



## Health Education to Villages: An integrated approach to reduce childhood mortality and morbidity due to diarrhoea and dehydration; Maharashtra, India 2005 – 2010



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## Section I: Summary



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**Name of Project:** Health Education to Villages: an integrated approach to reduce childhood mortality and morbidity due to diarrhoea and dehydration; Maharashtra, India 2005 – 2010

**Region and Country:** Maharashtra, India.

**Name of Local Partners:** Government of Maharashtra - Health Services, IMR Nutrition Mission, United Nations Children's Fund (UNICEF) India and Education to Home (ETH) Research Labs.

This plan of action introduces Health Education to Villages (HETV), a network of programmes and organisations working in partnership to reduce childhood mortality and morbidity.

### Project Summary

The **goal** of this five-year project is to better educate the people of Maharashtra, especially health-care providers, mothers, and children, about basic health practice, sanitation, and child care, with a primary focus on diarrhoeal diseases and the use of oral rehydration therapy (ORT).<sup>1</sup> The **purpose** of this plan of action is to improve the health, and therefore the quality of life, of all citizens, especially mothers and their children in rural villages and urban slums.<sup>2</sup> More specifically, the purpose of this project is to decrease the high child mortality rate resulting from dehydration caused by diarrhoea, and also to decrease the prevalence of diarrhoeal diseases, through targeted health educational programmes. More generally, this project will develop an education network to train mothers and health-care providers in proper health practices, with the aim of expanding this network in the future to include more regions of India and more areas of health education. This journey is only the beginning. We hope to build on it and root it into the good health landscape of Maharashtra. We hope it can serve as a learning experience for other parts of India.

At present, the people of Maharashtra lack much of the basic information and resources necessary to improve their health and reduce the incidence of disease and child mortality. Either they do not have access to accurate information, especially in rural areas and among those who cannot read or write, or they have received mixed, inconsistent, or insufficient messages about proper health practice. In the case of diarrhoeal diseases, for example, the message of correct management simply has not reached its audience in a consistent and sufficient way. **After 37 years of ORT knowledge and more than 15 years of promotion of a variety of ORS Programmes, 42% of mothers in Maharashtra still believe that a child with diarrhoea should receive less fluid and less food than normal.**<sup>3</sup> This belief is entirely inconsistent with any form of proper diarrhoea management, and speaks to a deep lack of understanding of dehydration, the real danger of diarrhoea. Clearly, even when a well-intentioned message like ORT reaches a fairly large number of people (65% of mothers have at least heard of ORS), without basic education of the meaning of that message, the message loses its effect substantially.

The HETV project will expand the education of health-care providers, mothers, children, and communities in several targeted areas of health, water, hygiene, and sanitation. The project will use an aggressive, focused, comprehensive approach to spread consistent health messages, and in a manner and order such that the goal of these messages – better health for mother and child – will reach all its audiences.

<sup>1</sup> Throughout this document, ORT refers to administering by mouth, frequently, small quantities of fluid, often a solution of sugar, salt and water in order to replace fluids and electrolytes lost during diarrhoea. ORT includes, but is not limited to, solutions made from packets of oral rehydration salts (ORS).

<sup>2</sup> This plan often uses language of "village" and "community." Even when not mentioned explicitly, these targeted audiences include urban slums as well.

<sup>3</sup> National Family Health Survey, 1998-1999 (NFHS 2), Maharashtra. Unless otherwise noted, all further statistics in this document come from NFHS 2.

**The activities of the project** will enable HETV, through multiple, on-going, discrete yet integrated programmes, to promote proper health practices and certain necessary health resources to the mother at the village level. Health workers and other medical professionals will receive supplemental education at the same time, so that they may teach and reinforce the information available to mothers and communities. The programmes are grouped into four target areas, and address specific problems within these areas: health education to mothers, educating health-care providers, safe water management, and educating the whole community.<sup>4</sup>

This grouped approach will achieve rapid transfer of knowledge in an organized and comprehensive manner, so that all target audiences are reached with the information they need to know. Many of the programmes, such as the Mother Child Protection Card computer based training (CBT) programme and the *Facts for Life* Marathi wall calendar, will incorporate built-in sustainability and monitoring. In the former, for example, the process of certification and required yearly recertification will assure both the supervision and continuation of the programme in the long term, and in the latter, the prospect of yearly reprinting allows permanent sustainability, integrated with a continuation of health days and health educational mass media events scheduled on the calendar. Long-term monitoring in the form of surveys and success statistics will be conducted by the government of Maharashtra and the National Family Health Survey (NFHS), and HETV will work closely with the government to incorporate feedback and revise the programmes for increased efficiency and efficacy.

