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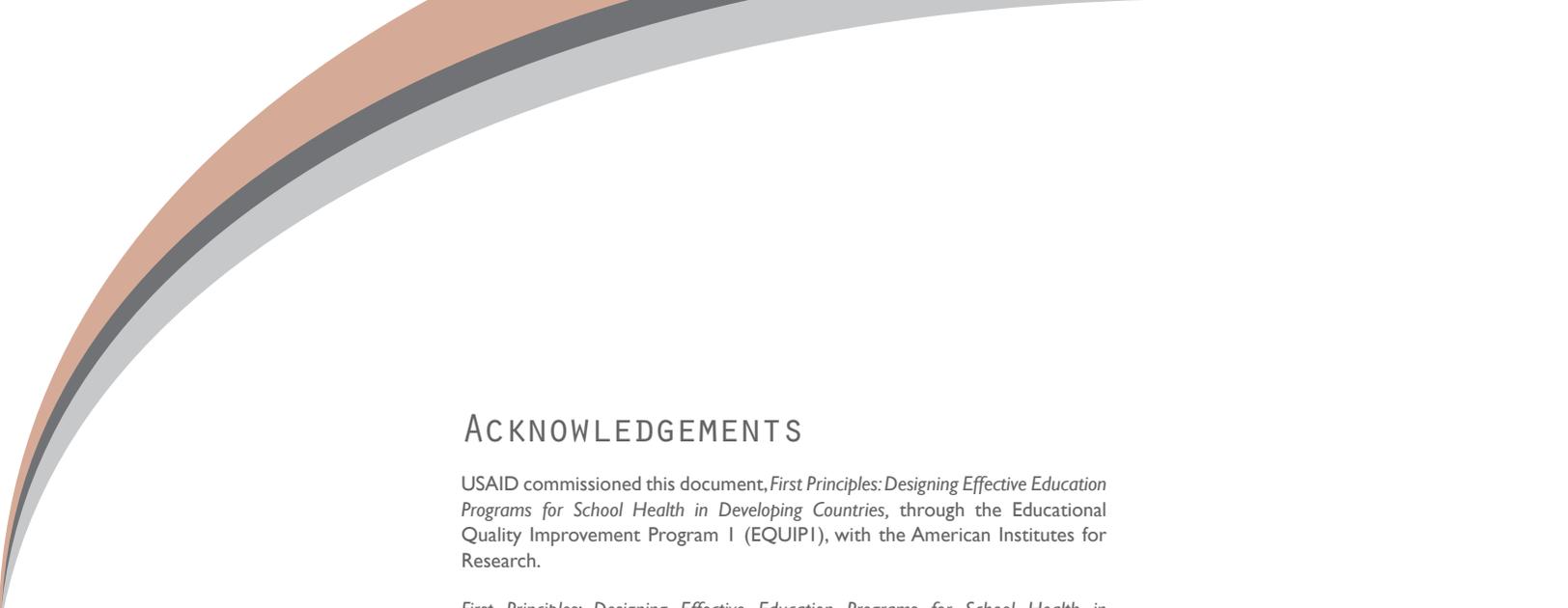
DESIGNING EFFECTIVE EDUCATION PROGRAMS FOR SCHOOL HEALTH IN DEVELOPING COUNTRIES

COMPENDIUM



Credit: Elise Gelin/AIR

This *First Principles: Designing Effective Education Programs for School Health in Developing Countries Compendium* provides an overview and guidance for designing and implementing programs that support and integrate school health and nutrition activities into education programs in developing countries. The principles, steps, and indicators are primarily meant to guide program designs, including the development of requests for and subsequent review of proposals, the implementation of program activities, and the development of performance management plans, evaluations, and research studies. The *First Principles* are intended to help USAID education officers specifically, as well as other stakeholders— including staff in donor agencies, government officials, and staff working for international and national non-governmental organizations— who desire to establish or strengthen school health programs, sometimes also called schools-based health promotion programs in order to provide holistic education for all. The guidance in this document is meant to be used and adapted for a variety of settings to help USAID officers, educators and implementers overcome the numerous challenges in supporting the health and learning of youth. The last section provides references for those who would like to learn more about issues and methods for the support of healthy learning environments.



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EQUIPI: Building Educational Quality through Classrooms, Schools, and Communities is a multi-faceted program designed to raise the quality of classroom teaching and the level of student learning by effecting school level changes. EQUIPI serves all levels of education, from early childhood development for school readiness, to primary and secondary education, adult basic education, pre-vocational training, and the provision of life-skills. Activities range from teacher support in course content and instructional practices, to principal support for teacher performance, and community involvement for school management and infrastructure, including in crisis and post-crisis environments.

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FOR WHOM IS THIS COMPENDIUM WRITTEN?

This compendium is intended for USAID education officers as a practical guide to support governments in developing countries that desire to establish or strengthen school health programs, sometimes also called schools-based health promotion programs. The most important factor for the success of robust school health programs in developing countries has been the creation of strong partnerships between ministries of education and ministries of health. Strong partnerships with other stakeholders, such as private sector partners, nongovernmental organizations (NGOs), and community-level stakeholders, are also extremely important.

This compendium is also written for education and health professionals in other bilateral and multilateral development agencies, ministry of education staff working in policy and programs, and private sector businesses looking for ways to support the health and learning of youth. It may also be useful to stakeholders as they advocate for resources for school health and nutrition programs in ministries of education, communities, or development agencies.

By addressing USAID education officers among the variety of partners who have made school health programs strong, this compendium acknowledges sectoral consensus on the importance of a strategy for school health that coordinates the resources of stakeholders that intersect at the school level (the Focusing Resources on Effective School Health [FRESH] Framework and the Health Promoting School Framework [HPS]). These strategies have been cited and adapted by most developing countries as they establish school health programs because the strategies lead to programs that capitalize on the strengths of all relevant partners to improve the health status and health knowledge of learners and to strengthen learning outcomes.¹

