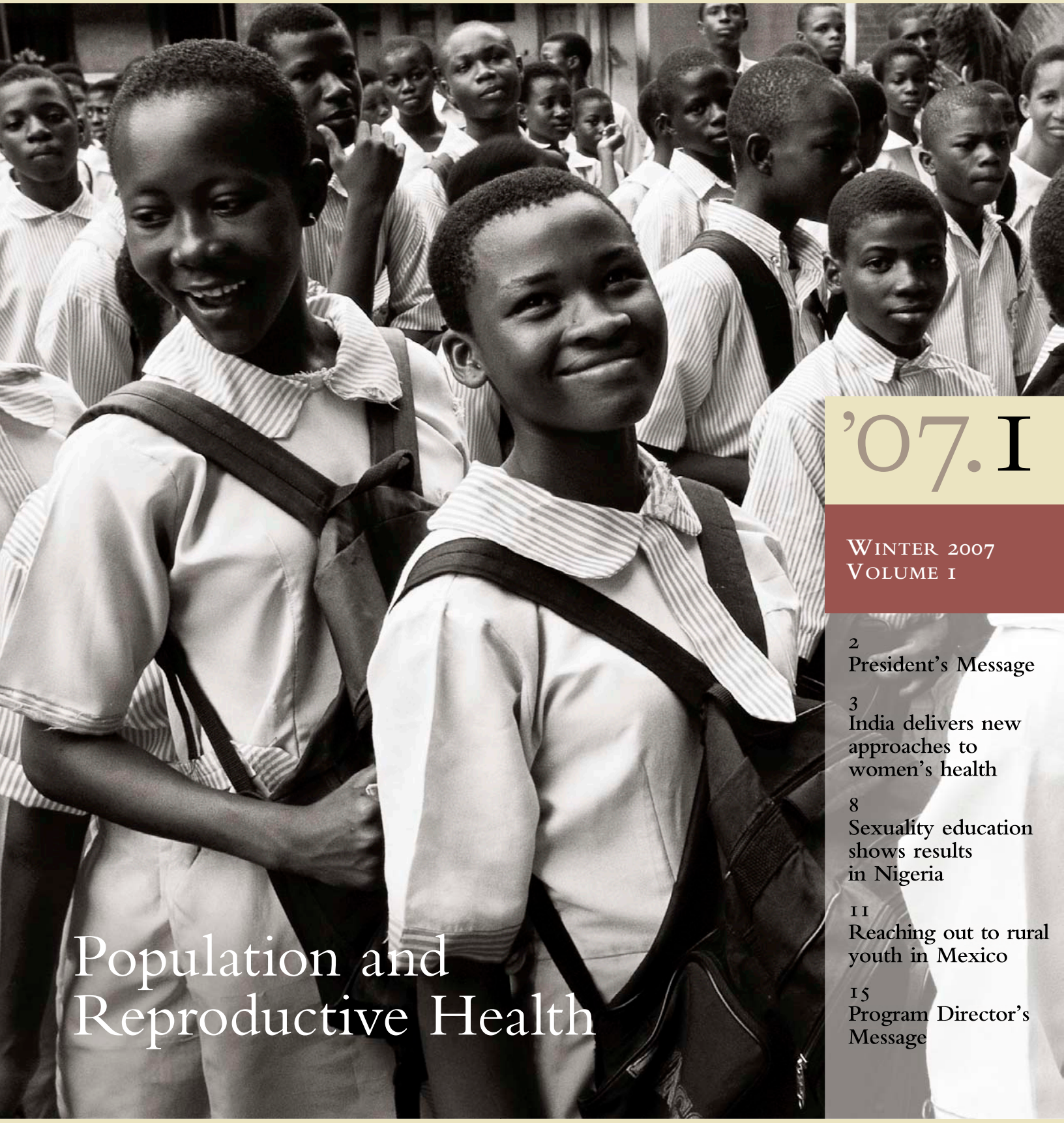
MacArthur

A newsletter from The John D. and Catherine T. MacArthur Foundation



Population and Reproductive Health

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Population and reproductive health

Despite historically low birth rates in North America and much of the developed world, global population is expected to increase by more than 40 percent to 9 billion over the next 50 years. About 1.5 billion people between the ages of 10 and 24 are currently living in the developing world, about to enter their childbearing years. There are more young people in the world today than ever before. The decisions this generation makes about when to start their families, how many children to have, and how far apart to space their births may determine whether the world's poorest countries can advance toward greater prosperity.

