

The EVALUATION Project

Indicators for Reproductive Health Program Evaluation

Final Report of the Subcommittee on Adolescent Reproductive Health Services

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Acknowledgments

In April 1994, the United States Agency for Development (USAID) requested that The EVALUATION Project establish a Reproductive Health Indicators Working Group (RHIWG). The purpose of the RHIWG has been to develop indicators for program evaluation in five areas of reproductive health: safe pregnancy, breastfeeding, STD/HIV, women's nutrition, and adolescents. A steering committee, composed of staff from the USAID Population Health Nutrition Center and external organizations has provided valuable guidance to the work of the RHIWG.

Following the first meeting of the RHIWG on June 8, 1994, in Rosslyn, VA, each of the subcommittees met several times, identified the indicators judged most useful for evaluating programs in their specific area, and drafted descriptions of each indicator. Subsequently, the full Reproductive Health Indicators Working Group met on February 8, 1995, to review progress to date and draft a "short list of primary indicators" for each topic area. Further revisions were made, and each report was then sent to one or more reviewers with expertise in the topic area. Comments from reviewers have been incorporated into the current set of reports.

The Adolescent Subcommittee of the RHIWG consisted of some 24 professionals from various agencies who gave their time to participating in meetings, preparing the descriptions of indicators, and reviewing various drafts of this report. The members and their organizations (who supported their participation in this subcommittee) are listed in the back of this report. We owe a debt of gratitude to all who contributed their time, energy, and ideas to this collaborative effort.

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SUMMARY LIST OF INDICATORS

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SHORT LIST OF INDICATORS

Each of the Reproductive Health Indicators Working Groups (RHIWG) subcommittees was asked to draw up a short list of "key indicators" that potentially would be the most important and useful in monitoring interventions in their area. It was recommended the list contain both policy or output (program-based) indicators and outcome (population-level) indicators. The list (proposed at the February 8th meeting and later modified) includes the following indicators:

- Existence of government policies, programs, or laws favorable to adolescent reproductive health
- Number/percentage of providers who successfully complete training programs on adolescent reproductive health services
- Number of SDPs serving adolescents that are located within a fixed distance or travel time of a given location
- Total number of contacts with adolescents
- Percentage of participants competent in communication with adolescents on reproductive health issues
- Percentage of adolescents who know of at least one source of information and/or services for sexual and reproductive health
- Adolescents' knowledge of reproductive health: composite indicator
- Percentage of adolescents who used protection at first/most recent intercourse
- (Adolescent) contraceptive user and/or non-user characteristics
- Proportion of births to adolescent women that are wanted

LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ASFR	Age-Specific Fertility Rate
AVSC	Access to Voluntary and Safe Contraception
CBD	Community Based Distribution
CDC	Centers for Disease Control
CEDPA	Center for Development and Population Activities
CYP	Couple Years of Protection
DHS	Demographic and Health Surveys
DS	Dissemination Site
FP	Family Planning
HIV	Human Immuno-Deficiency Virus
IEC	Information-Education-Communication
IPAS	International Projects Assistance Services
IPPF	International Planned Parenthood Federation
IUD	Intra-Uterine Device
JHPIEGO	Johns Hopkins Program for International Education in Reproductive Health
KAP	Knowledge, Attitudes, Practices
LAM	Lactational Amenorrhea Method
NFP	Natural Family Planning
NGO	Non-Governmental Organization
NICHD	National Institute for Child Health and Human Development
OC	Oral Contraceptives
PATH	Program for Appropriate Technology in Health
RH	Reproductive Health
RHSG	Reproductive Health Service Guidelines
SDP	Service Delivery Point
STD	Sexually Transmitted Disease
USAID	United States Agency for International Development
WHO	World Health Organization

Chapter I

Introduction

- Definition of Adolescence
- Why Adolescent Reproductive Health Care Merits Special Attention
- Service Related Issues
- Conceptual Framework for Adolescent Services
- Linkages to Other Areas of Reproductive Health
- Safe Pregnancy and Adolescents
- Breastfeeding and Adolescents
- Nutrition and Adolescents
- STD/HIV and Adolescents
- Organization of the Indicators

Definition of Adolescence

Adolescence is a concept encompassing physical and emotional stages of transition from childhood to adulthood. Physiologically, adolescence is a period of rapid growth and involves the development of secondary sexual characteristics. It is also a period of emotional turbulence during which adolescents strive to achieve independence from their parents or guardians. While these stages themselves are universal, they can occur at widely varying ages in different cultures. A single, generalizable definition of this population for use in different settings is difficult to produce. For these reasons, it is important for specific programs to take into consideration the various social and economic factors that play a role in defining their target population. As program managers use the indicators in this document to evaluate their activities, they may wish to adapt the indicator to suit the target population of the program in question.

A review of the literature concerning adolescent reproductive health yielded information on a wide variety of age groups. Many programs, especially those concerned with contraception, use the 15-19 age bracket. This targets adolescents of reproductive age and allows for comparability with the Demographic Health Survey (DHS) and other similar data sources. Many programs and studies have broadened the scope to include young people of 10 or 12 as the lower bound and 22 as an upper bound for adolescence.

Prepared by Jane Cover, The Futures Group International and Erin Eckert, The EVALUATION Project, Tulane University.

Sociologic factors can affect the definition of adolescence as well. Rites of passage from youth to adulthood are often culturally specific and vary widely from country to country. The onset of puberty is widely regarded as the beginning of the adolescent period, but cultures differ in their definition of what determines the final transition to adulthood. Other factors such as marital status also play a role. A young woman who marries at age 16 or 17 may have more in common with older married women than with peers from her age group (although not in terms of physiological maturity). Uneducated young people may enter the work force and assume the roles and responsibilities of adults earlier than their counterparts who are still in school. Factors such as urban or rural residence or financial independence greatly influence the characteristics of this age group as well.

The World Health Organization (WHO) has put forth a two-stage definition of adolescence. All persons between the ages of 10 and 19 are defined as adolescents. The younger group, from 10 to 14, is classified as "early adolescence" and 15 to 19 is "late adolescence." The latter category may be further subdivided into 15-17 and 18-19 brackets, where programmatically appropriate. WHO further suggests that the terms "youth" and "young people" may be used to refer to persons up to the age of 24. In order to extend the definition beyond chronologic age, the WHO definition also outlines the transitional stages of adolescence (WHO, 1989). This is defined as the period during which:

- the individual progresses from initial appearance of secondary sexual characteristics to full sexual maturity;
- the psychological processes and modes of identification for the individual evolve from those of a child to those that characterize an adult; and
- the individual passes from the state of total social and economic dependence to relative independence.

The WHO definition allows flexibility for program designers to decide which age bracket describes their target population, or to target the adolescent population as a whole. In doing so, it is imperative that planners pay close attention to the cultural and social norms (e.g., early vs. late marriage) that define adolescence in their area in order to develop effective adolescent reproductive health programs.

Why Adolescent Reproductive Health Care Merits Special Attention

Adolescent reproductive health services represent an area of tremendous unmet need worldwide. One-fifth of all births worldwide are to adolescents between the ages of 10 and 19 (Population Reference Bureau, 1994), who themselves make up one-fifth of the world's population (WHO, 1989). Although specific data are lacking, use of contraception for pregnancy and STD/AIDS prevention is believed to be considerably lower among unmarried, sexually active adolescents than among married women. Declining ages of menarche and delayed age of marriage among women--due in large measure to increased educational opportunities, are driving forces contributing to increasing numbers of unmarried adolescents. In terms of the sheer magnitude of adolescents, this population constitutes a demographically important subset of women and men potentially in need of reproductive health services.

While there is considerable variation across countries on entry into sexual activity, it appears that the majority of young people will

become sexually active, either within or outside marriage, during their teenage years. Age at first intercourse is generally quite young. For instance, the average age for women's first sexual experience is 15 in Niger. A series of adolescent surveys in Latin America revealed that the average age at first intercourse was lower for teenage men than for women, in some countries by as much as two years. Many young people do not use contraception during their first sexual experience. Data from Latin America, for example, show that fewer than 40 percent of young women and 30 percent of young men used any method of family planning during their first intercourse. This is a cause for concern because young girls are not physically ready for childbearing and adolescents of both sexes are often not mature enough for parenthood.

One of the primary reasons for early sexual activity is young age of marriage. Even today, 18 percent of girls in Asia, 16 percent in Africa and 8 percent in Latin America are married by age 15. In Bangladesh, fifty-one percent of 15-19 year-old girls are married, and about three-quarters of the marriages in India are to girls under the legal age of marriage of 18. While in some countries, a significant proportion of married adolescent women practice family planning (in Indonesia and Thailand, for example), in other countries, like Peru, Zambia and Pakistan, few do, and those who do tend to rely on traditional rather than modern contraceptive methods. This increases the likelihood of becoming pregnant at early ages.

Aside from their demographic significance, adolescents constitute a population of special importance due to their high incidence of negative health consequences associated with unprotected sexual activity. Adolescent women are more biologically vulnerable to STDs than older adults because immature reproductive systems pose less of a barrier to infection. While specific data are unavailable, STDs are thought to be more prevalent among young adults aged 15 to 29 than among older adults. The Population Reference Bureau estimates that one out of 20 teenagers becomes infected with an STD each year

(1994). In addition, early exposure to infected persons via sexual intercourse during adolescence corresponds to the growing incidence of HIV at younger ages in the developing world. In many countries of the world, the negative stigma associated with unmarried sexual activity deters adolescents from seeking treatment for STDs, which in turn, increases the likelihood of long-term health and fertility consequences.

Young women exposed to pregnancy experience greater likelihood of childbirth-related morbidity and mortality, with some countries experiencing mortality rates among women aged 15 - 19 that are as high as *twice* that of women in their 20s or 30s (WHO, 1989). Physiological under-development increases the likelihood of prolonged or obstructed labor, which may lead to ruptured uterus and death for the mother or fetus (Network, 1994). Negative pregnancy outcomes also result in part from poor prenatal health behavior among young adults, particularly teenage schoolgirls. In a study of longitudinal data from the Sahelian cities of Bamako and Bobo-Dioulasso, researchers found that teenage schoolgirls are significantly *less likely* to seek prenatal care than non-schoolgirls (LeGrand and MBacke, 1992). This finding confirms other studies that suggest that adverse social and economic consequences of schoolgirl pregnancies may cause women to diet to avoid appearing pregnant, defer prenatal care, and occasionally seek illegal abortion. And the younger the adolescent, the later she often waits to seek medical care for her pregnancy. This accounts for much of the morbidity and mortality associated with adolescent pregnancy and childbearing throughout the world.

Social and psychological factors push large numbers of young women to seek abortions. At least one million and as many as 4.4 million adolescent women have abortions in developing countries yearly. Most of these procedures are performed illegally and under unsafe conditions. Data from sub-Saharan Africa indicate that 60 percent of those hospitalized for abortion complications were

adolescents (Population Reference Bureau, 1994). Factors contributing to relatively high rates of unsafe abortion among adolescents include: 1) restricted access to contraceptive services and supplies; 2) the relatively high cost of abortions provided by trained practitioners (a factor that leads teenagers to seek the less expensive services of an untrained provider or to try to self-induce an abortion), and 3) the pronounced tendency among teenagers to postpone seeking abortion services until after the first trimester, and to delay seeking treatment for post-abortion complications (NAS, 1994).

Adolescents who become pregnant prior to completion of their education typically face expulsion from school, and those who give birth often are not readmitted. In many African societies for example, once a young woman has given birth she is regarded as an adult, a role that is generally perceived as incompatible with continued formal education. In the event that a young woman is forced to abandon her education due to early pregnancy, she likely faces curtailment of her social, intellectual and economic development.

Successful reproductive health programs consider the distinct characteristics and needs of the client population. Given both adolescent traits and the special reproductive health issues facing sexually active adolescents as described above, the complexion of adolescent reproductive health needs differs from those of adults. The greatest difference concerns the independence with which adolescents make decisions about their reproduction. Adult women may be presumed to exercise relatively more autonomous reproductive choice, whereas adolescents generally do not exercise complete independence in making decisions affecting their reproduction. Additionally, adolescents tend not to think of their sexual activity and reproduction in terms of "family planning," the way an older, married woman would. Rather, their primary concern is to "avoid pregnancy" (IPAS quoted in Network, 1994). Because adolescents' reproductive intentions are fundamen-

different from those of women in stable sexual unions, different strategies for meeting their reproductive needs are also required. Consequently, the indicators by which adolescent reproductive health programs are evaluated are distinct from those used to assess reproductive health programs that principally target married women.

Service Related Issues

Designing programs for adolescents requires attention to the particular needs of this population. Adolescents face barriers to use of reproductive health services that are minor or nonexistent for adults. In addition, the transitional nature of this population means that programs must target not just one audience, but many, each with its own characteristics and needs. A number of issues related to the provision of services and information for adolescents merit special consideration.

Gender and Adolescents: Programs should ensure that they meet the reproductive health needs of both young men and young women. In some cases these needs are the same but in others they differ.

Young men and women face social pressures that influence their ability to practice safe reproductive health behavior. Young men often face pressure to become sexually active to prove their manhood and be accepted by their friends. There are few programs to reduce this pressure. Young women may face pressure to have sexual intercourse to gain benefits otherwise denied to them. At the same time, girls often incur severe punishment if they are sexually active, especially if they become pregnant. To counteract these influences, young men and young women both need help in identifying social pressures and developing the skills needed to resist them.

Pressures on young people also come from within. They wish to become men or women and so they pattern their behavior on male and female stereotypes learned from the media, adults, and their peers. Following

these gender stereotypes can result in behavior that leads to poor reproductive health. In the US, for example, young men who believed strongly in male stereotypes had more sexual partners, a lower level of intimacy with partners, higher level of adversarial sexual beliefs, lower consistency of condom use, a higher concern about condoms reducing male pleasure, less value on partner appreciation of condom use, lower level of male responsibility for preventing pregnancy, and a greater belief that pregnancy validates masculinity (Marsiglio, 1993; Pleck, et al., 1993). In Mexico and the US, adolescent girls who sought contraceptive methods had a weaker association with traditional female sex roles than similar girls who became pregnant (Ireson, 1984; Pick de Weiss, no date). In Brazil gender norms supporting aggressive males and passive females interfered with condom use (Paiva, 1993). Both adolescent males and females often share beliefs in a double standard that can lead to poor reproductive health behavior. Many surveyed adolescents in India and Thailand supported multiple sexual partners for males but not females, and pre-marital sexual intercourse for males but not females (Praditwong, 1990; SECR, 1993). In the US, both adolescent males and females reported that young men who didn't initiate and control sex were weak--an attitude that sometimes leads boys to coerce girls into sexual relations (Brown, 1993).

Adolescent reproductive health programs try to help young people achieve healthy sexual lives. As part of their efforts they attempt to teach young people attitudes toward sexuality that will protect their own health and that of their partners. To achieve this end, programs must convince both young men and young women that reproductive health requires cooperation, mutual respect, joint concern, and shared responsibility. Programs must reach both young men and young women with these messages, and with the reproductive health services that enable young people to act responsibly.

Married and Unmarried Young Adults: Young adults, whether married or unmarried,

have the same biological needs related to sexual intercourse, pregnancy, parenthood, and protection from sexually transmitted diseases. They need information, services, and protection from coerced sex. Married and unmarried young adults may, however, face different constraints in access to care. In some places, it is illegal to provide unmarried young people with reproductive health information and services. Where care is not illegal, public and provider disapproval may informally restrict access to care. Married adolescents may have access to maternity services but limited access to contraceptive services. Married and unmarried adolescents may need different programs to address these concerns. Some unmarried adolescents need programs that will help them delay sexual intercourse. Some adolescent women need programs to protect their health from early childbearing by delaying marriage and childbirth. Where society pressures young married women to have early or multiple pregnancies, these women need programs to resist these pressures, or at least reduce their health risks.

Need to Address Younger Adolescents:

Many programs addressing adolescents begin at the age of 15. However, in many societies, adolescents become sexually active at a considerably younger age. Indeed, in Asia and Africa, adolescent girls may be married and raising a family by the age of 15 or 16. Because of this early age of sexual activity, it is important that programs encompass younger adolescents to provide the information and services they need as they make the transition to adulthood. Among school-going adolescents, a similar issue is seen. Because of severe crowding and chronic shortages of public funds in many developing countries, girls may not matriculate in primary school on schedule, sometimes waiting until they are 10 years or older before beginning school. In Botswana the percentage of girls who dropped out of secondary school because of pregnancy was identical to the percentage of pregnant primary school drop-outs (Botswana DHS, 1988). This suggests that girls in primary school may be both sexually active and fecund, and *as likely as secondary schoolgirls*

to become pregnant. The significance of this finding is that adolescent pregnancy is not a problem limited to girls in secondary school but increasingly, a problem affecting girls in primary school as well. Because attitudes and opinions that shape subsequent behavior are formed early in life, sexuality education has greater potential impact when targeted to young audiences. Some studies in the U.S. have shown that sexuality education can delay sexual intercourse, and contraceptive information, when provided prior to the onset of sexual activity, may have greater influence on the decision to contracept (Frost et al., 1995).