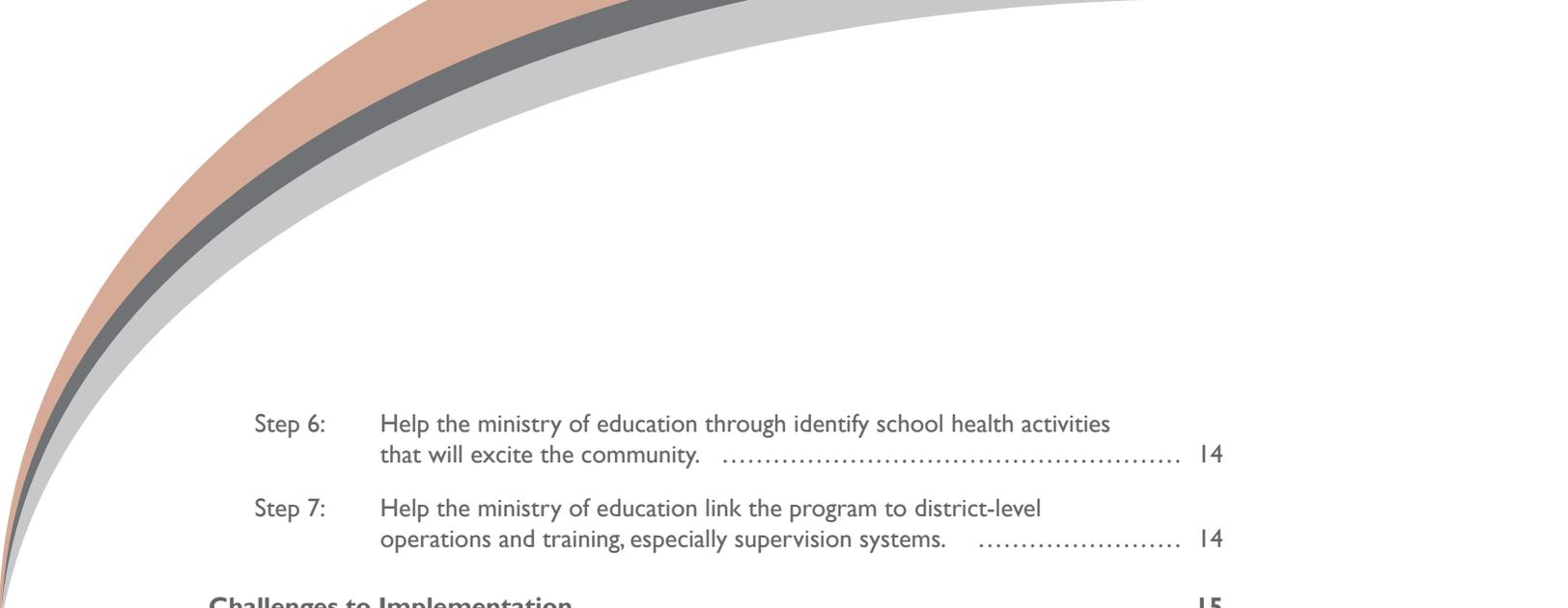
¹ See Focusing Resources for Effective School Health (FRESH) launched by UNESCO, UNICEF, WHO, and the World Bank in Dakar, April 2000, during the World Education Forum at http://www.unesco.org/education/efa/know_sharing/flagship_initiatives/fresh.shtml. See also the WHO Health Promoting School concept at http://www.who.int/school_youth_health/gshi/hps/en/index.html.

ACRONYMS

AIR	American Institutes for Research
CHANGES2	Community Health and Nutrition, Gender and Education Support 2 Program
CSO	Civil Society Organization
DANIDA	Danish International Development Agency
DfID	United Kingdom – Department for International Development
EFA	Education for All
EMIS	Education Management Information Systems
EQUIP	Education Quality Improvement Program
FRESH	Focusing Resources for Effective School Health
FTI	Fast Track Initiative
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HPS	Health Promoting School
IRB	Institutional Review Board
JICA	Japanese International Cooperation Agency
M&E	Monitoring and Evaluation
NGO	Non-governmental Organization
NORAD	Norwegian Agency for Development Cooperation
PEPFAR	President's Emergency Plan for AIDS Relief
SHN	School Health and Nutrition
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WASH	Water, Sanitation, and Hygiene Education
WHO	World Health Organization

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INTRODUCTION

What does “school health” mean?

School health first and foremost means school-based programs. Many approaches to health education warrant the support of development agencies, such as community health education, or health education targeted at a particular sector of the workforce. But in the field of education, school health programs almost universally refer to health-related education and interventions that are led by schools with communities and ministries of health as partners.

“School health” is sometimes used interchangeably with “school health and nutrition” (SHN). Including the word *nutrition* is intended to emphasize the important role of healthful nutrition for positive learning outcomes, as well as the importance of nutrition education to promote good health and learning capacity among students and their families. In this compendium, *school health* is used as shorthand for *school health and nutrition*.

Ministries of education invoke many reasons to justify investments in school health. Most important among these is that improving health is a documented way to improve education outcomes. The benefits that come from simple health interventions provide necessary building blocks for educational attainment, from improving the cognitive capacity and cumulative memory of students—necessary for learning to read—to attendance at school. In most of the developing world, health interventions that target children usually focus on children under 5 years of age and postpubescent adults of reproductive age. Seldom do programs in developing countries target the health of school-age children, making the school-going population one of the most underserved for health services or health education. This fact on its own often justifies or intensifies a government’s determination to design and implement school health programs. At the same time, one of the most efficient and cost-effective ways to reach the highest number of school-age children in any country with simple health interventions is through the existing and extensive infrastructure of schools and the public training system for teachers (Bundy, 2011; Disease Control Priorities Project, 2008).

Credit: Lesley Drake/Deworm the World



The lack of health services targeting school-age children in most developing countries comes at a particularly unfortunate time in the life of a child. Several conditions that are detrimental to the health and learning ability of children are often present together in the same environment, compounding their systemic negative impact on the education and health of children. Malnutrition resulting from inadequate food, poor diet, or parasitic infections is common in low-resource communities where access to safe water and sanitation is often lacking. These conditions may increase the likelihood of the transmission of soil-based helminthes and water-borne diseases. Parasitic helminthes infections have been shown to negatively affect the cognitive ability of children, thus compromising their potential to benefit from school. Although each of these problems related to water, sanitation, and nutrition has a negative impact on a child’s health and learning, taken in combination they can make learning at school and benefiting from school almost impossible. School-age children are also especially vulnerable to infectious diseases such as malaria, acute respiratory infections, and tuberculosis. Violence and substance abuse are other

Credit: Meredith McCormac/AIR



problems that often affect children's participation in education in developing countries and are cited as justification for school health programs. The immediate results of a childhood without adequate health education or health services are decreased participation at school and increased absenteeism. The long-term effect is a negative impact on the overall growth and development of children, which decreases learning potential and hinders prospects for them and their families for the future.

