

H N P D I S C U S S I O N P A P E R

Interactive Learning Exchange

Exploring Strategies to Reach and Work with Adolescents

Leslie Kennedy Elder

March 2004



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Health, Nutrition and Population (HNP) Discussion Paper

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ISBN 1-932126-82-1

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Exploring Strategies To Reach And Work With Adolescents

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Report of a World Bank Interactive Learning Exchange,
The World Bank, Washington DC, June 5-6, 2002

Abstract: The Millennium Development Goals (MDGs) have refocused global attention on still un-addressed needs of children and youth. In response to the MDGs, the World Bank is strengthening its attention to the most vulnerable populations such as children and adolescents, through a cross-sectoral approach to human development including education, health, nutrition, sexual and reproductive health, and social protection. One crucial component for healthy adolescent development is good nutrition. It affects health, learning, physical fitness and the ability to withstand stress. Yet this population has received little emphasis in nutrition programs, and nutrition, in turn, has received little attention from programs for youth. While some low-cost solutions to adolescent malnutrition are available, nutrition specialists and programs do not have the operational experience needed to access and work with youth.

In order to learn from the experience of adolescent health and development specialists, and avoid reinventing the wheel, the World Bank Nutrition team hosted a consultation to explore best practice strategies for reaching and working with youth. The objectives of the workshop were (i) to gather and distill information from multiple sectors on the successful approaches and promising practices for identifying, reaching, and working with vulnerable adolescents in resource-poor settings; and (ii) to discuss how effective strategies from other sectors might be exploited for nutrition. The Learning Exchange resulted in dialogue between a diverse group of adolescent health and development and nutrition sector specialists that would not otherwise have occurred. It successfully raised awareness among youth specialists of the synergies between actions to address the healthy development of adolescents and improved nutrition. The consultation also streamlined the learning process for the nutrition sector about how to work with this age group.

Keywords : adolescent health, nutrition, micronutrients, low birth weight, youth

Disclaimer: The findings, interpretations and conclusions expressed in the paper are entirely those of the author, and do not represent the views of the World Bank, its Executive Directors, or the countries they represent.

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This report and the presentations are available on the following website:

<http://www.worldbank.org/nutrition>

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FOREWORD

The World Bank and its partners have been challenged anew to work with countries to tackle un-addressed health and development problems of vulnerable groups. Among these groups, adolescents have been identified as particularly important, and often neglected. There is increasing concern about the negative consequences of malnutrition in adolescent girls and young women for their offspring and themselves. Renewed action to address the nutritional problems and needs of adolescents is therefore a priority.

There are 1.2 billion adolescents between the ages of 10 and 19 in developing nations, making up one fifth to one quarter of their populations. While adolescents have typically been considered a low risk group for poor health, this ignores the fact that many health problems later in life can be improved or avoided by adopting healthy lifestyle habits in adolescence. There is substantial evidence that inadequate diets affect adolescents' ability to learn and work at maximum productivity. Undernutrition increases the risk of poor obstetric outcomes for teen mothers and jeopardizes the healthy development of their future children. Children born to short, thin women are more likely themselves to be stunted, underweight and less cognitively able than normal birthweight peers. In addition, the heightened obstetric risk caused by stunting in childhood and adolescence persists throughout a woman's reproductive life.

Adolescence is also a unique intervention point in the life-cycle. It is a stage of receptivity to new ideas and a point at which lifestyle choices may determine an individual's life course. It offers a chance to acquire knowledge about optimal nutrition during young adulthood that could prevent or delay adult-onset diet-related illnesses later on. Potentially, the inclusion of adolescent boys in nutrition and healthy lifestyle programs will contribute to the improved nutrition and health of women during childbearing and for infants and young children in the critical early years of life.

Attention needs to be directed at the link between adolescent nutrition and immediate and long-term health issues, including the cost effectiveness of addressing adolescent nutrition, so that the political commitment to support an action agenda can be secured.

In order to rapidly learn from the operational experience of knowledgeable youth program specialists, the World Bank Nutrition team undertook a consultative process – an interactive learning exchange – to glean and distill lessons learned about the best approaches to reaching and working with youth in resource-poor settings. This report summarizes that event. Specialists from a wide range of types of programs and agencies (international and domestic NGOs and PVOs, universities, research institutions, UN agencies, and representatives from bilateral donors), engaged in dynamic discussion and sharing of their ideas about the strategies that the nutrition sector might incorporate into programs for adolescent nutrition. At the same time, there was reciprocal learning about the often-overlooked contributions that improved nutrition might add to their own programs for youth health and development. This report, prepared by Leslie Elder, documents the discussions and highlights key opportunities for further action.

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ACKNOWLEDGEMENTS

The consultation was organized by Leslie Elder and Judith McGuire, consultants to the Nutrition Team, Health, Nutrition and Population unit of the Human Development Network, World Bank. Leslie Elder prepared the report of the Learning Exchange. Nusa Maal, of SenseSmart Consulting, assisted with the planning of the Interactive Learning Exchange, led the design and facilitation for the Exchange, and produced the original artwork for the materials and the meeting. Kathleen Kurz, International Center for Research on Women (ICRW) and James Rosen, consultant to the Population and Reproductive Health Team, HNP unit of the Human Development Network, World Bank, provided extensive technical guidance to the Nutrition Team. Many other technical specialists both in and outside of the World Bank gave generously of their time and ideas as the nutrition team navigated the unfamiliar territory of adolescent health and development. Dr. Kurz also made an important contribution during the meeting with her presentation, “Nutritional Status of Adolescents.”

The World Bank acknowledges with appreciation the five youth panelists who agreed to share their time and creative energy with the consultation: Stephanie Ianochkov, Rodrigo Lopez, Stubbs Maluleke, Shingayi Musarurwa, and Mikiko Senga. Ritu Chhabra, Nutrition Team, World Bank, assisted with recording the proceedings of the consultation. Karol Goodwin, Nutrition Team consultant, ably coordinated and facilitated preparations and logistics for the meeting, assisted by Merced Doroteo, World Bank. The final report was formatted by Gisele Biyoo.

The Nutrition Team also gratefully acknowledges a brainstorming session on adolescent nutrition in advance of the consultation hosted by Lawrence Haddad and Stuart Gillespie, International Food Policy and Research Institute. Financial support from the Netherlands Ministry of Foreign Affairs, through the Bank-Netherlands Partnership Program is gratefully acknowledged.

The author of this Report is grateful to the World Bank for having published the Report as an HNP Discussion Paper.

EXECUTIVE SUMMARY

Within the framework of achieving the Millennium Development Goals (MDGs), the World Bank and its partners are working with countries to address health and development problems of vulnerable groups such as children and adolescents. One crucial component of the healthy development of adolescents is good nutrition. Yet this population has received little emphasis in nutrition programs and youth health and development programs have similarly not addressed nutrition in their strategies to improve outcomes for adolescents.

To accelerate action to address the nutritional problems and needs of adolescents, the World Bank Nutrition Team undertook a consultative process to learn from the experiences of professionals working with youth in resource-poor settings. The interactive learning exchange among youth program specialists examined and made suggestions on i) how to define the target population; ii) how the needs of an adolescent population are best assessed; iii) how to reach adolescents iv) how to work effectively with adolescents; v) what the main nutrition issues are for adolescents; vi) how to integrate nutrition actions into programs for adolescents; and vii) how to accelerate action for the health and development of adolescents.

Key findings of the consultation included the following:

Youth are not a monolithic target population. Narrow age bands and consideration of a range of key attributes (gender, poverty level, living circumstances, in/out of school among others) are critical determinants of an approach to intervening with adolescents.

Youth must be consulted closely and involved integrally in the process of assessing problems, designing and implementing programs, and crucially, understanding and embracing the need to monitor and evaluate programs that address adolescents.

The youth lens must be applied to message development and intervention strategies. For example, according to the consultation's youth participants, "Nutrition is boring, but food is fun."

Youth programmers felt that nutrition is overlooked and often absent from broader youth health and development programs, but that it is appealing in its lack of stigma or taboo as a topic of interest and concern to adolescents and their families.

There was consensus that adding nutrition represents an important value-added synergy to many outcomes of interest to traditional youth health/development programs.

Adolescent nutrition problems are not well understood or recognized widely, but they have an impact on adolescent health/development for youth currently and an important role in later life cycle health and nutrition. In the case of girls, there is a direct intergenerational link to fetal growth and well-being, with later consequences for infant and young child survival and health.

There are a number of efficacious interventions to address some of the nutrition problems of adolescents (for example, iron/folate supplementation) and there are at least pilot-level experiences with effectiveness for these same approaches. There are also related health interventions (e.g., malaria prophylaxis, treated bed-nets, deworming) with known efficacy and effectiveness that impact on the nutritional status of youth and which programs can implement now. There are also a range of interventions which have not been implemented in this target population, and for which operations research needs to be supported.

INTRODUCTION

The Millennium Development Goals (MDGs), established by the UN Millennium Declaration in September 2000 and the UN General Assembly Special Session for Children in May 2002, have refocused global attention on still un-addressed needs of children and youth. As part of its commitment to reduce global poverty and improve the health of the poorest nations through the achievement of the MDGs, the World Bank is engaged in strengthening its attention to the most vulnerable populations, such as children and adolescents, through a cross-sectoral approach to human development including education, health, nutrition, reproductive health and social protection.

One crucial component of the healthy development of adolescents is good nutrition. It affects adolescent health, learning, physical fitness, and ability to withstand stress. Yet this population has received little emphasis in nutrition programs, and nutrition, in turn, has received little attention from programs for youth. An evaluation of the World Bank's recent Health, Nutrition, and Population project portfolio found only a handful of projects that planned to address the nutritional needs of adolescents (Annex 1). While low-cost solutions to adolescent malnutrition are available, nutrition specialists and programs do not have the operational experience needed to access and work with youth. Yet many organizations are successfully reaching adolescents and improving their lives in other sectors such as reproductive health, child labor, youth livelihoods, urban violence and youth leadership development. In order to learn from these multifaceted experiences and avoid reinventing the wheel, the World Bank Nutrition team hosted a meeting to explore best practice strategies for reaching and working with youth (see Workshop Agenda and Participants' List, Annexes 2 and 3).

PURPOSE OF THE LEARNING EXCHANGE

The purpose of the workshop was to engage in focused dialogue and exchange of ideas with youth program experts in order to mine the operational knowledge of program managers from the frontlines. The long-term objective of the meeting is to accelerate effective and sustainable action for improved adolescent health, growth, and development.

In lieu of didactic presentations, participants were challenged to think about key questions (Annex 4) in advance of the workshop to facilitate bringing their own learning to the table. A panel of older adolescents and young adults also spoke about their ideas regarding how to design and implement programs to address adolescent health and development as well as fielding questions from the youth program experts. During the two days together, youth program representatives were tasked with examining their collective experiences to date, synthesizing lessons learned, and speculating about how they might be applied to nutrition as a sector.

The immediate objectives of the workshop were:

1-To gather and distill information from multiple sectors on successful approaches and promising practices for identifying, reaching, and working with vulnerable adolescents in resource-poor settings, and

2-To discuss how effective strategies from other sectors might be exploited for nutrition.

