A young woman with dark hair, wearing a bright pink sari with white embroidery, is smiling and looking towards the right. She is wearing a small red bindi on her forehead and a thin necklace. The background is dark and slightly blurred, suggesting an indoor setting.

START WITH A GIRL A NEW AGENDA FOR GLOBAL HEALTH

A GIRLS COUNT REPORT ON
ADOLESCENT GIRLS

MIRIAM TEMIN

RUTH LEVINE

CENTER FOR GLOBAL DEVELOPMENT

**START
WITH A GIRL
A NEW AGENDA
FOR GLOBAL
HEALTH**

TAKE ACTION FOR GIRLS' HEALTH

1 Implement a comprehensive health agenda for adolescent girls in at least three countries.

Working with countries that demonstrate national leadership on adolescent girls, bilateral donors, the World Bank, the WHO, UNFPA, and UNICEF can comprehensively support girl-focused interventions (including girl-friendly reproductive health services), broad health sector changes, transformations in social norms, community resources for girls, and girls' schooling. Accompanied by operational and evaluation research and funded by domestic and international resources, the aim is to achieve full program coverage among the poorest segments of the population by 2016.

2 Eliminate marriage for girls younger than 18.

Child marriage is a manifestation of girls' powerlessness and a driver of health risks. International agencies should identify the practice, affecting at least half of all girls in about a dozen countries, as a human rights violation. Girls need national laws to prevent child marriage, along with donor support for national responses—for example, marriage registration systems and incentive schemes to keep daughters in school—and programs to mobilize communities and create viable alternatives to marriage.

3 Place adolescent girls at the center of international and national action and investment on maternal health.

New advocacy and programmatic investments give renewed hope for maternal health. Within advocacy and program efforts, specific attention to girls will pay off. Donors should support research on the risk factors for pregnant adolescents and evaluations of programming for girls facing high hurdles to health care. They should translate evidence into programming to reduce adolescent maternal mortality beyond labor and delivery to also include family planning, nutrition, and abortion-related care. Funding should be earmarked for adolescents within any new resource package for maternal health.

4 Focus HIV prevention on adolescent girls.

To turn off the tap of new infections and break the back of the epidemic, HIV prevention efforts must focus more on girls and young women. As the Global Fund to Fight AIDS, TB and Malaria, the U.S. President's Emergency Plan for AIDS Relief, and other major international HIV/AIDS initiatives step up HIV prevention efforts, adolescent girls must be at the forefront. This means supporting efforts to transform harmful social norms, ensuring that essential services and commodities are in place for girls, educating girls about avoiding HIV/AIDS as part of comprehensive sexuality education, and working with boys and men to change their behavior—for themselves and their partners.

5 **Make health-system strengthening and monitoring work for girls.**

If the health system is failing girls, it's failing. Strategies to strengthen health systems are unfolding, funded by vertical and health sector sources and new resources. Those designing health system reforms should pay particular attention to community-based service delivery for girls, girl-friendly reproductive health services, health worker training to increase competency on adolescent girls' and boys' health, and financing and payment strategies that prioritize girls' health.

6 **Make secondary school completion a priority for adolescent girls.**

Getting girls through secondary school is one of the most important actions governments can take to improve girls' chances for good health. Governments should extend the definition of basic education, to which all are entitled, to lower secondary or to age 16. Governments and the private sector, with donor support, must increase formal and non-formal school places by extending primary school facilities, offering targeted scholarships or household cash transfer schemes to disadvantaged girls, and offering open-learning programs so girls can study at their own pace.

7 **Create an innovation fund for girls' health.**

The evidence base on girls' health, and effective strategies to improve it, is weak. Girls urgently need investments in data collection (e.g. through the Demographic and Health Surveys and longitudinal studies) and multi-country evaluations of promising programs, including the 12-year-old check-in and programs to change boys' and men's attitudes and behaviors. Philanthropic funders could create an innovation fund to stimulate knowledge generation and dissemination, leveraging resources from governments and official donors' agencies along the way.

8 **Increase donor support for adolescent girls' health.**

Obtaining better health for girls requires significant—yet feasible—investment by governments, donors, and the private sector. There is no valid estimate of current spending on girls' health. In the absence of a baseline, but knowing that girls' health programs constitute a small share of current effort, OECD donors should increase official development assistance in areas that benefit girls by at least \$1 billion per year. This constitutes approximately 6% of current spending on global health. In addition, non-traditional donors, including emerging donors in the Middle East, should identify girls' health as a focus area and commit \$1 billion per year.

START WITH A GIRL A NEW AGENDA FOR GLOBAL HEALTH

A GIRLS COUNT REPORT ON
ADOLESCENT GIRLS

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Cover Photo Credit: Brent Stirton / Getty Images

START WITH A GIRL

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START WITH A GIRL FOREWORD

Girls Count Series

In 2008, *Girls Count: A Global Investment and Action Agenda* uncovered adolescent girl-specific data and insights to drive meaningful action. Authored by Ruth Levine from the Center for Global Development, Cynthia Lloyd of the Population Council, Margaret Greene of the International Center for Research on Women, and Caren Grown of American University, *Girls Count* laid out the case for investing in girls and outlined actions that policymakers, donors, the private sector, and development professionals can and should take to improve the prospects for girls' wellbeing in the developing world.

Today, *Girls Count* has gone into its second printing. More importantly, the authors have continued beyond that groundbreaking work to explore girls' lives further. Together, the results comprise the new Girls Count series:

- In *New Lessons: The Power of Educating Adolescent Girls*, Cynthia B. Lloyd and Juliet Young demonstrate that education for girls during adolescence can be transformative and identify a broad array of promising educational approaches which should be evaluated for their impact.
- In *Girls Speak: A New Voice in Global Development*, Margaret Greene, Laura Cardinal, and Eve Goldstein-Siegel reveal that adolescent girls in poverty are acutely aware of the obstacles they face, but are full of ambitious, powerful ideas about how to overcome them.
- In *Start with a Girl: A New Agenda for Global Health*, Miriam Temin and Ruth Levine describe the positive multiplier effect of including adolescent girls in global health programs and policies—and the risks if they continue to be left out.
- Through *Girls Discovered: Global Maps of Adolescent Girls*, Alyson Warhurst, Eva Molyneux, and

Rebecca Jackson at Maplecroft join the ranks of Girls Count authors by using their unique quantitative analysis of girl-specific data to literally put girls on the global map.

- Finally, Caren Grown is exploring how income and savings in the hands of girls can drive fundamental social change. This work will be the first to shine a light on this exciting but little-understood area of global development.

Each report takes us deeper into the lives of adolescent girls and contains an action agenda outlining how the global community can count girls, invest in girls, and advocate for girls. Taken together, the Girls Count series presents a powerful platform for action. Please visit coalitionforadolescentgirls.org for more information.

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START WITH A GIRL

PREFACE

During adolescence, between 10 and 19 years old, girls stand at the precipice between childhood and their adult lives. It is from that edge that they fly—or fall.

Whether girls in the poorest countries of the world fly or fall—whether their futures are bright or bleak—is in part a result of whether they traverse adolescence in good health, well prepared for their roles as citizens, wives, mothers, and workers. And whether girls thrive today foretells the development prospects for their societies long into the future.

Girls' health, in particular, influences their chances for educational attainment and productivity in employment, and has well-documented impacts on the wellbeing of their children. The age at which they marry and bear their first child—which in many developing countries is by 18—has an impact not only on the babies' chances of survival, but also on all their children's education and ultimate chances in life and, consequently, on the economic outlook for their countries.

Many have a role to play in reducing the risks to girls' health that are all too common—from child marriage to ignorance about sex to exploitive work and barriers to health care. Leadership at the national level is of paramount importance: girls' health should be very high on the priority list not only for ministers of health, but for the finance and planning officials who have an eye on the bottom line. Their leadership can be encouraged and supported by donor, technical, and implementing organizations operating internationally. These organizations can provide knowledge about “what works” within and outside of the health sector and a share of the financial resources to step up the response to girls' health needs. Civil society groups can bring to light the key health problems facing girls and marshal the advocacy—including the voices of girls themselves—to solve those problems in ways that fit in the local context.

This report follows from the landmark *Girls Count: An Investment and Action Agenda*, which we issued

in 2008. While that report looked across a range of sectors and issues affecting girls' wellbeing, this one dives deeply into health. This does not mean it's about only the health sector. To fully address the needs of girls and make the most of opportunities to have a positive development impact, the authors look at the social determinants of health. They highlight, with real-world examples, the ways in which investments in changing social norms, improving girls' school experiences, and addressing violence against girls and women can make a difference. In short, the report serves as a roadmap for those who are seeking to advance a range of social and economic goals, within and outside of the health sector.

It is always tempting to get caught up with the crisis of the moment, and in 2009 there are no shortages of crises. But it is the job of think tanks like the Center for Global Development to keep our eye on the medium and long term, working to ensure that the public policy responses today—many of which are reacting to the headlines of the moment—are fostering as resilient and prosperous a future as possible. There is no doubt that policies and programs that improve the health of girls today will pay off handsomely for many years to come.

Nancy Birdsall

President, Center for Global Development

START WITH A GIRL EXECUTIVE SUMMARY

The world is filled with paradoxes and ironies, gulfs between rhetoric and reality, and instances of just plain hypocrisy. So perhaps we should be unsurprised by the vast gap between how widely the international community recognizes the importance of adolescent girls' health and what is actually done to help girls in developing countries become fully prepared for healthy, empowered, and productive adult lives.

It is time to close that gap. It is time to invest in adolescent girls' health for the payoffs that will accrue to girls and to their families, communities, and countries over many generations. For those who seek ways to uphold human rights and accelerate progress toward better maternal and child health, reduced HIV incidence, and other Millennium Development Goals, this is the moment to commit to a global health agenda for adolescent girls.

Most girls enter adolescence healthy. But a host of factors, often out of their control, jeopardize their health and deny them their rights. Girls' disadvantaged social position relative to boys and men is at the root of most of these: forced sexual initiations, limited employment options that are unsafe and exploitative, early marriage before girls are physically and emotionally mature, and school dropout before the essential education and health benefits are conveyed.

The costs of ignoring girls' health are massive. Lives are lost. An astounding 97% of the 2.6 million 10- to 24-year-olds who died in 2004 lived in developing countries (Patton et al. 2009). And precious resources are wasted. Some researchers estimate that in India, for example, adolescent pregnancy results in nearly \$100 billion of lost potential income, equal to almost two decades' worth of global humanitarian assistance (Chaaban and Cunningham 2009).

This report describes the most prevalent and serious health problems adolescent girls face in developing countries, linking them to a combination of specific

When adolescent girls win, everyone wins. The primary motivation to improve the health of and health care for adolescent girls must always be the wellbeing of girls themselves. But girls are also agents of positive change for their future families and communities.

In about a dozen countries, at least half of all girls are married as children, a manifestation of their powerlessness and a driver of health risks.

public health risks and social determinants of health. It highlights the diverse ways in which governments and non-governmental organizations have sought—often successfully, albeit on small scale—to break vicious cycles of ill health. Finally, and most importantly, the report lays out an ambitious yet feasible agenda for governments, donors, the private sector, and civil society organizations, complete with indicative costs.

Amidst the facts, figures, and program examples, five main messages emerge:

When adolescent girls win, everyone wins. The primary motivation to improve the health of and health care for adolescent girls must always be the wellbeing of girls themselves. But girls are also agents of positive change for their future families and communities. Improving the health of adolescent girls happens to be one of the most direct means to accelerate and sustain progress toward improving maternal and child health, halting the HIV/AIDS pandemic, mitigating the looming burden of chronic disease, and achieving a range of economic and social development goals at the top of the international agenda. Specific health measures taken for girls also will benefit boys and, indeed, virtually all users of health systems. Strategic investments in girls' health today also pay off through lower demands on public health dollars tomorrow, for girls themselves as they grow into women, and for their children, who will be born healthier. And finally, they pay off through reduced childbearing, improving changes for long-term economic growth. In short, there is near-perfect convergence between protecting the rights of adolescent girls and making the right public policy choices to establish a sound foundation for development.

Girls' ill health is shaped more by social forces than biological ones. Public health and clinical perspectives tend to dominate our approach to health, distracting from the social forces that actually have the greatest influence on health outcomes. Understanding girls' health must begin by shining a light on the social factors that shape their lives. For many girls in developing countries, wellbeing is compromised by poor education, violence and abuse, unsafe working conditions, and early marriage—all manifestations of poverty and gender inequality. The results: early and frequent childbearing, HIV/AIDS, neuropsychiatric problems, burns, and violence; road traffic accidents

and infectious disease are also major concerns (World Bank 2006; Mathers 2009). To obtain crucial health information and care, girls must overcome a panoply of barriers, from restrictions on their movement to taboos about discussing sexuality to lack of autonomy in decision-making. Efforts to improve the health of girls will be most effective when they go beyond biomedical solutions and foster healthier, more equitable social environments.

Adolescent girls are neither “large children” nor “mini-adults”; they have unique health needs. Young people require accurate information about risks and choices, offered in a non-judgmental context; peer and other social support to make healthy choices; and a range of tools to help them deal with old and new risks to their health. Some of those tools, like sexual and reproductive health counseling and services, fall within the traditional boundaries of the health sector as part of youth-friendly health services. Many others, such as learning to negotiate sexual interactions and combating gender-based violence by righting inequitable gender relations, require programmatic approaches within communities and in educational settings. These investments include comprehensive education on sexuality, gender, and human rights; the creation of safe spaces and mentoring for out-of-school girls with limited mobility and life choices; and social mobilization to get girls back into school instead of marrying.

Some progressive governments and innovative NGOs are undertaking innovative approaches with promising results, both within and outside of the health sector—but we know far too little about what works. Small projects illustrate what innovation can achieve when the will is there, and when activities are tailored to the context and shaped by evidence on the unique characteristics of the girls, or indeed the boys, involved. For example, heroic local efforts to tackle gender-based violence using group work and community education with boys and men has had an impact in South Africa and Brazil. Limited but exciting experience combining adolescent girls’ livelihoods and income generation with health and sexuality education is beginning to bear fruit in India and elsewhere. And in Ethiopia, safe spaces, schooling support, and vocational training have effectively delayed marriage for vulnerable girls. We have evidence on the impact of these programs, which makes them the exception

MARGARET GREENE

“If only the world took the health of adolescent girls more seriously. Instead, girls traverse adolescence with few of the resources offered to children and even fewer of those extended to adults. This report highlights the price that girls—and the world—pay for this neglect and offers concrete ideas about how to do things differently in the future.”

A comprehensive agenda for girls' health is within reach. A range of policies and programs within and outside of the health sector comprise a comprehensive agenda for girls. We estimate that a complete set of interventions, including health services and community- and school-based efforts, would cost about \$1 per day.

rather than the rule; we know far too little about the programs' cost-effectiveness, or whether the same success will be achieved when programs are replicated or scaled-up. And we have virtually no evidence from the developing world on which to base programming for some health concerns, including the mental health problems and behaviors such as smoking, poor diet, and lack of exercise that contribute to a massive chronic disease problem down the line. We urgently need action to tackle these emerging priorities and expand promising approaches with specific research and evaluation built in, so we can learn by doing.

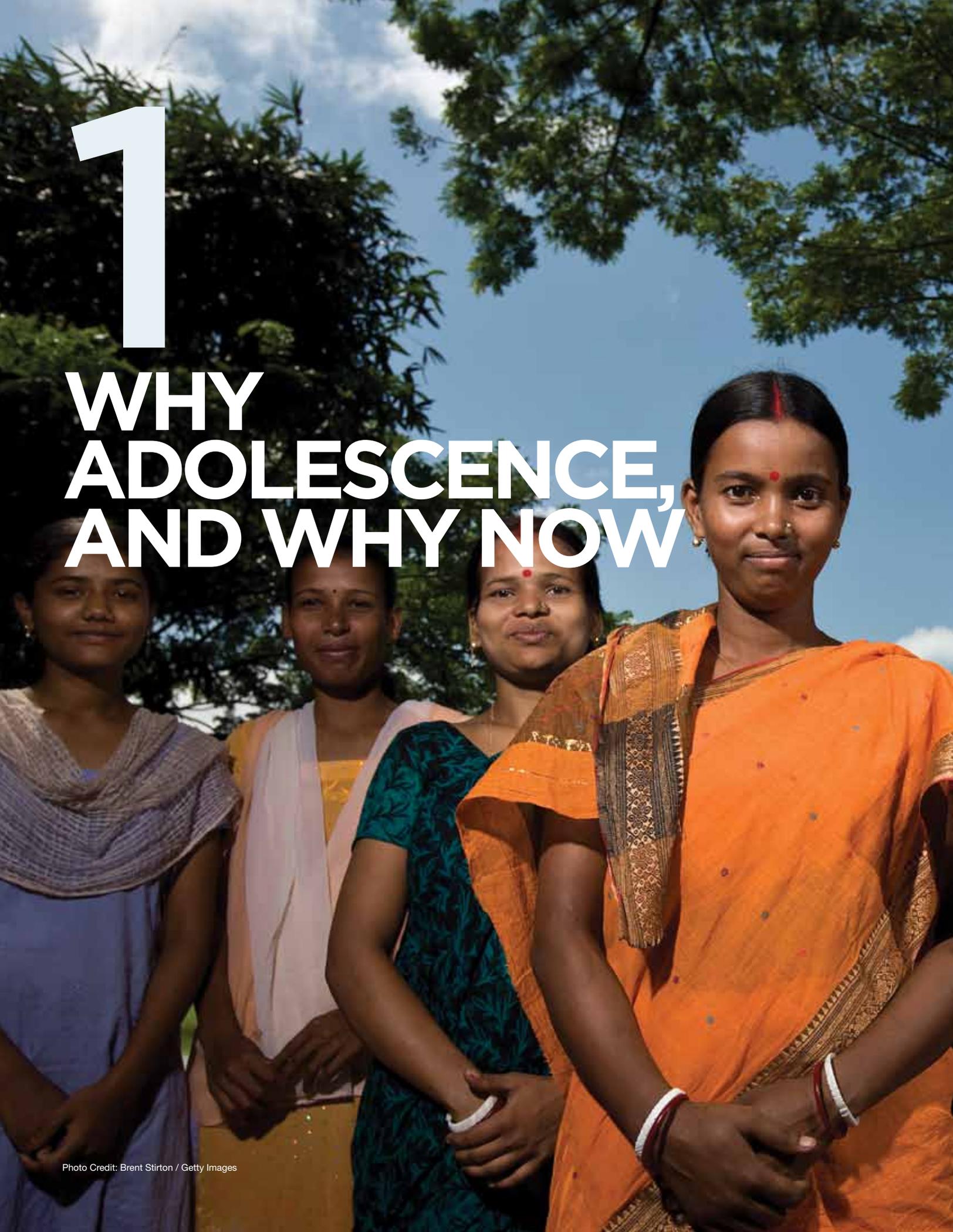
A comprehensive agenda for girls' health is within reach. A range of policies and programs within and outside of the health sector comprise a comprehensive agenda for girls. We estimate that a complete set of interventions, including health services and community- and school-based efforts, would cost about \$1 per day for each girl in low- and low-middle-income countries. Taken together, the breadth and intensity of the work ahead may appear daunting, particularly for countries at relatively early stages of institutional development, with limited capacity for planning and implementation. But in each of the areas of intervention and programming, from changing social norms around female genital cutting to the delivery of iron supplements, there are real-world examples and models from which to draw. Innovative approaches to changing social norms, empowering girls with information and skills, and making health services work better for adolescents all provide inspiration.

Taking action in girls' health

Major improvements in global health have been possible when powerful champions put their voices behind key priorities—child survival, HIV/AIDS, malaria—and when leading funders step up to the plate. That opportunity exists today for adolescent girls. International and national leaders have at their fingertips enough evidence about the links between girls' health and a vast array of health and development goals to motivate action. There is a policy opportunity, with new focus on the importance of effective HIV prevention; interest in using HPV vaccine introduction as an additional entry point to reach girls in developing countries; and a reenergizing of the maternal, child, and reproductive health communities. There is also a notable surge of interest in adolescent girls and boys at the international level.

EXECUTIVE SUMMARY

The global health agenda for adolescent girls—described in detail in Chapter 5 of this report—is the chance to seize this opportunity.

A photograph of four young women standing outdoors in a row. They are dressed in traditional Indian clothing, including sarees and blouses. The woman on the far right is wearing a bright orange saree with a gold border and has a red bindi on her forehead. The woman next to her is wearing a green patterned blouse. The woman in the middle is wearing a white shawl over a yellow top. The woman on the far left is wearing a light purple shawl over a blue top. They are all looking towards the camera with neutral expressions. The background consists of green trees and a blue sky with some clouds.

1

WHY ADOLESCENCE, AND WHY NOW



Adolescence is a critical juncture for girls. What happens to a girl's health during adolescence determines her future—and that of her family, community, and country. While this should be a relatively healthy life stage in many settings, by virtue of gender and other social inequalities, many adolescent girls in developing countries are at risk from violence; forced early marriage; HIV/AIDS and other sexually transmitted infections; and, especially among the poor, exclusion from schooling, fair employment, and good health care. They are neither empowered to take care of themselves nor to benefit from the knowledge of their bodies and their rights that would enable them to have relationships based on mutual consent in sex and marriage.

Girls are falling through the cracks. Families often lack the knowledge, means, or motivation to afford daughters equal treatment with sons. Governments and international agencies, for the most part, focus on children under five. Older children pose challenges that many governments are just beginning to consider, especially when it comes to sexuality, substance abuse, autonomy, and decision-making. Few development programs address adolescents as an identified group, and those that do are often limited by small budgets and shortcomings in evidence on program effectiveness.

This report is part of the story of girls' potential and girls' needs—and what can be done to respond to those needs and realize the promise. It is about the health of adolescent girls in developing countries.

A complement to the co-authored *Girls Count: An Action and Investment Agenda* (2008), it is issued as part of a series that covers adolescent girls' education, economic empowerment, and aspirations. The report builds on earlier contributions—such as the National Academy of Sciences' study *Growing Up Global: The Changing Transitions to Adulthood in Developing Countries* (2005) and recent work on women's and adolescent health by the World Health Organization (WHO)—to provide up-to-date information for setting policy priorities. It particularly emphasizes what those in the international community—public and private institutions and individuals who help shape the global health agenda—can do to respond to the opportunity presented by strategic investments in adolescent girls' health.

In this report, we discuss the relationship between adolescent health and a broad range of social outcomes. We describe what health problems girls face and why, with a clear recognition of the role of social determinants (Chapter 2). We highlight the promising approaches that have been developed and, where possible, summarize the evidence about what works (Chapters 3 and 4). Finally, we lay out a set of specific priority actions for the many institutions and individuals who can make a difference (Chapter 5).

The goal of this work is simple: to help close the gap between what we know about the importance of adolescent girls' health and what we are doing to foster the best health possible among girls in the developing world; and, in the process, to tap into the potential to greatly accelerate and sustain progress toward improved health across the generations.

The numbers are large

In the past 30 years, the chances of survival past infancy and early childhood have increased dramatically in the developing world. Since 1950, the child death rate has fallen by roughly 60% through a combination of improved social conditions and actions within the health sector, including immunization, availability of antibiotics for respiratory disease, and access to other health technologies (Levine 2007; Ahmad et al. 2000). Combined with the legacy of high fertility in many parts of the world, this means that more and more children are now entering into adolescence (WHO 2003c).

Previous Page

From an early age, these Bangladeshi girls took part in programs that built their social and economic assets. With the support of their families and communities, they've delayed marriage and continued their education.

¹ Figures calculated from *United Nations World Population Prospects: The 2008 Revision* data for 2005.

The population of adolescents ages 10 to 19 is about 1.2 billion, or almost 20% of the world's population, with 87% living in the developing world. Out of every 100 adolescents, about 62 are in Asia, another nine are in Latin America, and 15 are in sub-Saharan Africa (UNFPA 2003; UN 2008b).¹

In countries that have already passed through a demographic transition, the adolescent population has peaked. This is the case in East and Southeast Asia, dominated by China. In Latin America and the Caribbean, the adolescent population is projected to peak in 2015, and in South-central Asia and West Asia this will occur around 2030 or a bit later. In sub-Saharan Africa, by contrast, the population of adolescents will still be growing in 2050 (UNFPA 2003; UN 2008b). As shown in Map 1.1, the developing world comprises the largest share of the world's adolescents, with the greatest number of 10 to 19 year olds in South and South East Asia, Africa, and the Middle East.

The risks for girls are unique—and so are the opportunities

The many risks that adolescent girls face, as well as their emerging potential, make this a critical phase for attention. Families and communities are not as engaged in protecting adolescents as they are younger children and babies; in modernizing societies, parental control and social cohesion are decreasing. Both adolescent girls and boys often lack knowledge about their bodies, ways to maintain their health, and the health services available; this unhealthy ignorance is even more acute for girls. They often lack the power and resources they need to prevent and treat common health problems—particularly because some of the most common health complaints are associated with their burgeoning (and often unmentionable) sexual lives.

Several health opportunities are specific to this age group as well. While still often close with their parents, adolescents can be influenced in positive ways by school—a key institutional setting for both general and health-specific education—and/or by community-based programs designed to reach out-of-school youth. Adolescence is the period when the crucial foundations are established for a lifetime of behaviors: sexual activity, family planning, diet, drug and tobacco use, and physical activity.

JOY PHUMAPHI

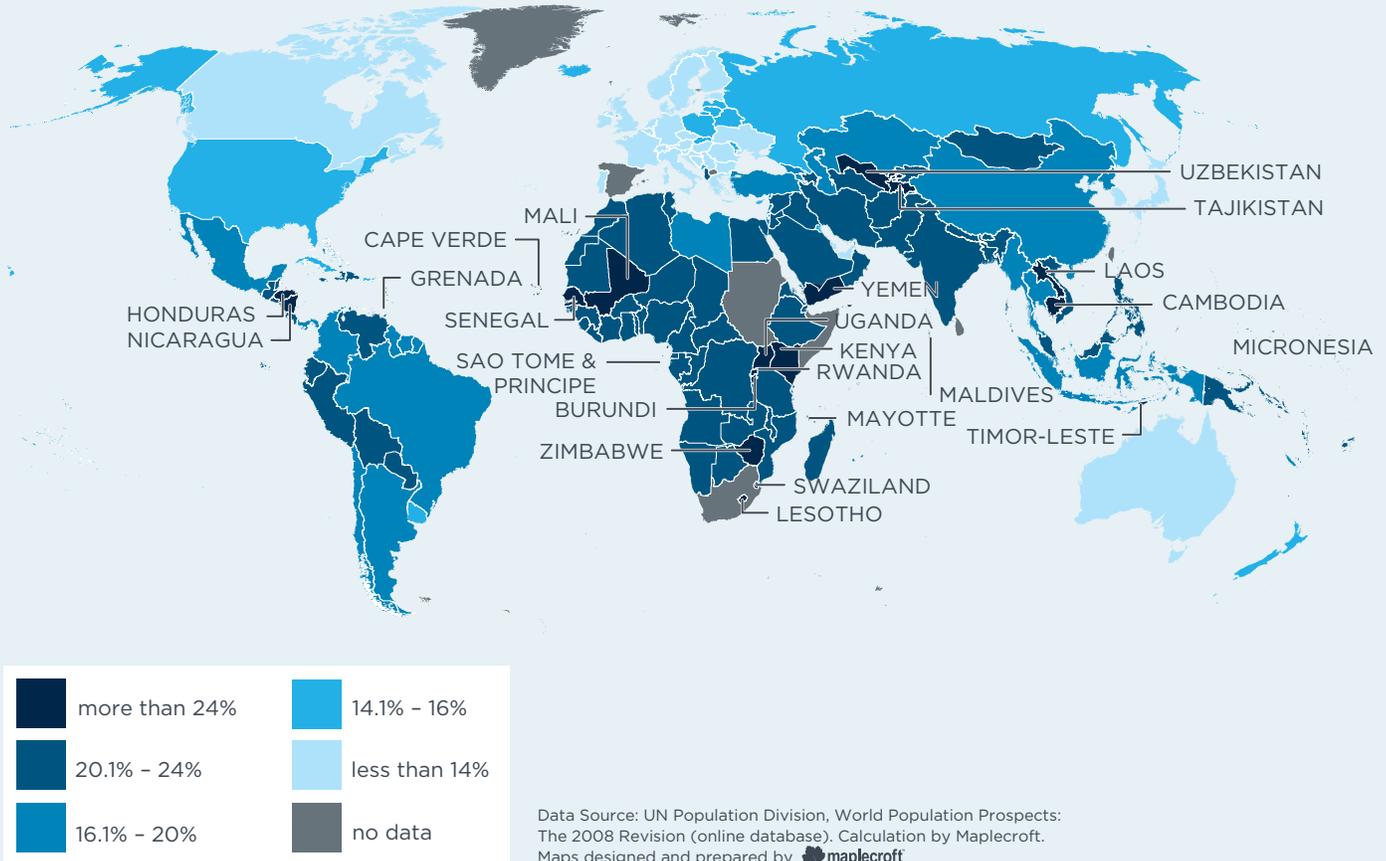
Vice President of the World Bank's Human Development Network

“Investing in adolescent girls is one of the smartest investments that developing countries and donors can make in their pursuit of lasting economic and social development. It makes sense for everyone: young girls, their families, and their wider communities. This was true long before the global crisis and it becomes all the more urgent now.”

MAP 1.1

Adolescents: a large share of the population, especially in poor countries

Share of adolescent boys and girls (10-19 years) among the total population (2005)



² Millennium Development Goal 6 is to combat HIV/AIDS, malaria, and other diseases by halting (and beginning to reverse) the spread of HIV/AIDS by 2015; achieving universal access to treatment for HIV/AIDS by 2010; and halting (and beginning to reverse) the incidence of malaria and other major diseases (UN 2008a).

