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Using data to see and select the most vulnerable adolescent girls

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A **GIRLS FIRST!** PUBLICATION

USING DATA TO SEE AND SELECT THE MOST VULNERABLE ADOLESCENT GIRLS

BY SARAH ENGBRETSSEN



GIRLS FIRST!

PERSPECTIVES ON GIRL-CENTERED PROGRAMMING

The field of research and programs for adolescent girls has traditionally focused on sexuality, reproductive health, and behavior, neglecting the broader social and economic issues that underpin adolescent girls' human rights, overall development, health, and well-being. Further, efforts to improve girls' lives often spotlight those who control or influence their lives—parents, in-laws, boys, men, perpetrators—overlooking girls themselves.

GIRLS FIRST! Perspectives on Girl-Centered Programming is a set of five thematic Reviews, written by experts at the Population Council. They are snapshots of the knowledge base at a particular moment in this quickly changing field. They address the five strategic priorities defined in the UN Joint Statement, “Accelerating Efforts to Advance the Rights of Adolescent Girls” (March 2010), which represents the collective commitment of seven UN agencies to support governments and partners in advancing key policies and programs for the hardest-to-reach adolescent girls. The Reviews therefore:

1. Explore where to go next with **education for girls**;
2. Outline innovative approaches to **improving girls' health**;
3. Reframe the field's approach to **violence against girls**;
4. Describe the best ways to cultivate **girl leaders**; and
5. Explain novel ways to collect and use **data on adolescent girls**.

The Reviews put forward innovative arguments for investing in girls and highlight promising practices. They express a forward-looking and evidence-based point of view on where the field must allocate resources in order to most quickly and effectively improve girls' lives.

These Reviews—while written by experts at the Population Council, an organization that has pioneered cutting-edge research and programming for vulnerable and marginalized adolescent girls—were catalyzed with leadership support from the UN Adolescent Girls Task Force. Additional moral and material support was provided by the Nike Foundation, the United Nations Foundation, and the David and Lucile Packard Foundation. These Reviews add to other programmatic guidance and toolkits now available and serve as an essential reference for anyone seeking to develop successful and sustainable policies and programs for girls. We hope that they will inspire innovative approaches in efforts that realize the rights of marginalized adolescent girls worldwide.

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Population Council and UN Adolescent Girls Task Force

Disclaimer

The Reviews on programming for adolescent girls in the areas of Education, Health, Reduction of Violence, Girls Leadership, and Data have been prepared by the Population Council for the UN Adolescent Girls Task Force (UNAGTF), with support from the Nike Foundation, the United Nations Foundation, and the David and Lucile Packard Foundation.

The views expressed in these Reviews are solely those of the authors and do not necessarily reflect the views of their donor partners.

USING DATA TO SEE AND SELECT THE MOST VULNERABLE ADOLESCENT GIRLS

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BASIC PREMISES AND POLICY CONTEXT

Seeing girls in the macro picture and linking them to development goals

Investment in adolescent girls is crucial in the developing world where a large and growing proportion of the population is under the age of 24. In many developing countries, young age at marriage and related childbearing constitutes a significant source of future population growth. Investing in adolescent girls is critical to shaping the demographic future, protecting the human rights to schooling, bodily integrity, legal and chosen marriage, and shaping the dependency burden. In countries with declining fertility, the possibility exists of a “demographic dividend”—a moment when a rising proportion of the population is of working age, resulting in a rise in the rate of economic growth. Investments in girls can reduce their fertility while increasing their productive capacity, benefiting the girls, their families and communities, and the greater economy and society.¹

The world has embraced the Millennium Development Goals, the Convention on the Elimination of All Forms of Discrimination Against Women, and the Convention of the Rights of the Child. These agreements together provide a framework of international human rights standards, values, and desirable action with respect to children and adolescents. Realization of these goals and human rights requires substantial, focused, and thoughtful investments in the social, health, and economic assets of young people in the poorest communities throughout the world. Investments need to be made at critical moments in early adolescence, when disadvantage is consolidated for more than 600 million girls in the developing world. Reaching this population is an essential development and social justice strategy, and critical to the achievement of the Millennium Development Goals.² (see box)

Across the developing world, adolescents experience a series of human rights abuses such as threats to bodily integrity, lack of education, and young age at marriage and childbearing. The

INVESTING IN ADOLESCENT GIRLS A STRATEGY TO MEET THE MILLENNIUM DEVELOPMENT GOALS

Building a strong economic base and reversing intergenerational poverty: Increased female control of income has stronger returns to human capital than comparable income under male control.