In order to achieve the objectives, the workshop was planned using a variety of unconventional communications techniques to draw out knowledge about effective (and ineffective) strategies for working with adolescents from a diverse array of programs, geographical settings, and target populations. Annex 5 provides a description of these facilitation processes.

RESULTS OF THE LEARNING EXCHANGE

1) HOW DO WE DEFINE THE TARGET POPULATION?

According to the meeting participants, it is important to determine a targeted audience for programs addressing health and development issues for youth. The short answer to the question of how to target is: “It depends...” The goals of the program combined with the types of interventions either available or feasible to address selected issues play a role in decisions about how to target.

A clear message concerned the wide variety of age definitions of “adolescents” or “youth.” For example, the government of India defines youth as individuals between the ages of 15 and 35. Many programs use the World Health Organization (WHO) definition of adolescents as individuals ages 10 to 19 and youth as those between the ages of 15 and 24. This report uses *adolescent*, *youth*, and *young people* interchangeably, defining specific age groupings as needed.

Constraints imposed by donors (e.g., ideological stances and/or priority issues of donor governments) as well as implementing agencies or gatekeepers for adolescents (for example, church groups, non-governmental organizations or NGOs, and parents) impact on program targeting. Legal definitions of accessible groups may constrain age cut-offs (for instance, programs addressing child labor). Special vulnerabilities (street children, adolescents employed in the non-formal sector, refugees/displaced persons, commercial sex workers or AIDS orphans) may also define the group of interest.

A number of characteristics should be considered when designing programs to intervene with youth, and participants in the learning exchange had varied experiences and recommendations. There was unanimity concerning the need to insure that the process of targeting specific adolescents did not result in stigmatization of individuals in a community. In addition, wherever a youth program operates, be aware of the groups of young people that are *not* reached by or accessing the services and interventions being offered. Are they in need of a different programmatic approach?

Age/stage. Of the many determinants affecting the lives of adolescents, age and developmental stage are two of the most important. Within the WHO chronological definition of adolescence (ages 10 to 19), the meeting participants recommended segmenting by narrow age spans for program message and intervention design. For an individual, a particular stage of adolescence can change overnight and is not necessarily related to age. At the same time, insure that age is not a rigid admissions ticket to programs and services -- children may not know their age and communities often do not define life stages by chronological markers.

Targeting by adolescent nutritional status

- Using anthropometry for diagnostic and targeting purposes with adolescents is complicated by the difficulty of reaching this population (especially the most disadvantaged) and the variable rates of growth between individual young people.
- It is important to disaggregate adolescent anthropometric data by sex because of the differences in size and timing of the growth spurt between the sexes.
- According to WHO (1995) for *individuals*, stunting (height for age < 5th percentile of the National Center for Health Statistics or NCHS/WHO reference data) is used to identify adolescents who could benefit from improved nutrition or treatment of other underlying health problems, with the greatest impact expected for premenarcheal girls and pre- or early pubertal boys.
- Thinness (low BMI*) in adolescents is useful for determining need for supplementary feeding, nutrition education, and referral to medical care, with a suggested cut-off of BMI < 5th percentile of the NCHS/WHO reference data. Adolescents with BMI > 85 percentile are at risk of overweight (WHO, 1995).
- At the *population* level summary statistics (mean values and standard deviation or SD) for thinness should be reported for targeting purposes by age and sex groups, as well as the frequency below the 5th percentile of BMI. Identifying regions with a high proportion of thin adolescents will help to guide decisions about design or intervention programs and the allocation of resources. Premenarcheal girls and pre-pubescent boys are the at-risk groups that will derive the greatest benefit from intervention (WHO, 1995).

*Body Mass Index (BMI = weight in kg/height in m²)

Using two to three year age bands allows a program to tailor interventions for the youngest, middle, and oldest age groups, reflecting the significant differences in ability, knowledge, and life experience of only a few years in adolescence. For nutrition programs, the fact that most 10 to 12 years olds do not participate in food purchasing or disposition of food resources within the household, while older adolescents may purchase and prepare food for themselves and/or the household, necessitates different approaches to programming and message design. For younger adolescents, parents may be the final arbiters on who eats what in a household, whereas older youth may have full responsibility for their own intake.

Targeting preventive programs to the youngest adolescents was stressed. In Malawi the age of sexual debut in some communities is as young as 10, making a reproductive health program that targets 15 to 24 year olds obsolete. There is mounting evidence that it is critical to “catch” youth during the earliest years of adolescence. It is often too late to prevent the development of high-risk behaviors if programs work only with older teens. Intervening with the youngest adolescents means that programs can reach youth with skills for making positive choices for healthy lifestyles and possibly mitigate some of the damage for children growing up in deprived environments.

According to some specialists, if scarce programming resources mandate limiting the interventions to one high risk group, those adolescents who are sexually active was suggested as one of the most critical populations with which to work.

Gender. Participants underscored the crucial nature of gender considerations for the design and implementation of programs to foster the healthy development of youth. In addition to different rates of physical maturation and other biological factors, cultural characteristics of communities create different health risks and vulnerabilities for boys and girls. In most cultures, gender differences are clearly reflected in the division of productive and reproductive roles, which frequently translate into unequal access of girls to education, economic resources, and health and

other social services. Differential access to education is one of the most pervasive determinants of gender inequity, with negative consequences for both the health of adolescent girls and their future offspring.

Nutrition may provide an important bridge between the sexes in terms of youth programming topics. The results of an unpublished study on counseling services for adolescents in ten Latin American and Caribbean countries (A. Monroy, 1995 reported in WHO/UNFPA/UNICEF, 1999) found that both boys and girls sought counseling on nutritional problems, whereas other counseling topics differed by gender.

Marital status and pregnancy. Married adolescent girls are often “missing.” They are frequently invisible to programs that address the needs of unmarried youth, but have difficulty accessing health services available to married women due to low social status related to their youth within their marital households. And if pregnant, they are lumped inappropriately with their older married counterparts.

Programs that fail to identify and address the health and development issues of married adolescent girls risk neglecting significant numbers of vulnerable youth. According to DHS surveys in East and Southern Africa, between 5 (Kenya) and 15 percent (Uganda and Malawi) of girls are married by age 15. By age 18, between 25 and 55 percent are married (Population Council, 2000). In Bangladesh, 50 percent of girls are married by age 15 and 90 percent of newly weds are between 11 and 19 years old.

Adolescent mothers are at particularly high risk for both poor obstetric and perinatal outcomes, including anemia, inadequate pregnancy weight gain and delivery of low birth weight infants. Many undernourished adolescent girls experience slower growth over a longer period than their well-nourished counterparts and they will not have finished growing before their first pregnancy. These still-growing girls appear more likely to produce lower birth weight infants due to competition for nutrients between the fetus and adolescent mother and poorer placental function (Allen and Gillespie, 2001). A combination of biological (e.g., incomplete linear growth) and psychosocial risk factors (e.g., restricted access to health services and financial resources, low decision-making capacity, low visibility in the community, low educational attainment) contributes to the higher risk profile for teen mothers.

Why is low birthweight of concern?

The intergenerational nature of undernutrition means that the poor nutritional status of mothers can negatively affect the growth of the fetus. Infants suffering from intrauterine growth restriction (IUGR) may be born with low birthweight (LBW = <2500 g); children born prematurely may also have LBW despite the fact that they grew adequately while in utero. Globally, at least 4 million babies born with LBW die annually. In developing countries, the majority of neonatal deaths occur in IUGR babies. There is also an increased risk of infectious disease occurring in LBW infants living past the first few days after birth.

LBW babies that survive infancy are often handicapped for life. They perform less well in school and on cognitive tests than matched higher birthweight peers. There is also some evidence that individuals suffering from LBW are at higher risk for adult-onset non-communicable diseases (hypertension, coronary heart disease, obesity, diabetes mellitus) than normal birthweight counterparts. And growth is affected in children born too small. Even in industrialized countries, LBW children do not fully catch up, and are shorter and lighter as adults, potentially lowering productivity as well as jeopardizing reproductive outcomes.

In addition to low maternal energy intake (quantity) and poor diversity of diet (quality), infections (e.g., sexually transmitted infections and malaria), substance abuse, and exposure of the mother to secondary smoke inhalation, indoor air pollution, and violence can contribute to IUGR and/or low birthweight.

In addition to comprehensive prenatal medical care, it is important that adolescents receive specialized nutritional counseling and attention to their behavioral and social needs, tailored to their life circumstances. For example, in a US study of teen mothers attending an adolescent obstetric clinic at the University of Texas (Berenson et al, 1997), several behavioral markers were associated with heightened risk of low pregnancy weight gain and LBW infants: unintended pregnancy; testing positive for a sexually transmitted disease; and physical assault during the current pregnancy. Screening for these social risk factors among pregnant teens will assist healthcare providers to improve nutrition-related reproductive outcomes.

In low resource settings in developing nations, adolescent girls, irregardless of marital status, are frequently subject to heavy physical workloads including care of younger children, hauling water and firewood, agricultural tasks, and food preparation for the household. This increases their nutritional needs in order to meet the demands of energy expenditure for their still-growing bodies. Pregnancy adds still higher demands. Studies looking at the influence of heavy manual labor on (adult) pregnancy outcomes in Brazil, the Gambia, and Ethiopia consistently found an adverse effect on birthweight (Lima et al, 1997). Influential members of the household as well as adolescents need information and counseling about the specialized dietary and nutritional needs of pregnant adolescents.

Other characteristics for youth program targeting include: Location (urban/rural; suburban; periurban); attender/non-attender of school; living with parents, extended family, alone or homeless; employed/unemployed; have a child/children with whom they live (or not); race; class; being disabled; destitute, poor, non-poor; level of educational attainment; whether youth are HIV-positive or living with AIDS, and whether they are sexually active/inactive.

For many meeting participants, donor or community demands have at times derailed the advice of program implementers to focus on a particular target group of youth. Sometimes spontaneous participation in a program by non-targeted youth in a community (of different ages, sex, or other

characteristics such as in or out-of-school status) also expanded the beneficiary profile. However, even when implementation of the project deviates from the original design, impact of the program on the intended beneficiaries can be captured through evaluation of those program participants that meet the definition of the target group.

2) HOW ARE THE NEEDS OF AN ADOLESCENT POPULATION BEST ASSESSED?

Participants in the learning exchange were asked to discuss best practice and problems related to needs assessments of adolescents.

Include stakeholders. Formative research, with an emphasis on incorporating youth and their communities in the process of problem identification and/or program focus is key. Self-diagnosis of problems helps a community to take ownership of the problem(s) and the solution(s). Focus groups and consultations with all of the stakeholders both in/outside of a community are important, as is time. It was suggested that it is not possible to build a project with, and within, a community in less than six months.

