	68
Nepal	50	38	20
Nicaragua	17	32	35
Paraguay	8	67	72
Peru	75	53	51
Philippines	42	39	38
Senegal	58	37	31
Tanzania	67	40	19
Togo	8	47	29
Turkey	67	75	72
Vietnam	58	45	60
Zambia	42	39	27
Zimbabwe	25	34	53
Average²⁴	41	46	44

HIV/AIDS AND CONTRACEPTIVE SECURITY

Ninety-five percent of the people living with HIV/AIDS live in the developing world, with more than 70 percent in sub-Saharan Africa alone.²⁵ HIV cases are expected to soar in Asia and Eastern Europe in the near future. HIV infection is having a profound impact on all aspects of society where prevalence is high. It lowers a country's gross domestic product, ravages the most productive segment of the population, eliminates primary breadwinners in families, leaving countless orphans behind, and erodes development gains in virtually all sectors, including education, health, agriculture, and industry, pushing infrastructures to the limit and, in many cases, over the limit.²⁶

The impact of HIV/AIDS on the sustainability of reproductive health programs requires more research. What is clear is that high HIV/AIDS prevalence rates dramatically alter the dynamic of commodity supply systems and pose an enormous financial burden on health systems. In Zimbabwe, where over 25 percent of all adults are infected, 50 percent of the health care budget is devoted to treating AIDS patients.²⁷ Under these circumstances, the resources available for other health programs, including family planning goods and services, are severely limited. In fact, at all levels, HIV affects the priorities of spending and investment, even while the direct and indirect costs of the disease are difficult to quantify. Where HIV/AIDS has afflicted a family member, it devastates personal economies, reducing or eliminating disposable income for the purchase of contraceptive goods and services. Family planning programs in badly-affected countries will have a much greater task, at the level of advocacy as well as financially, programmatically, and politically, to maintain and improve their services in the face of this epidemic.

HIV is most widespread in the very countries whose national family planning programs are the least equipped to cope with the demands that an effective HIV-prevention approach calls for.

It is clear that HIV/AIDS can have an enormous impact on a country's contraceptive security. However, the extent of the impact varies by country, and even within a country. Where integration of family planning and HIV prevention is being considered, it is not clear what effect the linking of the two will have on the entire system. No doubt, the need for large quantities of HIV/AIDS condoms can overwhelm a supply system and considerably lengthen the timeframe for donor assistance. Even in countries with "moderate" contraceptive security, the logistics systems may buckle under with an enormous upsurge in demand for condoms for HIV/AIDS prevention.

Table 3 shows HIV/AIDS prevalence for the 31 countries whose contraceptive security was assessed in Part II of this paper. Those countries with the highest incidence of HIV/AIDS all have very weak or weak levels of contraceptive security. These are also low-income countries with meager financial resources and poor logistics infrastructures. In other words, HIV is most widespread in the very countries whose national family planning programs are the least equipped to cope with the demands that an effective HIV-prevention approach calls for. Prevalence rates alone provide little insight into the impact of the disease. India, whose current overall HIV/AIDS prevalence rate is low relative to some countries in this sample, especially many in sub-Saharan Africa, has the second largest number of people living with AIDS in the world after South Africa.²⁸ Only an in-depth, in-country study will be able to provide a fuller picture of the impact of HIV/AIDS on a given country's contraceptive and, more generally, reproductive health supply systems, taking into account epidemic prevalence and infected populations, the organization of the logistics system(s), resource targeting strategies, political commitment, and other factors.

The development and improvement of research and data on the relationship of HIV/AIDS to contraceptive and, more broadly, reproductive health supply systems are necessary first steps towards solutions to reproductive health supply problems throughout the world. As with problems afflicting contraceptive supply systems worldwide, coordinated and collective actions between the global and national levels are required to fully respond to the challenges presented by the HIV/AIDS epidemic.