³ Millennium Development Goal 5 is to improve maternal health by reducing the maternal mortality ratio by three quarters between 1990 and 2015, and to achieve universal access to reproductive health by 2015 (UN 2008a).

Adolescent girls are overlooked

Between the age of the last childhood vaccination (typically five years old) and the first pregnancy, girls are largely ignored by the health sector. Ministries of women and youth tend to be under-funded, weak and, in the case of many youth ministries, oriented more toward keeping young men off the streets than protecting the most vulnerable adolescents (A. Germain, pers. comm.).

The international community also has often overlooked adolescent girls. Out of 19 indicators for

the health-related Millennium Development Goals, only four pertain to young people, and only one is specific to girls. Three indicators for MDG 6 on HIV/AIDS measure young people's HIV/AIDS knowledge, infection rates among 15- to 24-year-olds, and risks facing orphans.² An indicator for the MDG 5 target on universal access to reproductive health is the birth rate among girls ages 15 to 19.³

Programs with the particular characteristics that are necessary to reach adolescent girls are rare. Such programs recognize that adolescents are neither

“large children” nor “mini-adults.” Instead, they are individuals in transition facing a complex constellation of challenges. For example, compared to the younger years, it is at this age when gender roles intensify and increasingly shape day-to-day experience. Successful health programs must accommodate gender-related needs, including the need for confidentiality and an awareness of girls’ unique vulnerabilities. Similarly, adolescents cannot just be treated as adults. For example, contraceptive promotion for adolescent girls is too often “junior family planning”—standard family planning unmodified for young women and girls—limited in its effectiveness and reach.

Even programs explicitly focusing on adolescents do not necessarily reach girls. For example, coverage surveys of urban-based peer education and youth clubs targeting 10- to 24-year-olds in Ethiopia, Burkina Faso and Guinea Bissau, reveal that users were mostly male, older (even above 24), and in school, rather than the most vulnerable (Weiner 2007). Many programs that target girls do not report on usage by sex and age, making it difficult to discern how well they are reaching their target beneficiaries.

A 2004 study of more than 1,000 boys and girls ages 10 to 19 in low-income and slum areas of Addis Ababa, Ethiopia, provides important illustrative coverage details for youth centers and peer-based programming close to the study area. As elsewhere, boys are more likely than girls to have used both services, although coverage was low for both boys and girls. Girls least likely to be reached had the largest workload, the fewest friends, the least mobility, and were the most isolated and socially invisible. Only 1% of female domestic workers reported visiting a youth center and 6% reported having contact with a peer educator (Erukhar et al. 2004b).

Programs that approach adolescents as a monolith are also making a mistake, again illustrated by the Ethiopia study. Study results varied by sex and school enrolment—no surprises there. But they also varied significantly by other factors that program designers might not appreciate, such as if adolescents were migrant or native to the capital and if they resided with their parents or not. Approaches need to recognize the diversity of adolescents and tailor programs accordingly.

BOX 1.1

Governments have already committed to girls: international treaties that protect girls’ health

Most countries recognize that girls have an inalienable right to health as described in international conventions, and recognition of adolescent girls’ right to health has greatly increased in recent years. In 1989, the Convention of the Rights of the Child (CRC) granted children up to 18 the right to information and skills; access to health, education, recreation, and justice services; safe and supportive environments; and opportunities to participate and have their voices heard. Further gains were made in 1994 with the International Conference on Population and Development and in 2001, with the UN Special Session on AIDS, which affirmed the rights of young people to high-quality sexual and reproductive health information and services. Countries that have ratified the CRC and signed declarations of commitment are required to take necessary measures to secure the rights described (UNICEF 2007a).

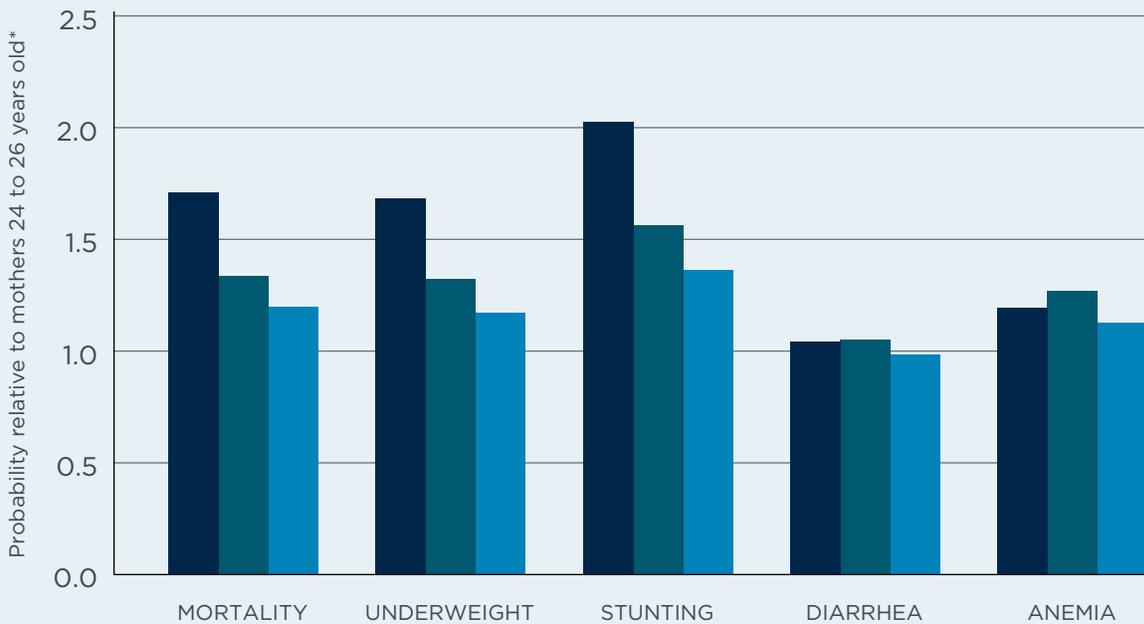
Why girls’ health matters

Girls’ health matters because girls matter. Girls are endowed with human rights, including the right to health (see Box 1.1). Moreover, health is a determinant of whether they will be able to fulfill their potential: to succeed in school and have a full range of life chances, to have the ability to participate in the labor market, and to bear healthy children. So, first and foremost, the global health agenda for adolescent girls is for the girls themselves.

Girls’ health also matters because of the special role that girls and women play in physical and social reproduction. In health as in other dimensions of girls’ wellbeing, when girls do well, so do their current and future families, communities, and societies. Investments in girls to delay marriage and childbearing have profound effects for future population growth; raising the age of first birth has obvious health and human rights benefits, but also important macroeconomic benefits (Bongaarts and Bruce 2009). Declines in

FIGURE 1.1

Mother's age is a risk factor for children's health problems



Age of the Mother at First Birth



Source: David Canning, Jocelyn E. Finlay, and Emre Ozaltin, "Adolescent Girls Health Agenda: Study on Intergenerational Health Impacts" (Harvard School of Public Health, unpublished, 2009).
*The analysis also controlled for mothers 21 to 23 years old.

fertility lead to a demographic structure that, under the right policy conditions, fosters rapid economic growth (Bloom et al. 2002). Recent research proves there are climate-related benefits as well: declines in fertility through investments in girls' education and family planning lowers carbon emissions at a level comparable to other means of reducing emissions (Wheeler 2009). The very same changes in public policies and health programs that can ensure girls' rights will accelerate progress toward the broad social aims of healthier children and more productive and thriving societies over the long term.

The health of girls drives the health of others and therefore deserves a special place among global health priorities. Four particular links illustrate that when girls win, everyone wins: first, the relationship between early childbearing and the babies' health; second, the links between girls' nutrition and healthy pregnancies and births; third, the importance of successful prevention of HIV among adolescent girls in high-prevalence countries; and fourth, the link between health-related behaviors in adolescence and the longer-term consequences, particularly with respect to sexually transmitted infections and chronic disease.

Later childbearing benefits babies' health

Systematically, younger mothers have babies who are more likely to die young. This has long been established in the research literature.⁴ In a new set of analyses conducted for this report, Canning, Finlay, and Ozaltin (2009) examined patterns in 76 Demographic and Health Surveys conducted between 1994 and 2007.⁵ As shown in Figure 1.1, children's health suffers when their mothers are young. Specifically, the researchers found that "when the first born child is born to a young mother (12 to 20 years old), then the child is at a greater risk of dying before the age of five, being stunted, being underweight, and suffering from anemia" compared to a mother 24 to 26 years old. These analyses control for the potential confounding effect of a range of other influences on babies' health, including household wealth, mothers' education level, and other factors, so the results isolate the effect of age.

From this analysis of data on nearly 87,000 women in diverse settings of 76 countries, the detrimental effect for the next generation of early childbearing is apparent. Delaying those births would have meant fewer underweight, stunted, and anemic babies and less infant mortality.

Better nourished girls have healthier babies

Adolescent girls who are stunted due to malnutrition during their childhoods are likely to have low-birthweight—a risk factor in 70% of neonatal deaths (Victora et al. 2008)—and less-healthy babies. This is one of the ways in which poor health is transmitted to later generations. Research in Guatemala and India has shown the association between maternal birthweight and babies' birthweight. This relationship spans at least three generations, as grandmother's height has a small but significant association with grandchildren's birthweight in settings as diverse as Brazil, the Philippines, and South Africa (Victora et al. 2008).

Other nutritional deficits common in young mothers also harm babies. Anemia in pregnancy poses considerable risks, including miscarriage, stillbirth, premature birth, low birthweight, and perinatal mortality (Gillespie 1997). Research also reveals an association between poor maternal nutrition and the risk of vertical HIV transmission (Piwoz and Greble 2000).

Prevention of HIV among girls is without question one of the most essential challenges to reach a turning point in the epidemic.

⁴ For examples, see Zabin and Kiragu 1998; Phipps and Sowers 2002; and Lloyd 2005.

⁵ The methodology and full results of "The Study on Intergenerational Health Impacts" (Canning, Finlay and Ozaltin 2009) can be found at <http://www.cgdev.org/content/publications/detail/1422676>.

Tobacco marketing is effectively targeting adolescents in emerging-market countries, and the number of girls who smoke is on the rise.

Preventing HIV among girls is essential to halting the epidemic

In the parts of sub-Saharan Africa where AIDS is so prevalent that it is changing entire societies, about three out of every four new HIV infections are among young women ages 15 to 24. The gender discrepancies are most pronounced in the hyper-epidemic countries of southern Africa, where HIV prevalence among young women ages 15 to 24 is more than four times higher than among young men of the same age group. In that region, Swaziland presents one of the starkest disparities: 22% of young women are HIV positive; among males of the same age, prevalence is 4% (UNAIDS 2008a, b).

There are glimpses of progress, with epidemics appearing to stabilize in many parts of the continent. However, advances in preventing HIV amongst young people, especially girls and young women, have been too slow. In Botswana and Zimbabwe, for example, HIV prevalence among pregnant 15 to 19 year olds is declining, but throughout the rest of southern Africa, it remains high and continues to rise among young women (UNAIDS 2008a).

On the whole, prevention efforts fail to tackle the underlying causes of female vulnerability. Girls, particularly those who are married, are much younger than their partners, who are more likely to have acquired HIV. This, combined with disempowering gender norms, means that girls are unlikely to negotiate the terms of sexual activity. Girls face a high risk of violence and abuse, both important risk factors for the transmission of HIV. Finally, girls and women are more vulnerable to acquiring the infection because of their biology and the natural history of the disease.

As the facts about the burden of HIV among girls have come to light, an understanding is dawning about how profound the response must be. A major meeting in South Africa called for nothing less than a social transformation to address practices that place girls at risk, including human rights violations and harmful social norms.⁶ The prevention actions needed to break the back of the epidemic? Delayed sexual debut, reduced numbers of sexual partners (especially concurrent ones), reduced age-disparate sex, increased condom use, increased male circumcision, increased knowledge of HIV status, and use of voluntary counseling and testing by those at highest risk.

⁶ UNAIDS and the Reproductive Health and HIV Research Unit of the University of Witwatersrand in South Africa convened an expert technical meeting in June 2008 focusing on young women in HIV hyper-endemic Southern Africa.

These strategies are not easy to pursue. But prevention of HIV among girls is without question one of the most essential challenges to reach a turning point in the epidemic.

Healthy behaviors in adolescence pay off over a lifetime

The patterns of sexual behavior, diet, exercise, and smoking that girls establish during adolescence set the stage for adult health. Many non-communicable health problems, projected to cause more than three-quarters of all deaths in 2030, are linked to eating and physical activity patterns that are established early (World Health Statistics/WHO 2008e). While the health consequences of these choices will not manifest for years, these girls are at risk for chronic problems associated with obesity, including diabetes, hypertension, and cardiovascular disease. The risks are especially acute for girls who were born underweight. Low birthweight babies who rapidly gain weight after infancy are particularly susceptible to cardiovascular and metabolic diseases later in life (Victora et al. 2008).

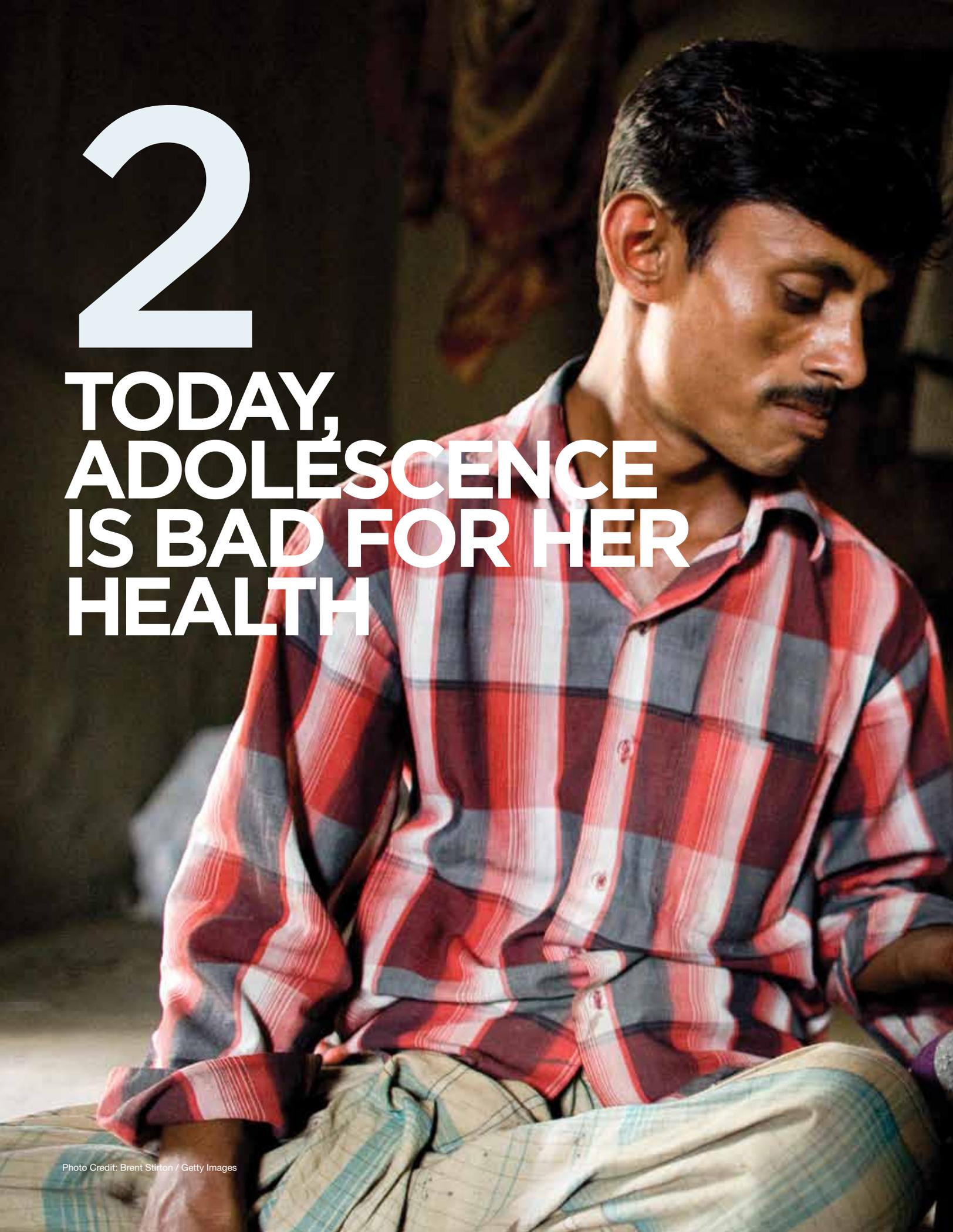
Smoking behaviors are often established in this transition age. Tobacco marketing is effectively targeting adolescents in emerging-market countries, and the number of girls who smoke is on the rise. The list of long-term health consequences of smoking is lengthy, and for women in particular, risks include reproductive cancers, osteoporosis, miscarriage and other pregnancy-related problems, infertility, painful menstruation and premature menopause, stroke, hardening of the arteries, and aortic aneurysm (Ernster 2001). It is estimated that as today's young women reach middle age, tobacco could kill one in four of them (WHO 2001). Taking advantage of the current window for prevention of an epidemic of chronic disease in the developing world requires deliberate efforts to counteract the effects on today's young people—and particularly young women—of urbanization, a globalized food supply, and tobacco marketing.

Sexual behaviors initiated during adolescence also profoundly influence lifetime health. The long-term risks for girls who engage in unsafe sex, too often involuntarily, include pelvic inflammatory disease, infertility, complications of pregnancy, cervical cancer, and AIDS. In contrast, healthy sexual behaviors—delaying the start of sexual activity, negotiating within

sexual relationships, and protecting against unwanted pregnancy, HIV infection, and other sexually transmitted infections—are fundamental to good sexual and reproductive health over many decades.

* * *

Investments in the health of girls at the precarious moment between child and woman, from 10 to 19 years, is essential above all because girls are entitled to their full complement of human rights, including the right to health and to live free from violence, discrimination, torture, and coercion. But beyond that fundamental truth, their health is a fundamental prerequisite for learning and reaching a productive adulthood strong and empowered. Further, their health uniquely shapes the prospects for their families and communities, having positive spillovers across a broad range of global health and development priorities.

A man with dark hair and a mustache is sitting down, looking down and to the right. He is wearing a red, white, and grey plaid button-down shirt and light-colored pants with a green and blue pattern. The background is dark and out of focus.

2

**TODAY,
ADOLESCENCE
IS BAD FOR HER
HEALTH**



Adolescent girls in the developing world suffer from significant rates of preventable death, disease, and disability. Some may arrive at adolescence in relative good health; others may be compromised by malnutrition during much of their childhood. During adolescence, new health threats appear: the start of sexual activity and childbearing, and accidents and violence.

This chapter offers a picture of girls' health and the risks that girls face in low- and middle-income countries in broad strokes. By necessity, the effort to represent a global picture obscures many of the unique features of particular regions. In addition, limitations in the available data—a problem that is both caused by and exacerbates the invisibility of adolescent girls in public policymaking—prevent as detailed and nuanced an understanding as we would like of which girls are affected by what health problems, and why. Despite these constraints, however, clear patterns emerge.

Social determinants of adolescent girls' health

Understanding girls' health doesn't start with biomedical science; it starts by shining a light on the forces that shape their future in society. As the recent report *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health* compellingly reveals, it is these forces that are often overlooked in favor of narrowly defined public health and medical perspectives—and yet they have the largest influence on health outcomes (WHO 2008a). The list of social determinants is long, but three strong and related determinants of girls' health status are their educational attainment, entry into marriage and childbearing at a young age, and exploitive work. Poverty critically influences all of these, along with the gender norms that disadvantage adolescent girls.

Education

Research from a range of countries shows that more education leads to better health (LeVine et al. 2004; Glewwe 1999; Thomas 1999; Khandke et al. 1999). Completion of primary school is strongly associated with later age at marriage, later age at first birth, and lower lifetime fertility (compared to less education) (UN 1995; Jejeebhoy 1995; Ainsworth et al. 1998; Lloyd and Mensch 1999).

The inverse relationship between women's education and fertility is perhaps the best studied of all health and demographic phenomena, and has obvious health implications. The relationship generally holds across countries and over time, even when income is taken into account (Adamchack and Ntseane 1992; Ainsworth et al. 1998; Castro Martin 1995; UN 1995; Jejeebhoy 1995; Bledsoe et al. 1999). An eight-country study from 1987 to 1999 concluded that "girls' education from about secondary level onwards was found to be the only consistently significant co-variate" determining the probability of a first birth during adolescence (Gupta and Mahy 2003). An analysis that followed women for over 35 years in Guatemala showed that the benefits of mothers' schooling for their children's health are even greater than previously assumed just from studies of one point in time (Behrman et al. 2009).

It is not simply completing a certain number of years of schooling that yields these benefits. Literacy appears to drive the relationship between education and health behaviors. This means that school quality determines the extent of health benefits girls experience from schooling (Lloyd 2009).

In large measure because of policy initiatives and greater economic opportunities for those educated, recent years have seen great advances in girls' enrollment in primary school in the developing world. Many regions have achieved gender parity, with particularly striking gains in West and Central Africa, the Middle East, and South Asia. In fact, aside from West Africa, most 15-year-olds are in school (Lloyd 2007). Some 43% of girls of appropriate age are in secondary school in the developing world (UNICEF 2007a).

Gains in girls' secondary school enrolment have stagnated, though, especially for girls in rural areas and among ethnic minorities. In Malawi today, for instance, only one of every four girls is enrolled in

Previous Page
Mahmuda, age 17, gave birth to a baby boy 10 months after being married in Bangladesh. Today she struggles to pay for healthcare for her sick child. Girls who marry early often pass disadvantage to their children, perpetuating the cycle of poverty and gender discrimination.

secondary school; in Nepal, less than half of girls make it that far (UNICEF 2008a).

Quality also is a major concern, and too many girls are leaving school after three to five years without functional literacy. An analysis of Demographic Health Surveys (DHS) data from a range of countries shows that in most countries, less than half of the women had basic literacy by the end of grade 3, and in half of the African countries included, less than half had achieved basic literacy even by grade 5 (Lloyd forthcoming 2009).

The risk that girls will drop out of school around puberty is high. Schoolgirl pregnancies explain 5% to 10% of school dropout in francophone Africa and possibly elsewhere; marriage or co-habitation more often limit school attendance (Lloyd and Mensch 2008). Interestingly, a recent study showed that in South Africa, being sexually active was not incompatible with school enrolment for African students in predominantly African schools, and some girls even returned to school after pregnancy (Mateleto et al. 2008). Other factors interrupting girls' schooling include poverty, the priority that families give to marriage over education, distance to school, safety or quality of schooling, school performance, and competing household demands.

Child marriage

Despite positive trends toward decreasing rates of child marriage, the problem remains profound in parts of the world (see Map 2.1). A full 36% of 20- to 24-year-old women in the developing world (excluding China) experienced child marriage—that is, they married before age 18. The frequency of child marriage varies regionally, with 49% of 20- to 24-year-olds married by 18 in South Asia and 44% in West and Central Africa. Niger has the highest prevalence, with more than 76% of girls marrying by 18 (ICRW 2007).

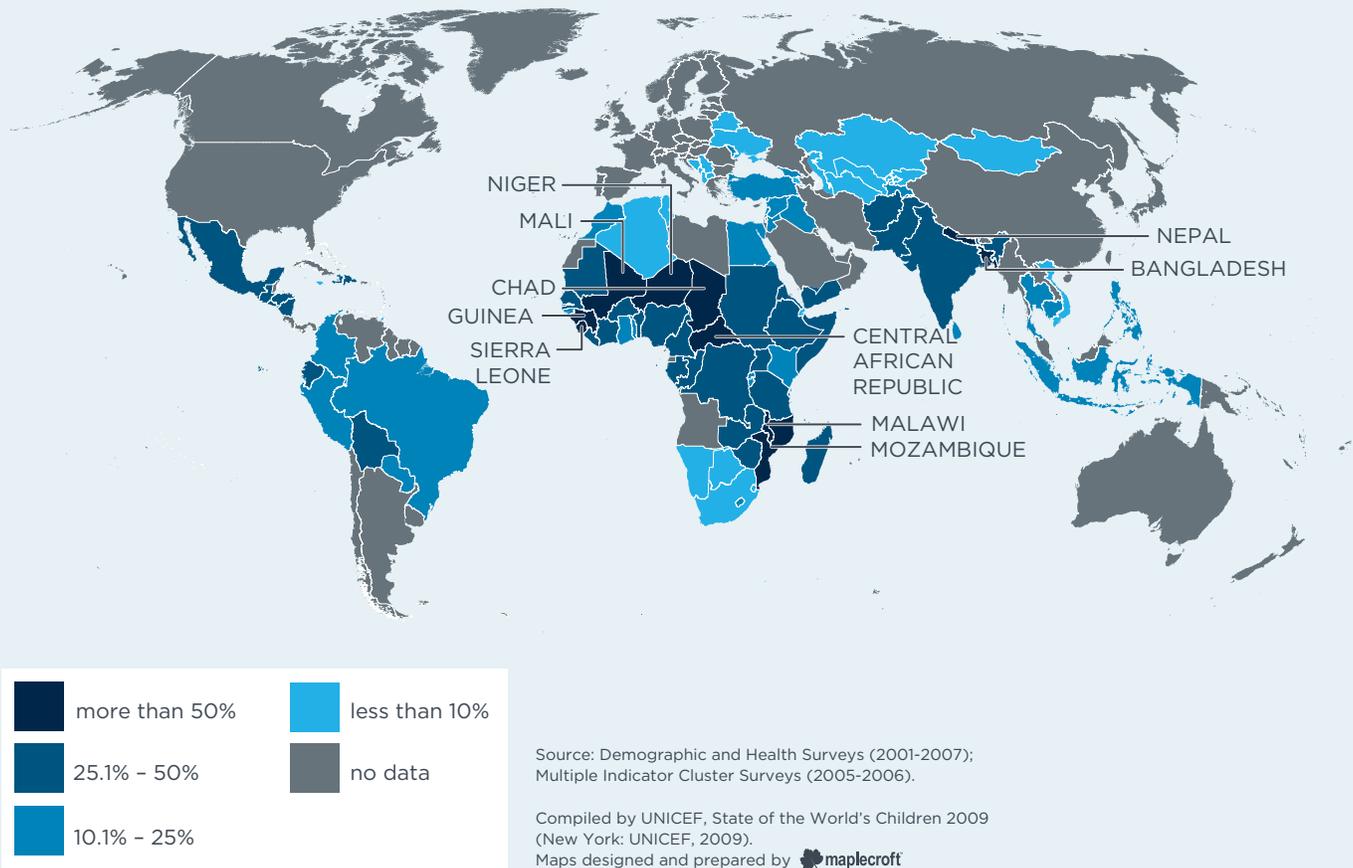
Child marriage, a stubborn tradition, persists even in the face of legal strictures. It is most common where obvious alternatives for girls, such as schooling and opportunities to improve their livelihoods, are absent. Child marriage robs girls of the opportunity for education, skills, and social networks that could empower them for a healthier life and improve outcomes for their children (Bruce and Clark 2003; ICRW 2007).

Despite positive trends toward decreasing rates of child marriage, the problem remains profound in parts of the world.

MAP 2.1

Child marriage is still common in many regions of the world

Percentage of women (20-24 years) married before 18 years (2008)



Girls who enter into marriage early face serious health risks. They are more vulnerable than their unmarried peers to adverse pregnancy outcomes, HIV infection, and violence. In Kisumu, Kenya, and Ndola, Zambia, for example, HIV infection rates for married girls ages 15 to 19 were 48% and 65% higher, respectively, than for their unmarried counterparts (Glynn et al. 2001). Girls who marry early are at greater risk of violence than those who marry later, especially those who are much younger than their husbands (Otoo-Oyortey and Pobi 2003).

The greater health risks are partially due to power differentials between spouses, which increase with an age gap that makes it hard for girls to converse and negotiate with their husbands. In South Asia, the average age gap within marriage is five years; in sub-Saharan Africa, excluding southern Africa, it is six years. Within marriage, girls and women generally cannot refuse sex or insist on condom use, while also having more sex than their unmarried peers. Married girls also tend to be more isolated, exacerbating their vulnerability (UNICEF 2007a; Haberland et al. 2004).

They are also the most likely to pass disadvantage to their children, perpetuating intergenerational cycles of poverty and gender discrimination.

Risky work, sexual exploitation, and trafficking

Up to 10 million highly vulnerable 10- to 17-year-old boys and girls are exploited within the sex industry (UNAIDS 2004), and every year more than one million children are trafficked into work in agriculture, mining, factories, armed conflict, and sexual exploitation. From the incomplete evidence on child prostitution, it is estimated that up to one million children enter prostitution annually (UNAIDS 2004).

Girls used in prostitution come from poor families, with debt bondage serving as a frequent form of entry. For example, some 50,000 Nepalese girls have been sold and trafficked to India as bonded laborers in Mumbai brothels. In a Thai study, half of all those in prostitution reportedly entered because of their parents' financial needs. Sex tourism perpetuates these industries (UNICEF 2002).

Domestic work is the main economic activity for girls under 16. More than 90% of domestic workers are girls, mostly ages 12 to 17 (UNICEF 2007b). This employment is tolerated because parents believe that it is protective for girls and teaches them important skills; it may be seen as preparation for marriage. It often takes place within families and is supported by elites, who have a stake in perpetuating it. Many girls are trafficked for this purpose: tens of thousands of West African children are sent to the Middle East as domestic workers. Trafficking in West and Central Africa may be seen as an extension of the tradition of placing children with extended family members.

Girls in domestic work face many health risks.

Domestic work often takes the form of unregulated employment and exploitation and sometimes servitude or slavery. Girls in this behind-closed-doors occupation are vulnerable to abuse by both the women and men of the household. They often receive little or no pay, do not have access to education and skill training to compete for better jobs, and are isolated from friends and family.