Achieving universal primary education: The most deprived are rural girls.

Promoting gender equality: Gender-based violence and harmful practices drive high and unwanted fertility, maternal mortality, and HIV acquisition.

Reducing maternal mortality and related infant mortality: In most settings, the youngest first-time mothers are at greatest risk of maternal mortality.

Reversing the rising tide of HIV in young people: Girls and young women, including child mothers, bear an increasing and disproportionate share of new HIV infections. The ratio of female to male HIV incidence among those aged 15–24 reaches 8:1 in some countries.

Reducing rapid population growth: Eliminating child marriage and associated early childbearing increases girls’ productivity and fosters a synergistic reduction in population growth.

SOURCE: Bruce, Judith. “Reaching the Girls Left Behind: Targeting Adolescent Programming for Equity, Social Inclusion, Health, and Poverty Alleviation.” Prepared for: “Financing Gender Equality: A Commonwealth Perspective,” Commonwealth Women’s Affairs Ministers’ Meeting, Uganda, June 2007.

realization of some rights is delayed (such as opening a savings account at age 19 rather than age 16 in a country where full-time work is allowed). The consequences of the violations of some rights can be remediated, albeit at a high cost (having an interrupted course of study), whereas other violations cause irremediable harm (when a person experiences forced sex, is infected with HIV, or has a child when she is still a child herself). While violation of any human rights threatens the well-being of adolescents, policymakers and program managers must consider these categories of abuses when allocating scarce resources. The youngest adolescents are often at highest risk of abuse. Adolescent girls face serious challenges around the time of puberty³ including withdrawal from (and lack of safety in) public spaces, loss of peers,

leaving school, pressure for marriage or liaisons as livelihood strategies, and internalization of harmful gender norms including those regarding gender-based violence. These emergent issues affect psychosocial development and trajectory into adulthood.⁴ Data reveal these transitions and provide a rationale for targeted programming.

Using data to decide which girls to invest in as a strategic, practical, and ethical choice

We need to invest in girls to build their key protective assets. But in order to make these investments, we must “see” these girls. Current youth policies and the data that accompany them block our view of these girls and treat young people as a homogenous group. But the skills and experiences of young people, even in the same

community, can vary considerably. By not recognizing how adolescent capacities and opportunities vary by subgroup, these policies have often failed to direct resources to vulnerable and hard-to-reach adolescents. Rather, the beneficiaries of such policies have typically been those who are already advantaged—urban, older, male, and school-going populations. This situation arises because these populations generally have greater social and economic power and are better positioned to take advantage of available resources. Additionally, recruitment strategies do not always take into account how to find hard-to-reach adolescents.

Making adolescent girls visible is essential so that investments can be targeted toward those at the highest risk of the poorest outcomes. This premise underpins this brief, which seeks to find and target vulnerable adolescent girls and shape policy context. It provides guidance on resources and tools that can reveal the internal diversity of adolescents, identify the onset and extensiveness of vulnerability, demonstrate where there are high concentrations of vulnerable girls, assess girls' share of youth resources, and identify communities and vulnerable girls for program participation. The brief concludes with field applications for making dynamic use of data.⁵ While this brief focuses on the Demographic and Health Surveys (DHS) as a data source, it is worth noting that where census data are available, one can zoom in and learn about a target population at the micro level—even if indicators available on adolescents at that level are somewhat limited.⁶

RESOURCES AND TOOLS

Disaggregated data reveal the internal diversity of adolescents and help prioritize investments to those in greatest need

Disaggregated data are critical in making visible the heterogeneity of adolescent subgroups. These data help decisionmakers, governments, NGOs, and advocacy organizations identify marginalized adolescents, make decisions and prioritize investments, and,

where data are unclear or lacking, motivate additional targeted policy and program-oriented research. Without a solid understanding of the internal diversity of adolescents, those who are most disadvantaged may be left behind. In examining these data, one must look for differences between diverse groups of adolescent girls, e.g., rural and urban. Such data can be used to get an idea of different kinds of conditions of concern, as well as the times when these conditions are most intense.