◀ TABLE 3 ▶
HIV/AIDS AND
CONTRACEPTIVE SECURITY IN 31 COUNTRIES

	Estimated Percent of Adults (15-49) Living with HIV/AIDS (at end 1999)	Contraceptive Security Level
Cameroon	7.73	Very weak
Burkina Faso	6.44	Very weak
Guatemala	1.38	Very weak
Nicaragua	0.20	Very weak
Cote d'Ivoire	10.76	Very weak
Benin	2.45	Very weak
Togo	5.98	Weak
Haiti	5.17	Weak
Mali	2.03	Weak
Zimbabwe	25.06	Weak
Ghana	3.60	Weak
Zambia	19.95	Weak
Nepal	0.29	Weak
Kenya	13.95	Weak
Bolivia	0.10	Weak
Philippines	.07	Weak
Malawi	15.96	Weak
Senegal	1.77	Weak
Tanzania	8.09	Weak
Dom. Rep.	2.80	Weak
Paraguay	0.11	Weak
Bangladesh	0.02	Weak
Vietnam	0.24	Moderate
Egypt	0.02	Moderate
India	0.70	Moderate
Peru	0.35	Moderate
Jordan	0.02	Moderate
Morocco	0.03	Moderate
Turkey	0.01	Moderate
Brazil	0.57	Moderate
Mexico	0.29	Moderate

Source: UNAIDS. *Report on the Global HIV/AIDS Epidemic: June 2000*. Table of country-specific HIV/AIDS estimates and data, end 1999 (New York/Geneva: UNAIDS/WHO, 2000); available from http://www.unaids.org/epidemic_update/report/index.html; Internet; accessed 2 March 2001.

METHODOLOGICAL CONSIDERATIONS FOR USE OF FPLM AND PROGRAM EFFORT SCORES

The Use of the 1999 Program Effort Database

Four of the twelve indicators used in the Contraceptive Security Tool were adopted from John Ross and John Stover, *Effort Indices for National Family Planning Programs, 1999 Cycle*, undertaken for the USAID-funded MEASURE Evaluation by The Futures Group International:

- In-country budget for program;
- Evidence of top level commitment to family planning;
- Import laws and legal regulations regarding contraceptives; and
- Availability and accessibility of family planning methods.

The Futures Group International used a five-point scale (0 to 4) in assigning a Program Effort indicator score to a country. To convert Program Effort scores for **In-country budget for program, Evidence of top level-commitment to family planning, and Import laws and legal regulations regarding contraceptives** into a four-point scale (0 to 3), we multiplied the individual country score on each indicator by .75 and rounded it to the nearest tenth. Keeping with the original scoring formula, for the Budget indicator we assigned a score of 0 to any program whose budget is comprised of less than 50 percent of in-country sources.

The following is an illustration of the conversion of Program Effort Budget scores into a four-point scale:

Brazil: Program Effort score for Budget: **2.0**
Contraceptive Security score for Budget:
 $2.0 \times .75 = 1.5$

A different formula was used to convert Program Effort scores for the indicator **“Availability and accessibility of family planning methods”** (the percent of the population with ready and easy access to contraceptive methods) to a four-point scale. The Program Effort scores for this indicator were achieved by dividing the original percentage figure on contraceptive availability by 20, to fit a five-point scale. A country with 50 percent of its population having ready and easy access to contraceptive methods would achieve a Program Effort Availability score of 2.5. Any percent of 80 or more received the maximum score of 4. To convert the score to our four-point scale, we converted the Program Effort score back to its original percentage figure and then divided by 25 (or, alternatively, multiplied the Program Effort score by .8), rounding the number to the nearest tenth. Any percent of 75 or more receives the maximum score of 3.

The following is an illustration of the conversion of Program Effort Availability scores into a four-point scale:

India: Program Effort Score for Availability:
3.1 on a scale of 0 to 4.
Contraceptive Security score for Availability:
 $3.1 \times .8 = 2.48$ (**2.5**) on a scale of 0 to 3.

