Supply–Enabling Environment–Demand (SEED) Programming Model™
The Supply–Enabling Environment–Demand (SEED) Programming Model™ reflects EngenderHealth’s commitment to a holistic approach to the design and implementation of sexual and reproductive health (SRH) programs. Programs dedicated to improving SRH often look to attain specific health outcomes, such as achieving a safe pregnancy and delivery, helping clients meet their reproductive intentions through family planning (FP), or reducing the transmission of HIV and/or improving the health of people living with HIV and AIDS.

The foundation of the SEED Programming Model is that SRH programs will be more successful and sustainable if they comprehensively address the multifaceted determinants of health and include synergistic interventions that:

- Attend to the availability and quality of services and other supply-related issues
- Strengthen health systems and foster an enabling environment for SRH-seeking behavior
- Improve knowledge of SRH and cultivate demand for SRH services

The SEED Programming Model can contribute to a wide range of program planning functions. Using it can help planners foster a comprehensive approach to program assessment, design, implementation, and evaluation; it can also highlight the need to effectively and synergistically address factors related to service delivery and support systems, culture, and community, as well as policy, governance, and accountability. The SEED Programming Model may also offer a framework for partnering, given that no single entity is likely to have the capacity or interest to address all components of Supply, Enabling Environment, and Demand. Realization and implementation of the full model commonly requires the collaboration of multiple stakeholders with complementary expertise. The SEED Programming Model also offers program planners an opportunity to undertake a range of interventions at various levels—from the national down to the district, facility, and community levels.
A. Supply
Quality services are the cornerstone of any health program. Quality is considered good when adequate infrastructure, supplies, and equipment are in place. In addition, critical to the provision of good-quality care is the availability of well-trained, skilled, motivated, and supported staff who are performing to established standards and providing services that are accessible, acceptable, and accountable to the clients and communities they serve.1

To achieve this level of quality and ensure clinical safety and comprehensive counseling, programs must have effective training, supervision, logistics, and referral systems in place. Program managers may need to address organization of work and service integration, as well as explore public-private partnerships. At the facility level, or for community-based or mobile services, infrastructure may need to be upgraded and the reliable and sustained availability of commodities, equipment, and supplies ensured. Staff must be of adequate number, motivated to provide quality services, and enabled (through managerial support and proper infrastructure) to manage services effectively. Administrative, financial, and management systems also need to be in place, with administrators focused on evidence-based medicine and the use of data for decision making to improve service quality and plan and manage programs.

Further, health services must be strongly linked to the communities they serve and must be accountable to them. Communities can be valuable partners in defining and maintaining quality services when given opportunities to participate in overseeing and managing health services.

B. Enabling Environment
A range of interlinked sociocultural, economic, and policy factors influence both the functioning and sustainability of health services, as well as social norms and practices related to health. An Enabling Environment for health requires equitable policies; adequate resources; good governance, management, and accountability; supportive social and cultural norms; and gender equity. If these needs are not addressed during program design and implementation, investments in Supply and Demand interventions may be neither effective in the short term nor sustainable over time.

Strong and effective leadership is crucial for creating an enabling environment at all levels of the health system and within communities to support and advance SRH issues. This leadership is needed to promote evidence-based policies, guidelines, and approaches, support the allocation of human and financial resources for SRH, ensure that the health system has the capacity to provide quality services, and challenge social and gender norms that may adversely affect an individuals SRH.

Pivotal to fostering an enabling environment is the need to engage both governments and communities to move discourse about SRH from the private to the public realm. This encourages discussion and recognition of SRH as a public health and rights issue, wherein everyone has a stake in ensuring sexual and reproductive well-being.

C. Demand
Many barriers can keep people from realizing their sexual and reproductive well-being, and service availability is often the least of these. Individuals, families, and communities must have the knowledge, capacity, and motivation to ensure SRH and to encourage people to seek care. Programs need to advance a positive attitude toward SRH, address myths and misconceptions, provide evidence-based information about SRH-related issues and risks, and promote available services.

This requires a range of social and behavior change communication (SBCC) interventions—from basic health education and counseling to interpersonal communication, peer support, social marketing, and mass media communication. Such SBCC approaches need to provide clear, factual, and unbiased information, so as to increase people’s knowledge, skills, perception of risk, and self-efficacy; promote communication among couples, among peers, and within families; strengthen values and attitudes that support healthy behavior; and encourage people to seek care and use services. Further, such interventions should be synergistic and mutually reinforcing; this ensures that individuals and families receive consistent information and messages from a variety of different sources and in a range of formats—critical to the adoption and maintenance of healthy behaviors (Kincaid, 2000).

