Using Schools to Improve Health:

A Map of Informative Interventions

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Purpose of the paper

The overall purpose of this paper is to map out key initiatives in Sub-Saharan Africa in which primary schools are a vehicle for implementing health, nutrition, and population education and services.

- For those attending this consultative meeting who are already engaged in these efforts, we offer our rough cut on a map of noteworthy activities in Africa--activities that can be instructive to our office as we begin to explore this area. We ask you to help better define this map.

- For those whose work is more sector-specific, in either education, health, nutrition, or population, we offer this rough cut as an overview of what is going on in Africa. We intend this paper to complement the other, more technical, background papers for the meeting in giving you a common core of information about this area.

Our focus is on primary schools, though, particularly in the area of reproductive health, it occasionally extends to secondary schools.

State of the practice

The state of the practice of using schools as a vehicle for implementing health, nutrition, and population education and services is in flux. In the past five or so years, there has been an increase in activity, particularly in research into the nutrition and health--including reproductive health--problems facing school children, and in policies and strategies that can address these problems. Most researchers and practitioners agree on the need for the education sector to cooperate with the health sector in delivering education and services, but the best strategies for cooperation are only beginning to be tested.

It is not that the notion of promoting the health of children through schools is brand new. The record of interest on the part of international organizations goes back to the 1950s. United Nations agencies, particularly WHO, UNESCO, and UNICEF, have, between them, held at least ten high-level meetings on this topic since the mid-century.[1]

Yet a surge of recent interest is evident in both statements of top-level policy-makers and increased activity among researchers and technical advisors.

- UNESCO proclaimed in 1990 that "enough is now known to recommend health and nutrition programs among efforts to increase school enrolment and learning....The school setting itself offers opportunities to correct health and nutrition problems of public health and educational significance."[2]

- The Director General of WHO has stated, "Educating children at school on health should be given the highest priority, not only for their health per se, but also from the perspective of education, since if they are to learn they need to be in good health."[3]

- The 1993 World Development Report (World Bank) identified school-based programs as among the most cost-effective approaches to enhancing the health and development of school-age children and has included this strategy in a short list of five public health priorities.[4]

- At least two collaborative groups have formed and found funding. The Partnership for Child Development "conducts operations research projects to investigate how a package of interventions can be delivered most effectively and at lowest cost to children via the educational system." Established in 1992, the Partnership is supported internationally by UNDP, WHO, and the Rockefeller, Edna McConnell Clark and James S. McDonnell Foundations. UNDP and UNICEF provide some support at the national level. The implementation of policy is coordinated by the Scientific Coordinating Centre at Oxford University.[5] The Action Group for International School Nutrition and Health is a "network of school nutrition and health professionals and concerned organizations working to strengthen the nutrition and health status and Active Learning Capacity of school-age children in developing countries." The group does research, newsletters, conferences, and similar activities. Members have included USAID (Office of Nutrition) Canadian International Development Agency (CIDA), Swedish International Development Agency (SIDA) UNICEF, UNDP, the World Bank, World Food Program, and the Kellogg Foundation. UN agencies have been cooperating in school-health linkages during the 1990s.

Genesis of recent interest

What is the genesis of this recent interest? We have identified two persuasive sources of concern: researchers and school communities.

- Seminal documentation of research includes a UNESCO compilation of research literature quantifying some of the adverse educational consequences of ill health and malnutrition.[6] Another important document is Ernesto Pollitt's review of the literature on educational consequences of specific types of morbidity and malnutrition.[7] Jamison and Leslie reviewed linkages between health conditions and educational problems and addressed from the viewpoint of an educational planner how educational systems can intervene to improve the health and nutrition of school-age children.[8] Beryl Levinger has written on the effects of health and nutrition on a child's school performance, active learning capacity, and related policy and technical environments.[9]

- In at least one case, local school communities have persuaded education sector advisors

that improvements in the health of their children would make a difference in their success in school. The Ministry of Education in Guinea, in planning a project supported by the World Bank, held focus groups of parents, students, and teachers to find out what they thought would improve girls' education. One clear response was the need for broad efforts to improve not only individual health and nutrition but also the sanitary condition of schools themselves.[10] Other initiatives, particularly those supported by UNICEF, also respond to local concerns.

- In addition, the assessment of the international community that, through concerted efforts of child survival programs, the health and nutritional status of infants and pre-school age children has improved dramatically provides a rationale for turning to focus on school-age children.