Pressure from this large cohort of young people is only part of the demographic challenge. Survey data suggest that about 120 million women in the Global South would prefer to avoid pregnancy but are not using contraceptives. For those who do give birth, their risk of death is exponentially higher than for women in North America or Europe (one out of every 16 women in Africa will die due to complications from childbirth, compared to one in 2,800 in the developed world). There are more than half a million maternal deaths in the developing world each year, most of which could be avoided with even the most basic maternal health services and care.

The MacArthur Foundation has been active in the field of population and reproductive health since 1986. During two decades in the field, MacArthur has awarded $215 million to almost 1,000 organizations and individuals.

From the beginning, our approach has emphasized the importance of reproductive rights and health. Since the 1994 International Conference on Population and Development (ICPD) in Cairo, these issues have become central to poverty reduction and health care. In the early years of MacArthur's program, we offered support to individuals with strong leadership potential through the Fund for Leadership Development [see article on page 14 of this newsletter]. MacArthur's investments in these leaders contributed to the paradigm shift reflected in the ICPD's "Programme of Action," which was endorsed by 179 countries.

Today, MacArthur's Population and Reproductive Health program has four interconnected components. We assist international organizations that sustain the infrastructure of the field, such as the International Planned Parenthood Federation and the Population Council. We support organizations that influence policy and resource allocation through targeted advocacy. We fund research — programmatic, clinical, and social science investigations into key issues of effectiveness and policy. And we support field-level programs in India, Mexico, and Nigeria — three countries that account for about a quarter of all women of reproductive age, as well as a quarter of all young people in the developing world.

In our focus countries, MacArthur's grantmaking is designed to help reduce maternal mortality and to help educate young people about their reproductive and sexual health. Reducing maternal mortality is a worthy goal in itself, but it is also the best indicator that women are receiving the reproductive health services they need. We believe that when they are, they will make sensible reproductive choices that are right for them and for their families. MacArthur focuses on educating young people because the choices they make today will help determine the size and well-being of the world's population tomorrow.

We believe that by concentrating MacArthur's limited resources on two critical issues in three key countries, we can learn and demonstrate how a mix of civil society advocacy and action can be combined with sensible government policy to help take good work to scale. In order to expand care and services to women and young people, MacArthur is supporting carefully selected model projects in each of our focus countries and providing assistance to help scale them up where warranted.

For example, several MacArthur grantees in India have developed training programs to expand the pool of health workers able to provide obstetric care to India's vast rural populations (see "India delivers new approaches to women's health," page 3). Because of the promise of one such effort by the Federation of OB-GYN Societies of India (FOGSI), the Indian government has asked them to adapt their training programs for use countrywide. Indeed, $450,000 from MacArthur to train general medical practitioners in emergency obstetric care has stimulated an additional $4.75 million from the Indian government to expand the project from three training centers to 20.

MacArthur's grantmaking also recognizes the value that nongovernmental organizations can contribute to government programs. In Nigeria, MacArthur grantees are working directly with State Ministries of Education to implement a sexuality curriculum in six states (see "Sexuality education shows results in Nigeria," page 8). In Mexico, our partners are working with a government program called IMSS Oportunidades to bring information and services to young people in rural Mexico (see "Reaching out to rural youth in Mexico," page 11). In both cases, these nongovernmental organizations had the experience and specialized expertise that government agencies needed to improve their work.

At the core of our grantmaking, we believe that proof of what works should drive our efforts and help shape the field. To this end, MacArthur has begun to invest in research that explores the links between population dynamics and economic well-being. We hope that researchers will be able to recommend strategies to help governments take advantage of the opportunity that current population trends may offer: a "bulge" in the number of people just entering their most productive years, known as "the demographic dividend." Researchers note that fewer births in developing countries increase the proportion of adults able to contribute to the economy without the burden of additional dependents. The investment dollars freed up as a consequence of lower fertility may be able to be used to strengthen economic development and social well-being. Evidence from East Asia suggests that as much as one-third of its growth in the 1990s may have been the result of such dividends. Can this success be replicated? Research MacArthur is supporting aims to provide an answer.

We realize that MacArthur's contribution to the field is small compared to the challenges we face. But we hope this newsletter illustrates how our current strategies take advantage of the best of research and practice to develop approaches and policies that contribute to improving the health and well-being of the world's population.