Assessment methodologies. Participatory rural appraisal (PRA) with the focus on shared learning between communities and outsiders received high marks in the meeting. PRA often uses such methods as semi-structured interviews with individuals, focus group discussions and community meetings. The language (word usage) of assessment tools is an important issue and pre-testing/piloting of tools is vital to insure collection of accurate information. Participants recommended validating qualitative data (which was acknowledged to be of variable quality, depending on the skill with which it is collected and analyzed) with results of quantitative data collection methodologies. At the same time, the youth specialists cautioned against over reliance on DHS-type models for survey design, suggesting that the youngest adolescents are often too young to respond appropriately to DHS-type questions. Always map out the range of needed resources (human, time, funds) ahead of beginning a needs assessment.

In India, the International Center for Research on Women (ICRW) implemented in-depth interviews and focus groups with adolescent girls. They found that the girls enjoyed the opportunity to talk about themselves at length, leading to rich insights into the overarching context of their lives. Not only did the girls contribute information about themselves, but they also asked many questions of the discussion leaders and interviewers necessitating knowledgeable, flexible individuals who can respond to adolescent queries appropriately.

Several learning exchange participants recommended taking an assets-based approach to the assessment of adolescents. This involves inventorying the positive attributes and resources (e.g., parents, teachers, clergymen) of youth and their lives in a particular setting in order to understand, “What’s working?” A program can then incorporate these strengths into its strategy.

Involve youth. Involving youth from the outset of the process is seen as key to successful design and implementation of a situation analysis. Partnering with youth will insure that an assessment accurately captures priority concerns for this group. Understanding what information (and misinformation) adolescents possess already is important, helping to define the skills and knowledge deficits in a particular population.

As youth participants in the learning exchange stressed, adults and adolescents may have radically different perceptions of the importance of specific issues. For a 14-year old, his acne is an overwhelming problem, while HIV/AIDS in the abstract appears to have little relevance to his emotional or physical well-being. Issues of food and nutrition are more likely to be of immediate

interest and concern to adolescents than less tangible (albeit more dangerous or risky) issues such as substance abuse, sexually transmitted diseases, or suicide. Yet data about diet, nutrition knowledge, signs and symptoms of nutrient deficiencies, access to food, food preparation/handling skills, and other related topics are rarely collected in advance of youth health, employment, or more general development program design.

Adults count too. Equally important is the integration of influential adults in the process, from formulation of assessment tools to implementation of the study. According to the youth experts, a frequent cause of program failure is the omission of key actors from any point in the process (formative research, program design and implementation, dissemination of evaluation results). Community members, parents, teachers, and youth are all involved in the healthy development of adolescents. At the same time, adults participating in youth needs assessments need training to use the specific assessment tools and methodologies correctly and effectively.

Data issues. Data from adolescents need to be collected and analyzed by age and sex. Globally, there are serious health data gaps for children ages 10 to 15 years. Nutritional status data are rarely available for adolescents. And particularly for unmarried adolescents, there is little information collected about sexual health (WHO/UNFPA/UNICEF, 1999).

Nutrition issues for adolescents: What to look for. When assessing the nutritional condition/problems of an adolescent population, data on activity levels including estimates of energy expenditure from recreational and physical work output as well as dietary intake will be important. Programs will need to assess adolescent knowledge of food preparation and handling, food purchasing (for example, do youth know about “best buys” for rich sources of micronutrients, protein, and energy) as well as their understanding of positive indicators of health and nutrition status. Even in settings of widespread undernutrition, adolescent girls have verbalized their desire to be thin like Western models rather than conceptualizing health and optimal nutritional status in relation to their ability to run quickly when playing sports, to do household chores easily, or to perform well in school.

Monitoring and evaluation. Given the dearth of evidence for the impact of youth programs, monitoring and evaluation of programs is crucial. Participants highlighted the need for development of a formal evaluation agenda for programs that address adolescent/youth health and development.

Lessons from existing youth programs include the importance of bringing youth participants on board with monitoring and evaluation (M/E) activities. They need to be convinced of the value of M/E data for themselves as well as for youth in the future. Data and their presentation must be demystified for adolescents (WHO/UNFPA/UNICEF, 1999) and different types of data may need to be collected. For example, a standard M/E system will document program coverage and effectiveness, but the quality of the interventions may best be captured by whether or not youth *value* the program.

Barriers to successful M/E efforts in the past include the complexity of measuring program outcomes based on multisectoral interventions, the long time frame necessary to document impact/see change, and the fact that the results of life skills education and communication for behavior change are often difficult to measure.

Meeting participants faulted existing youth program indicators for their frequent focus on morbidity and mortality, citing the relatively rare occurrence of both conditions in this population. The inadequate range of outcome indicators also means that adolescent health and

development programs do not capture the positive nutritional impacts (e.g., decreased incidence of low birth weight babies) of their non-nutrition interventions (e.g., family planning and birth spacing, antenatal care counseling).

The nutrition sector faces a similar focus by policymakers, clinicians, and scientists on the impact of nutrition interventions on rare occurrences such as maternal mortality related to severe anemia. This detracts from support and action for more widespread concerns related to mild and moderate forms of nutritional deficiencies. These conditions are the greatest contributors to the global burden of nutrition-related disease and disability that negatively affect the quality of daily life for large numbers of people including adolescents.

3) HOW DO WE REACH ADOLESCENTS?

In communities with high school attendance rates for children, reaching youth through the school infrastructure is an effective and efficient pathway, especially to access younger adolescents. Schools may also provide a base in the community for accessing out-of-school youth and parents. But as the meeting participants emphasized, school is only one avenue; geographic and social barriers to the most vulnerable populations surfaced as key stumbling blocks to program success.

Other possibilities for reaching youth include: Formal and non-formal work places that employ adolescents; youth centers (health, recreational, and other); Scouts/Guides; initiation ceremony cohorts; savings clubs, agricultural groups; vocational education training sites; health camps; public and private sector health services; markets and grocery stores; restroom walls and other public gathering places.

Reaching adolescents through schools. Many groups deliver health and nutrition services through schools. Save the Children/US supports an integrated package of school health and nutrition services in a number of countries. These services include vitamin and mineral supplementation, immunizations, deworming, dental and first aid kits, and school environment improvements. Sexual and reproductive health programs and hunger mitigation interventions are also delivered through schools.

School-based anemia prevention and control programs in Egypt and Peru

Anemia prevention and control programs in two markedly different countries achieved significant reductions in anemia and/or improvement in hemoglobin levels among adolescent girls in school settings. In Egypt boys also benefited, although the improvement was not statistically significant.

A 1997 national survey in Egypt (The Population Council) found that 47% of adolescent girls and boys are anemic. Poor dietary patterns are the main cause, with a typical diet having few iron-rich or iron absorption enhancing foods and high consumption of iron inhibitors such as tea. To address the problem, a school-based anemia prevention program was initiated with support from the United States Agency for International Development (USAID). The main interventions were weekly iron supplementation and nutrition education to improve diets. Malaria was not a contributing factor and an effective treatment program for schistosomiasis was functioning. Specially trained nutrition and health educators implemented the program. In addition to high student compliance with supplements, teachers and administrators took a strong interest in the innovative participatory teaching techniques used by the health educators and were frequently requested to conduct activities during instructional time. Overall anemia prevalence rates were reduced by 20% (Bumgarner et al, 2002).

Poor school girls in periurban Lima, Peru participated in a study to look at the efficacy and acceptability of daily and intermittent iron supplementation schedules delivered through the school. Compliance with the supplements was high and the frequency of reported side effects was low and similar across the intervention groups. The study authors concluded that, in addition to improving iron status and preventing anemia in adolescent girls, a school-based delivery strategy might help to improve maternal iron stores in populations where girls marry and become pregnant shortly after completing their highschool education. In this population, daily supplementation was more effective than weekly in increasing hemoglobin concentrations (Zavaleta et al, 2000).

Reaching adolescent girls through sports. Research in the USA and Kenya documents the association between girls' participation in sports and increased self-esteem. In some settings, there is also an association between athletics and delayed sexual debut. Brady and Khan (2002) of the Population Council suggest that by involving Kenyan girls in sports, they "...rewrite conventional scripts of femininity that encourage them to establish self-worth mainly in terms of their sexuality."

A winning combination: Sports and nutrition

There are important synergies between sports and nutrition programs. Particularly for programs aimed at marginalized adolescent girls in resource-poor settings, a focus on improved nutritional status may translate directly into improved athletic performance. By incorporating messages about nutrition and dietary behavior to enhance their strength and ability to perform on the sports field, girls develop a sense of ownership and stewardship of their bodies. Sports programs in combination with nutrition information can provide an important opportunity for girls to value themselves on the basis of their ability to learn, do work, compete in sports, and remain healthy (Population Council, 2000). And in both industrialized and developing country settings, there is strong evidence of the importance of healthy lifestyle decision-making skills related to diet and exercise for maintenance of health throughout adulthood.

Reaching out-of-school youth with community-based programs. Meeting participants debunked a myth that often surfaces in programs that work through schools: In-school youth are not smarter than out-of-school youth. But the needs and vulnerabilities of out-of-school adolescents can

differ significantly. There is substantial program experience with reaching adolescents in both formal and informal workplaces, in marketplaces and more broadly “on the street,” and through a variety of community groups (e.g., NGOs, Scout troops, YMCAs, and others). One advantage of working with adolescents in their daily environment is that prevention efforts aimed at risky behaviors can occur directly in the context that fosters or condones them.

Changing nutrition practices in the community: Approaching girls through marriage registration systems and community kitchens

Many of the newly wed women reached through an innovative partnership between the Ministry of Health (MOH) and Ministry of Religious Affairs in Indonesia were adolescents. Religious officers were trained by the MOH and The MotherCare Project* to counsel couples about the importance of iron and folate for the health of new mothers and their babies during the mandatory registration process for marriage. The main message was that brides should purchase and consume iron tablets each day for at least 30 days prior to conception. Results from the pilot study were encouraging. Anemia prevalence was lower and compliance with the recommended minimum of 30 tablets following marriage was high (Jusát et al, 2000).

In Peru, adolescent girls attending community kitchens participated in an educational intervention to improve their nutritional knowledge and dietary practices related to iron. In addition to increased understanding of their nutritional needs, they successfully raised their intake of iron-rich foods and iron absorption enhancers to a level significantly above the adult study participants. This change in dietary practices protected them from increased anemia prevalence rates seen in the study’s control groups (Creed-Kanashiro et al, 2000).

*Funded by USAID; implemented by John Snow, Inc., Arlington, VA

Reaching young people through mass media produced in partnership with youth. Based on winning movie scenarios selected from among submissions from 22,000 West African youth to contests held in '97 and '00, *Scenarios From the Sahel* is a collection of 13 short films about HIV/AIDS. Made by distinguished African directors and coordinated by the British NGO, Global Dialogues, the project is supported by a coalition of donors. The films are broadcast on television and used for school- and community-based education efforts. In addition to the winning entries, an archive in Dakar is the repository for the creative, informative ideas generated by the other contest entrants. By working directly with the words and ideas of young people, the process used by *Scenarios* provides a unique source of information about youth.

According to the project replication guide¹, textual analysis of the scenarios provides insight into the vocabulary of youth, their perceptions and knowledge of HIV/AIDS, and the types of risky situations they face. Their solutions to problems reflect the perspective of youth in ways that those proposed by adults will not.