Location of Services: Adolescent reproductive health services started as an outgrowth of adult RH care. The latter had a well-defined target population and personnel trained to deal with adults. However, adolescents often have great difficulty approaching community health centers for reproductive health services out of fear of negative provider attitudes toward adolescent sexuality, pregnancy or abortion, as well as the potential lack of anonymity. Similarly, adolescent women tend to have greater restrictions on their mobility, lacking both the resources and psycho-social freedom to travel outside their immediate community. Consequently, reproductive health services and information are ideally made available in places where adolescents congregate, such as schools, youth centers, etc. This concept of targeting reproductive health care specifically to adolescents is a relatively recent development. For the purpose of the adolescent reproductive health indicators, "Service Delivery Point" (SDP) is defined so as to include both formal (clinic-based) and non-formal (educational institutions, community-based programs, etc.) facilities.

Importance of IEC: It is important to remember that not all adolescents are in need of services, per se, but often only require information on reproductive health issues. There exists a sizable percentage of young people who choose not to become sexually active. These young people do not need

services such as contraceptives, prenatal care, etc. Instead they need information on physical and emotional changes they will be going through during adolescence, counseling to develop decision-making skills, and other information in order to make the right choices regarding their sexual development. Thus, for this target population, IEC is often an endpoint in itself and not merely a means to encourage use of other services. Program evaluators must consider this non-sexually active population, and their specific needs, when evaluating any adolescent reproductive health program.

Financial Hardship: Another distinguishing characteristic of adolescence is the lack of financial resources upon which to draw for reproductive health services. The fee structure of adolescent reproductive health programs should accommodate the special financial constraints faced by adolescents.

Age and Service Statistics: When using age-specific indicators, it should be noted that due to the negative stigma associated with sexual activity among younger adolescents, reliable age data from service delivery points is notoriously difficult to obtain. Similarly, in population-based surveys (e.g., the DHS) the youngest age bracket (15 to 19 years) may be under-represented due to some interviewers under-reporting age for 15 year olds in order to avoid the interview. Some population-based surveys do not interview adolescents under the age of 15 to avoid political or religious opposition.

Youth Involvement: Because adolescent participation in program design is thought to be critical to program success, an indicator is included to address the level of youth involvement in both design and implementation. Program planners as well as evaluators should look for ways to incorporate adolescents in program development and evaluation. It should be noted, however, that empirical evidence is lacking regarding the impact of youth involvement on program performance.

Information Gaps: Although adolescents

have long been in need of reproductive health services and information, adolescent reproductive health has only recently become a priority intervention area for donor assistance. Large gaps exist in the understanding of factors that affect adolescent sexuality and use of reproductive health services. In the absence of concrete data, many indicators are based on the "educated guesses" of experts in the field. For this reason, more research on adolescent issues is needed in order to design effective programs in reproductive health.

Behavioral Factors: Sexual experimentation among adolescents is sometimes a manifestation of a broader behavioral phenomenon of rebellion against societal norms. Other behaviors such as smoking, drinking, and drug use may occur at the same time. In these circumstances, what is needed is a broader approach, behavior modification that encompasses all these factors, not merely safer RH.

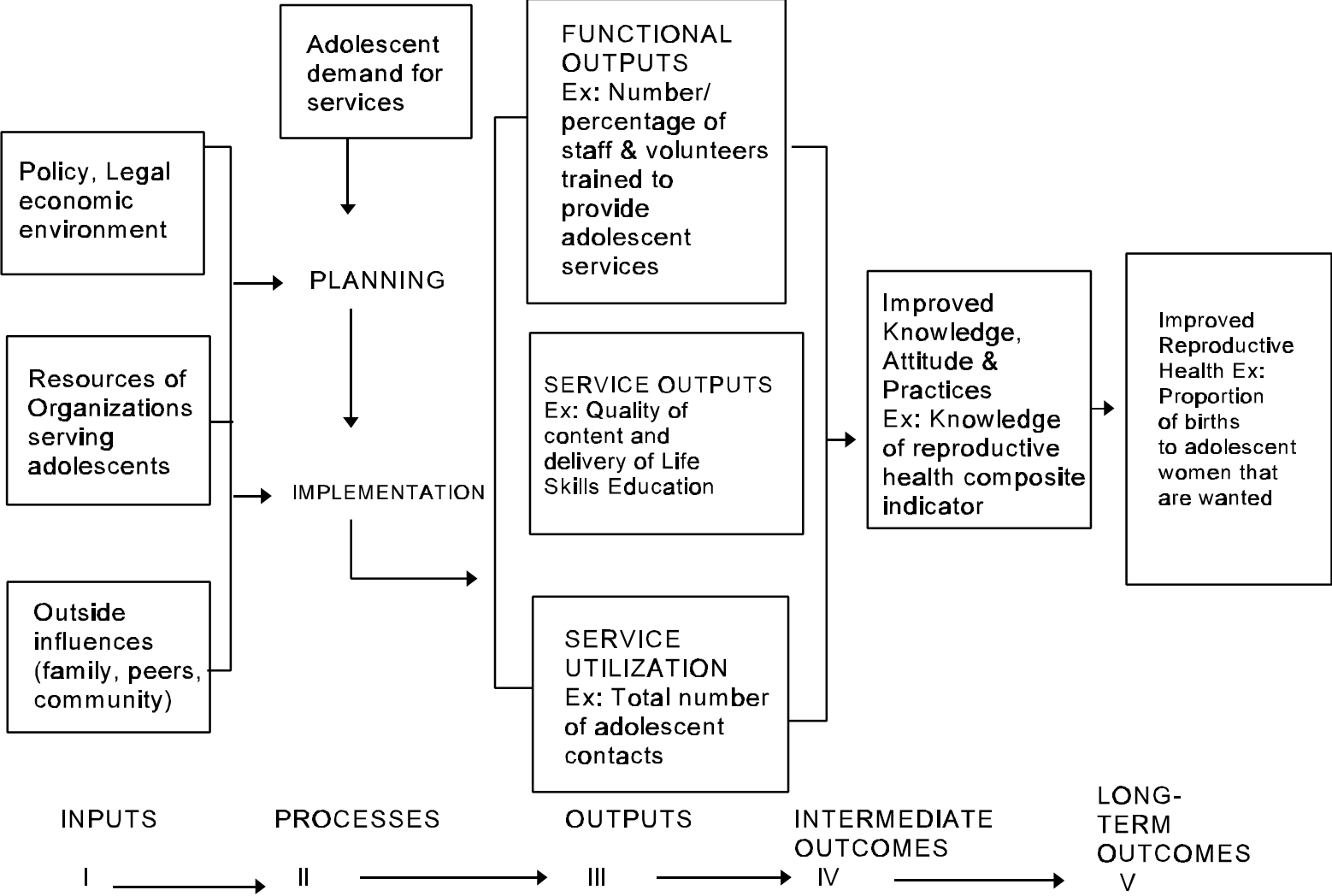
Conceptual Framework for Adolescent Services

The indicators in this report were developed from the basic conceptual framework used by The EVALUATION Project, as shown in the figure below.

Linkages to Other Areas Of Reproductive Health

"Adolescents" is one of five topics included on the agenda of the Reproductive Health Indicators Working Group (RHIWG). Whereas the other four deal with specific health issues (breastfeeding, safe pregnancy, STD/HIV, women's nutrition), "adolescents" are in fact a

CONCEPTUAL FRAMEWORK FOR ADOLESCENT REPRODUCTIVE HEALTH



Framework developed by Myrna Seidman, Sharon Rudy, Mary Luke

sub-group (target population) within the larger category of adults of reproductive age, who in fact experience problems and need health services related to the other four.

Indeed, after reviewing the indicators prepared by the other four groups, the Subcommittee on Adolescents recognized that the same indicators that are useful for the population of adults (or women) of reproductive age are generally applicable to adolescents as well. Thus, rather than single out special indicators for adolescents in each of these four subject areas, we highlight special issues for adolescents with respect to these different areas. An example of how to adapt indicators is included in each section.

Safe Pregnancy and Adolescents¹

Adolescents who begin childbearing in their early reproductive years increase the available period for childbearing and, on average, can have a higher number of births over their lifetime. This fact in turn increases the cumulative risk of morbidity and mortality to the woman in question. In short, although these consequences may not present themselves until the woman has long since passed out of adolescence, the seeds of the problem can be linked to early onset of child bearing.

The indicators developed by the Safe Pregnancy working group are generally applicable to adolescents as a subgroup of women of reproductive age. Nonetheless, it could be argued that the following four are of particular importance with respect to adolescents:

- knowledge of the location of obstetrical services;
 - knowledge of the complications of pregnancy and childbirth;
 - use of prenatal care; and
 - presence of trained personnel at delivery.
- The reason for focusing particular attention on

¹This section is based on personal communication with Marge Koblinsky.

these indicators is that adolescents tend to deny their own vulnerability (e.g., to consider themselves impervious to death). The well-known attitude of "it couldn't happen to me" is particularly harmful to adolescents who give birth, since they may underestimate the risks of pregnancy and fail to seek adequate medical care, either in the prenatal period or in the event that complications arise in the early stages of delivery. This attitude is further compounded by the generally low levels of service utilization among adolescents for health services, especially for services that adolescents perceive to be intended for "adult married women."

Example: "Percent of women attended at least once during pregnancy by trained personnel for reasons related to pregnancy" could be adapted to "Percent of adolescent women....etc."

Breastfeeding and Adolescents²

Adolescents who breastfeed have many needs in common with other breastfeeding women. They need to be adequately nourished, properly instructed and supported in their breastfeeding by family and community members and health providers. Traditional role models for "mothering" are being weakened in many countries worldwide. Although this breakdown of traditional roles affects the acceptance of breastfeeding in general, it may be more of a problem for young women exposed and attracted to "modern ways."

Breastfeeding adolescents are likely to be first time mothers, and thus inexperienced in breastfeeding. First time mothers, whether adult or adolescent, need more extensive assistance and support to be successful.

For the most part, adolescents tend to receive services in programs serving adults. There are thus some special issues related to providing breastfeeding support to them. The first has to do with outreach: where adolescents can be reached, what the best ways of

²This section is based on personal communication with Myrna Seidman.

reaching them are and if the program targets them as a special group needing services. The second issue concerns the most effective models for supporting adolescent breastfeeding: through hospital, clinic or community based programs; through traditional mother support groups; or through mother support groups comprised of peers. Adolescents attending school require special assistance in being accepted by their peer group and in being assured easy access to their babies.

Example: The indicator entitled "Community-based counseling" could be adapted to focus specifically on community-based programs to support adolescent mothers, such as school-based support groups.

Nutrition and Adolescents³

Nutritional interventions that target adolescents are potentially able to impact the nutritional status of girls and young women prior to first pregnancy. Improving adolescent nutrition is important for the health of these young women, and because of the relationship between pre-maternal health status and its subsequent effects on maternal, fetal, and infant health. Pre-pregnancy weight and weight gain during pregnancy are two of the strongest determinants of birth weight. Low birth weight, in turn, presents one of the most widely acknowledged risks for subsequent mortality in infants. Thus, interventions during adolescence will protect women against the added nutritional burdens of pregnancy and the deleterious consequences for their infants (Kurz, 1995).

However, programs providing nutrition education must be cognizant that adolescents may not control access to resources. Advocacy will be required to achieve appropriate policies and public attitudes supportive of public health needs, if increases in nutrition knowledge are to affect behavior

³ The content of this section is based on comments of Kathleen Kurz, included in the minutes of the 4 January 1995 meeting of the Subcommittee on Adolescents, RHIWG.

changes. Additionally, education must provide more than knowledge of nutritional problems; it must provide the skills and attitudes to improve decision-making skills, and, subsequently, behaviors.

Example: "Percent of targeted women receiving food supplements" could be adapted to read "Percent of adolescent women ..etc."

STD/HIV and Adolescents⁴

Large numbers of young adults face serious consequences from sexually transmitted diseases, yet few have access to appropriate resources. First they need accurate information. School curricula are usually the most effective way to reach large numbers of young people with information. Increasing the quality of such programs should be a high priority. Second, young adults need reproductive health services. At present, they face legal, psychological, and practical barriers. Many health clinics do not serve young people until they are adults or married. Clinic personnel are often hostile to sexually active young people, or insensitive to their need for confidentiality. Young people themselves may find it difficult to ask for help. Very often they cannot pay for services, or are unaware of existing facilities. Providing reproductive health care for young people requires finding effective methods to respond to their need for information and services.

Example: "Appropriate perception and assessment of self risk" could be adapted to "Appropriate perception and assessment of self risk among adolescents."

Organization of the Indicators

The indicators are organized in terms of outputs (program-based measures) including functional outputs, service outputs (adequacy), and service utilization; and outcomes (population-based measures). For a full description of these terms, see the

⁴ This section is based on personal communication with Ann McCauley.

Overview section to this report. In some cases the definition of an indicator as output versus outcome depends on the level of measurement. For example, suppose a given program provides adolescent services in a defined catchment population. One could choose to monitor a behavior, such as the percentage of adolescents who use protection at most recent intercourse, among clients in the program (which would constitute a program-based or 'output' measure). Or one could measure changes in behavior by conducting a survey among a random sample of adolescents in the catchment area (a population-based or 'outcome' measure). A list of indicators that could be used as either output or outcome is included in Appendix A.

Conceptually, changes at the population level are the long term goal of adolescent programs. However, it is often difficult to evaluate such programs in terms of changes at the population level, especially long-term

outcomes. Even if an evaluator is able to demonstrate that change occurs over time on outcome variables, it is difficult if not impossible, in most cases to attribute the change uniquely to the intervention program (in the absence of a controlled field experiment). Because of the difficulty of establishing cause and effect, many evaluations are limited to simply monitoring change in key indicators over time.

In sum, the indicators in this document are meant to serve as a menu of possible measures of adolescent-focused activities within a RH program. In addition, the indicators that are included in this volume do not encompass every possible indicator for adolescent programs. Researchers or evaluators interested in using these indicators to evaluate a given program should choose those most relevant to the objectives of the program. Finally, many indicators are generic and not culturally specific; therefore they should be further refined and elaborated by the researcher or program manager using the indicator.

Chapter II

Output Indicators

- Section A: Policy
- Section B: Functional Outputs
- Section C: Service Outputs
- Section D: Service Utilization/Program Participation

Section A

POLICY

- Dissemination of policy analyses on adolescent reproductive health issues
- Number of awareness-raising events targeted to leaders
- Existence of government policies, programs, or laws favorable to adolescent reproductive health
- Absence of restrictions limiting adolescent access to services and information
- Existence of reproductive health service guidelines favorable to adolescent reproductive health care

DISSEMINATION OF POLICY ANALYSES ON ADOLESCENT REPRODUCTIVE HEALTH ISSUES

DEFINITION

This is a qualitative (yes/no) indicator. A “yes” value is assigned if at least one policy analysis was conducted over a given period of time (e.g., one year). Each analysis should be designed to address an important policy obstacle. The dissemination must be targeted to the audience concerned with the issue through the channels and formats most effective for that audience.

DATA REQUIREMENTS

Description of policy analysis, including policy objectives, the target audience and a description of the manner in which the completed study was disseminated.

DATA SOURCE(S)

Administrative records of those organizations carrying out the various studies.

PURPOSE AND ISSUES

The provision of adolescent reproductive health services and information is both vitally important and politically sensitive in many countries. Policy development for the promotion of adolescent health services thus requires building consensus among stakeholders and generating strong political commitment at the national level. Policy analyses are intended to generate consensus and political support for policy revision by raising aware-

ness of the public health, demographic and economic advantages of addressing adolescent reproductive health needs. The results of policy analyses may also aid policy makers in directing scarce resources toward the revision of policies with the greatest potential to impact adolescent reproductive health.

Policy analyses provide relevant information to policy makers in such a way as to target specific policy questions. Policy analyses for the adolescent reproductive health arena may speak to issues such as: (1) the risk of maternal and infant morbidity and mortality for pregnant adolescents; (2) the incidence of STDs, including HIV among sexually active adolescents; (3) the extent to which expulsion of schoolgirls serves as a preventive or punitive policy; (4) the impact of school policies calling for expulsion or preventing readmission on enrollment, school achievement, and subsequent fertility; (5) the extent to which provider disapproval of adolescent sexual activity hinders access to reproductive health services; and (6) the impact of parental consent regulations on adolescent use of clinic services, including emergency treatment for post-abortion complications. This is a simple measure of activity that in no way reflects either the quality of the effort or its impact on policy output. It is useful to the extent that it creates a sense of accountability among staff responsible for these activities.