High HIV/AIDS prevalence is also common in many parts of the developing world, making HIV prevention and mitigation education another reason many ministries of education justify school health and health promotion programs. The prevalence of HIV/AIDS in school-age children is low, and these unaffected children are often called "The Window of Hope." Effective prevention education that reaches school-age children with information and skills before their sexual debut when they become especially vulnerable to HIV infection can enable

today's learners to remain free of HIV for the rest of their lives. The need for HIV education to help learners cope with the psychological and economic impacts of HIV and AIDS in their families and communities is also acute. Children affected by HIV and AIDS and the economic hardships and psychological stress resulting from the loss of family and community members also benefit greatly from SHN activities that reduce stigma and support HIV-affected children.

Limiting the definition of school health to school-led (or school-based) programs is thus done for several reasons: (1) it targets the health of school-age children, who often lack health services; (2) it uses the education infrastructure to maximize efficiency and cost-effectiveness in reaching school-age children; (3) it targets education and learning outcomes as the primary reason for investing in school health programs; (4) it targets interventions on problems that are particularly acute for the school-age population; and (5) it focuses energies on simple health-related interventions that teachers and community members can implement on their own, sometimes in collaboration with local health professionals. Examples of such activities may include, but are not limited to, the following:

- Promoting a safe and clean school environment, including constructing latrines for both boys and girls, constructing walls and fences, and developing protocols for managing violence at school
- Developing and posting school health policies, including statements opposing tobacco and drug use and encouraging intolerance of school violence, bullying, and/or gender-based violence
- Providing school snacks and/or school feeding
- Providing safe water and sanitation
- Offering water and sanitation and hygiene education (WASH)
- Offering HIV prevention education and HIV/AIDS mitigation activities
- Providing infectious disease prevention education, including for malaria, tuberculosis, chronic respiratory illness, influenza, and cholera

Credit: Kathryn Fleming/AIR

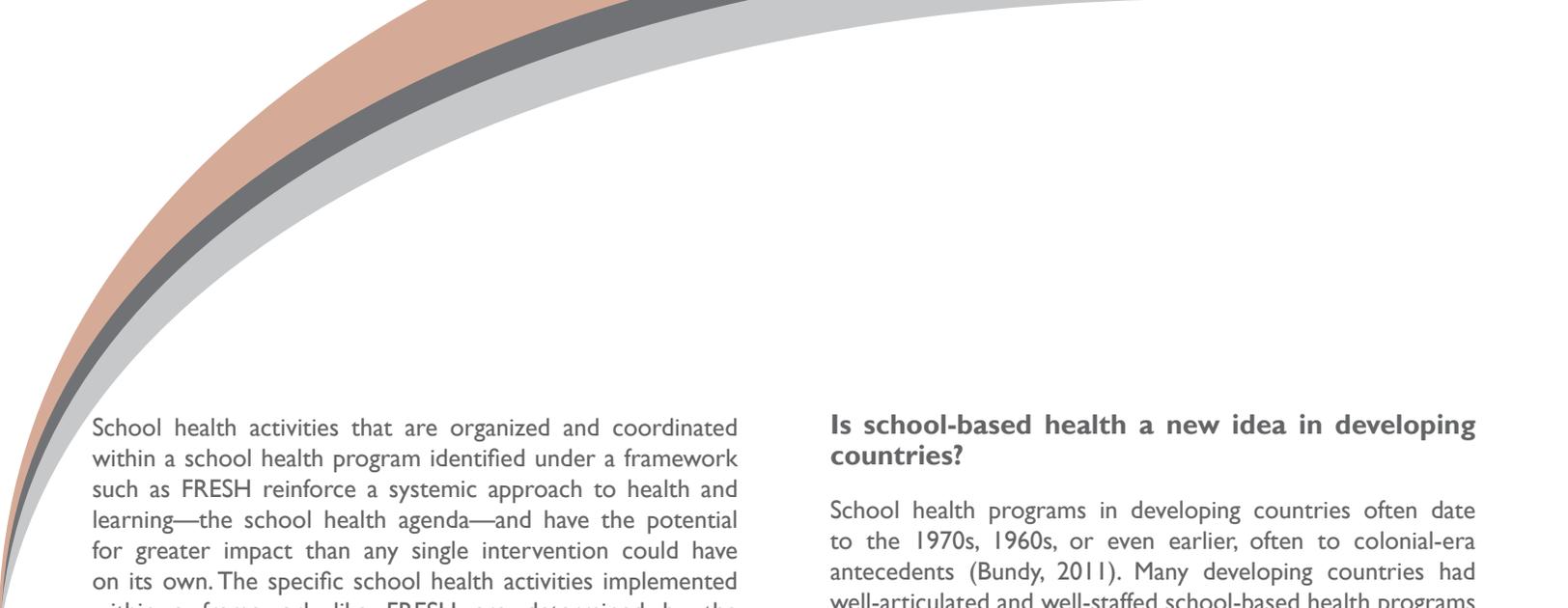


- Delivering deworming medicines and micronutrients
- Providing nutrition education
- Offering health referral programs and promoting the use of health facilities
- Educating students in life skills and social and emotional skills that will help them make healthy choices in life
- Addressing the mental health needs of learners, which is especially important in postconflict or postdisaster environments
- Promoting positive community health behaviors through drama and message campaigns

According to the Focusing Resources for Effective School Health (FRESH) Framework adopted at the World Education

Forum, four overarching goal areas should be addressed by the combination of activities implemented in a school health program:

- *Policy:* Health-related school policies should support optimal education outcomes.
- *Environment:* Improving the school environment should include increased access to safe water and sanitation facilities (i.e., separate latrines for boys and girls) in school.
- *Education:* Life-long healthy behaviors should be promoted through skills-based and child-focused health (including HIV) education.
- *Services:* Increased access to and use of health and nutrition services at school should be supported, especially those targeted to promote education and learning.



School health activities that are organized and coordinated within a school health program identified under a framework such as FRESH reinforce a systemic approach to health and learning—the school health agenda—and have the potential for greater impact than any single intervention could have on its own. The specific school health activities implemented within a framework like FRESH are determined by the ministry of education and stakeholders. The interventions are selected to be manageable by teachers and principals with active engagement from parents and community members, as well as periodic support from area health professionals. As noted above, most education ministries insist that the selected activities must promote, or be compatible with, their teaching and learning goals and be implemented within existing structures of the ministry of education and its routine operations. Some instructional activities may be incorporated in classroom instruction, but others that address infrastructure or the school grounds may be conducted during extracurricular activities and clubs. Ministries often prioritize activities that explicitly support local needs, such as financial support for HIV-affected learners to stay in school in HIV-epidemic regions, deworming and micronutrient administration where soil- or water-transmitted helminthes are a particular problem, or mental health support in postconflict or disaster settings (CHANGES2 Program, 2007; Vince Whitman, & Aldinger, 2009; Jukes, Drake, & Bundy, 2008; FRESH, 2000a, 2000b).