## Section II: Project Rationale

### What problems will the project address?

This project addresses the primary health concerns of the 100 million people in Maharashtra, especially women and children in rural areas and urban slums, who live in very poor health or die young from the diseases of sub-standard health, water, hygiene, and sanitation. 40% of both mothers and children in Maharashtra are chronically undernourished, and under-five mortality occurs at 58 deaths per 1000 live births, or 1 in every 17 children. A very large number of these deaths are caused by dehydration from diarrhoea, the most easily preventable cause of childhood mortality. We recognize that widespread diarrhoeal diseases, malnutrition, and high child mortality result first and foremost from poverty, the eradication of which is beyond the scope of this project. But, in the area of health education, there are many possible improvements we can address in the short-term, using the resources and infrastructure already in place. This project will address problems relating to mother and child health, with a primary focus on diarrhoea, in the following areas:

**1. Health Education to Mothers.** A healthy and educated mother can dramatically improve the health of her child. Mothers in Maharashtra, however, currently have little or no access to information or materials relating to proper child care, and even when information is available, it often does not target the more than 20 million women in Maharashtra who cannot read or write. Without sufficient and understandable information, mothers are not properly equipped to look after the health of their children and themselves in the best possible practice, given their limited resources. This project will educate mothers about several key issues which relate immediately to diarrhoeal diseases but carry over into many other important areas of child health.



- **Diarrhoea management.** If ORT and other sound diarrhoea management measures were administered early and correctly, mothers could prevent up to 90% of diarrhoeal deaths.<sup>5</sup>
  - **Increased fluid intake.** As mentioned in Section I, mothers need much more education about when and how to use ORT. Only 65% of mothers in Maharashtra have ever heard of ORS, only 50% use any kind of ORT when a child has diarrhoea, and only 33% use ORS. And even more grave, of the 50% who do use ORT, only 14% give increased total fluids. This absolute contradiction of understanding – that a mother could give a child a solution designed to facilitate the rapid absorption of fluids by the intestinal lining, and then give this same child *less* total fluid than normal – is the

<sup>4</sup> See Section II for an in-depth discussion of the problems addressed in these areas, and see Section III for discussions of the specific programmes addressing these problems.

<sup>5</sup> UNICEF, *Oral Rehydration Therapy: Elixir of Life*, 1997.

most clear indicator available that the message of ORT simply has not reached mothers in a way they can understand, and that a new approach is necessary.

- **Continued feeding.** In addition to more fluid, children with diarrhoea need to receive more food and more breast milk than normal, both during and after an episode. There is a widespread misconception among mothers in Maharashtra; however, that a child with diarrhoea should be given less food until the episode is over.
- **Recognizing signs and degrees of dehydration.** In order to prevent deaths, mothers must also be better educated about how to recognize signs that a child is in danger. Clearly, mothers must learn when and why to give more fluids, but they must also learn when to seek immediate medical care. For example, while only 41% of mothers in Maharashtra can correctly identify symptoms suggesting a child needs medical treatment for dehydration, 77% take a child with diarrhoea to a health facility. If mothers could recognize and treat dehydration early on at home, the great majority of these children would not need additional medical care. In this way, better practice would save mothers the trouble and expense of travelling to the health centre (and also prevent them from spending money on unnecessary drugs), and it would release some of the burden on health facilities.
- **Zinc supplementation** has emerged in recent studies as an effective method, along with ORT, to prevent deaths from diarrhoea. According to research conducted by USAID, UNICEF, and WHO, zinc supplementation during an episode of diarrhoea, combined with correct use of ORT, can reduce a child's chance of death by up to 50%, and it can decrease the child's susceptibility to diarrhoea and other diseases for up to three months after the episode. Since these and other benefits of zinc are not yet widely known, there is great potential to promote this supplemental treatment for diarrhoea, which is cheap and easy to distribute, to mothers throughout Maharashtra.
- **Diarrhoea prevention.** With better education about prevention, mothers could reduce the prevalence of diarrhoea, and many other diseases which are caused by similar health conditions.