What formal interventions, then, have commenced, in pursuit of this challenge?

Sorting out types of interventions

Interventions can be mapped according to various classifications.

- The most obvious is a *sectoral* classification: Is the project addressing health, nutrition, or population issues?[11] But such a map has limits in terms of our purpose, because recent projects are determined to integrate these sectoral services with a school-centered focus.

- In at least one instance, interventions have been categorized on the basis of required *resources*: Whether services can be delivered (1) immediately at low cost, (2) medium-term and cost (requiring at least a modest infrastructure), or (3) long-term and high cost (requiring an extensive capital investment and requisite planning).[12]

- An extensive map would indicate the *level* of intervention--whether it is in a limited number of communities or regions of a country (often with support of NGOs), national, or international. At the international level, this map would define the interests of supporting organizations such as the UN agencies, because those inevitably drive many local efforts.

We have opted to describe interventions in terms of their *strategies*.[13]

- Providing knowledge and skills (curricula and teaching materials)
- Providing services (nutrients and disease prevention and cure)
- Creating healthy and safe school and community environments.

Even this categorization has limited usefulness, however, insofar as the trend seems to be toward initiatives that take a holistic approach and combine one or more of these strategies. Nevertheless, we can discuss rough groups of interventions according to their primary strategies.

Interventions offering knowledge and skills

Interest in teaching basic health and nutrition goes back a long time. But in response to the alarming epidemic of HIV and AIDS, most African nations made urgent efforts to introduce lessons on this subject to children and youth, and the school as often been used as one of multiple channels. The initiatives described in this section reveal important variations.

This section begins with descriptions of more general health education programs and ends with those focusing on HIV/AIDS.

Child-to Child: Uganda (and Botswana, Burkina Faso, Kenya, Zimbabwe)

The most widespread health education concept is child-to-child. With variations from place to place, this program teaches primary school children about health and nutrition behaviors in a manner that encourages them to share their skills and knowledge with others—younger children, peers, and families. In Uganda, it is incorporated into the School Health Education Project, launched in 1988, and includes a teacher-education component (pilot) and extra-curricular activities for children. The program covers around 200 schools in 10 districts; it is implemented by the Institute of Education, Kyambogo. It is guided at the national level by an interministerial panel drawing from the ministries of agriculture, health, local government, AMREF, Red Cross, WHO, and UNICEF. Implementation responsibility cascades to the zone level and to school health committees. In Uganda, the most common topics in the syllabus include immunizable childhood diseases, AIDS, and personal hygiene. Children are encouraged to deliver messages and provide examples of health living to younger children in and out of school as well as to work on practical health activities in their families and communities. Textbooks and numerous other learning materials are provided to schools. An evaluation in 1992 found that the child-to-child approach was "taking root and proving to be viable in Uganda...and to change behaviors of children and teachers exposed to it."[14]

Variations in other African countries include the following:[15]

- The Child-to-Child Trust in London supplies guidance and materials to all interested parties. In some instances, it is not the government that sponsors the program. In Botswana, for example, a child-to-child program was initiated by the American Women's Association (AWA) and is run today by a Child-to-Child Board, that includes the government and donors, as well as the AWA.

- The Ministry of Education, with heavy involvement of the Ministry of Health, in Zimbabwe, produced a source book intended for teachers, *Health Across the Curriculum: Science.* The book covers personal hygiene (the primary emphasis), illnesses, water, sanitary arrangements and pollution, protection against sickness, safety, handicapped children, medicines, population growth, and family life.

- In Kenya, the Aga Khan Health Services Project in Kisumu produced an educational comic magazine, *Pied Crow,* sponsored by the Ministry of Education and Care Kenya. The magazine is distributed free to every primary school, yet makes no mention of curricular materials designed for the project. In each issue, the bird in the comic raises awareness of different topics such as AIDS, population growth, and urban migration. It describes health problems and gives advice on how to deal with them. *Pied Crow* reaches a far wider audience than the targeted school children. WHO, UNICEF, and other agencies funded a record print of 800 thousand copies of the issues on AIDS and how to stop the spread of HIV virus.[16]

- The Burkina Faso program takes place in pre-school creches as well as primary schools. Teacher training at both levels is an important component.

- A Kenya program focused on improving the school environment is discussed in the subsequent relevant section.