National-level data often mask important subnational differences. Therefore it is important to look at indicators on a subnational level (for example, proportion of 18–24 year-old girls and young women married by age 15 in each region of a country) to see where there are “hot spots” of vulnerable subgroups. Many datasets allow for subnational representation, so policymakers and programmers could learn, for example, that the percentage of girls married at younger than age 15 in a given country is less than 15 percent, but in one province it rises to almost 50 percent.

With UNFPA support, the Population Council produced adolescent data guides, which use Demographic and Health Survey data in order to make visible vulnerable groups of adolescents. The guides emphasize early adolescence to draw attention to transitions that lead to disadvantage.⁷ The data guides then examine the context of sexual activity among adolescents, with special attention to child marriage, gender norms, and reproductive health.⁸ While population-based surveys do not gather information about adolescents younger than 15 years of age, Cynthia Lloyd, a Population Council researcher, pioneered a way to use the household framework to generate a picture of the situation of 10–14 year olds. Among the findings was the realization that a large proportion of adolescents are both out of school and living apart from their parents. In Ouagadougou, Burkina Faso, for example, 20 percent of girls aged 10–14 are not in school and are living apart from their parents.⁹ The adolescent data guides were designed to provide a compara-

tive picture between and across countries. They map the internal diversity among adolescents by disaggregating data whenever possible by age, sex, living arrangements, schooling, marital status, and current residence (urban or rural).

The data included in the guides, which are mapped to show subnational variation whenever possible, make clear where there is great need and show potential areas for intervention. Sample types of data included in the guides are listed here:¹⁰

- The proportion of young women aged 20–24 who were married by age 15 and age 18;
- The proportion of girls aged 10–14 living with one or no parent;
- The proportion of girls of school-going age¹¹ not enrolled in school;
- The proportion of girls who are in school at grade for age;¹²
- The proportion of girls and young women aged 15–24 who believe that violence against women is acceptable under certain circumstances;
- The proportion of girls who have ever experienced violence;¹³
- The proportion of girls who are sexually active;
- The age difference between sexually active girls and their first and current partner.

These indicators can be used to confirm subjective observations about adolescent females. For example, grassroots groups working in Lusaka, Zambia, can enumerate the challenges facing adolescent girls, and each observable condition can be substantiated—or refuted—by data (see Table 1).

The life-table method identifies the onset and extensiveness of vulnerability and is an essential advocacy tool

Some data provide a picture of vulnerability across age cohorts, such as the proportion of girls and boys of certain ages who are out of school (though this is less useful where a small proportion of students begin school on time). Where a higher proportion exists, the

TABLE 1 MOVING FROM SUBJECTIVE TO OBJECTIVE MEASURES OF RISK FOR ADOLESCENT GIRLS IN LUSAKA, ZAMBIA

OBSERVABLE RISK FOR ADOLESCENT GIRLS	OBJECTIVE MEASURE OF RISK
Adolescent pregnancy and childbearing	21.4% of 15–19 year olds have been pregnant or had a child
Physical violence	40.5% of 15–24 year olds have experienced physical violence
Isolation	7.7% of 10–14 year olds are not in school and not living with either parent
Low access to education	29.7% of 7–18 year olds are not in school

SOURCE: Data in the table come from the 2007 DHS. A summary of adolescent findings can be found in *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Zambia 2007*. 2009. New York: Population Council.

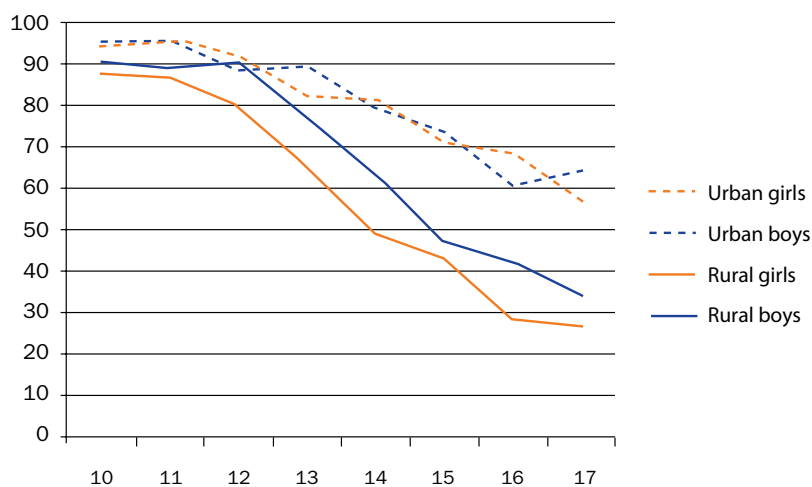
data in the adolescent data guides allow pinpointing of ages at which school drop out begins and accelerates. For example, more than 87 percent of rural girls in Guatemala are in school at age 10, but by age 17 only 27 percent are in school.¹⁴ The rapid decline in school enrollment among females occurs around the time of puberty.