Mass media offers the potential to reach youth otherwise unreachable through more traditional venues such as schools and the workplace. Cultural icons such as artists and athletes can reach them with positive health messages through radio, television, and the music industry. Mass media can also constructively influence the attitudes and behaviors of adults toward young people, correct adults’ misconceptions about the situation of youth in their communities, and strengthen partnerships between young people and adults.

¹ Enger, D and Winskell, K. (1999) *Scenarios from the Sahel: Working in partnership to prevent HIV/AIDS Replication Guide*. The Global Dialogues Trust, Dakar, Senegal.

At the same time, meeting participants cautioned against over-reliance on mass media as an instrument of behavior change. In Bhutan, mass media messages increased knowledge about sexual and reproductive health, but the project evaluation did not document behavior change. On the other hand, television messages about iron deficiency and anemia in Egypt successfully increased acceptance of iron supplements among adolescents. Clearly mass media has an important place in a broad communications strategy and can reinforce public health messages, but it is generally inadequate as a stand-alone intervention.

Reaching youth through improved access to health services. Traditionally underserved by the health sector, there are many efforts to improve the quality and accessibility of health services for adolescents in both developed and developing countries. Tailored services have been delivered through school health programs; government health services; special clinics and community-based centers for youth; and through social marketing campaigns directed at young people. Positive impact of special health services for youth has been documented for decreased incidence of helminth infections with improved growth and nutritional status; reduced incidence of unintended pregnancies; decreased complications during pregnancy and childbirth; improved fetal growth outcomes; increased breastfeeding and postpartum contraceptive use; reduced transmission of HIV and other sexually transmitted infections (STIs); and decreased use of drugs, alcohol, and tobacco (WHO, 1999).

Hallmarks of successful health service delivery to adolescents include training of the adults who work with youth to enhance their ability to view adolescents not as problems, but as individuals deserving of respect and competent technical assistance. Health workers need to approach adolescents with sensitivity to their developmental stage and an appreciation of this age group's qualities and characteristics.

In some settings, providing a full array of "adolescent-friendly" services under one roof (general, sexual, reproductive, and mental health services for example) through the government health system has proved effective. But as several meeting participants pointed out, this approach can backfire, particularly in communities where adolescent access of reproductive and other types of health services is taboo. In these settings, a community-based clinic catering to the entire family is a better strategy. At times, special youth services can create a gender imbalance. For example, in Mexico, girls are the primary attenders, while in Africa it is primarily boys who come to youth clinics.

The often-controversial nature of adolescent health issues sometimes makes building financial and political will difficult. This fact may position nutrition as a useful entrée for youth programs. By focusing on a more benign topic (i.e., food and nutrition), program sponsors may more easily enlist community involvement and support for a focus on adolescents and expand to other health issues over time.

4) HOW DO WE WORK EFFECTIVELY WITH ADOLESCENTS?

Consistent messages about effective programming come both from the evaluation literature of youth programs as well as from the shared experience of the Learning Exchange participants. Youth are viewed as particularly open and amenable to change during this part of the lifecycle, making it feasible to “change the script early” and to take a preventive approach to lifestyle and health. Participants stressed the fact that success is dependent on implementing programs in partnership with parents.

One-quarter century of programming for youth: Lessons learned from Johns Hopkins University Center for Communications Programs and the Population Communication Services project

- 1-Work with youth to design the program.
- 2-Appeal to youth with friendly centers and services.
- 3-Engage multiple audiences with one program.
- 4-Use telephone hotlines.
- 5-Entertain to educate.
- 6-Involve and teach youth through technology.

(Palmer A, 2002)

Focus on adolescent development, not on their problems. A key lesson roughly equates to the dichotomy between a preventive and a curative approach to a given disease or disability. According to the WHO/UNFPA/UNICEF adolescent health programming study group (1999), success with youth programs depends on a holistic approach that focuses on adolescent healthy development, and not on adolescent problem reduction.

“Adolescence is a gateway to the promotion of health. Adolescence provides opportunities to prevent the onset of health-damaging behavior and potential repercussions. Fortunately, adolescents are receptive to new ideas; they are keen to make the most of their growing capacity for making decisions. Their curiosity and interest are a tremendous opening to foster personal responsibility for health (WHO/UNFPA/UNICEF, 1999).”

Youth at center stage. Youth are perhaps the best consultants for the design and implementation of programs targeting this population. Their involvement in project design has the potential to circumvent failed programs and better meet the needs of this group. The adult design of an HIV/AIDS prevention program recommended placement of condom dispensers by the side of streets, thinking that access was the primary barrier to use. The project failed because of the embarrassment youth experienced by being seen openly procuring condoms. A youth-appropriate strategy changed the location of the machines and “camouflaged” them in grocery stores and other less open public areas.

Participants supported the incorporation of young people on the boards of youth program agencies and in other positions where policy and program direction are determined. It is important to move away from the concept and role of youth as recipients of services to youth as actors. The youth specialists highlighted youth involvement as an opportunity to tap into the creativity and innovation that young people bring to any project. In Bhutan adolescents actively want to be in greater control of youth centers. They feel frustrated by the sense of adult ownership and direction of the centers’ agendas. It is important that there are mechanisms to

ensure the accountability of projects for supporting real *partnerships* between young people and adults and not merely token involvement. Programs need to develop process indicators for these partnerships – and to take them seriously.

Involve adults. Adults are often important, positive influences for adolescents despite young people's increasing movement toward independence from parents and family. And as with other aspects of human growth and development it is important for youth to have adult role models for healthy lifestyle practices such as good diet and exercise.

Studies by the International Center for Research on Women (ICRW) documented the fact that youth desire communication with trustworthy adults, particularly about challenging topics such as sexuality. Parents may need assistance to overcome obstacles to open communication with adolescents, particularly in the face of rapid urbanization and cultural change generated by the global interchange of cultures via television and the Internet.

According to a facilitators guide for a parents' orientation on adolescent and youth issues (Save the Children/US – Bhutan, 2002), in Bhutanese society parents are uncomfortable with speaking about the physical and other changes of adolescence to their children. Mothers rarely explain menstruation, conception or contraception to their daughters and sons are not usually given information about the types of changes they may experience during their physical and sexual maturation. The orientation program is designed to help parents overcome these cultural barriers to the type of parent-child communication that is needed in Bhutan today.

Adults must also learn how to share power with youth in order to work with them successfully. While adults need to be involved in programs (whether as paid staff or volunteers) they may also need training on how to work in true partnership with young people. Trust and mutual respect must be fostered. For many adults non-judgmental listening skills need to be taught. Adults may need training in specific techniques to enhance the participation of youth in program design and implementation such as priority assessment approaches. It may be helpful to ask adults to recall their own experiences as adolescents and reflect on the important relationships with adults from their youth.

Youth in context. Participants stressed the need to approach programs for youth with a holistic view of the context in which they live, beginning with their families (if they live with them) and peers, and expanding to the community, and the overarching policy environment. This type of approach may lead program design away from a focus on youth to other individuals or institutions with which youth interact. It also often leads to programs that work on multiple levels and with multiple interest groups.

Balance the youth program agenda. According to a review of youth programs (Hughes and McCauley, 1998) generic life skills and skill building are key to any and all interventions for adolescents. “...*enhancing the overall development of adolescents helps not only to forestall problems but also to improve health and well-being* (WHO/UNFPA/UNICEF, 1999).” And importantly, both young people and their families *value* programs that build vocational and other life skills. The Center for Development and Population Activities (CEDPA) has documented the potential for vocational skills training to draw young people – with the support of their families -- into programs that ultimately aim to deliver information on specific, often uncomfortable, issues (for example sexual and reproductive health). A balanced program is more effective than one that simply offers information alone.

The uncharted passage: Girls' adolescence in the developing world (Mensch et al, 1998) calls for adolescent policies and programs to move away from too close an association with reproductive health and underscores the need for a multisectoral approach: *"The moral objections of parents and communities to adolescent programs may lessen if these program were framed as opportunities for work, sports, and education. It is thus more realistic, fairer to girls, and probably politically expedient to frame adolescent policy in a broad development context."*

What did the five youth panelists say?

- We want information from well-informed and knowledgeable sources.
- We want adults to **listen** to us in order to understand our questions and our concerns.
- Don't include us merely as "token" youth participants.
- Don't always start out by talking about bad things (e.g., diseases, suicide, substance abuse).
- Present options and multiple choices.
- Don't stand up and lecture to us; we want to learn by doing.
- Make it **fun!** Make it **practical!** "Food is fun; nutrition is boring."
- Bond with youth – establish a relationship between the adults and young people.
- Think young!

Teach, don't preach. Based on the fact that life and vocational skills acquisition are highly prized by adolescents, participatory learning and action (PLA) is seen as a good approach to programming for this population.

According to a baseline survey of adolescent girls in New Delhi India implemented by CEDPA in 1987, the majority was not in school. In response, CEDPA launched the Better Life Options Program to improve girls' status and increase their income generation opportunities. Among the life skills covered in the curriculum are individual capacity building through literacy, family life education, and vocational skills training directed toward building self-esteem and expanding choices related to marriage, fertility, health, vocation, and civil participation among adolescent girls.

Nutrition education is a part of the program as it relates to maternal, fetal, and infant health. A 2001 program impact evaluation looked at the dietary practices of program participants and controls and found that alumnae were consuming significantly greater amounts of nutritious foods in the postnatal period. They also consumed significantly greater numbers of prenatal iron supplements. The evaluation recommended adding a nutrition education and iron supplementation component to the program that focused on the immediate nutritional needs of the unmarried adolescent girls.

Youthful interaction modalities. Youth are motivated by their peers and respond to opportunities to gather together socially. They enjoy participatory programs that are interactive, utilize entertainment modalities such as drama, and incorporate modern communications technology when feasible. Younger teens enjoy playing games, while older adolescents are developmentally more able to appreciate small group discussions and debates. Packaging is important. Adolescent boys in India were reached through public health messages printed on kites. Visually attractive, creative materials and presentation of information through music, art, and drama ("edutainment") will attract and maintain the adolescent audience.

Public health nutrition messages need to be communicated in ways that can successfully compete with the advertising prowess of multinational food and beverage companies. They have clearly

been effective at reaching youth with the “fun,” “sexy” messages advocated by the meeting’s youth panelists.

Peer counselors are used frequently in programs for adolescents with success. However, just as with adult volunteers in community-based health programs, turnover of volunteer peer counselors is common. One youth program had established apprenticeships for peer counselors at youth centers; after two years, counselors were eligible to become center supervisors. Other recommendations to decrease staff losses included the use of non-financial incentives to keep volunteer staff.

Integrated programs. Many problems faced by adolescents stem from similar sets of risky behavior or negative social norms and conditions. Very frequently, important determinants of health problems for this age group are non-health in nature. Poverty is directly linked to heightened risk of pregnancy among teenage girls. Poverty also increases young peoples’ vulnerability to sexual violence and exploitation including exchanging sex for money or food. And lack of education (related to gender discrimination, household poverty, poor quality schools, lack of teachers, and inadequate sanitation facilities for girls) is highly correlated to poor health that in turn, exacerbates poverty.