Integration of health and population into the curriculum: The Gambia

As part of its broad redesign of basic education, The Gambia introduced new curriculum materials in 1993. These materials are noteworthy here not only because they include the integration of health, environment, and population issues into the curriculum starting with upper primary and middle school grades, but also because they are student-centered and interactive. They propose redefined roles for teachers and students, and many structured assignments call for student reflection and problem-solving. In addition, based on a government study of stakeholder's thoughts and attitudes on population issues, government schools have introduced at the secondary level Population and Family Life Education.

The Gambia's new materials were assessed in a USAID study of such integrated curricula in The Gambia, Botswana, and Senegal.[17] The contrast among these three cases sheds light on the role of policy and top-level support in planning and implementing curricula that integrate into academic subjects these kinds of behavioral skills and knowledge.

Integration of health education and services: Swaziland

In Swaziland, health education is integrated into pre-school through secondary school curricula rather than presented as a separate discipline. At the primary level, it is presented as part of the science and home economics curricula. At junior and senior secondary levels, health topics are covered in optional subjects such as biology, home economics, and agriculture. The teacher's role is predominant in the supervision and promotion of health, especially at the preschool and primary levels. Teachers rely on the nearest health facility for technical and interactive inputs with respect to vaccinations and management of specific illnesses such as skin disorders or parasitic infections . Nurses provide linage between health services and facilities and health education in schools. They help review the schools curricula with the teachers in order to focus and refine the instruction in

health and hygiene. Strong links also exist between schools and their communities.[18]

Swaziland has resources not available to many other African countries, allowing cooperation between the education and health sectors. Yet several studies indicate that even though it has been fully explored, the health sector has yet to fully accept the potential of using the school system to reach communities.[19]

School Health Program: Tanzania

In 1979 Tanzania received a grant from USAID to support the Ministry of Health's development of a comprehensive health program for primary schools. A central component of the initiative was to be teacher training, using a Teacher's Guide to Health Instruction for the domestic science syllabus. One teacher from each of the zones in the pilot area was to be trained as a school health coordinator, relaying new teaching techniques to colleagues and providing routine health check-ups, follow-up, and managing children's health records. A limited number of schools were to have water supply systems and latrines installed, as well as upgraded school farms and a feeding program.[20]

School-based AIDS Education: Zimbabwe

The Zimbabwe School-based Education Program is based on the Life Skills model supported by UNICEF and WHO. The Zimbabwe program is a UNICEF "flagship" and draws heavily on that agency for financial and technical assistance. The program, which is compulsory in the school curriculum (Grade 4 to A Level) with special time allocation on school schedules, embraces student-centered, participatory teaching methods. The teacher's role is that of a manager or facilitator who creates situations in which students explore issues and problems and come up with their own solutions and conclusions. The curriculum is supported by textbooks that include issues of sexual responsibility, teen-age pregnancy, dating, making friends, development of self-esteem, drug and alcohol abuse, and safe-sex. Textbooks are developed for each grade and are sequential. The program also provides for in-service and pre-service teacher training in all colleges. HIV/AIDS education has been integrated into teacher education programs. Systematic teaching of HIV/AIDS started in January 1994. Experience suggests that this approach is a more effective way of enabling students to cope with HIV/AIDS than a purely information-based program.[21]

HIV/AIDS Curriculum: Malawi

In 1989, Malawi's National AIDS Control Committee called for introduction of a school-based AIDS education and prevention program. While many countries have developed AIDS education programs, few have included the AIDS curricula in national examinations, as Malawi has done. The effort benefited from the cooperation of the ministries of health, education, and community services, other government bodies, and donor agencies--UNICEF, WHO, and USAID. The initiative began with a workshop to review existing AIDS education materials from other countries, a nationwide survey of knowledge, attitudes, beliefs, and practices, and activities to

form a broad consensus of ministries, donors, religious groups, and other stakeholders. Workshops were held to draft teachers' guides and help educators conduct focus group research with students, parents, and teachers. Thirteen units were developed, spanning the first year of primary school through university. Materials were produced and given to teachers, who also received training in their use.[22] At this time, however, the materials are not being used, apparently as a result of a gap or conflict between the jurisdictions of the ministries of health and education.[23]