Where are some examples of school health programs?

Research and surveys by institutions (e.g., World Bank, Partnership for Child Development, Save the Children) and authors (e.g., Cheryl Vince Whitman, Carmen Aldinger, Donald Bundy) provide comprehensive overviews of current school health programs. These studies show important examples of school health programs from countries as diverse as China, Bangladesh, Malawi, and Jamaica. Whereas ministries of education often develop consistent national guidelines and targeted flagship activities for all schools to implement, individual school programs are usually tailored to meet local needs. It would be impossible to show a detailed table of what each school in a country implements, but it is possible to illustrate how selected countries have organized their policies and activities under the components listed in the FRESH education and health framework (Table 1).

Is school-based health a new idea in developing countries?

School health programs in developing countries often date to the 1970s, 1960s, or even earlier, often to colonial-era antecedents (Bundy, 2011). Many developing countries had well-articulated and well-staffed school-based health programs during these decades, which unfortunately became inactive or collapsed owing to budget constraints associated with structural adjustment policies of the 1980s. These inactive school health programs are often remembered fondly by adults as beneficial school programs that delivered a wide range of health services to school-age children, but they were very expensive for governments and required extensive inputs from the health workers. Ultimately, the programs were unsustainable and were discontinued. The historical legacy of these programs reminds us of the limits of what can be afforded and implemented by schools in terms of time and money. But they are also an opportunity to promote community awareness of the linkages between education and health, because these programs represent one way that families learned about the benefits of health interventions for education.

It is helpful to review the recent global history of school health advocacy. In 1986, the World Health Organization (WHO) launched the Health Promoting Schools (HPS) initiative as a global follow on to the Ottawa Charter for Health Promotion (Vince Whitman & Aldinger, 2009). At about the same time, a framework for Coordinated School Health Programs was developed for schools in the United States. A decade later in 1995, WHO initiated an expert committee on school health and launched the Global School Health Initiative, giving renewed impetus to the HPS concept. Finally in 2000, UNESCO, UNICEF, WHO, and the World Bank launched the FRESH Framework at the World Education Forum in Dakar, demonstrating the importance of school health policies and programs in reaching Education for All (EFA) goals.

TABLE 1: EXAMPLES OF APPLICATION OF THE FRESH FRAMEWORK

Country	FRESH or HPS Initiative Component	Key Interventions
Kenya		
	Policy	School health policy written jointly by the Ministries of Education, Health, and Agriculture
	Environment	UNICEF framework on safe and clean school grounds (Child Friendly Schools approach adopted)
	Education	HIV prevention; hygiene education
	Services	Deworming; safe drinking water; school feeding
Zambia		
	Policy	School health policy written jointly by the Ministries of Education and Health and signed by the Ministry of Community Development and Social Services
	Environment	Ministry of Education adapted HPS framework for certification process of schools with clean and safe grounds
	Education	Infectious disease prevention; HIV prevention; hygiene education; violence prevention
	Services	Deworming; micronutrients
Nigeria		
	Policy	Ministry of Education—developed policy and tools in collaboration with Ministry of Health
	Environment	National-level environmental risk awareness
	Education	School and community education on sanitation and hygiene
	Services	Safe water and sanitation provided at schools; communities involved in installation of ventilation improved toilets
Mauritius		
	Policy	Collaborative policy developed between the Ministry of Education and the Ministry of Health
	Environment	Promotion of healthy school environment
	Education	Physical and social education, including sexuality education and behavioral topics such as bullying and aggression
	Services	In-school medical checkups
Barbados		
	Policy	Ministry of Education and Ministry of Health collaboration on health promotion policy and program
	Environment	Promotion of safe and healthy school environments
	Education	Physical education; family life education; infectious and noninfectious disease prevention education; HIV prevention and stigma reduction; nutrition education
	Services	School feeding

Note: Information in this table is based on consultation with school health focal points and implementing partners and a review of secondary sources. A comprehensive inventory of programs organized by country and school health activities may be found in Bundy (2011, pp. 269–285).

What is the evidence that school health programs are effective?

The build up to the incorporation of the FRESH framework in the World Education Forum in 2000 coincides with the increasing evidence accumulated in research about the benefits of simple, targeted health interventions and health education for school children. Many studies have been summarized in monographs, such as Vince Whitman and Aldinger's *Case Studies in Global School Health Promotion (2009)*, that document the growing interest in health and education and the effectiveness of many interventions. Some of the most important international research providing the evidence base for school health interventions is summarized in the section that follows. Research has targeted the evaluation of several of the most common school health interventions that aim to improve education and learning outcomes.

Deworming: Worm infections are chronic conditions affecting the health of children, as well as their nutrition, learning, and social development. School-age children tend to have the highest burden of worm infection, in both the number of children infected and the number of parasites they carry. According to studies, worms contribute to children becoming anemic and malnourished, often with impaired mental and physical development. Worm infections are thus associated with impaired cognitive development, delayed reaction time, poor short-term memory, and decreased educational achievement (Jukes et al., 2002; Simeon, Grantham-McGregor, Callender, & Wong, 1995; Grigorenko et al., 2006).

A randomized evaluation in Kenya showed that deworming in schools reduced school absenteeism by 25 percent and increased the participation of children in schools (Miguel & Kremer, 2004). Evidence suggests that the effects of parasitic infection can be reversed and that children attend school more regularly and perform better after being dewormed in school-based programs. Because simple deworming medicines can be administered without side effects, teachers can easily be trained to administer the treatments. Capitalizing on existing teacher training systems and incorporating deworming within a comprehensive school health framework have allowed efficiency and cost-effectiveness in parasite control in school-age children through school health (Jukes et al., 2008; CHANGES2 Program, 2006).

Perhaps the most compelling evidence related to deworming within the past ten years shows that this simple health intervention is among the most cost-effective ways to increase school attendance rates. One rigorously evaluated education intervention in Kenya showed that school-based deworming dramatically increased school attendance, yielding an additional 0.15 year of school per pupil treated over the course of his or her schooling and costing only US \$3.50 per pupil per additional year of school participation (Kremer, 2003). Research of this kind has also demonstrated the cost-effectiveness of deworming for educational outcomes and has increased interest in other school-based health interventions as strategies for improving education outcomes.