Jonathan F. Fanton
President

Training maternal caregivers: India delivers new approaches to women's health

Above: A group of mothers in India listens to a presentation on health.

Cover: Nigerian students wait outside of their school. Nigeria is one of three countries that are the focus of MacArthur's population and reproductive health grantmaking.

An organization that combines the philosophy of Mahatma Gandhi with the science of modern medicine did what many considered impossible — dramatically reduced newborn deaths and improved women's health in one of India's most impoverished regions. Founders Abhay and Rani Bang, physicians committed to working with India's poor, demonstrated how in a region where 95 percent of all births take place at home, often hundreds of miles from a hospital, it was possible to reduce newborn death by 70 percent, complications from pregnancy and delivery by nearly 75 percent, and the need for

Right: SEARCH trains health care workers, like the woman on the left in the photo, who visit women at home during their pregnancies. They also assist during delivery and make post-partum visits.

emergency obstetric care by more than 30 percent. They accomplished this by training teams of women in rural villages — many of them illiterate and others with only a few years of education — to provide home-based mother and newborn health care ranging from basic hygiene to treatment of pneumonia and infant resuscitation.

"Most doctors tend to work in hospitals in cities, so we don't see the women and babies who are sick and die because they don't make it to the hospital," says Abhay Bang, who with his wife Rani founded Society for Education, Action and Research in Community Health (SEARCH) in Gadchiroli in the central Indian state of Maharashtra. "The standard recommendation to a woman who needs medical attention is, 'Go to the hospital' — but in rural parts of India there are so few doctors that this is like telling her, 'Do nothing.' We decided to follow Gandhi's message to go to the villages. Instead of waiting for people to come to us, we found a way to take the care to the people."

Leveraging change

In India, more than 100,000 women die each year due to complications of pregnancy and childbirth, most within 24 hours of delivery — nearly 20 percent of the global maternal death toll. And for every maternal death in India, there are 10 newborn deaths — a total of 1.1 million, or one-quarter of all newborn deaths worldwide.

Most of these deaths occur because the women do not have access to adequate medical care. In fact, nearly 50 percent of women in India deliver at home with untrained birth attendants, which dramatically raises the risk of death for both mother and child. Recognizing this challenge, the Indian government has committed to increasing the number of hospitals and clinics, especially in rural areas. However, building up the infrastructure is a long-term process, and in the interim the government is looking for other ways to expand services and improve care.

"Delivering health services in India, especially in the rural areas, is a challenge the government cannot tackle on its own," says V. K. Manchanda, deputy director general of maternal and child health for India's Ministry of Health and Family Welfare. "Many nongovernmental organizations have the expertise and reach at the local level we need to develop effective strategies." The government is now partnering with a number of MacArthur grantees to expand services

Research to reduce maternal mortality

In addition to support for model programs, MacArthur funds research to help reduce maternal mortality in its focus countries of India, Mexico, and Nigeria. The following are examples of support for research.

Massachusetts Institute of Technology, Poverty Action Lab
$165,000 to provide research assistance to a local Indian organization, Seva Mandir, to introduce and test the value of a voucher system for paying birth attendants during deliveries in the state of Rajasthan.

The Guttmacher Institute and the Campaign Against Unwanted Pregnancy
Two grants totaling $640,000 for research on the causes and consequences of unwanted pregnancy and induced abortion in Nigeria.

Asesoría, Capacitación y Atención en Salud
$180,000 to study the availability and accessibility of maternal health services for an area of the state of Chiapas with one of the highest maternal mortality ratios in Mexico.

Replacing hope with strategy

Scaling up model programs

When a maternal health program is successful on a small scale, women's lives are saved. Then the obvious next question is — how can the model be expanded to save the lives of many more women or reach millions of people throughout a country?

"People working in women's health organizations are among the most dedicated and self-sacrificing people in the world," says Richard Kohl of Management Systems International (MSI), which works with nongovernmental organizations (NGOs) to scale up their model programs. "They are great at what they do, but they are usually specialists — doctors or nurse-midwives or educators — and they don't necessarily have the political or advocacy skills to persuade government agencies to adopt their programs and replicate them on a large scale."