Indicator

NUMBER OF AWARENESS-RAISING EVENTS TARGETED TO LEADERS

DEFINITION

“Events” may include conferences, workshops, presentations, fairs, media campaigns, and observational travel designed to increase knowledge of adolescent reproductive health issues. “Number” refers to a given period (e.g., one year).

DATA REQUIREMENTS

Number of events, listed by type of activity, numbers and official positions/responsibilities of persons attending or participating.

DATA SOURCE(S)

Administrative records of those organizing these activities.

PURPOSE AND ISSUES

The purpose of this indicator is to provide a quantitative measure of a commonly used policy intervention. This indicator is distinguished from the previous one (Appropriately Disseminated Policy Analyses)

by virtue of its special focus on creating fora for policy communication and dialogue. Whereas policy analyses are specific technical studies prepared and disseminated, awareness-raising events may include a wide variety of communication events, beyond dissemination of policy studies. A single policy development activity may be reflected in both indicators if an analysis is prepared that is then disseminated through a number of awareness-raising events. On the other hand, the results of studies may be disseminated through other channels; and awareness-raising events may not involve studies.

The proposed indicator is a simple measure of activity that in no way reflects either the quality of the effort or its impact on policy output. Such information is best gained from other sources such as focus groups, policy reviews, etc. This indicator is useful to the extent that it creates a sense of accountability among staff responsible for these activities.

Prepared by Jane Cover, The Futures Group International.

EXISTENCE OF GOVERNMENT POLICIES, PROGRAMS, OR LAWS FAVORABLE TO ADOLESCENT REPRODUCTIVE HEALTH**DEFINITION**

The existence of any government policies, programs, or laws that are favorable to adolescent reproductive health services. Such policies or laws may forbid restrictions on services based on age, require physicians to treat all clients regardless of age or marital status, etc.

DATA REQUIREMENTS

Official policies or laws concerning adolescent reproductive health.

DATA SOURCE(S)

National, regional, local laws and policies.

Official court rulings or statements regarding reproductive health.

PURPOSE AND ISSUES

This indicator examines official laws and policies of both national and local government that concern reproductive health care. Such laws and policies may not restrict access to services or information for the adolescent age groups. This indicator differs from those concerning absence of restrictions and the existence of guidelines in that it is more broad-based and its effects more long range. This type of favorable legal environment may be required prior to the development of any guidelines or lifting of restrictions concerning adolescents.

Prepared by Alberto Rizo, private consultant, and Erin Eckert, Tulane University.

Indicator

ABSENCE OF RESTRICTIONS LIMITING ADOLESCENT ACCESS TO SERVICES AND INFORMATION

DEFINITION

This indicator is a scale of points for the absence of various types of restrictions to care that affect adolescents. The following are four broad categories in which restrictions or limitations might exist. These restrictions might pertain to services, information, method-specific barriers and the like. Each category can be further subdivided according to country-specific practices. A program would get a positive mark for each category in which restrictions DO NOT exist. For example, a family planning program without any parental consent requirements would receive a point in the first category. However, if the program refuses to provide services to client under the age of 16, it would not receive a point for category 3. A total of 4 points constitutes complete absence of restrictions.

1. Parent consent requirements
2. Spousal consent requirements
3. Age restrictions concerning the target age group (10-19, or however the program has defined its target population)
4. Site specific restrictions that are intended to restrict adolescent access (schools, youth centers, etc.).

Prepared by Jane Cover, The Futures Group International.

DATA REQUIREMENTS

Medical regulations and clinical practices.

DATA SOURCE(S)

Ministry of Health regulations, other legal, official regulations, situation analyses and other user/provider surveys; service statistics.

PURPOSE AND ISSUES

This output indicator measures the extent to which medical policies and practices impose restrictions that limit access to services for adolescents. The list of key policies and practices included in the definition of the indicator may vary in specific country applications. Individual policies and practices should be included only in cases where they have demonstrable impact on the use of services by adolescents. Widespread practice at the clinic level may not reflect official policy, nor may policies be implemented in practice. For example, providers may demonstrate personal bias against adolescent sexuality by requiring parental consent for family planning services irrespective of whether official policy requires them to do so. Interviews with providers and clients may reveal those medical policies and practices with the greatest likelihood of negatively impacting access to services for adolescents, and therefore most relevant for specific country applications.

EXISTENCE OF REPRODUCTIVE HEALTH SERVICE GUIDELINES FAVORABLE TO ADOLESCENT REPRODUCTIVE HEALTH CARE

DEFINITION

A systematically developed set of statements designed to assist practitioner decisions about reproductive health care for adolescent Reproductive Health Service Guidelines (RHSGs) standardize the medical and technical components of reproductive health services independent of the settings in which they will be applied. These guidelines must not limit or restrict RH care for the adolescent population.

DATA REQUIREMENTS

RHSGs, clinical practice guidelines and national reproductive health policies that have been developed either for adolescent care specifically or for general care WITHOUT any restrictions for adolescent age groups.

DATA SOURCE(S)

Ministry of Health regulations; national or institutional standards for RH practice. Guidelines may also exist through medical and professional associations.

PURPOSE AND ISSUES

National RHSGs favorable to adolescent RH care form the foundation for:

- revision of policy norms aimed at removing parental or spousal consent requirements for RH services;
- content of training materials;
- standards for the reproductive health

component of curricula for schools of medicine, nursing, and midwifery;

- standards for care helpful in planning, maintaining and evaluating adolescent RH services; and
- standards for quality of services.

A coalition of stakeholders should jointly develop RHSG since research shows increased levels of compliance with guidelines when broad based consensus has been achieved. Stakeholders should include the Ministry of Health, Social Security Institute, Schools of Medicine, Nursing and Midwifery, and leading service providers. RHSGs should be scientifically based and updated in accordance with the latest international research findings and analysis. An illustrative list of topics included in RHSGs follows:

- Components of FP: Counseling, informed choice of methods, provision of contraceptives, client confidentiality, follow-up and referral, supervision, logistics, commodities
- Types of Methods: IUDs, hormonals (OCs, injectables, NORPLANT®), barrier methods, voluntary sterilization, NFP, LAM, emergency contraception
- Reproductive health: Youth, infertility, breastfeeding, antenatal and postpartum care, cervical cancer screening, post-abortion care, breast exam, STDs and HIV/AIDS

Section B

FUNCTIONAL OUTPUTS

- Proportion of program design and implementation activities in which youth are involved
- Effectiveness of coordination between adolescent services and partner organizations
- Number/percentage of staff and volunteers trained to provide adolescent services
- Number/percentage of providers who successfully complete training programs on adolescent reproductive health services
- Number/percentage of schools of medicine, nursing and/or midwifery with a required adolescent reproductive health component of the curriculum
- Number of communication outputs disseminated, by type and by audience

PROPORTION OF PROGRAM DESIGN AND IMPLEMENTATION ACTIVITIES IN WHICH YOUTH ARE INVOLVED

DEFINITION

An indicator that assesses the degree of involvement that adolescents have in RH program design, implementation and evaluation.

DATA REQUIREMENTS

Information on the degree to which youth participated in carrying out tasks at all stages of a program.

DATA SOURCE(S)

Possible sources include project reports; interviews with project staff, the target population and peer promoters; survey data; focus group discussions; field observations; curricula used for training; peer promoter records to determine the number of contraceptives distributed by the youth, the number of counseling sessions held by peer promoters, the number of IEC materials designed and distributed by youth, and the number of referrals made for other RH services.

PURPOSE AND ISSUES

This indicator should be used to measure the influence that youth under the age of 20 (or other ages as defined by the program) have on the design, implementation and evaluation of adolescent health programs. It is believed that youth involvement results in stronger youth programs. By obtaining data from the sources listed above, the evaluator can assess the extent of youth involvement in various tasks. The project is broken into com-

ponents, which are further subdivided into activities. Each activity can then be examined for the degree of youth involvement. Activities might include: developing a work plan, conducting local needs assessment, determining program objectives, fundraising, etc.

Using a chart similar to the one below, a program can be given a score composed of the ratings from all the activities. The maximum value would depend on the number of activities being assessed. The "Total" Participation value (2) multiplied by the number of activities would constitute a maximum. The actual participation score could then be calculated as a percentage of the maximum. In this example, there are 4 activities. If each activity had total adolescent participation, the maximum score would be 8 (4 x 2). The program in the example has 6 points in the framework. The adolescent participation score for this example would then be 6/8 or 75% participation.

Model rating chart: Adolescent participation in program design and implementation

Program or Project Component	Activity or Task Adolescent Participation	Adolescent Participation in the Implementation		
		None (0)	Minimal (1)	Total (2)
Planning	Selection of Project Site		X	
Training	Workshops for Youth leaders		X	
Service Delivery	Distribution of condoms			X
IEC	Designing of brochures on the use of condoms			X

Prepared by Susan Rich, Population Action International.

Indicator

EFFECTIVENESS OF COORDINATION BETWEEN ADOLESCENT SERVICES AND PARTNER ORGANIZATIONS

DEFINITION

An indicator measuring whether a particular youth-serving organization has developed and effectively implements internal management and operations policies aimed at:

- clarifying for its staff and the outside world what specific services it will offer to the target adolescent population during the short and long term (e.g., an official organizational policy stating that it will serve adolescents with information and education on sexuality and/or contraceptive services, recreational services; a long term plan for fundraising and increasing the reach and quality of its program);
 - coordinating its services with those of colleague agencies carrying out similar and complementary services for adolescents; and
 - establishing referral mechanisms for services that the organization does not provide (e.g., counseling, alcohol and drug rehabilitation; treatment of incomplete abortion if abortion is illegal in the country and for safe abortion if abortion is legal; prenatal and other social services for pregnant and parenting teens).
- existence of a specific policy on adolescents;
 - existence of and adherence to a coordination plan. This plan may include joint planning meetings, informal and formal discussions, coordinating activities and partaking in each others' activities (i.e., training), co-organizing events (i.e., conferences), developing and implementing joint advocacy plans and events (i.e., petition drives, issuing joint policy or press statements); and
 - existence, adherence to and monitoring of a referral mechanism. Referral mechanisms may include:
 - listings of referral organizations
 - staff trained on referral mechanisms and actually referring adolescents
 - tracking system for referrals (e.g., color-coded referral slips for different services; referral organization is aware of referral system, responds quickly to referred adolescent's needs and keeps records of referrals; and referring organization periodically assesses referral mechanism, looking at percentage of completed referrals, etc.).

DATA REQUIREMENTS

Interviewing staff, reviewing organizations' mission statement, position papers, policy statements, strategic plans, referral mechanisms; and interviewing colleague organizations, etc. to ascertain:

DATA SOURCE(S)

- Organizational mission statement, policy

papers, annual workplans, strategic plans and

operational procedures including referral lists, etc.

- Staff interviews.
- Survey of referral services.

PURPOSE AND ISSUES

This indicator measures the existence and effectiveness of a youth-serving organization's internal policies and procedures aimed at coordinating its services with colleague organizations offering services that are either similar or complementary to its own.

This indicator is very important in showing an organization's capability, the systematic nature of its program and its relationship with similar colleague agencies. It also shows its funders that it avoids duplication and complements its services through referral systems. Since adolescent sexual and

reproductive health is a very controversial issue, the existence of an organizational policy spelling out the organization's position towards its services to adolescents assists staff to be clear about what to say and what services to offer without fear of retribution.

While collaborating and coordinating program activities with those of colleagues is advantageous, scheduling conflicts, organizational rivalries, and competition for funds, and individual work style differences may affect collaboration and coordination efforts. Therefore; it is important to take these issues into account when evaluating youth-serving organizations.

This is one of several indicators, including those measuring staff competence and training, existence of high quality training manuals, and management information systems, that measure an organization's capability in serving adolescent reproductive health needs.

Indicator

NUMBER/PERCENTAGE OF STAFF AND VOLUNTEERS TRAINED TO PROVIDE ADOLESCENT SERVICES

DEFINITION

The proportion of staff and volunteers who work with or provide information, education, counseling or family planning services to adolescents, who have been specifically trained in how to provide these services to adolescents.

DATA REQUIREMENTS

Information on the number of staff and volunteers who work with adolescents, and the number who have been trained (within a specified time) in providing these services to adolescents.

DATA SOURCE(S)

List of staff and volunteers trained, job descriptions including staff tasks and responsibilities, roster of volunteers, list of training courses addressing adolescent needs that staff have attended which address adolescent needs, records of training attendance and completion.

PURPOSE AND ISSUES

This indicator provides a measure of the ex-

tent to which personnel (staff and volunteers) working with adolescents have been specifically trained to provide services to adolescents. Services may include outreach, information, education, counseling, referral, and reproductive health and family planning services.

When constructing the indicator, staff and volunteers can be combined together or they can be treated separately. If they are treated separately, the denominator (total number of staff or volunteers working with adolescents) also needs to be constructed separately.

The indicator only measures staff and volunteer exposure to training. It does not address the quality of training (whether, for example, the training covered such areas as adolescent development and sexuality; confidentiality, attitudes towards adolescent sexuality, etc.) Nor does it measure staff and volunteer competence in working with adolescents as a result of training. Both of these areas are important to explore to arrive at a complete picture of how well the program understands the specific needs of adolescents.

Prepared by Myrna Seidmen, Georgetown Institute for Reproductive Health.

NUMBER/PERCENTAGE OF PROVIDERS WHO SUCCESSFULLY COMPLETE TRAINING PROGRAMS ON ADOLESCENT REPRODUCTIVE HEALTH SERVICES

DEFINITION

In contrast to the previous indicator, this indicator measures the quality of the training program by testing participants' skills upon completion. Participants who successfully demonstrate the skills through various types of assessment procedures are considered competent in the skill area.

DATA REQUIREMENTS

Assessment, conducted by the trainer(s), of program participants against standards established by the program for RH/FP services for adolescents.

DATA SOURCE(S)

Checklists completed by trainer(s), pre and mid-course questionnaires, and follow up assessment several months later.

PURPOSE AND ISSUES

Many training programs are designed to provide first-time or refresher training in specific skills related to RH (e.g., IUD insertion, counseling techniques). At the end of a course, the participants are assessed to determine how well they incorporated knowledge and skills into completion of tasks. This indicator measures the competence of physicians, nurses and midwives in the provision of RH services after completion of an adolescent RH training course delivered in a competency-based approach to training. It reflects both the trainer's approach to training and the knowledge and skills of the trainee. It is designed as a complement to the previous indicator on the number of providers who

participate in a training course. Trainee assessment during a competency-based course in RH includes:

- administration of a pre-course questionnaire to assess the trainees' knowledge about course content;
- administration of pre-course skills assessments using models to standardize skills;
- delivery of the course by a trainer/facilitator using an interactive and participatory approach;
- administration of a mid-course questionnaire to determine if the trainees have mastered knowledge associated with clinical skills;
- assessment of each trainee's skill demonstrated on an anatomic model where appropriate. The assessment by the trainer is performed using competency-based checklists; and
- assessment of each trainee's skills with a client. The assessment by the trainer is performed using competency-based checklists.

Follow-up assessment several months after the adolescent RH course is conducted by the trainer or other qualified professional utilizing competency-based checklists. (Checklists include each of the steps required to perform each skill. They are based on predetermined criteria or standards to which the skills must be performed.)

Indicator

NUMBER/PERCENTAGE OF SCHOOLS OF MEDICINE, NURSING AND/OR MIDWIFERY WITH A REQUIRED ADOLESCENT HEALTH COMPONENT OF THE CURRICULUM

DEFINITION

This indicator measures the incorporation of adolescent reproductive health in preservice schools of medicine, nursing and/or midwifery.

DATA REQUIREMENTS

Assessment of requirements for graduation from schools of medicine, nursing or midwifery with regard to adolescent reproductive health care.

DATA SOURCE(S)

Curricula from schools of medicine, nursing or midwifery documenting requirements for graduation including: didactic (classroom) hours dedicated to adolescent reproductive health, clinical practicum in adolescent reproductive health care, and/or final exam questions on adolescent reproductive health.

Prepared by Sandra de Castro Buffington, JHPIEGO.

PURPOSE AND ISSUES

This indicator serves to measure whether students of medicine, nursing and/or midwifery are required to complete didactic and/or clinical training in adolescent reproductive health as a requirement for graduation. Preservice education in adolescent reproductive health prepares the health professional, regardless of future specialization, to address the needs of adolescents upon graduation from the health professional schools. Opportunity costs of preservice education in adolescent care include cost savings since students are already in school to learn thereby don't need to leave a worksite for 1-2 weeks for refresher training and don't require travel and per diem support. Sustainability of adolescent reproductive health is enhanced once it becomes a requirement for graduation since the health professional school will necessarily dedicate staff time, classroom space, educational materials and clinical practice time to prepare students to meet the graduation requirements.