Societies that condone early marriage and child bearing, tolerate substance abuse, promote the consumption of high fat/high sugar foods, or stigmatize the use of condoms may inadvertently contribute to detrimental health outcomes for their own young people (Rosen, 2003). Effective youth programs take a holistic approach to the healthy development of young people. They are characterized by integrated approaches to program design and use a multisectoral strategy to address the problems of youth. The one cautionary comment from Learning Exchange participants concerned the potential for integration to “water down” the impact of programs.

Scaling up. Lessons learned from the expansion of youth programs suggest the need to:

- Assure quality in the face of expansion;
- Remember that one size does not fit all. Interventions may need to be tailored during the process of expanding catchment areas, target age groups, and so forth; and
- Build in policy reforms from the beginning as a goal of programs and insure the means to implement them.

5) WHAT ARE THE MAIN NUTRITION ISSUES FOR ADOLESCENTS?

Malnutrition. For many adolescents in low-income settings inadequate quality and quantity of food are the primary determinants of nutrition problems. Hunger may be an overt symptom of chronic energy deficiency. These conditions may be due to household food insecurity, intrahousehold allocation of food that does not meet adolescents’ dietary needs, livelihoods insecurity, and lack of nutrition knowledge. Micronutrient malnutrition and chronic energy deficiency that causes thinness (low BMI) and stunting (short stature) result very frequently from insufficient diets. Excessive physical activity patterns and infection may also contribute to these conditions. A problem of increasing concern is overweight and obesity among youth. For some young people unhealthy eating habits are fueled by skewed perceptions of body image, and real or imagined pressure to look different (e.g., to be thinner or more muscular).

Inadequate growth. Stunting in both adolescent boys and girls was prevalent in 9 of 11 studies conducted by the International Center for Research on Women in the early 90’s, ranging from 27

to 65 percent. Chronic undernutrition that results in stunting among youth delays growth and physical maturation, increases obstetrical risk, and decreases the capacity to produce work.

Data on underweight (defined in this report as thinness measured by low BMI²) are largely unavailable for adolescents. ICRW reported low BMI ranging from 3 to 53 percent, with boys more affected than girls in seven of the eight countries studied³. Adolescents in India, Nepal, and Benin were the most severely affected among the 11 study sites. Low maternal prepregnancy weight is one of strongest predictors of low birth weight. Underweight (thinness) is also a risk factor for increased morbidity, increased severity of morbidity, and increased mortality in adults (ACC/SCN, 2000).

Vitamin and mineral deficiencies. Micronutrient deficiencies can be highly prevalent among adolescents, particularly iron deficiency. In the ICRW studies, anemia prevalence among boys and girls ranged from 32 to 55 percent. Most anemia (indicated by hemoglobin levels in the blood below a specified cut-off point) in adolescents is likely to be due to iron deficiency, although malaria can be a major contributing factor in endemic areas. Hookworm and other parasitic infections and other nutritional deficiencies may also cause anemia. Risk factors for anemia in girls (in addition to key causes such as inadequate diet and infections) are menstruation and rapid growth. Boys are at similar risk for iron deficiency and/or anemia due to high growth velocity. But boys' iron status will improve after growth has stopped, whereas girls' may deteriorate further if pregnancy occurs during or shortly after adolescence.

Iron deficiency and/or anemia may result in decreased ability to produce physical labor, diminished cognitive performance, increased obstetric risk, loss of appetite, and depressed immune system functioning.

In settings of endemic iodine deficiency, girls and women are affected disproportionately relative to males, although all individuals are affected. Detrimental cognitive effects include neural impairment and poor school performance. The fetus of an iodine-deficient mother is at risk of spontaneous abortion as well as a range of neurological and intellectual impairments.

Other micronutrients that may be deficient in adolescents include vitamin A, zinc, and calcium. Severe vitamin A deficiency can cause blindness. Less severe deficiency impairs immune system functioning that can lead to increased susceptibility to infection and illness. Zinc and calcium are particularly important for achieving maximum growth potential and adequate intake of calcium in combination with weight-bearing exercise is a preventive strategy for later development of osteoporosis.

Overnutrition. Data on overweight and obesity prevalence are not widely collected for adolescents, but these conditions are on the rise. The World Health Organization estimates that 60 percent of global mortality is due to noncommunicable diseases associated with unhealthy diets and physical inactivity, with 79 percent of these deaths occurring in developing countries. The same changes in diet and physical activity currently affecting adults contribute to the

² This definition of underweight in adolescents and adults is used by ACC/SCN (2000). Other authors prefer the term "undernutrition" for low BMI (e.g., Kurz and Johnson-Welch, 1994).

³ It is hypothesized that differing maturation rates, with boys being slower than girls, may contribute to the higher prevalence of underweight among boys. It may also be linked to anemia in boys. Muscle gain is dependent upon iron, with weight gain in girls due more to fat deposition than muscle, placing girls at lower risk than boys of poor weight gain in the face of low body iron stores (Kurz and Johnson-Welch, 1994).

increased prevalence of obesity in youth, often seen side by side in communities with undernutrition. There is also some evidence that low birth weight predisposes individuals to obesity and associated chronic diseases later in life. In Chile, 12 percent of schoolchildren are obese; 17 percent of older adolescent girls in South Africa are obese; and in China, one study found that the prevalence of overweight and obesity (BMI>25) among young adults has moved up from 10 to 15 percent in urban areas and from 6 to 8 percent in rural areas between 1982 and 1992.

In the USA, obesity is a highly prevalent nutritional problem among adolescents (ages 12-17), with 21 percent of this population categorized as obese in 1997. The rapid increase in the condition over the last two decades of the twentieth century is particularly alarming.

Overweight and obesity in children trigger earlier puberty and a shortened period of long bone growth, negatively affecting adult stature relative to individual genetic potential. There is evidence that adolescent obesity (particularly in late adolescence) is associated with a greater risk of persistence in adulthood relative to childhood obesity. Changes in blood pressure, plasma insulin, and other risk factors for chronic diseases are attributed to adolescent obesity, and place individuals at heightened risk for developing disease conditions in middle age, independent of adult weight. The psychological and social consequences of overweight and obesity in teens can damage self-esteem and increase the incidence of eating disorders (Livingstone, 1999).

Pregnant too early. Adolescent pregnancy represents heightened obstetrical risk due to a clustering of factors. These risk factors often characterize pregnant teens: first time birth, incomplete maternal growth, poor pre-pregnancy and pregnancy nutritional status, low socioeconomic status, substance abuse, limited access to services, and low visibility within the community. Their offspring are, in turn, at risk from low micronutrient stores, low birth weight, and poor care and feeding practices.

Cut-offs for determination of adolescent nutritional status. As mentioned earlier, nutritional status data for adolescents are not widely collected and there has been little work to date on determining cut-offs and the relative risks attributable to anthropometric indices for this population (Gillespie, 1997). The following table lays out suggested definitions of adequate growth and hemoglobin levels among adolescents.

Measures of adequate adolescent nutritional status	
Appropriate weight for height in girls 4 years post-menarche	<ul style="list-style-type: none"> • 18.5 < BMI > 25
Optimal linear height for girls 4 years post-menarche	<ul style="list-style-type: none"> • >145 cm
Hemoglobin (Hb)	<ul style="list-style-type: none"> • >11.5 g/dL for boys/girls 10-11.9 years • >12g/dL for non-pregnant adolescent girls 12 years and older • >11 g/dL for pregnant adolescent girls • > 12g/dL for boys 12–13.9 years • > 13g/dL for boys 14 years and older (DeMaeyer et al, 1989)

How can we intervene? Proven solutions for many conditions of nutritional deficiency that affect adolescents exist. Yet because of the absence of adolescents from health care policymaking agendas (and the absence of nutrition from the larger health agenda), few of these interventions

have been applied to this population. Annex 6 provides an overview of ways to address various nutritional problems. But we do not have many documented examples of nutrition interventions either piloted or scaled-up among this population group.

Nutrition education. A fundamental intervention with adolescents is the effective communication of information about nutrition through skills-based nutrition education to promote positive self-care nutrition and health behavior and practices among youth. It appears feasible to deliver practical nutrition knowledge to adolescents through integrated programs addressing healthy youth development in a variety of venues.

This might include counseling with age-tailored messages and hands-on participatory learning to:

- Give adolescents accurate information about their specific nutritional needs at each stage of growth;
- Teach techniques for shopping for best nutrition buys;
- Master the basics of healthy food preparation including food handling/safety;
- Equip youth with the knowledge to make decisions about food and dietary supplement advertising and health claims;
- Understand fad diets and ineffectual dieting aids;
- Implement healthy nutrition and lifestyle practices as adolescents and later as adults including balanced diets and physical activity; and
- Prepare future parents to nourish and nurture their children, beginning with adequate maternal nutrition, optimal breastfeeding, and appropriate complementary feeding practices for young children after the first six months of life.

Addressing poor growth in adolescence. In populations where girls are too thin/underweight (measured by low BMI) at 18 years, it is important to focus on increasing adolescent girls' weight, particularly prior to the first pregnancy in order to decrease the risk of delivering a low birth weight baby (Kurz and Dusch, 2000). Height is more difficult to address in adolescence. There is some evidence that supplementing stunted adolescents may contribute to overweight and obesity, particularly if the population experienced fetal malnutrition and low birth weight.

For chronic energy deficiency, it is imperative to improve adolescents' access to and control over food. Reducing excessive energy expenditure due to heavy physical workloads is a corollary action. For overweight and obese youth, information about and support for modifying diet and physical activity are needed to prevent or correct these conditions.

Preventing and controlling anemia. Insure that adolescents have sufficient iron stores and adequate circulating hemoglobin. This requires a multi-pronged approach to anemia prevention and control to: improve dietary sources of iron (including through the consumption of iron fortified foods); reduce consumption of dietary iron absorption inhibitors such as tea; provide iron supplementation as needed; and insure infection control (including deworming and malaria treatment/control).

There is consistent evidence that iron deficient and anemic teens will respond to oral iron/folate supplements. Their blood hemoglobin levels rise and anemia prevalence diminishes. In some studies, increased appetite that can result from improved hemoglobin levels produced weight gain.

Other micronutrients. Deliver folate along with iron supplements to adolescent girls. If folate deficiency is not addressed prior to conception or shortly thereafter, neural tube defects may occur in the early weeks of pregnancy. The majority of adolescent pregnancies are unplanned, necessitating a preventive approach to this nutritional issue.