Governments must almost always be engaged, Kohl says, because they are often the only entities with a health care delivery system that operates at large scale and has the potential to fund such programs; even the wealthiest donor organization can't sustain long-term a health program in countries with millions of people. But often NGOs simply focus on improving their model programs, hoping that government will notice their good work without taking concrete steps to garner their attention.

With funding from the MacArthur Foundation, MSI is working with reproductive health and sexuality education groups in India, Nigeria, and Mexico to help them think strategically about scaling up and to provide hands-on training in scale-up methodology. MSI's process for managing the scaling up process ranges from step one, create a vision; to step five, legitimize change; to step 10, track performance and maintain momentum. (The MSI handbook can be found online at: www.msiworldwide.com.)

One of the organizations MSI is collaborating with is SEARCH (see feature article page 3). Dr. Abhay Bang of SEARCH said, "We know that the problems here are not unique to this region in India, and we want to see how this work can be replicated in other places."

Scaling up is a very time intensive process that can take years, says Kohl. "It can be difficult for people who have envisioned the model and nurtured it for years to see it grow up — it's like letting go of a child. We act as facilitators, but 90 percent of the work is in their hands."

and develop new policies to improve pre-natal, post-natal, and emergency obstetric care.

Simple, effective solutions

When SEARCH was founded, the Indian government's reproductive heath program was heavily focused on family planning. But the Bangs soon learned that women needed much more than contraception. Their discovery that 92 percent of women in Gadchiroli suffered from gynecological diseases led to their first published article in *The Lancet* (1989) and contributed to a sea change in global population policy — from a focus on reproduction to the broader perspective of women's health worldwide.

The Bangs recognized that many maternal and infant health problems, including complications from childbirth and newborn death, could be addressed with better hygiene, improved diet, basic health education, early treatment of common infections, and other relatively simple interventions. They believed that these services could be offered by *dais*, traditional village birth attendants — older women who help women giving birth in their homes. The *dais*, who are illiterate and often have little status in the community, were honored to be approached by physicians seeking to learn from them

Women wait outside of the SEARCH clinic in Gadchiroli.

Reproductive rights as human rights

Public interest litigation used to prevent child marriage in India

Although Indian law forbids the marriage of girls younger than 18 and boys younger than 21, mass marriages of children are widespread and often ignored by authorities. Fifty-seven percent of Indian women are married before they turn 18; some are as young as seven. These early marriages often are motivated by economic reasons (e.g., securing a dowry or relieving a family of an additional dependent) or by a desire to strengthen relationships between families and communities.

"When a girl gets married, she basically becomes an indentured servant in her husband's home," says Colin Gonsalves, a senior advocate and executive director of the Socio-Legal Information Center, a MacArthur grantee. He says that child marriage not only puts young girls at risk because of early sexual activity, pregnancy, and childbearing, but it also robs them of the opportunity to go to school and have normal friendships with peers. At the national level, child marriage contributes to high rates of maternal and child mortality and is a source of extreme and persistent poverty. It also is a breach of international law, including the Universal Declaration of Human Rights, the Convention on the Elimination of All Forms of Discrimination Against Women, and the Convention on the Rights of the Child.

In February 2006, in response to a petition filed by the Socio-Legal Information Center, the Indian Supreme Court made a landmark ruling that all marriages must be registered. Individuals who perform weddings and officials and policemen who participate in and encourage child weddings now will face prosecution. "Although the Supreme Court ruling is only a first step, we've been quite pleased to see that it has already had quite an effect on this barbaric practice," Gonsalves says. "In just a few months, we've seen a remarkable decline in child marriages."

In collaboration with women's rights organizations, the center collected evidence of child marriages and used it to petition the Indian Supreme Court to help end the practice. The center argued that the court should direct the government to make the registration of all marriages compulsory by district government officials and requested an order to make local government offi-

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Above: Improving the clinical skills of health professionals is a key component of the MacArthur program.

and eager to acquire new skills, Abhay says. The women were trained to prevent and treat the most common causes of infant death, including malnutrition and pneumonia. They were each given simple tools, including a tiny sleeping bag to treat hypothermia and an abacus for counting infant heartbeats.

One *dai* in a woman's home made a great difference (infant mortality in the study area was reduced by 50 percent) but the Bangs soon found that there was an advantage to having a team of two women assisting the mother. "At the moment of delivery, with the mother standing in a dark and ill-equipped room, there are two emergencies: first the woman giving birth and bleeding and second the baby not yet breathing. If everything is normal, it might be fine, but if there is a complication for the mother and the baby is left even 10 seconds without breathing, then there is a crisis."