NUMBER OF COMMUNICATION OUTPUTS DISSEMINATED, BY TYPE AND BY AUDIENCE

DEFINITION

This indicator measures the number of communication messages disseminated to the public. "Disseminated" refers to: a) the external transmission or distribution of the communications produced via electronic, print, or other tangible media; and b) the implementation of interpersonal activities or public relations events. The indicator consists of a total number of communication outputs, which may be further broken down by type of communication and by target audience. For example: a condom social marketing program may put out 10 different messages over the life of the project. Of the ten, three may be TV spots, four may be radio spots, one loudspeaker announcement, and two print advertisements. Seven of the ten messages may target young men, while three target women.

DATA REQUIREMENTS

A list of communication outputs disseminated, and activities conducted during a specific period of time; description of the audiences for each output.

DATA SOURCE(S)

Log books of radio and television stations that record the number of broadcasts of each spot or program; data from project records, substantiated by documentation; data from records of the IEC Department on the number of printed materials distributed to dissemination sites (DS) or SDPs; data from project records at the DS and the SDPs, substantiated

by documentation, regarding the number of print materials distributed to clients; the number of educational talks given, live performances given, and outreach visits done by program staff, etc. Information on informal dissemination could be obtained from surveys asking where a person had heard the information.

PURPOSE AND ISSUES

This indicator measures the productivity of the IEC Department--specifically the quantity and type of communications disseminated (regardless of whether or not anyone sees/hears them, understands them or acts on them).

Well-organized IEC programs generally have a strategy for the diffusion of communications that lists the types of communications and the number of each type to be disseminated. This plan serves as a target to be achieved during the reference period. It is particularly useful to interpret the number of communications actually disseminated in relation to the number targeted. Particularly with programs targeting youth, the DS/SDP should be liberally interpreted. This could include youth centers, kiosks, schools, video parlors, community volunteers in the marketplace, and so forth. Because 'word of mouth' is such an important means of communication for this age group, effort should be made to gather information on informal dissemination of information through the above-mentioned sites.

Prepared by Sharon Rudy, Johns Hopkins University.

Section C

SERVICE OUTPUTS

- Number of SDPs serving adolescents that are located within a fixed distance or travel time of a given location
- Quality of content and delivery of life skills education

NUMBER OF SDPs SERVING ADOLESCENTS THAT ARE LOCATED WITHIN A FIXED DISTANCE OR TRAVEL TIME OF A GIVEN LOCATION

DEFINITION

The number of different SDPs that are located within a specific distance (e.g., 5 km) or travel time (e.g., 1 hour) from a given reference location (e.g., a cluster center). SDP is broadly defined as any location at which reproductive information and/or services are provided.

DATA REQUIREMENTS

Information on the location of service sites and the types of services available to adolescents (total, or by gender) in each of those sites (e.g., information, counseling, contraceptive services, testing for STDs, etc.).

DATA SOURCE(S)

- Careful mapping of SDPs (preferred).
- Reports by knowledgeable local informants on locations of SDPs (less preferred).
- Reports by respondents in surveys of locations of SDPs (least preferred).

Prepared by Krista Stewart, USAID.

PURPOSE AND ISSUES

This indicator provides an indication of the number of services available to adolescents within a defined geographic area. Services include providing information, counseling, contraceptive, or clinical services. When gathering data, it must be clearly determined that services will be provided to adolescents within a particular site for it to be counted; just because a service site exists does not mean that services from that site will be available to adolescents. Legal or regulatory barriers may prevent services, particularly contraceptive and clinical services, from being offered to adolescents. Providers may be biased against providing services to adolescents, even when the services can be provided legally. Hours of the operation may make it impossible for those adolescents who are in school or who are working to seek services at that site. Evaluators using this indicator should also bear in mind that it does not take into account the quality of the SDP. Some countries might have a model adolescent clinic in the capital city which would then be grouped together with other 'regular' clinics offering services to both adolescents and adults.

Indicator

QUALITY OF CONTENT AND DELIVERY OF LIFE SKILLS EDUCATION

DEFINITION

Content of life skills education refers to different aspects of life covered by youth programs, such as gender roles, decision making skills, dating and sexuality. These contents will vary by program and by country. Quality of content of such education refers to coverage and appropriateness whereas quality of delivery refers to how well the educational message is communicated to the intended youth population.

DATA REQUIREMENTS

- Content analysis of the curriculum, accompanying materials, and activities that permit the evaluation of its completeness and appropriateness.
- Assessment of the quality and effectiveness of the methods used to deliver the key messages.
- Information on referral to RH services.

DATA SOURCE(S)

A content analysis of the project documents, curriculum, materials and learning methodology. Observation by experts during the actual delivery and other related activities. Interviews with youths who have gone through the program. Self-reported questionnaires for youths. Inventory of referrals. Questionnaires and focus groups may be used to assess what students have retained from the educational program.

PURPOSE AND ISSUES

This indicator provides a complementary aspect of quantitative assessment on life skills education by examining quality of educational content and methods. It reflects how well the program covers various aspects of life skills education, how appropriate the contents are, and how well it is delivered to the youth. It is difficult to set criteria of appropriateness due to sensitivity by different cultures and interest groups. A guideline, however, for content and quality for sexuality education is available for reference by Sex Information and Education Council for the US (SEICUS, 1991).

Life skills education content for adolescents varies by program and country. Content often includes such topics as interpersonal communication, self-esteem, value clarification, life stage, decision making, education/career goals, gender roles, dating, sexuality, and marriage. Delivery may be achieved in many ways including seminars, discussions, field visits, drama festivals and sports.

Life skills education programs can encourage youth to visit services immediately. Thus, the extent to which the program sends young people to youth service sites can be evaluated. Programs can also recommend services for the future to others, especially those who are not sexually active. It is important that adolescents in these life skills education programs know what services are available, where, and how to use them effectively.

Prepared by Young Mi Kim, Johns Hopkins University.

SERVICE UTILIZATION/PROGRAM PARTICIPATION

- Total number of contacts with adolescents
- Number of new adolescent clients
- Proportion of adolescent follow-up contacts
- Volume of specific services provided to adolescents
- Number of contact hours with adolescents
- Number of adolescents receiving a specific service
- Volume of supplies distributed to adolescents
- Cost per unit of output for adolescents
- Number/percentage of adolescent clients referred
- Percentage of trained adolescents who have competency in specific life planning/negotiation skills
- Percentage of participants competent in communication with adolescents on reproductive health issues
- Number/percentage of adolescent participants who have mastered knowledge of reproductive health concepts
- Percentage of adolescents who seek advice on key reproductive health contents of the project, with persons whom they trust, during a reference period
- (Adolescent) client/participant characteristics
- Expenses incurred by adolescent users for reproductive health services and/or supplies

Indicator

TOTAL NUMBER OF CONTACTS WITH ADOLESCENTS

DEFINITION

The total number of adolescent (aged 10-19 or as defined by the program) contacts reached via a delivery mechanism (clinic, school-based health program, street outreach, etc.) during a defined reference period (e.g. one year).

DATA REQUIREMENTS

Enumeration of total adolescent contacts reached by a given delivery mechanism; age of the adolescents.

DATA SOURCE(S)

In clinics or school-based programs, service statistics or visit logs (including telephone calls); for outreach programs (e.g., a school assembly, mobile van, street network program, etc.) a tally sheet of the number of adolescent contacts.

PURPOSE AND ISSUES

The purpose of obtaining this figure is to measure the volume of adolescent activity, information that can be particularly useful for donors or program administrators interested in learning the workload repre-

sented by adolescent contacts.

This indicator measures the number of contacts a service mechanism makes, not the number of individuals. For example, an adolescent may hear a school assembly on family life, visit a school-based program to receive information, return to the program to receive contraceptive supplies, and return again to ask for information about sexual violence and, thus, be counted four times. For this reason, it is important when evaluating a program to distinguish between number of contacts and number of individuals contacted.

There are caveats, however, to the accuracy of the data obtained. First, particularly with service statistics on adolescents, there may be some inaccuracy in information gathered, (particularly) on age and marital status. Second, it is not possible to obtain age information for certain distribution, mechanisms (e.g., vending machines, bowls of condoms in bathrooms, street outreach with pamphlets on AIDS, etc.), unless a special survey instrument is designed that includes, for example, an observer for a specified period of time.

Prepared by Mary Nell Wegner, AVSC International.

NUMBER OF NEW ADOLESCENT CLIENTS

DEFINITION

The total number of individual adolescents aged 10-19 (or as defined by the program) who receive (a certain) service(s) and/or supplies from a given service delivery mechanism for the first time during a defined reference period (e.g., one year).

DATA REQUIREMENTS

Enumeration of adolescent clients who are first time users of a given service delivery mechanism; age of the adolescent.

DATA SOURCE(S)

For clinics or school-based programs, service statistics (which differentiate between new and continuing users); for outreach campaigns, a tally of new clients.

PURPOSE AND ISSUES

This indicator measures the number of adolescent clients using a given service delivery mechanism for the first time.

Presumably someone can only be "new" to a given service delivery mechanism once; however, attention must be paid to the structure of the mechanism to make sure that

the appropriate counting system is in place. In some situations, the designation of "new" to a client may be by specific service rendered, (e.g., a street outreach program for drug users may designate a client as "new" when s/he first receives clean needles; and later in the program when the client accepts condoms s/he may also be labeled a "new" contraceptive client).

There are therefore two ways to count new users. Some service delivery mechanisms may want to count all the new clients who receive one specific service, while for other mechanisms it may be more useful to track new users to one or more services. An illustration of the variety of services a new client uses may be useful information to a mechanism which offers multiple services. For these reasons, attention to the definition of "new" is critical.

In addition, it is not feasible to count new clients with regard to certain service delivery mechanisms (for example, a vending machine with condoms, a public place with informational brochures about rape, etc.). In the absence of a study designed specifically to gather data on new clients to these "services."

Indicator

PROPORTION OF ADOLESCENT FOLLOW-UP CONTACTS

DEFINITION

The number of follow-up contacts among adolescents aged 10-19 (or as defined by the program) during a defined reference period (e.g. one year) who previously received services through the same service delivery mechanism at least once before, over a denominator of the total number of adolescent contacts.

DATA REQUIREMENTS

Enumeration of adolescent contacts through a service delivery mechanism that differentiates between new and continuing contacts, and total number of adolescent contacts; age of the adolescent.

DATA SOURCE(S)

For clinic or school-based programs, service statistics or visit logs (including telephone calls) that differentiate between new and continuing contacts; for outreach programs (whether in a school assembly, mobile van, street network program, etc.), a tally sheet of the number of adolescent contacts.

PURPOSE AND ISSUES

This indicator measures the proportion of adolescent follow-up contacts by counting the number of adolescent contacts who

previously received services through a given service delivery mechanism at least once, compared to the total number of adolescent contacts. This information can be useful from a programmatic perspective to reflect the extent to which a service delivery mechanism is providing continuing care.

Because any given client may use a number of services (or the same service repeatedly) offered through a particular delivery mechanism, however, the classification of repeat "contacts" is not a proxy for the number of individual adolescents receiving services.

In addition, the usefulness of measuring the indicator depends largely on what the mechanism is tracking. The indicator is not equally suitable for all services or mechanisms, and is probably of most value in clinic service provision. By monitoring a specific service such as family planning supplies or STD treatment, the clinic can get some sense of how it is doing as a provider, (e.g., while a relatively high proportion of adolescent follow-up contacts in family planning service delivery would be desirable, a high proportion of repeated follow-up contacts in STD treatment is probably not because it would appear to correlate with clients becoming reinfected).

Prepared by Mary Nell Wegner, AVSC International.

VOLUME OF SPECIFIC SERVICES PROVIDED TO ADOLESCENTS**DEFINITION**

The total volume of services by category (education, counseling, information/referral, medical exam, STD treatment, laboratory tests, etc.) provided to adolescents aged 10-19 (or as defined by the program) during a given reference period (e.g., one year).

DATA REQUIREMENTS

Enumeration of the volume and description of the type of services provided to adolescents via a delivery mechanism.

DATA SOURCE(S)

In the case of a clinic or school-based program, service statistics or visit logs (including telephone calls) are adequate, providing they offer information on the number and type of service. For outreach

programs (whether in a school assembly, mobile van, street network program, etc.) a tally sheet of the number and type of services offered to adolescents is appropriate. Whatever the source, information on age and type of service must be obtained.

PURPOSE AND ISSUES

This indicator, which is particularly useful for program planning, measures service volume (by category) to adolescents as a population. While measuring the volume of services rendered to adolescents, it does not account for the number of individual adolescents who receive the services. Data about services received by any one individual and cannot be obtained from measurement of this indicator, nor can information about new versus continuing users.

Prepared by Mary Nell Wegner, AVSC International.

Indicator

NUMBER OF CONTACT HOURS WITH ADOLESCENTS

DEFINITION

The total amount of time in which individual adolescents aged 10-19 (or as defined by the program) are in direct contact with a service provider for the purpose of receiving services and/or supplies (information, referral, counseling, a medical exam and/or contraceptive supplies, etc.) during a defined reference period (e.g., one year.) Contact hours may be defined as contact time from the perspective of the provider (for example, calculating the amount of time a provider spends giving a 2 hour workshop to 10 participants as 20 hours of contact).

DATA REQUIREMENTS

Enumeration of clients and duration of contact time (starting and completion time for each client) with a service provider; age of adolescents.

DATA SOURCE(S)

For on-site service delivery mechanisms like clinics or school-based programs, service statistics collected at program facilities; for outreach programs, a logbook accounting of a client's starting and stopping time.

PURPOSE AND ISSUES

This indicator measures the amount of time each client spends with a provider. It assesses the 'volume' of service provision. However, the data gathered to calculate this indicator may be used to determine the average amount of time spent with a provider which is one of the indicators of quality of care.

This indicator is obviously not appropriate for mechanisms designed to provide supplies in the absence of contact with a provider (e.g. vending machines, distribution of educational materials, etc.).

Prepared by Mary Nell Wegner, AVSC International.

NUMBER OF ADOLESCENTS RECEIVING A SPECIFIC SERVICE

DEFINITION

The total number of adolescents during a defined reference period (e.g., one year) that have received a specific service (e.g., counseling, contraceptive supplies, STD treatment) from a specific service delivery point or mechanism.

DATA REQUIREMENT

Count of adolescents who receive a specific service for the first time during the reference period at a service delivery points or through a service delivery mechanism.

DATA SOURCE(S)

- Service statistics
- Surveys (uncommon)

PURPOSE AND ISSUES

The indicator measures the effectiveness of the SDP(s) or service delivery mechanisms(s)

to reach adolescents for provision of specific services.

In contrast to the *number of adolescent contacts*, which provides a measure of workload, this indicator approximates the number of individual adolescents receiving specific services during the reference period. Each individual receiving a specific service (whether once or a number of times) during the reference period should only be counted once. However, because clients might possibly change service delivery points, it is possible that some double counting occurs when numbers of people receiving a service (e.g., contraceptives) are aggregated from different service delivery points.

In order to count clients only once, even if they visit several times to receive the same service during one reference period, an appropriate design of the daily registers is required, for instance with a special column to mark the first visit (ever) to the service.

Prepared by Peter Wondergem, SEATS/John Snow, Inc.

Indicator

VOLUME OF SUPPLIES DISTRIBUTED TO ADOLESCENTS

DEFINITION

The amount of each supply distributed to clients by service delivery mechanism or service delivery point during a defined reference period (e.g., one year).

DATA REQUIREMENTS

- For family planning programs:
 - For methods commonly given to adolescents: Quantities of cycles of pills, numbers of condoms, tablets or suppositories (and tubes for other forms) for spermicide distributed to clients
 - For other methods that may be given to adolescents: Number of IUDs and NORPLANT[®] devices inserted; number of injections administered; number of trained, confirmed clients of natural family planning (NFP); number of lactational amenorrheic method (LAM) clients during the reference period.
- For HIV/STD treatment and prevention programs: Number of treatment cycles (or number of tablets/capsules/injections) distributed during the reference period, and/or condoms supplied during the reference period.
- For other programs: Quantity of supplies appropriate to the program (e.g., for nutrition, quantity of supplements given to pregnant women).

If services are provided to both adults and adolescent groups, information on age of clients must be obtained, to monitor adolescents as a subgroup.

DATA SOURCE(S)

- Service statistics
- Logistics management information system

PURPOSE AND ISSUES

The indicator measures the volume of activity for certain program activities and is especially useful for family planning and STD services. It is used to monitor changes in output volume of these services. It can be used to track volume of output by type of service delivery mechanism and by specific SDP.

This indicator is of primary importance for monitoring output of family planning programs. In adult FP programs, couple-years of protection (CYP) is used for this purpose which has the advantage that it is an aggregate indicator. CYP, however, is not regarded as an appropriate output indicator for adolescent health program, since adolescents' sexual activity is often less frequent and more sporadic than most adults. A valid set of CYP conversion factors for adolescent contraceptive use, which would yield an estimate of the duration of the contraceptive protection provided per unit of each method, has not yet been determined. The volume

Prepared by Peter Wondergem, SEATS/John Snow, Inc.

distributed is therefore monitored for each method separately. This has an advantage especially in case of AIDS/STD prevention programs, where the volume of condoms distributed is a key indicator for monitoring program output.

