Contraceptive Security Index 2003

A Tool for Priority Setting and Planning

A primary goal of reproductive health and family planning programs is to ensure that people can choose, obtain, and use a wide range of high-quality, affordable contraceptive methods and condoms for STI/HIV prevention. Referred to as contraceptive security, this goal requires sustainable strategies to ensure and maintain access to and availability of supplies.

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As demand for family planning continues to rise in developing countries and countries in transition, compounded by significant population growth, contraceptive security (CS) will be more challenging to achieve. Financing for reproductive health (RH) and family planning (FP) programs has not kept pace with demand and donor resources are more constrained than ever. These pressures have placed an increasing burden on national programs, with logistics and service delivery systems stretched to their limits. Not only has higher demand for supplies driven up funding requirements, but the fight against HIV/AIDS has also multiplied the need for additional resources and increased competition for existing resources. Now, more than ever, it is critical that programs focus attention on long-term contraceptive security.

Programs cannot meet their clients' reproductive health and family planning needs without the reliable availability of quality contraceptive supplies and services. Further, attaining the poverty reduction and health goals adopted by many countries-most notably in HIV reduction, and maternal and child health-will be slowed without improvements in contraceptive security. Ensuring contraceptive supplies and services are available to clients requires a multi-sectoral approach. The public and private sectors must cooperate to ensure a supportive policy environment, appropriate forecasting and procurement of commodities, efficient supply chains, well-trained providers, effective service delivery systems, a supportive social environment, and adequate financing. Policy makers, program managers, and international donor agencies need to know if and how their programs are progressing toward contraceptive security in order to plan effective interventions to reach this goal.

This document presents a tool developed to measure a country's level of contraceptive security and to monitor it over time. The tool uses a set of indicators covering the primary components of contraceptive security to measure the level of contraceptive security in countries. These indicators can be used separately to monitor progress in each component. They are also aggregated to establish a composite index, which can be used to compare countries at a point in time or to monitor progress over time within a country.

The Contraceptive Security Index can also be used for priority setting, planning, and advocacy at the national and international levels to support policies and other interventions that promote contraceptive security. The index can help country governments, donors, and lenders improve resource allocation by providing them with a way to track where countries are on a continuum of contraceptive security. With repeated measures over time, the index is meant to provide a measure of progress toward the goal of contraceptive security.

Uses

These results are a powerful tool for raising awareness about CS and the inter-relationships between program components, different sectors, and program outcomes. The CS Index can be useful for cross-country comparisons, comparing inputs, and program outputs. At the country level, it can identify areas of relative strengths and weaknesses to help stakeholders target their resources more effectively and appropriately. However, in-depth assessment is required at the country level to identify issues that need to be addressed through the development of a strategic plan designed to move countries toward contraceptive security.

The CS Index can be used to set priorities and to advocate for national and international support for promoting progress toward contraceptive security. It is also a useful guide for advocating among global donors and lenders to determine the countries most in need of assistance and to determine what kind of assistance they need. The results can be used to monitor progress

toward the goal of contraceptive security over time. By drawing attention to the importance of contraceptive security, this tool can help donors and governments focus on meeting the growing contraceptive needs into the future.

Finally, the CS Index should be updated periodically, as new data become available (ideally, every two to three years).

Results

Table 1 shows the 17 indicators, grouped into the five components used to construct the CS Index. Figure 1 shows the scores for the 57 countries included in the index. The range of possible scores on the weighted CS Index is 0 to 100, although actual scores range from 28.1 to 68.1. It is important to note that movement in rank up or down by a few places may not represent significant differences in levels of contraceptive security. The index represents a country's CS situation at a point in time, although the actual data was collected over a period of years. It is unavoidable that indicators will be updated for different countries at different intervals.

Individual countries can be compared on their weighted component scores (maximum score of 20 for each component), allowing users to identify components that need attention and further assessment (see table 2). Countries can score similarly overall, but have strengths or weaknesses in different components. Figures 2 and 3 show the weighted component scores for the five highest scoring and five lowest scoring countries in the series. Of the five highest scoring countries—Brazil, Mexico, Peru, Colombia, and Jordan—the total scores are very similar. However, Jordan is stronger in supply chain management and the health and social environment component than the other countries, but has weaker scores for access and utilization. Colombia's scores show the opposite situation—the public sector supply chain scores are relatively weak, but utilization is high. This highlights that the indicators need to be reviewed within the broader context of a country, including aspects not captured in the CS Index due to data limitations. In Colombia, for example, the private sector is a major provider of family planning services and supplies.

Background

The CS Index builds on the recent work of other public health organizations. Staff at the Program for Appropriate Technology in Health (PATH) authored *Contraceptive Security: Toward a Framework for a Global Assessment* (Finkle, Hutchings, and Vail 2001), which was presented at a 2001 international conference for reproductive health commodity security.[1] This paper laid the groundwork for the development of a methodology to measure and monitor contraceptive security.

In a separate effort, more than twenty organizations collaborated in the development of the Strategic Pathway to Reproductive Health Commodity Security (SPARHCS), a tool for assessing and planning for reproductive health commodity security. The framework at the core of SPARHCS was used as a guide in developing the CS Index. It defines the program and program environment components that are required to achieve RH commodity security, whether for contraceptives or for other RH commodities. See figure 4.

Both efforts have drawn much needed attention to the issues around contraceptive security and have generated interest in refining a methodology to measure CS. The CS Index takes additional indicators into account, organizes them around a conceptual framework vetted by a wide range of family planning experts, and allows additional countries to be scored in the index for cross-country comparisons and in-country analysis.