Family Life Education: Kenya

One sex education program in Kenya introduces reproductive health and sexuality under the rubric of Family Life Education. The curriculum aims to mitigate the prevalence of teen-age pregnancies and abortions and the high incidence of sexually-transmitted diseases. Content also includes environmental degradation consequences of rapid population growth and their effects on child and community health. At the primary level, the program is integrated into geography, history, civics, home science and religious education courses. It is implemented by the Kenya Institute of Education, with support from UNFPA and UNESCO, and provides reading materials for children, teachers' materials, and material to be used in teacher training. Some materials are multi-media; materials vary from school to school in accordance with cultural values and needs. The program began as a pilot in the curricula of 50 primary and secondary schools in the urban areas of Nairobi and Machakos District. Following the pilot, the curriculum was revised to stand along rather than be integrated into other subjects. But the program did not go to scale as planned. While stakeholders had been fully involved in the pilot, few were aware of it beyond that small area, and many misunderstood its purpose as birth control and sex education. It became a political issue during an election year, and was eventually shelved.[24]

Other efforts

Other African countries have noteworthy programs in health education, often with a component of AIDS. Many have support from NGOs and international agencies. UNICEF has been working in Cameroon, Ghana, Ivory Coast, and Uganda.[25] Others with some documented experience in this area include Madagascar, Zambia, and Namibia.[26] In addition, the countries housing some of the programs described here have other health education programs as well.

Issues related to a strategy of offering skills and knowledge

Strategies designed to teach skills and knowledge entail issues common to all curriculum policy and implementation decisions. Particular to the interventions discussed here, however, are three issues. First, should the curriculum be integrated into the school's broader curriculum or designed as stand-alone units? Second, how are students, teachers, parents, and communities best brought into decisions about the curriculum? Opinions vary on these issues, and experience still has much to teach.

Interventions offering nutrition and health services

Interventions that offer nutrition and health services, including provision of nutrients and treatment and prevention of diseases, are far fewer than those that offer skills and knowledge. (The background papers for this meeting by Israel and Levinger describe these kinds of interventions.) Several stand out at this time, and although their strategies are convergent, the emphases in their approaches reflect the difference between public health and education perspectives. The programs in Ghana and Tanzania, to date, focus on finding cost-effective health interventions; the project in Guinea is attempting to institute a sustainable system of delivering nutrients and medications. The South Africa effort is to optimize the developmental benefits of an existing feeding program.

Partnership for Child Development: Ghana and Tanzania

As stated above, the Partnership conducts operations research projects to investigate how a package of interventions can be delivered most effectively and at lowest cost to children via the educational system. The program in Ghana studies effects of urinary schistosomiasis on cognitive function of school children. It involves a partnership between the ministries of health and education and the Ghana Education Services, which is the executing arm of the education sector and the delivery mechanism for the National School Health Education Program. Other government technical and academic institutions and NGOs provide technical support for monitoring and evaluation. The program is based in three districts of the Volta Region and involves 85,000 school children. In 1993 a questionnaire was administered to identify schools where urinary schistosomiasis is a problem and to provide information about common health problems of school-age children. Subsequently, drug delivery and reporting systems were designed and piloted; the collection of baseline information on a sample of 2,500 children began in January 1994, and the first round of treatments given through schools was completed in July 1994. Cognitive tests have been developed and used, and the Partnership is conducting cost-effectiveness analysis and analyses of intervention and delivery processes. In addition, health education materials have been prepared and teachers trained in their use.[27]

Tanzania established a Partnership program called *Ushirikiano Wa Kumwendeleza Mtoto Tanzania* (UKUMTA) in February 1993. The partnership involves the ministries of health, education and culture, local government, community development, women affairs and children. The interagency National Committee for School Health is the focus for policy, and an equivalent committee in the Tanga Region, the site of the program, is the local coordinating and implementing body. In 1994 a study of anemia and infection in the region was completed, and a haematuria (blood cells in the urine) questionnaire was piloted with 15,000 children. A survey of nutritional status and parasitic infections to assess the interventions required in the program districts has been scheduled, and a training program in methods to evaluate the impact of health education was conducted. Data on school enrollment is currently being analyzed in the regional education office, and a report is being prepared with the aim of improving data collection procedures.[28]

The Partnership operations research activities are complemented by initiatives to build the capacity of the schools of public health in Ghana and Tanzania to conduct this kind of research. This work, is being carried out by the Harvard Center for Population and Development Studies on behalf of the Edna McConnell Clark Foundation.[29]