- **Timing births.** Children born to mothers under the age of 18 are far more susceptible to diarrhoeal diseases, yet women aged 15-19 account for 26% of all fertility in Maharashtra. Children born less than 24 months after a previous birth are also far more susceptible to these diseases, and 31% of all births in Maharashtra occur less than two years apart. Compounding these dangerous factors, statistics show that mothers aged 15-19 are the most likely to give birth within two years of a previous birth, and that young mothers are also the least likely to know about proper diarrhoea management.
- **Breastfeeding and child feeding practices.** Two thirds of all child deaths annually are associated with inappropriate feeding practices, mostly in the first year of life. The Indian National Guidelines on Infant and Young Child Feeding quite clearly recommend exclusive breastfeeding for a child's first six months, with complementary feeding for up to two years, as well as feeding the child colostrum (first breast milk) within the first half hour after birth.<sup>6</sup> Yet only one third of all mothers in Maharashtra feed their newborns colostrum, which contains antibodies necessary to fight disease, and only 16% practice the early initiation of breastfeeding. Also, only 55% of children in Maharashtra receive exclusive breastfeeding in their first three months, and even less for the full recommended six months. After six months, only 34% of mothers begin suitable complementary feeding of nutrient-rich foods, which is recommended for all children at six months, and which is

<sup>6</sup> Government of India, Department of Women and Child Development, Food and Nutrition Board, *National Guidelines on Infant and Young Child Feeding*, 2004.

necessary for making children less susceptible to diarrhoea, which is most likely to occur between 6 and 11 months of age.

- **Measles immunization.** Immunizing a child against measles is one of the most important measures a mother can take in preventing diarrhoea. While 84% of children in Maharashtra do receive a measles vaccination, that number is still far from the goal of 100% coverage. Also, only 68% of children receive this vaccination in the first year of life, the year in which most deaths from diarrhoeal diseases occur.

**2. Educating Health-care Providers.** Improving and monitoring the education of health workers is a necessary step in ensuring better health for mothers and children, and in preventing and managing diarrhoeal diseases. With so many mothers who cannot read or have limited education, and without any widespread structure of adult education, health workers provide the means to bring correct health information and materials to mothers. Health workers are also the first line of defence for a child who is ill enough to require treatment, and the actions of the health worker are crucial to the survival of the child. According to NFHS 2, "[diarrhoea management] figures indicate poor knowledge about proper treatment of diarrhoea not only among mothers but also among health-care providers. The results underscore the need for informational programmes for mothers and supplemental training for health-care providers that emphasizes the importance of ORT, increased fluid intake, and continued feeding, and discourages the use of drugs to treat childhood diarrhoea." Information by itself is not enough. It has to be communicated. It has to be received. It has to be understood. It has to be used to make the desired change. This plan addresses this need for supplemental training in several areas.



- **Training process for the Mother Child Protection Card.** The Indian government has standardized the health information a mother receives upon the birth of a child in the form of the Mother Child Protection Card. The benefits received from this card are greatly dependent upon the training of health-care providers, who must teach and reinforce its messages, and instruct mothers on how to use the card. The current process of classroom trainings, however, will take several years for health workers to have learned the programme, and these trainings do not include a certification process to ensure the quality of knowledge a health worker has acquired.
- **Correcting dehydration.** As noted above, health-care providers, like mothers, need further training on recognizing symptoms of dehydration and properly managing diarrhoea, and on promoting these practices to mothers. It is usually diarrhoea which first brings babies into contact with doctors and the health system, and therefore, diarrhoea provides the first opportunity for health workers to educate mothers early on about proper child care practices. For many mothers, however, this first educational opportunity too often provides them with incomplete or unclear messages.
  - **Increased fluids.** Of the 77% of children with diarrhoea in Maharashtra who are brought to a health facility, only 9% receive increased fluids, all of which is administered in the form of an IV, and the number of children who receive any form of ORT is negligible. Using IV is expensive for both the health facility and the family, and in cases when it is not entirely necessary (most cases), it can do more harm than good in the long term by setting a poor example to the mother and not promoting the use of ORT in the home.
  - **Preparation of home-made and packaged solutions.** Studies have shown that in the case of both ORS and home solutions, health-care providers at several levels often themselves cannot correctly measure one litre of water. And in the specific case of home solutions, there are further confusions among measurements of sugar and salt, such as variations in size of pinches, spoons, and water vessels, which all make the task of measuring such solutions far more difficult.
  - **Anti-diarrhoeal drugs** are widely known to be ineffective and often harmful in the treatment of severe diarrhoea. They are a distraction from dehydration, which is the real danger. They are capable of further dehydrating the child, and they are an unnecessary expense for the