Table 1. CS INDEX INDICATORS

	SUPPLY CHAIN					FINANCE			HEALTH & SOCIAL ENVIRONMENT			ACCESS			UTILIZATION		
	Storage and Distribution max=60	LMIS max=24	Forecasting max=16	Procurement max=16	Contraceptive Policy max= 4	Gov. Health Expenditure max=30	Per Capita GNP, PPP max=US$20,000	Poverty Level max=100	Governance max=30	Women's Education max=100	Adult HIV Prevalence max=50	Access to FP Methods max= 4	Public Sector Targeting max=10	Spread of Access to FP Methods max=1	Method Mix max=1	Unmet Need max=50	CPR max=100
Asia & the Pacific																	
Bangladesh	43	19	10	10	4.0	11	1600	50	12.3	13	0.1	3.3	1.5	0.00	0.38	15.3	43
Cambodia	-	-	-	-	4.0	-	1790	36	14.6	17	2.7	1.4	0.6	0.40	0.25	29.7	19
India	45	18	12	16	3.3	5	2820	29	15.1	39	0.8	3.1	0.9	0.00	0.75	15.8	43
Indonesia	38	15	8	9	4.0	3	2830	27	10.2	48	0.1	3.3	1.3	0.00	0.24	9.2	55
Nepal	40	13	14	16	3.6	-	1360	42	12.3	33	0.5	2.2	0.6	0.10	0.25	27.8	35
Philippines	40	17	12	10	2.0	8	4070	37	14.6	78	0.1	3.0	1.2	0.10	0.23	18.8	35
Vietnam	49	20	13	11	3.4	6	2070	51	12.0	46	0.3	3.0	1.0	0.10	0.58	6.9	65
Eastern Europe & Central Asia																	
Azerbaijan	35	12	8	8	-	3	2890	50	10.7	81	0.1	-	-	-	0.41	12.0	12
Kazakhstan	-	-	-	-	2.0	19	6150	35	12.0	91	0.1	1.7	1.0	0.20	0.67	8.7	53
Kyrgyz Rep.	-	-	-	-	1.0	12	2630	64	11.3	83	0.1	2.3	0.9	0.10	0.74	11.6	49
Turkey	45	18	12	12	3.4	9	5830	-	13.0	48	0.1	2.9	1.1	0.00	0.41	10.1	38
Turkmenistan	-	-	-	-	3.3	-	4240	-	8.6	-	0.1	2.5	0.8	0.20	0.70	19.0	53
Uzbekistan	-	-	-	-	4.0	-	2410	28	9.3	88	0.1	2.1	1.0	0.20	0.86	13.7	63
Latin America & the Carribean																	
Bolivia	24	13	5	9	3.2	20	2240	63	13.7	34	0.1	2.6	0.5	0.00	0.29	26.1	25
Brazil	45	18	16	16	2.0	13	7070	17	15.6	54	0.7	4.0	1.3	0.00	0.51	7.3	70
Colombia	47	14	10	9	1.6	28	6790	64	11.7	69	0.4	3.7	1.5	0.00	0.24	6.2	64
Dominican Rep.	45	16	9	10	2.8	11	6650	29	16.1	61	2.5	2.8	1.4	0.00	0.63	11.9	66
Ecuador	42	13	9	9	2.0	-	2960	35	11.4	50	0.3	2.4	1.0	0.00	0.24	21.2	50
El Salvador	40	9	5	10	4.0	22	5160	48	15.5	39	0.6	2.2	0.8	0.10	0.45	8.9	54
Guatemala	31	15	8	8	4.0	-	4380	56	11.7	25	1.0	2.4	0.3	0.10	0.41	23.1	34
Guyana	34	8	10	12	2.0	-	4690	35	15.0	76	2.7	2.3	-	0.20	-	-	36
Haiti	47	9	9	12	4.0	23	1870	-	8.9	20	6.1	2.0	1.0	0.20	0.40	39.8	22
Honduras	44	14	11	9	2.0	-	2760	53	12.8	37	1.6	2.2	1.2	0.10	0.17	11.2	51
Jamaica	-	-	-	-	4.0	7	3490	19	15.8	67	1.2	2.3	2.1	0.20	0.14	18.9	63