Employing a life-table method¹⁵ is important wherever the data permit.

This method shows the age by which a milestone has happened (rather than seeing averages across cohorts). For example, data from the 2010 Ethiopia DHS show that while only 23 percent of 15–19-year-old girls in Amhara region were currently married or in union, an astounding 56 percent of 20–24-year-old married young women were married by age 18¹⁶—more than a two-fold increase in the proportion of married

girls. The life-table method reveals the true magnitude of the problems facing girls. Policymakers and programmers can begin with this information and then look backward to decide when investments should be made so that they will have the greatest impact on girls. If a high proportion of girls in a certain area were married by age 15, the disinvestment process likely occurred substantially earlier. If an increase in

SCHOOL ENROLLMENT AMONG 10–17 YEAR OLDS IN GUATEMALA



SOURCE: *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Guatemala 2002/2006*. 2009. New York: Population Council.

school drop-out rates was detected among 13-year-old girls, for example, one could begin an intervention with 10–12-year-old girls to avert this.

Raw numbers reveal where to find high concentrations of vulnerable girls in need of targeted programming

Percentages are not always the most compelling way to present the scope of a particular problem, and raw numbers are often more impressive to policy-makers. Supplementing percentages with raw numbers may provide a more complete picture of an issue. While percentages give a general idea of what is happening in a particular place, they do not indicate the size of the problem with respect to the total number of adolescent girls affected by a certain condition. In Ethiopia, for example, more than 5 percent of 10–14-year-old girls are not in school and are not living with either parent.¹⁷ While the percentage does not seem problematic, it's very striking to note that approximately

281,320 girls fall into this category in Ethiopia.¹⁸ While an even higher percentage of 10–14 year old girls in Mozambique are not in school and not living with either parent (9 percent), the number of girls affected is far smaller—130,960—given the smaller size of Mozambique's population.

Large-scale investments are often prioritized to large countries but a reallocation of resources to regions can yield an equally impressive number of beneficiaries. For example, while it is understood that school enrollment rates are generally very low among adolescent girls in francophone West Africa, the counterargument is that these countries have small populations and therefore do not merit the same investment as larger countries. A sample calculation, however, using adolescent population data from the 2008 UN World Population Prospects and the most recent education data from the Demographic and Health Surveys shows that the number of 10–14-year-old girls who are out of school and

therefore “off-track” is virtually the same in francophone West Africa as in Nigeria. (See Table 2.) Absolute numbers are important in the process of mapping the magnitude of a problem versus mapping aid targeted toward that problem and deciding where to prioritize investments.

Assessing girls' share of youth resources: The coverage exercise tool

Once the need to target programs to vulnerable subgroups of adolescents has been revealed, a scan of existing programs can be used to assess girls' usage of youth resources. The Population Council created an assessment tool to determine the equity of access to adolescent programs. Known as the coverage exercise,¹⁹ this resource can be used to determine the basic characteristics of those who are, and are not, participating in adolescent initiatives. This low-cost evaluation tool can be used to profile beneficiaries within one program or across programs.²⁰ Often, there is an inversion of

TABLE 2 CALCULATIONS TO ESTIMATE THE NUMBER OF GIRLS AGED 10–14 WHO ARE OUT OF SCHOOL

	POPULATION OF 10–14-YEAR-OLD GIRLS	X	PROPORTION OF 10–14-YEAR-OLD GIRLS WHO ARE OUT OF SCHOOL (YEAR)	=	ESTIMATE OF NUMBER OF 10–14-YEAR-OLD GIRLS WHO ARE OUT OF SCHOOL
Francophone West Africa					
Benin	553,369		37.6 (2006)		208,067
Burkina Faso	987,093		71.1 (2003)		701,823
Guinea	617,935		48.6 (2005)		300,316
Mali	824,359		57.8 (2006)		476,480
Niger	997,839		70.2 (2006)		700,483
Senegal	805,530		43.5 (2005)		350,406
					2,737,575
Nigeria	9,488,199		29.7 (2003)		2,817,995