The Use of the FPLM Logistics Database

Four indicators used in the Contraceptive Commodity Security Tool were adopted from “Composite Indicators for Contraceptive Logistics Management” under the USAID-funded FPLM project:

- Forecasting;
- Procurement;
- LMIS; and
- Warehousing and Delivery.²⁹

In addition to adopting these four logistics indicators from FPLM, we have made use of the FPLM database on these indicators in our Application of the Contraceptive Commodity Security Tool section of this paper. The FPLM database consists of scores (and sub-scores) for 27 countries across these same logistics indicators. For the four remaining countries included in our 31-country sample not scored by FPLM, we have estimated logistics scores based on information contained in UNFPA Technical Reports, *Contraceptive Requirements and Logistics Management Needs*.

FPLM assigned a separate score for each of the many sub-tasks entailed in each logistics area, assigning higher maximum scores to some tasks than to others to weight importance. Each of these individual tasks is represented by a “bullet” in our description of these logistics indicators in the Indicator section of this paper, above. In addition, for each of these tasks, FPLM applied two indicators: Performance and Sustainability. According to FPLM, the Performance Indicator measures how well a given logistics task is performed, while the Sustainability Indicator measures “the degree to which the system functions independently of outside assistance.” Both indicators measure the same tasks, “but are scored in relation to these two different purposes” (FPLM 1999).

In converting FPLM measurements to our four-point (0 to 3) measurement scale, we followed three central steps:

1. For each country, we summed up the scores measuring *performance* across all tasks and then did the same for scores measuring *sustainability* across all tasks. This left us with two scores for each of the four logistics areas, a composite score for Performance and a composite score for Sustainability. We then took the product of these two composite scores to arrive at a preliminary (unconverted) indicator score for each country.

2. To convert the FPLM scale to a four-point scale for any given indicator, we took the product of the maximum *performance* score and the maximum *sustainability* score. After examining the distribution of preliminary indicator scores, we divided the maximum score into quartiles, each quartile representing a score of zero to three.
3. Each preliminary score was assigned a score from zero to three, based on its location in one of the quartiles.³⁰

The following is an illustration of the conversion of FPLM forecasting scores into a four-point scale:

Maximum score = 8 x 8 = **64**

0 = < 16 1 = 16 to 31 2 = 32 to 47 3 = > 48

Mexico	Performance	Sustainability
Forecasting		
A) Periodic forecasts of consumption are prepared, updated, and validated. Max 4 pts.	2	4
B) Forecasts are incorporated in cost analysis and budgetary planning. Max 4 pts.	2	4
Forecasting sub score (Max 8 pts.)	4	8

Product of performance and sustainability composite scores:
4 x 8 = **32**

Mexico: Forecasting Score = 2

The FPLM indicators adopted here are qualitative measurements. As with all qualitative tools, FPLM measurements of a program's logistics system relied on the individual knowledge, observations, and subjective judgements of the evaluator(s). Moreover, the same person did not evaluate all programs, which subjects the scores to variable standards. These and other factors raise the question of the validity and reliability of the scores assigned by FPLM and adopted here for application of the contraceptive security tool. FPLM attempted to minimize the effect of measurement distortions that derive from personal bias and variable interpretation by encouraging its scorers to follow a set of procedures, including basing scores on a "consensus from a group of individuals knowledgeable in system performance and operations so that the consensus score represents different perspectives and experiences."³¹ However, FPLM advises that users of the scores take into account the inherently subjective nature of the scores and the non-standardized methods of their collection in their application.