Micronutrients: Strong research evidence shows improvement in cognitive function resulting from the administration of micronutrients—vitamins and minerals—which are often lacking in the diets of many malnourished children (Mann, 1999). For example, school-age children receiving iron supplementation to treat iron-deficiency anemia improved in tests of memory, visual/motor coordination, and concentration, and they performed better on cognitive tests (Seshadri & Gopaldas, 1989; Nokes, van den Bosch, & Bundy, 1998). Other research evidence shows that school feeding programs, often essential for the delivery of micronutrients, can improve verbal fluency, school participation, and mental concentration (Chandler, Walker, Connolly, & Grantham-McGregor, 1995; Bundy et al., 2009; Best, Neufingerl, van Geel, van den Briel, & Osendarp, 2010). Iodine supplementation has also been shown to improve children's attention and concentration, as indicated in improvements in the level and speed of task performance in tests with a time limit (van den Briel, West, Bleichrodt, van de Vijver, Ategbo, & Hautvast, 2000). Educating children about good nutrition is an important part of school health and is considered essential to interventions associated with deworming and micronutrients. Many curricula developed for school health programs include nutrition education as well as training for teachers in the effective implementation of curricula and programs. Micronutrient administration interventions are most often included with deworming activities or school feeding activities. They are always accompanied by nutrition education.

Credit: Elise Gelin/AIR



Malaria: Malaria is an important cause of mortality and morbidity in school-age children in Sub-Saharan Africa and elsewhere, and yet these children are the least likely to sleep under insecticide-treated bed nets. Research evidence shows that illness caused by malaria has a profound negative impact on learning and educational achievement and contributes to a significant percentage of school absenteeism, by some estimates as high as 4 to 10 million lost school days per year. This evidence compels some ministries of education to address malaria prevention and referral to treatment in their school health programs. Many advocates of school health programs make the case that malaria control through schools offers a cost-effective approach to the control of malaria among school-age youth (Bundy, 2011; Brooker, 2008; Nalwamba & Makono, 2004). Preventive education, including awareness about the causes of malaria and ways to avoid infection, is an important and cost-effective way to address malaria control in school health, as are activities to improve treatment-seeking behavior and to increase sleeping beneath mosquito nets. Some countries have experimented with presumptive treatment of malaria symptoms by teachers, such as an innovative program in Malawi delivered on a pilot basis in 101 schools in Mangochi

district. But because policy guidelines have not been developed for the safe administration of antimalarial drugs by teachers, most school health guidelines continue to urge teachers to be trained to recognize dangerous symptoms of malaria and to urge students to seek prompt treatment in a health facility if they experience or witness dangerous symptoms (Bundy, 2011).

HIV Prevention Education: An important part of school health programs is prevention education for HIV and AIDS, as well as education to mitigate the impact on children affected by HIV and AIDS. Care and treatment education is also included in many school health programs. The impact of HIV and AIDS on education is well documented, beginning with Michael Kelly's 1999 seminal essay, "What HIV/AIDS Can Do to Education, and What Education Can Do to HIV/AIDS." The loss of teachers is an ongoing concern in countries already struggling to maintain the teaching force to attain EFA goals. In countries with generalized HIV epidemics, successful efforts to increase access to care, treatment, and support have reduced teacher attrition owing to HIV-related illness and mortality to one or two percentage points. But added to ongoing teacher attrition resulting from other causes, HIV and AIDS contribute a significant challenge

Credit: Jonas Ngulube/AIR



for many education systems to train adequate numbers of teachers to reach EFA goals, especially those goals related to educational quality. At a time when developing countries are hard pressed to build a trained teaching force to provide all children with a quality education, HIV and AIDS erode the supply of teachers, prompting many ministries of education to institute workforce programs to prevent and mitigate HIV and AIDS among educators (Risley, Bundy, et al., 2007; Grassly et al., 2003).

Often, students who come from families affected by HIV and AIDS, as well as students infected with HIV and AIDS, suffer from the effects of stigma and discrimination, leading them to drop out of school. The economic impacts of HIV in affected households also may lead students to drop out (Kelly, 1999; UNICEF, 2006; Bundy, 2011).

This information about the impact of HIV and AIDS on education systems, combined with the opportunity to reach millions of youth at school, many of whom have not yet become sexually active and have not yet begun practicing high-risk behaviors, motivates many ministries of education to action. Many SHN programs in generalized HIV epidemic countries provide HIV and AIDS prevention education through schools. Curricula have been prepared in life skills education to improve decision-making skills, and many school health programs include sexual health education. Many countries have programs on HIV and AIDS awareness, with stand-alone curricula containing lessons on how HIV is transmitted, what constitutes high-risk behavior, and the importance of providing support to the HIV infected, including testing and anti retroviral therapy. The cost-effectiveness of prevention education in schools is increased by the efforts of some ministries of education to institute community outreach and awareness programs, thereby

affecting community-wide norms that may contribute to high-risk behaviors. Some ministries have created HIV resource centers as part of school health programs, linked in some cases to reinvigorated Anti-AIDS clubs to help schools reach out to communities and to empower youth through service learning to change high-risk behavior and increase their chances of remaining HIV negative. An increasing variety of research studies have documented the effectiveness of school-based HIV prevention programs, including a study of 83 program evaluations that showed the most important attributes of programs that successfully prevented transmission of sexually transmitted diseases and/or pregnancy in 22 countries (Kirby, Laris, & Roller, 2006).

Studies of sexual behavior are difficult to conduct owing to local sensitivities, but it is clear from research that education is an effective way to increase essential communication among students, parents, friends, and sexual partners about sexual risk behaviors and HIV and AIDS. These conversations often also reduce stigma and discrimination (Klepp, Ndeki, Leshabari, Hannan, & Lyimo, 1997; Stanton et al., 1998). Education and school-based activities related to HIV prevention and mitigation are essential components of a national response to HIV and AIDS.

Water and Sanitation: Hygiene promotion is one of the most cost-effective of all public health interventions, potentially improving the lives of millions annually.² Poor hygiene and unsafe water are major contributors to life-threatening illnesses among children annually and major contributors to school absenteeism globally (Guinan, McGuckin, & Ali, 2002). Because of the effectiveness of hand washing with soap to prevent diarrheal disease and acute respiratory infection, hand washing is sometimes said to be more effective than any single vaccine—a sort of “do it yourself” vaccine (Curtis, Cardosi, & Scott, 2000). A study by the Global Public-Private Partnership on Hand-washing cited by Bundy (2011) reported that hand washing with soap at critical times may help reduce school absenteeism by as much as 42 percent. Inadequate sanitation for girls is also considered one of the major causes of girls dropping out of school following puberty (Adams, Bartram, Chartier, & Sims, 2009). Effective coordination of resources at the school level may bring the resources of multiple donor agencies and NGOs to the school-based provision of water, sanitation, and hygiene education at little or no cost to the education sector.