SOURCE: Tabulations by Sarah Engebretsen using *Adolescent Experience In-Depth Data Guides* and UN projections.

care. That is, those who begin with the greatest advantages—typically older, in-school males—receive the greatest number of resources; those who begin with the fewest advantages (younger, out-of-school females) receive the fewest number of resources. One coverage exercise completed by the Population Council and UNFPA revealed that among a sample of more than 6,000 adolescents frequenting youth services, 63 percent were more than 20 years of age, while a mere 7 percent of program beneficiaries were 10–14 years old,²¹ indicating that the youngest and arguably most vulnerable group was barely being reached. A similar scan completed in Mauritania revealed that 83 percent of beneficiaries of youth-serving programs were male.²² Results from a coverage exercise can be used to help organizations redirect resources to those people in greatest need and to develop more targeted approaches to reaching them.

Mapping technology to define a community, identify eligible girls, and see who is being reached

Mapping technology assists in the collection of important information for programming. Specifically, mobile data collection can be used to define a community, identify eligible girls, and see who is being reached in a given program. A Global Positioning System (GPS) unit can collect latitude and longitude coordinates of a program location that can easily be fed into an application such as Google Earth in order to generate aerial maps of program coverage. Aerial maps can depict the location of a girl-only program and draw particular attention to the catchment area, or target community from which program beneficiaries are drawn. Finding a program's catchment area gives a realistic idea of the size and boundar-



GPS Unit

ies of a given community and allows for selection of appropriate program locations. Mapping can also show where programs do and do not exist and allow the differentiation of programs on the ground from programs that do advocacy on behalf of adolescent girls but do not transfer resources.

Mapping technology can also be used to identify households with vulnerable adolescent girls who may be eligible to participate in a given program. One can go door-to-door with a GPS unit and collect information on the age and sex of all household members. The GPS coordinates allow the identification of the exact location where adolescent girls live, which is important information for a population that is often invisible in public spaces. Program planners can then determine the threshold proportion of girls needed from that community (a general recommendation is about 30 percent) in order to intensify the social capital of program participants. Additionally, this information reveals which girls are and are not being reached, which is especially important given that it is often the most vulnerable who are absent from program participation or have higher rates of drop-out.

FIELD APPLICATIONS: FOUR PROGRAMS THAT ARE MAKING DYNAMIC USE OF DATA TO TARGET THE MOST VULNERABLE ADOLESCENT GIRLS

Using disaggregated data to find regions with high concentrations of vulnerable girls in Benin

The picture of adolescent girls in Benin is one of generalized vulnerability. A team from UNFPA Benin and OSV Jordan (an NGO) participated in a Population Council–led and UNFPA-

funded adolescent girls' programming and capacity-building workshop where they learned how to use data to identify vulnerable subgroups of young people for programming purposes. These partners used DHS data presented in the 2006 Benin adolescent data guide to estimate the number of girls in particular pockets of vulnerability, such as girls not in school, living apart from parents, illiterate, and married or in union. They assumed that the proportions listed in the 2006 data guide would remain constant over time and multiplied these percentages by the 2010 predictions of the total number of girls in each age range²³ to quantify the absolute numbers of vulnerable girls. In 2006, for example, 69 percent of 10–14-year-old girls in the Alibori region were out of school. Assuming this proportion was maintained through 2010, when there were a total of 41,113 girls aged 10–14 years in Alibori, then 28,204 10–14-year-old girls were out of school in this particular region. (See box, right, and Table 3.)

These data emphasize the multitude and magnitude of problems facing girls in the Alibori region. The partners who led this exercise are in the process of designing an intervention that would prioritize investments to these girls before their critical transition into vulnerability. For further information, please contact Josephat Avoce at osvjordan@yahoo.fr.

Using disaggregated data to discover disadvantage among adolescent girls in Ghana

The Women's Initiative for Self-Empowerment (WISE) studied the Ghana adolescent data guide to better understand disadvantage among adolescent girls and to design an intervention accordingly. This group participated in two Population Council–led adolescent-girls programming and capacity-

$$68.6\% \times 41,113 = 28,204$$

Percentage of girls in vulnerable category x Total number of girls in age range = Total number of girls in vulnerable category in given age range

DEVELOPING APPROPRIATE BENCHMARKS OF SUCCESS FOR SPECIFIC GROUPS OF GIRLS

Once a target population has been selected, the benchmarks of success should be developed. Program planners need a clear understanding of where their girls are at the start of a program in order to design an appropriate intervention. Planners must develop indicators at the level of the girl and measure them pre- and post-intervention. Changes should be measured at the level of the girl rather than at the level of the gatekeepers in her life.^a