Mexico	53	18	12	14	3.1	16	8240	-	15.3	64	0.3	3.9	-	0.00	-	19.0	59
Nicaragua	49	12	8	8	3.0	6	2450	48	12.8	62	0.2	2.6	1.2	0.00	0.30	14.7	66
Paraguay	39	5	4	7	4.0	16	5180	22	10.0	48	-	3.1	2.3	0.00	0.11	19.9	48
Peru	52	19	12	14	3.4	15	4470	49	14.4	67	0.4	3.3	0.9	0.10	0.11	10.2	50
Middle East & North Africa																	
Egypt	45	12	8	8	3.0	3	3560	17	15.0	73	0.1	2.2	1.2	0.10	0.55	10.7	54
Jordan	56	23	12	16	2.5	14	3880	12	17.1	89	0.1	1.9	1.3	0.00	0.50	14.2	39
Morocco	52	21	14	16	2.3	4	3500	19	16.5	34	0.1	2.6	0.9	0.00	0.71	19.7	49
Yemen	53	15	10	10	4.0	8	730	42	10.4	14	0.1	1.1	0.1	0.10	0.25	38.6	10
Sub-Saharan Africa																	
Benin	36	14	6	7	2.4	-	970	33	13.6	11	3.6	1.3	0.3	0.10	0.11	27.2	7
Burkina Faso	29	10	7	1	3.0	3	1120	45	12.5	6	6.5	1.5	0.3	0.20	0.15	25.8	5
Cameroon	22	3	6	7	0.0	7	1580	40	11.6	22	11.8	0.4	0.2	0.00	0.09	19.7	8
Côte d'Ivoire	9	1	1	0	2.0	6	1400	-	10.5	16	9.7	0.9	0.2	0.70	0.29	27.7	7
Eritrea	39	15	9	7	-	-	1030	53	11.2	17	2.8	-	0.1	-	0.39	27.0	7
Ethiopia	36	12	8	9	2.7	7	800	44	11.2	10	6.4	1.2	0.3	0.40	0.44	35.8	6
Gabon	-	-	-	-	1.3	-	5190	-	12.6	42	-	1.7	0.7	0.20	0.26	28.0	12
Ghana	35	12	5	4	4.0	3	2170	40	14.7	28	3.0	2.5	0.7	0.10	0.09	23.0	13
Guinea	-	-	-	-	2.9	9	1900	40	13.1	7	-	2.0	0.7	0.30	0.36	24.2	4
Kenya	48	16	12	12	3.3	7	970	52	10.2	22	15.0	2.8	0.5	0.10	0.18	23.9	32
Madagascar	34	9	8	9	1.0	15	820	71	12.9	16	0.3	0.7	0.2	0.20	0.38	25.6	10
Malawi	59	17	11	14	3.0	-	560	65	14.1	12	15.0	1.1	0.6	0.30	0.53	29.7	26
Mali	41	14	10	10	3.0	-	770	64	12.9	8	1.7	1.5	0.2	0.30	0.23	28.5	6
Mauritania	-	-	-	-	4.0	-	1940	46	10.8	11	-	1.2	0.0	0.10	0.35	31.6	5
Mozambique	38	12	9	10	3.0	-	1050	69	14.4	5	13.0	1.9	0.1	0.20	0.31	22.5	5
Namibia	-	-	-	-	4.0	12	7410	-	18.4	67	22.5	3.2	0.4	0.10	0.24	21.9	26
Nigeria	31	5	5	5	2.0	3	790	34	9.6	30	5.8	1.7	0.2	0.20	0.05	17.4	9
Rwanda	27	10	4	9	4.0	-	1240	51	10.2	9	8.9	2.1	0.3	0.20	0.60	35.6	4
Senegal	47	16	12	14	2.0	13	1480	33	13.7	12	0.5	2.2	0.1	0.20	0.21	34.8	8
South Africa	-	-	-	-	3.0	13	10910	-	16.9	92	20.1	2.7	0.8	0.10	0.23	15.0	55
Tanzania	44	15	15	14	4.0	-	520	36	13.4	5	7.8	0.9	0.4	0.30	0.21	21.8	17
Togo	42	13	7	7	4.0	-	1620	32	9.7	14	6.0	2.0	0.5	0.10	0.13	32.3	7
Uganda	22	3	8	7	2.5	7	1460	44	10.8	9	5.0	1.5	0.3	0.30	0.18	34.6	18
Zambia	36	17	15	6	2.0	3	750	73	12.9	21	21.5	1.7	0.3	0.10	0.36	26.5	23
Zimbabwe	34	16	8	9	3.2	3	2220	35	8.1	45	33.7	2.2	0.9	0.20	0.65	12.9	50