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1. Service providers may be doctors, midwives, clinical officers, nurses, counselors, peer educators, pharmacists, outreach workers, or community health workers. Service sites may be clinical facilities, health and other outreach posts, pharmacies, drug shops, or other venues used to deliver SRH services (e.g., community health worker outlets or visits to clients’ homes).
D. Synergies among Components

Interventions within any of the three program components—Supply, Enabling Environment, and Demand—do not operate in isolation, as represented in the visual model (page 2) by the bridging arrows connecting these three areas. Investments in one component will have an impact in another area. Activities that are well-coordinated and mutually reinforcing will yield optimal impact. The SEED Programming Model highlights three areas of synergy between the program components—Quality Client-Provider Interaction, Systems Strengthening, and Transformation of Social Norms.

Quality Client-Provider Interaction bridges Supply and Demand. A quality client-provider interaction is at the heart of quality services and is realized when a knowledgeable, empowered client interacts with a skilled, motivated service provider at an equipped and well-managed service site or during mobile/outreach activities.

Investments in both the Supply and the Demand components contribute to a quality client-provider interaction. For example, supply-side investments in interpersonal communication, counseling training, and job aids/tools enable health providers to provide client-centered counseling that can positively influence clients’ knowledge of and demand for services. Tailored to clients’ needs, such counseling is effective in identifying and addressing knowledge gaps and misperceptions and helps clients identify their health needs, their intentions, and an appropriate course of action or treatment. Likewise, demand-side investments in effective SBCC interventions can heighten clients’ awareness of and knowledge about health issues and available services and can empower them to ask questions and to request their desired services or products during health consultations. These mutually reinforcing investments increase the likelihood that clients’ SRH needs will be met.

Systems Strengthening bridges Supply and the Enabling Environment. The World Health Organization (WHO) has defined six key building blocks of a health system: (1) service delivery, (2) health workforce, (3) information, (4) medical products, vaccines and technologies, (5) financing, and (6) leadership and management (stewardship) (WHO, 2007a). Strengthening health systems encompasses efforts by all actors and organizations (public and private) to enhance interventions and activities within these six areas, thus improving providers’ capacity to provide sustainable, quality health services.

To be sustainable, many supply-side interventions require systems strengthening. For example, initiatives to address gaps in provider competence and in essential equipment and supplies cannot be sustained without complementary investments in systems for supervision, commodity logistics, training, and the like. Systems strengthening may also entail consideration of new service delivery approaches, such as task shifting, task sharing, community-based or mobile outreach services, and the adoption of new technologies. Likewise, systems strengthening provides an opportunity to identify potential areas for integrating services, where improved linkages may both enhance efficiency and increase the accessibility and availability of services. EngenderHealth’s Integration Approach uses systems strengthening to help a site’s staff and managers incorporate a realistic range of components from one service into a core service (e.g., levels of FP with HIV care and treatment) or to strengthen a component of care within a service model that has been underutilized (e.g., FP within postabortion care or maternity services).

Systematic approaches to engaging key stakeholders, particularly local communities, also need to be strengthened to ensure that they have meaningful and continuous input into resource allocation and program planning, design, implementation, and monitoring. This supports the principle that services should be accountable to the communities they serve, and that communities themselves have an interest in and ability to contribute to the establishment of quality, sustainable services.

2. Private refers to both for-profit and nongovernmental organizations.

3. EngenderHealth’s Integration Approach uses a five-step process: (1) engaging stakeholders to define integrated services; (2) assessing core service capacity to integrate; (3) building or strengthening service systems to accommodate the selected level of integration; (4) identifying and strengthening additional supporting resources, such as partners; and, (5) monitoring services performance as well as assessing the potential for integrating additional features of care. Focusing on Levels of Integration can make the process of integration manageable and practical by breaking down into its functional parts the components of the service that are to be integrated and presenting them in a progressive range of service options that may be appropriate to the core service’s capacity and resources (Farrell, 2007).
**Transformation of Social Norms** bridges Demand and the Enabling Environment. A social norm is a value, belief, attitude, or behavior pattern to which most people in a particular community or culture adhere, and individuals are often expected by their community to conform to that social norm. Social norms significantly influence an individual’s SRH, in that they lay out expectations of behavior that may conflict with the behavior needed to safeguard one’s health and well-being. In such cases, a holistic program needs to undertake interventions that will work toward transforming those harmful social norms that inhibit individuals from ensuring their SRH and/or adopting positive health-seeking behavior. Engaging communities to discuss SRH issues requires, in part, an exploration of the sociocultural barriers to SRH, such as the expected roles of women and concepts of masculinity. Undertaking demand-side interventions with a concurrent focus on fostering supportive social and gender norms increases not only people’s knowledge and awareness of SRH, but also their capacity to ensure this and seek care within a supportive environment.