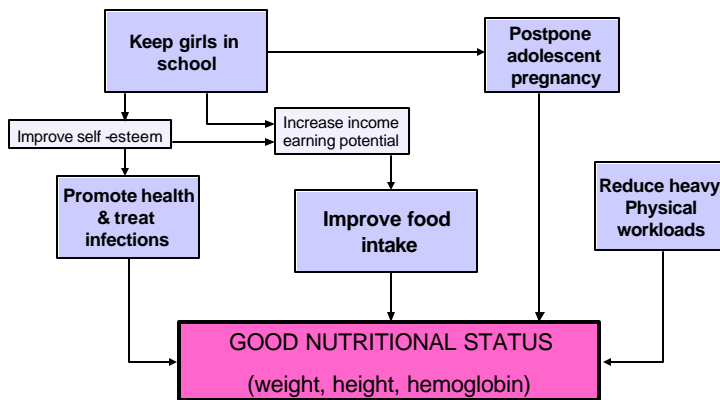
In communities with endemic iodine deficiency, universal salt iodization is a long-term solution to the problem for the community as a whole.

For adolescents living in areas with documented vitamin A deficiency, increasing their pre-pregnant stores of vitamin A through diet and supplementation may help to improve health outcomes for both mothers and babies.

Fortification of widely consumed foods with micronutrients is a strategy to help prevent deficiencies that has been adopted in the USA and other developed countries. Adolescents may benefit from fortified foods, particularly when teens often have erratic, unbalanced eating patterns and may consume few rich sources of naturally occurring vitamins and minerals.

Nutrition and HIV/AIDS. Adolescents living with HIV/AIDS need special attention including nutritional care. Both the virus and opportunistic infections create increased energy needs. All people living with HIV/AIDS need increased energy to bolster their immune systems, mitigate the effects of opportunistic infections and possibly slow the progression of HIV to full-blown AIDS. Asymptomatic individuals should increase their energy intake by 10 percent over the amount required for people of the same age, sex, and physical activity level without HIV infection. For those with symptomatic HIV and during AIDS, increased energy intake of 20 to 30 percent over that of virus-free peers is recommended. Currently, recommendations for protein and micronutrient intake remain the same as those for their uninfected counterparts (Castleman et al, 2003).

Actions to improve adolescent nutritional status



Adapted from Kurz K, Peplinsky NL, and Johnson-Welch C (1994).

Non-nutrition interventions. Non-nutrition interventions to improve nutritional status include delaying the first birth, preventing and treating infections, insuring that girls remain in school and, critically, enhancing girls' self-esteem and control over their lives (Kurz, Peplinsky, and Johnson-Welch, 1994).

6) HOW CAN WE INTEGRATE NUTRITION ACTIONS INTO PROGRAMS FOR ADOLESCENTS?

Meeting participants brainstormed about ways to integrate nutrition interventions and messages into their own youth programs.

Combining interventions. Participants suggested linking nutrition and reproductive health programs by addressing the not-infrequent situation in which girls and women trade sex for food, either “formally” as sex workers, or in disrupted circumstances such as those found during conflicts when vulnerable populations are relocated to refugee camps.

Reproductive health programs have piggybacked onto agricultural programs, using agricultural extension workers to deliver health messages to young people in rural areas. Nutrition information can be added to the health components to communicate and disseminate knowledge via this innovative approach.

In school-based health programs, think about adding cooking classes to build adolescent life skills. Combine health, nutrition, and physical education curricula, with an emphasis on enhanced physical fitness. Consider placement of nutrition content in the science curriculum in schools, including support of healthy traditional foods and nutritional practices. Examine nutrition education messages and update ineffective ones. In many settings, although the food pyramid⁴ has been adapted to reflect local foods, it does not have a good track record with effectively helping behavior to change.

Programs that work with street children typically have included attention to the nutritional problems of their target populations. Vouchers redeemable for food is one method used to address the vulnerable nutritional status of street children in Peru.

Tailoring nutrition strategies for youth. Based on their experiences with adolescents in multidimensional types of programs, the meeting participants suggested ways to tailor basic nutrition interventions for this broad age group.

Use popular culture figures to deliver public health nutrition messages to youth. Mass media can be used to lay the groundwork for the proposed behavior change(s) in order to normalize the new diet and nutrition behaviors. Exploit the link between athletes and good nutrition by looking for a nutrition champion among sports stars – particularly a female athlete.

Several youth programs (e.g., CEDPA in India) use cooking classes to communicate nutrition information and teach life skills. In the Indian context, they also sensitize boys to gender issues. Cooking competitions are popular and adolescents may enjoy being able to impress their peers with cooking prowess. Another positive aspect of building cooking skills is the potential benefit to adolescents’ families. Self-confidence grows through adolescent control of their own nutritional status.

Development of nutrition information referral services for teachers and parents was suggested. They could be based in a variety of locations in the community to address the knowledge gap about the problems and special nutritional needs of youth.

⁴ The food pyramid illustrates a food guidance system intended to help select what kinds and how much food individuals should consume.

Iron supplementation programs for adolescents are needed in many settings to address iron deficiency in both boys and girls. In addition to coming to agreement on international protocols for iron supplementation of adolescents, pilot projects in schools, factories, and other venues need resources and support to go to scale.

Learn from the multinational food industries and adopt social marketing strategies for healthy nutrition that are colorful, exciting, and attractive to youth. Collaborate with youth for strategy design. There are good examples of successful involvement with youth in reproductive health social marketing campaigns for such items as a “cool condom.” To attract youth and reach non-school going adolescents, set up food fairs and nutrition events in food markets, and design contests related to nutrition in conjunction with TV and radio programming. Television food shows are very popular in some countries in South America with women and youth, providing an excellent conduit for delivery of positive nutrition messages.

Given the different nutritional needs and variable timing of growth for adolescent boys and girls, the youth specialists recommended that the nutrition sector develop gender-specific advocacy and intervention strategies. As an example, include empowerment activities for girls related to healthy lifestyle practices such as bike riding.

Segment message development strategies by location. For urban youth, good nutrition is equated with being attractive and sexy; for rural populations, good nutrition will build stamina, enhance their ability to do household work, and help them be better at sports. For both groups, improved school results are important.

The participants strongly advocated the use of food as a learning aid. It is associated with social occasions, it is less formal than other types of teaching tools and in many societies, it is related to traditional patterns of showing respect for others (e.g., when and how food is offered to guests). They also recommended exploiting nationalistic trends (where they exist) in order to promote the benefits of traditional foods in contrast to imported, processed foods.

Advocacy strategies for adolescent nutrition. The group felt strongly that there is a serious knowledge gap about adolescent nutrition for those involved in policymaking and allocation of health and other resources. They recommended developing briefing materials and fact sheets for youth program managers and government policymakers with information about the nutrition needs and possible interventions available to them for this age group.

Indicators. Youth specialists already recognize a need for innovative thinking about positive indicators to use with adolescents and programs that intervene with them. They suggested that identifying a fitness indicator for adolescents is important.

Basic approaches. Hallmarks of adolescent development must be factored into programs that intend to address problems of adolescent nutritional status. Youth are more inclined to seek immediate gratification rather than to make decisions with a view to the future. Nutrition messages and strategies will need to emphasize the more immediate payoffs of healthy nutrition practices (e.g., feeling energetic and alert, able to compete more effectively at sports) and not the longer-term benefits of a healthier adulthood or diminished risks of childbearing.

Adolescents are often highly interested in themselves. Tap into this focus and use it to motivate them to adopt improved nutrition practices for enhanced good looks and school performance.

The specialists cautioned against using fear as a motivating factor. As a group, adolescents are not risk averse. For example, in reproductive health, the ineffective message is: Sex without a condom equals AIDS. The effective message is: Use condoms, they're good for you. The nutrition community needs to construct similar positive messages about healthy nutrition practices.

Finally, be opportunistic. Look for ways to link to existing youth programs and advocate for the mutually beneficial outcomes of nutrition and adolescent health and development.

Key nutrition messages for adolescents. Depending upon the specific nutritional issues and needs of a target population for youth program intervention, incorporation of key nutrition messages may be one type of nutrition action that will improve the lives of youth and enhance the impact of other components of a program. The following are some suggested *key messages* to deliver to young people and their families in a program that reaches youth:

1-Adolescents need increased amounts of food to support the rapid physical growth that occurs at this stage of life.

2-Adolescents need varied types of food that provide adequate amounts of vitamins and minerals. Iron-rich food (meat, eggs, dark greens) is especially important for both boys and girls. Iodized salt, bright green and orange fruits and vegetables for vitamin A, and sources of calcium are vital to healthy growth and development.

3-Iron- or iodine-deficient adolescents cannot learn or perform in school as well as children who consume adequate amounts of these micronutrients. For athletes, iron deficiency reduces strength and endurance.

4-The quantity and quality of food adolescents consume is directly related to their personal appearance. Diets lacking in vitamins, minerals, or enough energy and protein can cause skin discoloration and blemishes, hair to become brittle and fall out, or eyes to become clouded.

5-*Both* boys and girls need enough healthy food to grow during adolescence. Treat them equally.

6-Delay marriage and pregnancy until after girls have completed secondary education and have finished growing. It can take 4 years after menstruation begins before a girl is fully-grown.

7-Prevent or treat infections such as hookworm, malaria, and schistosomiasis. These can cause anemia.

8-If adolescents do heavy physical labor or are active in highly competitive sports, they need more food, or they need to do less work.

9-Dieting (eating less) to become or stay thin (like a model) can stop growth, make you more likely to get sick and less able to learn.

10-Invest in good nutrition for children and adolescents now in order to insure their health as adults. Many diseases and conditions that disable or kill adults have their foundation in poor nutrition when people are teenagers (being too thin, not having enough vitamins and minerals, or being too heavy). Often these nutritional problems began much earlier in life, but adolescence is a time when deficiencies or excesses can be corrected and/or prevented.

11-For girls, insuring their optimal nutritional status before becoming mothers is critical for a safe pregnancy and delivery and a healthy, growing baby. In developing countries, this often includes the need to gain weight and insure adequate iron, folate, iodine, vitamin A, and calcium stores and/or intake. Particularly in industrialized nations, girls may need to address overweight and obesity before conception⁵, although problems of overnutrition are rapidly taking hold in lower income countries as well. Micronutrient deficiencies (particularly iron and folate) are also frequently a problem among adolescent girls in resource-rich settings.

7) MOVING BEYOND THE MEETING: ACCELERATING ACTION FOR THE HEALTH AND DEVELOPMENT OF ADOLESCENTS.

Operations research agenda. There was consensus that continuing and expanded efforts to assess adolescents' nutritional needs along with standard queries about sexual and reproductive health, educational, and other areas of need must be supported. An operations research agenda must be developed to support learning about application of effective methods used in youth programming to issues of nutrition. For example, "edutainment" events proved popular avenues for delivery of reproductive health messages to youth in Botswana, Cameroon, Guinea, and South Africa⁶ How can this strategy be successfully adapted to deliver nutrition messages and improve nutritional outcomes?

⁵ Maternal overweight and obesity are associated with increased perinatal mortality, increased risk of premature delivery, higher risk of congenital defects (particularly neural tube defects) in the infant, and increased risk of maternal complications including gestational hypertension, gestational diabetes and/or cesarean delivery. Obesity increases the risk of infertility in women by as much as 70 percent (March of Dimes, 2002).

⁶ Social Marketing for Adolescent Sexual Health: Results of operations research projects in Botswana, Cameroon, Guinea, and South Africa. Funded by USAID, June 2000.