The indicator may be most useful for specific

adolescent activities (e.g., youth clinics or condoms promotion). When contraceptives or other commodities are distributed in the context of services for both adults and adolescents, then data on client age is also needed. However, logistics information systems (especially in non clinic-based facilities) often do not include data on client's age.

Indicator

COST PER UNIT OF OUTPUT FOR ADOLESCENTS

DEFINITION

Cost (actual expenditures) of inputs required to deliver each unit of the key output(s) of service delivery operations for adolescents, over a designated period of time.

For time x:

Cost of inputs
----- = Cost per unit of output
Volume of output

DATA REQUIREMENTS

Information on amounts budgeted and expended for inputs, by major line item and for the pertinent time period. Information on the volume of key program output(s) for the pertinent time period.

DATA SOURCE(S)

For cost data:

- program budget documents and financial statements.

For output data:

- service statistics, special surveys.

PURPOSE AND ISSUES

This indicator provides a summary measure of a program's operating costs, expressed as unit cost for routine delivery of key output(s), e.g., cost per visit, cost per participant. Depending on the goals of the evaluation, the cost examined could be the cost attached to the particular output, or the cost of the whole program. The indicator assumes the existence of a financial management system and supporting information sub-system that enables managers to track budget and actual expenditures; it also assumes the existence of a management information system for collecting service statistics.

Unit cost information of this type is especially valuable for comparing different service delivery models, or the same models in different locations. For such comparisons to be fair, the time periods compared must be consistent. Also, effort should be made to exclude any one-time costs associated with testing a new model (e.g., special data collection), in order to ascertain cost information as close to routine operations as possible. If adolescents are a sub-group of the overall client population, and if special program features are introduced for adolescents (e.g., an adolescent counselor), then the unit cost calculation must be adjusted to account of these special features.

Prepared by Jane Hughes, The Rockefeller Foundation.

NUMBER/PERCENTAGE OF ADOLESCENT CLIENTS REFERRED

DEFINITION

The number or percentage of adolescent clients referred to an existing, accessible site when the necessary treatments or services are not available at the SDP under study.

DATA REQUIREMENTS

Number of adolescent clients referred to another SDP, total number of adolescent clients visits to the SDP, type of SDP (clinic, hospital, family planning center, etc.).

DATA SOURCE(S)

- Service statistics
- Client information cards

PURPOSE AND ISSUES

This indicator can be used as one measure of quality of care if adolescents are referred to an appropriate site when the SDP in question cannot provide the services necessary. This information could be gathered by cross-tabulating referral by type of service. The reason for referral can be used to look at potential bias against adolescent clients.

It may also be used to determine if the SDP is adequately meeting the needs of its adolescent clientele. If large numbers of clients in this age range are being referred elsewhere, it may indicate a need to provide appropriate services at the SDP in question.

It is also important to know if the adolescents who are referred follow through with the referral and go to the new SDP. This type of information is difficult to obtain, and often special surveys are necessary to evaluate compliance. However, few such surveys have been conducted, due to the effort and cost involved.

Alternative indicators that measure related issues are:

- percentage of adolescent clients referred elsewhere out of the total number of adolescent clients; and
- percentage of all clients referred that are in the adolescent age range.

Prepared by Erin Eckert, The EVALUATION Project/Tulane University.

Indicator

PERCENTAGE OF TRAINED ADOLESCENTS WHO HAVE COMPETENCY IN SPECIFIC LIFE PLANNING/NEGOTIATION SKILLS

DEFINITION

"Competency" refers to the ability to apply a specific skill in a controlled setting according to a standard. Since knowledge is a necessary part of acquiring a skill, the term competency covers both knowledge and skills. Many training programs provide instruction in skill development related to reproductive health (negotiation, decision-making techniques). At the end of a training course, participants are assessed to determine how well they incorporated the knowledge and skills necessary to complete the task. This indicator measures the percentage of participants who successfully complete the program according to the standards set by the trainers. In addition, follow-up assessment enables the evaluator to determine whether the knowledge acquired in the training program is being appropriately used in the field.

DATA REQUIREMENTS

Assessment of trained population against standards established by the program for a number of life planning/negotiation tasks, conducted by an expert observer.

DATA SOURCE(S)

Checklist completed by the expert observer, pre- and post-tests, role plays and follow-up several months later.

PURPOSE AND ISSUES

This indicator serves to measure the technical

competence of the trained population after exposure to life planning/negotiation education with respect to specific skills. It reflects both the adequacy of the education (and educator) and the ability of the trained population to absorb the information.

Preventive education provides teens with the knowledge and skills needed to navigate what has been called the "stormiest" period of their lives. Preventive education helps teens prepare for the future and acquire knowledge and skills necessary to function well in society. They must establish relationships with peers and adults of both sexes and maintain loving relationships with their family members while becoming independent. Teens must also learn to manage their developing sexuality, both physical and emotional, as they prepare to make their own reproductive, sexual and parenthood decisions.

Life planning education generally includes strategies for good communication, values clarification, self-esteem building, goal-setting, and decision-making. Skills building is combined with factual information on sexuality, pregnancy, STD and AIDS prevention, and in many cases, vocational development and employment.

Given the qualitative nature of this indicator and the difficulties and subjectivity in data collection, assessing life planning education is often not accorded the priority it deserves.

Prepared by Marjorie Macieira, Advocates for Youth.

PERCENTAGE OF PARTICIPANTS COMPETENT IN COMMUNICATION WITH ADOLESCENTS ON REPRODUCTIVE HEALTH ISSUES

DEFINITION

This indicator is designed to determine what proportion of individuals who have undergone communication skills training is deemed to have achieved the necessary skill level as a result of the training.

"Participants" may be parents, adolescents, teachers, religious leaders, or others attending or exposed to communication skill development programs.

"Competent" refers to the fact that the participant is capable of performing the skill according to a set standard, which may differ according to the training context.

DATA REQUIREMENTS

Clear definition of the communication skills to be learned. Careful specification of the audience to be targeted. Intervention programs which deal explicitly with topics which are known to be related to or integral to the communication skills to be mastered.

DATA SOURCE(S)

Pre- and post-test interviews or questionnaires concerning skills. Measures of the attendance of the intended audience at

the intervention. Interviews or questionnaires completed a specified period of time after the completion of the intervention with parents, teachers, young people, or others which can be linked to earlier interviews or questionnaires.

PURPOSE AND ISSUES

This indicator can be used to assess the effectiveness of a communication skill development program in changing behaviors in the target audience. It must be remembered, however, that the target audience is not always the adolescents themselves, but may be their parents, teachers, friends, etc. Improving communication about sexual behavior issues is thought to facilitate the young person's own dealing with sexual issues, including use of contraception. It can also improve the parents' (or other target audience) acceptance of the provision of such information to young people. Lack of ease in discussing sensitive issues, lack of information and fear of being asked questions on their own behavior all contribute to communication gaps. These gaps can be repaired with skill building interventions that include opportunities to practice the newly learned skills.

Indicator

NUMBER/PERCENTAGE OF ADOLESCENT PARTICIPANTS WHO HAVE MASTERED KNOWLEDGE OF REPRODUCTIVE HEALTH CONCEPTS

DEFINITION

This commonly-used indicator measures the adolescent population's ability to identify and describe reproductive health concepts such as: anatomy, contraception, prevention of unwanted pregnancy, abortion, etc.

"Mastery" must be operationally defined in terms specific to a given context. It is conventionally used in relation to acquisition of knowledge.

DATA REQUIREMENTS

Evidence of sufficient knowledge as demonstrated through recognition or sponta-

neous identification and description of the concepts mentioned above.

DATA SOURCE(S)

Written test (e.g. pre-and post-tests of knowledge), interviews, etc.

PURPOSE AND ISSUES

This indicator reflects a basic component of sexuality education and can measure the participants' ability to comprehend and retain information provided.

Prepared by Marjorie Macieira, Advocates for Youth.

PERCENTAGE OF ADOLESCENTS WHO SEEK ADVICE ON KEY RH CONTENTS OF THE PROJECT, WITH PERSONS WHOM THEY TRUST, DURING A REFERENCE PERIOD

DEFINITION

"Seek advice" refers to the action of asking for an opinion, information, advice or referral for service. Issues on reproductive health cover a broad range of topics from contraceptive methods and knowledge about STDs/AIDS prevention to dating, marriage, career planning service site locations and so forth. The more specifically we determine these "key contents" which are closely related to the project's main objectives, the more concretely we can measure this indicator. The persons whom adolescents trust for advice on reproductive health matters will vary according to the age, sex, culture, etc.

Previous studies show that persons include a wide variety of individuals, varying from those with family ties or emotional ties, to those with whom they interact socially. They also trust each group to a different degree. We need to determine these specific "trusted person groups" in each evaluation study.

DATA REQUIREMENTS

A list of the "key project contents," as well of "trusted person groups" should be determined before designing the interview questionnaire. Percentages can be calculated dividing the number of adolescents who respond to having sought advice, from a particular group of trusted persons for each key content, by the total number of respondents. We recommend that a reference time be established beforehand, for example during the last three or six months.

Prepared by Young Mi Kim, Johns Hopkins University.

DATA SOURCE(S)

Survey of the target population (preferably with a random sample). To determine the project impact, two types of comparisons are needed: pre- versus post-test data on an intervention vs. non-intervention group.

PURPOSE AND ISSUES

The purpose of the indicator is to determine how successful the project is in prompting adolescents to seek advice on reproductive health issues from trusted persons. This indicator is more important in evaluating adolescent than adult programs because of the lower level of youth going to clinics for reproductive health services. Whereas adults solicit advice from the clinic providers, adolescent do so more from others they trust. Trusted persons are thus very important sources of advice and referral service for adolescents. As adolescents increase their awareness about reproductive health, they may talk and seek more advice from trusted persons. In an intervention that uses interpersonal channels of trusted persons to reach youth, any increase of communication between them indicates program success.

Determining from whom adolescents would seek the reproductive health advice may require a study before the questionnaire design.

Adolescents are in a life stage in which they explore, shape, change and confirm their ideas about life in general. In the process

they seek advice or information from those whom they trust and respect. They may seek help from those who are more knowledgeable or older, or on some topics such as dating or sex, they may seek advice from those who can offer confidentiality.

Greater information is needed on the types of trusted persons that are preferred for each sub group (e.g., by age, gender, or school status--attenders versus dropouts).

Survey data can provide information on

which reproductive content areas adolescents are discussing and what percentage of them discuss each content area. However, it may not necessarily reveal how the conversation actually takes place, or what persuasive arguments help adolescents take actions. Whether the information or advice given to adolescent was in fact what the program would deem "desirable" also can not be determined. Some additional observations of interactions, analysis of actual conversations, or in-depth interviews with adolescents and trusted persons would complement the survey data.

(ADOLESCENT) CLIENT/PARTICIPANT CHARACTERISTICS

DEFINITION

A socio-demographic profile of current users of contraceptive methods.

Relevant characteristics include: age, parity, urban-rural residence, economic status, ethnicity, and other factors judged important in the context of a specific country.

DATA REQUIREMENTS

Accurate data on age are of special importance with this age group. At a minimum, programs need to distinguish the <15 from the >15 age group, assuming that the >15 group is more likely to be sexually active.

Additional characteristics which are valuable to obtain for adolescents include:

- sex (female, male);
- currently sexually active or not;
- marital status (married/in union, single);
- parity, pregnancy history;
- education status (in school, not; if not, number of years of past schooling);
- contraceptive use history (ever/current use, method, source(s) of supplies);
- STD history (past, current status);
- STD protection use (ever/current use, method, source(s) of supplies); and
- acknowledged desire to abstain from sexual activity.

Where relevant:

- female genital mutilation;
- history of abuse/violence or sexual abuse/violence;
- same-sex sexual contacts; and
- previous exposure to sex education.

Data on types of services requested and provided:

- services requested; (Note: be sure to include counseling);
- services provided; (ditto); and
- referral(s) made (number, type).

DATA SOURCE(S)

Service statistics, client surveys

PURPOSE AND ISSUES

This indicator measures the characteristics of clients receiving contraceptive and/or other services at SDPs in the program. In those cases where the program is designed to reach subgroups with specific socio-demographic characteristics, it indicates the extent to which the program is reaching its target population. Similarly, large urban/rural differentials in a public program may signify that it is not reaching key target populations.

Ideally, one would like to have this type of information on all current users. However, due to the difficulty of monitoring current users, an alternative approach is to obtain data on acceptors as they enter the program.

Program statistics on user characteristics allow a program to monitor how its client population changes over time. A comparison of sub-groups (e.g., age, marital status, rural/urban) within the adolescent age group can add to knowledge about patterns of service utilization and contraceptive practice among adolescents.

Programs that offer services in non-clinic settings (e.g., through community-based distributors, social marketing schemes, or

non-clinic NGO settings), may need to tailor data collection accordingly.

Non-users of contraceptives is a relevant sub-population of adolescents to track. As access to services expands, one goal will be to delay intercourse or promote abstinence, especially among younger adolescents. Also, sexual activity is quite sporadic for many adolescents. Adolescents who are not sexually active may still use services to obtain information and counseling.

Increasingly, contraceptive services programs incorporate the promotion of dual protection against unwanted pregnancy and STDs/HIV. It is pertinent to monitor utilization of both types of services (i.e., contraception and prevention and treatment of STDs/HIV).

EXPENSES INCURRED BY ADOLESCENT USERS FOR REPRODUCTIVE HEALTH SERVICES AND/OR SUPPLIES

DEFINITION

Expenses in this indicator refers to out-of-pocket costs, during a specified period of time, for the adolescent user of reproductive health service or supplies.

DATA REQUIREMENTS

For specified time periods: Information on costs/fees for reproductive health services or supplies, and adolescents' actual financial outlays for various types of services and supplies, (optional) include the costs of transportation to and from the service delivery point.

DATE SOURCE(S)

Service statistics on services and supplies provided, and fees charged. Information from population-based surveys or special program surveys about the actual spending patterns of adolescents for various types of services and supplies.

PURPOSE AND ISSUES

This indicator provides a measure of the actual financial outlays by adolescent users for reproductive health services and supplies.

It may be particularly useful if estimated in relation to the estimated income of adolescents. Cost is often assumed to be a major barrier for many adolescents, but little is known about how this factor operates. This indicator can assist in learning more about actual expenditures adolescents are willing to make for different types of services and supplies, (e.g., pharmacy, clinic, traditional healer).

The indicator measures one dimension of accessibility, but has a number of limitations. Many adolescents do not earn regular wages; estimates of adolescent income are likely to vary sharply over time. Adolescents, especially females, who are part of households may have little control over income they do earn. The indicator does not take into account other costs of seeking and using services and supplies, (e.g., time spent traveling to and from the SDP and waiting time once there; and psycho-social "costs" to the young person deciding whether and how to seek help or to cope with judgmental providers). It is important, but not always feasible, to use consistent time periods in comparisons of costs/fees, spending patterns, and estimated total income.

Prepared by Jane Hughes, The Rockefeller Foundation.

Chapter III

Outcome Indicators

- Section A: Intermediate Outcomes
- Section B: Long-Term Outcomes

INTERMEDIATE OUTCOMES

Exposure to Communications

- Percentage of adolescents exposed to program messages, based on respondent recall
- Percentage of target audience who correctly comprehend a given message
- Number/percentage of target audience who discuss message(s) with others, by type of person
- Percentage of target audience who advocate the key message

Knowledge

- Percentage of adolescents who know of at least one source of information and/or services for sexual and reproductive health
- Percentage of adolescents who know of at least one contraceptive method
- Adolescents' knowledge of reproductive health: composite indicator

Attitudes

- Percentage of adolescents who desire pregnancy
- Percentage of adolescents who agree with the attitudes promoted in a reproductive health program
- Percentage of adolescents not using services because of psycho-social barriers
- Percentage of adolescents who intend to use protection at first/next intercourse

Practice/Behavior

- Age at first intercourse
- Percentage of previously sexually active adolescents who abstain from sexual intercourse
- Age at first birth
- Percentage of adolescents who used protection at first/most recent intercourse
- (Adolescent) contraceptive user and/or non-user characteristics
- Unmet need for family planning among adolescents
- Percentage of adolescents who have experienced coercive sex
- Percentage of women of reproductive age having undergone female circumcision

Indicator

PERCENTAGE OF ADOLESCENTS EXPOSED TO PROGRAM MESSAGES, BASED ON RESPONDENT RECALL

DEFINITION

"Exposure" refers to an individual's recall of seeing or hearing messages disseminated by the RH program or other source via electronic, print, or interpersonal channels. The message(s) may be either a specific phrase (e.g., the slogan of an ongoing campaign) or mention of a specific reproductive health issue.