mother. In Maharashtra, however, of the 77% of all children who are brought to a medical facility when ill with diarrhoea, 78% receive some form of anti-diarrhoeal drug (pill, syrup, or injection). In many of these cases, health workers not only endanger the health of the child, but they also set a poor example for the mother, making it much less likely that she will understand the danger of dehydration or manage diarrhoea properly at home in the future.

**3. Safe Water Management.** Unclean water is the number one cause of diarrhoea and many other diseases, and in Maharashtra, there is great room for improvement in the areas of access to clean water and knowledge of water disinfection, harvesting and storage.



- **Water disinfection** can be quite effective in managing soiled water and preventing the spread of disease. In Maharashtra, however, 44% of all households do not attempt to purify water at all, and of those that do, the most common method by far is to strain water through a cloth, which offers little or no disinfection of disease-causing agents. Only 18% of households (13% rural) boil or filter their water, and predictably, diarrhoea occurs much less frequently among these households than in those that do not boil or filter water.

**4. Educating the Whole Community.** Diarrhoeal diseases will be eradicated in Maharashtra only with a much wider effort involving high-level political leadership, social mobilization, engagement of the private sector, and partnerships between the health community and variety of other industries, especially in the areas of electronic and print media. These efforts are necessary to achieve a high level of awareness in the cultural consciousness about diarrhoea or any other health concern.



- **Young female education.** In Maharashtra, 96% of villages have a primary school, while only 41% have a secondary school. Female school attendance remains high (90%) until age ten, but drops to 54% from ages 15-17, the time when reproductive rates begin to soar (women aged 15-19 account for 26% of total fertility). These numbers speak to a great need for partnerships between primary school education and health education. If female children were educated about basic health and sanitation early on, they would have a much better foundation of knowledge both to pass along to the mother and family, and perhaps more importantly for the long term, to use when they themselves become mothers. Within the existing structure of society, it is much easier to educate a child than a mother (especially if the mother cannot read), so educational programmes must target the female while she is still in school.
- **Toilets and latrines.** In Maharashtra, 85% of rural households and 54% of all households have no access at all to a toilet facility. While the Indian government is making great strides in the availability of toilets, increased advocacy and education will be necessary to convince people to use the toilets, to create separate male and female toilets in schools, and to promote proper practices of hand washing with soap and water after using the toilet.
- **Social mobilisation of Boy Scouts.** The scout movement and other youth organisations provide a potential army of infrastructure and willingness to do good works, already in place, that could be used to further the messages of rehydration and health education. Promoting health education to the Boy

Scouts, specifically relating to family and child care, could address at an early age the need for men to take greater responsibility for caring for their children and families.

- **Mass media.** 70% of all women in Maharashtra are regularly exposed to some form of mass media, and growing numbers of villagers are gaining access to television and radio. If all the available media were employed to spread timed, consistent health and diarrhoea management messages, a wider general health consciousness could be achieved in a very short amount of time. With regular television and radio broadcasts, Internet and satellite technology, posters, printed material, and community events all moving at the same time, Maharashtra could move much more quickly towards its health educational goals.

### Section III: Programmes

Programmes will be supplemented and supported by booklets, leaflets, posters and informational guides in Marathi and English, and made freely available at health worker stations, hospitals, schools, and more. No claim for originality of the programmes is made by HETV. We acknowledge our gratitude to the many people and sources whose work has been drawn freely upon. We thank them all.