Agricultural work accounts for 70% of child labor globally among 5- to 14-year-olds (Kebebew 1998). Nearly half of overall female employment is in this

Girls in domestic work face many health risks. Domestic work often takes the form of unregulated employment and exploitation and sometimes servitude or slavery.

sector, although more boys than girls are exposed to the health risks of agricultural work. Girls and boys involved in agriculture are exposed to harmful pesticides, poor ergonomics, sanitation risks, and large-animal threats.

In emerging-market countries, more girls and young women are working in industries where they are exposed to chemical and physical risks. For example, in China 150 to 180 million workers migrate after secondary school to make money before marriage, especially for work in textile-industry jobs.¹ The health risks include exposure to dirty drinking water, unsafe conditions, long hours, and environmental toxins.

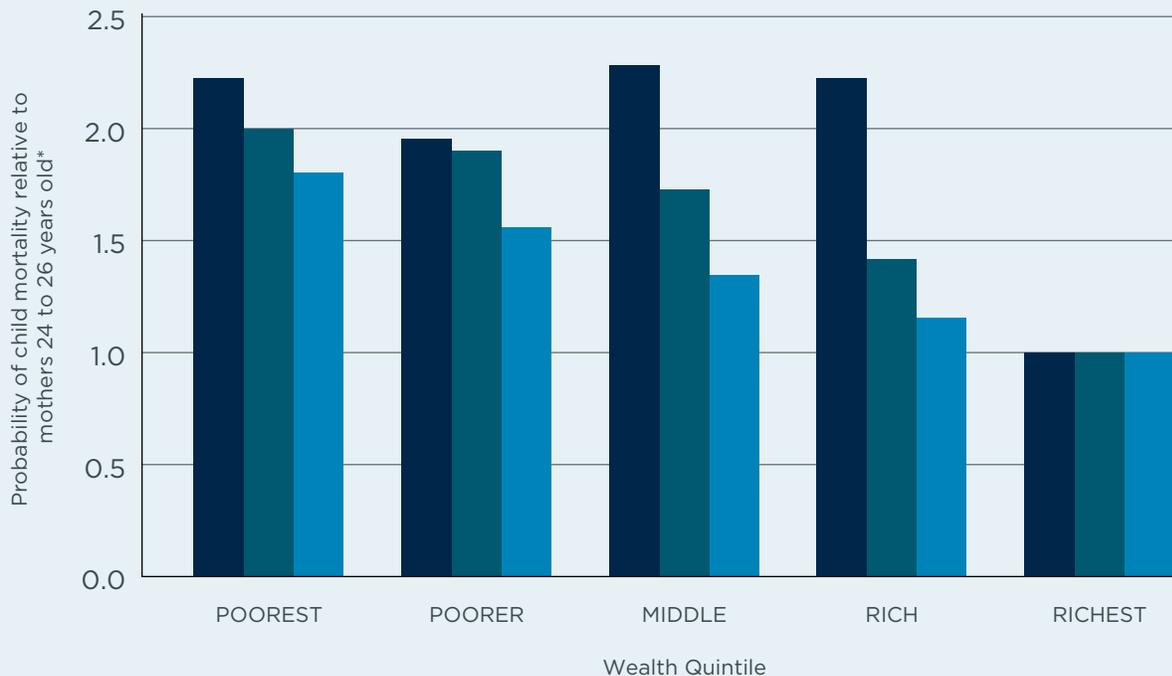
Poverty

All of the social risks addressed above are much greater for girls living in poverty, with implications for

¹ Joan Kaufman, personal communication.

FIGURE 2.1

The effect of mother's household wealth on child mortality by age of mother



Age of the Mother at First Birth



Source: David Canning, Jocelyn E. Finlay, and Emre Ozaltin, "Adolescent Girls Health Agenda: Study on Intergenerational Health Impacts" (Harvard School of Public Health, unpublished, 2009).
*The analysis also controlled for mothers 21 to 23 years old.

their health and that of their children. The analyses conducted for this report by Canning, Finlay, and Ozaltin examining patterns in 76 Demographic and Health Surveys illustrate how children of very poor mothers of all ages are more likely to die than children born to better-off mothers.² Babies of 12- to 14-year-old mothers in anything but the top fifth of the income distribution are more than twice as likely to die as are babies of very young mothers in the richest quintile. The relationship between poverty and child mortality holds in a multivariate analysis controlling for the effect of many other risk factors related to sexual and reproductive health, nutritional status, education, and domestic violence (see Figure 2.1).

These social determinants of health and others shape which girls are vulnerable to what types of health problems. The sections that follow describe girls' health conditions and their direct risk factors using epidemiologic information.

Causes of death and burden of disease

Compared to infant and older adult mortality, deaths during adolescence are rare. But the ranking of causes of death hints at major health problems. In 2002, an estimated 1.5 million adolescents ages 10 to 19 died in the developing world (Mathers 2009).

² David Canning, Jocelyn E. Finlay, and Emre Ozaltin, "Adolescent Girls Health Agenda: Study on Intergenerational Health Impacts" (unpublished, Harvard School of Public Health, 2009). The methodology and full results of the study can be found at <http://www.cgdev.org/content/publications/detail/1422676>.

A WHO analysis of more recent data reports that 2.6 million 10- to 24-year-olds died in 2004, 97% of them in developing countries, with death rates of 103 per 100,000 among 10- to 15-year-olds and 150 per 100,000 among 15- to 19-year-olds (Patton et al. 2009). Many more become ill or injured.

The main causes of death among adolescents are accidents, suicide, violence, pregnancy-related complications, and preventable/treatable illnesses such as lower respiratory tract infections and tuberculosis. Boys ages 10 to 14 experience 6% excess mortality over girls, with the difference attributed primarily to road accidents, falls, and other accidents (UNAIDS 2004). For girls ages 15 to 19, deaths are the result of early and frequent childbearing, with HIV/AIDS, depressive and panic disorders, and burns following closely; violence is also a significant problem (World Bank 2006). Combined, maternal causes including haemorrhage, abortion, and hypertensive disorders are the top killers of 15- to 19-year-old girls (Patton et al. 2009).

Whether and how girls die depends on where they reside. Across most of the developing world, the adolescent death rate is about one per 1,000. In South Asia, adolescents die at twice that rate; in sub-Saharan Africa, the death rate is three times as high. Together, these two regions account for two-thirds of all young people's deaths but only 42% of the population (Patton et al. 2009).

In sub-Saharan Africa, the excess mortality is caused by HIV/AIDS, tuberculosis, and maternal deaths, along with higher death rates from other infectious diseases and violence and war. A new analysis of mortality data reveals that African girls and young women ages 10 to 24 are an extraordinary 168 times more likely to die than their counterparts in high-income countries. In South Asia, the excess death rate is associated with infectious diseases and injuries (Patton et al. 2009).

Often ignored in health sector priorities, road traffic injuries are among the top five killers of adolescent girls and women of reproductive age in all regions but one. Overall, injuries contribute nearly a third of all young female deaths. In Southeast Asia, the third leading cause of death is burns—sometimes cooking accidents, and sometimes suicides or homicides at the hand of an intimate partner (Peden et al. 2008).

BOX 2.1

Dangerous preparation for womanhood: female genital cutting

Female genital cutting (FGC) is widespread among girls and adolescents in parts of Africa and the Middle East and is practiced less widely in countries such as Pakistan and Indonesia. While the practice is highly focused geographically, large numbers are affected. An estimated 130 million girls and women have undergone cutting and three million girls face this ritual every year in sub-Saharan Africa, Egypt, and the Sudan (Blum and Nelson-Mmari 2004). FGC takes different forms with varying degrees of severity; the most extreme, infibulation, involves almost entirely removing and then sealing the labia to ensure chastity. Numerous health problems ensue: infections (especially tetanus), uncontrolled bleeding, painful intercourse, urinary system damage, scarring, and other serious long-term disabilities. It also increases risks of pregnancy and delivery and is associated with poor birth outcomes.

Turning to burden of disease, which combines data on death, illness, and disability, the ranking of health problems is somewhat different: unipolar major depression is the top of the causes of burden of disease during adolescence, followed by road traffic accidents (see Figure 2.2). Injuries comprise four out of the 10 leading causes of burden of disease, and several other mental disorders also appear (Mathers 2009).

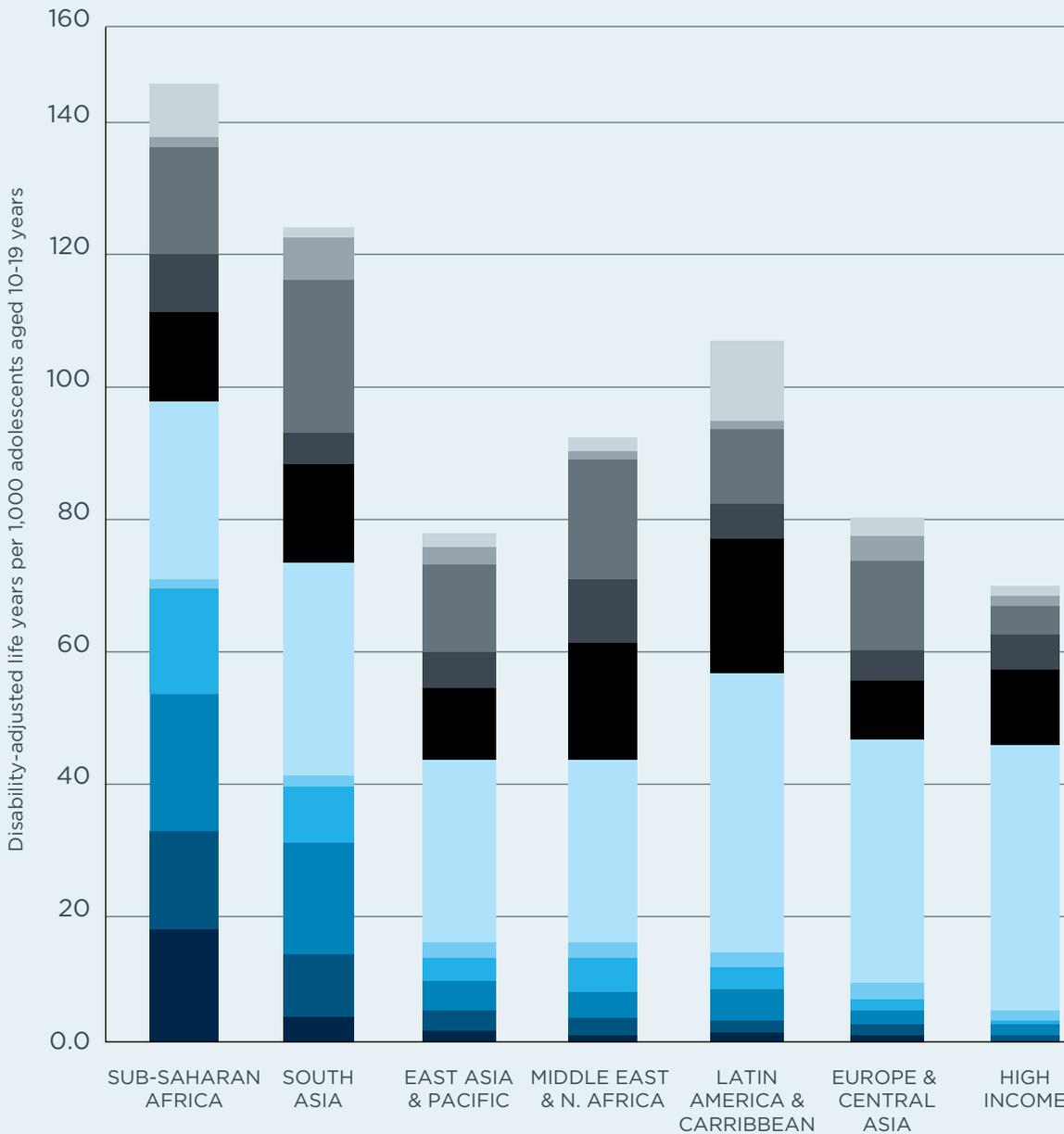
Girls' health and reproduction

For many girls, the start of sexual activity is a defining feature of their future lives. Much of this occurs within marriage among child brides; for them, the health risks include early childbearing and illnesses acquired from sex with their husbands, who may bring HIV and other sexually transmitted infections (STIs) home.

Though declining in frequency, female genital cutting (FGC) is considered essential marriage preparation in some countries, with accompanying health problems in too many cases (see Box 2.1). Sex outside of marriage, rarely captured in statistics, carries its own risks. Because it is viewed with disfavor and shame in

FIGURE 2.2

Adolescent girls' burden of disease by cause, 2002



Source: WHO, 2004; presented by World Bank Region, 2002. (Mathers 2009)



most cultures, girls may be unable or unwilling to obtain preventive services or care for their health needs.

An alarming number of sexual initiations are forced. While rates vary regionally, studies in Swaziland, South Africa, and Tanzania find that for up to one of every three adolescent girls, the first sexual experience is forced. It is even higher in other settings. For example, in South Korea, Cameroon, and Peru, almost four out of 10 girls reported coerced first sex. Rates are highest in the Caribbean (48%), while Asia has low rates relative to Latin America and sub-Saharan Africa.

In more than half the settings in the WHO's Multi-country Study on Women's Health and Domestic Violence, more than 30% of women who reported first sex before the age of 15 described that sexual experience as forced. Between 1% and 21% of women reported being sexually abused before age 15, in most cases by male family members other than fathers or stepfathers (WHO 2005a).

Sexual coercion has direct physical and emotional consequences for the girls, including STIs, HIV, unwanted pregnancy, unsafe abortion, and other gynecological disorders. Long-term consequences include a tendency later in life to engage in unsafe behaviors such as substance abuse, choosing abusive partners, having multiple sexual partners, and lower use of contraception.

Early pregnancy

Despite the overall trend of decreasing birth rates for girls, maternal causes kill more 15- to 19-year-old girls than any other cause. Girls' reproductive capacity continues to define their young lives: adolescents have disproportionately high rates of complications from pregnancy, delivery, and abortion, and in many cases their contraceptive needs are unmet. The consequences accrue in myriad ways for the girls themselves over their adult years, and for their future families.

Adolescent girls ages 15 to 19 account for 11% of all births, or an estimated 14 to 16 million each year. The regional differences are striking. In China, births to adolescents account for only 2% of all births; in Latin American and Caribbean nations and sub-Saharan Africa, nearly half the births are to adolescents (Westoff 2003).

LIYA KEBEDE

Founder of the Liya Kebede Foundation and
WHO Goodwill Ambassador

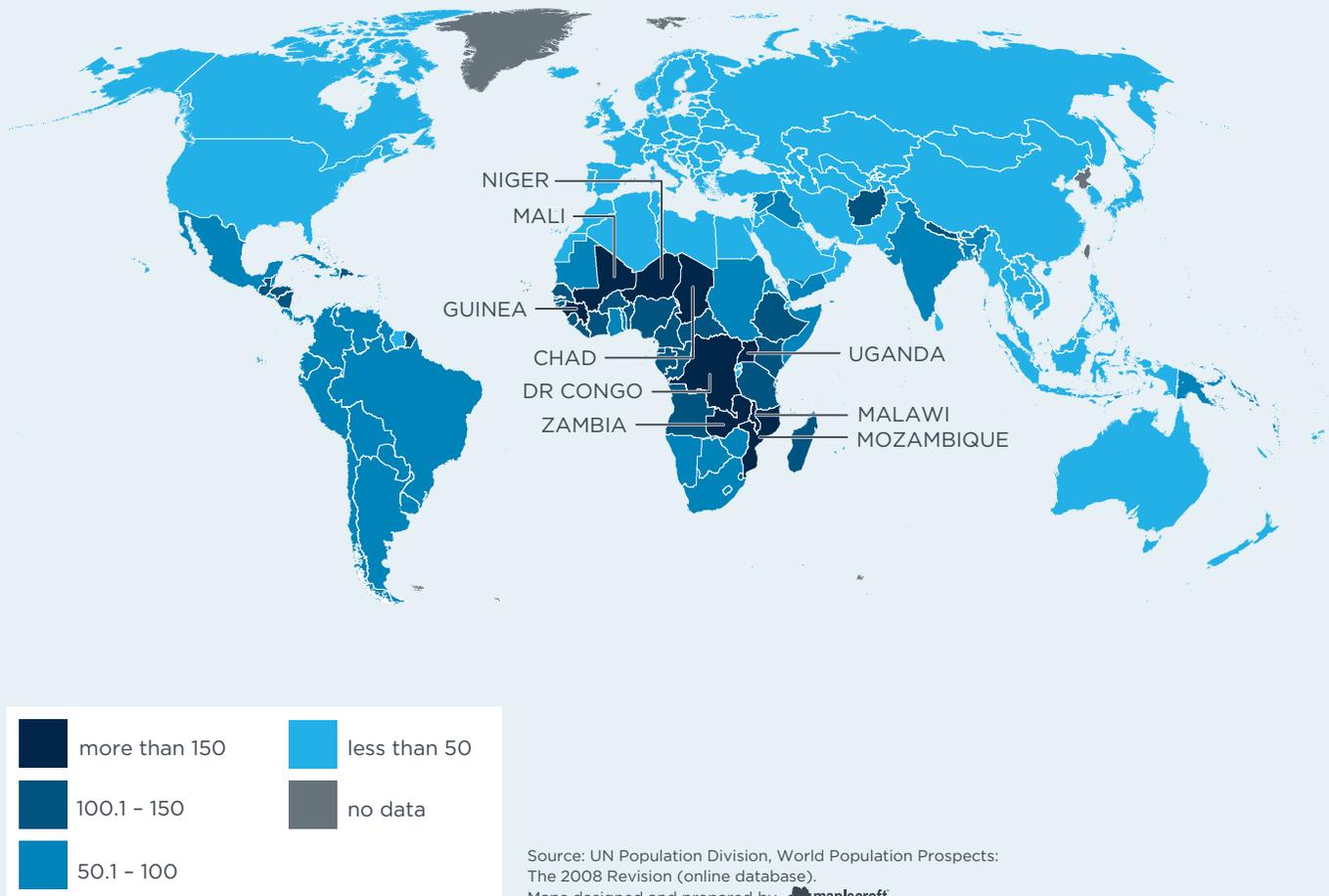
“When young girls become pregnant before they themselves have grown up, both they and their babies face an uphill battle to survive. The world loses the enormous potential of yet another generation of girls.”

Nearly half of all adolescent births in the developing world take place in six countries: Bangladesh, Brazil, Democratic Republic of Congo, China, India, and Nigeria, making these countries obvious priorities for action (UN 2008b). Notably, in Nigeria, the percentage of adolescent mothers is declining: in 1990, 35% of 20- to 24-year-olds' first birth was before age 18; this was down to 28% in 2003. The comparable rate of first births before age 15 decreased from 12% to 7% (Bankole et al. 2009). In India, the age of first births is declining, though slowly—22% of new mothers were under 18 in 2006, compared to 28% in 1993 (Moore

MAP 2.2

Early childbearing is common

Births per 1,000 adolescent girls aged 15-19



2009). In Brazil, in contrast, where a sharp decline in fertility rates has taken place mostly at older ages, the opposite trend has been observed among teenagers (Cardoso and Verner 2007).

Adolescent mothers' vulnerability shows up in poor birth outcomes. Adolescents account for just over one-tenth of births (see Map 2.2), but a disproportionate 23% of the burden of disease from maternal conditions (WHO 2008d). Adolescent mothers are two to five times more likely to die in pregnancy and childbirth than women in their twenties (WHO 2001a).

Age itself does not appear to be the key risk factor; rather, adolescents are at risk because they tend to be having their first baby (first births are riskier regardless of age), and they are small, poorly nourished, suffering from malaria, and relatively uninformed about how to manage a pregnancy and birth.

Some 60,000 to 70,000 girls ages 15 to 19 die from complications of pregnancy and childbirth annually. The main causes of adolescent maternal death are hemorrhage, hypertension, puerperal sepsis, and septic abortion. For those who survive pregnancy

and delivery complications, long-term consequences may include vesicovaginal fistulae, a devastating complication of prolonged labor (see Box 2.2), uterine prolapse, reproductive tract infections, and infertility (WHO 2008d; WHO 2004a; WHO 2007b).

Babies of young mothers also are at greater risk than those with mothers between 25 and 29 years old. In particular, stillbirth and death are 50% more likely for babies with mothers under age 20 than those with mothers 20 to 29 years old. Specific causes are preterm birth, low birthweight, and asphyxia. Low birthweight is a factor in more than two-thirds of neonatal deaths. Babies who survive are more likely to suffer from under-nutrition, late physical and cognitive development, and chronic diseases in adulthood, such as coronary heart disease resulting from low birthweight (UNICEF 2006; WHO 2008d; Victora et al. 2008).

Overall, adolescent mothers are less likely to have the benefits of prenatal care and are less likely to get help for complications and deliver in facilities than older mothers. However, the specific differences between adolescent and older mothers' antenatal service use varies geographically. Where overall antenatal care uptake is low, they are disproportionately less likely to use services; where overall uptake is better, they are less disadvantaged by age (Reynolds et al. 2006).

Differential service usage is partially due to strong family influence on their ability to access services. Key factors include the influence of in-laws, as well as marital status, education level, parity, and urban/rural location.

In the face of unintended pregnancies, adolescent girls often turn to abortion—with tragic consequences when the procedure is clandestine, legally restricted, or beyond their reach financially. Adolescents are more likely than older women to delay abortions, go to unsafe providers, use unsafe methods, and delay seeking help for complications. Schoolgirls are more likely to seek abortions than girls out of school.

Although data are extraordinarily hard to come by, an estimated 14% of all unsafe abortions are to girls ages 15 to 19, or about 2.5 to 4 million adolescents annually. A review of 27 studies of hospital-based abortion data in developing countries revealed that a disproportionate 60% of hospital admissions for abortion complications are adolescents (Blum and

BOX 2.2

One of early childbearing's most devastating consequences

Fistulae are one of the most damaging consequences of obstructed labor for girls and women lacking access to health care. Obstructed labor can result in permanent disability for those who survive this trial, and usually a stillborn baby. Untreated obstructed labor, caused by a small pelvis or unusual positioning of the baby, kills the tissue between the vagina and the bladder or rectum, which leaves a hole, or fistulae. This results in permanent leaking of urine and/or feces, and other chronic medical problems including ulcerations, kidney disease, and nerve damage in the legs, as well as frequent abandonment by husbands and families.³

Fistulae affect the poorest, most marginalized girls and women. Young women are especially prone because they are usually having a first birth and are small, especially where stunting is common. Where they are unable to access emergency obstetric care, especially caesarian sections, the consequences are either fatal or horrific for survivors. WHO (2004b) estimates that two million women have untreated fistulae and approximately 100,000 women develop them each year, mostly in Africa and Asia. African studies reveal that 58% to 80% of those suffering from obstetric fistulae are under age 20, with the youngest only 12 or 13 years old (UNFPA and Engender Health 2003).

Fistulae are both preventable and treatable. Making emergency obstetric measures accessible to girls and women is essential, as well as preventing early pregnancies with contraception. Fistulae can be repaired with a relatively simple procedure costing \$450, which is out of reach for affected families.

Nelson-Mmari 2004). Complications include pelvic sepsis, septicemia, hemorrhage, renal failure, and an array of reproductive tract injuries. Without treatment, these are fatal. (WHO 2007e)

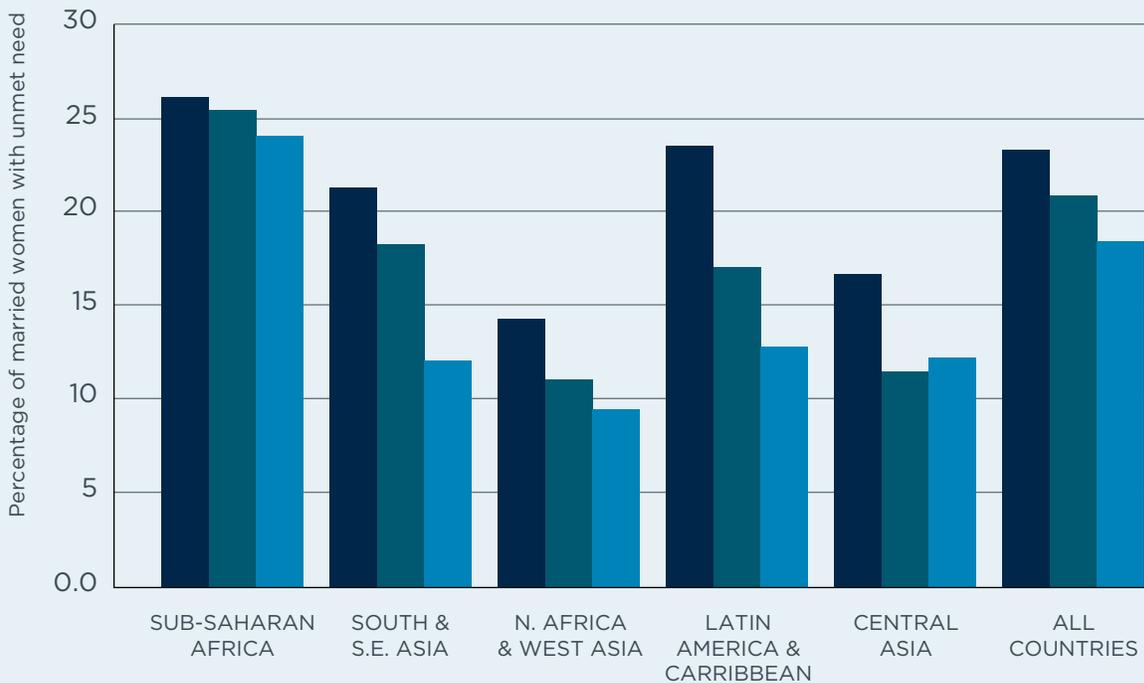
Contraception

Preventing unintended pregnancies with family planning would go a long way toward improving adolescent girls' health. Despite recent gains in access to contraceptive services, young women's unmet need for contraception is double that for older women. In Latin America and the Caribbean, for example, more than 60% of married women are

³ UNFPA, 2006. "Obstetric Fistula In Brief, Campaign to End Fistula," http://www.endfistula.org/fistula_brief.htm (accessed July 27, 2009).

FIGURE 2.3

Unmet need for contraception among married women by age and region



Source: Sedgh, Hussain et al. 2007 (Rosen 2009)

using modern contraceptives, as are 50% of sexually active, unmarried young women in many countries in the region. Yet teen birth rates in the region are among the highest in the world, revealing the significant unmet need (UN 2007).

Globally, adolescent girls' use of modern contraception is low, although this varies greatly across regions and countries. Countries within sub-Saharan Africa have among the lowest percentage of young women ages 15 to 24 ever using modern contraceptive methods—fewer than one in five. In Chad, only 2% of married young women ages 15 to 24 use modern contraception, but in Nicaragua, 60% of married young women do so (Khan and Mishra 2008).

Sub-population differences are important. Demographic Health Surveys (DHS) in 40 countries show that sexually active, unmarried adolescents are more likely to use contraceptives than married ones (e.g. 38% vs. 60% in Kazakhstan, 4% vs. 45% in Nigeria), presumably due to their desire to avoid pregnancy outside of marriage. The differences in contraceptive use between married and unmarried adolescents vary regionally and are greatest where married women's contraceptive use is low. For example, in parts of West Africa at least four times as many unmarried adolescents use contraception as married young women (e.g. 54% vs. 8% in Benin) (Blanc et al. 2009).

Multiple barriers impede girls' access to contraception (see Figure 2.3). These include laws prohibiting or restricting young and/or unmarried girls' contraceptive access or requiring permission from parents or husbands, and a prevalent belief that exposure to family planning information increases the propensity for young people to engage in sex.

When girls overcome those barriers, nearly all contraceptive methods that are appropriate for older women are safe for them, except for contraceptive sterilization. Emergency contraception is registered and sold in most countries in the world, but DHS data show that knowledge and use remain extremely low in almost all developing countries;⁴ young women in particular do not have easy access to this important “second chance” method of contraception.⁵ While male condom use is increasing, far too little is done to encourage condom use for

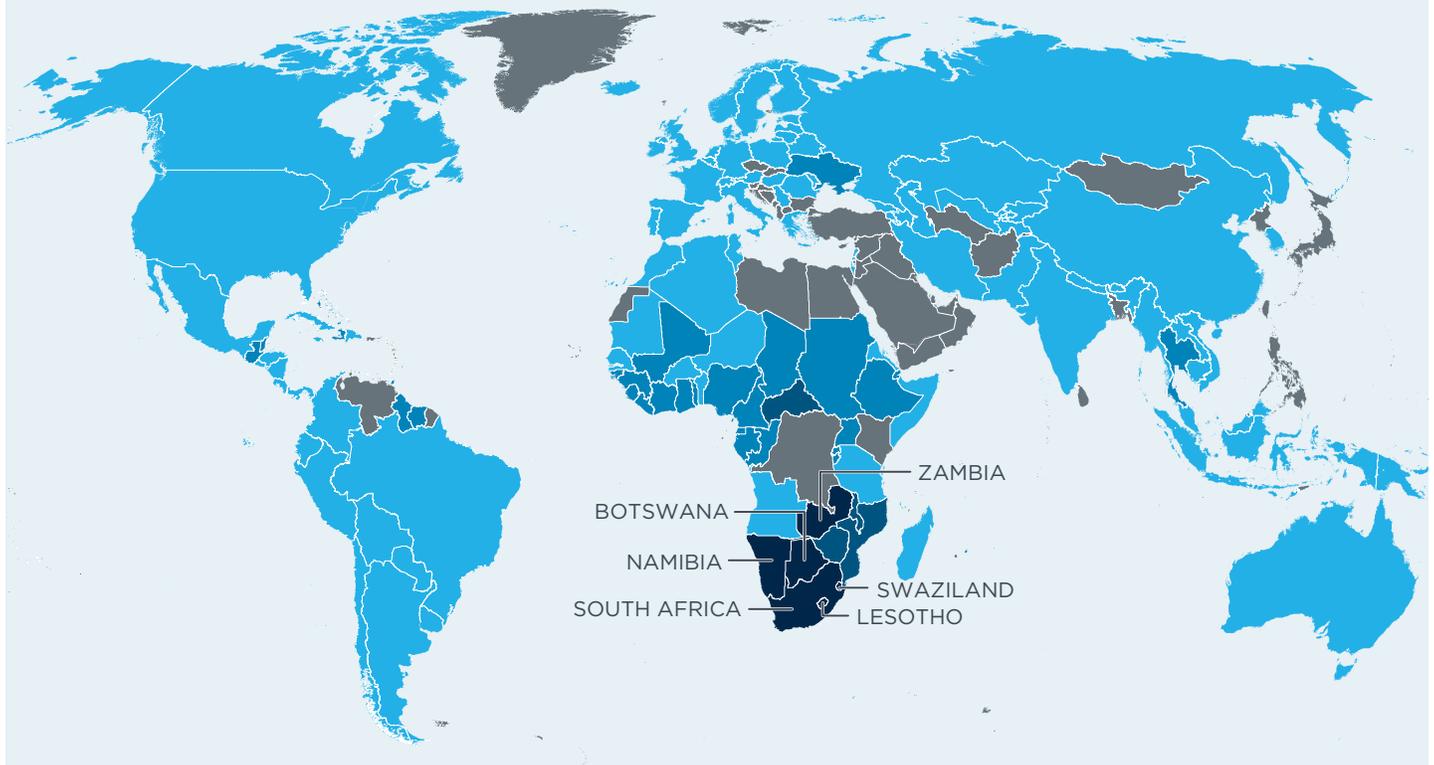
Despite recent gains in access to contraceptive services, young women's unmet need for contraception is double that for older women.