Among the Partnership's other activities is a potential collaboration with USAID in the use of schools as a delivery point for anthelmintics through its support to the Schistosomiasis Research Program in Egypt.[30]

Equity and School Improvement Project: Guinea

School health is one small component of the World Bank-supported Equity and School Improvement Project in Guinea. WHO gives technical advice, and UNICEF provides in-country assistance. In the first year, the project staff have conducted a pilot study to determine for what health interventions the school is an appropriate site. For example, parents want prevention and cure of malaria, but the school may not be the best provider of these services. In addition, they are looking for measurements and/or proxies of student learning. A baseline study of parasite infection in students in all regions has been conducted, and the first round of intervention has occurred in one region: students received micronutrient supplements and deworming tables. While cooperation between health and education personnel is evident, delivery mechanisms and technical and logistical issues are not yet resolved. The project is trying to avoid overburdening teachers with additional responsibilities. Complementary activities will include building running water and sanitation facilities at schools and developing a health component in school curricula.[31] World Bank projects in Niger, Burkina Faso, and Madagascar have similar health components but are not as far advanced as the project in Guinea.

Primary School Nutrition Program: South Africa

The Republic of South Africa introduced as one of the flagship initiatives of the Mandela government a Primary School Nutrition Program, providing universal coverage and feeding four and a half million students. A range of political as well as health and nutrition goals are now being reviewed to focus the program on improving children's "active learning capacity."[32] The program will encourage communities to become more involved in health issues at school, and it will reduce wastage and inefficiency by targeting supplies to children who need them most. To reach these goals, many preliminary objectives have been met, such as mapping rural schools to determine where resources should go.[33] The government is now planning an evaluation of the program, which will ask a number of questions, including these: Does the program increase student attendance? Is there a difference between its attendance effect on boys and girls? Does the program improve cognitive function, active learning capacity, and classroom behaviors? Does it increase learning? Does school quality influence the pattern of program benefits? Does it influence dietary habits as well as other nutritionally related behaviors, attitudes, and knowledge? The evaluation will look at a range of variables such as participant's age and nutritional status, number of feeding days, composition and timing of feeding, and level and nature of community

participation.[34]

School Immunization Promotion Project: Kenya

In the Siaya district of Nyanza province, the Kenya Expanded Program for Immunization (KEPI) piloted a project funded by UNICEF to see if school children (age 12–14) could be used as suitable agents for carrying immunization messages to mothers in villages. This, in effect, was an immunization campaign of short duration. The project strategy was to teach children about immunization and ask them to go into their communities, look for children under two years who were not yet immunized and try to encourage their mothers to take them for immunization. The children gave mothers who agreed an appointment slip to take to her local clinic with her child. At the clinic, health workers gave the immunizations, then stamped the slip and gave it back to the mother, from whom the child collected it and returned it to school. The project was conducted as an inter-school competition, and awards were given at several levels. Although an internal evaluation found that the overall concept was acceptable and some objectives were met, problems were also identified. Many schools did not participate, messages were distorted as they passed among participants, and some students skipped school to look for children who needed to be immunized.[35]

Issues related to a strategy of offering nutrition and health services

This strategy is perhaps gaining the most attention now. The most prominent issues arise from the need for cooperation in policy making and implementation at several levels—cooperation between the education and health sectors. Professionals in these two areas have different perspectives on development problems and different approaches to solving them. Within any civil service, they also have jurisdictional territory to guard. For example, to what extent are teachers expected to become health workers, and vice versa? A second set of issues has to do with agreement on priorities, in terms of health problems to address, geographic areas to serve, and resources to call upon. Various stakeholders have differing priorities. Finally, research must eventually help determine which interventions are most cost-effective, and which have a chance of being sustained, once external support is withdrawn.

Interventions to improve the school's facilities and environment

Interventions to improve the physical facilities and environment of schools include UNESCO's thorough and well documented study of school health in Kenya, a similar project in Tanzania, and other efforts, many supported by UNICEF, to provide running water and sanitary latrines at schools. These projects also include health and nutrition services like those described above.