#### Health Education to Mothers:



[Nurturing newborns and their mothers](#) — Skilled attendance during pregnancy, childbirth and the immediate postpartum period. Mothers will be provided with training for breastfeeding from the nurse or midwife, encouraged about the importance of providing colostrum within the first half hour after birth, and advised about other questions they may have about their newborn or postpartum period.

[Diarrhoea Management](#) — Intended to target mothers' confusion and lack of understanding about how to recognize, assess the degree of, and treat diarrhoeal dehydration. Mothers will be taught the crucial need for immediate fluid replacement, increased fluids and food, instructions on how to correctly prepare home-made and packaged ORS, cereal-based ORS, when and why to use it, and continuous feeding, including breastfeeding.

[Breastfeeding](#) — Protect against diseases through the promotion of clear guidelines about proper feeding practices and the benefits of immunity. Promote the practice of providing colostrum to the child within the first half hour after birth, exclusive breastfeeding during the first six months of a child's life, with appropriate complementary feeding from six months and continued breastfeeding for two years or beyond, with supplementation of vitamin A and other micronutrients as needed.

[Timing Births](#) — Encourage the culture of having children later in life and having a child at least 24 months after a previous birth. Reduce health risks for children born to mothers under the age of 18 by educating about the importance of timing births as it relates to the dangers of diarrhoea.

[Measuring Sugar, Salt, and Water](#) — Correct the confusion created by years of mixed messages regarding measurement of the ingredients in rehydration solutions. Mothers will receive a plastic one-litre bottle, with a label about how to recognize signs and degrees of dehydration, how to prepare home fluids for rehydration, and how to mix and prepare home-made and packaged ORS. Additionally, they will receive a 2-sided spoon to correctly measure salt and sugar.

[Zinc Supplementation](#) — Prevent deaths from diarrhoea and decrease child susceptibility to diarrhoea after episodes by educating all health-care providers and mothers about zinc supplementation. Through focused and integrated campaigns, and through partnerships with local manufacturers, we will increase availability of zinc supplements.

[Facts for Life Wall Calendar](#) — This 13-month calendar, corresponding to the 13 Facts for Life messages, makes life-saving information easily available to everyone. It presents important health information about an issue or concern that every family has a right to know. The messages are simple, and people in Maharashtra can act on them. The calendar will also indicate state health days, and health educational mass media events.

**Educating Health-care Providers:**



[Mother Child Protection Card - Computer Based Training \(CBT\)](#) — Provide a monitored, consistent, and expedited health worker training process, including a certification program, for the Mother Child Protection Card. The CBT will accelerate the current pace of training to health workers by using over 1,000 computer literacy centres throughout Maharashtra. This will provide a better learning experience through interactive computer exercises, and, when necessary, give the option to complete an individual training module at a modified pace.

**Electronic Resources** — For those who have access to the internet or a computer, a comprehensive, up-to-date body of material about diarrhoea, dehydration, oral rehydration, water systems, hygiene, sanitation, and much more will be available.

- [Online Resources](#) — The portal [hetv.org](http://hetv.org) provides a comprehensive set of resources relating to health education. Materials can be downloaded for offline research or printed for easy dissemination.
- [Health Resources CD](#) — For those without Internet access, all these resources will be available on a CD which will be freely distributed to health care providers, educators, reference libraries, doctors, schools, universities, and hospitals in Maharashtra.
- [HETV Webcast](#) — Online health education videos for mothers, health care providers, medical specialists, doctors, and students. These videos can be easily transferred for news, TV, or radio broadcast.



[Education Satellite](#) — Enhance the current knowledge of diarrhoea management by facilitating lectures and training courses which will allow for dialogue and interaction of hundreds of people simultaneously. Key health issues will be taught and discussed by doctors, medical specialists, medical students, and health care providers at the existing 100 virtual learning centres in Maharashtra with video conferencing facilities linked by satellite.

[Cloth Health Guides](#) — Health workers will inform mothers, especially those with limited education or who cannot read, using this series of washable, easily transportable, and simple-to-use health guides. These handkerchiefs with drawings, diagrams, and graphs, contain useful health information, and will be distributed to health care providers throughout Maharashtra.