Girl-level indicators are important benchmarks of success, and often people want to measure adolescent well-being through an index. The problem with this method is that it conflates three different conditions that should be considered separately, certainly for programming purposes. The picture of success and the

goals for the target population of girls fall into three broad categories:

- Conditions that should be reduced to zero, such as child marriage, HIV infection, or having a child when a girl is still a child herself.
- Conditions that should be maximized, such as getting the mandated and proper amount of schooling.
- Conditions that relate to fair share of available resources, such as getting access to work when you want it.

^aA complete set of girl-level indicators can be found in Chapter 13 of *Girl-Centered Program Design: A Toolkit to Develop, Strengthen, and Expand Adolescent Girls Programs*. 2010. New York: Population Council. Available at <http://www.popcouncil.org/publications/books/2010_AdolGirlsToolkit.asp>.

TABLE 3 ESTIMATES OF NUMBER OF GIRLS IN VULNERABLE CATEGORIES IN BENIN

REGION	10–14-YEAR-OLD GIRLS WHO ARE OUT OF SCHOOL	10–14-YEAR-OLD GIRLS WHO ARE OUT OF SCHOOL AND NOT LIVING WITH EITHER PARENT	15–19-YEAR-OLD GIRLS WHO ARE OUT OF SCHOOL	15–19-YEAR-OLD GIRLS WHO ARE ILLITERATE	15–19-YEAR-OLD GIRLS WHO ARE MARRIED OR IN UNION
Alibori	28,208	2,302	35,137	34,251	22,269
Atacora	21,249	425	27,497	25,641	13,142
Atlantique	22,731	762	30,763	24,310	8,511
Borgou	24,676	834	32,643	21,425	20,150
Collines	15,940	93	22,273	18,063	7,477
Couffo	13,993	183	16,908	14,537	4,393
Donga	8,957	397	13,340	9,454	7,205
Littoral	19,078	1,192	32,347	18,493	2,606
Mono	6,427	152	9,325	7,613	4,258
Ouémé	20,026	646	30,345	22,857	5,855
Plateau	16,438	637	18,846	17,380	6,272
Zou	19,241	658	25,065	21,087	9,570
National	216,964	8,281	294,489	235,111	111,708

NOTE: Full presentation of Benin-led calculations of vulnerable girls is entitled *Aperçu des groupes cibles Bénin* and can be found at <<http://www.popcouncil.org/mediacenter/events/2010AdolGirlsProgrammingBurkina.asp>>.

building workshops. During the second workshop, they presented an overview of the situation in Ghana using facts and figures from the adolescent data guide. Their presentation demonstrated the declining rates of school enrollment as adolescent females grow older, and the increase in the percent of girls aged 15–19 years old living in urban areas compared with 10–14-year-old girls. They remarked that such migration patterns are typical of females in Ghana and that migration pathways are generally from the North to large cities such as Accra or Kumasi. Their presentation also highlighted the number of girls living apart from parents and not in school and their subsequent vulnerability to exploitation. Based on these data, WISE designed an intervention for 10–20-year-old out-of-school females living in urban areas and working as head porters in the local markets. For further information, please contact Adwoa Bame at abame@wise-up.org.

Exploring the balance between need and coverage of vulnerable adolescents in Burkina Faso

Seeing disadvantaged adolescents and deciding appropriate programmatic responses requires the use of multiple data sources. The Population Council explored the DHS data from Burkina Faso complemented by a 2004 national survey of adolescents led by the Guttmacher Institute, which asked questions of specific groups of adolescents and brought in the voices of adolescent girls through in-depth interviews. These data illustrated the needs of adolescent girls, particularly with respect to sexual and reproductive health information. To learn whether those in greatest need were being prioritized through current youth-serving initiatives, the Population Council, with UNFPA support, conducted a coverage exercise in 2005 with 20 youth-serving organizations.

