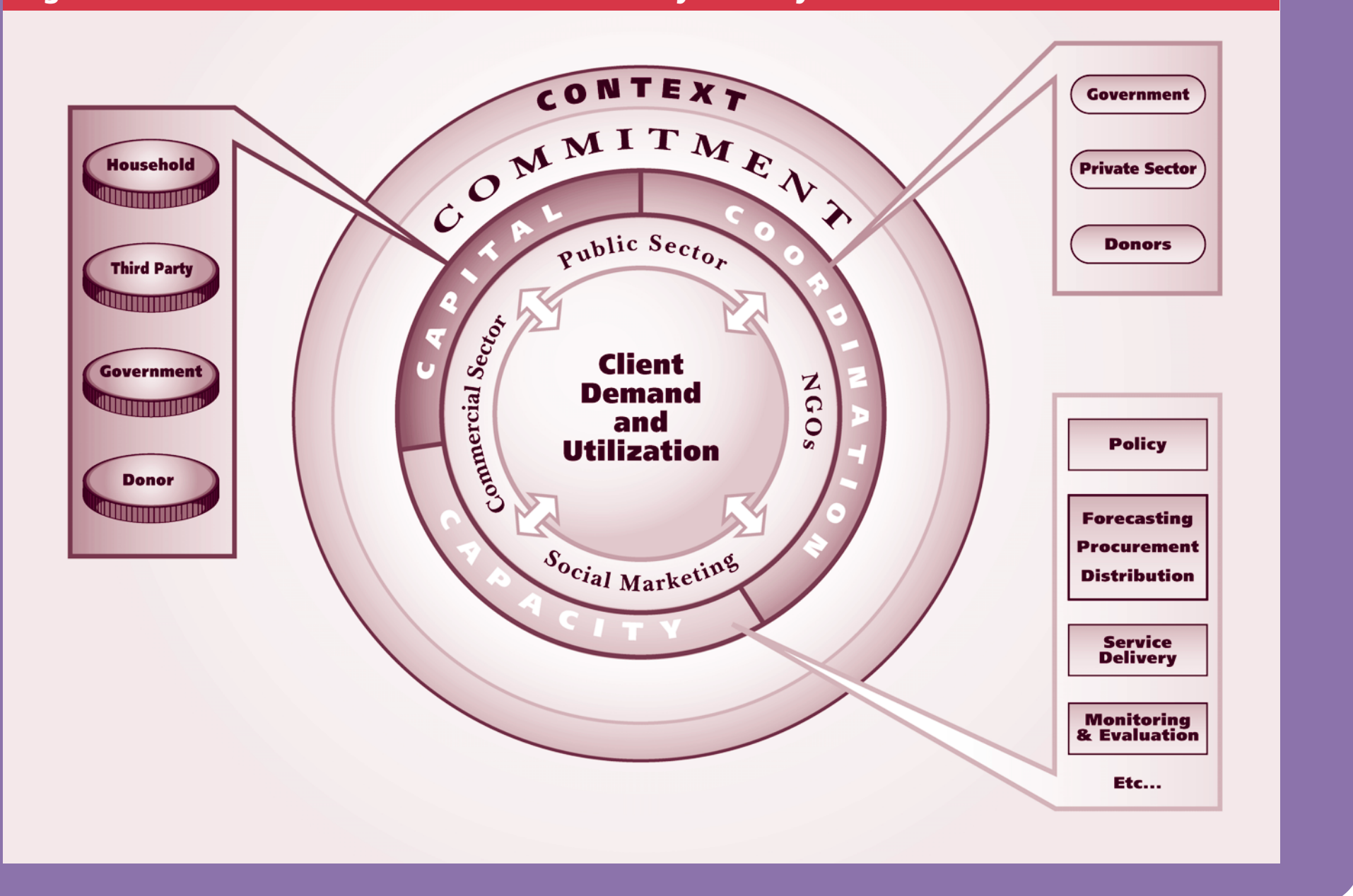


Background

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.

Figure 4. SPARHCS Framework for RH Commodity Security



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.

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 15-49⁷ 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.deliverjsi.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/online/onlinebases.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.deliverjsi.com

POLICY Project:
www.policyproject.com

Commercial Market Strategies Project:
www.cmsproject.com

Partners for Health Reformplus Project:
www.phrplus.org

Population Action International:
www.populationaction.org

The Supply Initiative:
www.rhsupplies.org

USAID:
www.usaid.gov

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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