Child health, nutrition, and education: Kenya

Among all those discussed here, perhaps the intervention with the longest history and best

documentation is that of the Kenyan government, supported by UNESCO, to study the health and nutrition status of children in primary school and to use that data for planning interventions. Since 1990 in Kenya, researchers have looked at the association between undernutrition and morbidity and educational participation as reflected by basic indicators such as grade attainment, grade retardation, school success and failure, etc. Findings cover the nutrition and health status of students, delayed school entry and grade retardation, school attendance patterns, the physical learning environment of schools, and the school health environment.[36]

Regarding the school's physical and health environment, the study's findings document and bring to a level of concrete evidence the dismally unhealthy state of most rural schools, including

- "Starkness and bleakness," "dreary and colorless learning space," "classrooms either underlit or over-illuminated and the associated problems of harmful glare, shadows, and extreme contrasts," which lead to eye fatigue, irritation, headaches, etc....The problem of glare poses a particularly intractable instructional challenge, since it seriously undercuts the usability of chalkboards, the main teaching tool in many schools."

- Less than a quarter of the sample of schools with ready access to a water supply, and few with adequate latrines, which are "either full or considered dangerous, therefore unusable (unbelievably filthy or simply unsafe in terms of having collapsing walls and floors or slippery floors).

- Overcrowding in classrooms, which is "conducive to the spread of common infections such as respiratory infections and skin and eye infections, common in many schools."[37]

The government and UNESCO presented findings to a large group of teachers and other stakeholders in a workshop in one of the rural districts where the assessments were carried out, as well as at a meeting in Nairobi. UNESCO plans to convene a meeting for countries in Eastern and Southern Africa to stimulate policy discussion. It also wants to assist in local initiatives tailored to specific health and nutrition problems of the area. Improving the condition of school facilities and health take high priority.[38]

Health and Sanitation through Water (HESAWA): Tanzania

A joint program between the government of Tanzania and SIDA aims to promote better environment and health in villages, starting with the schools as a focal point. Senior students were trained to survey and collect baseline data in their communities; at the same time children in the schools were screened medically in order to identify main health problems. Parents and community decision makers met to plan joint programs to improve the health of both students and their communities. School health clubs and village health committees were then established, village health volunteer workers were trained, and the planned activities were carried out by the schools and villages as a continuing activity. An evaluation of the program found these positive results, among others: (1) the school health package created awareness of environmental

sanitation-related problems, their causes, and solutions among the target populations, (2) communities were motivated to participate in implementing activities, (3) use of sanitary facilities (latrines, dish racks, refuse pits, and bathrooms) increased, and (4) government extension workers, teachers, parents, and community members cooperated in finding solutions.[39]

Health Clubs: Kenya

A pilot child-to-child project conducted in 35 primary schools in Nakuru District encouraged children to improve the sanitary environment of schools, most of which lacked such basics as sufficient latrines and refuse bins. The project had pupils, supervised by teachers, systematically clean courtyards. Food safes were constructed using local materials for pupils who brought lunch to school. In a second phase, students were taught to promote health techniques at home. The program took place outside the classroom in voluntary health clubs for students in Standards 5–8. An evaluation found positive results, but had no baseline data to draw on. As an extra-curricular activity, it attracted only children interested in joining a health club. It was not successful in training them to turn health concepts into practical activities or to become effective community agents. Another problem was that parents were not fully involved in decision-making or motivated to benefit from their children's knowledge or participate in the projects children proposed.[40]

Issues related to a strategy of improving the school's facilities and environment

Some of the issues of cooperation and jurisdiction suggested earlier in relation to providing health services apply also to strategies aimed at improving school facilities and environment. So does the issue of applying generic strategies to conditions that are not consistent from one school to the next. In addition, construction activities, which these are, raise the issue of maintaining what has been built. How can these interventions be designed and implemented so that improvements last?

Conclusions

A complete and up-to-date map of interventions that use the school to provide health and education services will take considerable digging. Beyond generalizations on what can and should be done, information is based only in many localized activities. Treatment and prevention of disease demands a local focus and strategy, due to the varying nature of conditions and disease prevalence. Those who are working in the projects cited herein make it clear that each region, each district, even each school, has its own health, sanitation, and safety problems, and that interventions must be tailored accordingly. Finding informative activities is also difficult because many are in early phases, and, with the exception of some health education efforts, we do not know to what extent they will prove successful and be sustained.

Even at this time, however, it seems evident that successful interventions will have at least two characteristics:

- Stakeholders are involved, especially at the local level. Health education projects that have not included parents and communities in decision-making have faltered.

- The policy environment is favorable. Our rough map reveals clusters of projects and/or multi-faceted interventions in certain countries—Kenya, Zimbabwe, Ghana, Guinea—where ministries of education and health are willing to cooperate and support local and donor initiatives.