### UNDERLYING PRINCIPLES

Though not incorporated visually into the SEED Programming Model, EngenderHealth subscribes to four underlying principles of good program design and implementation. These are the foundation of EngenderHealth’s approach to its work and are described below.

#### A. The Fundamentals of Care

The fundamentals of care are the essential elements of quality services, particularly (though not exclusively) in a clinical setting (The ACQUIRE Project, 2006). The fundamentals of care include:

- Informed and voluntary choice and decision making
- Clinical safety
- An ongoing mechanism for quality improvement and quality assurance, based on clients’ rights and staff needs

All clients have the right to informed and voluntary choice and decision making based on accurate information on service options, free of negative provider influence. This applies to the availability of and choice among a range of FP methods, as well as decision making related to any SRH clinical procedure (e.g., a facility-based delivery, a vasectomy procedure, or testing for HIV). The safety of clinical procedures can be ensured when providers are skilled and work in a well-managed, appropriately equipped service delivery site; when procedures are performed according to up-to-date, evidence-based standards, protocols, and guidelines; and when infection prevention processes are in place. Finally, facilitative supervision and quality improvement approaches facilitate problem solving and empower staff and communities to actively engage in ensuring quality standards over time. Facilitative supervision and quality improvement approaches help providers move from actual to desired performance and adopt better practices to improve performance as new evidence emerges.

#### B. Evidence-Based Programming

Evidence-based programming is the explicit use of data and scientific evidence during the design and implementation of a program. It has many manifestations and can include:

- Formative research to assess needs and inform the design of a program
- Use of survey data (e.g., from the Demographic and Health Surveys) to define the need for and scope of a program
- Use of published research and logical models to select and design intervention activities
- Use of literature reviews and international guidelines or standards to update policies and service protocols
- Incorporation of fact-based information and behavior theory into SBCC interventions

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• Use of service delivery statistics and other data for quality improvement
• Operations research during implementation and scale-up
• Monitoring and evaluation of a program
• Use of data for decision making and program planning (e.g., use of service delivery statistics and population-level data for forecasting)

In many instances, programs are designed and implemented based on intuition, ideology, or past experience, without strong indications that the chosen approaches will be effective. Wherever possible, programs should use locally generated evidence, which can be complemented by international data or evidence where knowledge gaps exist. Taking an evidence-based approach allows programs to target priority needs and use resources efficiently, maximizing the likelihood of programmatic success by avoiding “reinvention of the wheel” and taking advantage of previous experiences and existing knowledge on “what works.” Evidence is also critical to support advocacy efforts. Advocacy efforts backed by scientific data can lead to improved evidence-based policies and programs.

Programs should not only use evidence, but also, where feasible, contribute to generating it as well. Monitoring and evaluation, operations research, and documentation and dissemination of results should be built into program design from the onset.

C. Gender Equity

Clearly, women and men have significantly different SRH needs; these are rooted in their biological and socialized roles in reproduction (childbearing) and child-rearing. Yet the gender norms in a given society and the power dynamics between women and men may place “differential constraints on the meeting of those [SRH] needs” (Doyal, 2000). For example, women’s lack of decision-making power and limited control over financial resources serve to increase their SRH risks and limit their access to services. Similarly, sociocultural norms surrounding masculinity may hinder men from seeking preventive and curative SRH services.

An equity approach recognizes that women and men face different constraints and have a different level of resources to address their health problems. It is therefore important to evaluate SRH interventions through a gender lens, to look at whether conditions exist for equitable access and participation, as well as safety from violence and discrimination. Doing so may require dealing with women and men differently, so as to work toward an equal outcome of improved SRH for both sexes (Simpson et al., 2005). As such, the SEED Programming Model recognizes the need to challenge and transform harmful social norms, including gender inequity, so that programs can promote positive changes in gender roles to the benefit of improved SRH for both women and men.