NOTES

- ¹ UNFPA. "United Nations Population Fund welcomes Netherlands and U.K. action to avert condom crisis," November 10, 2000 [press release]; available from <http://www.unfpa.org/news/pressroom/2000/contracep.htm>; Internet; accessed 2 March 2001.
- ² Ross J.A. and Bulatao R.A. *Contraceptive Projections and the Donor Gap*. (Washington, DC: The Futures Group International for John Snow, Inc./Family Planning Logistics Management Project, 2001). Ross and Bulatao include 87 donor-dependent countries in their analysis, excluding such countries as India, China, and Brazil, which are self-reliant or largely self-reliant for contraceptive products.
- ³ The U.K. and Netherlands recently donated US \$76 million for reproductive health supplies (UNFPA, November 10, 2000).
- ⁴ UNFPA. *Donor Support for Contraceptives and Logistics 1999* (New York: UNFPA, 2000), Table 2, p.5.
- ⁵ In making their projections, Ross and Bulatao hold the contraceptive market shares constant between the private and public sectors for each country. Because (a) the proportion of couples using contraception rises, and (b) population sizes grow, the burden upon both sectors in absolute terms is expected to grow.
- ⁶ Winfrey W. et. al. *Factors Influencing the Growth of the Commercial Sector in Family Planning Service Provision*. The Policy Project Working Papers Series, No. 6 (February 2000); available from <http://www.policyproject.com/pubs/wps6.html>; Internet; accessed 2 March 2001.
- ⁷ Ross J. A. and Stover J. *Effort Indices for National Family Planning Programs, 1999 Cycle* [MEASURE Evaluation working paper] (Chapel Hill: University of North Carolina, May 2000); available from <http://www.cpc.unc.edu/measure/publications/workingpapers/wp0020.pdf>; Internet; accessed 2 March 2001. Those wanting this database are asked to request it from The Futures Group International.
- ⁸ In including this indicator, we were constrained by the availability of data. In fact, the procurement criteria listed above constitute only part of the procurement package. For a more complete set of criteria to guide future data collection efforts, see fn. 21, below.
- ⁹ For a full statement of the concept for each score, see Mauldin W.P. and Ross J.A. *Family Planning Programs: Efforts and Results, 1982-89*. Policy Research Division Working Paper No. 34 (New York: The Population Council, 1991); abstract available from <http://www.popcouncil.org/publications/wp/prd/34.html>; Internet; accessed 2 March 2001.
- ¹⁰ Commercial-sector service delivery includes private hospitals, private clinics, pharmacies, employer insurance, markets or shops, private doctors, and private midwives (See Winfrey W. et. al. *Op. Cit.*).
- ¹¹ Scoring for male and female sterilization takes into account whether or not medically adequate voluntary sterilization services are legally and openly available.
- ¹² If the availability of injectables is higher than that of pills, the data on injectables were used to score this item.
- ¹³ If the availability of other conventional contraceptives is greater than that of condoms, the data on those other methods were used to score this item.
- ¹⁴ Scoring for abortion does not take into account whether or not abortions are legal, but excluded in the scoring is the availability of abortions carried out only under poor conditions.