From the Learning Exchange participants: Thinking about how to approach issues of adolescent nutrition

How do the multinationals so effectively reach youth in my country?

What do adolescent gatekeepers know and think about food and nutrition for youth?

What are the nutrition problems among the specific group of adolescents targeted for program resources?

What do diet and nutrition mean to them? What language do they use to describe positive nutrition practices?

What are youth eating? Boys? Girls?

What are existing nutrition programs doing to address the food and nutrition problems of youth?

Should adolescent girls be the sole focus of a program?

What are nutrition indicators for youth in a given setting or community?

What is the role of the agricultural sector for nutrition?

Who is responsible for food purchasing and preparation in a household?

What changes have occurred among youth with regard to ideal body image in Africa with the advent of HIV/AIDS?

How can cooking be cool? Nutrition? Healthy lifestyle practices?

What or how do youth think about multinational food corporations?

What are the constraints to physical activity for girls? Is physical activity excessive?

What is the traditional diet in a setting or community?

How is eating a social and cultural activity for adolescents?

What has been learnt from nutrition programs directed toward adolescents in resource-rich settings?

Challenges for the future. Information gaps persist. We need to know more about adolescents' diets, eating patterns, motivators and constraints to improved nutritional intake, and who or what can support successful behavior change. We need to better understand the intra-household dynamics of food distribution to youth. When programs do deliver nutrition services to youth, there is a chronic need to insure that high quality evaluation and dissemination of impact results takes place. How can programs include the youngest adolescents in program design, implementation and M/E as is recommended for older adolescents? And how do we go to scale in adolescent programs?

One certainty was the heightened interest in the topic of nutrition for adolescents that participants gained over the two-day meeting. What remains is to find viable ways to work across disciplines to achieve the crucial synergies between improved nutrition and other interventions for optimal adolescent health and development. Bringing specialists from varied sectors together and raising awareness of the potential for collaboration was a major first step.

ANNEX 1: FOCUS ON ADOLESCENT NUTRITION IN WORLD BANK PROJECTS.

A review of the World Bank's Health, Population, and Nutrition (HNP) portfolio from 1984-1999 identified five projects that promoted better adolescent nutrition. These projects, along with the specific activities aimed at adolescents, are described below.

Cameroon, Health, Fertility and Nutrition Project: This project, effective in 1996, assists the Government in reorienting and reorganizing primary health care delivery, intensively decentralizing regional level health care services, and expanding quality primary health care coverage. The project also aims to strengthen nutrition interventions in Cameroon, by promoting operational research and development of region-specific health and nutrition strategies. The project promotes routine preventive care and treatment of patients using health centers, and provides outreach activities aimed at eradicating parasitic and nutritional disorders in villages and slums located around the participating health centers. Along with other vulnerable groups, female adolescents are intended to benefit from food supplementation, distribution of iodized salt, vitamin A capsules, and iron tablets.

India, Integrated Child Development Services I (ICDS): The ICDS I project was implemented in the Indian states of Andhra Pradesh and Orissa from 1991 through 1997. The main objective of the project was to improve the nutrition and health status of children under the age of six, with special emphasis on those under three. The project had the following components: service delivery, communication, community mobilization, and project management and evaluation. The service delivery component was aimed at expanding the range and coverage, as well as improving the quality of services provided. Adolescent girls, along with women, were to be provided with nutrition and health education through this component. The objective was to reduce moderate malnutrition among children in the long term. The community mobilization component also involved adolescent girls and promoted non-formal study courses, training programs and involvement in the Anganwadi activities. The girls (three in each village) from poor households would be trained to assist the Anganwadi (AW) workers for two days a week, for a period of two years. They would also receive a daily food supplement similar to those provided to pregnant and lactating women. The final evaluation done in Orissa by the National Institute of Nutrition in 1998 showed that fewer adolescent girls than projected had been enrolled in the AW centers. Fifteen percent assisted the AW workers twice a week, and 70-80 percent made home visits. The final evaluation for Andhra Pradesh showed that a higher number of girls were enrolled in the AW centers compared to Orissa. A majority of them (58-69 percent) received supplementary food at the AW centers. More than 80 percent of them helped the AW workers in collecting the children, and about 42-68 percent assisted in making house-visits. Vocational training had also been provided (activities such as wire basket making, mirror stitching, tailoring, embroidery) but none had been employed.

ICDS II: The ICDS II project is being carried out in two of India's poorest states: Bihar and Madhya Pradesh. It became effective in 1993. The project has the same objectives (and is delivered through the same set of components) as ICDS I: To improve the health and nutrition status of children under the age of six, with emphasis given to those under the age of three. The project aimed to identify moderately and severely malnourished adolescent girls and provide

them with health and nutrition services. The training and involvement with AW activities for adolescent girls is also promoted, as detailed in ICDS I.

India, The Women and Child Development Project: This project, effective since 1998, also aims to improve the nutrition and health of pre-school children and women by increasing the quality, impact and cost-effectiveness of the ICDS program in the states of Kerala, Maharashtra, Rajasthan, Tamil Nadu, and Uttar Pradesh. The specific objectives of the project are to improve the nutrition, health and psychosocial status of children under the age of six, with particular emphasis on preventing malnutrition in under threes, and improving childcare practices at the household level, improving the health and nutrition of women (pregnant and lactating) and adolescent girls, and empowering adolescent girls through increased awareness, to take better care of their personal and household health and nutrition needs. The project provides iron and folate tablets to adolescent girls and involves them in a program to increase self esteem. One of the key performance indicators for determining progress for the empowerment objective is reducing the number of girls marrying before the age of 18 years.

Bangladesh Integrated Nutrition Project (BINP): Launched in 1995, BINP is a community-based nutrition services delivery project, covering areas representing 12 percent of the country's total population. The project emphases include community mobilization and deployment of locally-based community nutrition promoters, universal growth monitoring/promotion of children under two and weight gain and nutrition status monitoring for pregnant and lactating women, complemented by targeted supplementary feeding. A specific concern regarding severe maternal malnutrition in the country prompted experimental work with newly wed women to address this problem and the high incidence of low birth weight infants born in Bangladesh. Services are provided from marriage through the first born child's second birthday. Intensive counseling efforts with newly wed couples and the mother-in-law, combined with iron/folate supplementation of the new wife beginning at enrollment form the cornerstones of the intervention, with monthly weight monitoring and supplementary feeding of malnourished pregnant women (BMI<18.5). Unmarried adolescent girls are also targeted for life cycle information, with specific messages designed to improve subsequent maternal health and pregnancy outcomes.

Annex 2: The Learning Exchange Agenda

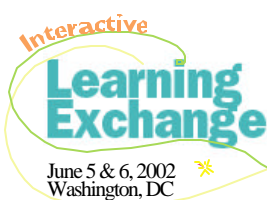


AGENDA

Exploring Strategies for Reaching and Working with Adolescents

Wednesday, June 5, 2002

8:00-8:30 a.m.	Registration Coffee/breakfast and World Tour set-up (Print, visual, and audiovisual materials from participants' programs and agencies will be displayed)
8:30-10:00 a.m.	Welcome World Tour: Who's in the room Agenda overview: Plan and objectives for the workshop Introduce key questions
10:00-10:15 a.m.	Break: Mark age map (Process to capture range of ages reached by participants' agencies and programs)
10:15-12:00 p.m.	Question Dialogues (Dialogue surrounding key questions will be mapped to build a graphic representation of the group's discussion and conclusions)
12:00-1:00 p.m.	Lunch (in meeting room)
1:00-2:15 p.m.	Interviews with youth guest panelists
2:30-2:45 p.m.	Introduction of World Café process (Small group format for informal exchange focused on issues and key questions that follow on the morning dialogues)
2:45-3:45 p.m.	First Café: 17 minutes inquiry and feedback
3:45-4:45 p.m.	Second Café: 17 minutes inquiry and feedback
4:45-5:30 p.m.	Wrap-up Day 1
6:00-7:00 p.m.	Wine and cheese reception World Tour



AGENDA

Exploring Strategies for Reaching and Working with Adolescents

Thursday, June 6, 2002

- | | |
|------------------|---|
| 8:00- 9:00 a.m. | Coffee/breakfast and World Tour visits |
| 9:00-10:45 a.m. | <p>Welcome/review/check -in</p> <p>Gallery walk –silent tour of visual maps, artifacts from Day 1</p> <p>Agenda check -in</p> <p>Review observations/insights from Day 1; Continue mapping strategies; Finalize age map</p> |
| 10:45-11:00 a.m. | Break |
| 11:00-11:30 a.m. | <p>Adolescent Nutrition – Issues and Interventions</p> <p>Presentation by Dr. Kathleen Kurz, International Center for Research on Women</p> <p>Q&A</p> |
| 11:30-12:30 p.m. | Dialogue: Integrating nutrition into programs for youth |
| 12:30-1:30 p.m. | <p>Lunch and welcome to expanded group of colleagues joining the workshop from 12:20-2:30 p.m.</p> <p>Report-out of workshop results</p> |
| 1:30-2:30 p.m. | Large group inquiry: What is the essence of working with adolescents? How can these approaches and best practices be exploited to improve the nutritional status of youth? |
| 2:30-2:45 p.m. | Break |
| 2:45-3:45 p.m. | Identification of challenges |
| 3:45-4:45 p.m. | Check-out (Synthesize reactions to the learning exchange; most valuable interactions; next steps) |
| 4:45-5:00 p.m. | Close |

ANNEX 3: PARTICIPANTS LIST LEARNING EXCHANGE: EXPLORING STRATEGIES FOR REACHING AND WORKING WITH ADOLESCENTS

Wyndham City Center Hotel, Washington, D.C. June 5-6, 2002

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ANNEX 4: KEY QUESTIONS TO BE ADDRESSED IN THE LEARNING EXCHANGE: STRATEGIES FOR REACHING AND WORKING WITH ADOLESCENTS



Defining the target population

1. Various age cutoffs have been used for people between childhood and adulthood:

Children: everyone under 18 years of age

Adolescents: 10-19 year olds

Youth: 15-24 year olds

Young people: 10-24 year olds

There are other age breakouts as well. How have you defined your age-based target population? How should we segment this audience or disaggregate it for programmatic purposes? How do you identify the target population when you begin working in a new area?

2. In addition to age, there are other ways of segmenting the audience:

Urban/rural/periurban/suburban

Male/female

Sexually inactive/sexually active (with/without negative health consequences)

Heterosexual/homosexual

In school/out of school

Married/unmarried

Is parent/is not parent/is parent but uninvolved with child(ren)

Living with parents/living with own family/homeless/other (institutionalized/incarcerated/group home/living alone)

Employed/unemployed/not in labor force

Destitute/poor/non-poor

Race/class

By level of educational achievement

By problem (drug addiction, convicted of crime, HIV/AIDS)

How have you targeted your program? How do you know how to segment your audience? How might you do it better? Who participates and who doesn't participate in your programs (i.e., are you really reaching your target population)?

Reaching adolescents

3. What are the key characteristics of programs that are successfully reaching the majority of the desired target population? What are concrete examples of the innovative use of existing youth meeting spots or locations where youth live/work? Clubs? Sports programs? Schools? Employers of domestic servants? Factories? Other community groups and institutions?