Who are the primary implementers of school health programs?

The primary implementers of school health programs in 2011 are ministries of education in partnership with ministries of health. Implementation of any health activity needs to be informed and supervised by health experts, but the education sector must lead on activities that promote education and learning outcomes. Many NGOs working in the developing world also support training for and implementation of school health programs and have been instrumental in providing the technical leadership necessary to promote health action among youth. But where school health and school health promotion programs have been taken to scale, they have been staffed at central ministries of education by education personnel and have been implemented by teachers and inspectors working at provincial, district, and school levels. School health staff are often housed in the central ministry of education in a school health unit, sometimes in association with cross-sector programs or gender and equity programs, or in a directorate of planning. The administrative home varies, but most ministries identify and name a specific location to gather the expertise and leadership necessary to build capacity in school health programs. It is a fundamental first step in the development of a school health program or health promotion program for the ministry of education and the ministry of health to agree to work together and to agree on the distribution of responsibilities between them. This agreement is often negotiated through a memorandum of understanding that establishes and documents the shared responsibilities.

Who are the primary funders of school health programs?

In a 2009 survey of organizations funding school health programs in developing countries, the Partnership for Child Development documented 38 development organizations funding components of school health programs through a variety of mechanisms, including project assistance, bilateral assistance, and multilateral budgetary support to ministries of education (Partnership for Child Development, 2009). These organizations included JICA, Irish Aid, NORAD, OXFAM, Save the Children, UNICEF, UNESCO, WHO, DfID, DANIDA, Catholic Relief Services, Food and Agricultural Program, World Food Programme, and the World Bank. Since the survey was taken, the demand for resources for school health has increased in the developing world, and additional organizations

2 See UNICEF website on water, sanitation, and hygiene: <http://www.unicef.org/wash/>

have joined the number of funding and coordinating organizations, including Fast Track Initiative (FTI) and Deworm the World. The number of funding entities does not mean that advocacy for school health has worked and therefore no additional funding or technical support is needed. The increasing number of funders demonstrates the growing awareness of the importance of school health and the increasing opportunity to maximize the investments of every organization investing in school health. The fact that the key implementers of school health programs are ministries of education shows that support to school health is a powerful way to build the capacity of education ministry training and support systems, community support for education, and avenues for advocacy for education. The inclusion of school health elements in the EFA platform, as well as the FTI platform, has increased the visibility and awareness of the importance of addressing school health as a means to reach EFA goals. It ensures that requests for funding from ministries of education in the developing world for support to school health will increase as a key strategy for promoting global quality and equity in basic education.



Credit: Meredith McCormac/AIR

Malawi: Expanded Anti-AIDS Youth Clubs Support Health Promotion at Schools

Malawi's Power to the Youth Clubs aim to make knowledge about HIV and AIDS, sexual and reproductive health, and sex/gender-based violence personally relevant and build the confidence and competence of youth to take positive action for a healthy future. Club activities are organized according to (1) citizenship skills, (2) life skills education, and (3) community action projects (service learning). The outcomes of all activities are mandated in the clubs' charter to result in the mitigation of the impact of HIV and AIDS. Because the outcomes of this activity are designed to be HIV prevention outcomes, health sector and HIV prevention resources fund the activity. These clubs were initially funded through the USAID education *Malawi Teacher Training Activity* project with the President's Emergency Plan for AIDS Relief (PEPFAR) funding for the HIV and AIDS School Club Initiative but were later continued by the Malawian Ministry of Education.

Youth Development and HIV Prevention Goals:

- Help youth and communities understand and gain competence in skills that reduce the social causes of HIV transmission
- Provide members with opportunities to serve communities through projects that improve HIV care and support
- Show youth that activities that help prevent HIV/AIDS and Sexual/Gender Based Violence can also teach practical skills and prepare them for productive work, also making contributions to their communities
- Invigorate community action to prevent and mitigate HIV/AIDS with special emphasis on participation of girls, out-of-school youth, Orphans and Vulnerable Children (OVC), learners with disabilities, and HIV-positive children
- Empower youth to identify, engage in, and support community programs and services that are youth friendly

8 KEY PRINCIPLES TO CONSIDER IN STARTING A SCHOOL HEALTH PROGRAM

The following principles to consider in starting a school health program are synthesized from lessons provided in a variety of sources, including USAID-funded program implementers, World Bank-funded implementers, and authoritative authors such as Cheryl Vince Whitman (Vince Whitman & Aldinger, 2009) and Donald Bundy (Jukes et al., 2008).

Principal 1. Facilitate and support strong cross-sector policies and relationships across the ministry of education and the ministry of health.

Because school health programs rely on and build on services often administered across these two ministries, it is important to put in place the policy framework that allow them to collaborate in the delivery of simple health services in schools. Education sector actions in health require the explicit agreement of health sector professionals. The potential tensions between these two ministries are often eased by creating memoranda of understanding that clearly document what each ministry agrees to do. Often these documents lead to formalized policies that build a solid foundation for long-term school health programs to succeed.

Principal 2. Focus on education outcomes to justify school health programming.

Educators should engage in school health when they are convinced of the benefits of health for learning and schools. The health sector should tap into the education sector and its infrastructure and human resources only when it is understood that by accomplishing health goals, this sector is also supporting the goals of educators and the strategic plans of the ministry of education. Although health goals may be important links to learning capacity and school participation, without emphasizing the primacy of education goals, ministries of education cannot justify health actions.

Principal 3. Assist the ministry of education in an exploration of global frameworks for school health policies and programs (such as FRESH and HPS) with all stakeholders in the ministry of education, the ministry of health, the ministry of community development, communities, and schools.

Assisting the ministry of education gather stakeholders and explore the work of other education systems and the platforms they have used to build school health programs helps developing countries learn from the experiences of other developing country programs. The global network of school health practitioners has contributed to the FRESH Framework as well as to WHO's HPS framework (WHO, n.d.), both of which provide important guidance for ministries building or strengthening school health systems.

Principal 4. Assist the ministry of education in selecting simple school-level activities that are not complex for teachers to implement in order to gain support from education professionals; select activities that promote national education goals in enrolment, attendance, and attainment.