Table 2. WEIGHTED COMPONENT SCORES

	Supply Chain (20 pts)	Finance (20 pts)	Health & Social Environment (20 pts)	Access (20 pts)	Utilization (20 pts)	Total (max=100 pts)
Asia & the Pacific						
Bangladesh	15.0	6.3	10.3	13.2	11.6	56.4
Cambodia	15.2	7.3	10.7	6.7	9.0	48.9
India	16.3	6.9	12.5	12.4	9.1	57.2
Indonesia	13.3	6.5	12.1	13.0	14.2	59.1
Nepal	15.9	7.3	11.5	10.1	10.3	55.1
Philippines	13.0	7.3	15.1	11.8	11.6	58.9
Vietnam	16.0	5.2	12.4	11.7	12.9	58.1
Average	**15.0**	**6.7**	**12.1**	**11.3**	**11.2**	**56.2**
Eastern Europe & Central Asia						
Azerbaijan	9.3	5.0	14.4	7.5	9.8	46.0
Kazakhstan	13.3	10.6	15.4	8.8	11.2	59.4
Kyrgyz Rep.	13.7	5.9	14.7	10.4	10.1	54.9
Turkey	15.4	8.1	12.7	12.2	11.8	60.2
Turkmenistan	11.2	8.4	12.4	10.0	9.7	51.6
Uzbekistan	14.5	5.7	14.6	9.5	10.0	54.3
Average	**12.9**	**7.3**	**14.0**	**9.8**	**10.4**	**54.4**
Latin America & the Carribean						
Bolivia	10.5	7.8	12.0	11.3	9.6	51.1
Brazil	16.0	10.7	13.6	14.2	13.6	68.1
Colombia	11.8	10.9	13.8	13.8	15.2	65.5
Dominican Rep.	13.2	9.4	14.0	12.3	11.9	60.8
Ecuador	11.5	7.4	12.5	11.3	12.2	55.0
El Salvador	11.9	10.1	12.6	10.2	12.7	57.6
Guatemala	12.6	8.1	10.8	10.2	9.8	51.4
Guyana	11.1	8.8	14.7	9.7	12.0	56.3
Haiti	13.9	9.0	9.2	9.3	6.8	48.3
Honduras	12.3	6.8	11.8	10.5	14.1	55.4
Jamaica	13.4	8.1	14.5	10.6	14.1	60.6
Mexico	16.1	10.7	14.3	14.1	11.6	66.8
Nicaragua	12.3	5.7	13.6	11.8	13.8	57.1
Paraguay	10.2	10.4	11.3	13.4	13.1	58.4
Peru	16.5	8.2	14.3	12.1	14.6	65.6
Average	**12.9**	**8.8**	**12.9**	**11.7**	**12.3**	**58.5**
Middle East & North Africa						
Egypt	12.0	7.4	14.9	10.5	11.8	56.5
Jordan	17.1	10.2	16.4	10.7	10.7	65.0
Morocco	16.8	7.5	12.6	11.6	9.2	57.7
Yemen	15.0	5.9	9.9	7.9	7.2	45.9
Average	**15.2**	**7.7**	**13.4**	**10.2**	**9.7**	**56.3**
Sub-Saharan Africa						
Benin	10.4	5.7	9.9	8.4	9.4	43.8
Burkina Faso	8.6	4.7	9.0	8.0	9.2	39.5
Cameroon	5.2	6.0	9.1	7.5	10.6	38.5
Côte d'Ivoire	3.0	4.5	8.8	3.6	8.2	28.1
Eritrea	12.1	5.0	9.9	8.1	7.6	42.8
Ethiopia	11.4	5.5	9.0	6.2	6.0	38.0
Gabon	7.4	8.8	11.3	8.6	8.7	44.8
Ghana	10.6	5.4	11.4	10.6	10.5	48.6
Guinea	11.6	6.7	9.5	8.5	8.0	44.2
Kenya	15.2	5.1	8.4	11.0	11.1	50.7
Madagascar	9.0	5.5	10.6	6.6	8.1	39.7
Malawi	16.0	6.2	8.6	6.9	7.6	45.3
Mali	13.1	5.6	9.8	7.3	8.4	44.2
Mauritania	10.2	7.7	9.0	8.0	7.1	42.1
Mozambique	12.3	4.5	8.5	8.6	8.6	42.4
Namibia	18.2	10.3	12.2	11.6	10.5	62.8
Nigeria	7.4	5.3	10.0	8.3	11.3	42.3
Rwanda	10.7	6.5	8.3	9.0	4.9	39.4
Senegal	14.3	7.7	10.4	9.1	7.8	49.4
South Africa	13.9	11.4	13.9	11.0	13.5	63.7
Tanzania	16.7	5.2	8.9	6.4	10.2	47.5
Togo	12.5	6.1	9.0	9.7	8.6	45.8
Uganda	8.2	5.8	9.0	7.4	8.7	39.1
Zambia	12.5	2.7	8.1	9.0	8.9	41.2
Zimbabwe	12.4	5.7	7.0	9.6	10.6	45.3
Average	**11.3**	**6.1**	**9.6**	**8.4**	**9.0**	**44.4**
Overall Average	**12.6**	**7.1**	**11.5**	**9.9**	**10.3**	**51.4**