[Measles Immunization](#) — Promote measles vaccination within the first year of a child’s life to reduce incidence of diarrhoea. 100% immunization coverage against measles is the programme goal.

## Safe Water Management:



**Safe Water Systems** — Water quality interventions that employ simple, inexpensive and robust technologies appropriate for the developing world. The objective is to make water safe through disinfection and safe storage at the point of use. The basis of the intervention is: point-of-use treatment, safe water storage and behaviour change techniques.

**Water Disinfection** — Treat soiled water and prevent the spread of disease by promoting the practice of boiling water and the usage of chlorine, iodine, or even household bleach, to conduct home water disinfection. Health workers will be trained to use these practices, and will convey the techniques to mothers.

**Solar Disinfection** — Disinfect soiled water with this free and easy technique using solar radiation. This simple process of filling transparent containers with water, and exposing them to full sunlight for about five hours, destroys pathogens in the water.

## Targeting the Whole Community:



**Partnership of Health and Education** — Educate all school children, especially young girls before child-bearing age, about important health information. A partnership between the Ministries of Health and Education in Maharashtra will include the teaching of proper health practices within the curriculum.

**Toilet Facilities in all Schools** — Encourage and contribute to developing the necessary partnership between the state of Maharashtra and the Government of India's programmes to establish toilet facilities in all schools. The Indian government has launched a focused campaign to increase the households in the country that have toilets by 2010. Additionally, we will target the urgent need for separate toilets for boys and girls, together with a hand-washing facility in every school in Maharashtra.

**Usage of Soap and Water** — Promote the habit of washing hands with soap and water to decrease episodes of diarrhoea. To ensure the sufficient availability of soap, partnerships with local manufacturers will be used to promote this practice.

**Television Broadcasts** — Educate the entire community about health issues through documentaries, commercials, news programs, public service announcements, and other TV programs. The broadcasts, linked to the *Facts for Life* Calendar, will advertise health days and other monthly TV health shows.

**Radio Broadcasts** — Educate the general public and mothers about health issues through an informal dialogue in various radio formats (interviews, documentaries, quiz shows). The radio programmes will educate with the same messages as the TV broadcasts, but will reach a wider audience.

**Social Mobilisation of Boy Scouts** — Educate and encourage young boys to be health conscious members of society, and to convey important health messages to their families and the community. The Boy Scouts will partner with the government of Maharashtra, attend school events and public fairs, organize rallies and fundraisers, create and distribute handouts.

[Health Messages on School Notebooks](#) – Educate school children about health issues in descriptive messages, cartoons, and animation printed on their notebooks. Young school-children will see these key health messages almost every day to encourage them to become health conscious members of society, and to convey important information to their families and the community.

#### Section IV: Long-term Goals and Conclusion

##### Lessons drawn on and new approaches



**The lessons of mixed and inconsistent messages** – The HETV programmes draw their design from areas in which health information has not reached its target audience, or has reached this audience in an inconsistent and confusing manner. The two most poignant examples already discussed are those of mothers giving children with diarrhoea *less* fluid and food, and of health workers prescribing anti-diarrhoeal drugs instead of giving increased fluids. Either the message simply does not reach its audience, or if it does, it is not in a way which that audience understands. If a mother hears about the benefits of ORT, for example, and then a health worker gives her child not fluids, but drugs, the message reaching her is quite inconsistent. Or even when mother hears correctly about the benefits of ORT, she may lack the tools or instructions to correctly make the solution, or even to measure one litre of water.

**An integrated approach** – This project, with the help of partner organisations, will improve upon the lessons of mixed or inconsistent messages by providing more information, better targeted to reach specific audiences, and with the consistency necessary for the information to fully reach these targeted groups. The new approaches to achieve these improvements will involve the integration and leveraging of programmes so that messages presented to specific audiences are connected in a coherent and understandable way. The computer-based training of the Mother Child Protection Card, for example, is an enhancement and acceleration of the training of health-care providers tied into an already existing government programme, so that health workers are taught to reinforce the messages already being used in the programme, rather than confusing mothers with a different message. Another highly integrated programme is the *Facts for Life* calendar, which uses the very well-established messages of *Facts for Life* and reinforces a different message each month. This calendar will also integrate with HETV mass media events, so that a mother may look at the calendar to see what day a television programme, radio broadcast, or community event about health practice will take place, and the information of these mass media events will in turn be consistent with *Facts for Life*, the Mother Child Protection Card, and any other materials or messages of the HETV programmes in Maharashtra.