Selecting simple, targeted, but effective activities often lies at the heart of a successful program. Complex interventions that address many health problems simultaneously may sound good, until someone tries to implement and sustain them. Targeting and designing simple and effective activities also reduce costs and maximize outcomes. This approach includes targeting activities geographically where they are most needed, such as deworming in regions most affected by soil-transmitted helminthes and school feeding in regions where malnutrition or food insecurity is highest.

Principal 5. Work with the ministry of education to understand the costs and cost-effectiveness of school health programs.

Simple programs that are cost-effective are much more likely to be sustained and be taken to scale by the ministry of education. Helping the ministry of education make technical decisions that are based on best global research about the cost of interventions, calculate the savings to be gained by targeting interventions only where needed, and analyze which interventions provide the greatest improvement to education outcomes help build capacity within the ministry of education

for data-driven decision making while building knowledge and skills about school health. Decisions driven by cost-effectiveness will also make the maximum best use of existing infrastructure where possible, such as teacher training systems, the inspectorate, or perhaps the ministry of health's drug distribution systems.

Principal 6. Help the ministry of education establish indicators that will show the impact of health activities on education goals, including attendance and cognitive goals.

Assisting the ministry of education in establishing clear links between school health and education sector outcomes and priorities, including EFA goals, gender and equity, and inclusive education, helps ensure full education ownership and commitment to school health.

Principal 7. Strive to work with existing systems and infrastructure, such as teacher training systems and education management information systems (EMIS), to build capacity in the education sector for long-term management of school health programming.

Working with education sector systems and infrastructure is a cost-effective and efficient way to reach school-age children with any intervention and ensures that school health programs do not duplicate implementation strategies of the ministry of education. Building on these systems ensures cost-effectiveness in school health and increases the likelihood of systemic uptake within the ministry of education. Building simple health- and HIV-related data into EMIS systems not only builds host country capacity for school health programming and planning but also allows country-to-country comparison when multiple countries agree to collect similar data in their EMIS.

Principal 8. Help the ministry of education consider the legal and ethical factors involved in health-related research, thus avoiding unrealistic goals that are undermined by local laws.

There may be limits to what any ministry of education can accomplish regarding research on such sensitive topics as sexual practices and reproductive health. For example, although Institutional Review Board (IRB) protocols guide the practical use of U.S. government funds for research in the United States, protocols in other countries may not address potential

ethical problems related to research about sexual activity among youth—particularly if targeted youth are under the age of consent. Ministries of education that are unaccustomed to processes for research planning and review that originate in the health sector (such as IRB) may appreciate support when considering the ethical and legal implications of health-related research and developing a research plan that adheres to international standards while still respecting local mores and values.³

Funding for School Health May Originate From a Variety of Sectors: The Example of USAID's CHANGES2 Program in Zambia

The USAID-funded Community Health and Nutrition, Gender and Education Support 2 Program (CHANGES2) Program supported Zambia's ministry of education in the implementation of school health activities. These were funded through a variety of funding streams at USAID, but all supported important aspects of the ministry of education's school health program. The ministry of education's SHN policy, the School Environment certification process, as well as the deworming and micronutrients program, was supported through Development Assistance funding and supported education and learning outcomes. The ministry of education's pre-service and in-service teacher training on HIV prevention education was funded through PEPFAR and supported HIV prevention outcomes. Other education priorities supporting OVC were also funded by PEPFAR. Technical assistance provided through these CHANGES2 components were important for the ministry of education's development of policies, tools, and programming for its SHN program. They demonstrated how a variety of funding sources from different sectors can support a ministry of education's schools-based health program. (The CHANGES2 Program was funded by USAID/Zambia through an EQUIPI Associate Award.)

³ For more information about Institutional Review Board protocols and processes, please visit <http://www.irbservices.com/irbservices/Home.html>.

7 STEPS TO ESTABLISHING A PROGRAM WITH MINISTRY OF EDUCATION STAFF

The following steps to consider when helping a ministry of education establish or strengthen a school health program are intended as practical guidance for development agency education officers.

Step 1. Help the ministry of education through external research assistance (e.g., project, NGO, consultant) to understand and conduct a baseline school health needs assessment in sample districts, adapting existing needs-assessments where possible.

Specific tools for baseline needs assessments are available from various school health websites, including UNESCO's FRESH Framework, the Partnership for Child Development, and others (see, for example, UNESCO, 2000b). These tools will help in the development of a needs assessment that will identify the issues most critical to child health, development, and learning and will guide researchers to activities that optimize education outcomes. A needs assessment will also help in the analysis of geographic need, thus ensuring program success and sustainability.

Step 2. Help the ministry of education and stakeholders through external research assistance (e.g., project, NGO, consultant) use epidemiological mapping to guide decisions about geographic targeting of interventions.

Resources are available to help ministries of education make critical decisions about start-up geographic targeting and intervention targeting. Maps available from the Global Atlas of Helminth Infections are particularly relevant and useful (London School of Hygiene & Tropical Medicine, n.d.). Combined with baseline tools for needs assessment, these resources help ensure that the most cost-effective decisions are made in program design and start up. They are also important tools for advocacy for school health programs.

Step 3. Help the ministry of education through external assistance (e.g., NGOs) identify potential donors and implementing partners at the school level; identify the other stakeholders in school health in the school catchment area and district.

Many stakeholders at the school level have interests in school health. Often NGOs or multilateral organizations supporting water and sanitation infrastructure are very pleased to expand services to deliver a borehole or latrines to schools. Many NGOs work on school feeding programs and can be encouraged to develop nutrition education or school gardens in new areas. Some of these activities require additional funding for expansion and some could be brought to new schools under existing funding through improved coordination and planning.

Step 4. Work with the ministry of education and communities to identify who at the school will be responsible for the program; at least two teachers and the head teacher are suggested.

Schools need champions for school health, as well as trained teachers who can implement programs. Many ministries of education work to train at least two teachers and the head teacher at a school, who in turn train other teachers to implement new school health activities. Health officers from local clinics may also be trained to work with the teachers, providing periodic support when needed through school visits, as well as a link to health services for referrals.

Step 5. Support the ministry of education through external assistance (e.g., consultants, projects, health-related NGOs) in creating school health committees that involve teachers, community members, and students at the school to work with district, provincial, and ministry officials to adapt ministry of education policy and frameworks for school-level application.

Schools need community support and engagement to make a school health policy effective, build support for simple health interventions, and ensure that the benefits of health education extend to the community. School health committees build the capacity of communities to apply for and manage grants to improve their school infrastructure, increasing the healthy environment at school while also increasing awareness in the community about the critical links between health and learning.

Credit: Kathryn Fleming/AIR



Step 6. Help the ministry of education through external assistance (e.g., consultants, projects, health-related NGOs) identify school health activities that will excite the community. Be innovative and inclusive in design.