⁴ Demographic and Health Surveys, Measure DHS, <http://www.measuredhs.com/pubs/>

⁵ E. Westley, Emergency Contraception Consortium, personal communication.

MAP 2.3

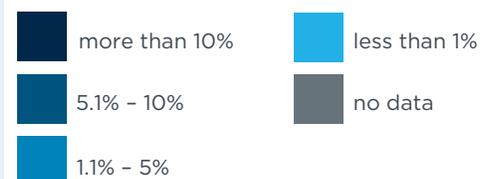
Young women have a high prevalence of HIV in many countries...



...and often have a higher prevalence than young men

RATIO OF YOUNG WOMEN TO YOUNG MEN LIVING WITH HIV	
Countries with the greatest imbalance	Ratio
CENTRAL AFRICAN REPUBLIC	5.0 : 1
SWAZILAND	3.9 : 1
CAMEROON	3.6 : 1
MALAWI	3.5 : 1
GUYANA	3.4 : 1
SUDAN	3.3 : 1
TRINIDAD AND TOBAGO	3.3 : 1
BURUNDI	3.3 : 1
GHANA	3.3 : 1
LIBERIA	3.3 : 1

Prevalence of HIV among young women (15-24 years) 2007



Source: Joint UN programme on HIV/AIDS (UNAIDS), Report on the Global Aids Epidemic 2008, UNAIDS, Geneva, August 2008. Maps designed and prepared by



pregnancy and STI/HIV prevention. Female condoms are rarely available.

Girls' health and unequal sexual relationships

HIV/AIDS

Globally, half of all people living with HIV are women, and in sub-Saharan Africa, women account for nearly 60% of those living with HIV. Young people are especially at risk, and those 15 to 24 account for almost one out of every two new HIV infections worldwide. According to the latest UNAIDS statistics, the global HIV infection rate for young women ages 15 to 24 is 0.6%, and for young men it is 0.4%. In sub-Saharan Africa, this is a shocking 3.2% for young women and 1.1% for young men (UNAIDS 2008a) due in part to the dynamics described in Box 2.3.

While sub-Saharan Africa has the dubious distinction of having the greatest HIV burden, the fastest growing epidemics are in Russia and Ukraine. Nearly 70% of those living with HIV and AIDS in the Eastern Europe and Central Asia region live in Russia. While the epidemic is still growing there, it is doing so at a slower rate than Ukraine, where according to UNAIDS, the number of new HIV diagnoses has more than doubled since 2001 (UNAIDS). These concerning trends are fueled by transmission among IV drug users, sex workers, and their partners.

Despite the continued profound challenges of preventing and dealing with the consequences of HIV/AIDS, there are some positive signs. In developing countries, the percentage of sexually active young people under age 15 is declining. Condom use also has increased. For example, it is up to 50% in Zambia. These behavior changes are having an impact: among young women attending antenatal clinics, HIV prevalence has declined since 2000–2001 in 14 countries surveyed. Declines in HIV prevalence exceeded 25% in seven countries⁶ (UNAIDS 2008a).

Treatment access has greatly prolonged life in affected populations. In most countries, antiretroviral treatment coverage for women is equal to or higher than that for men. Many HIV-positive women have two ways to gain treatment: treatment programs and

BOX 2.3

Especially vulnerable adolescents

Being a married girl is a particular risk factor for HIV infection. In Uganda, for example, married girls are three times more likely to be HIV-positive than their unmarried peers. This is largely due to the age gap between spouses, with older men being more likely to be or become HIV-positive, as well as the nature of sex within marriage.

Girls and women who trade sex for gifts or money are also more susceptible to HIV infection. Data from the Demographic and Health Surveys in several sub-Saharan countries show that 13% of unmarried 15- to 19-year-olds received gifts or money in exchange for sex in the preceding month. In Zambia, a full 38% reported receiving gifts or money in the year preceding the survey (Population Reference Bureau 2000). Girls who receive gifts, money, or school fees in exchange for sex have little ability to refuse and negotiate sex and are more prone to violence.

Recent research in Cameroon sheds further light on the risks involved in transactional sex, particularly regarding payment of school fees. Young women are less able to refuse sex with men who pay their school fees than with men who have positions of power over them, such as teachers or employers (Hattori and DeRose 2008). Often referred to as the “Sugar Daddy” phenomenon, this is characteristic of several contemporary African societies, and is an important contributor to the spread of HIV (Lloyd 2005).

New evidence shows that girls who were orphaned by AIDS are an especially vulnerable group. In a study in Zimbabwe, adolescent girls who lost their mothers at any age, and their fathers before age 12, were more likely to have become sexually active than those not orphaned, with all the accompanying risks (Birdthistle et al. 2008).

programs designed to prevent mother-to-child transmission of HIV through treatment during pregnancy and immediately after birth.

Other sexually transmitted infections

Pregnancy and HIV are not the only dangers that adolescent girls face from unprotected, and often coerced, sexual activity. People under 25 constitute one-third of the more than a quarter of a million people infected with an STI each day (Blum and Nelson-Mmari 2004; FHI 2009). In studies in Kenya and Brazil, STI prevalence was higher among adolescents than

⁶ Botswana, Kenya, Benin, Burkina Faso, Côte d'Ivoire, Malawi, and Zimbabwe.

A full 61% of adolescents stated that they believed that intimate partner violence was justified under certain circumstances.

more than half of all treatable STI cases; and in Nigeria, nearly one in every four sexually active adolescents has this infection (Behets et al. 1995; Brabin et al. 1994; Cates and McPheeters 1997; FHI).

Human papilloma virus (HPV) is the most common STI in the world, causing half a million cases of cervical cancer and 70,000 cases of other cancers annually (WHO 2007c). Cervical cancer is the most common type of cancer for women in developing countries (Parkin et al. 2005).

While STIs cause immediate health problems, they attract the most public health attention because of their adverse consequences for more severe illnesses and for pregnancy. STIs are of special concern for adolescent girls because they can lead to pelvic inflammatory disease, ectopic pregnancy, premature membrane rupture, infertility, and other complications. Higher rates of STIs in younger women than older ones could account for higher miscarriage rates for younger mothers (WHO 2004d). STIs also make it 10 times more likely that a girl will get HIV when exposed to an infected man (WHO 2003b).

Violence against women and girls

Gender-based violence, including physical, sexual, and emotional violence, is an ancient problem. But only recently has the global public health community started to view it as public health issue, let alone a priority.

Groundbreaking WHO research has documented the breadth of the problem, and brought to bear the tools of public health in analyzing risk factors and defining possible policy and programmatic solutions. The WHO Multi-country Study on Women's Health and Domestic Violence brings together important data from representative samples from 15 sites in 10 countries, resulting in a total sample of 24,000 women between the ages of 15 and 49 years old (WHO 2005a; WHO 2006a).⁷

Younger women are at higher risk of physical or sexual abuse than older ones, making this a critical health challenge for adolescent girls as well as young women. Data from the WHO Multi-country Study show that between 14% and 50% of partnered adolescents reported at least one act of physical and/or sexual violence by a partner in the

adults, attributed to both behavioral and biological reasons (Zabin and Kiragu 1998; Childhope 1997; Blum and Nelson-Mmari 2004).

The most common adolescent infections—trichomoniasis, gonorrhea, syphilis, and chlamydia—are all preventable and curable. Chlamydia prevalence, in particular, declines with age and is therefore considered an “adolescent infection.” In Haiti and Nigeria, for example, up to one-half of all sexually active young women have chlamydia. Adolescents comprise about one-third of all gonorrhea cases in South Asia and sub-Saharan Africa. Trichomona infections represent

7
Fifteen sites in 10 countries reported data: Bangladesh, Brazil, Ethiopia, Japan, Namibia, Peru, Samoa, Serbia and Montenegro, Thailand, and the United Republic of Tanzania. To view the final report, visit http://www.who.int/gender/violence/who_multicountry_study/summary_report/en/index.html.

past year (WHO 2005a). WHO further estimates that a total of 150 million girls under 18 experienced forced sex or other forms of sexual violence in 2002 (UN Sec. Gen. 2006). These figures partially reflect the fact that younger men tend to be more violent than older ones, and that abuse tends to start early in relationships.

A recent sub-analysis focuses on 3,566 adolescents (15–19 years old) in 14 sites⁸ (see Figure 2.4). On average, more than one-third reported physical and/or sexual abuse by their partner in the past 12 months; in Ethiopia, half of the adolescents reported physical and/or sexual abuse by a partner. Non-partner sexual abuse was reported by between 1% and 27% of adolescents in the different sites (WHO 2009c).

Other important findings of this sub-analysis are that a full 61% of adolescents stated that they believed that intimate partner violence was justified under certain circumstances, and that women aged 20 and older reported lower rates of acceptance of abuse. Demonstrating the clear links between gender-based violence and women's mental health problems, 2% to 30% of adolescents in this sample reported suicidal thoughts or attempts, often correlated with experiencing violence.

The legacy of unhealthy childhoods

Some of the health problems girls face as they leave childhood are not new. Rather, they are the manifestation of health risks many younger children face in the developing world. These include undernutrition, which takes on a new character as girls go through puberty and reach their adult height, and infectious and parasitic diseases.

Undernutrition

In particular ways, girls from poor households and communities suffer from undernutrition, and the negative consequences are lifelong. The worst conditions are found in South Asia. In Bangladesh and Nepal, 16% of young women 20 to 24 years old are stunted, reflecting chronic undernutrition at earlier ages. In India, the figure is 13% (World Bank 2006).

Undernutrition is part and parcel of the intergenerational cycle of ill health. Small mothers produce small

babies and are at high risk of pregnancy and birth complications. In addition, poor nutrition increases the chance of vertical HIV transmission.

Anemia merits particular attention because of how widely it is found and how serious its impacts are on girls, women, and their children. Surveys show that overall, a massive 40% of adolescent girls are anemic (see Map 2.4). In Benin, Mali, Haiti, and India, this increases to 50%. Furthermore, studies show that anemia is more of a problem in adolescent pregnancies than in pregnancies among older women. One of every two pregnant women is anemic, with rates as high as 86% in Tanzania, 88% in India, and 94% in Papua New Guinea—the result of malaria and other parasitic diseases, as well as iron-deficient diets. Anemia increases the risk of stillbirth, premature birth, low birthweight, prenatal mortality, and maternal death (Lule and Rosen 2009; Delisle 2005; WHO 2007c).

Recent scientific findings demonstrate the convergence among multiple health risks: Low birthweight babies are often born to women who themselves are undernourished before and during pregnancy. When these babies gain weight rapidly in childhood, they are as adults at particularly high risk of cardiovascular and metabolic disease, one of many adverse consequences of low birthweight (Victora et al. 2008).

Infectious and parasitic diseases

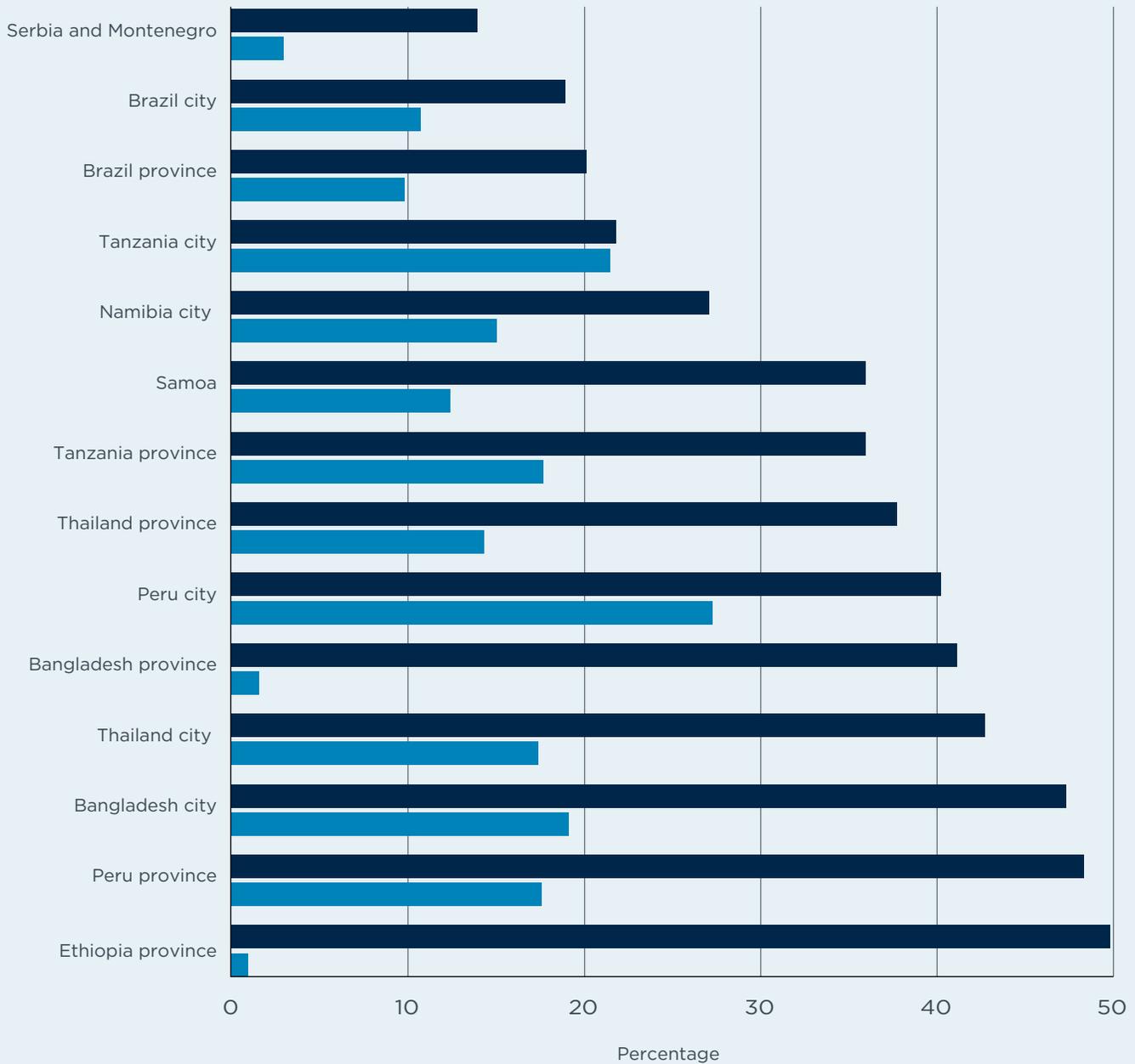
Malaria and tuberculosis are waning in relative importance in countries undergoing epidemiological transitions, but they still represent challenges for adolescent girls, including their interactions with pregnancy. TB and malaria cause nearly 8% of 10- to 14-year-olds' deaths: 8.3% for girls and 7.3% for boys (Patton et al. 2009).

The diseases have distinct effects on adolescents. Malaria causes anemia, which causes problems as described above. In adolescents, TB more often follows infection than for other age groups. The risk of developing adult-type TB infection is two to six times greater for girls than for boys, and a jump in incidence appears to be associated with menarche. Compliance with the relatively long treatment regime for TB is a major challenge in this population, and is linked to the growing concern about the spread of drug-resistant forms of the disease (WHO 2007a).

⁸ Japan was excluded here because data were collected only from women 18 to 49, while other sites included those 15 to 49.

FIGURE 2.4

Physical and/or sexual intimate-partner violence and non-partner sexual violence among adolescent girls 15-19



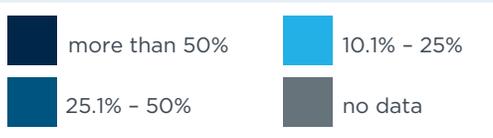
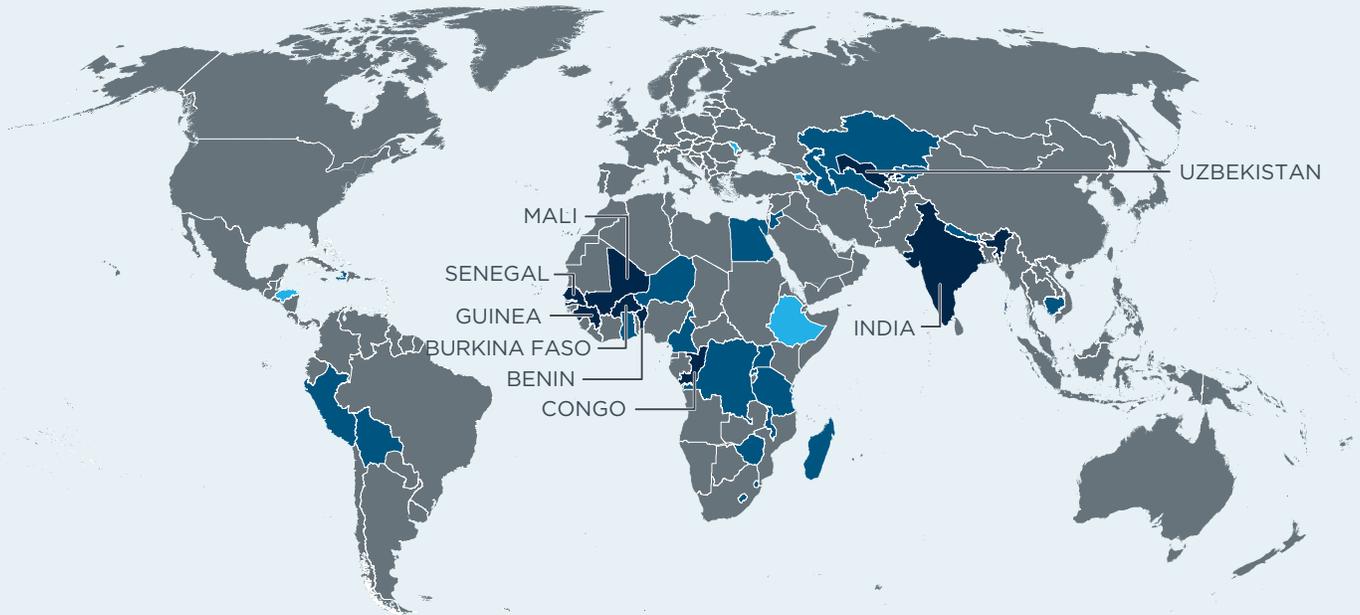
Intimate partner physical and sexual violence in last 12 months
 Non-partner sexual violence since age 15

Source: Unpublished data from WHO Multi-country Study on Women's Health and Domestic Violence. Department of Reproductive Health and Research, World Health Organization, July 2009.)

MAP 2.4

Anemia is a major health concern for adolescent girls

Prevalence of anemia among adolescent girls 15-19 years (1999-2007)



Source: Demographic & Health Surveys (1999-2007)
Maps designed and prepared by 

BOX 2.4

Poor access to water takes a toll on girls' health

Globally, 884 million people lack regular access to safe water. In settings without this essential asset, girls and women typically spend a great deal of time collecting water for household use, with direct implications for their health. The WHO estimates (2004) that 40 billion “woman-hours” are spent carrying water in Africa annually (Lenton et al. 2005; Ray 2007).

For girls, there is a clear tradeoff between time spent collecting water and time at school. In addition, direct health problems have been observed. Carrying heavy loads over long periods causes cumulative problems for the spine, neck muscles, and lower back, leading to the early aging of the vertebral column, as well as constant pain in the neck and knees. Girls' role in carrying water makes them vulnerable to water-borne diseases like schistosomiasis, which can result in anemia, malnutrition, and learning difficulties.

Schistosomiasis, a neglected tropical disease that deserves attention in its own right, is one of the several health consequences of poor water supply (see Box 2.4). It is also a co-factor in HIV transmission. Schistosomiasis can take a genital form, which causes lesions in girls and women. Research from Zimbabwe suggests that these lesions increase the HIV susceptibility of affected women (Kjetlan et al. 2006).

New risks in a changing world

Most of the social and health challenges described above are recognized development priorities, although they do not receive all of the political and financial attention they deserve. Adolescent girls face additional health risks that are only now beginning to attract attention as health priorities, described below. Many of these fall outside of the traditional conception of “global health,” and consequently receive little visibility or financial support. An analysis of WHO expenditures notes that injury deaths, which cause 40% of mortality among 10- to 24-year-olds, receive only 1% of WHO funds (Patton et al. 2009).

Injuries

Injuries, unintentional and intentional, are the most frequent causes of death for adolescents globally. Road traffic injuries are the second most frequent cause of death for 10- to 14-year-olds and the most frequent cause for 15- to 19-year-olds, followed by self-inflicted injuries (Peden et al. 2008). More than twice as many males as females die from road traffic injuries, but girls and women are affected, too, as passengers, pedestrians, and drivers. Road accidents are predicted to dramatically increase in India, China, and elsewhere as the use of cars becomes more widespread but the infrastructure and driving culture fail to keep pace.

Out of all accidental injuries, fire-related burns are of particular importance for adolescent girls. Burns account for about one out of every 10 deaths from unintentional injury; they are among the leading causes of burden of disease in developing countries.⁹ In Southeast Asia, burns are the third leading cause of death for adolescent girls and women of reproductive age, and in this region and parts of the Eastern Mediterranean, fire-related burns kill 50% more females than males. Disempowering gender norms place girls and women at risk from cooking accidents and intimate partner violence (WHO/UNICEF 2008).

Mental illness

Mental health is gaining recognition as a public health priority for adolescents. Almost 22% of their burden of disease is estimated to be attributed to neuropsychiatric conditions for 10- to 19-year-olds, including depression (10%), schizophrenia (5%), bipolar disorder (4%), and alcohol use disorders (3%) (Mathers 2009). WHO estimates that up to 20% of children and adolescents have a disabling mental illness, and 4% to 6% of children and adolescents need a clinical intervention for a significant mental disorder (WHO 2005b). Gender-based violence is one of the important causes of girls' mental health problems. While mental health problems are clearly much more significant than previously thought, both conceptualization of the problem and measurement are fraught with challenges, and data for developing countries are limited.

Four million adolescents attempt suicide annually (more girls than boys), and nearly 100,000 succeed (more boys than girls) (UNICEF 2002). Self-poisoning

⁹ Other health risks are associated with traditional means of cooking. Indoor smoke from solid fuels is among the top 10 health risks, and indoor air pollution is associated with an estimated 2.7% of the global burden of disease (Patton et al. 2009).

by organophosphates is the most common method in many developing countries because of the easy availability of pesticides and herbicides.

Tobacco and other substance abuse

Tobacco use by smoking and other methods is a large and growing concern. While rates are decreasing in the developed world, they are increasing in low- and middle-income countries. By 2030, tobacco use will be the single biggest cause of death globally, accounting for 10 million deaths annually, according to World Bank projections (World Bank 1999). Approximately 150 million adolescents are already smokers, and 75 million will die of smoking-related causes later in life. A full one-third of the world's smokers live in China (Yang et al. 2005).

More men than women smoke in the developing world—but these traditional patterns are changing as girls' smoking rates are increasing more rapidly than boys'. According to the WHO's Global Youth Tobacco Survey, 7% of girls 13 to 15 years old smoke, compared with 11% of boys (WHO 2008c). There is variation between regions, with 41% of male students smoking in Russia and former Soviet Asia to less than 10% in South and East Asia (Warren 2003).

Tobacco use contributes to problems of pregnancy and delivery. Smoking and use of other tobacco products during pregnancy increases the risk of miscarriage and low birthweight, as well as problems during labor, delivery, and breastfeeding. Smoking during pregnancy is more of a problem in adolescent mothers than in older women (Rosen 2009). Some studies suggest possible long-term effects on child behavior and a propensity toward nicotine addiction.

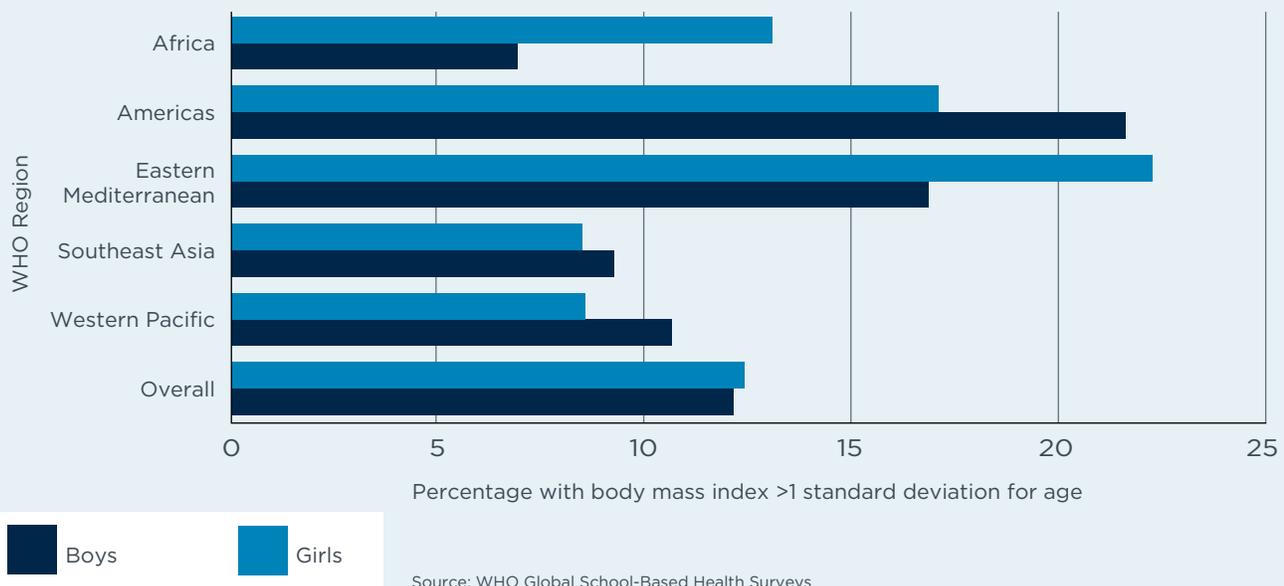
Tobacco marketing targets girls and women, especially in “emerging-market” countries. Aggressive, seductive advertising exploits ideas of independence, emancipation, sex appeal, and slimness. In India, for instance, British American Tobacco introduced a cigarette brand, “Ms,” targeted toward “emancipated women.” Two cigarette brands were introduced in China under the names “Chahua” and “Yuren,” literally meaning “pretty woman” (Chaloupka 1996).

Abuse of other substances is a recognized problem of adolescents in high-income countries, but it does not have the same profile in developing countries. Where it

Road accidents are predicted to dramatically increase in India, China, and elsewhere as the use of cars becomes more widespread but the infrastructure and driving culture fail to keep pace.

FIGURE 2.5

Percentage of students 13-15 years old who are overweight



is seen as a concern, it is more of a problem for boys than girls. However, in Latin America, girls are catching up and even surpassing boys' rates of alcohol consumption. Heavy drinking is now a recognized problem among adolescent girls in Mexico, Chile, and Brazil (World Bank 2006).

Overweight and obesity

Many countries in the developing world face new nutritional problems as diets and activity patterns change. The new problem: overweight and health problems associated with high-fat, high-sugar diets and reducing physical activity. In a survey of 36 low- and middle-income developing countries, most countries had substantially fewer underweight young women than overweight ones. India was the main exception, with continued high prevalence of undernutrition (Mendez et al. 2005). In Brazil, China, Mexico, South Africa, and many other countries, obesity and overweight are increasingly problems, often co-existing with undernutrition. For example, in Ghana, adults are only slightly more likely to be underweight than overweight. In Chile, 12% of schoolchildren are

obese, while in South Africa, 17% of older adolescent girls are obese. In China, the prevalence of overweight and obesity in young adults increased from 10% to 15% in urban areas and from 6% to 8% in rural areas from 1982 to 1992.¹⁰ Figure 2.5 illustrates the regional variation and gender differences using data from 20 countries included in the WHO/CDC Global School Health Survey.¹¹

Far from being a condition of affluence, as has long been the common belief, obesity is strongly correlated with poverty and marginality (Mendez et al. 2005). Across 36 low- and middle-income countries studied, for women with the lowest education level (a proxy for socioeconomic status), overweight exceeded underweight among urban women in 31 countries and rural women in 18 countries. The differences between levels of overweight in urban and rural areas also declined for the relatively wealthier, more urbanized countries. And finally, in the relatively better-off countries in the sample, the prevalence of overweight was as high among women with the lowest education level as the most educated.