Finally, it is worth noting that the bulk of activity is occuring in Anglophone Africa.

Improving the map

Once again, our map is sketchy and needs additions, corrections, and perhaps deletions. We invite participants in the meeting to inform us of other noteworthy uses of primary schools to provide health education and services.

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24. Ascroft, work cited.

25. See Dick, Bruce, "School Health Revisited," work cited.

26. See *Education-Health Linkages: A Guide to Resources*, work cited.

27. "Partnership for Child Development," http://www.zoo.ox.ac.uk/~child/pcd.html, and *The African School-Age Health Research Initiative: Summary Report of the Ghana Meeting (17-20 July 1995)* prepared by Timothy G. Evans and Hiroyu Hatao. Cambridge, MA: Harvard Center for Population and Development Studies.

28. Previous work cited.

29. Alayne Adams, HCPDS.

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32. Levinger, Beryl, "Critical Transitions: Home to School." (January 1996) Newton, MA: Education Development Center.

33. Barry Popkin, University of North Carolina.

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37. Previous work cited.

38. Susan Van der Vynckt, UNESCO

39. "The Status of School Health," work cited.

40. Ascroft, work cited.

Programs using schools as health intervention channels

Program	Country	Donor support	Info source	Status
School Health Programme (MOH):	Botswana		HCPDS	Developing strategies to promote school health.
Evaluation of program for school going children (Component of WB Basic Ed program)	Burkina Faso	World Bank	HCPDS del Rosso	(slow start)
	Cameroon		HCPDS	Training 2000 teachers; School health clubs; life skills education
	Cameroon	UNICEF	Dick	Curriculum: strengthening skills-based health education/life skills
*School Health Education Programme (SHEP)/ Ghana Partnership for Childhood Development	Ghana	Partnership UNICEF	HCPDS Dick	Health promotion; school feeding; school-based health services; healthy school environment; (Part: Cost-effective treatment of worms, nutritional deficiencies)
Health of School-age Children in Sub-Saharan Africa	Ghana	Clark Found. (Harvard)	HCPDS (A.Adams)	support to school of public health to evaluate rigorously life skills, health promotion programs
*Component of WB Basic Ed program	Guinea	World Bank	del Rosso	
Health Education Service	Guinea		HCPDS	Provide health services to schools and teachers
	Ivory Coast	UNICEF	Dick	Policy development on schools as safe environment
*	Kenya	UNESCO	van der Vynct	Extensive studies of school-age health nutrition needs
AIDS/HIV curriculum	Malawi	USAID	J.Hatch	Integrated K-12 curriculum by MOH; MOE "cooperative but not integrative" in implementing
*Component of Basic Education Project (PROSEF)	Niger	World Bank	HCPDS, del Rosso	started 10/95; health/nutrition services

Improving the Ability of Primary School Children to Learn Through Nutrition and Health Interventions	Nigeria	American Jewish World Services	HCPDS	
*Primary School Nutrition Program (?)	South Africa	Kellogg (support to evaluation)	Levinger	Planned evaluation of a school feeding program
*Tanzania Partnership for Child Development Project (UKUMTA)	Tanzania	Partnership	HCPDS Dick	deworming, health ed, micronutrient
UMATI (family planning organization)	Tanzania		HCPDS	nutrition and parasite control projects
	Tanzania	Unicef, Sida, Danida, Unfpa, Gtz, Usaid, Ilo	HCPDS	programs addressing health problems of school-age children
Health of School-age Children in Sub-Saharan Africa	Tanzania	Clark Found. (Harvard)	HCPDS (Alayna)	support to school of public health to evaluate rigorously life skills, health promotion programs
*School Health Education Programme (SHEP)	Uganda		HCPDS	health ed curric (prim/sec)
National Programme of Action for Children	Uganda		HCPDS	policy, health, nutrition, basic ed, child protection
	Uganda	UNICEF	Dick	school-based water and sanitation projects
*	Zimbabwe	UNESCO	van der Vynct	extensive study of school-age children's health/nutrition care needs
Health education; school health masters program	Zimbabwe		HCPDS	health ed teacher training
Health 2000 club	Zimbabwe		HCPDS	improves health facilities and conditions in schools
	Zimbabwe	UNICEF	Dick	Curriculum: strengthening skills based education/life skills

Add: Child to child
Family Life skills/Life skills

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