Joint efforts by the Population Council, UNFPA, and the Guttmacher Institute revealed that those in greatest need were the least represented in youth-serving programs. Younger girls and newly married girls lacked information and were underrepresented in pro-

GATHERING SENSITIVE DATA FROM ADOLESCENTS: AUDIO COMPUTER-ASSISTED SELF-INTERVIEWING

Different technologies exist to help one learn about large and often neglected groups of adolescents. Population Council researchers developed audio computer-assisted self-interviewing (ACASI) software to reduce inaccurate responses to sensitive survey questions, which might cause embarrassment or discomfort if discussed in person. The ACASI tool allows respondents to listen to recorded questions and then respond on a handheld device. This ensures privacy and allows for more candid responses, which is especially important for adolescent girls in the developing world where sexual behavior is often stigmatized and freedom of expression among females is often limited. Assessments of the technology have shown that people are more likely to report sensitive behaviors during computerized interviews than when questioned face-to-face. Even among populations with low education or high illiteracy, these tools are well accepted and easy to use.^{a,b}

^aAdditional information on the ACASI tool can be found at http://www.popcouncil.org/projects/246_ACASI/asp.

^bInformation on ACASI's uses with youth can be found in "Obtaining more accurate and reliable information from adolescents regarding STI/HIV risk behaviors." *Promoting Healthy, Safe, and Productive Transitions to Adulthood*. Barbara Mensch and Paul C. Hewett. 2007. New York: Population Council.

grams. Only 7 percent of adolescents reached by youth-serving initiatives were aged 10–14, for example, and yet 12–14-year-old adolescent girls had more limited knowledge of sexual and reproductive health information than 15–19 year olds (15 percent versus 31 percent for knowledge of STIs, 22 percent versus 47 percent for knowledge of where to procure contraceptives). Likewise, only one-quarter of adolescents who were being reached by peer educators were out of school, yet the majority of adolescents in Burkina Faso had never been to school.²⁴ These findings made it clear that there was a need to better target resources to the most vulnerable, and informed the design of an intervention for both girls at risk of marriage and newly married girls in rural areas of Burkina Faso. This pilot project, led by the Population Council, UNFPA, UNICEF, and the Ministry of Social Action, focused on improving sexual and reproductive health knowledge and access to services. For further information, please contact Population Council country director in Burkina Faso, Gisele Kabore at gkabore@popcouncil.org.

Use of mapping to target and recruit vulnerable girls, engage girls as researchers, and engage the community in supporting an asset-building program in Guatemala

Population Council colleagues in Guatemala's *Abriendo Oportunidades* program have innovated the use of mapping as a tool to target and recruit vulnerable girls, engage girls as researchers, and engage the community in supporting an asset-building program. *Abriendo Oportunidades* is designed for rural Mayan girls aged 8–17 who face early marriage, limited schooling, frequent childbearing, social isolation, and chronic poverty. Program staff members have mapped households to target and recruit vulnerable girls for participation in the program. As the program expands to new communities, program leaders use GIS technology to map the boundaries of each community. Like most of the world's poorest and often informal communities, these areas are not formally demarcated by administrative boundaries. Program leaders also use mapping to document the number of girls living in each household, the households of commu-

nity leaders, and the location of natural resources. This data is then used to determine the potential for expanding the program into new communities. The program has engaged the girls in the mapping-data collection process. Girls have been empowered by the technology and by the opportunity to learn more about the communities in which they live. Developing and sharing such maps with the community is a valuable activity provided by the program. It helps build local buy-in for girls' programs and gets stakeholders engaged and interested. More important, the mapping process helps establish girls as genuine leaders in the community. For further information, please contact consultant Angel del Valle, adelvalle@popcouncil.org.