DATA REQUIREMENTS

Number of respondents who have seen or heard either a specific phrase or a message of the specific reproductive health issue; total number of respondents.

DATA SOURCE(S)

Survey (preferably with a random sample) of the target population and in-depth interviews. (The latter is sometimes used when the evaluation for one project serves as the baseline for another; however, in-depth interviews may not lend themselves to quantification.)

PURPOSE AND ISSUES

Recall of specific messages provides a measure of the reach of a given communications campaign. ("Exposure to" and "reach of" a communications program are equivalent concepts.) For example, in a male motivation project in Zimbabwe, it was estimated that 52% of the target population were exposed to project messages (Piotrow et al., 1992).

By contrast, exposure to "any message" about family planning provides a crude but useful measure of the extent to which the public has been informed by the media, whether through promotional messages produced by the government or private family planning associations, or through news stories about specific methods. For example, from DHS data it is possible to obtain the percentage of the population exposed to any family planning message. Countries with aggressive media programming on family planning tend to score high on this measure. By contrast, populations that have remained closed to family planning, due either to lack of interest or language barriers, tend to score low.

Two recall types are frequently used: spontaneous and aided (analogous to the questions on knowledge of FP methods in the DHS). The respondent is asked whether he/she has heard other messages not spontaneously mentioned. This type of "recall" is sometimes labeled "recognition."

When collecting data from younger adolescents, special attention needs to be paid to obtaining official permission, particularly from local leadership, before collecting the information; and discussion with parents regarding the nature and content of the survey should be held.

Adapted by Sharon Rudy, Johns Hopkins University from the *Handbook of Indicators for Family Planning Program Evaluation*.

PERCENTAGE OF TARGET AUDIENCE WHO CORRECTLY COMPREHEND A GIVEN MESSAGE

DEFINITION

In operational terms, the percentage of persons who, having heard a specific message, are able to correctly paraphrase the main idea.

DATA REQUIREMENTS

Answers from respondents in either a pre-test of a communication or in a post-diffusion survey.

DATA SOURCE(S)

Survey (preferably with a random sample) of the target population.

PURPOSE AND ISSUES

This indicator is useful in ensuring that the messages being disseminated are indeed comprehended by the target population. Ideally, all messages should be tested for comprehension (as well as other dimensions)

Adapted by Sharon Rudy, Johns Hopkins University from the *Handbook of Indicators for Family Planning Program Evaluation*.

prior to final production. However, even if they pass a pre-test based on a small, non-representative sample of the population, it is useful to assess comprehension once the messages are actually in circulation among the target audience.

It is important to collect this information by interviewing a series of individuals privately. By contrast, focus groups are not a useful means of obtaining this information. If, for example, only one person in the group knows the correct response and he/she gives it, this immediately contaminates the rest of the data collection procedure.

When collecting data from younger adolescents, special attention needs to be paid to obtaining official permission, particularly from local leadership, before collecting the information; and discussion with parents regarding the nature and content of the survey should be held.

Indicator

NUMBER/PERCENTAGE OF TARGET AUDIENCE WHO DISCUSS MESSAGE(S) WITH OTHERS, BY TYPE OF PERSON

DEFINITION

"Discussing the message" refers to any conversation subsequent to exposure to the communication in which the content (spot, brochure, song, etc.), its characters, or messages are mentioned. "Type of person" includes spouse, partner, relative, friend, teacher, etc.

DATA REQUIREMENTS

Number of persons that discussed the family planning messages with others, as a percentage of:

- those who heard/saw the messages in questions; or
- those interviewed

DATA SOURCE(S)

Survey (preferably with a random sample) of the target population.

Adapted by Sharon Rudy, Johns Hopkins University from the *Handbook of Indicators for Family Planning Program Evaluation*.

PURPOSE AND ISSUES

This indicator measures the extent to which mass media message(s) generate further interpersonal communication.

Within the communication field, it is often stated that mass media are useful to create awareness and increase knowledge, but that interpersonal communication plays a vital role in bringing about actual behavioral change. Whereas it has also been shown that media can have a direct effect on behavior, campaigns that generate substantial interpersonal communication may result in an even greater level of behavioral change (first, because of the social support that may be generated for the idea; second, because the message may be transmitted to others who did not hear it from the original source).

The "spin-off effect" is not necessarily positive. A campaign judged to be in poor taste might create great controversy, much of which was negative. (On the other hand, some would argue that any publicity is useful).

PERCENTAGE OF TARGET AUDIENCE WHO ADVOCATE THE KEY MESSAGE

DEFINITION

In operational terms, the percentage of persons who either recommend the "key message" to their friends peers and relatives, including possibly taking them for family planning services, and those who speak out or provide some public testimonial in support of a program such as participating actively in community events, encouraging support from community, political, or health leaders for enhanced services.

DATA REQUIREMENTS

Number of persons that recommend the "key message" to relatives and friends or the number of persons who participated in public events or spoke up publicly in support of the "key message" progress as a percentage of:

- those who heard/saw the messages in question; or
- those interviewed.

DATA SOURCE(S)

Survey (preferably with a random sample of the target population) or surveys of specific groups or organizations which have worked in the programs, such as nurse/midwives associations, medical associations, women's organizations, or other organized social or professional institutions with members in the community.

Adapted by Sharon Rudy, Johns Hopkins University from *Handbook of Indicators for Family Planning Program Evaluation*.

PURPOSE AND ISSUES

This indicator measures the extent to which support for the "key message" is hidden by individuals, but is rather perceived as a community norm and valuable part of community activities. Examples of a key message might include: "Have fun in a relationship without having sex," "Talk to an adult you trust," "Play it safe."

Within the communication field, the willingness of an adopter or supporter of a program to bear public witness is a measure of the depth of personal commitment. Persons who have spoken out publicly in support of a measure (whether family planning, or smoking cessation) are less likely to discontinue their new practice. Expressions of individual support encourage practice within the community, and expressions of public support within community forums increase national and community support for programs in the long run. This behavior has not been measured previously, but could become an important indicator for measuring sustainability and local financial and political support for FP and related programs.

Special attention is required when the target audience is adolescents. Using in-depth interviews or survey interviews, the researcher can better control for the acquiescence factor (desire to fit in, be part of group) which is more present during the adolescent period than at other ages.

Indicator

PERCENTAGE OF ADOLESCENTS WHO KNOW OF AT LEAST ONE SOURCE OF INFORMATION AND/OR SERVICES FOR SEXUAL AND REPRODUCTIVE HEALTH

pr

DEFINITION

The percentage of the target population that can name one or more specific location(s) or source(s) of information and services for adolescent sexual and reproductive health available in the community. These sources should be spontaneously mentioned. Sources of information may be informal (parents, peers, other adults, media) or targeted sources (education, print materials, special programs). Services should be differentiated: medical (clinics, hospitals), counseling (institution-based, hotline, etc.), and distribution centers (pharmacies, automatic dispensers, CBDs).

DATA REQUIREMENTS

Respondent's response to a question on knowledge of: (a) all sources of information on sexuality and RH available to him or her, including individuals, reference materials and locations; and (b) sexual and reproductive health services catering to adolescents in their community, such as clinics, other health promotion and youth-serving institutions.

DATA SOURCE(S)

Survey of the target adolescent population. Sampling may be done by household (as in the DHS) or focus on target areas such as schools, youth centers, and similar sites. Interviewers could be young persons,

preferably gender appropriate.

PURPOSE AND ISSUES

This indicator reflects the extent to which the adolescent population is aware of existing sources of information and services catering especially to their needs. Although most communities offer some type of health services to the population at large, a prime determinant of adolescent use of those services is knowledge that such services are targeted to adolescents' needs. For example, adolescents have a strong need for confidentiality and privacy in accessing services; and they judge services on affordability and providers' "teen friendly" attitude. Likewise, key sources for information and counseling on delicate issues pertaining to sexuality or self-esteem need to be of the kind that teens feel comfortable turning to, such as an "approachable parent/relative/teacher."

Methods for data collection need to ensure confidentiality to encourage truthfulness. For example, teens may feel shy about discussing the topics at home if parents are around.

This indicator focuses on knowledge only; it does not measure whether or not teens actually use the sources of information and services about which they know, unless that differentiation is made.

Prepared by Marjorie Macieira, Advocates for Youth.

Indicator

**PERCENTAGE OF ADOLESCENTS WHO KNOW OF
AT LEAST ONE CONTRACEPTIVE METHOD****DEFINITION**

Percentage of respondents who have heard of at least one contraceptive method; alternatively, the percentage that can mention or have heard of each method.

DATA REQUIREMENTS

Number of methods that the respondent can name or recognize.

DATA SOURCE(S)

Survey of the adolescent target population (e.g., Young Adult Reproductive Health Surveys of the CDC, DHS).

Prepared by Marjorie Macieira, Advocates for Youth.

PURPOSE AND ISSUES

This indicator reflects the extent to which the target population is aware of methods that prevent pregnancy. It is generally reported as the percentage who know at least one contraceptive method or the percentage that know each specific method.

On this type of population-based survey, the respondent is asked to name all the methods that he/she has heard that prevent pregnancy. For those not mentioned, the interviewer names the method and asks if the respondent has heard of it and what they know about it.

Indicator

ADOLESCENTS' KNOWLEDGE OF REPRODUCTIVE HEALTH: COMPOSITE INDICATOR

DEFINITION

A composite index measuring adolescents' knowledge of reproductive health issues.

DATA REQUIREMENTS

Although the example given here evaluates knowledge of RH issues, this type of indicator may be used to evaluate adolescents' knowledge of other health issues as well (e.g., nutrition, safe motherhood or empowerment.) For ease of illustration, this particular indicator is composed of the three elements illustrated below. Managers should tailor the elements to fit the program being evaluated. An index which gives weight to all elements may be used to score responses. Questions may include the following:

1. Knowledge of Menstrual Cycle and Conception:
 - Can the respondent correctly define conception, using either of the following two terms: "sperm and egg" or "male and female"?
 - Can the respondent correctly identify a woman's fertile period as the middle of a woman's menstrual cycle?
 - Does the respondent know that a girl can get pregnant the first time she has intercourse after menarche?
2. Knowledge of Contraceptive Methods:
 - Can the respondent spontaneously men-

tion two or more modern methods of contraception?

- Can the respondent correctly identify two or more advantages of modern methods?
 - Can the respondent correctly identify correct use of two or more modern methods?
3. Knowledge of STD/HIV Prevention, Transmission and Symptoms:
 - Can the respondent correctly identify two or more sexually transmitted diseases (e.g., HIV, gonorrhea, syphilis, chancroid)?
 - Can the respondent correctly identify two or more methods of preventing STD/HIV (e.g., condoms, not sharing infected IV drug needles, refraining from sexual intercourse with multiple partners)?
 - Can the respondent correctly identify two or more symptoms of STDs (i.e., vaginal discharge, burning, itching, lesions)? Does she/he know that there are some STDs that are asymptomatic?

DATA SOURCE(S)

Adolescent reproductive health surveys (e.g., Young Adult Reproductive Health Surveys of the CDC) and DHS questionnaire responses.

Prepared by Sandhya C. Rao, The EVALUATION Project/Tulane University.

PURPOSE AND ISSUES

This composite indicator is not intended to be a "catch-all" of adolescents' knowledge of RH. Rather, it targets several key issues upon which other aspects of RH knowledge are based. Keeping this in mind, it should be emphasized that issues of adolescent RH vary by country. In addition, data collection on adolescents can be difficult in those countries where there is a stigma attached to premarital sex.

The purpose of developing a composite index of adolescents' knowledge of RH issues is to better gauge the effectiveness of educational interventions, which constitute a major part of adolescent programs. Long-term objectives of IEC programs should focus on the transmission of accurate RH information and the eradication of myths often found among young adults. Accurate information is vital to the RH and welfare of women whose sexual debut occurs during their adolescent years.

Dispelling myths about reproductive health starts with finding the sources of these misconceptions. Many adolescents get their information from uninformed sources (e.g., other uninformed peers). Inaccurate beliefs regarding the dangers or ineffectiveness of

contraception may be strong enough to discourage teenagers from acquiring and using modern methods. On the other hand, even though some adolescents *do* have accurate knowledge regarding these issues, they may not internalize their knowledge and act upon it. Also, adolescent girls may not perceive themselves to be at risk of contracting an STD or becoming pregnant, in which case using contraception would be out of their realm of behavior.

Thus, this composite indicator is operationalized only as an index of knowledge, not of practice, and should be used in conjunction with behavioral indicators. Knowledge of health-seeking behavior does not necessarily lead to practice of the behavior, even if RH clinics are easily accessible to adolescent women. For example, knowledge of condoms is almost universal in some countries while condom use in those same countries remains low. Finally, certain psychological factors must be considered regarding data collected from adolescents (e.g., shyness, inability to verbalize knowledge of sexual issues, or unwillingness to answer truthfully for fear of retribution).

Indicator

PERCENTAGE OF ADOLESCENTS WHO DESIRE PREGNANCY

DEFINITION

The percentage of adolescents, whether in union or not, who desire a pregnancy within a specified time interval, usually a year.

DATA REQUIREMENTS

Responses to survey questions on:

- desire for pregnancy; and
- desired time interval until pregnancy.

DATA SOURCE(S)

Population based surveys.

PURPOSE AND ISSUES

The indicator can be used to identify those adolescents with a desire to become pregnant within the next year, on the one hand, and those who do not want to become pregnant and apparently have a need for family planning services, on the other. When restricted to the currently abstinent, it can also be used to identify--albeit indirectly--

those most likely to become sexually active. In addition, coupled with questions on current fecundity and contraceptive use, this indicator can be used to assess the level of unmet need for family planning among adolescents.

Although similar questions on the desire for a(nother) child are included in surveys such as the DHS and have proven to be reasonably valid, it is not clear whether these questions generate equally valid results among adolescents. Because pregnancy is a sign of proven fecundity, in societies where a woman's worth is measured by her marriageability and fertility, unmarried girls may have ambivalent attitudes towards pregnancy. Even married adolescents may be conflicted; while these young women's value to their families is enhanced by childbirth, they may feel unready for motherhood. Standard survey questions on desire for a pregnancy are ill-equipped to accommodate such ambivalence. Consequently caution should be exercised in interpreting the results from such questions.

Prepared by Barbara Mensch, The Population Council.

PERCENTAGE OF ADOLESCENTS WHO AGREE WITH THE ATTITUDES PROMOTED IN A REPRODUCTIVE HEALTH PROGRAM

DEFINITION

The percentage of young adults who report that they agree with the attitudes towards reproductive health promoted by a program in which they have participated.

DATA REQUIREMENTS

Information about whether young people who have participated in a program agree with the attitudes toward reproductive health promoted by the program.

DATA SOURCE(S)

Surveys among young adults who have participated in a program.

PURPOSE AND ISSUES:

Some programs set increasing the percentage of young people with positive attitudes toward specific RH behaviors as a program goal. For example, programs may promote positive attitudes towards delaying sexual intercourse, communicating with sexual partners, or using condoms. This indicator measures whether or not young adults agree with the attitudes toward RH behaviors promoted by a program in which they have participated.

Positive attitudes toward healthy RH behaviors do not imply that respondents always act in ways that are consistent with those attitudes. Still, programs want to measure whether or not they have been effective in promoting positive attitudes towards RH behaviors as a step toward ensuring healthy

behavior. In some cases, programs may wish to measure changes in attitudes because they do not have the time or resources to measure changes in behavior.

Programs evaluate those attitudes which the program has chosen to emphasize. Different programs focus on changing different attitudes. There are, however, a number of common attitudes that frequently prevent young adults from adopting positive reproductive health behaviors such as low self-esteem ("I can't say 'No'"), invulnerability ("It won't happen to me"), peer pressure ("I won't be accepted if I don't do it"), and poor self-efficacy ("There's nothing I can do"). Attitudes based on stereotypes of attractive male and female behavior can also prevent young adults from practicing good reproductive health behaviors. Programs may focus on changing attitudes of young men such as "Men don't like condoms" or "Sexual intercourse proves I'm a man," or attitudes of young women such as "Nice girls can't suggest using condoms" or "I'll hurt his feelings if I say 'No'."

Researchers may wish to measure the attitudes of young adults at the population rather than the program level. If so, researchers must decide which young adult attitudes they need to measure. In a single survey they can determine the number or percentage of young adults who agree with the attitude. Repeating questions on attitudes on a second survey administered at a later date would allow researchers to measure changes in attitudes.

Prepared by Ann McCauley, Johns Hopkins University.

Indicator

PERCENTAGE OF ADOLESCENTS NOT USING SERVICES BECAUSE OF PSYCHO-SOCIAL BARRIERS

DEFINITION

The proportion of adolescents who are not seeking reproductive health services (e.g., information, counseling contraceptive services, testing for STDs, etc.) due to barriers of a psycho-social nature (e.g., fear of social stigma associated with adolescent sexual activity, concerns about confidentiality, not wanting to have to seek permission from parents when parental consent is required, etc.).