Figure 1. Total Weighted Scores

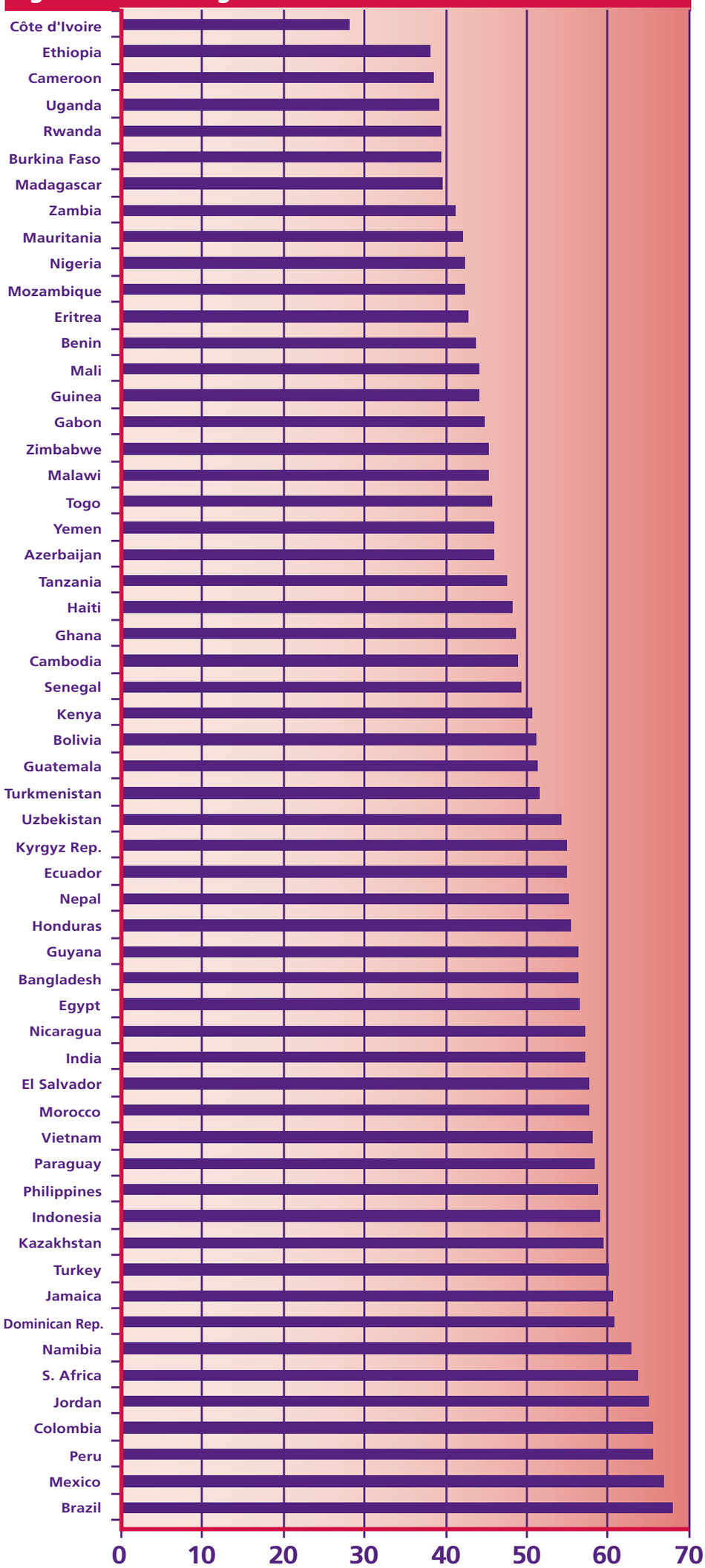


Figure 2.

Top 5 Countries by CS Index Component Score

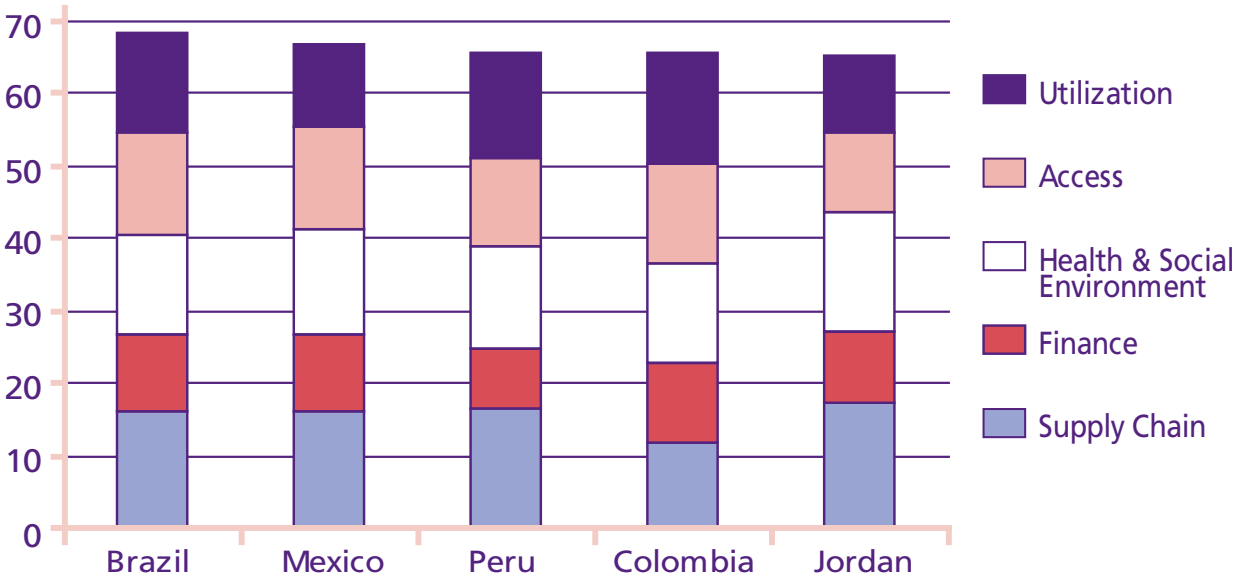
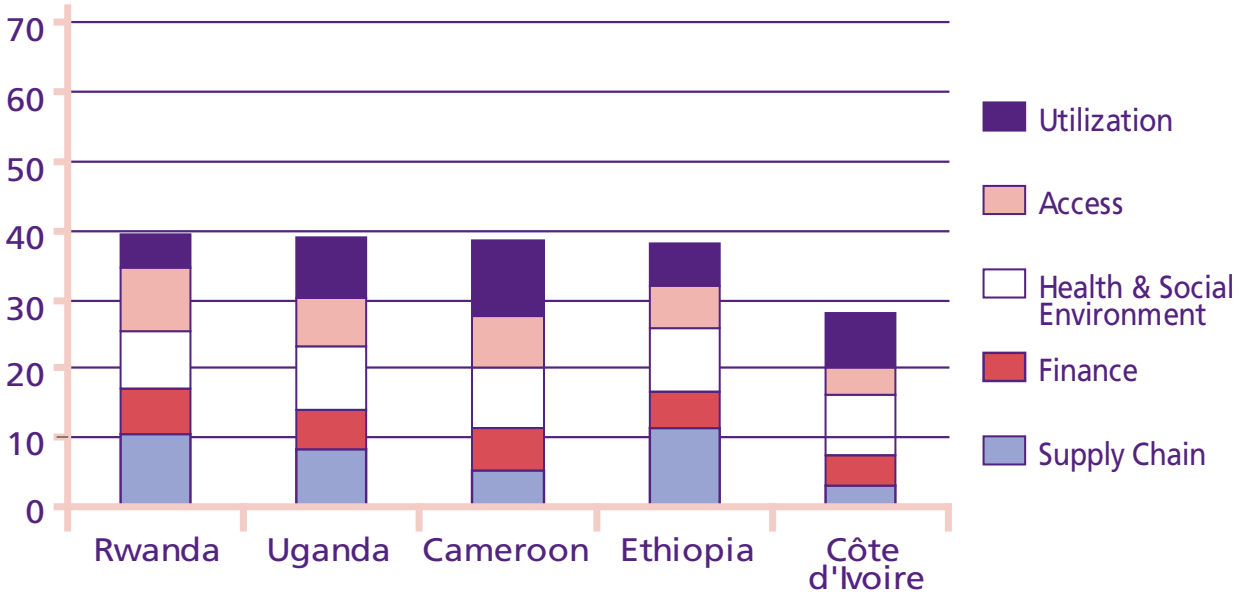