- ¹⁵ Measurement will present particular difficulties where national family planning programs reside in a decentralized public sector with great variations across states, provinces, and/or municipalities (northeastern and southern Brazil, for example). Depending on the size and degree of autonomy of each administrative unit, in such cases it may be useful to treat each unit independently for measurement purposes.
- ¹⁶ As shown in the recent study of the strength of effort by national family planning programs in 89 countries undertaken by The Futures Group International, most governments already have a solid commitment to family planning.
- ¹⁷ Fort C. *Financing Contraceptive Supplies in Developing Countries: Issues, Options, and Experience* (Arlington, VA: John Snow, Inc./Family Planning Logistics Management Project, 2001). Winfrey W. et. al. *Op. Cit.*
- ¹⁸ For a comprehensive discussion of this and other contraceptive financing options, see Fort, C. *Op. Cit.*
- ¹⁹ Winfrey W. et. al. *Op. Cit.*
- ²⁰ Fort, C. *Op. Cit.*
- ²¹ The indicators for which future data collection would benefit include, among others: program funding capacity (a program's ability to secure and manage financial resources for commodities, whether those resources are generated by national resources or user fees, or by grants, loans, or donations from external agencies), procurement capacity (a program's ability to arrange for detailed and technical product specifications including quality requirements; pre-select suppliers based on price and quality criteria; and adjudicate tenders), market segmentation (a program's ability to target its goods and services to those who are poor and most in need, while minimizing the leakage of benefits to the non-poor by charging them for services and/or directing them to the commercial sector), and drug regulatory capacity (a strong drug regulatory authority can be said to exist when there are up-to-date regulations and legislation that address drug registration, inspection, and quality control; drugs are registered and registration information is available; premises and persons are licensed and inspected; in-country, national quality-control laboratory is doing full range of testing; and post-marketing surveillance systems for safety, efficacy, and quality exist and are operational).
- ²² See the Appendix for explanation of score conversions to a four-point scale.
- ²³ Population Reference Bureau. *2000 World Population Datasheet* (Washington, DC: PRB, 2000); available from http://www.prb.org/catalog/catalog_english.htm#t-z; Internet; accessed 2 March 2001.
- ²⁴ Rounded to the nearest tenth of one percent.
- ²⁵ Joint United Nations Programme on HIV/AIDS (UNAIDS). *AIDS epidemic update: December 2000* (New York/Geneva: UNAIDS/WHO, 2000); available from http://www.unaids.org/wac/2000/wad00/files/WAD_epidemic_report.htm; Internet; accessed 2 March 2001.
- ²⁶ Ibid. Hanson K et al. *Supplying Subsidised Contraceptives: Economic Rationale and Programme Issues for Promoting Sustainability* (London: Options Consultancy Services Limited for Health and Population Division, Department for International Development, August 1998).
- ²⁷ UNWire. "HIV/AIDS: African Nations Could See 20% of Adults Die" (September 29, 1999).
- ²⁸ UNAIDS. *Report on the Global HIV/AIDS Epidemic: June 2000*. Table of country-specific HIV/AIDS estimates and data. (New York/Geneva: UNAIDS/WHO, 2000); available from www.unaids.org/epidemic_update/report/index.html; Internet; accessed 1 March 2001.
- ²⁹ We have combined Warehousing and Delivery, which FPLM treats as two separate indicators, into one indicator.
- ³⁰ For Warehousing and Delivery, which FPLM treats as two separate indicators, we combined the scores for both indicators, then proceeded as described above.
- ³¹ Gelfeld D. *Summary of Results: The Composite Indicators for Contraceptive Logistics Management under FPLM III* (Washington, DC: FPLM, October 2000, draft).

ADDITIONAL REFERENCES

1. Brudon-Jakobowicz P., Rainhorn J.D., and Reich M.R. *Indicators for Monitoring National Drug Policies; A Practical Manual* (Geneva: World Health Organization [WHO]/DAP, 1994).
2. Crowley J. "Meeting Couples' Reproductive Health Needs: Contraceptive Security in the Next Decade." Presented at UNFPA/HQ Informal Meeting On Reproductive Health Commodity Security, 25 January 2000.
3. The Futures Group International. *Questionnaire: International Family Planning Program Study, 1999 Cycle*. (1999); available online at <http://www.tfgi.com/Fpe.pdf>; Internet; accessed 2 March 2001.
4. UNFPA. *Global Strategy for Reproductive Health Commodity Security* [background paper for the UNFPA consultative meeting on reproductive health commodity security]. (September 22, 2000, draft); available from <http://www.unfpa.org/news/features/rhcs.htm>; Internet; accessed 2 March 2001.
5. United States Agency for International Development (USAID), Office of Sustainable Development, Bureau for Africa. *Health and Family Planning Indicators: Measuring Sustainability*. Vols. I and II; available from <http://www.usaid.gov/regions/afr/hhrraa/indicators/indicators.htm>; Internet; accessed August 24, 2000.

MEETING THE CHALLENGE

SECURING CONTRACEPTIVE SUPPLIES

SECURING SUPPLIES FOR REPRODUCTIVE HEALTH

The Interim Working Group on Reproductive Health Commodity Security (IWG) is a collaborative effort of John Snow, Inc. (JSI), Population Action International (PAI), the Program for Appropriate Technology in Health (PATH) and Wallace Global Fund. Recognizing the important leadership role of the UN Population Fund (UNFPA) in meeting the goals of the 1994 Programme of Action, the IWG's objective is to further these goals by raising awareness about the importance of securing reproductive health supplies. The IWG seeks to identify the causes of failures and weaknesses in commodity systems and to spur actions that will contribute to securing essential supplies for the delivery of reproductive health care.



John Snow, Inc.



Printed on Recycled Paper