DATA REQUIREMENTS

Information on non-use of services among adolescents (total, or by gender). The type of service needs to be defined (e.g., counseling, STD testing, information, contraceptives). In this case, the denominator would be all individuals who both need services (i.e., are sexually active, require counseling) and have access to services but who are not using them. The numerator would be those not using the service for psycho-social reasons.

DATA SOURCE(S)

Population-based surveys

PURPOSE AND ISSUES

This indicator is intended to provide a measure of the extent to which access to otherwise accessible reproductive health services (i.e., broadly defined) is limited by barriers of psychological, attitudinal, or social origin. The intent is to distinguish those who would seek services were it not for the psycho-social barriers they perceive from

those who have no need for or interest in the service. What is key here is perception of barriers by the individual; perceptions may or may not correspond with reality. Moreover, perceptions are likely to vary not only from situation to situation but also from individual to individual based on that individual's background.

Because adolescent sexuality is a sensitive issue in many cultures, a variety of psycho-social barriers are likely to exist. Adolescents may avoid services for fear of having others (e.g., parents, teachers, peers, etc.) in their community know that they are making use of reproductive health services. Requirements for parental consent may further exacerbate this concern as would having services for adolescents integrated with those for adults. In some cases, adolescents may not seek services because of their own guilt about their sexuality. Previous experience with service providers who do not maintain confidentiality or who show biases against adolescents may also create barriers that would make adolescents unlikely to seek services again.

When surveys are used, adolescents may be reluctant to admit desire to use services to an individual interviewer. Where respondents can read, anonymous paper and pencil surveys may result in more accurate information. Evaluators may be more successful in gathering meaningful information on this indicator through focus groups, which would provide qualitative rather than quantitative data.

Prepared by Krista Stewart, USAID.

PERCENTAGE OF ADOLESCENTS WHO INTEND TO USE PROTECTION AT FIRST/NEXT INTERCOURSE

DEFINITION

The percentage of individuals below a given age (to be defined by program or researcher) who have not yet initiated sexual relations, who state that they plan to use a contraceptive method the first time they have intercourse; and/or the percentage of sexually active unmarried individuals below at a given age who state that they plan to use a contraceptive method the next time they have sexual intercourse.

DATA REQUIREMENTS

- Women/men below a given age who have not initiated sexual relations.
- Sexually active women/men below a given age.
- Responses of the populations mentioned above regarding their intent to use protection.

DATA SOURCE(S)

Population-based surveys.

Prepared by Douglas Nichols, Family Health International.

PURPOSE AND ISSUES

Intent to practice contraception at first intercourse among sexually inexperienced adolescents or next intercourse among adolescents who are already sexually active provides a rough approximation (generally an overestimate) of the sexual activity among the specified group that is likely to be "protected."

By further specifying what method(s) individuals say they intend to use, the degree of protection can be inferred (e.g., modern vs. traditional method effectiveness in avoiding pregnancy), as can the type of protection (e.g., pregnancy vs. sexually transmitted disease). Researchers should note the subtle differences among words such as "plan," "intend," and "expect," and take these into consideration in formulating questions asking about future behavior.

Although the measure may be of limited value in predicting actual contraceptive behavior, it may be a useful means of assessing program outreach needs--targeted IEC campaigns, clinic, community and/or school-based counseling, correcting method-specific misinformation, etc.--to influence the initiation and regular use of contraception among sexually active adolescents.

Indicator

AGE AT FIRST INTERCOURSE

DEFINITION

An indicator that provides a summary measure of when adolescents become sexually active. The indicator may be calculated as the mean or the median age at first intercourse. An alternative measure is the proportion who are sexually active, or, conversely, still abstaining, by a particular age or the probability that an adolescent will become sexually active, or remain abstinent, by a particular age.

DATA REQUIREMENTS

Responses to survey questions asking:

- whether intercourse has taken place;
- age at first intercourse; and
- current age.

DATA SOURCE(S)

Population based surveys.

PURPOSE AND ISSUES

In situations where all of those surveyed are not yet sexually active, the mean age at first intercourse among those who have had intercourse is a biased estimate of the ultimate mean age for the entire group; the mean based on those who are sexually active will be too low. Since the age of first intercourse is unknown or "censored" for those not yet sexually active, computation of

the mean is not recommended.

The median is preferable as a measure of central tendency provided that at least 50 percent of the group for whom it is being calculated have had intercourse. Although the median is less affected by extreme values than is the mean, if fewer than half of the group have had intercourse the median will also be biased downward.

If fewer than 50 percent of the sample are sexually active, then it would be preferable to simply compute the proportion sexually active by each age for those at that age or older. Alternatively one could construct a life table which will give an estimate of the probability that someone who has not experienced sexual intercourse by a particular age will experience intercourse during the following year (i.e., the hazard rate). Standard statistical packages have life table procedures.

In addition to the statistical issues discussed above, problems may arise in attempting to collect reliable data on sexual intercourse. In societies where intercourse outside of marriage is frowned upon, accurate reporting about age at first sex may prove problematic. Not only may reporting of age at first intercourse be flawed, definitions of "intercourse" may also vary with the result that adolescents have in mind different behaviors when responding to the exact same questions.

Prepared by Barbara Mensch, The Population Council.

PERCENTAGE OF PREVIOUSLY SEXUALLY ACTIVE ADOLESCENTS WHO ABSTAIN FROM SEXUAL INTERCOURSE

DEFINITION

An indicator measuring whether previously sexually active adolescents have changed their sexual activity after participating in a particular adolescent program. The indicator is calculated as the percentage of previously sexually active adolescents of a specified age group who abstained from sexual intercourse for a specified period (e.g. 3 months, 1 year) after participating in a particular adolescent program.

DATA REQUIREMENTS

Responses to survey questions ascertaining:

- whether they have previously had sexual intercourse; and
- whether they have abstained from sexual intercourse for a given period of time (generally in relation to participation in an intervention program).

DATA SOURCE(S)

Surveys

PURPOSE AND ISSUES

This indicator is used to determine whether participation in a particular adolescent program (e.g. an IEC campaign, counseling service, a community or sexuality education program) influenced adolescents who were previously sexually active to abstain from sexual intercourse. An alternative indicator is the percentage of previously sexually active

adolescents who intend to abstain from sexual intercourse for a specified time (e.g., one year) upon completion of participation in a program or activity.

This indicator is potentially valuable in showing the positive effects of sexuality education programs to policy makers and opponents of such programs. However, there are several problems with its measurement and use. Sexual activity among adolescents is usually sporadic and depends on the existence or absence of a relationship, rather than on a conscious decision to abstain. Therefore, abstaining for a period following the participation in/exposure to a particular program may be coincidental. Furthermore, adolescents who state that they intend to abstain for a period may not follow through with their stated intention. Another problem is that many adolescent programs in the US and developing countries over emphasize abstinence for both sexually active and non-active adolescents. Designing a program that uses a decision or intention to abstain as an outcome indicator places the program focus on the sexual activity of the adolescents rather than on the prevention of undesirable consequences, such as pregnancy or sexually transmitted diseases including HIV/AIDS. On the other hand, in Africa, sexually active young women are subjected to tremendous pressure to stay sexually active from boys who contend, "She had sex with so-and-so, how can she refuse me!" In this situation, programmatic focus on the adolescents' decisions and right to abstain is quite valuable.

Indicator

AGE AT FIRST BIRTH

DEFINITION

An indicator that provides a summary measure of the age at which first birth occurs. The indicator may be the mean or the median age at first birth, the proportion giving birth by a particular age, or the probability that an adolescent will give birth by a particular age.

DATA REQUIREMENTS

Responses to survey questions asking:

- whether the respondent has given birth;
- age at first birth; and
- current age.

DATA SOURCE(S)

Population based surveys.

PURPOSE AND ISSUES

In situations where all of those surveyed have not yet given birth, the mean age at first birth among those who have given birth is a biased estimate of the ultimate mean age for the entire group; the mean based on those who have given birth will be too low. Since the age of first birth is unknown or "censored"

for those who have yet to give birth, computation of the mean is not recommended.

The median is preferable as a measure of central tendency provided that at least 50 percent of the group for whom it is being calculated have had a birth. Although the median is less affected by extreme values than is the mean, if fewer than half of the group have given birth the median will also be biased downward.

If fewer than 50 percent of the sample have given birth, then it would be preferable to simply compute the proportion giving birth by each age for those at that age or older. Alternatively, one could construct a life table which will give an estimate of the probability that someone who has not given birth by a particular age will experience childbirth during the following year (i.e., the hazard rate). Standard statistical packages have life table procedures.

In addition to the statistical issues discussed above, problems may arise in attempting to collect reliable data on age at first birth. In societies where childbirth outside of marriage is viewed unfavorably, accurate reporting about age at first birth may prove difficult, particularly in cases where the child has died.

Prepared by Barbara Mensch, The Population Council.

PERCENTAGE OF ADOLESCENTS WHO USED PROTECTION AT FIRST/MOST RECENT INTERCOURSE

DEFINITION

The percentage of adolescents (age to be defined by program or researcher) who state that they used a contraceptive method the first time they had sexual intercourse; and/or the percentage of sexually active unmarried adolescents who state that they used a contraceptive method the last time they had sexual intercourse.

(Note: This measure can be further specified to record the proportion with "dual protection," e.g., using a single method that provides protection against both STDs and pregnancy, or concurrently using one method for STD prevention and another for avoiding pregnancy.)

It should be noted that this indicator is intended as a proxy for contraceptive prevalence in the adolescent age groups. Because most adolescents are not in stable unions and sexual activity is often sporadic, it is difficult to obtain accurate figures for contraceptive prevalence.

DATA REQUIREMENTS

Responses on surveys among adolescents.

Whether he/she:

- has had intercourse;
- (if so) used a contraceptive method at first intercourse; and

- (if so) used a contraceptive at last intercourse.

DATA SOURCE(S)

Population-based surveys.

PURPOSE AND ISSUES

Reported use of a contraceptive method at first intercourse provides a retrospective view of the "protection gap" between the onset of sexual activity and the initiation of fertility-regulating behavior. Reported use of a method at the most recent intercourse comes close to measuring contraceptive prevalence within a group, and gives an index of current unmet service delivery needs.

The measurement of contraceptive use among adolescents (or during adolescence) involves numerous problems of definition. In the assessment of use at first intercourse, what age group forms the respondent population? Does the index seek to measure use at last intercourse among all sexually active individuals, or only unmarried ones? How is "sexually active" defined?

Contraceptive service delivery components of adolescent programs seek to identify and target sexually active non-users, as they are at risk of an unplanned and likely unwanted pregnancy. Among adolescents, particularly those having sex only occasionally, contra-

ceptive use is often discontinuous; use or non-use at one measurement point may not be indicative of usual behavior. An alternative to the use at most recent intercourse (though still subject to selective recall, truncation and other sources of error) may be the number of protected acts of intercourse during a specified period (such as "the past seven days" or "this month") divided by the total number of sexual encounters over the same

time period. A third approach is to ask respondents to state the relative frequency (such as "never," "rarely," "occasionally," "about half the time," "most of the time," "almost always") with which they used a method over a specified time period. Such data, though less quantitative, may be useful to program planners seeking to identify individuals or sub-groups in greatest need of services.

(ADOLESCENT) CONTRACEPTIVE USER AND/OR NON-USER CHARACTERISTICS

DEFINITION

A socio-demographic profile of current users and/or non-users of contraceptive methods. Non-users should be further subdivided into sexually active youth who do not use contraception and those who abstain from sexual activity. Relevant characteristics include: age, parity, urban-rural residence, economic status, ethnicity, and other factors judged important in the context of a specific country.

Accurate data on age are of special importance with this age group. At a minimum, programs need to distinguish the under-15 from the over-15 age group, assuming that the over-15 group is more likely to be sexually active.

Additional characteristics that are valuable to obtain include:

- gender;
- currently sexually active or not;
- frequency of sexual activity and number of partners;
- marital status (married/in union, single);
- parity, pregnancy history;
- education status (in school, not; if not, number of years of past schooling);
- contraceptive use history (ever use, current use, method, source(s) of supplies);

- STD history (past, current status); and
- STD protection use (ever use, current use, method, source(s) of supplies).

Where relevant:

- female genital mutilation;
- history of abuse/violence or sexual abuse/violence;
- same-sex sexual contacts; and
- previous exposure to sex education.

DATA SOURCE(S)

Population-based surveys, service statistics (for methods provided by SDPs), sales records (over-the-counter methods), clinic records.

PURPOSE AND ISSUES

This measure indicates the type of persons using contraception in a given population (or program). User profiles based upon service statistics reflect the characteristics of clients receiving contraceptive services at program SDPs, whereas profiles based upon survey data reflect the characteristics of users obtaining contraceptive services and supplies from all service and distribution sources. (This indicator is classified under "outcome" since it is highly appropriate for population-

based measurement. However, when this indicator is based on program statistics, it would be clarified under output.) Population-based data may also be used to ascertain characteristics of adolescents who are abstinent and therefore do not use services. Thus, a comparison of the characteristics of the user population to those of the general population provides insight into the types of people being reached (e.g., better educated, more likely to have paid employment, etc.). A comparison of sub-groups (e.g., age, marital status, rural/urban) within the adolescent age group can add to the scant knowledge about patterns of service utilization and contraceptive practice among adolescents.

For survey data, it is also possible to compare the characteristics of users versus sexually active non-users and abstinent individuals, and thus to identify sub-populations not being reached by the existing program. Surveys have the added advantage over service statistics that more detailed information on the characteristics of contraceptive users is normally available. Non-users of contraceptives is a relevant sub-population of adolescents to track. As access to services expands for adolescents, one goal will be to delay intercourse or promote abstinence, especially among younger adolescents. Also, sexual activity is quite sporadic for many adolescents. Adolescents who are not sexually active may still use services, to obtain information and counseling.

This indicator asks the question: "Of all individuals using contraception, what is the breakdown by specific characteristics such as urban/rural residence, educational level, religion, ethnic group, etc.?" For example, one might find that of all contraceptive users in a given country, 70% were Catholic and 30% Evangelical. If, in that country, 70% of the population were Catholic, 30% Evangelical, then this breakdown would simply mirror the composition of the general population (Panel B taken from Bertrand et al., 1994, p.162).

The indicator on user characteristics should not be confused with the question asked in many research studies: "How does contra-

ceptive use differ by subgroup in the population?" (which compares the percentage using contraception for the different categories of the explanatory variable, e.g., urban/rural residence, educational level, religion, ethnic group, etc). To continue with the above example on religion, one might find that 40% of the married women of reproductive age in the total population used contraception, and that there was no difference by subgroup (see Panel C, below).

Panel A: Absolute Numbers: Cross tabulation of modern contraceptive use by religion

Uses Modern Contraception:	Religion		Total
	Catholic	Evangelical	
Yes	280	120	400
No	420	180	600
Total	700	300	1000

Panel B: Among users, what is the breakdown by religion? (What religion do users tend to be?)

(Answer: 70% Catholic, 30% Evangelical)

Uses Modern Contraception:	Religion		Total
	Catholic	Evangelical	
Yes (users)	70%	30%	100%
No (non-users)	70%	30%	100%
Total	70%	30%	100%

Panel C: Does the percent using modern contraception differ by religious group?

(Answer: no)

Uses Modern Contraception:	Religion		Total
	Catholic	Evangelical	
Yes	40%	40%	40%
No	60%	60%	40%

Increasingly, contraceptive services programs incorporate the promotion of dual protection, against unwanted pregnancy and STD/HIV. It is pertinent to monitor the utilization of both types of services (i.e., contraception and prevention and treatment of STDs/prevention of HIV).

UNMET NEED FOR FAMILY PLANNING AMONG ADOLESCENTS

DEFINITION

The number/proportion of sexually active adolescents whether in union or not who are fecund and who desire to postpone childbearing (spacers), or in a few cases, terminate childbearing (limiters), but who are not currently using a contraceptive method.

DATA REQUIREMENTS

Responses to survey questions on:

- desire for (additional) children and, if so, the desired time until childbirth;
- current contraceptive use status;
- current sexual activity, fecundity, pregnancy, and amenorrhea status for women not currently using a contraceptive method;
- wanted status of the last pregnancy for women currently pregnant or amenorrheic; and
- whether a contraceptive method was being used at the time of the current/last pregnancy.

DATA SOURCE(S)

Population-based surveys.

PURPOSE AND ISSUES

The indicator of unmet need has long been thought extremely important for family plan-

ning program management, in that it provides a measure of unfulfilled contraceptive services demand.