NOTES AND REFERENCES

- 1 Bruce, Judith. "Reaching the girls left behind: Targeting adolescent programming for equity, social inclusion, health, and poverty alleviation." 2007. Paper prepared for Financing Gender Equality: A Commonwealth Perspective, Commonwealth Women's Affairs Ministers' Meeting, Uganda, 2007.
- 2 Ibid.
- 3 The needs of very young adolescents are captured in a guidance document and toolkit created by the Population Council and UNFPA. This document addresses the lack of research and attention to 10–14-year-olds by compiling new data-gathering approaches, tools, and methodologies. The methodologies described in the guide are useful primarily for discovering which very young adolescents are most vulnerable, what their needs are, and whether they are being reached by existing programs. "Investing When It Counts: Generating the Evidence Base for Policies and Programmes for Very Young Adolescents." <<http://www.popcouncil.org/pdfs/InvestingWhenItCounts.pdf>> or <<http://www.unfpa.org/public/pid/363>>.
- 4 Bruce, Judith and Amy Joyce. 2006. "The failed reach of current schooling, child health, youth-serving, and livelihoods programs for girls living in the path of HIV," Chapter 3 in Judith Bruce, Nicole Haberland, et al. (eds.), *The Girls Left Behind*. Policy paper. New York: Population Council.
- 5 This brief focuses on how to use data to detect target populations and program for them appropriately. For information on how to use data for monitoring and evaluating adolescent girl programs, see Chapters 12 and 13 of *Girl-Centered Program Design: Toolkit for the Elaboration, Reinforcement, and Expansion of Adolescent Girl Programs*. 2010. New York: Population Council.
- 6 With support from UNFPA, the Population Council is developing census guidelines for targeted information on adolescents. These guidelines, which will use Liberia as a case study, will be available in 2012.
- 7 Information on ethical issues and protecting children's rights in data collection can be found in *Protecting children's rights in the collection of health and welfare data*. <<http://www.popcouncil.org/publications/abstract.asp?RefID=4536>>.
- 8 These data guides exist for approximately 50 countries. A list of available data guides and more information can be found at <<http://www.popcouncil.org/publications/serialsbriefs/AdolExpInDepth.asp>> and <http://www.unfpa.org/youth/dhs_adolescent_guides.html>.
- 9 *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Burkina Faso 2003*. 2009. New York: Population Council.
- 10 The majority of indicators on this list can be found in the DHS and have been included in *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People*, a series jointly developed by the Population Council and UNFPA. For more information and a link to the adolescent data guides: <<http://www.popcouncil.org/publications/serialsbriefs/AdolExpInDepth.asp>> and <http://www.unfpa.org/youth/dhs_adolescent_guides.html>.
- 11 The definition of school-going age is country-specific and comes from UNESCO.
- 12 This indicator can be found in the DHS. Country-specific analyses have been summarized in Cynthia B. Lloyd and Juliet Young, *New Lessons: The Power of Educating Adolescent Girls*. 2009. New York: Population Council.
- 13 Some but not all DHS surveys include questions on experience of violence. A list of completed surveys addressing violence can be found at http://www.measuredhs.com/topics/gender/dv_surveys.cfm#1.
- 14 *The Adolescent Experience In-Depth: Using Data to Identify and Reach the Most Vulnerable Young People: Guatemala 2002/2006*. 2009. New York: Population Council.
- 15 A complete description of the life-table method can be found in Yaukey, Anderson, and Lundquist. *Demography: The Study of Human Population*. 3rd Edition. 2007. Illinois: Waveland Press.
- 16 *2011 Demographic and Health Survey, Ethiopia*.
- 17 Ibid.
- 18 Calculations based on multiplying the percentage of 10–14-year-old out-of-school girls in Ethiopia (5.2 percent) from the 2011 DHS by the population of 10–14-year-old-females in Ethiopia, which is 5,410,000 according to the UN's *World Population Prospects, 2008 Revision*. A similar calculation was made for Mozambique by multiplying the percentage of 10–14-year-old out-of-school girls in Mozambique (9 percent) from the 2003 DHS by the population of 10–14-year-old females in Mozambique, which is 1,455,000 according to the UN's *World Population Prospects, 2008 revision*.
- 19 A guide on how to conduct a coverage exercise can be found at <www.popcouncil.org/pdfs/CoverageExerciseGuide.pdf>.
- 20 Additional information on the coverage exercise can be found at <www.popcouncil.org/pdfs/TABriefs/28_AssessAccess.pdf>.
- 21 Coverage exercise results are summarized in <http://www.popcouncil.org/pdfs/TABriefs/28_AssessAccess.pdf>.
- 22 Ibid.
- 23 *Benin Projections Départementales: 2002–2030*. Institut National de la statistique et de l'analyse économique. 2008.
- 24 For additional information on the Burkina Faso case study of reaching adolescents in greatest need and the joint efforts by the Population Council, UNFPA, and the Guttmacher Institute, please visit <<http://www.popcouncil.org/mediacenter/events/2010AdolGirlsProgrammingBurkina.asp>>.



The Population Council confronts critical health and development issues—from stopping the spread of HIV to improving reproductive health and ensuring that young people lead full and productive lives. Through biomedical, social science, and public health research in 50 countries, the Council works with our partners to deliver solutions that lead to more effective policies, programs, and technologies that improve lives around the world. Established in 1952 and headquartered in New York, the Council is a nongovernmental, nonprofit organization governed by an international board of trustees.

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