##### Monitoring and sustainability

Several of the proposed HETV programmes incorporate a built-in sustainability and monitoring structure. Also, the integrated nature of the programmes assures that the monitoring of one programme can incorporate the monitoring of a linked programme, which is true for long-term sustainability as well. For example, the computer-based training of health workers will require a periodic recertification which will monitor and reinforce the messages being passed from health worker to mother. The event of each recertification then provides an opportunity for the health worker to receive new educational materials, such as the next year of the *Facts for Life* calendar or the most up-to-date posters and pamphlets, to distribute at the village level. This leveraging of programmes assures the sustainability and continued monitoring of the training of health workers as well as the continual education of best practice information to the mother.

Correctly educating mothers, health workers, and children in the community, combined with a greater availability of resources like toilets and clean water, is a form of sustainability itself. As proper knowledge spreads from person to person into a heightened culture of awareness, capacity-building allows communities greater control over their health status. Each mother, child, or health-care provider empowered with better knowledge and the desire to share that knowledge is an agent of sustainability herself.

## Long-term benefits of the HETV network

While diarrhoeal diseases are the primary focus of the HETV programmes in Maharashtra, the design of the project will allow it to expand into other health concerns and other regions of the world. This effect will take shape in several ways:



- **General disease prevention.** The educational attempts to combat diarrhoeal diseases will necessarily combat other diseases which are caused by similar health conditions. If mothers become better educated about timing births, exclusive breastfeeding, and water disinfection, for example, their children will be much less susceptible to acute respiratory infections, malaria, and a host of other diseases as well. Better health education, put simply, will create better health in all areas.
- **Network expansion.** Once the HETV network and partnerships are in place – with computer-based training available at over a thousand computer literacy centres in Maharashtra and eventually all over India, with an education satellite allowing for video-conferenced health lectures, with health workers using tested materials to teach mothers about best practice – any message could rapidly travel through this network. With a new language layer substituted in the CBT programme, or with a new topic for a series of EDUSAT lectures, these programmes could be quickly adapted for other regions of India or for any country in the world. If an AIDS advocacy organisation or a social equity group, for example, wanted to use the HETV model for a different message and then distribute it to the locations already in use, the training could be under way in just a few months.

## Conclusion



The root cause of many health problems in India is poverty, not diarrhoea, dirty water, or lack of information. These more direct causes stem always from a lack of economic resources among disadvantaged populations, and a lack of basic needs such as toilets, clean water, and sufficient food. Without food and water, a malnourished population is far more susceptible to disease, which further cripples the economy, leaving marginalised groups stuck in a cycle of poverty, malnutrition, and illness. As such, the major killers of children in India can only be fully eradicated when a more equitable economic and social order is achieved. However, significant improvements are possible in the meantime, and the incredible opportunities of our time create the potential for these improvements to take place far more rapidly than we might have imagined in the past. With over 500,000 children dying yearly in India from diarrhoea and water-related diseases, there is no time to wait. It is the moral responsibility of governments, private organisations, and civilians – of anyone who can help – to work toward ending the cycle of such preventable diseases.

This HETV plan of action deals with broad programmes involving large numbers of people, and it often cites statistics to discuss the health concerns of these people. We wish to remember, then, that every statistic is comprised of a large number of individuals – individuals loved by their families and communities, and individuals who work hard to contribute to those communities. Too many of these individuals die before having a fair chance at life, and many more live, but are left to lead a life forever handicapped by a childhood of hunger, illness, and both physical and mental underdevelopment. Behind all our efforts is the sense that every life has enormous value, and every unnecessary and avoidable death is a great tragedy. We wish to remember, finally, that health education is at its core an attempt to value these lives, and that a new order of health can be achieved to save these lives, which is our true goal and purpose.