In recent years concerns have been raised about indicators of unmet need for which involve both the measurement procedure used and the inclusiveness of the definition (see Bertrand et al., 1994). Adjustments have been proposed to account for the fact that demand for spacing is artificially inflated and that fulfillment of spacing needs results in a reduction of the limitation component. While these adjustments result in a reduction in the level of unmet need, a broadening of the definition of the population at risk of pregnancy through inclusion of those using traditional methods, those using effective methods incorrectly or infrequently, and those using unsafe or inappropriate methods for them, lead to much higher estimates.

Not only are these concerns relevant to the computation of the level of unmet need among adolescents, there is an additional issue which further confounds measurement for this sub-group. Conventional measurement of unmet need is limited to those of reproductive age who are currently married or in union. Therefore, by definition, adolescents who are single or, if single, have a "permanent" partner are excluded. The problem is that many of these young women are sexually active (if only intermittently), do not want to become pregnant, and are not using contraception. Were the standard indicator

Prepared by Barbara Mensch, The Population Council.

Intermediate Outcomes

adjusted to include this group of adolescents, the level of unmet need in many societies would be substantially higher. However,

given that sexual activity among adolescents is frequently sporadic, imprecision in the estimate is to be expected.

PERCENTAGE OF ADOLESCENTS WHO HAVE EXPERIENCED COERCIVE SEX

DEFINITION

Coercive sex is a violation perpetrated by someone with power over another. This violation takes a sexual form and may include physical, verbal and emotional components. Types of coercive sex include: rape, date-rape, domestic violence, sexual assault, sexual harassment, incest and sexual molestation (Kidman, 1993).

DATA REQUIREMENTS

Self-report by adolescents of coercive sex or sexual abuse either in the immediate or distant past.

DATA SOURCE(S)

Structured interviews (at population level), alternatively, intake interviews, interviews during health service provision and education or counseling programs (at the program level).

PURPOSE AND ISSUES

This indicator attempts to measure the prevalence of coercive sex acts perpetrated against adolescents in order to ascertain the magnitude of the problem. Contrary to the popular opinion that the majority of adolescents become sexually active voluntarily, many female adolescents, and sometimes male adolescents, first have sex when coerced--often by a relative or an older person in an inappropriate use of power (Kidman, 1993). This underlines the importance of this

indicator which should generate data to further buttress current, but empirically weak evidence that adolescents are frequent victims of non-consensual sex (The Population Council draft document, 1994).

Due to the sensitivity of this matter, it is often necessary to ask questions about coercive sex repeatedly to offer clients or respondents an opportunity to disclose their involvement. One potentially effective way of broaching the subject is to ask the adolescent: "Did you have any upsetting sexual experiences in childhood or adolescence?" (Heise, 1995). After receiving a positive response, clinicians, counselors, or researchers can probe deeper by asking: the age at first abuse, the age at last abuse, the frequency of occurrence, type of abuse, whether abused by one or more people, the relationship of person(s) to the victim, the location of the abuse (e.g., home, school, etc.), and whether the victim told anyone else about the abuse.

Responses to the above questions will yield proportions of adolescents reportedly victimized by coercive sex acts. This statistic is an important "adolescent" issue both because of psychological impact of coercive sex on clients in adolescent programs, and its ability to undermine the effectiveness of pregnancy and AIDS prevention strategies (Elias and Heise, 1993).

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Intermediate Outcomes

Additional pertinent questions associated with coercive sex and adolescent programs include the following.

- Does a program have policies and/or protocols for dealing with coercive sex?
- If so, do the program's educational activities and counseling sessions include discussion of barriers to safer sex including coercive sex?
- Does a program attempt to identify those who have been sexually abused or have experienced coercive sex?
- Have staff received the necessary training to deal with the many facets of this issue?
- If the program does identify victims of coercive sex, does it have treatment and/or referral services?

PERCENTAGE OF WOMEN OF REPRODUCTIVE AGE HAVING UNDERGONE FEMALE CIRCUMCISION

DEFINITION

The proportion of women (or specifically, of adolescents) who have undergone female circumcision, a cultural practice that is generally divided into three categories:

- Clitoridectomy: the removal of all or part of the clitoris.
- Excision: the removal of all or part of both the clitoris and the labia minora.
- Infibulation: the removal of all or part of the clitoris, labia minora and labia majora followed by the stitching together of the edges of the wound so as to form a hood over the urethra and vagina leaving only a small posterior opening to allow the passage of urine and menstrual fluid (Macro International, 1994).

DATA REQUIREMENTS

Counts of women of reproductive age who have undergone female circumcision.

DATA SOURCE(S)

Population-based surveys; alternatively, facility-based data.

PURPOSE AND ISSUES

This indicator measures the prevalence of female circumcision in those population groups where it is still commonly practiced

(notably in parts of Africa and the southern region of the Arabian peninsula). The denominator for this indicator can be either all women of reproductive age or females in the adolescent age group. Nonetheless, this indicator is included under "Adolescents" since most females who undergo the procedure do so prior to or during adolescence (the typical range is between the ages of four and twelve years; however, in some communities, women can be as old as nineteen).

Despite widespread condemnation by health officials and international agencies such as the WHO and UNICEF, female circumcision continues in many countries causing a myriad of both short-term and long-term health complications. Only facility-based data provide estimates on the extent of different complications, and they may not be representative of the larger population, but rather they may reflect the subgroup of those seeking medical care for these complications. Less measurable, but equally important are the psycho-social effects of the custom on young girls and women.

The primary source of data for the indicator is population-based surveys. The DHS initially asks women of reproductive age if they have ever been circumcised, and if so, the type of circumcision. The latter question is asked because of the differential health risks involved in the three procedures. It is important to

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note that respondents may not identify the scientific names of the three procedures; therefore use of local terminology, after matching with its scientific counterpart, is necessary. Women having undergone circumcision are asked their age at the time it occurred; the second series of questions from the DHS concerns the respondent's eldest daughter, to track inter-generational changes in the practice of female circumcision.

Currently, these data are not difficult to collect, as there is little stigma towards female circumcision in the countries where it is still practiced; however, as IEC programs expand, under-reporting may become an issue. The indicator may also be of utility to program planners who can use this information to design programs integrating IEC, counseling, adolescent and family planning programs.

LONG-TERM OUTCOMES

Fertility

- Age-specific fertility rate (among adolescent age groups)
- Proportion of births to adolescent women that are wanted
- Median interval between first and second births
- Proportion of adolescents' second birth intervals that are of a specific length or longer

Indicator

AGE-SPECIFIC FERTILITY RATE (AMONG ADOLESCENT AGE GROUPS)

DEFINITION

The number of births occurring during a given year or reference period per 1000 women of a given age or range of ages (e.g., 15-19 years old).

DATA REQUIREMENTS

The ASFR is calculated as:

$$\text{Formula ASFR}_{(15-19)} = (B_{(15-19)} / E_{(15-19)}) \times 1000$$

Births = Number of births to women for each age or for a specific range of ages (e.g., 15-19 years old) in a given year or reference period.

Exposure = Number of women of each age or of a specific range of ages (e.g., 15-19 years old).

DATA SOURCE(S)

For data on births:

Population-based surveys, vital statistics, or population censuses.

Surveys: questions on prior births or complete/partial birth histories

Censuses: questions on births during a specified period preceding the census.

PURPOSE AND ISSUES

The primary purpose of age-specific fertility rates among women of adolescent age (e.g., 15-19 years) is to measure and monitor trends in fertility rates for the age groups targeted by adolescent programs. In fact, this information is often more useful for creating awareness among decision makers regarding the extent of adolescent fertility than it is for evaluating the impact of adolescent programs at the population level. There are two reasons for this.

First, adolescent programs are still in their infancy in the majority of countries; they reach a relatively small segment of the adolescent population, often residents of major urban areas, and even then only a small fraction of this age group. Thus, adolescent programs are generally not of the scope or magnitude to effect change in age-specific fertility rates. Second, there are other factors that work concurrently to increase and to decrease age-specific fertility rates, independent of adolescent programs. These include education of young women, exposure to western ideas through the mass media, changes in societal norms, and related factors.

Why then are age-specific fertility rates even mentioned in this manual? Family planning programs, including adolescent programs with contraceptive services, are designed to reduce unwanted fertility among women of

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reproductive age; a substantial proportion of unwanted fertility involves adolescents. If adolescent programs were to increase in magnitude and intensity, as have family planning programs for married women in developing countries around the world, then one would expect to find a decrease in age-specific fertility rate over time, assuming that a substantial number of the births occurring to adolescents in the baseline period were in fact unwanted. To omit this indicator would be to overlook the important long-term goal of such programs.

To our knowledge there are no examples of an evaluation of adolescent reproductive health programs at the national scale based on age-specific fertility rates. However, there are isolated examples in the literature from the United States that attempt to demonstrate the effects of school-based programs on births for a given county. In one such study the numerator consisted of the number of births to women 15-19 in a given county, which were obtained from hospital birth records. The denominator was the population of the schools in question (i.e., the number of adolescent women at risk based on records from the school). This study found that at least for a short period of time, the adolescent program did have an effect on fertility rates. However, similar studies have not been conducted in developing countries. Moreover, given the large number of adolescents not attending school, this approach would be of questionable utility in the context of developing countries.

In contrast to developed countries that tend to have reliable fertility data from vital statistics and a census every ten years, in developing countries the most reliable source

of data for age-specific fertility rates is generally a population-based survey (e.g., the Young Adults Reproductive Health Surveys conducted in numerous Latin American countries). In certain countries with adequate though not highly reliable vital statistics systems, fertility rates based on these data may be acceptable when aggregated at the national level, but may lack precision when broken down by subgroups, such as urban-rural.

Several Latin American countries have reliable survey-based data that demonstrate change in age-specific fertility rates for adolescents over time. Examples of decreases include:

Costa Rica - from 99 to 87 births per 1000 (between 1986 and 1993)

El Salvador - from 138 to 124 births per 100 (between 1988 and 1993)

Family planning programs in general and adolescent programs in particular may have contributed in some way to this decline. However, based on these statistics alone one is unable to directly attribute these changes at the population level.

A potential problem in measuring the indicator through sample surveys is that adolescents may be excluded as eligible survey respondents through age misreporting. There is evidence in DHS surveys that 15-17 year-old females are frequently misclassified as 14 by either the household respondent or the interviewer. However, this will only cause a significant bias in societies where fertility rate are high among adolescents.

Indicator

PROPORTION OF BIRTHS TO ADOLESCENT WOMEN THAT ARE WANTED

DEFINITION

The proportion of births occurring during a specified period of time that were "wanted." Conversely, one can calculate the births that were "unwanted."

Births are classified as "wanted" when respondents report having desired a child (or additional children) at the time of becoming pregnant with the referenced birth.

"Unwanted" births are those for which respondents report having not desired a child or additional children at the time of becoming pregnant.

DATA REQUIREMENTS

Responses to retrospective questions on whether or not respondents had desired the child or additional children at the time of becoming pregnant during a specified interval of time (for example: births occurring 2-5 years prior to the survey).

The indicator may be derived from a survey question. In the DHS, for example, the following question is asked regarding all births in the five year period prior to the study: "Just before you became pregnant with (child), did you want to have more children then, did you want to wait longer, or did you want no more children?" Desired births consist of those in the first two categories.

DATA SOURCE(S)

Population-based survey.

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PURPOSE AND ISSUES

The purpose of this indicator is to measure the extent to which fertility among the 15-19 year age group (or other group defined by a different range of ages) is in fact wanted. The purported goal of most adolescent programs with a contraception component is to reduce unwanted fertility. The previous indicator (age-specific fertility rates) measures the level of fertility in a given population and can be used to show trends over time (e.g., a decrease in adolescent fertility). However, many would argue that adolescent reproductive health programs should aim to satisfy the reproductive intentions of the client population, rather than simply to reduce fertility, especially in a situation where a substantial portion of the adolescent fertility takes place among married women (for example, in countries where the age of marriage is low). Thus, the goal of many programs is to decrease unwanted fertility or conversely to increase the proportion of births that are wanted.

This indicator should ideally be analyzed in conjunction with age-specific fertility rates for adolescents to bring greater understanding of fertility trends and satisfaction of reproduction intentions among given age group.

In contrast to age-specific fertility rates, which can be obtained from vital statistics or census data in selected countries, data on the "wanted" status of the previous birth is available only through surveys.

As mentioned in the *Handbook of Indicators*

for Family Planning Program Evaluation (pg.126), the proportion of previous births that are reported as not desired is conceptually simple. However, there are certain methodological problems with its use.

The indicator may be seriously biased toward overstating the actual level of "wanted" births due to reluctance on the part of the survey respondent to admit to "unwanted" pregnancies in survey interview situations.

Indicator

MEDIAN INTERVAL BETWEEN FIRST AND SECOND BIRTHS

DEFINITION

The median number of months between first births experienced by adolescents and their second births.

The median interval is calculated as:

$$\text{MEDIAN} = L + [(50 - cf) / f] \times I$$

where:

- L = the true lower limit of the class interval in which the median is located,
- 50 = the 50th percentile observation,
- cf = the cumulated frequency up to the median class interval,
- f = the frequency within the median class interval, and
- I = the class width.

DATA REQUIREMENTS

The distribution of second births occurring to women whose first birth occurred during adolescence by number of months elapsed since the first birth.

DATA SOURCE(S)

- Population-based surveys
- Follow-up studies of women experiencing birth of a child during adolescence.

PURPOSE AND ISSUES

Birth interval measures provide an indication of fertility spacing or tempo. Conventional uses of birth interval measures for demogra-

phic analysis and FP program evaluation and some of the issues involved in their use are described in *Handbook of Indicators for Family Planning Program Evaluation* (pp. 184-185).

In the context of RH indicators for adolescents, their primary use is an indication of how closely second births are spaced following a first birth, which in many cases is unplanned or unwanted. As such, the measure provides an indication of the extent to which family planning and RH services are able to reach a significant proportion of women experiencing a first birth during adolescence and the effectiveness of such interventions in delaying subsequent births.

As in the more general use of birth interval measures, a major concern is the extent to which birth intervals that are too short (e.g., less than 18 or 24 months) may jeopardize the health of women and children. This concern is more pronounced in case of adolescents, where the deleterious effects of giving birth at young ages may be compounded by having a second, closely-spaced birth.

The usual cautions regarding interpretation of birth interval measures apply to the present indicator. While the bias introduced by including women who never have a second birth in the computation of the indicators is minimized by using the median instead of the mean interval length, the fact that birth intervals are censored should be borne in mind. Avoiding this potential bias requires the use of life table or survival methods in the computations.

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PROPORTION OF ADOLESCENTS' SECOND BIRTH INTERVALS THAT ARE OF A SPECIFIC LENGTH OR LONGER

DEFINITION

The proportion of women experiencing a first birth during adolescence that have a second birth within a specified number of months following the first birth (e.g., within 24 months).

DATA REQUIREMENTS

The distribution of women experiencing a first birth during adolescence by number of months elapsed since the first birth and whether they have had a second birth.

DATA SOURCE(S)

- Population-based surveys
- Follow-up studies of women experiencing birth of a child during adolescence.

PURPOSE AND ISSUES

This indicator is an alternative to the median birth interval measure. Its principal advantage is that in addition to providing information on

the spacing of second births among women who experienced their first birth during adolescence **and who have gone on to have a second birth**, it provides information on the number or proportion of women who have been able to delay or avoid having a second birth for at least the referenced number of months used in the measure. In addition to perhaps being a more sensitive measure of program success in avoiding unwanted births than the median birth interval lengths indicator, the effects of censoring are minimized.

More refined versions of the measure might be (1) the proportion of adolescent women experiencing a delivery who had become pregnant again within a specified length of time following the first birth or (2) the proportion of women who become pregnant during adolescence who experience a second pregnancy within a specified number of months. These measures would take into account the fact that some unwanted pregnancies do not result in live births due to induced abortion.

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References
and
Appendices

- References
- Appendix A: Program-Based Versus Population-Based Indicators
- Appendix B: Members of the Subcommittee on Adolescent Reproductive Health Services
- Appendix C: Steering Committee of the RHIWG

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PROGRAM-BASED VERSUS POPULATION-BASED INDICATORS

Certain indicators can be used either as a program-based or population-based measure. That is, a given variable could be included in surveys either of program participants/clients or of survey respondents randomly selected from the general public. In this report, we have classified these indicators as population-based, but they could also be used at the program level. The indicators that could be used at either level include:

- Percentage of adolescents who know at least one source of information and/or services for sexual and reproductive health
- Percentage of adolescents that know of at least one contraceptive method
- Percentage of adolescents who desire pregnancy
- Percentage of adolescents who agree with the attitudes promoted in a reproductive health program
- Percentage of adolescents who intend to use protection at first/next intercourse
- Age at first intercourse
- Percentage of previously sexually active adolescents who abstain from sexual intercourse
- Age at first birth
- Percentage of adolescents who used protection at first/most recent intercourse
- (Adolescent) contraceptive user and/or non-user characteristics
- Percentage of adolescents who have experienced coercive sex
- Percentage of women of reproductive age having undergone female circumcision

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