4. Are efforts to construct multiservice “youth friendly” health centers misguided and ineffectual? A proven, effective approach?

5. Many programs for youth are mass media-based. Do we know that mass media approaches are reaching the target populations for programs? Who exactly is reached through MTV-style videos, radio soap operas, etc? For what problems is mass media enough? What else is needed?

6. How are traditional social institutions used for reaching youth? What are the ramifications of current crises such as HIV/AIDS in Africa for traditional networks that supported or linked adults and youth? Are adults always a critical ingredient for programs that aim to reach youth? How do programs foster youth-adult partnerships?

6.a (From Hally Mahler, YouthNet Project) How should the role of youth be defined for the design, implementation, management and evaluation of youth programming? How can we move organizations from an old paradigm of youth "involvement" to a new paradigm of youth-adult partnerships?

Working effectively with adolescents

7. There is much ado about "evidence based programs". What is your opinion about this principle with respect to youth programs? What constitutes "evidence" today for youth program design and implementation.

8. What is unique about youth that requires totally different approaches (design, targeting, implementation, evaluation)?

9. Many people working with youth have supply driven programs (reproductive health, HIV/AIDS, vocational education, etc.). To what extent is your program supply-driven? Does "supply-driven" work? How do you make sure demand matches supply? How has your program changed because of this? Are we too goal oriented -- should we be more focused on giving adolescents/youth access, empowerment, self-confidence, and broad-based life skills versus telling them what they should be doing?

10. To what extent are problems facing youth a lack of information versus a behavior change problem? Do programs that emphasize knowledge dissemination/acquisition actually change behavior (e.g., radio, TV, and youth-friendly print materials)?

11. Many programs purport to provide job training or employment promotion for adolescents and say that this is the most important issue for adolescents. What has been your experience with the success and sustainability of such programs?

12. To what extent have we applied lessons learned from general development programs (vocational education, health services, family planning, community based participatory programs, communications for behavior change) to programs for adolescence? To what extent are they relevant?

13. If we assume that the best long-term investment in youth is to keep them in school through at least secondary school, to what extent are these alternative programs for adolescents competing with schools? To what extent can they substitute for schools?

14. In working with adolescents/youth, what preconceived notions did you have that were turned on their heads? What assumptions did you make that turned out to be true or false? What were pleasant surprises? What were bitter defeats?

15. What is the relative weight that needs to be put on operational research and pilots vs. large-scale programs vs. policy reform?

Integrating actions to improve the nutritional status of adolescents

16. In nutrition we "know" (in an epidemiological sense) what nutrition problems adolescents face and what problems in adulthood can be averted through action during adolescence. What advice would you give us about how to go forward? Have you ever in your program heard youth express any interest in or need for information about nutrition (broadly defined)?

What other questions should we have asked?

ANNEX 5: FACILITATION TECHNIQUES AND COMMUNICATIONS STRATEGIES FOR THE WORLD BANK LEARNING EXCHANGE: STRATEGIES FOR REACHING AND WORKING WITH ADOLESCENTS

Background

The purpose of the meeting was to rapidly exchange information and share the knowledge of youth program experts with the World Bank nutrition staff to distill best practices for reaching and working with youth. Secondly, the participants and World Bank team would brainstorm about new applications of youth programming to improve adolescent nutritional status in vulnerable populations. In order to achieve this, the Learning Exchange brought together individuals from different countries and settings with expertise in various aspects of youth development. They were often unfamiliar with each other's programs, and nearly universally unfamiliar with the planning team for the meeting (the World Bank's nutrition group) and its work. It was important to use communications techniques that would quickly overcome these potential barriers to learning.

World Tour

The "World Tour" was the ice-breaking technique designed to help meeting participants get to know each other. It also facilitated the rapid exchange of information about the nature of their programs.

Participants entered a room furnished casually as a "café," with round tables set-up for four to six people, complete with checked tablecloths and flowers. They were requested to put together displays of their print materials, posters, and other examples of the communications media used in their work on the walls/long tables set up around the perimeter of the meeting space. As an early activity, the full group walked around the room and "toured" each display. Every participant introduced her/himself to the group and presented an overview of their program and approach to youth in their work. This set the stage for the core activities of the meeting (facilitated dialogue and information exchange in small groups). In addition, the displays remained throughout the consultation for more leisurely viewing and interchange during breaks and in the evening.

World Café

According to the meeting facilitator, Nusa Maal, "The Café draws on the natural human tendency to have the most fruitful conversations in small, informal settings. It is a process in which participants sit together in small groups and explore a question that matters. It is designed to create the possibility for the most fertile conversations – drawing from the participant's direct and personal experiences."

After self-selecting to small tables of four to seven people, participants identified a "Café Host." The host's duties included welcoming members to the café table and taking notes of the dialogue that continued for 20-30 minutes for each inquiry period. Every table addressed the same question. The process was repeated two to three times – participants were directed to go to tables with new faces for each round, apart from the host who remained seated. "This creates an opportunity for cross-pollination and deepening of ideas, insights and inquiry in meaningful conversation (N. Maal)." The host then reported highlights of the discussions to the larger group when it reassembled for the feedback session.

Visual Mapping & Synthesis

In a departure from traditional “linear” recording (i.e., written text, either verbatim or in a synthesis format), the results of discussions and Café process feedback were visually mapped on large paper as they occurred. For many individuals, visual mapping – or the use of simultaneously generated colored illustrations to note the main messages, and to show interconnections between groups of ideas, through pictures combined with key words – is a highly effective technique for enhancing the exchange of creative ideas and ultimately, for better recall of the learning and further interchange. “The group map captures key ideas, themes, their relationships, and the essence in a shared and referenced way beyond words (N. Maal).” The final map(s) were preserved digitally for use in a variety of media (either hard copy or electronic).

ANNEX 6: INTERVENTIONS FOR IMPROVED ADOLESCENT NUTRITION

Prevent overweight and obesity	<p>Skills-based nutrition education for optimal energy/protein consumption (for healthy weight maintenance and/or healthy weight reduction)</p> <p>Facilitate favorable environments/opportunities for physical activity (e.g., School-based physical education programs; urban design to promote mixed land use, recreation space/facilities)</p>	Adolescent boys and girls at risk for obesity (children born with LBW; children with retarded growth – both height and weight -- in infancy/early childhood; adolescents living in obesogenic environments)	% adolescents falling above cutoff for BMI-for-age ¹⁰
<i>Prevent and treat micronutrient deficiencies</i>			
For all deficiencies	Skills-based nutrition education for consumption of diverse food sources rich in micronutrients; counseling on the use of fortified food and supplements	All adolescents accessible through schools or other youth programs	<p>Biochemical markers of iron & vitamin A status, or clinical signs of deficiencies</p> <p>Urinary iodine</p> <p>Dietary diversity/intake results on dietary history, 24-hour recall, or food frequency surveys</p>
Vitamin A deficiency (VAD) prevention and treatment	<p>Above plus fortification of widely consumed foods with vitamin A</p> <p>VA supplementation in deficient populations</p>	All adolescents	% of vulnerable adolescents consuming VA fortified foods

⁸ % <5th percentile NCHS/WHO height-for-age (Kurz and Johnson-Welch, 1994)

⁹ % <5th percentile NCHS/WHO BMI-for-age (Kurz and Johnson-Welch, 1994)

¹⁰ % >95th percentile NCHS/WHO BMI-for-age (Kurz and Johnson-Welch, 1994)

ANNEX 6: INTERVENTIONS FOR IMPROVED ADOLESCENT NUTRITION

	(10,000 IU daily or 25,000 IU weekly 4-8 weeks for pregnant adolescent girls)		
Iodine deficiency disorders prevention and treatment	<p>Universal salt iodization and consumer education</p> <p>Short-term supplementation (iodized oil; iodized water) where iodized salt is not available in iodine-deficient areas</p>	All adolescents (girls affected disproportionately)	<p>% households consuming iodized salt</p> <p>Proportion of target population with urinary iodine level < 100µg/L or</p> <p>Proportion of school children with palpable enlarged thyroid</p>
<p>Iron deficiency and anemia prevention and treatment:</p> <p>Strategy will be an integrated package, depending on the specific causes of iron deficiency and anemia in a given setting</p>	<p>Fortification of widely consumed foods with iron/folate</p> <p>Iron/folic acid supplements (weekly for non-pregnant; daily throughout pregnancy for pregnant teens)</p> <p>Regular deworming of adolescents in high parasite-load settings (girls at higher risk than boys)</p> <p>Malaria control/treatment</p>	<p>All adolescents</p> <p>Adolescents in supervised settings such as schools, workplace</p> <p>All adolescents living in areas with low-moderate malaria transmission</p>	<p>% vulnerable households consuming iron fortified foods</p> <p>Prevalence of anemia in target population</p> <p>% target population receiving iron/folate supplements</p> <p>% of target population receiving deworming treatment</p> <p>% of at-risk population sleeping under insecticide-treated bednets or other materials</p>

ANNEX 6: INTERVENTIONS FOR IMPROVED ADOLESCENT NUTRITION

			<p>% at-risk population with uncomplicated malaria receiving correct treatment according to national guidelines within 24 hrs. of onset of symptoms</p> <p>% pregnant girls who have taken chemoprophylaxis or intermittent drug treatment according to national policy</p>
<i>Address underlying causes of malnutrition</i>			
Postpone/avoid adolescent pregnancy to reduce nutritional losses	Increase age at marriage; delay first pregnancy including provision of family planning and reproductive health information and services for adolescents	Adolescent girls	<p>Age at marriage</p> <p>Service statistics for adolescent RH services</p>
Adolescent access to/control over food	<p>Increase educational attainment of adolescents</p> <p>Parent education about meeting the nutritional needs of adolescents</p> <p>Increase income earning potential (adult literacy education; skills training; inputs/microcredit for small business enterprise development)</p> <p>Increase household livelihood security (e.g., food policy reforms; off-farm income generation; safety nets including targeted</p>	All adolescents	<p>Increased completion rates for secondary schooling</p> <p>% target population consuming < 80% of daily energy requirements OR < two meals per day</p> <p>% of households with expenditure on food > 50% of</p>

ANNEX 6: INTERVENTIONS FOR IMPROVED ADOLESCENT NUTRITION

	income transfers)		household expenditure
Hygiene and sanitation	Infrastructure/supplies for schools (e.g., wells; sanitation facilities; soap)	School-going adolescents	% of schools with functioning sanitation facilities Increased gross enrollment rates of girls
	Improve access to adequate water and sanitation in households	All adolescents	% hhs with access to potable water; latrines
Gender equity	Gender-sensitive school environment/policies (e.g., safety/privacy for girls at school; flexible hours for girls; programs to support school retention for adolescent mothers; raise proportion of female teachers) Foster girls' self-esteem (e.g., sports programs; community-service projects; mentoring programs to expand girls' expectations for the future)	Adolescent girls	Female secondary school enrollment ratio (or gross enrollment rate of girls) Increased age of sexual debut Increased age of first pregnancy

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