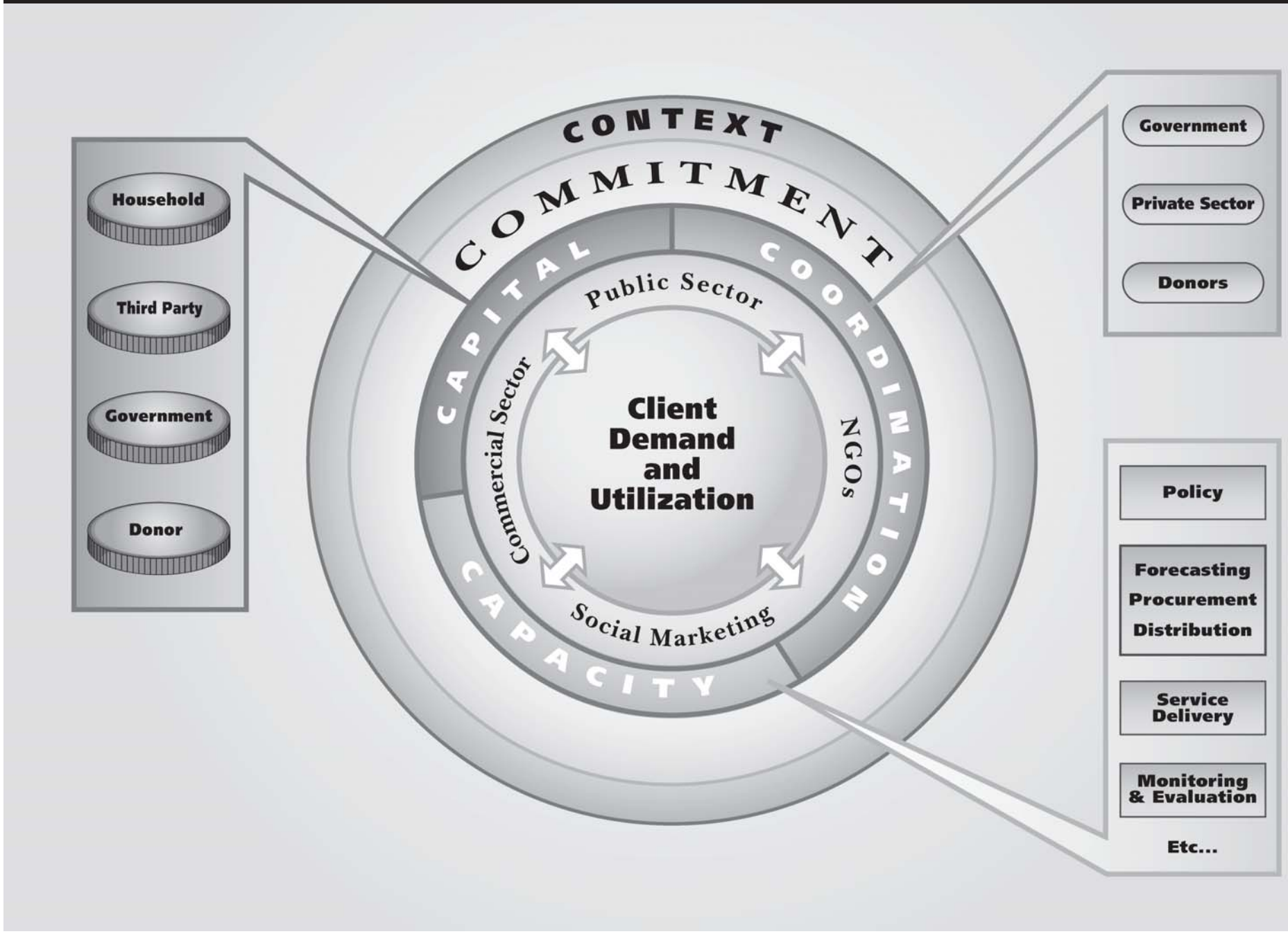
Figure 3.

Bottom 5 Countries by CS Index Component Score



Refer to table 2 for component and total scores

Figure 4. SPARHCS Framework for RH Commodity Security



Methodology

The work noted above was a starting point for a working group convened to conceptualize the CS Index. The group consisted of CS experts from USAID, John Snow, Inc./DELIVER, Futures Group International/POLICY, and Commercial Market Strategies (CMS). The process of constructing the CS Index was designed to minimize data collection costs (using only secondary data), and to maximize data reliability, validity, and replicability. Seventeen indicators were chosen to meet these criteria. They address a mix of inputs and outputs, and programmatic and macro-level issues. Together, they paint a picture of CS and promote a cross-sectoral approach to addressing CS. Although some indicators are highly correlated, each represents an important aspect of CS. During development, the working group experimented with different indicators and weighting schemes and recognized that they all had limitations. In the end, 17 indicators are arrayed across the five CS components described below; the components are aggregated to create the index. For detailed information regarding how missing data were filled in to calculate the index, how indicators were weighted, and other technical issues, please refer to the *Contraceptive Security Index Technical Manual*[2].

Definitions

***Component I: Supply Chain*—**Each of the five indicators of logistics management represents a key function in the supply chain for contraceptive supplies. An effective supply chain ensures the continuous supply of sufficient quantities of high-quality contraceptives needed to achieve security. More effective management of supplies is associated with better prospects for contraceptive security.