¹⁰ World Bank, 2003. "Adolescent Nutrition, Public Health at a Glance," <http://go.worldbank.org/1RQ995V300> (accessed July 29, 2009).

¹¹ The Global School Health Survey is a school-based survey conducted primarily among students aged 13–15 years, developed by the WHO in collaboration with UNICEF, UNESCO, and UNAIDS, with technical assistance from CDC. See <http://www.who.int/chp/gshs/en/> for more information.

The catalog of problems associated with obesity is long and growing. Overweight can lead to chronic diseases such as diabetes, hypertension, cardiovascular disease, and cancer. And worryingly, WHO projects that in all countries except Nigeria and Tanzania, chronic diseases will become the leading cause of death in 2015 (WHO 2005c).

Adolescents' contribution to this shift is crucial: WHO estimates that 70% of premature deaths among adults are largely due to behavior initiated during adolescence, including poor eating habits (WHO 2001a). With the elimination of major chronic disease risk factors in the short term, at least 80% of heart disease, stroke, and type 2 diabetes, and 40% of cancer, could be avoided in the long term.¹²

The barriers to good health care

Adolescent girls in the developing world encounter multiple barriers in obtaining appropriate preventive and curative health services. Individual, familial, and clinic-related factors keep girls from services. Many of the barriers are a function of the fact that adolescent girls have health needs similar to those of adults but lack the autonomy and financial wherewithal to seek care. The health system in general has no organized way to reach young people and rarely orients services in ways that are responsive to their profound needs for information provided in non-judgmental ways, confidentiality, and adolescent-specific types of care.

Restrictive laws and policies may keep adolescent girls from services even where they exist: for example, laws requiring a parent's or husband's written permission before contraception can be provided and denial of services to the unmarried. Adolescents rarely have control over financial resources and may have limited transportation options, so services may be inaccessible because of costs and inconvenient location or hours.

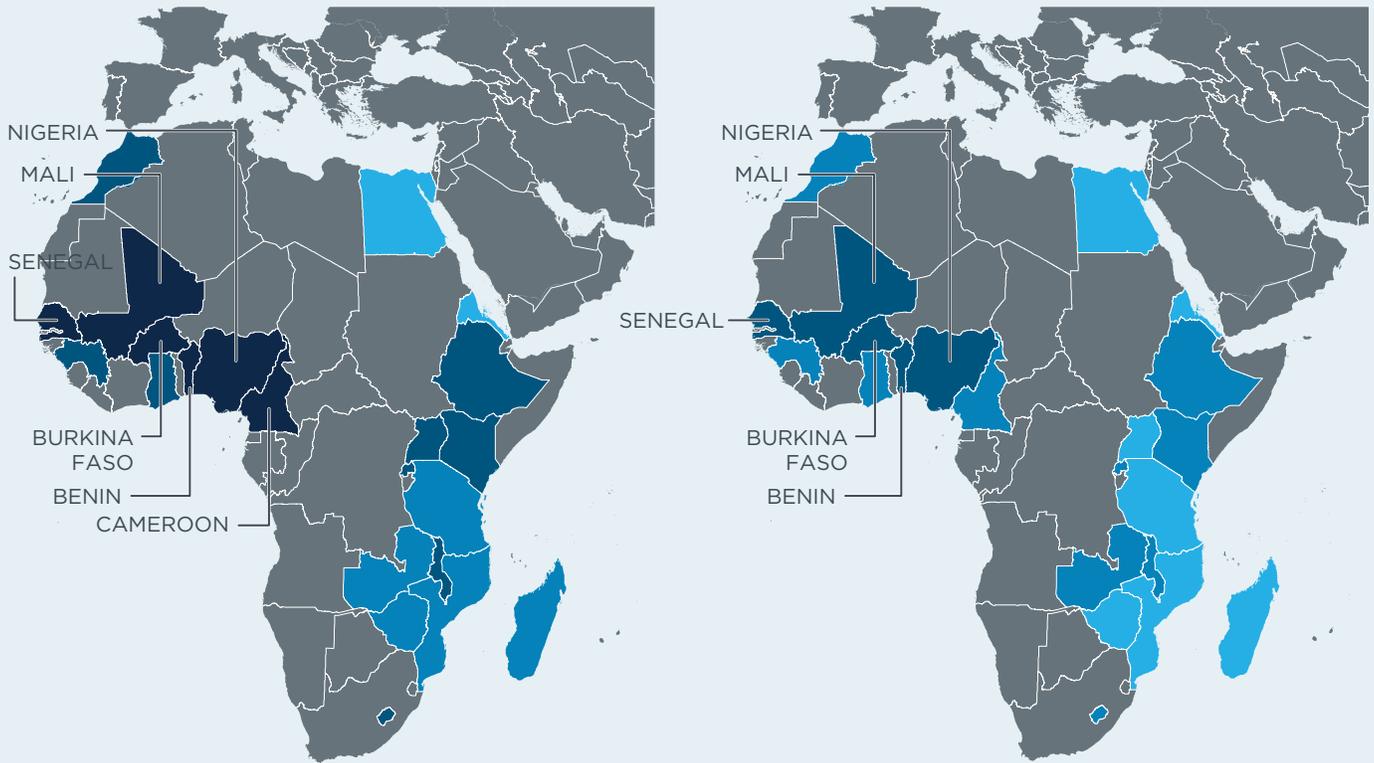
Adolescent girls may simply be unaware that services exist for them, or those services may be unacceptable because of fears about the lack of confidentiality and negative interactions with providers. For instance, family planning services are generally focused on serving married women and may be integrated with maternal and child health care. While issues of confidentiality are always a concern for family planning

WHO estimates that 70% of premature deaths among adults are largely due to behavior initiated during adolescence, including poor eating habits.

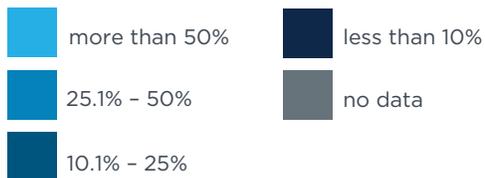
12
WHO, 2005d. "Ten Facts About Chronic Disease," http://www.who.int/features/factfiles/chp/10_en.html (accessed on July 21, 2009).

MAP 2.5

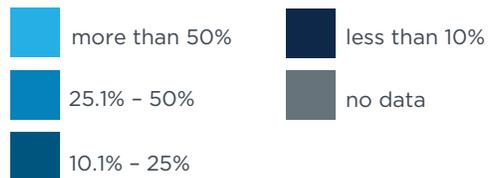
Adolescent girls and young women have limited autonomy in their health care decisions



Percentage of young women (15-19 years) able to make their own health care decisions (1999-2005)



Percentage of young women (20-24 years) able to make their own health care decisions (1999-2005)



Source: Demographic & Health Surveys (1999-2005)
Maps designed and prepared by
 maplecroft

counseling and service delivery, they are even more acute for unmarried girls.

Where services are available to some, they are likely to be inaccessible to many adolescents due to ethnicity, age, sex, poverty, and other factors. Map 2.5 shows how infrequently girls control their destiny regarding health care access.

Examples of barriers that are specific to adolescents are summarized in Figure 2.6. Some of these must be tackled specifically for adolescents, while others are part of general health sector improvements with wider benefits.

* * *

Girls in developing countries experience a range of health problems. Some, like HIV and the risks of childbirth, result from the onset of sexual activity, within or outside of marriage. Others, like accidents, are associated with their emerging independence from their families of origin. And still others, like nutritional deficits, are a function of poverty and marginality. All are exacerbated by gender inequality. Systematically, preventing and caring for these problems is impeded by a health care system that can be unfriendly toward young people, and has difficulty providing appropriate, accessible, and respectful care to adolescents, who tend to have little knowledge of how to negotiate health or other social services. These are significant problems, but each has been addressed—in one form or another—in a range of settings. In the chapters that follow, we provide an overview of the types of approaches and programs that have made (or have the potential to make) a meaningful difference for girls' health.

FIGURE 2.6

Illustrative factors impeding adolescent girls' use of health services

ADOLESCENTS	FAMILIES	PROVIDERS	FACILITIES
<ul style="list-style-type: none"> • Embarrassment 	<ul style="list-style-type: none"> • Low position of girls in families 	<ul style="list-style-type: none"> • Judgmental attitudes 	<ul style="list-style-type: none"> • Non-availability
<ul style="list-style-type: none"> • Ignorance 	<ul style="list-style-type: none"> • Lack of health knowledge 	<ul style="list-style-type: none"> • Inability to talk/listen to/treat adolescents 	<ul style="list-style-type: none"> • Overcrowding • Long waiting times
<ul style="list-style-type: none"> • Fear 	<ul style="list-style-type: none"> • Poverty • Low priority of sexual and reproductive health 	<ul style="list-style-type: none"> • Legislative restrictions 	<ul style="list-style-type: none"> • Low priority of sexual and reproductive health and insufficient supplies

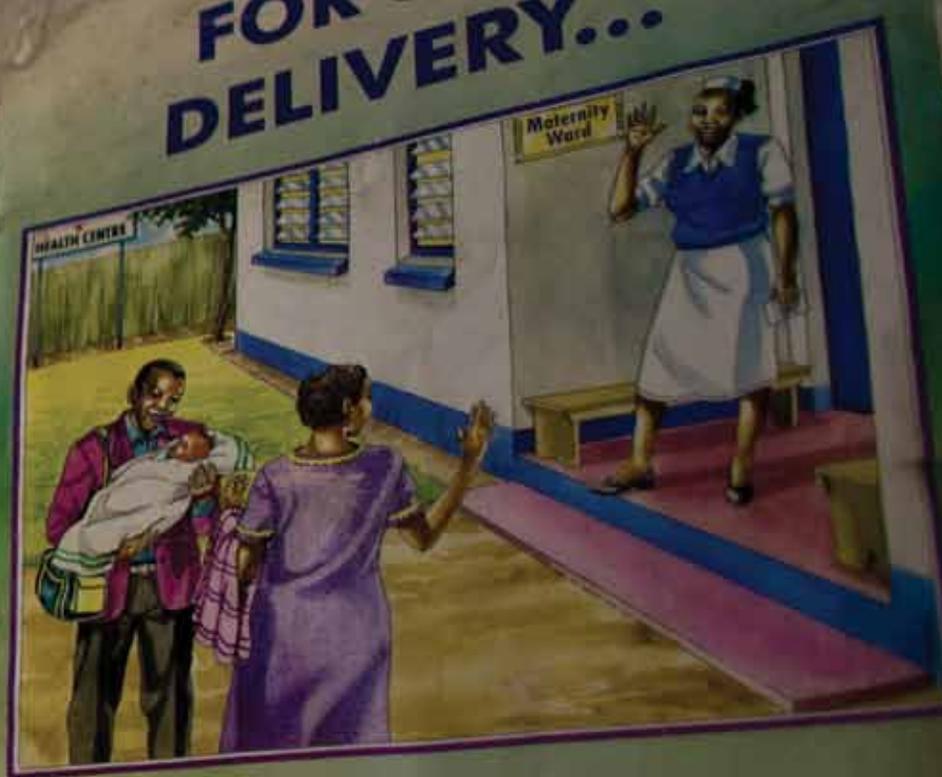


3

**KEEPING
GIRLS
HEALTHY:
WORKING
THROUGH
THE HEALTH
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If you have read this far, you know about the “why” of better health for girls, and the “what” of the health problems they face. What remains for this chapter and the one that follows is the “how”—the ways in which specific health problems of girls have been prevented and treated successfully in many parts of the world, and how the risks that girls encounter have been mitigated through intentional efforts to change social norms, build girls’ physical and psychological strength, and engage brothers, boyfriends, fathers, and husbands in reimagining who girls are and can be. Some of these efforts have occurred within the traditional health sector, which is where this chapter begins; others have been implemented outside of those boundaries, and will be covered in Chapter 4.

Making breakthrough progress in the policy arena requires compelling evidence, ideally on relative effectiveness and cost effectiveness. To move ahead for adolescent girls, we need to do something different—girls cannot wait until we have amassed this level of evidence. To make progress, we must combine findings from rigorous impact evaluations with less conclusive documentation of real-world experiences, accompanied by a strong commitment to research and evaluation.

This chapter and the next describe the results of a literature review that identified the recognized effective actions for adolescent girls’ health.¹ The evidence is limited, and many of the biggest challenges described in Chapter 2 require solutions where there is little or no evidence base. Hence, these chapters also present innovations, small-scale examples, and even

promising ideas not yet implemented that have the transformative potential that adolescent girls need.

Making the health sector work for girls

Great potential exists to improve and protect adolescent girls’ health through health sector actions. The most popular approach to address this challenge is the development of “youth-friendly services,” which are either embedded or free-standing services that aim to attract adolescents by being convenient and appropriate for this age group, and by providing services that meet adolescents’ expectations and assuage their fears.

A few countries have national programs that bring health services to girls and women in their communities, or provide services through non-traditional venues such as pharmacies or social marketing outlets. In addition to these approaches to increasing health service coverage, other priority interventions that girls need, such as nutritional and mental health support, are best delivered through integrated efforts lead by the health sector with complementary actions in schools and communities.

Youth-friendly health services

The concept of youth-friendly health services (YFHS) emerged in the international health arena largely in response to the HIV/AIDS epidemic, and the recognition that adolescents have special health and social needs that may be poorly dealt with by services that are oriented to adults. The essence of YFHS is *how* services are provided rather than the specific content; any service can become youth friendly. The orientation of YFHS vary depending on young people’s priority health problems, but the core elements typically include sexual and reproductive health information and counseling, family planning and contraceptive provision, post-abortion care and safe abortion where allowed by law, treatment for STIs, and voluntary counseling and testing (VCT) for HIV, as well as access to basic health care for infectious diseases and injuries, and sometimes management of mental health, sexual violence, and dental care (WHO 2003a).

The services are oriented toward adolescents through their location, which can be close to places where they congregate; the extent to which they undertake

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A health clinic in Kibera, one of Nairobi’s poorest slums. For health services to work for adolescents they must be convenient and provide respectful and confidential services, particularly in the areas of reproductive health and HIV.

¹ While the value of systematically assessing effectiveness is recognized by the authors, that is beyond the scope of this report. This is clearly a research priority for the future.

outreach to youthful clientele; timing; and a welcoming and non-judgmental stance. Making health services accessible to girls can extend beyond the well-documented sexual and reproductive benefits to include identifying and treating communicable diseases, intervening where mental health problems or gender-based violence are suspected, or targeting services to specifically vulnerable groups such as girls engaged in the sex trade or injecting drug users. In an innovative example, Zimbabwe has made urban hospitals supportive for young victims of rape as the core element of a comprehensive approach (see Box 3.1). YFHS can be provided through government clinics and hospitals, although often NGOs are the implementers (WHO 2003a; WHO 2004c; WHO 2009b).

Done right, YFHS can have an important impact, but this requires adhering to known success factors. To be effective, YFHS must include training for service providers; improvements to clinic facilities to improve privacy, adjust hours, and make them more appealing; and community-based activities to build support and demand for services. Training includes counseling and communication skills, clinical knowledge and skills related to a range of health issues, health workers' attitudes toward young people and ensuring confidentiality, and gender sensitivity. Community activities include public meetings, advertising the facilities, and effective referrals from schools or youth programs. Increasingly, national governments are developing standards and guidelines that include such action and encourage common approaches to implementation and monitoring in public and private health facilities.

The WHO framework describes the elements of a youth-friendly site and can provide a basis for monitoring and evaluation (see Box 3.2). It is vital to track who YFHS are reaching (e.g. in-school girls? older males? girls with greatest need?) and with what (e.g. do girls receive accurate information about condoms, or is that information reserved for males?).

Bringing services to girls: community-based services and social marketing

Sometimes it's about bringing the services to girls. A few countries, including Bangladesh and Ethiopia, have developed models for training large cadres of community-based health workers who bring basic services to poor communities. These are important

BOX 3.1

Using hospitals to support young rape victims in Zimbabwe

The Family Support Trust of Zimbabwe is an innovative model of a holistic, coordinated approach for young victims of sexual abuse, based out of urban hospitals. Of their approximately 3,000 cases per year, more than half are girls aged 12 to 16. The Trust aims to provide a comprehensive medical and rehabilitative service to sexually abused children and their families in a child-friendly environment in partnership with relevant government departments. Family Support Clinics in urban hospitals offer counseling, medical examinations, and treatment, as well as post-exposure prophylaxis to prevent HIV infection. Other services include STI treatment, emergency contraceptive, and abortion when relevant. Many stakeholders have praised this "one-stop model" as best suited for the management of child survivors of sexual abuse, and versions of this approach are being developed in other countries in the region. The initiative also provides psychosocial support for children, training for hospital staff and police, and advocacy to make courts child-friendly (Brakarsh 2003; J. Brakarsh, pers. comm.).

BOX 3.2

WHO framework for youth-friendly health services

To be considered youth-friendly, services should be equitable—all adolescents, not just certain groups, are able to obtain the health services they need; accessible—adolescents are able to obtain the services that are provided; acceptable—services are provided in ways that meet the expectations of adolescent clients; appropriate—services that adolescents need are provided; and effective—the right services are provided in the right way and make a positive contribution to the health of adolescents.

Other specific characteristics make services youth-friendly. These include procedures to facilitate easy confidential registration, short waiting and referral times, and capacity to see patients without an appointment. Their providers are non-judgmental, technically competent in adolescent-specific areas and health promotion, and backed by compassionate support staff. The facilities should be convenient and allow for privacy. And importantly, they should be accompanied by community-based outreach and peer-to-peer dialogue to increase coverage and accessibility (B. J. Ferguson, pers. comm.; WHO 2003a).

BOX 3.3

A modest proposal: the 12-year-old check-in

As a young girl enters early adolescence, she is at a critical point in time for protective health interventions. A 12-year-old check-in provides a scheduled and uniform way to ensure that girls most vulnerable to unhealthy outcomes receive the care they need and may have missed in childhood. This could be an important platform for girls themselves and for global health in general. Judith Bruce and colleagues at the Population Council have developed a promising idea in the spirit of “leaving no girl behind.”

As with early childhood health schedules, donors and national health ministries can codify an age-benchmarked check-in wherein adolescent girls, in a rolling fashion across a district or country, are reliably contacted at this propitious moment. This social gateway can be used to find out where girls are on basic health indicators and the social conditions that underlie health outcomes (see table). Screening can be conducted for universal health concerns such as vision and hearing, but also for detection of country-specific health priorities such as malaria, sickle-cell anemia, and HIV. Gaps in immunization can be corrected; the HPV vaccine and other more sophisticated health technologies can also be made available, where appropriate.

Girls might be offered information about the core rights framing their health and development, such as minimum age for legal marriage, ages of consent for sexual relations, voting, working, and opening a savings account. This moment can also be used to inform parents and their children about their rights before child marriage, unsafe migration, FGC, and other gender-linked practices set in. An inventory of girls’ status in terms of their living arrangements arrangements (e.g. with two parents, with one parent, with no parents, in a foster home, or as a domestic worker) and schooling level and plans can be conducted to connect them to appropriate services as needed. Ambitious programs might provide key assets, such as IDs and the opening of entry-level small savings accounts (possibly in partnership with the private sector). Additionally, it could provide a safe venue for adolescents to be confidentially queried about sensitive topics.

Check-in Wellness Components	
Health	Social
Physical exam	Counseling
Immunizations review and catch-up	Life-skills building
Nutrition/growth check-up	Educational assessment and support
Sexual and reproductive health information and services	Peer and social support screening and improvement
HPV vaccine (when available)	Drugs/alcohol/smoking screening and support for addictions prevention
HIV/AIDS prevention information	Family wellness and social support
Violence screening and support	Citizenship and social participation skill building and motivation
Mental health screening and support	
Injury screening and prevention	

Such a check-in lends itself to effective implementation through many avenues and features:

- Annual, community-based health campaigns
- Outreach and incentives promoting universal coverage
- Core campaign teams reaching the most vulnerable and excluded girls
- Private-public partnerships
- Social mobilization
- Household visits
- Central administration
- Recruitment and fielding of female community health workers to conduct screenings

The 12-year-old check-in provides an opportunity to find the often hidden information on adolescent girls apart from the aggregated numbers. Health and demographic data can be collected and tracked, and allow for a longitudinal assessment of women’s health, pooling a subset of girls at critical ages.

This proposal originated in Judith Bruce, “The diverse universe of adolescents, and the girls and boys left behind: A note on research, program and policy priorities,” background paper to *Public Choices, Private Decisions: Sexual and Reproductive Health and the Millennium Development Goals* (New York: UN Millennium Project, 2005). Additional applications with respect to Guatemala and sub-Saharan Africa were elaborated by Population Council colleagues Jennifer Catino and Martha Brady. This box is based on the background note “Poor Adolescent Girls—Still Lost Between Childhood and Adulthood—The Case for a 12-year-old Check-in” for the presentation entitled “Making Critical and Timely Investments in Adolescent Girls’ Health: Why and How,” prepared by Judith Bruce for the G-8 International Parliamentarians’ Conference: Strategic Investments in Times of Crisis—The Rewards of Making Women’s Health a Priority.

opportunities for young women in need of care, especially those who are married or domestic workers with restricted mobility. These approaches tend to be more expensive than facility-based service provision, but are feasible even in low-income settings (Baqui 2008; Wakabi 2008).

Recognizing where adolescents actually go for medical care brings pharmacies into focus. PATH's approach to making pharmacies adolescent-friendly with personnel training, referrals, and education shows promise (see Box 3.4). Another way to increase coverage is to increase the accessibility, affordability, and attractiveness of services and products using social marketing. For example, in Cameroon, the 100% *Jeune* social marketing program aimed to reduce barriers to condom use and increase safe behavior among youth ages 15 to 24. Mass media activities included a radio call-in show, a monthly magazine, and a serial radio drama, along with integrated television, radio, and billboard campaigns and a network of branded youth-friendly condom outlets. Evaluators concluded that the program contributed to substantial increases in condom use, including consistent use with regular partners (Meekers et al. 2005).

Improving girls' nutritional status

Tackling anemia effectively would address the most common nutritional problem adolescent girls face. It is recommended to improve girls' nutritional status before pregnancy rather than during. Where anemia prevalence is high, iron supplementation is universally recommended for women 10 to 49 years old and children under five (U NICEF/WHO 1990; Gillespie 1998); iron supplementation through schools is highly cost effective. Other approaches to anemia reduction include a combination of environmental sanitation, hygiene, promoting consumption of vitamin C-rich foods that enhance iron absorption, avoidance of absorption inhibitors such as tea at meal time, and increasing intake of animal sources of iron. Controlling parasitic diseases such as malaria, intestinal helminths, and schistosomiasis will also improve iron status (Delisle 2005; World Bank 2006; World Bank 2003).

Programming to tackle the rapidly emerging problem of overweight faces the obstacle of limited programming experience and evidence. Small-scale innovations and directions for future research are easier to come by than evaluated programming efforts.

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“Because the health of adolescent girls has such far reaching consequences for girls, their future children, and their societies, it is everyone’s business. In our own ways, we all need to step up to the plate to embrace this ambitious agenda. We have to commit to ensuring that girls everywhere get a fair chance for the brightest possible future.”

BOX 3.4

Pharmacist training to improve adolescents' access to essential goods and information

In many countries, pharmacists are a key point of contact between adolescents and the health sector. In recognition of the opportunities this provides, PATH launched the RxGen Project in 2000 in Cambodia, Kenya, and Nicaragua, now expanded to Vietnam. The initiative includes training pharmacists and pharmacy staff, developing referral networks with nearby clinics, and providing educational materials to young clients. Participating pharmacies are labeled with a special logo flagging their “adolescent friendliness” to potential clients. Evaluation results are positive. More than 60% of participating pharmacies visited by mystery clients provided correct products and instructions for emergency contraception use, an increase of 50 percentage points from baseline to evaluation, as well as improvements in the provision of STI and contraception information for mystery shoppers who presented for emergency contraception (PATH 2006).

Mental health is an emerging health priority for adolescents in the developing world.

Obesity prevention requires modifications in diet and increased activity levels. Supply-side interventions such as food and agriculture policy and fruit/vegetable and junk food pricing are also important. Generally, compulsory physical activity is more effective for reducing children's obesity than nutritional skills training and physical education. Like with smoking, children are strongly affected by their parents' nutrition and exercise choices.

Evidence on effective interventions against obesity outside of the developed world comes from Brazil, where the Agita São Paulo program has been effective at reducing overweight and obesity. Brazil's Agita program targets school children, older adults, and workers with a combination of special events, informational materials, mass media, training for physical educators and physicians, worksite health promotion, and cooperative ventures with public agencies from several sectors. A main goal is to expand physical activity by 30 minutes of moderate activity at least five times a week (WB 2005).

Improving mental health

Mental health is an emerging health priority for adolescents in the developing world. According to the WHO, in low-resource settings it makes sense to take an integrated approach to mental health. They recommend integrating mental health programs into general youth health and welfare programs, especially those on education and reproductive and sexual health. These types of programs are more likely to be available, accessible, and less stigmatizing to young people than stand-alone mental health services. They also can provide a range of youth-friendly services under one roof. They recommend that where mental health professionals are available, they work as part of a team delivering specialist interventions and building generic mental health skills (Patel et al. 2007). Restricting access to pesticides, a frequent tool for suicides, is also recommended (WHO 2009a).

Many girls with mental health problems have experienced gender-based violence, school dropout, child marriage, and other challenges described throughout the report. The impact of actions to address these other challenges is not usually measured in mental health terms. Nevertheless, reducing the incidence of threats such as gender-based violence undoubtedly benefits girls' mental health.

Making health-system strengthening and demand-side financing responsive to girls

Beyond the obvious point that improved functioning of core elements of the health system, such as drug supply chains and reliable funding, would benefit girls, specific opportunities exist to improve the responsiveness of the health system to the needs of adolescent girls.

Inclusion in policy processes

As national and sub-national governments establish the priorities for health financing and delivery, sometimes with donor partners, officials can introduce language and performance measures linked to girls' health. This might be, for example, explicit policy statements regarding the importance of adolescent girls' health, establishment of health impact goals (e.g. reduced maternal mortality among young mothers), and/or targets related to access to youth-friendly health services. While clearly insufficient without solid implementation, when high-level officials bring attention to the vital importance of adolescent girls' health, the topic becomes established as a legitimate area for concern by those lower in the system.

Making results-based financing of health care provision work for girls

Increasingly, governments and NGOs are introducing and/or expanding the use of performance incentives to improve health service delivery. Under these arrangements, sometimes called "results-based financing," monetary incentives are provided when health worker teams, facilities, districts, and/or provinces or other sub-national units achieve health-related targets that are identified in advance. The intent is to use rewards, above and beyond regular and predictable salaries or institutional transfers, to motivate higher levels of performance.

In the past, performance incentives in some sterilization and other family planning programs were used inappropriately and resulted in coercion. In a concerted effort to avoid this, the current generation of performance-incentive programs focuses on other targets, such as immunization, prenatal care, and skilled birth attendance, and they generally use relatively modest levels of monetary incentives.

In the past, performance incentives in some sterilization and other family planning programs were used inappropriately and resulted in coercion.

Evidence on the effectiveness of incentives for providers is incomplete, but suggests important potential to boost performance, particularly when there is underused capacity. In Haiti, for example, a 10-year incentive-based program has shown dramatic improvements in immunization coverage, use of skilled birth attendance, and other basic services. In that program, NGOs that operate health clinics covering about half of the Haitian population are provided with rewards on top of a base budget allocation if, and only if, they reach about 10 performance targets. The program induced rapid improvement when NGOs entered the program and

Demand-side approaches include the use of vouchers that can be used to obtain health services...in which mothers in poor households receive a monthly payment if, and only if, their children attend school and receive specific well-child services like immunization.

spurred clinic managers to be more attentive to information about the use of services, responsiveness to the community, and other system-strengthening activities (Eichler and Levine 2009).

The potential exists to incorporate indicators related to adolescent girls as specific performance targets in such schemes. For example, if the use of antenatal care or skilled birth attendants is particularly low among young mothers, targets can be established on increasing this type of service utilization. Achieving this target would require some resourcefulness on the part of the health team—organizing some type of peer outreach, for example, or attracting young mothers to the clinic by organizing a “young mothers” group.

Insurance/microinsurance

Increasingly, governments and donor partners, including the World Bank, are exploring various types of insurance to protect families from financial hardship during times of ill health, and to efficiently deploy a combination of public and private financing for health. Community insurance and coverage associated with microcredit institutions holds some promise in reducing dependence on out-of-pocket payments and increasing access to health services by poor populations.

For adolescent girls, two elements of insurance have particular salience. First are the questions about what family members are covered under insurance programs—how, for example, a community health insurance scheme defines household membership and the age limits for coverage of children. Second are questions of the benefit package and whether services of special importance to girls—for example, contraceptive services for unmarried women—are included. While these are not at the top of the priority list for those designing health financing innovations, the implications for adolescent girls require specific attention.

Demand-side financing

In recent years, one of the most exciting developments in health and social protection in developing countries has been the exploration of “demand-side financing” mechanisms. Demand-side approaches include the use of vouchers that can be used to obtain health services, incentives paid to patients for HIV testing or adherence to TB and other drug regimes, and conditional cash transfers, in which mothers in poor households

receive a monthly payment if, and only if, their children attend school and receive specific well-child services like immunization. These approaches are intended to overcome household barriers to use of social services, and to align the short-term behavior of individuals with their long-term interests.