Ministry of education personnel have been quoted as saying that while other interventions to improve educational quality target teachers, books, or administration, school health actually targets the child directly. Whereas teacher training results in a teacher who is more engaging and effective in the classroom, school health interventions can actually produce a more energetic and attentive student—almost instantly. Such observations by teachers and community members about the benefits of school health excite and energize people about education, and about school health. These attitudes are important for increasing the support and involvement of all in the design and implementation of school health programs.

Step 7. Help the ministry of education through external assistance (e.g., projects, consultants) link the program to district-level operations and training, especially including supervision systems.

School health programs benefit greatly when they are part of in-service and pre-service training systems. But including the inspectorate is also essential to ensure lasting monitoring and supervision, as well as a trained resource for evaluation and impact research.

Kenya's National Deworming Program

In 2009, Kenya's National School Health Policy and Guidelines adopted a school-based deworming program that targeted deworming medicines to reach those children in high-risk areas for soil-transmitted parasites. Existing data and prevalence maps from WHO made it possible to identify high-risk areas rather than deworm every school child in Kenya. Existing maps demonstrated that it was necessary to deworm children in only 45 districts, clustered in three geographic regions of the country. In this way, it was possible to deworm the majority of children needing to be dewormed by delivering deworming medicines to only one-third of schools in Kenya.

The ministry of education funded most costs associated with training staff and administering the drugs. Some 1,000 district-level education staff and 16,000 teachers were trained to deliver deworming drugs safely and effectively. Deworming drugs were sourced through a variety of means, including an international donation, and were distributed using the same training cascade to maximize cost-effectiveness. In this exercise, 3.6 million school children were dewormed in 8,200 schools. The program benefitted from technical assistance provided by NGO partners that were funded by external sources, including the World Bank (Bundy, 2011).

CHALLENGES TO IMPLEMENTATION

Sustainability in funding and trained personnel in ministries of education are both essential for successful long-term programming. School health programs that have seen high attrition rates, with focal points being moved frequently to other jobs, have had a hard time gaining traction in their respective education systems (Vince Whitman & Aldinger, 2009). School health programs that have been funded only through pilot activities and donor-funded projects have also had a hard time being sustained after project funding ran out. Long-term funding from the ministry of education and a commitment to keep staff trained and at work in a school health unit in a ministry are important elements to successful school health programs (Vince Whitman & Aldinger, 2009).

A general lack of trained teachers in the education sector continues to pose a challenge to successful school health programming. Many teachers are considered too overworked with other education duties to take on additional school health activities that are not well understood as being complementary to and amplifying the benefits of education. A shortage of teachers trained in school health policies and program implementation is also a challenge for successful school health programs, and especially to successful HIV and AIDS prevention education (Kirk & Dembele, 2007; James-Traore, Finger, Ruland, & Savariaud, 2004).

HIV and AIDS units have often been established separately from school health units. Although the division of labor, policy, and funding facilitates a needed focus on the impact of HIV and AIDS on education human resources, the bifurcation of financial resources and personnel has been an obstacle to the sustainability of school health programs. Bifurcation has also been a hindrance to unified reporting on HIV prevention education, along with other issues that are related to health, showing their impact on education outcomes. This policy has undermined the long-term support for all school health programs, especially in development agencies.

Credit: Elise Gelin/AIR



Stove-piped funding in development agencies has confused both ministries of education and development agency staff about what kind of funding can be used for school health—basic education funding, PEPFAR funding, child survival funding. In fact, all can be used effectively to support different aspects of school health programs when targeted well by development agencies and tracked properly by contracted project staff.

SUGGESTED INDICATORS OF SUCCESS

The *FRESH M&E Framework: A Generic Framework for Monitoring and Evaluation of School Health Interventions* (UNESCO, 2010) provides the most up-to-date consolidated indicators to measure the success of school health programs. These measures have been developed by WHO with UNESCO, UNICEF, and civil society organization (CSO) stakeholders. The indicators are being adapted for use by the World Bank, the FTI, UNESCO, UNICEF, WHO, and many CSO groups working with ministries of education. Globally, most ministries of education will be working to incorporate these indicators and should be supported in efforts to include them in the ministry of education's existing EMIS. Common experiences in school health programming present an opportunity for concerted action by agencies not only to assist countries in developing school health programs but also to support effective monitoring and evaluation systems for them. Effective monitoring and evaluation (M&E) are essential if school health programs are to be scaled up and sustained. The organizations mentioned above working on the FRESH Framework developed the M&E framework for school health interventions to provide internationally agreed-on guidance to help development agencies and countries implementing school health programs monitor and evaluate their programs.

The outcomes and impacts of the summary indicators include (1) reduction in morbidity and mortality, (2) improved capacity to concentrate and learn, and (3) improvement in education performance indicators (e.g., attendance, retention, and completion rates).

Indicators to Measure Progress Related to School Health Policy

1. Existence of a national-level school health policy
2. Percentage of schools with policies promoting health and nutrition written and disseminated
3. Percentage of schools implementing health and nutrition policies
4. Percentage of schools with strong leadership and management structures

Indicators to Measure Progress Related to School Health Environment

1. Minimum standards for WASH in schools defined at the national level
2. Existence of national-level school environment (inspection) standards
3. Percentage of schools with a safe, sufficient, and accessible water supply
4. Percentage of schools with sufficient, accessible, private, secure, clean, and culturally appropriate toilets/latrines for schoolchildren and staff
5. Percentage of schools where the school environment is kept clean and safe through regular cleaning and waste disposal
6. Percentage of schools that are conducive to social and emotional learning
7. Percentage of schools that have a supportive physical environment

Indicators to Measure Progress Related to School Health Services

1. Existence of national-level guidelines for service provision at the school level
2. Percentage of schools that provide health and nutrition services
3. Percentage of schools with accessible and effective referral and treatment systems

Indicators to Measure Progress Related to Life Skills

1. Generic and content-specific life skills concepts and themes addressed in the national-level curricula for primary and secondary schools
2. Generic and content-specific life skills concepts and themes explicitly assessed in national-level school-leaving examinations

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3. Generic and content-specific life skills concepts and themes addressed in the national-level pre-service teacher training curricula
4. Percentage of learners who received life skills education in the last academic year
5. Percentage of teachers who received in-service training in life skills education in the last academic year

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First Principles: Designing Effective Education Programs for School Health in Developing Countries is part of a series called *First Principles*, which provides guidance for programming in a range of topics in education and development. Topics in the series include:

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