The first four indicators were obtained from John Snow, Inc.'s (JSI) Family Planning Logistics Management (FPLM) project's Composite Indicators for Contraceptive Logistics Management database (JSI/FPLM 1999)[3].

- **Storage and distribution**—This indicator assesses storage capacity and conditions, standards for maintaining product quality, inventory control, stockouts, tracking system losses, and distribution and transportation systems.
- **LMIS (Logistics Management Information Systems)**—This indicator assesses reporting systems, validation of data, and information management and use in decision-making.
- **Forecasting**—This indicator assesses how forecasts of consumption are prepared, updated, validated, and incorporated into cost analysis and budgetary planning.
- **Procurement**—This indicator assesses how forecasts are used to determine short-term procurement plans and the degree to which correct amounts of contraceptives are obtained in an appropriate time frame.

The fifth supply-related indicator is drawn from the results of Futures Group's (Futures) Family Planning Effort (FPE) survey (Ross and Stover May 2000)[4].

- **Contraceptive policy**—Under some circumstances, locally manufactured contraceptives can provide an affordable and sustainable option for clients. In many countries, it will be more effective to have policies and regulations that facilitate open markets and the importation of competitively priced, quality products. This indicator measures the 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.

Component II: Finance—Sustainable and adequate financing for the procurement of contraceptives, service delivery, and other program components from international donors and lenders, national or local governments, households, and third-parties is critical for ensuring contraceptive security. Without a commitment of financing, program quality and access will suffer and CS will not be sustainable. Data are not widely or readily available to obtain an adequate country-level picture of contraceptive financing by donors/lenders, third parties (e.g., insurers, employers), or the private sector. Three indicators are used to capture the prospects for government and household financing of family planning services and contraceptives in a country. The World Bank's World Development Indicators (WDI) were the source for these indicators[5].

- **Government health expenditures as a percentage of total government spending**—A national government's commitment to public health, specifically to reproductive health and family planning, is critical for CS. The poorest segments of a population depend on free or subsidized health services often provided by the government for essential preventive and curative health services. This indicator is a measure of political commitment to public health spending as a proxy for government commitment to family planning programs. Greater commitment to health spending means more potential resources for family planning programs as part of overall government health programs. This indicator is derived from two indicators in the WDI: public expenditures on health as a percentage of gross domestic product (GDP) divided by total government expenditures as a percentage of GDP:

  (Gov Exp on Health/GDP) ÷ (Total Gov Exp/GDP) = (Gov Exp on Health/Total Gov Exp)

- **Per capita GNP**—A greater ability to pay for contraceptives at the household level is associated with better prospects for contraceptive security. This indicator represents the average consumer's potential ability to pay for family planning services and contraceptives expressed in purchasing power parity (PPP), which corrects for differences in market prices of goods in each country to allow for a better comparison across countries.

- **Poverty level**—While per capita income measures average consumer ability to pay, there are always inequalities in the distribution of income. High poverty rates can threaten CS if provisions are not made to ensure access to services and commodities for the poor. Higher poverty rates can indicate a greater reliance of the population on the public sector, adding stress to already overburdened systems. Because higher poverty rates are associated with lower household incomes and poorer access to health care, higher poverty rates are also associated with poorer prospects for contraceptive security. This indicator is expressed as the percentage of the national population living below the nationally defined poverty line.

Component III: Health and social environment—The health and social environment component, composed of three indicators, is included because it is recognized that other factors in the broader health and social environment can affect prospects for contraceptive security at both the country and individual levels, as described below.

- **Governance**—A healthier political environment improves prospects for contraceptive security. An accountable, stable, effective, and transparent government is more likely to be committed to the health and well-being of its population and to use its resources appropriately for the public good. International donors are also more likely to provide financial and material support to such a government. The private sector is more likely to invest in creating new or expanding existing markets for contraceptives. This indicator is a composite measure of governance composed of six dimensions of governance: voice

and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. It is derived from the World Bank's "Governance Matters" index (Kaufman, Kraay, and Zoido-Lobaton January 2002).

- **Women's education**—Women's educational attainment is one of the best predictors of contraceptive use. Women who are educated beyond primary school are more likely to use a contraceptive method. In addition, in countries where women's status is good, educated women are more likely to advocate for the protection of family planning programs. This indicator is expressed as the percentage of females enrolled in secondary school defined as the ratio of the number of students enrolled in secondary school to the population in the applicable age group (gross enrollment ratio). Secondary school enrollment rates were obtained from the Population Reference Bureau's *2002 Women of the World* publication, with the exception of Jordan (Roudi-Fahimi, Farzaneh, and Moghadam October 2003)[6].

- **Adult HIV prevalence**—It is increasingly recognized that a higher burden of HIV in a population can erode prospects for contraceptive security. HIV/AIDS contributes to higher levels of poverty and the pandemic has put new, competing demands on health financing. This indicator is expressed as the percentage of adults aged 15-49[7] who were infected with the HIV virus at the end of 2001. Adult HIV prevalence rates were obtained from the UNAIDS *Report on the Global HIV/AIDS Epidemic 2002*.

***Component IV: Access*—**The three access indicators measure aspects of availability and access to modern methods of contraception—the degree to which clients can choose and obtain their method of choice. Family planning and reproductive health programs should strive to offer a variety of methods to meet the needs of all clients.