Demand-side approaches can help to reduce constraints to access for adolescent girls. For example, if girls directly receive vouchers for appropriate services, this can enable them to seek services without requiring parents to pay and promote changes in health care worker practices. In a Nicaragua experience, poor adolescent girls were provided with close to 30,000 vouchers for a range of sexual and reproductive health services, and were able to choose among 19 public, private, and NGO clinics. A study of the knowledge and attitudes of participating physicians demonstrated that, in addition to helping girls overcome financial barriers to care, the voucher program prompted an increase in physician knowledge about caring for adolescents' reproductive health needs (Meuwissen et al. 2006). In Zambia, young women potentially in need of emergency contraception were provided with vouchers that were distributed within the community by health workers and at the point of service delivery, which included clinics and pharmacies. While not formally evaluated, the scheme was operationally functional, and girls availed themselves of services (Skibiak et al. 2001). Other countries have also experimented with vouchers for sexual and reproductive health services, often with good results (Gorter et al. 2003).

* * *

One part of the global health agenda for adolescent girls consists of making health systems more responsive to their needs. This includes, for example, building on the experiences of youth-friendly health services so that all girls can find and use health care that is appropriate to their stage in life. It also includes making girls' health status an indicator of the success of changes in health financing, organization, and delivery. Tackling these challenges requires leadership within countries, as health ministers and others embrace girls' health as a key priority. In addition, it requires that donors and technical agencies who support health sectors encourage creative, ambitious efforts to improve girls' health, while building the evidence base about effectiveness in a systematic way.



4

**FOR
HIGHER
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OUTSIDE
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While much can be achieved by making health policies, programs, and services easier to access and more responsive to girls' needs, the global health agenda for adolescent girls encompasses a broader set of priorities and actions. Addressing girls' health needs requires a combination of complementary actions to

- **change social norms;**
- **create community resources for girls that empower them to manage risks; and,**
- **increase the health-related benefits of schooling and investments in other sectors.**

In this chapter, we highlight experiences in each of these areas where innovative government and NGO programs have made progress in fundamentally altering the equation for girls.

Changing social norms to promote healthy behavior

Eliminating female genital cutting

Firmly entrenched cultural practices, especially those affecting girls with limited power, like female genital cutting (FGC), are hard to alter. Experience demonstrates that actions to reduce harmful traditional practices cannot be conducted in isolation; they have a greater impact when integrated with empowerment and community development activities (S. Baric, pers. comm.). Taking an integrated approach can enhance the essential trust between project staff and community.

The efforts to eliminate FGC are instructive. Three approaches have been used: developing alternative rituals, identifying and mobilizing positive deviants, and providing education combined with community mobilization and public declarations. Many of these

programs are small and poorly resourced; evaluations are few and far between. Generally, indigenous movements that advocate for women and girls' wellbeing targeting girls, circumcisers, males, and religious leaders are more effective than externally designed ones. Sharing information about the impact of FGC on fertility is also effective (Shaaban and Harbison, 2005).

Tostan, which deploys community-based approaches to reducing harmful traditional practices, is widely recognized because the work has been evaluated and expanded across several countries. In Senegal, Somalia, and elsewhere in the region, Tostan uses education and organizing to mobilize communities to make public declarations to cease FGC and child marriage, with demonstrated effect. Tostan's work in Senegal includes a basic education program for women on health, human rights, literacy, and problem-solving. As women learn about health and their rights, they focus on FGC and child marriage. They work toward organizing public declarations where men, women, religious leaders, and other stakeholders oppose harmful practices. The program has had a significant effect on community attitudes toward FGC, leading to a dramatic decrease in the number of parents who intend to have their daughters cut. Evaluation results also show positive impacts on child marriage (Diop et al. 2004).

Reducing child marriage

Efforts to reduce child marriage share some of the same elements. One review identifies five approaches, which are sometimes combined: education for families and communities with community sensitization and social marketing; formal, non-formal, and livelihood education for girls; law and policy initiatives; income-generation for girls and monetary incentives for parents; and efforts to safeguard rights, including safe social spaces and civil registration (Levine et al. 2008). Approaches with demonstrated effectiveness include those seeking to keep girls in school longer, addressing cultural norms, and working with parents. Projects in India, Nepal, and Bangladesh have had success in increasing marriage ages for girls and keeping them in school, often using economic incentives. In Kenya, ChildFund has been successful at "booking" girls for school instead of marriage, even offering dowries to fathers in exchange for a commitment that she will attend school (ChildFund International 2009).

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With a microloan and training from BRAC in Bangladesh, 19-year-old Sanchita bought a cow and used the proceeds from selling the milk to start a profitable vegetable patch. Higher household income sets the stage for better health over her lifetime.

Ethiopia's Berhane Hewan program is one of the few rigorously evaluated interventions to delay marriage. It was conducted in Amhara Province, where nearly 30% of girls are married before age 15 (Erulkar et al. 2004a). A pilot combined schooling support, group formation, and community awareness to assess the impact on child marriage. Elements included group formation by adult mentors; support for girls to stay in school, including an economic incentive, participation in non-formal education, and livelihood training for those out of school; and "community conversations" to engage the community in collective problem-solving. The evaluation showed that the intervention improved girls' school enrolment, age at marriage, reproductive health knowledge, and contraceptive use (Erulkar and Muthengi 2009). Results indicate that well designed and effectively implemented programs can delay the earliest marriages until later adolescence.

Using the media to promote healthy behaviors

The media is enormously influential on young people, and most adolescents access the mass media, whether printed, advertisements, radio, TV, or even the internet. A study in 11 countries showed that 12- to 15-year-old Latin Americans spent five to seven hours a day with TV, radio, internet, or reading (UNAIDS 2004). For Tanzanian adolescents, the media is the most important source of sexuality information (Masatu 2003).

The potential of the media has been harnessed in many regions to provide "edutainment" (or enter-education) to adults, adolescents, and children. Mass media approaches have a demonstrated impact on young people's knowledge, attitudes, and, in rarer cases, behavior (UNAIDS 2006; National Research Council et al. 2005; UNAIDS 2008). A meta-analysis showed a measurable impact of mass media approaches on HIV-related behaviors; this included a dose effect demonstrating that more exposure expands the impact (UNAIDS 2006). Media approaches work best when coordinated with other interventions.

For example, Soul City in South Africa takes on a range of topics, including gender-based violence, HIV/AIDS, and unplanned pregnancy. Soul City is cited as a success in shifting attitudes and norms concerning intimate partner violence and domestic relations. An evaluation also indicated that viewership was associated with regular condom use among

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“The chances girls have for healthy lives are circumscribed by many social forces. Making real progress depends on squarely recognizing and addressing the challenges of gender inequality and poverty, discrimination and violence. If we do so—supporting those who work in innovative ways—profound change is possible.”

BOX 4.1

Using partnerships and technology to broaden access to comprehensive sexuality education in Nigeria and Brazil

Access to comprehensive sexuality education for adolescents has been and remains a controversial subject in Nigeria. A sexuality education program and established relationships with Ministries of Health and Education and the National and State Agencies for the Control of AIDS paid off when the Nigerian organization Action Health Inc. collaborated with the Girls' Power Initiative and others to convince the federal government of the need for a nationally standardized sexuality education curriculum in 1999. Their prototype national curriculum became the national Family Life and HIV/AIDS Education curriculum, adopted by the government in 2001. Action Health Inc. and the Girls' Power Initiative then focused on advocacy and teacher training necessary for state level implementation. The Girls' Power Initiative, working in four states, coordinates trainings with the government to encourage replication of program content and methods in government efforts. Both organizations maintain consistent advocacy with national and state governments to ensure continuous provision of sexuality education unaffected by occasional flare-ups of controversy.

Using technology, organizers greatly expanded access to the national Family Life and HIV/AIDS Education curriculum, including through an electronic version (www.learningaboutliving.com/South) preinstalled on 52,000 computers as part of Intel's Skool Nigeria Program. They also created a partnership with two major mobile phone networks to broaden access beyond internet users. MyAnswer is a monthly competition where adolescents answer a peer's sexuality education question, using airtime donated by the government; MyQuestion is a question-and-answer outlet for adolescents, who can call, text, or email their questions to the electronic site and get a text response to their phone. The web-based initiative received more than 53,000 MyQuestions in its first year. Across the ocean, adolescents are also getting life-saving information online. Participants in the adolescent empowerment activities of Reprolatina in Brazil developed the Living Adolescence (Vivendo a Adolescência) website, with information on the body, contraception, rights, STIs/HIV, pregnancy, and sexuality and adolescence.¹ Established in 1999, the website now receives around two million hits per month (A. Germain, pers. comm.).

16- to 24-year-olds (Speizer et al. 2003). The program is even credited with helping to implement South Africa's Domestic Violence Act of 1998.

The internet has potential to reach and positively influence young people, who are often uncomfortable with sensitive topics and information. For example, the Nigerian Family Life and HIV/AIDS Education curriculum (described in Box 4.1) has gone electronic through the Learning about Living interactive website. It is being used increasingly in schools in Nigeria with government and NGO participation; it also uses mobile phones to engage young participants in question-and-answer sessions. There is interest in expanding this model in other settings, such as Mexico (Learning about Living 2009).

Preventing tobacco use

Tobacco use is a major concern in some regions, with a strong basis in notions of cultural acceptability and "cool," which are particularly powerful influences on adolescent girls and boys. There is little evidence on effective tobacco prevention in the developing world, though recommendations can be informed by evidence from the developed world and from some countries with a high prevalence of youth smoking, such as China. A Cochrane Collaboration review of interventions geared toward young people concluded that the evidence on youth-specific activities is not convincing (Jha et al. 2000; Thomas and Perera 2002). For instance, restricting the sale of cigarettes to young people in developed countries has been largely unsuccessful.

The evidence points to population-wide measures as the best way to prevent and reduce young people's smoking. The same methods appear to work for adolescents and adults. Reducing smoking among adults has indirect benefits for children as well: adolescents with smoking parents are more likely to smoke, even controlling for a range of other factors (Hill et al. 2005), so reducing parents' smoking can indirectly reduce adolescent smoking.

Campaign-like approaches to reducing tobacco use are effective, involving a coordinated set of proven approaches. The most powerful single element to prevent tobacco use is increasing the cost through higher prices and taxation. At present, cigarettes are cheaper in developing countries than in developed countries, although they are also less affordable

¹ http://www.adolescencia.org.br/portal_2005/secoes/index/default.asp?tema=index, accessed Aug. 3, 2009

for consumers. Experts estimate that a 10% price increase would reduce cigarette consumption by 8% to 10% in developing countries (Guidon et al. 2002; Ross and Chaloupka 2006). Young people are particularly price-sensitive, so taxation has a critical role to play for them (National Cancer Institute 2001).

Other approaches with proven efficacy include hard hitting, graphic advertisements on the dangers of tobacco use and pack warnings; bans on advertising to young people; and development and enforcement of non-smoking policies. Comprehensive tobacco policies in Thailand have had a positive effect: smoking prevalence among adolescents 15 to 19 years old dropped from 12.2% in 1991 to 9.5% in 1996. The policies have been supported by comprehensive provision of information and skills in schools, through the media, and through recreation activities (WHO 2001). Girls use tobacco in various forms, so price increases and advertisements need to go beyond cigarettes alone (Campaign for Tobacco Free Kids 2007).

Creating family and community resources to protect girls' health

A few promising approaches engage the people in girls' social networks, who can play a role in protecting their health. An emerging body of programming with couples and with boys and men demonstrates positive effects on gender-based violence, sexual and reproductive health, and couple communication. As this is a relatively new area, the effectiveness evidence is slim. In addition, these approaches are used more with adults than adolescents. Nevertheless, some evidence suggests that working with couples together, and with boys and men as partners, can have benefits for girls' health (Barker et al. 2007). These approaches are most pertinent for married girls, although they can be relevant for boyfriends/sexual partners as well.

Newlyweds programs

Working with newlyweds is an incipient but promising approach. Examples of specific activities include promoting condom use in first year of marriage to delay pregnancies, targeting efforts to assist first-time mothers, and engaging in-laws (WHO 2006b; Santhya et al. 2007). In China, newlywed couples receive information on maternal and child health clinics along with congratulations (WHO 2006b). Other activities targeting established couples can be effective in changing

BOX 4.2

Stepping Stones: addressing gender-based violence in South Africa

Stepping Stones is a participatory, gender-focused process that brings together men and women from a community to discuss and analyze factors in their environment that make them vulnerable to HIV. This training methodology was designed in 1995 in Uganda and has since been adapted to varied settings throughout the world.

The South African adaption of Stepping Stones was the subject of a cluster, randomized, controlled trial in which the approach was compared with a three-hour session on safer sex and HIV. Stepping Stones was effective in reducing sexual risk taking and violence perpetration among young, rural South African men (Jewkes et al. 2007).

An emerging body of programming with boys and men demonstrates positive effects on gender-based violence, sexual and reproductive health, and couple communication.

Good parenting, strong bonds between parents and children, and positive non-violent discipline have an impact on reducing violence.

BOX 4.3

Changing young men's gender norms through the Promundo Program improves girls' and women's health in Brazil

Promundo, a Brazilian NGO, works locally and internationally to reduce gender inequity and prevent violence against women, children, and youth. Promundo, in collaboration with the Horizons Program, conducted pioneering research on the impact of interventions to improve young men's gender norms on the risk of HIV and other STIs. Interventions included group education sessions and a "lifestyle" social marketing campaign to promote condom use using the gender-equitable messages from the group sessions. Researchers developed a Gender-Equitable Men scale to measure attitudinal change and demonstrated that improvements were associated with changes in at least one HIV/STI risk outcome. The study found that a significantly smaller proportion of participants supported inequitable gender norms over time, and key HIV/STI-related outcomes improved from the baseline, including condom use and reported STI symptoms. Group education effectively influenced young men's gender-role attitudes and led to healthier relationships. The program has been adapted for other countries, including Mexico and India (Pulerwitz et al. 2006).

attitudes and some behaviors; the couples-based interactive Stepping Stones approach, described in Box 4.2, has been an effective approach to HIV/AIDS, gender, and relationship issues widely adapted for use in Africa, Asia, North America, Latin America, and Europe. Because couples-based approaches could *increase* risks for girls and women where violence is a concern, it is imperative to involve them in planning, monitoring, and evaluation.

Working with boys and men

Other activities target men and boys on their own as husbands, boyfriends, brothers, and fathers. Few of these have moved beyond the pilot stage or small-scale implementation, but promising results are emerging on their effectiveness in decreasing gender-based violence, increasing contraceptive use, and improving couple communication (see Box 4.3). A WHO review of programs aimed at involving males found that those taking a gender-transformative approach where men questioned and modified their gendered attitudes were more effective than those without a gender component. It also found that a combination of integrated activities works best: group sessions plus community campaigns, mass media, and counseling in particular (Barker et al. 2007).

Working with parents

A few programs recognize the important role that parents play in their older children's health (WHO 2007d). An innovative approach to young adolescents' sexual and reproductive health in Nicaragua demonstrates how including the girls' mothers is an important element of success (see Box 4.4). Research shows that good parenting, strong bonds between parents and children, and positive non-violent discipline have an impact on reducing violence and recognizing it as unacceptable. Additionally, a sense of connectedness between adolescents and their mothers was shown to be protective against depression and anti-social behavior in a study of 11,000 11- to 14-year-olds in nine countries (Barber et al. 2005). Parents' tobacco use, diet, and activity patterns also affect their children. Home visiting programs, though rare in developing countries, can help parents practice good parenting and bond with their children, in addition to recognizing and addressing risk factors in the home. This approach is also recommended for reducing unintentional injury in the home.

Working in communities: safe spaces for girls

Going beyond individual girls' behavior and their family setting to the social environments in which they live—their communities—is essential for effectively protecting girls' health. Activities undertaken in communities have built support, awareness, and demand for the changes sought through service delivery, as well as tackling the more subtle threats to girls' health needs.

Youth centers are a popular community-based intervention in Africa, aiming to provide recreational opportunities and skill-building for young people in their communities, as well as a hook to link young people to health education and services. In reality, evaluations show that youth centers fail to reach adolescent girls (Weiner 2007).

A twist on the youth-center approach is the development of safe spaces for girls. This includes creating a safe space where girls gather with a mentor on a regular basis to learn about their bodies and rights, learn skills, make friends, and discuss their lives. The concept of safe spaces emerged out of the recognition that girls often lack safe spaces to socialize with peers, learn new skills, obtain critical health information, develop relationships with mentors and role models in their community, and begin the process of civic participation and engagement (Brady 2003, 2007). It builds on findings such as those from a study of more than 1,000 boys and girls ages 10 to 19 in low-income and slum areas of Addis Ababa, Ethiopia, which revealed that girls have fewer friends and less social support than boys. Girls had a reported average of 2.7 friends, while boys averaged 4.7. While girls' friendships appeared to be more intimate than boys', those with fewer friends were more likely to report feeling scared: two-thirds of girls reported feeling scared of someone in their neighborhood, and more than half were scared of being raped. Those with fewer friends and people to turn to in a crisis were indeed more vulnerable: for example, girls serving as domestic workers worked an average of 62 hours per week, with 32% reporting no friends at all (Erulkar et al. 2004b).

Today the Safe Spaces approach is used in a variety of settings to provide out-of-school unmarried and/or married girls, who would otherwise be isolated, the chance to make friends; participate in education and

BOX 4.4

Involving young adolescents, their mothers, and the media in Nicaragua

Entre Amigas, implemented by PATH and Nicaraguan organizations, focuses on low-income 10- to 14-year-old girls. It also addresses girls' support networks, including mothers, teachers, and community health care providers and officials, to improve their sexual and reproductive health knowledge and strengthen sexual negotiation skills. The project identified mothers as having the greatest influence on girls amongst their social networks. Activities for girls were complemented by learning and support sessions for mothers, teacher training, and entertainment for the community. Entre Amigas also introduced new, young adolescent characters and their support networks into a popular TV soap opera, *Sexto Sentido*.

Evaluation showed that the project significantly increased girls' self-esteem and knowledge of risk behaviors. Activities were also associated with significant increases in girls' communication with friends, mothers, providers, and community organizations. A cost analysis suggested that peer education, support to community networks, and mass media are feasible approaches to improving girls' knowledge and encouraging healthy behaviors (Guedes 2007).

BOX 4.5

A safe space for out-of-school girls in Egypt

A consortium of the Population Council, Save the Children, and the Centre for Development and Population Activities, with the Ministry of Youth, designed the Ishraq program to create safe spaces for socially isolated, out-of-school girls to learn, play, and grow, as well as to return to school and delay marriage. Ishraq offers girls literacy, life skills, and team sports in an integrated curriculum that includes specific attention to health information and rights, health campaigns, and access to health services. Girls learn to raise and sell poultry, repair home appliances, and learn basic financial skills.

The successful pilot involving more than 200 girls and their families in four communities won top-level political backing. Achievements included the following: 92% of participants who took the government literacy exam passed; participants reported higher levels of self-confidence than non-participants; they expressed a desire to marry at later ages and have a say in choosing their husband; and importantly, 68.5% of participants who completed the program entered or reentered school. Ishraq was designed to be expanded and now covers three governorates in hopes of reaching an additional 5,000 girls and their families (Brady et al. 2007).

skills building, including economic asset-building; participate in sports as part of a team; and in myriad ways begin to exert some control and autonomy over the lives. The program contents are tailored to the needs of the specific participants, for example, domestic workers. Providing a range of services through safe spaces for out-of-school girls in rural Egypt demonstrates how sensitive topics can be addressed for a vulnerable group when integrated into a comprehensive approach (see Box 4.5). One of few evaluated efforts to support pregnant and parenting adolescents, the Women's Centre of Jamaica Foundation aims to encourage girls to transition back into school to complete their education after having a child (see Box 4.6).

Increasing the health benefits of schooling and investments in other sectors

Schools play a major indirect and direct role in promoting adolescent girls' health. These include sustaining girls' school enrolment and attendance through education-system reforms, making the school environment girl-friendly and health-promoting, and teaching about health, sexuality, human rights, gender, nutrition, and other pertinent topics. Teachers and other school authorities can also identify and assist students at risk of gender-based violence and mental health problems.

Girls gain health benefits from simply being in school. This causal chain is much studied, but the precise mechanism of protection remains vague. It may have something to do with the peer networks surrounding schoolgirls, compared with more the inequitable power dynamics out-of-school girls experience within adult networks. It also may relate to schoolgirls' sense of self-efficacy, which can help them make good choices regarding their health and sexual behavior. To experience these benefits, girls need to stay in school beyond a few years and gain functional literacy. Education-sector efforts to keep girls in school beyond the primary years represent an important contribution to girls' health.

Education experts identify specific measures to help girls transition to and retain enrolment in secondary school, which can also increase the chance of paid employment. Recommendations include redefining "basic education" as education through lower second-

BOX 4.6

Safe spaces for adolescent mothers: the Women's Centre of Jamaica Foundation

The Women's Centre of Jamaica Foundation is one of few evaluated efforts to support pregnant and parenting adolescents. This long-running program for adolescent mothers aims to motivate and encourage pregnant and breastfeeding mothers under 16 to return to school. It includes educational programming, nutritional education and support, a day nursery, and counseling and referral services. Importantly, at the time of evaluation, no pregnancies had occurred in the adolescent children of participants. A study tracing the women who participated in the program 15 years prior found that more than half still had one child and that the average spacing between first and second births of all participants was 5.5 years. Since its inception in 1977, the Foundation has helped more than 22,000 adolescent mothers return to school and reached 51% of girls under 16 giving birth in 1997 (YouthNet).

ary or to age 16, increasing the number of formal and non-formal secondary school spots available, and targeting subsidies to disadvantaged girls. Recruiting and retaining female teachers, developing post-secondary vocational programs, and supporting and improving non-formal education are also important. Curricula that are relevant to the realities of adolescent girls' lives in terms of practical skill building, critical thinking, and decision-making can prepare them for work opportunities in a rapidly changing world (Lloyd 2009).

Increasing access to general education is powerful. Research in Kenya assessed the relative effectiveness of different approaches to reducing ill health among students. Compared with teaching the government's standard HIV curriculum and debates and writing essays on HIV prevention, the most effective approach appeared to be providing students with free uniforms, which reduced the overall cost of schooling. This reduced dropout rates by 17% for boys and 14% for girls, and reduced teenage childbearing and marriage among girls by 9% and 12%, respectively (Duflo et al. 2006).

School-based sexuality, human rights, and gender education

Providing comprehensive sexuality education covering human rights and gender issues is essential for adolescent girls both in and out of school. This section focuses on school-based sexuality education, where the weight of evidence lies. However, the community-based approaches described throughout this chapter are also critical to reach adolescent girls who are not in school and likely to be in greatest need of knowledge and skills on health, sexuality, gender, and rights.

Most countries have some type of sexual health or life skills education in schools, intended to benefit students' health and promote safe behaviors. High-quality reviews have examined the evidence on school-based sexuality education (Kirby et al. 2007; Paul-Ebhohimhen 2008; UNAIDS 2006). In general the reviews show that accurate, comprehensive school-based sexuality education has the greatest impact on knowledge, although studies also show some behavioral impacts, more for girls than for boys (see, for example, Box 4.7). In a meta-analysis of studies of school-based prevention education programs in low- and middle-income countries, almost three-quarters of programs involving curriculum-based, adult-led

BOX 4.7

A combined approach has an impact, but a limited one: school, community, and health services in Tanzania

The Mema Kwa Vijana study in rural Tanzania assessed the impact of an integrated program on biological outcomes. The study combined teacher-led, peer-assisted sexual health education in the upper years of primary school, “youth-friendly” sexual health services, and peer social marketing for condoms. Program participation improved knowledge and reported attitudes and behaviors, resulting in a reduced number of sexual partners among boys and an increased condom use among both girls and boys. An evaluation found behavioral effects but no consistent impact on biological indicators of HIV, other STIs, or pregnancy during the three-year trial period. Researchers suggest this may be due to the small sample size, the relatively low incidence of these outcomes among adolescents, and the fact that those most likely to transmit and acquire HIV and other STIs—out-of-school girls and their older sexual partners—did not benefit from the most intensive component, the school-based education (Ross et al. 2007).

But there is another angle to the story: a process evaluation revealed limitations in implementation of the school-based education. They noted that teachers generally taught the curriculum content well, but could not always adopt a different teaching style than their norm, as required by the sexual health education. In addition, the peer educators did well with scripted dramas, but did not perform as well as informal educators and behavioral models (Plummer et al. 2007). This suggests that part of the reason the program had limited impact on behavior and health may have been the low quality of schooling.

BOX 4.8

Aahung: surmounting cultural and political barriers to improve sexual and reproductive health in Pakistan

Aahung, founded in 1994 in Karachi, is today a leading national authority on sexual health and rights. The organization worked closely with public health and education systems to skillfully navigate a conservative environment and bring comprehensive sexuality education to young Pakistanis. They also have increased attention to sexual health issues in medical and educational institutions and broadened the remit of population and family planning NGOs to include sexual and reproductive rights and health.

A partnership with the International Women's Health Coalition enabled Aahung's expansion from one-on-one relationships with schools toward broader strategies to make comprehensive sexuality education an integrated part of the public health and education systems within one district. They developed culturally appropriate curriculum and training modules that are implemented and monitored by the Ministries of Health and Education. Aahung's expansion is based on information sharing, outreach, and persuasion of other larger actors, rather than scaling up their own service provision. To date, Aahung has reached 44,174 individuals directly and millions indirectly, and demonstrated how gradual, deliberate steps can overcome strong barriers to expand young people's rights (A. Germain, pers. comm.).

interventions had positive effects on the age of first sex, frequency of sex, number of partners, use of condoms/contraceptives, and the frequency of unprotected sex. Notably, the majority of studies measuring program effects on unintended pregnancy or STI rates do not find a significant effect. One possible explanation is the inaccuracy of self-reported data on which study results generally rely (WHO et al. 2006; Biddlecom et al. 2007; UNAIDS 2008).

Sexuality education has to be about more than conferring factual information. It must address and

explore human rights and social norms, especially regarding gender, and importantly, develop practical skills. As a resource for in-country decision-makers, UNESCO has recently prepared the *International Guidelines on Sexuality Education*.²

Some of the important factors for success of comprehensive sexuality education are to include active learning on refusal and negotiation skills, conflict resolution, critical thinking, decision-making, and communication, and to start when students are young. Critical thinking on gender is key: adolescents who respect gender equality have better outcomes than their peers who do not. Yet few curricula address gender issues in a meaningful way.

Students' sexual history appears to be an important mediator of impact. Abstinence is easier to promote among students who are virgins at the time of exposure, while condom use is more likely amongst those already sexually active. This highlights the need to start comprehensive sexuality education when students are young. Implementation is possible even in highly conservative environments if handled carefully (see Box 4.8).

Effective health, sexuality, and gender education can have benefits beyond sexual and reproductive health. It can also help protect adolescents' mental health. If done properly, life skills education can give adolescents skills to solve problems, trust others, initiate social interactions, build relationships, and manage disappointment.

Making school environments healthy for girls

Within the education sector, "business as usual" is not keeping enough girls in school, especially through the transition to secondary education. School actually can be a risky place for girls. It is well documented in sub-Saharan Africa that girls face risks of sexual harassment and violence, including by school staff, requirements of sex before teachers will give grades, or outright rape in unsupervised school environs. These threats motivate some parents to pull girls from school around puberty. Explicit measures are needed to make sure girls continue to safely receive the benefits of schooling well into their adolescence.

UNICEF recommends specific measures to make schools "girl friendly" (UNICEF 2006):

² The guidelines are available at http://hivaidsclearinghouse.unesco.org/index.php?id=79&L=3&tx_ttnews%5Btt_news%5D=1048&tx_ttnews%5BbackPid%5D=262&cHash=d6d3b9283a

- Ensure that schools have separate latrines for girls and safe drinking water.
- Build schools close to girls' homes.
- Make school facilities safe from gender-based violence.
- Encourage local school authorities and teachers to adopt flexible scheduling.
- Allow married adolescents and unmarried parents to attend classes.
- Encourage parents and community leaders to be actively involved in school management.

In addition to girl-specific measures, the WHO recommends general measures to make schools healthier for all students. This can include school meals to improve nutrition, routine health checks, growth monitoring, micronutrient programs, deworming, and access to safe water and sanitation facilities (WHO 2000).

In Sri Lanka, schools participate in the School Health Promotion Program, designed to strengthen the partnership between the health and education sectors. The program includes engaging health and education officials, teachers, students, parents, and community leaders in health promotion; providing a safe, healthy physical and psycho-social environment; providing skills-based health and life skills education; reorienting health services (School Medical Inspection in Grade 10, iron supplementation, school health cards); and community health projects (WHO 2008b).

Few examples of school-based health services, one component of a health-promoting school, exist in the developing world. Egypt massively expanded school health services in the 1970s, and now every school has a clinic including a nurse, who is part of an interdisciplinary team of health care professionals. A study in Alexandria showed that 14- to 19-year-old students' use of school health clinics far outweighed use of primary health care and other health services (Afifi 2004).

Improving girls' access to water and sanitation

Education is not the only sector in which actions have major implications for girls' health. Water and sanitation infrastructure is another. In communities

Explicit measures are needed to make sure girls continue to safely receive the benefits of schooling well into their adolescence.

BOX 4.9

The IMAGE project in South Africa

Recent evidence from a randomized cluster trial indicates that a combination of microfinance and gender and HIV education reduced levels of physical and sexual violence in rural South African communities. The study found a 55% reduction in self-reported experiences of physical or sexual intimate partner violence in the past 12 months among participants in the intervention. IMAGE provides adolescent girls and women (14-year-olds and up) with short-term business loans of up to \$1,300 (implemented through the Small Enterprise Foundation), operating on the premise that an increase in earning power will empower women to be more vocal at home, confronting unfaithful husbands about issues such as condom usage. Loan recipients are required to participate biweekly in an action curriculum called Sisters for Life. These workshops provide a place where women learn to communicate with their husbands about issues such as domestic violence, rape, and the importance of using condoms. Other efforts to empower women through microfinance alone have mixed results regarding violence, however (Lancet 2006).

without a safe water source nearby, girls and women spend large amounts of time collecting water for household use, with direct implications for their health as well as opportunity costs. The educational benefits of ensuring a clean water source and separate lavatories for girls in schools were mentioned above. According to a UNICEF survey of 60 countries, fewer than half of primary schools have an adequate water supply, and almost two-thirds lack adequate toilets (UNICEF 2009).