D. Stakeholder Engagement

Stakeholder engagement is a process of involving those who have a role or an interest in and/or are affected by a program’s activities and goals. This engagement can span a continuum of activities, including dialogue and consultation; collaboration in identifying problems and solutions; partnering in implementation and evaluation; and capacity building and empowerment. Stakeholders may differ at different levels—e.g., at the national level, stakeholders may include parliamentarians and high-level bureaucrats; at the district level, stakeholders may include district officials, health managers, district-level representatives of prominent institutions, and representatives of civil society and nongovernmental organizations; at the community level, stakeholders may include local government officials, program managers and service providers, traditional

5. Specific examples include: lack of power to decide with whom and when to have sex; lack of decision-making power to decide how many children to have; inability to negotiate condom use; lack of mobility in some settings to seek information and services; gender-based violence; and gender-rooted power imbalances between male providers and female clients.

6. Using a “gender lens” denotes analyzing a situation from a gendered perspective and therefore identifying how the experiences and situations of women might differ from men. Practically, a “gender lens” is in many cases operationalized by developing and using tools or checklists to systematically incorporate gender analysis into program design and planning.

7. Although stakeholder engagement and community engagement may involve similar approaches to catalyze ownership and action, stakeholder engagement is a broader term, encompassing stakeholders at various levels, from the local level to the national level, whereas “community engagement” may focus more narrowly on stakeholders within specific communities at the grassroots level.
and religious leaders, community health committees and groups, community representatives (including representatives of marginalized groups), client advocates, and beneficiaries of the project.

Stakeholder engagement is critical to program success and sustainability, ensuring that decision makers, program implementers, and the intended beneficiaries are partners in program design, implementation, and oversight. This increases the likelihood that an intervention will address the community’s SRH needs and preferences appropriately. Furthermore, involving stakeholders contributes to program sustainability and ownership, by including those who will be in a better position to carry on or advocate for the program’s work over time.

USE OF THE SEED PROGRAMMING MODEL

The SEED Programming Model builds on much of the thinking that has emerged from decades of FP/SRH program experience, both of EngenderHealth and of other technical organizations. The SEED Programming Model explicitly recognizes and responds to the complexity of improving health outcomes, reflecting growing global recognition of the need for a holistic approach to SRH programming. For example, a 2008 *Lancet* series on HIV prevention highlighted the need to effectively and synergistically employ biomedical, behavioral, and structural approaches to address HIV (Bertozi et al., 2008; Coates, Richter, & Caceres, 2008; Gupta et al., 2008; Merson et al., 2008; Padian et al., 2008; Piot et al., 2008). Yet it is also important to recognize that this very need to address SRH programs holistically complicates the ability to measure the effect of such a comprehensive approach, and more specifically, the individual contributions of each component.

What distinguishes the SEED Programming Model from other models and approaches is in the equal representation of Supply, Enabling Environment, and Demand components. The SEED Programming Model recognizes that these three components are interdependent and mutually supportive and highlights the importance of analyzing each programming area equally in light of the SRH changes a program wishes to make.

However, in many situations, initial analysis and formative research may identify specific issues necessitating more of a focus on one of the SEED components. As such, in the final design of an SRH program, interventions may not be equally distributed between the S, EE, and D components. Likewise, targeted SRH programs will have more specific goals than simply “improved SRH.” For example, an FP program may set “meeting reproductive intentions” as its goal; an HIV program may choose “reducing HIV transmission” and/or “improving the health of people living with HIV and AIDS” as its goal; and a maternal health program may target “healthy pregnancy outcomes” as its goal. Once the SEED Programming Model is adapted to a specific program goal, it can also assist in the conceptualization and development of a logical framework for that program, thus providing a road map for the specific program’s objectives, activities, outputs, and anticipated outcomes and impact.

Ultimately, the SEED Programming Model can help those involved in the design and implementation of SRH programs to ensure a comprehensive approach to their work, thus improving the likelihood of a program’s effectiveness and sustainability.

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8. Other models or approaches to consider include: the systems framework guiding WHO’s *Strategic Approach to Strengthening Sexual and Reproductive Health Policies and Programs* (WHO, 2007b); Management Sciences for Health’s Framework for People-Centered Health Systems Strengthening in *Health Systems in Action* (MSH, 2010); The United Nations Global Consensus on Maternal, Newborn and Child Health model, presented in *Investing in Our Common Future* (Ban, 2010); the nine elements of organization of work, presented in an issue of *Population Reports* (Setty, 2004); and the ecological model, which originated with Bronfenbrenner, 1979.
REFERENCES