- **Access to modern family planning methods**—Ready and easy access by clients to a wide range of contraceptive methods is associated with better prospects for contraceptive security. When family planning services are widely available, it is very difficult to reverse progress in access and availability of these services and supplies. This indicator measures the percentage of a country's population that have ready and easy access to male and female sterilization, pills, injectables, condoms, spermicides, and IUDs. It is also taken from Futures' Family Planning Effort survey (Ross and Stover May 2000).[8]

- **Public sector targeting**—Public sector family planning programs that offer heavily subsidized (and sometimes free) services and commodities are designed to meet the needs of the poor and near-poor segments of a population. This public sector funding is limited in virtually every country. The degree to which the poorest people benefit from these subsidized services, while wealthier clients who can afford to pay for services and commodities have and use other options, reflects upon the long-term CS in a country. This indicator measures the proportion of a country's contraceptives distributed through public sector channels that go to poor and near poor family planning clients. "Poor and near poor" is defined as clients who are in the lowest 40 percent of the population as defined by a standard of living index (SLI). Data from Demographic and Health Surveys (DHS) and Reproductive Health Surveys (RHS) are used both to compute the SLI and the distribution of public sector FP users across SLI categories.[9]

- **Spread of access to modern family planning methods**—Spread of access to modern family planning methods-Access to a wide range of family planning methods represents a choice for clients. Access to a range of methods can also mean that if one method becomes unavailable, other methods are available to clients in the interim. This concept of choice

is key to contraceptive security, regardless of what methods clients choose (reflected in Component V). This indicator is related to the access indicator above and it uses the same data. It measures whether clients have "ready and easy access" to a broad range of at least three contraceptive methods by taking the highest-scored method, minus the third-highest scored method, divided by the sum of access scores for all methods. This data is also taken from Futures' Family Planning Effort survey (Ross and Stover May 2000).

***Component V: Utilization*—**This component is composed of three indicators that measure clients' behaviors in terms of contraceptive use within the country program context.

- **Method mix**—While the access indicators (see Component IV) measure the extent to which consumers have ready and easy access to methods, this indicator measures the degree to which consumers' use a range of methods. The broader the range of methods used, the better the prospects for contraceptive security, because it demonstrates that women have a choice and are choosing from a range of methods. This indicator was measured as the difference in prevalence rates between the most prevalent modern method in a country and the third-most prevalent method, divided by the total modern method prevalence. A higher value indicates a higher concentration of use on a limited number of methods, which is interpreted as being not conducive to contraceptive security. This indicator was derived from the most recently available DHS or RHS data set for each country.

- **Unmet need**—Unmet need is indicative of barriers to accessing and using family planning. The higher the percentage of women with unmet need for contraception, the poorer the prospects for contraceptive security because unmet need represents clients who express a need to use family planning but cannot or do not. This indicator measures the percentage of women who express a desire to space or limit their next pregnancy, or who would have preferred to avoid or delay their current pregnancy, but are not using a contraceptive method. This indicator was derived from the most recently available DHS or RHS data set for each country.

- **Contraceptive prevalence rate (CPR)**—This indicator is the most obvious outcome of contraceptive security-women actually using contraception. Higher contraceptive use is indicative of better access and availability of contraceptives for the population. Increased contraceptive use will also encourage the improved availability in both the public and private sectors through political pressures and market forces. This indicator measures the percentage of married women of reproductive age currently using a modern method of family planning. This data is from the Population Reference Bureau's *2003 World Population Data Sheet*.

[1] Held in Istanbul in May 2001. "Meeting the Reproductive Health Challenge: Securing Contraceptives and Condoms for HIV/AIDS Prevention" was organized by the Interim Working Group on Reproductive Health Supplies (IWG). This was a collaborative effort by John Snow, Inc., Population Action International, the Program for Appropriate Technology in Health, and the Wallace Global Fund to address the looming crisis represented by the shortfall in contraceptives around the world.

[2] The CS Index Technical Manual is available on-line at www.deliver.jsi.com or www.tfgi.com.

[3] Staff from FPLM and Ministry of Health counterparts scored these indicators for public sector logistics systems through a participatory focus group discussion held in each country.

[4] The FPE is conducted periodically around the world by administering a questionnaire to expert respondents from each country.

[5] World Development Indicators website: http://www.worldbank.org/data/onlinedbs/onlinedbases.htm

[6] Female secondary school enrollment rate for Jordan.

[7] HIV prevalence among adults of reproductive age (15-49) is used as the indicator for the CS Index, because this population is most likely to use contraceptives and avail themselves of services from FP programs, making it the most relevant population for contraceptive security. It is also the most widely available data.

[8] This indicator uses the mean access score for these contraceptive methods.

[9] DHS are generally conducted with oversight from a USAID centrally funded project. In some countries, RHS, similar to a DHS but overseen by the Centers for Disease Control and Prevention, have been used where a recent DHS data set was not available.

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Further Resources

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Additional contraceptive security resources are available at the following web sites:

DELIVER Project: www.deliver.jsi.com

POLICY Project: www.policyproject.com

Commercial Market Strategies Project: www.cmsproject.com

Partners for Health Reform*plus* Project: www.phrplus.org

Population Action International: www.populationaction.org

The Supply Initiative: www.rhsupplies.org

USAID: www.usaid.gov

UNFPA: www.unfpa.org

The USAID Contraceptive Security Team works to advance and support planning and implementation for contraceptive security in countries. The team provides technical assistance to USAID Missions, their country partners, and other donors and international partners. The team can be contacted c/o Mark Rilling or Alan Bornbusch, Commodities Security and Logistics Division, Office of Population and Reproductive Health, Bureau for Global Health, mrilling@usaid.gov or abornbusch@usaid.gov.

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