Bringing water closer to girls can reduce the amount of time they spend fetching water, giving them greater opportunity to attend school and study, socialize, learn other skills, or possibly generate income. It also reduces the risk that they could be subject to violence or rape when collecting water in isolated spots. Additionally, girls who spend less time collecting and

carrying water reduces the direct health problems that can result.

Schistosomiasis, a waterborne disease prevalent in sub-Saharan Africa, is of emerging interest because of its possible role as a cofactor in HIV infection. Based on recent research in Zimbabwe, researchers propose that mass praziquantel treatment of young school-aged girls could be a highly cost-effective way to slow down the spread of HIV in heavily affected regions, as well as reducing the burden of disease associated with infection (Hotez et al. 2009; Kjetland et al. 2006).

Preventing unintentional injuries

Unintentional injuries are only beginning to receive the attention they deserve as a major cause of adolescent mortality and morbidity. As described in Chapter 2, burns kill more girls than boys. Recognizing that the literature on burn prevention in developing countries is extremely limited, there are measures that make sense and deserve greater support and evaluation. These include developing and using alternative stoves and lamps to reduce burns and air pollution, and separating cooking quarters from the living quarters. Home visitors can help to identify risks in households, though the feasibility in resource-constrained settings is a challenge. Evidence on unintentional injury prevention does indicate that education alone does not work; it must be combined with product modifications and legislation and standards to be effective (Penden 2008).

Road traffic injuries affect all ages, especially boys and young men. Adolescents are most at risk as road users—pedestrians, cyclists, motorcyclists, and passengers of public transport. Measures to slow traffic have proven benefits and need to be evaluated in low-income countries. These include infrastructural changes, for example, speed humps, mini-roundabouts, designated pedestrian crossings or pedestrian islands, and traffic redistribution. Infrastructural changes required include segregated road space between non-motorized and motorized traffic, safe street crossings near schools, foot and bicycle paths, and well-lit footbridges or tunnels. Helmet laws and standards, accompanied by free helmet distribution, also play an important role where motorcycles are the main mode of transport for families (WHO 2007f). All of these population-wide measures have broad benefits

but also are important for adolescent girls who are vulnerable as passengers, pedestrians, and drivers.

Livelihoods and microcredit approaches to improving girls' health

For women, linking livelihoods and microcredit with health benefits shows promise. Studies examining women's contraceptive use as a result of microfinance find that participation leads to higher rates of contraceptive use (Khandker 1998; Steele et al. 1998; UNFPA 2008b). And evidence also shows that families with access to microfinance have better health practices and nutrition and are healthier than comparison families (UNFPA 2008b). A randomized cluster trial in South Africa demonstrated the potential of combining microfinance and gender and HIV education in reducing gender-based violence for women (see Box 4.9).

This linkage primarily focuses on women, however. There is little evidence that these approaches have benefits for adolescent girls' health, though it's reasonable to assume so. A few examples test this assumption. The World Bank is piloting the Adolescent Girl Initiative, which seeks to address the economic needs of adolescent girls and young women in poor or post-conflict countries while also improving their wellbeing. The initial foray is a project in Liberia, which aims to combine interventions including job skills, life skills, and entrepreneurship training with linkages to microfinance combined with activities on gender-based violence and reproductive health (Katz 2008).

Other examples evaluated by the Population Council show the promise of combined "livelihood" approaches, although experts note that there is a long way to go to make linked livelihood and health programming effective, especially strengthening the capacity to integrate and appropriately sequence the different activities required to meet multiple objectives. Successful small-scale approaches provide a starting point, for example, "Action for Slum Dwellers' Reproductive Health, Allahabad," which offered vocational training and savings opportunities for girls ages 14 to 19 in India; participants showed increased reproductive health knowledge relative to control respondents who attended reproductive

Evidence shows that families with access to microfinance are healthier and have better health practices and nutrition than comparison families.

MUHAMMAD YUNUS

Founder and Managing Director of Grameen Bank

“By engaging girls and young women to provide quality health care for those around them, NGOs and social businesses can address girls’ health needs while creating productive livelihoods.”

health classes that lacked the additional livelihoods component (Mensch et al. 2004).

Ecuador’s Neo-Juventud project is testing a method of reducing adolescent pregnancy through income generation, education, and other indirect approaches. The research project explores whether sexual and reproductive health information and services; family planning; economic opportunities; community work;

and workshops on rights, gender, and self-esteem combine to empower adolescents to make better reproductive health decisions and contribute to a decrease in adolescent pregnancy (CARE 2009).

The Better Life Options for Girls in India is a long-running example of an integrated empowerment program with effectiveness demonstrated through an impact study. The program offers reproductive health education and services, provides vocational training, and promotes empowerment through recreational events for out-of-school girls aged 12 to 20 years old. Impact study results show improved welfare of participating girls, including delaying marriage, increasing reproductive health knowledge, strengthening decision-making skills, and increasing the use of health services. A multivariate analysis reveals that participants were significantly more involved in key life decisions, such as household spending, timing of marriage, and whether to continue education, than those not touched by the program (CEDPA 2001). In Bangladesh, an effort to train young women as nurses aims to provide employment opportunities at the same time as improving health care access, especially for girls.

Reaching girls and young women in the workplace

Workplaces can be used to tackle young workers’ health problems. For example, embedding nurses into workplaces, using unions as a channel for advocacy, providing health and AIDS education, treating STIs, and combating sex tourism through hotel guilds are all examples of harnessing opportunities where young workers gather. Workplaces can also be for young people to interact, socialize, and educate each other.

Workplace strategies with proven effectiveness include selected peer-based approaches and integrating health topics into job preparation fora. In Papua New Guinea, the curricula for all vocational training now includes HIV education, and in Vietnam, a national network of job centers provides a forum for HIV education along with job offers, and centers have become gathering points for young people (UNFPA 2008a).

Factories that employ large numbers of girls and young women can be used as opportunities to reach a vulnerable group. In China, one company employs more than 10,000 people in 40 sites throughout the

country. PATH and the Family Planning Association trained human resource managers at individual sites. The managers in turn provided life planning skills training to employees. An evaluation at one site indicated that the dropout rate among female employees because of unintended pregnancy had fallen from almost 31% to 20% (PATH).

Working girls under 16 are most frequently employed as domestic workers. Different approaches to reducing their health risks include constructing peer groups where older children serve as mentors for the younger children, helping workers access the support services they need from health to legal advice, establishing community inspection arrangements in villages so cases of exploitative labor can be identified, and setting up telephone hotlines. An effective approach in the Philippines has gained international recognition for their pioneering work (see Box 4.10).

The research agenda

The discussion of effective programming is incomplete without highlighting the need for more research to support expanded efforts for adolescent girls' health. Many of the approaches described above are promising innovations, but with limited information on feasibility, effectiveness, and cost-effectiveness in particular. The highest research priority, therefore, is to build evidence on these approaches, particularly those outside of the health sector, through evaluations, operations research, and randomized trials where feasible. The field would greatly benefit from a systematic review of the evidence for all actions to benefit adolescent girls' health, as well as cost-effectiveness data.

Other priorities include piloting approaches to tackling norm-based unhealthy behaviors and engaging members of girls' social networks in protecting their health. In addition to research relevant to programming, there is much more to learn about the risk factors threatening adolescent health over the short and long term. We need more and better age-disaggregated data on burden of disease for girls and boys, including special studies of the magnitude of specific health problems. The contribution of adolescent factors to chronic disease needs better understanding to influence health spending on prevention.

BOX 4.10

Keeping young domestic workers healthy and safe in the Philippines

Most efforts to combat domestic work help individual workers rather than trying to reduce the overall phenomenon. The Visayan Forum Foundation of the Philippines, working on behalf of migrants—especially those in invisible and informal sectors such as domestic workers and trafficked women and children—operates at multiple levels. Through the Campaign for Domestic Workers Rights, they founded SUMAPI, a self-help organization of Filipino domestic workers, now a national network of at least 8,000. They provide direct services such as temporary shelter, trainings, legal assistance, educational support, and other forms of intervention, as well as intervening to keep vulnerable children from joining the sector. But they also join together to lobby on behalf of all domestic workers, leading to a national “magna carta” on child domestic workers, training of government workers, and partnering with schools to allow flexible schooling and tutoring that allows them to continue their education (Anti-Slavery International 2005).

A photograph of a woman in a pink top holding a baby wrapped in a patterned cloth. She is surrounded by a group of children in an outdoor setting. A large red heart is painted on the wall behind them.

5

THE WAY TO ADOLESCENT GIRLS' HEALTH: AN ACTION AGENDA



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Strategic investments in adolescent girls' health, sustained over many years, will yield major social and economic benefits for generations, breaking the cycle of ill health, gender discrimination, and poverty, while upholding essential human rights. That's a big promise—and a big “ask” in a world with no shortage of worthy causes and overstretched budgets for social programs.

But both the direct and indirect benefits from focusing on adolescent girls' health make it an investment with a high pay-off: healthy girls become more capable and productive mothers and workers. Improving adolescent girls' health vastly enhances the prospects for accelerating progress toward better maternal and child health. And effective prevention efforts during this critical period—whether focused on the behaviors that make girls vulnerable to HIV or those that affect the lifetime chances of chronic disease—reduce the eventual financial demands on the health sector.

Over the past five years, the international community has gained awareness about the importance of adolescent wellbeing within economic and social development, and has started to step up in important ways—with some particular gains for girls. The topic of “adolescent girls” has expanded from the domain of a few long-time champions to broader recognition. For example, the World Bank launched the Adolescent Girls Initiative, which was praised by World Bank President Robert Zoellick as one of the Bank's signal accomplishments of 2008–09.¹ On World Population Day 2009, UN officials called for investment in women and girls during the global financial crisis as a way to promote economic recovery and tackle poverty and inequality.

The U.S. government also is devoting more attention to the wellbeing of women and girls. Soon after his inauguration, President Obama established the White House Council on Women and Girls. The State Department recently instated an ambassador-at-large

for women, and the Senate Foreign Relations Committee created a new subcommittee to focus on global women's issues.

The opportunity now—drawing on information about the health risks girls confront and experiences with a broad range of girl-focused programs—is to define a global health agenda for adolescent girls, and to mobilize resources to implement it. Actions within the health sector, including selected interventions targeting adolescent girls *plus* relatively low-cost modifications to the way health services are financed, delivered, and monitored, can make a meaningful difference. But the global health agenda for girls surpasses the boundaries of the health sector to tackle both the social and biomedical determinants of health. A comprehensive agenda includes stimulating changes in social norms, redressing gender inequality, creating particular types of social resources for girls and their families, and generating greater health benefits from investments in education and other sectors. Given that the evidence base on costs and impact is relatively limited, the agenda also must include deliberate actions and investments to undertake the type of policy-relevant research that can help to refine the approach to adolescent girls' health over time.

Succeeding for girls in the health sector

We recommend a set of proven or promising approaches for government leaders who recognize the value of investing in girls' health, and the organizations that provide financial and technical support to them, to pursue within the health sector.

Promote and expand coverage of focused interventions for adolescent girls, especially the poorest

The list below highlights promising interventions for which there is a growing body of solid evidence as well as cost information. However, the cost-effectiveness of each of these interventions will vary by location and population, so the highest priorities for each country will vary by context.

- *Youth-friendly health services* providing general health care specific to adolescent girls' needs; boys will also benefit. This includes actions to make services appealing to young people, including health

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Girls in the slums of Nairobi need greater coverage of health interventions and services designed to meet the unique needs of adolescent girls.

¹ World Bank, 2008. “The Adolescent Girls Initiative: An Alliance for Economic Empowerment.” The World Bank Group. <http://go.worldbank.org/15PX4JETM0> (accessed July 20, 2009).

worker training, outreach to adolescents, and use of peer workers. Specific elements vary by setting, but are likely to include providing sexual and reproductive health information and counseling, family planning and contraceptive provision, STI treatment, antenatal and delivery care, safe abortions as allowed by law, post-abortion care, and testing and counseling for HIV and other STIs.

- *Iron supplementation to prevent anemia* among adolescent girls in poor households or in areas of high anemia prevalence, provided through antenatal care or community nutrition programs.
- *Introduction of HPV vaccine into the national immunization program*, applying a strategy to reach adolescent girls.²
- *A "12-year-old check-in"* to provide vaccinations, health care, and education covering nutrition, sexual and reproductive health, and healthy behaviors. This program would provide each girl living on less than \$2 a day with one wellness check-in, including referrals for further treatment, sometime between ages 10 and 14.

Modify existing health-sector policies, service delivery, and financing arrangements to be more responsive to adolescent girls' health needs

In virtually every country, improvements in adolescent health can be achieved through changes in the financing, organization, and delivery of care as health systems support is scaled up. Actions that have high potential for impact include the following:

- Use adolescent-specific indicators as measures of sector performance, as well as to set goals, monitor progress, and, under certain circumstances, create incentives when tied to monetary or other rewards.

Adolescent-specific metrics would include, for example, those referring to health impact, such as the HIV or anemia prevalence rate among girls and young women, or the maternal mortality rate among adolescent mothers. They would also include those referring to sector performance in a more direct way, such as the unmet need for contraception among adolescents, the share of births to adolescent mothers that are attended, or the share of the population with access to youth-friendly health services.

The direct and indirect benefits from focusing on adolescent girls' health make it an investment with a high pay-off.

² WHO recommends that routine HPV vaccination should be included in national immunization programs provided that: prevention of cervical cancer or other HPV-related diseases, or both, constitutes a public health priority; vaccine introduction is programmatically feasible; sustainable financing can be secured; and the cost-effectiveness of vaccination strategies in the country or region is considered. See "Human papilloma virus vaccines: WHO position paper," WHO Bulletin – Weekly epidemiological record, 84, no. 15 (10 April 2009): 117–32, <http://www.who.int/wer>.

The broader and deeper challenge of addressing the social determinants of girls' health demands an extraordinary effort to change the social environments that confer serious risks through unsafe sex, violence, and discriminatory practices—and to build the assets of resilience, self-protection, and autonomy.

Near-term opportunities exist for the application of such indicators, for instance, within the International Health Partnership framework, through which donors negotiate support for national health plans in several low-income countries. Using adolescent girl-specific health indicators within the IHP+ assessments would be a direct way for national governments and their donor partners to demonstrate aligned interests in improved health for this population. In addition, performance targets on better serving adolescent girls could be integrated with relative ease into the new performance-incentive programs being supported by the World Bank Trust Fund on Results-based Financing. Moreover, during the next several years efforts will be made to develop the post-MDG development indicators. During that process, attention should be given to identifying appropriate adolescent-related indicators and targets, and establishing the baseline measurements.

- Integrate content on adolescent girls into health worker training. As health-system strengthening and human resource development activities take hold, it is likely that new resources will be made available for pre-service and in-service training of health care workers at all levels. Major efforts will likely be made to develop and deploy curricula. This represents an opportunity to ensure that up-to-date knowledge is made available about what girls need and how it should be offered to be most effective.
- Consider girls' needs in financing and payment strategies. A wide range of financing approaches are used in low- and middle-income countries, many intended to protect poor families from the risks of excessive dependence on out-of-pocket spending and/or to reduce barriers to access. These include, for instance, various forms of community-based insurance and other risk-pooling through microfinance organizations, as well as new means of paying health care workers and/or transferring funds to low-income families or individuals to enable them to access quality services.

As new financing mechanisms are introduced and evaluated, policymakers should consider the potential effects on adolescent girls' health service access. This may impact, for example, the eligibility of different family members for coverage under an insurance program—are all children up to 18 years covered? In provider payment arrangements, are services that are most important for girls—for example, counseling on

sexual negotiation—paid for at a level commensurate with their value? Are user fees removed when they are an apparent barrier to use of key services by girls—or younger children and older women—who may not have access to financial resources? In demand-side incentive programs, are incentives provided for behaviors that benefit adolescent girls? Are there opportunities for vouchers to be used for selected services that are of particular importance to girls?

Keep an eye on girls in monitoring and evaluation and plug evidence gaps

Systematically, national and sub-national data on health conditions and service use, and its analysis, should be disaggregated by age (10–14, 15–19, 20–24), sex, and marital status—filling a gap that currently exists.³ In addition, the WHO should be resourced to develop estimates of burden of disease for girls and boys; to better describe the health challenges for them, including long-term risks for chronic disease; and to ensure that this information informs funding and policy decisions. Similarly, there are opportunities to conduct national adolescent surveys and/or add content within Demographic and Health Surveys to measure key data including rural/urban, married/unmarried, schooling status, and class of individual girls.

The need to build a body of programming evidence is large. Research, especially operational research, is needed to better understand how to tackle the causes and consequences of girls' ill health, using qualitative and quantitative methods to determine how to scale up small, community-based approaches and/or mobilize multiple sectors toward shared objectives. Efforts to evaluate programs and facilitate communication to decision-makers are needed so that results influence resource allocation and programming decisions.

Policy-relevant insights could be gleaned from independent assessments of how responsive major global health initiatives such as the President's Emergency Plan for AIDS Relief; the Global Fund to Fight AIDS, TB and Malaria; the GAVI Alliance; the Global Alliance for Improved Nutrition; the World Bank's health operations; and other donor activities are to adolescent girls.

Combined, these actions within the health sector would yield high-impact changes with benefits both for girls and for the broader community of those who need health services. But they are not enough.

Accelerating success through other sectors

The broader and deeper challenge of addressing the social determinants of girls' health demands an extraordinary effort to change the social environments that confer serious risks through unsafe sex, violence, and discriminatory practices—and to build the assets of resilience, self-protection, and autonomy. This effort, which will bear fruit over the long term and for many generations, is built of specific actions tailored for local settings, and the unique and varied needs of subgroups of adolescents. Each of these areas of work—changing social norms, creating community resources for girls, and getting “more health” out of investments in other sectors—is vital.

Stimulate changes in social norms

Changing social norms is a concept that must be made concrete in localized ways; there is great potential to take action to change persistent social norms that harm girls, including the following:

- *Offer community education and mobilization to reduce child marriage and female genital cutting in countries with high prevalence of these risky practices.* Programming includes support to communities to learn about human rights and share knowledge to mobilize neighbors, friends, and family members to make informed decisions about abandoning harmful traditional practices.
- *Engage boys and young men through programs to overcome gender inequalities in health and to reduce gender-based violence and HIV/AIDS.*
- *Use media and education to promote physical activity and improve diets in countries where the prevalence of overweight among poor people is high and/or rapidly growing.*
- *Introduce media-based “enter-education/edutainment” programming on sexual and reproductive health, gender-based violence, and other relevant health challenges, to reach both girls and their social networks.*
- *Create or expand smoking reduction and prevention campaigns, including through taxation, clean*

³ For instance, among the three largest funders of HIV/AIDS programs in Africa—the Global Fund to Fight AIDS, TB and Malaria, the U.S. President's Emergency Plan for AIDS Relief, and the World Bank's Multicountry AIDS Programs—only PEPFAR collects gender-disaggregated data on beneficiaries (Ashburn et al. 2009).

BOX 5.1

Tracking global spending on adolescent girls' health

At present, it is impossible to estimate how much international aid supports adolescent girls' health. However, current innovations in global tracking of donor expenditures and government national health accounts (NHAs) provide an opportunity to improve tracking of health resource flows to adolescent girls.

Donor expenditure tracking emphasizes aggregate aid flows to countries and sectors, rather than flows to beneficiary groups. We can assume that aid to some sectors, such as sexual and reproductive health, flows primarily to girls and women of childbearing ages, but in other sectors global aggregate aid flows to demographic groups are not available. Donor disaggregation and reporting of project data is inconsistent, contingent on the quality of monitoring and evaluation that may vary by project, and typically found in project documents rather than collected systematically in centralized databases.

Launched in 2008 and still in its formative stages, the International Aid Transparency Initiative (IATI) has drawn on aid tracking mechanisms such as the Organisation for Economic Cooperation and Development–Development Assistance Committee (OECD-DAC), with the goal of making information about aid expenditures more accessible and assisting donors to improve tracking of aid use and impact. IATI provides a forum for donors, developing-country governments, and civil society organizations to agree on common information standards for all aid flows. Inclusion of sex- and age-disaggregated beneficiary data is currently not part of IATI's standardized reporting and definitions for sharing information.⁶

NHAs are used by more than 100 governments to classify and track all health expenditures in the country, with the intent of assisting policymakers to understand their health systems and improve health-system performance. Subaccounts are used to disaggregate national health expenditure information by specific health issues, which countries select based on policy priorities within a standardized framework. Because adolescent girls are rarely on countries' priority policy agendas, NHA expenditure by age and sex is not consistently reported even in the many cases where data is available from surveys and other data-collection mechanisms.⁷

Programs such as the USAID-funded 20/20 Program work with health ministries to improve NHA data collection and reporting. Rwanda used the reproductive health subaccount to identify that reproductive health accounted for only 6% of total health expenditures, which health planners later used to advocate for the selection of family planning/reproductive health as one of the four national health priority areas.⁸ In Yemen, the Yemen Partners for Health Reform used sex- and age-disaggregated indicators and geographic information system (GIS)-informed social mapping to identify underserved populations for family planning services in rural governorates and gaps in service allocation. This improved equity and efficiency in the targeting, accessibility, and allocation of family planning services to girls and women of childbearing age.⁹

Donors, governments, and civil society organizations have an opportunity to work together to improve the tracking, reporting, and analysis of aid flows to adolescent girls' health in several ways:

- Developing standardized sex- and age-responsive indicators with agreed-upon age brackets, and updating monitoring and evaluation plans accordingly
- Implementing performance standards for those collecting and reporting data
- Aggregating annual project spending and disaggregating spending by beneficiary subgroups
- Joining initiatives such as IATI and/or advocating for sex and age reporting standards
- Using social mapping and GIS tools to identify to whom and from where expenditures flow, and analyzing gaps in sector spending to areas and groups to encourage efficiency and equity
- Strengthening women's ministries' and civil society organizations' capacity to advocate for adolescent girls' health in priority policy objectives for NHA subaccounts and their abilities to institute and support electronic tracking and reporting mechanisms
- Using reported data on global and national spending on adolescent girls' health to contribute to analyses of spending on girls

indoor air law enforcement, bans on tobacco advertising, and school- and media-based education.⁴

Create health-promoting community resources for girls and their families

For both health and other reasons, girls who are out of school need institutions other than their families, broadly defined, to rely upon for information and companionship. “Safe spaces” for out-of-school girls can strengthen health knowledge, life skills, and create catch-up schooling opportunities, as well as expand social networks and referrals to health services.

Roughly one in three girls ages 10 to 19 is currently out of school or at risk of not transitioning to secondary school.⁵ In effect, in many places, safe spaces function as a second-chance program for these girls, imparting skills for the long term.

The “safe spaces” approach aims to develop mentorship and leadership skills in 30% of these girls within a community with one year of enrolment. The vision is that these participating girls then go on to create their own safe space clubs, reaching out to the remaining girls. The program covers monitoring and evaluation, training, community work, mentor stipends, and professional development for enrolled girls. The interventions build friendship networks for girls, which build confidence and leadership skills to ensure girls’ places in their communities, to educate and support them as decision-makers in control of their choices, and to create a friendly and safe environment.

Generate greater health benefits from investments in education and other sectors

Girls’ school experience—how early, how long, how safe—is a key driver of girls’ health, as well as that of her future family. While the main job of the education sector is to expand and improve educational opportunities, there are ways in which that can be done that have particularly high returns for adolescent girls’ health.

- *Invest in post-primary schooling:* Studies consistently find that fertility behavior and child health impacts of maternal education are observed only after girls have had at least some post-primary schooling. Schools must be safe for girls, and offer them quality education.

- *Provide school-based sexuality, gender, and human rights education:* Evidence shows that

adolescents who believe in gender equity have better health outcomes than their peers who do not. Education needs to go beyond the limitations of current school-based approaches to implement interactive, learner-centered education that teaches adolescents to think critically, make and act on responsible decisions, and exercise their rights. Critical measures are also needed to reach out-of-school girls with comprehensive sexuality education.

Beyond education, opportunities exist in other sectors for actions that specifically promote the health of girls, including the following:

- *Produce and promote innovative, alternative indoor stoves and lamps* to prevent the indoor air pollution and burns that disproportionately affect girls.
- *Improve water and sanitation access and safety* in communities, homes, and schools, including by forging partnerships between health and water and sanitation sectors and ensuring that women and girls participate in program design.

The bottom line: costs and benefits

Estimating the costs of investing in girls’ health in developing countries is a task fraught with challenges. First, the specific types of programs that would be most beneficial differ from place to place and over time, as do the costs of implementing them. Second, the cost information available is from a very limited number of experiences—sometimes only one—and so generalization requires heroic assumptions. Third, the numbers of girls who should or could be served by new health, education, and other programs are open to debate. Fourth, costs vary across segments of the population; reaching the poorest and most marginalized girls, which is likely to be costly relative to reaching better-off segments of the population, is crucial to the success of a comprehensive approach. Finally, without information about what is currently spent—and there is no source of such information—it is impossible to know how much funding would be additional (although it’s reasonable to guess that much of it would have to be) (see Box 5.1).

⁴ A comprehensive smoking reduction program will include excise tax on tobacco products at 600% of supply price.

⁵ UNESCO estimates of the current percentage of girls not in secondary school in each country (based on latest available national surveys).

⁶ <http://www.aidinfo.org> (Accessed July 14, 2009)

⁷ <http://www.healthsystems2020.org/> (Accessed July 14, 2009)

⁸ USAID 20/20. Directing Attention to Specific Health Issues: Rwanda Reproductive Health Subaccount

⁹ Yemen Partners for Health Reform. Powerpoint by Abdul Jabbar Ali Al Ghaithi, MD and Mark Landry, Nov. 2007.

FIGURE 5.1

Estimated average annual financial requirements (millions US\$2009) of a comprehensive priority intervention package for adolescent girls (2010-2015)

Intervention	Coverage	Countries Included	Number Girls Covered	Annual Cost Per Girl	Africa	Americas	Eastern Med	Europe	South-east Asia	Western Pacific	Global	India and China
Youth-friendly health services	Girls (10-19) living on less than \$2 per day	LMI + LI	149,162	\$8.50	133	14	40	6	52	19	264	227
		LI Only	83,612		93	1	7	5	30	11	148	
Iron supplementation	Girls (10-19) at risk of anemia	LMI + LI	131,437	\$2.00	122	23	54	8	48	19	273	178
		LI Only	63,787		82	2	10	4	26	9	133	
HPV vaccination	Girls (Age 11)	LMI + LI	143,124	\$17.50*	208	115	158	17	99	62	659	591
		LI Only	37,414		135	2	16	7	45	21	227	
Reducing harmful traditional practices	Girls (10-12) at risk of FGC/ (10-19) for child marriage	LMI + LI	70,880	\$80.85	603	26	137	0	273	0	1,039	897
		LI Only	43,876		420	6	12	0	46	0	483	
Male engagement	Males (15-24) living on less than \$2 per day	LMI + LI	149,162	\$113.25	1,596	184	526	92	711	270	3,379	3,282
		LI Only	83,612		1,101	19	90	77	413	154	1,854	
Obesity reduction	Girls (10-19) in high prevalence countries	LMI + LI	115,451	\$0.11	2	3	2	1	4	1	13	27
		LI Only	26,037		1	0	0.3	0.4	0.5	0	2	
Edutainment programs	Girls and boys (10-19) living on less than \$2 per day	LMI + LI	149,162	\$0.57	24	8	14	2	12	6	67	53
		LI Only	48,700		17	0.3	2	1	6	3	29	
Safe spaces	30% of girls (10-19) out of school	LMI + LI	42,379	\$130.51	557	26	267	6	193	56	1,106	800
		LI Only	23,993		388	1	58	2	132	45	626	
Comprehensive sexuality education	Girls (10-19) in school	LMI + LI	136,836	\$6.02	37	38	31	11	33	20	171	134
		LI Only	40,238		25	1	1	5	10	8	50	
Total annual intervention package		LMI + LI		\$359.31	3,282	435	1,231	144	1,427	453	6,971	6,189
		LI Only			2,261	33	197	103	709	251	3,553	

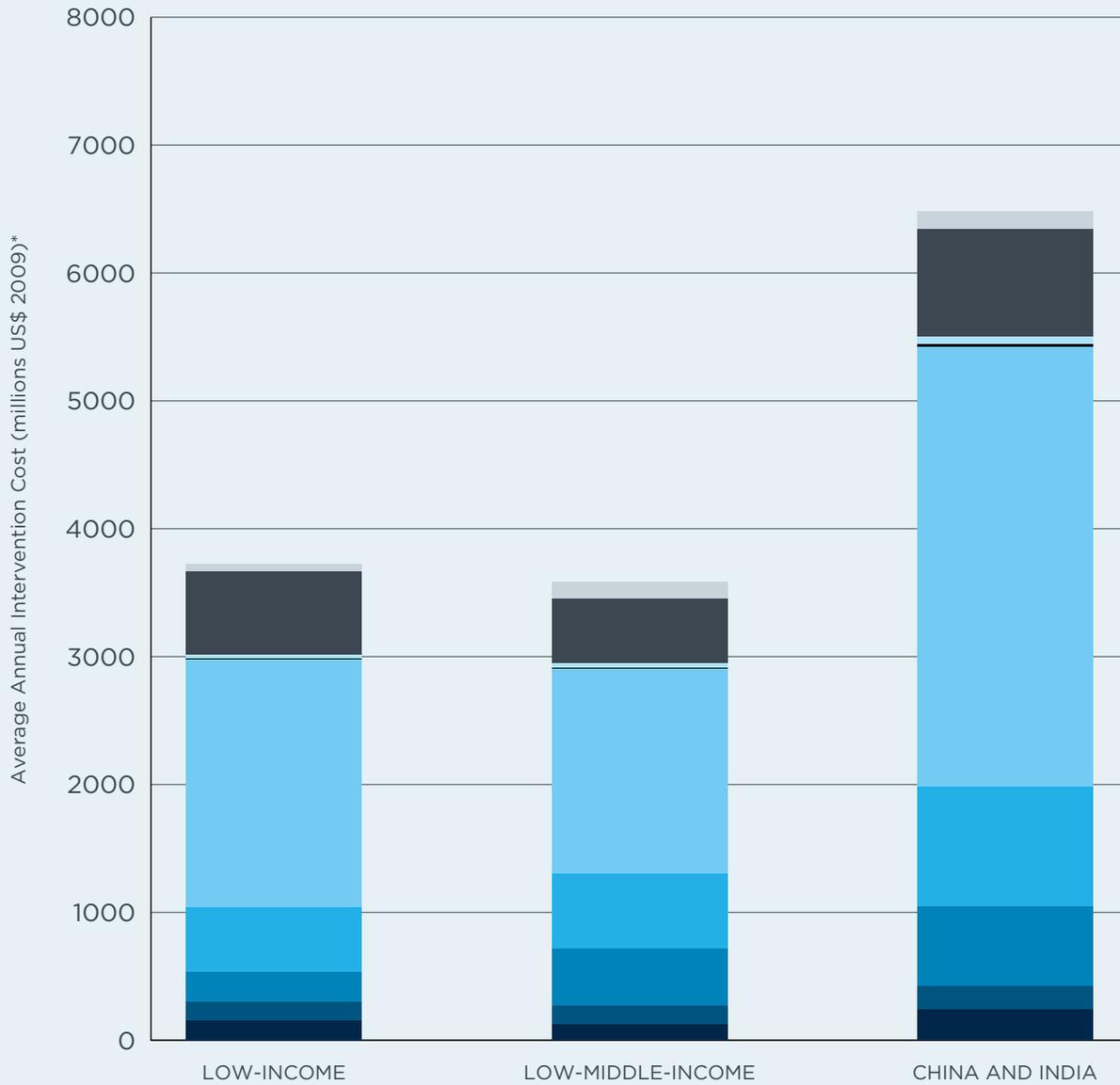
Costs for interventions in both low- and low-middle-income countries (LMI+LI) are presented on the first row for each intervention, and costs for the intervention in low-income countries only (LI only) are presented in the second row. Average annual program costs for China and India are presented separately and not included in the total global estimates.

Priority interventions also include smoking reduction and prevention campaigns, but these costs are not included in the estimate because the revenue received from taxation will exceed the cost to implement and will cover the total intervention costs.

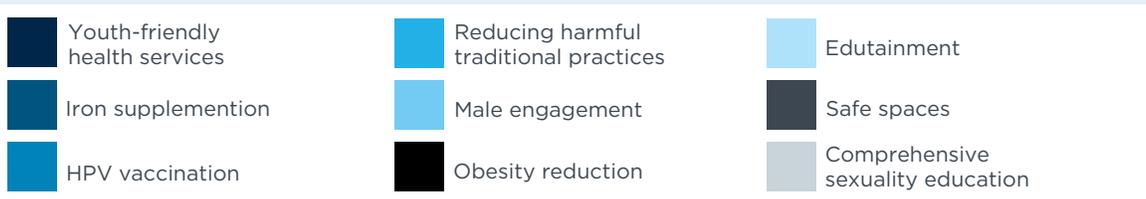
*Unlike the other costs in this table that are based on program example, this price per girl is based on hypothetical assumptions of what the cost per girl may be only in countries eligible for internationally subsidized vaccine prices; \$35 per vaccinated girl is assumed hypothetically for countries that are not eligible for subsidized prices.

FIGURE 5.2

Estimated annual costs of priority interventions by region



*Average annual program costs for China and India are not included in the total global estimates.



Source:
Ebbeler 2009

MUSIMBI KANYORO

“Hundreds of thousands of girls can be saved by fully financing programs that break through the silence that marginalizes them and provide them with the tools, knowledge, and social support to make wise choices, manage their own sexual and reproductive health, and liberate themselves from traditional practices that harm their health and wellbeing.”

Using data from a limited set of program experiences, we estimated average annual costs to serve girls who will be in the 10- to 19-year-old age range in low- and low-middle-income countries during 2010–2015. The estimated average annual cost of the full set of priority interventions for adolescent girls is about \$359.31 per girl—around \$1 a day.¹⁰ For some interventions, the aspired coverage is the entire population of girls (and sometimes girls and boys) in that age range; for others it is girls at particularly high risk or who face barriers to access because of poverty or other factors. Using these coverage targets, the estimated maximum total cost for low- and low-middle-income countries, excluding India and China, is \$6.97 billion; for low-income countries it is \$3.55 billion;¹¹ and for India and China alone it is \$6.19 billion (Ebbeler 2009).¹² These figures include the full set of priority interventions, which not all countries will need. The programs and the coverage targets are shown in Figure 5.1.

Knowing what the cost might be does not tell us much about the call on national government, private, and/or donor resources. One way to estimate in a rough way is to look only at the projected costs in low-income countries (under U.S. \$1,000 per-capita GDP) and assume that 70% of those would be borne by donors. In that case, the resource “ask” of the international community is \$2.49 billion per year, once programs are operating at full scale. This global priority intervention package is approximately 2% of the \$125.2 billion official development assistance commitments of 2007 (Kates et al. 2009).

The real bottom line is not the costs but the net costs (or net present value), accounting for the benefits of making the investment within and outside of the health sector. For obvious reasons, estimating the aggregate benefits of improved girls’ health—and then the net present value of these investments—is challenging in the extreme. One analysis attempted to examine the benefits of spending on a limited set of adolescent health interventions—iron supplementation for secondary schoolchildren, school-based health education to prevent HIV/AIDS, and a tobacco tax—in terms of improvements in productivity, reductions in health spending over the long term, improved nutritional status, averted teen pregnancy, and a range of other expected outcomes (Knowles and Behrman 2003). They concluded that all the interventions yielded

greater benefits, in monetary terms, than incurred costs; the iron supplementation was particularly cost-beneficial, estimated to yield benefits more than 25 times greater than the costs of the program.

Looking across the whole set of interventions used for the present costing exercise, an estimate of benefits, in monetary terms, would require extraordinarily strong assumptions about the program impact and its economic value. However, in broad strokes, it is reasonable to expect that a scaled-up set of programs to address girls' health would yield several benefits:

- Major reductions in adolescent childbearing and modest reductions in overall fertility rates
- Important reductions in maternal mortality
- Reductions in HIV incidence
- Significant reductions in infant mortality
- Major declines in cervical cancer
- Declines in the eventual burden of chronic disease
- Increases in women's education and labor market productivity

Who can take the next step?

Big changes for girls' health require big actions by national governments supported by bilateral and multilateral donor partners; international NGOs and technical agencies such as the WHO; civil society, including advocacy and community-based NGOs; and committed leaders in the private sector.

- Across the board, girls' health should be an explicit priority for action within and outside of the health sector. *Governments in low- and middle-income countries* should systematically include adolescent girls' health as a development target and track progress by reporting on girls' health indicators. To bring about meaningful improvements in their health, girls need their governments to develop and enforce laws on child marriage and violence against girls and women, commit to scaling up youth-friendly health services, and invest in education beyond primary schooling. Only when governments make adolescent

girls' health a priority will the benefits of international contributions be sustained.

- *Ministers of health* have a particularly important role to play in bringing to prominence the importance of girls' health as part of a strategy to achieve a full range of health improvements, from birth through adulthood. A vehicle for doing this might be the preparation of a ministerial report on the state of adolescent girls' health and a roadmap, with specific government commitments, for improving service delivery to young people. Ministers of health can demonstrate leadership by pioneering the integration of girls' health within basic public health services and by recognizing the contributions in this area by non-governmental actors.

- *Donors and technical agencies* are in a position to support these changes in ways that complement and reinforce existing commitments to HIV/AIDS, maternal and child health, and sexual and reproductive health. To make them real, donors and technical agencies also must state that adolescent girls' health is a priority, and include targets and indicators on adolescent girls' health as a measure of development progress. Donors should support expanded youth-friendly health services and quality post-primary educational opportunities with additional long-term, predictable funding; they should also invest in research, evaluation, and knowledge-sharing through the WHO, UNFPA, and other UN agencies on program effectiveness. A key objective should be to dramatically increase the focus on prevention for girls in HIV/AIDS programs. As the agenda for health-system strengthening becomes more defined, particularly by the World Bank, the GAVI Alliance, and the Global Fund to Fight AIDS, TB, and Malaria, progress should be measured against increases in responsiveness to the needs of adolescent girls.

- *Civil society, including advocacy and community-based NGOs and the business community*, has a critical role to play. As well as being advocates for the agenda outlined here, NGOs will be important implementers of many of the promising approaches girls need outside of the health sector, especially those reshaping social norms. Every day, civil society organizations take on sensitive topics to benefit girls' health, showing that it can be done; ideally this can stimulate governments' involvement in scaling up. NGOs should give greater attention to measuring

¹⁰ All costs are in constant U.S. 2009 dollars and include a variety of costs, such as capital and recurrent, administrative and personnel, monitoring and evaluation, training, and service delivery. Where unit costs are based on pilot programs with high capital costs, estimates may be overestimated as there will be a marginal decrease in per-unit costs as a pilot program is scaled up. Given limitations, rough cost estimates are solely for estimating "order of magnitude" financial requirements, not to evaluate cost-effectiveness or existing funding gaps.

¹¹ Using World Bank designations as of July 2009.

¹² The methodology and results of the study, "Financial Requirements for Global Investments in Priority Health Interventions for Adolescent Girls (Ebbeler 2009)," can be found at <http://www.cgdev.org/content/publications/detail/1422676>.

the effectiveness of these programs, as well as using emerging evidence to make the right decisions when it comes to program planning. Business leaders should play their part for adolescent girls by negotiating favorable prices on existing and new HPV vaccines, supporting innovations (and evaluations) in health care delivery for adolescent girls, and exploring the potential for novel financing approaches that combine public and private resources.

- *Adolescent girls* can be their own champions with the support of their families and the stakeholders listed above. Empowered, educated, healthy girls who speak up for their own rights and those of their sisters are the most powerful advocates for genuine, sustained change.

Start here: priority actions for change, now

The agenda presented above is ambitious, and for some of the elements, the responsibility is diffused across organizations. To make concrete progress in the near term, eight actions can be taken by specific individuals or groups:

1 Implement the health agenda for adolescent girls in at least three countries. Working with countries that demonstrate active national leadership on adolescent girls' health, bilateral donors, the World Bank, the World Health Organization, UNFPA, and UNICEF can support a comprehensive effort to introduce and/or expand the full agenda: girl-focused interventions (including girl-friendly reproductive health services), broader health-sector changes, programs to change social norms, community resources for girls and families, and girls' schooling. Accompanied by operational and evaluation research, and funded by a combination of domestic and international resources, the aim would be to achieve full program coverage among the poorest segments of the population by 2016.

2 Eliminate marriage for girls under 18. In about a dozen countries, at least half of all girls are married as children (less than 18 years old). This is both a manifestation of their powerlessness and a strong driver of health risks, from early childbearing to maternal mortality to HIV to domestic violence.

Child marriage should be identified by international agencies as a human rights violation and a barrier to achieving development goals. Internationally, advocacy and diplomatic efforts by thought leaders such as the members of the Elders can raise the visibility of the issue. Political and civil society leaders and advocates at the national level can pass and effectively enforce laws to prevent child marriage. Donor agencies should support government responses—for example with improvements in marriage registration systems and incentive schemes to keep daughters in school. They also should fund programs that mobilize communities and create viable alternatives to marriage, including general education and comprehensive sexuality education both within schools and in communities, and prepare girls to enter the labor market.

3 Place adolescent girls at the center of international and national action and investment on maternal health. Advocacy at the international level and promising programmatic investments at the country level give new hope for better maternal health. Within both the advocacy efforts and the expansion of quality antenatal, delivery, and postpartum care, specific attention to girls will pay off. In particular, public and private donors should support research to better understand the risk factors for pregnant adolescents, and evaluations of programmatic approaches to reach girls facing high hurdles to health care at appropriate moments. They should ensure that findings inform effective strategies to address maternal mortality among adolescents that go well beyond quality labor and delivery to include access to family-planning counseling and methods, attention to girls' nutritional needs, and abortion-related care. Based on research and evaluation findings, funding for adolescent health programs should be made available within any new package of resources for maternal health.

4 Focus HIV prevention on adolescent girls. To turn off the tap of new infections and break the back of the HIV/AIDS epidemic, we must do more to focus HIV prevention efforts on girls and young women. As the Global Fund to Fight AIDS, TB and Malaria, the U.S. President's Emergency Plan for AIDS Relief, and other major international HIV/AIDS initiatives step up their HIV prevention efforts, they must keep adolescent girls in the forefront of their work and be held accountable for doing so. This means supporting

work to transform the harmful social norms that make girls vulnerable; ensuring that essential services and commodities are in place for girls—especially those excluded by their marital or residence status; educating girls about avoiding HIV/AIDS as part of sexuality, gender, and human rights education; and working with boys and men to change their behavior—for their own health and that of their partners.

5 Make health-system strengthening and monitoring work for girls. Strategies to strengthen health systems are unfolding, using resources from HIV/AIDS, immunization and other “vertical” sources, traditional bilateral and multilateral health sector monies, and new funding that may be mobilized as a result of the High Level Task Force on Innovative Financing for Health Systems. As this happens, an important measure of success must be the extent to which system strengthening addresses barriers to girls obtaining appropriate health services. If the system is failing girls, it’s failing. Those involved in designing and implementing changes in health systems should pay particular attention to improvements in service-delivery arrangements that make it easier for girls to get the reproductive health services and other care they need in their communities; better health worker training to increase competency on adolescent girls’ and boys’ health; and effective financing and payment strategies—potentially including “pay for performance”—that prioritize girls’ health outcomes.

6 Make secondary-school completion a priority for adolescent girls. Getting girls through secondary school is one of the most important actions governments can take to improve girls’ chances for good health, and to maximize the many family, community, and society-wide benefits that follow. Governments should extend the definition of the basic education to which all are entitled to go through lower secondary, or to age 16. Governments and the private sector, with support from the donor community, must increase the number of formal and non-formal school places; this can be done by extending primary-school facilities, offering targeted scholarships or household cash transfer schemes to disadvantaged girls,¹³ and offering open-learning programs to allow girls to continue to study at their own pace and in their own time.

7 Create an innovation fund for girls’ health. The evidence base on the causes and consequences of unhealthy behaviors and ill health among girls, and effective strategies to address girls’ health problems, is weak. Careful investment in data collection (e.g. through the Demographic and Health Surveys and longitudinal studies) and multi-country evaluations of promising programs is acutely needed. These include, among others, the 12-year-old check-in and programs that focus on changing attitudes and behaviors of boys and men. Philanthropic funders could play an important role, leveraging government and public donor resources, by creating an innovation fund that would stimulate and support this knowledge-generation and dissemination of the findings. A starting point would be to establish a research and evaluation agenda, setting out the priority areas of inquiry.

8 Increase donor support for adolescent girls’ health. Obtaining benefits from better health for girls requires significant—yet feasible—levels of investment by governments, donor partners, and the private sector. As the costing exercise commissioned for this report suggests, no valid estimate of the current spending on girls’ health is available. In the absence of a baseline, but with the knowledge that girls’ health programs constitute a small share of international donors’ current effort, OECD donors should collectively increase official development assistance in areas that benefit girls by at least \$1 billion per year. This constitutes approximately 6% of current spending on global health. In addition, non-traditional donors, including emerging donors in the Middle East, should identify girls’ health as an area of particular focus and commit a total of \$1 billion per year.

13 This reiterates the first item on “10 priority actions for educating adolescent girls” in *Girls Transformed: The Power of Education for Adolescent Girls* (Lloyd 2009).

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START WITH A GIRL ADVISORS

The following individuals served as Advisors for the *Global Health Agenda For Adolescent Girls*. Serving in a personal capacity and on a voluntary basis, they brought a wealth of experience and knowledge to inform this report and its recommendations, and helped to identify opportunities to catalyze action.

Sarah Brown

Sarah Brown is married to Prime Minister Gordon Brown of the United Kingdom. She is president of the children's charity PiggyBankKids, founded in 2002, which supports charitable projects creating opportunities for children and young people in the United Kingdom.

Brown sits on the advisory group to the International Board of the Royal College of Obstetricians and Gynecologists, which works to improve maternal healthcare in developing countries. In 2008, Sarah became Global Patron of the White Ribbon Alliance for safe motherhood, an international coalition of 3,500 organizations working to save the lives of mothers across the world. Sarah is also co-chair of the Maternal Mortality Leadership Group alongside Bience Gawanas, social affairs commissioner for the Africa Union.

Melinda French Gates

Melinda Gates is a co-chair and trustee of the Bill & Melinda Gates Foundation, where she shapes and approves foundation strategies, reviews results, and advocates for the foundation's issues. Gates meets with local, national, and international grantees and partners to further the foundation's goal of improving equity in the United States and around the world.

Since joining Microsoft Corp. in 1987 and distinguishing herself as a leader in the development of many of Microsoft's multimedia products, she has directed her energy toward the nonprofit world. In addition to her role with the foundation, she is a former member of the board of trustees of Duke University and is a

former co-chair of the Washington State Governor's Commission on Early Learning.

Helene D. Gayle

Helene D. Gayle, president and CEO of CARE USA, heads one of the premier international humanitarian organizations, with programs in more than 70 countries to end poverty. An internationally recognized expert on health, global development, and humanitarian issues, Gayle spent 20 years with the Centers for Disease Control, focused primarily on combating HIV/AIDS. Gayle then directed the HIV, TB, and reproductive health program at the Bill & Melinda Gates Foundation.

Named one of Newsweek's 10 "Women in Leadership" in October 2008 and the Wall Street Journal's "50 Women to Watch" in 2006, Dr. Gayle serves on several boards, including the Center for Strategic and International Studies, ONE, the American Museum of Natural History, the Institute of Medicine, and Johns Hopkins University. Gayle earned a BA in psychology at Barnard College, an MD from the University of Pennsylvania, and an MPH from Johns Hopkins University.

Ashley Judd

Celebrated actress and humanitarian Ashley Judd joined Population Services International (PSI) as a board member in 2004 after serving as global ambassador for PSI's HIV education and prevention program, YouthAIDS, since 2002.

As PSI Global Ambassador, Judd was the subject of three award-winning documentaries aired in more than 150 countries worldwide. Judd has addressed the General Assembly of the UN on the scourge of human trafficking, testified before the Senate Foreign Relations Committee for the protection of vulnerable women from violence, sexual abuse, and HIV, and most recently, at the Condé Nast World Savers Congress and as an expert panelist at the Clinton Global Initiative to discuss the issue of safe water and the

empowerment of girls in the developing world. She has also given the prestigious Blazer Lecture at the University of Kentucky. Judd is currently pursuing a master's degree in public administration at Harvard University.

Musimbi Kanyoro

Musimbi Kanyoro is the director of the population and reproductive health program for the David and Lucile Packard Foundation, which is dedicated to the integration of those services with critical global health, education, and other development issues. From 1998 to 2007, Kanyoro served as general secretary of the World YWCA, with an outreach to 25 million women and girls in 3,000 communities. During her tenure, Kanyoro led the organization to prioritize women's reproductive health, with a special focus on HIV and AIDS, and on young women and girls, and facilitated increased participation of young women and girls in decision-making.

Kanyoro is a recognized public speaker, writer, and trainer who has published articles, chapters, and books and received numerous awards internationally. She holds a BA from the University of Nairobi and an MA and PhD from the University of Texas, Austin. She was a visiting Scholar at Harvard University. Kanyoro currently serves on the boards of the African Population and Health Research Centre, Realizing Rights, the Ethical Globalization Initiative, and the Legacy Foundation. Most recently, she was board chair of the International Service for Human Rights, Isis-Women's International Cross Cultural Exchange, and the World Association of Christian Communication.

Liya Kebede

Liya Kebede is an internationally recognized super-model, actress, designer, maternal health advocate, and mother. She is the founder of the Liya Kebede Foundation, a goodwill ambassador for the World Health Organization's maternal, newborn, and child health program, and an advisory board member for the Mothers Day Every Day campaign. As a WHO ambassador, she has been a vocal advocate for health, empowerment, and development causes impacting women.

As a leading model, Liya has been featured multiple times on the cover of American Vogue, including as one of the leading faces of "the Return of the Super Model" issue and with the heading "Cover Model With a Cause." Kebede gained widespread attention

in 2005 when she became the first model of color to represent Estée Lauder. In 2007, she launched a line of women and children's clothing called Lemlem ("to bloom" in Amharic), which supports Ethiopia's local weaving traditions. Liya has also appeared in several films including *The Good Shepherd*, *Lord of War*, and *Desert Flower*, an adaptation of Somali model Waris Dirie's autobiography chronicling her experience of female circumcision.

Sir Michael Marmot

Professor Sir Michael Marmot is director of the International Institute for Society and Health and research professor of epidemiology and public health at the University College, London. Marmot has led a research group on health inequalities for the past 30 years. He is principal investigator of the Whitehall Studies of British civil servants, leads the English Longitudinal Study of Ageing, and is engaged in several international research efforts on the social determinants of health. He chairs the Department of Health Scientific Reference Group on tackling health inequalities. He was a member of the Royal Commission on Environmental Pollution for six years, and is an honorary fellow of the British Academy.

In 2000, he was knighted by Her Majesty the Queen for services to epidemiology and understanding health inequalities. Internationally acclaimed, Marmot is a vice president of the Academia Europaea, a Foreign Associate Member of the Institute of Medicine, and the chair of the Commission on Social Determinants of Health set up by the World Health Organization. He won the Balzan Prize for Epidemiology in 2004, gave the Harveian Oration in 2006, and won the William B. Graham Prize for Health Services Research in 2008.

Thoraya Obaid

Thoraya Ahmed Obaid is the executive director of the United Nations Population Fund (UNFPA), with the rank of Under-Secretary-General of the United Nations. She is the first Saudi Arabian to head a United Nations agency, and the first Saudi Arabian woman to receive a government scholarship to attend university in the United States. Through several senior positions at the Economic and Social Commission for Western Asia and the UNFPA, Obaid has cooperated with governments to establish programs to empower women and develop their civil capacities and rights.

ADVISORS

Obaid's other contributions to development involve establishing the first women's development program in western Asia, chairing the United Nations Inter-Agency Task Force on Gender in Amman, Jordan, and serving as a member of the United Nations Inter-Agency Gender Mission to Afghanistan and the League of Arab States Working Group for Formulating the Arab Strategy for Social Development. Obaid has a doctorate degree in English literature and cultural anthropology from Wayne State University in Detroit, Michigan. She is a member of the Middle East Studies Association and Al-Nahdha Women's Philanthropic Association, a Saudi NGO. She has received many awards and honors.

Joy Phumaphi

Joy Phumaphi is vice president of the World Bank's Human Development Network in Washington, D.C. She chairs the Geneva-based Partnership for Maternal, Newborn, and Child Health and, in addition, sits on the advisory panel for the Bill & Melinda Gates Global Health Program. Before joining the Bank in February 2007, Phumaphi served as assistant director general for Family and Community Health at the World Health Organization (WHO) in Geneva, and represented the World Health Organization on the Board of the Global Alliance for Vaccines and Immunizations (GAVI).

From 1994–2003, Phumaphi served variously as a member of Parliament, a Cabinet Minister with responsibility for lands and housing—in the course of which she developed Botswana's first national housing policy—and Minister for Health. During her tenure as Minister, Phumaphi restructured the health ministry to make it more focused on results and on implementing HIV/AIDS prevention, care, and treatment services. Phumaphi holds a Master of Science degree in financial accounting and decision sciences from Miami University, Ohio.

Mary Robinson

Mary Robinson is the president of Realizing Rights: The Ethical Globalization Initiative. She served as United Nations High Commissioner for Human Rights from 1997 to 2002 and as President of Ireland from 1990–1997. She is a member of the Elders. She is chair of the Council of Women World Leaders and vice president of the Club of Madrid. She chairs the

International Board of the International Institute for Environment and Development (IIED) and the Fund for Global Human Rights. She is chair of the GAVI Fund Executive Committee and vice-chair of the GAVI Fund Board. She is honorary president of Oxfam International and patron of the International Community of Women Living with AIDS (ICW). She is a professor of practice at Columbia University, member of the Advisory Board of the Earth Institute, and extraordinary professor at the University of Pretoria in South Africa. She serves as chancellor of Dublin University.

Muhammad Yunus

Professor Muhammad Yunus is founder and managing director of Grameen Bank, which was informally launched in 1976. Grameen methods are applied in projects in nearly all countries of the world, including the United States, Canada, France, the Netherlands, and Norway. Yunus previously was a professor of economics in a Bangladeshi University where he developed the concept of microcredit.

In 2006, Yunus and the Bank were jointly awarded the Nobel Peace Prize, "for their efforts to create economic and social development from below." Yunus has received extensive honorary degrees and national and international honors, including the United States Presidential Medal of Freedom. In addition to many roles and memberships that he holds, he is the author of *Banker to the Poor* and *Creating a World Without Poverty*.

START WITH A GIRL ABOUT THE AUTHORS

Miriam Temin

Miriam Temin is a public health and social policy professional with 12 years of experience in Africa, the United States, and Europe working on HIV/AIDS, sexual and reproductive health, and social protection with donors, UN agencies, and non-profit organizations.

Previously, Temin was a senior AIDS policy advisor at UNICEF headquarters, where she brought greater attention to children affected by HIV and AIDS through research, advocacy, and technical assistance. Prior to that, at the UK's Department for International Development (DFID) in Zimbabwe and London, Temin was a health and HIV/AIDS advisor designing and overseeing programs on HIV/AIDS, sexual and reproductive health, and adolescent girls. In addition, she worked with the World Health Organization on gender-based violence and a number of NGOs on other sexual and reproductive health projects.

Temin has a master's degree in population and international health from Harvard University and is author and co-author of several reports and peer-reviewed publications including *Expanding Social Protection for Vulnerable Children and Families: Learning from an Institutional Perspective* (2008), *Caring for Children Orphaned by HIV/AIDS* (UNICEF Innocenti Research Centre 2006), *Poverty Reduction Strategy Papers: Do they matter for children and young people made vulnerable by HIV/AIDS?* (UNICEF and World Bank 2004), *Post-ICPD+5: Where Do We Go From Here?* (Reproductive Health Matters 1999), and *Perceptions of Sexual Behaviour and Knowledge About Sexually Transmitted Diseases Among Adolescents in Benin City, Nigeria* (International Family Planning Perspectives 1999).

Ruth Levine

Ruth Levine is a vice president of the Center for Global Development (CGD) and leads the Center's work on global health policy. She is a health economist with more than 15 years of experience designing and assessing the effects of social sector programs in Latin America, Eastern Africa, the Middle East, and South Asia.

Before joining CGD, Levine designed, supervised, and evaluated loans at the World Bank and the Inter-American Development Bank. Between 1997 and 1999 she served as the adviser on the social sectors in the office of the executive vice president of the Inter-American Development Bank.

Levine has a doctoral degree in economic demography from Johns Hopkins University and is the co-author of the books *Performance Incentives for Global Health: Potential and Pitfalls* (CGD 2009), *The Health of Women in Latin America and the Caribbean* (World Bank 2001), and *Millions Saved: Proven Successes in Global Health* (CGD 2004), which has been updated with a new edition as *Cases in Global Health: Millions Saved* (Jones and Bartlett 2007). She has also authored or co-authored several major reports, including *UNAIDS: Preparing for the Future* (CGD and GEG 2009), *Girls Count: A Global Investment and Action Agenda* (CGD, the Population Council, and ICRW 2008), *A Risky Business: Saving Money and Improving Global Health through Better Demand Forecasting* (CGD 2007), *When Will We Ever Learn: Improving Lives through Impact Evaluation* (CGD 2006), and *Making Markets for Vaccines: Ideas to Action* (CGD 2005).



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The Girls Count Series

The Girls Count series uses adolescent girl-specific data and analysis to drive meaningful action. Each work explores an uncharted dimension of adolescent girls' lives and sets out concrete tasks for the global community. Together, these actions can put 600 million adolescent girls in the developing world on a path of health, education, and economic power—for their own wellbeing and the prosperity of their families, communities, and nations.

The Girls Count series is an initiative of the Coalition for Adolescent Girls.
www.coalitionforadolescentgirls.org

Start With A Girl: A New Agenda for Global Health

In *Start with a Girl: A New Agenda for Global Health*, Miriam Temin and Ruth Levine describe the positive multiplier effect of including adolescent girls in global health programs and policies—and the risks if they continue to be left out.

“Protecting the health of adolescent girls is a human-rights priority. Whether by combating child marriage, facilitating access to quality health care, or eliminating harmful traditional practices, gains in adolescent girls' health permit the full realization of human potential.”

Mary Robinson

President of Realizing Rights: The Ethical Globalization Initiative and former President of Ireland

“Everyone has a role to play in fulfilling the promise of girls' futures. Much of what needs to be done challenges us: we need to work across sectors, in a sustained way over many years, tackling some of the most controversial topics. But to do less is to fail girls—and ourselves.”

Helene Gayle

President and CEO of CARE USA

“There are 600 million adolescent girls in developing countries and their health and wellbeing should be a top priority. If educated, healthy and empowered, they can build a better life for themselves, their families and nations. UNFPA is proud to be an active member of the UN Interagency Task Force on Adolescent Girls. I hope this report contributes to action to improve their health and unleash their full potential.”

Thoraya Ahmed Obaid

Executive Director of the United Nations Population Fund

“Prioritizing the health and prosperity of adolescent girls is fundamental to ensuring the health of future generations and to accelerating economic progress. To get there, we need to transform the health-care sector to reach girls specifically with services and to engage them as the next-generation health-care workforce.”

Muhammad Yunus

Founder and Managing Director of Grameen Bank