So SEARCH began to train another level of caregiver—a younger married woman, usually with five to eight years of school and children of her own. Because they were literate, these health workers could keep records, follow guidelines, and become a hands-on partner to the *dai* at the delivery. These local community health workers also

cials and police accountable for child marriages within their jurisdiction.

The center is one of a number of MacArthur grantees using the strength of international human rights covenants and treaties to promote reproductive rights. Earlier this year, women's rights advocates in Mexico celebrated a landmark decision by the Inter-American Commission on Human Rights that recognized access to legal abortion as a human right. Two MacArthur grant recipients, the Center for Reproductive Rights and the Information Group on Reproductive Choice, pressured the Mexican government to admit it had violated the human rights of a 13-year-old rape victim by denying her access to a legal abortion. As a result of the ruling, the government compensated the girl and called for new guidelines to facilitate access to legal abortion.

"Fortunately, India is a country that is friendly to international law, where international covenants are automatically enforceable unless they are in direct contrast to Indian statues," Gonsalves says. "Also, our constitution is very vibrant, and most of our network's legal actions are based on the constitution, with international covenants used to buttress and add strength to our arguments.

"We can't immediately reverse practices that are centuries old, but even a small band of people operating within the international legal system can have a direct impact on millions of people."

For more information

Center for Reproductive Rights
www.crlp.org

Information Group on Reproductive Choice (Grupo de Información en Reproducción Elegida)
www.gire.org.mx

Women's Aid Collective
www.wacolnigeria.org

visited women during their pregnancies and made several post-partum visits to assist with breastfeeding, recognize complications, and support the mother in newborn care. "With two attendants at the delivery there is a kind of semi-skilled division of labor — the village version of what you might find in a hospital in the city," Abhay says.

Documenting yet another 20 percent drop in infant mortality by using the team approach, the Bangs found evidence that home care also markedly reduced maternal morbidity — including lower rates of hemorrhage, anemia, and other problems. SEARCH is now studying the impact of home-based care on reducing maternal death over the past 15 years. Its approach and methodology have inspired similar home-care projects in Bangladesh, Pakistan, Nepal, and parts of Africa. SEARCH's successes have also earned them a MacArthur Award for Creative and Effective Institutions, which recognizes and rewards the innovation of nimble organizations.

SEARCH's effectiveness in improving life for mothers and infants in a region with some of the harshest health indicators has impressed the Indian government, which is now providing support for pilot studies of home-based care in six additional Indian states.

For more information

Society for Education, Action & Research in Community Health (SEARCH)
www.searchgadchiroli.org

FOGSI
www.fogsi.org

WRAI
www.whiteribbonalliance-india.org

Pathfinder International
www.pathfind.org

Society for Gynecology and Obstetrics Nigeria
www.sogon.org

Grupo de Estudios Sobre la Mujer Rosario Castellanos
www.casamujer.org

Emergency intervention

While frontline care can prevent and address many common reproductive health problems, many women still require emergency intervention ranging from caesarian surgery to blood transfusions. One reason the maternal mortality rate in India remains stubbornly high is that women in rural India have little or no access to emergency obstetric care. There are only two to four obstetricians or gynecologists in most districts encompassing large populations, and most general practitioners in India do not provide even basic emergency care.

In 2003, Dr. Sadhana Desai, then president of the Federation of Obstetrics and Gynecological Societies of India (FOGSI), which represents 21,000 obstetricians and gynecologists, decided to do something about the shortage of emergency obstetric care in rural India. Every year, the organization chooses a major health challenge, and all members work together to address it. "That year I chose maternal mortality, because rates are very high in India, and it's our responsibility as gynecologists and obstetricians to take steps toward reducing them," Desai says. "There are only 700 government obstetricians in rural India but there are more than 20,000 government nonspecialist physicians. So the idea was to train the nonspecialist doctors to provide emergency obstetric care."

With support from the Foundation, FOGSI set up three pilot project training centers — in Gujarat, Uttar Pradesh, and Rajasthan — with each offering a two-week course of basic emergency skills and a 16-week course of comprehensive emergency skills. At the end of the two-year pilot project, the three centers had trained a total of more than 100 doctors from rural or underserved areas to provide emergency obstetric care.

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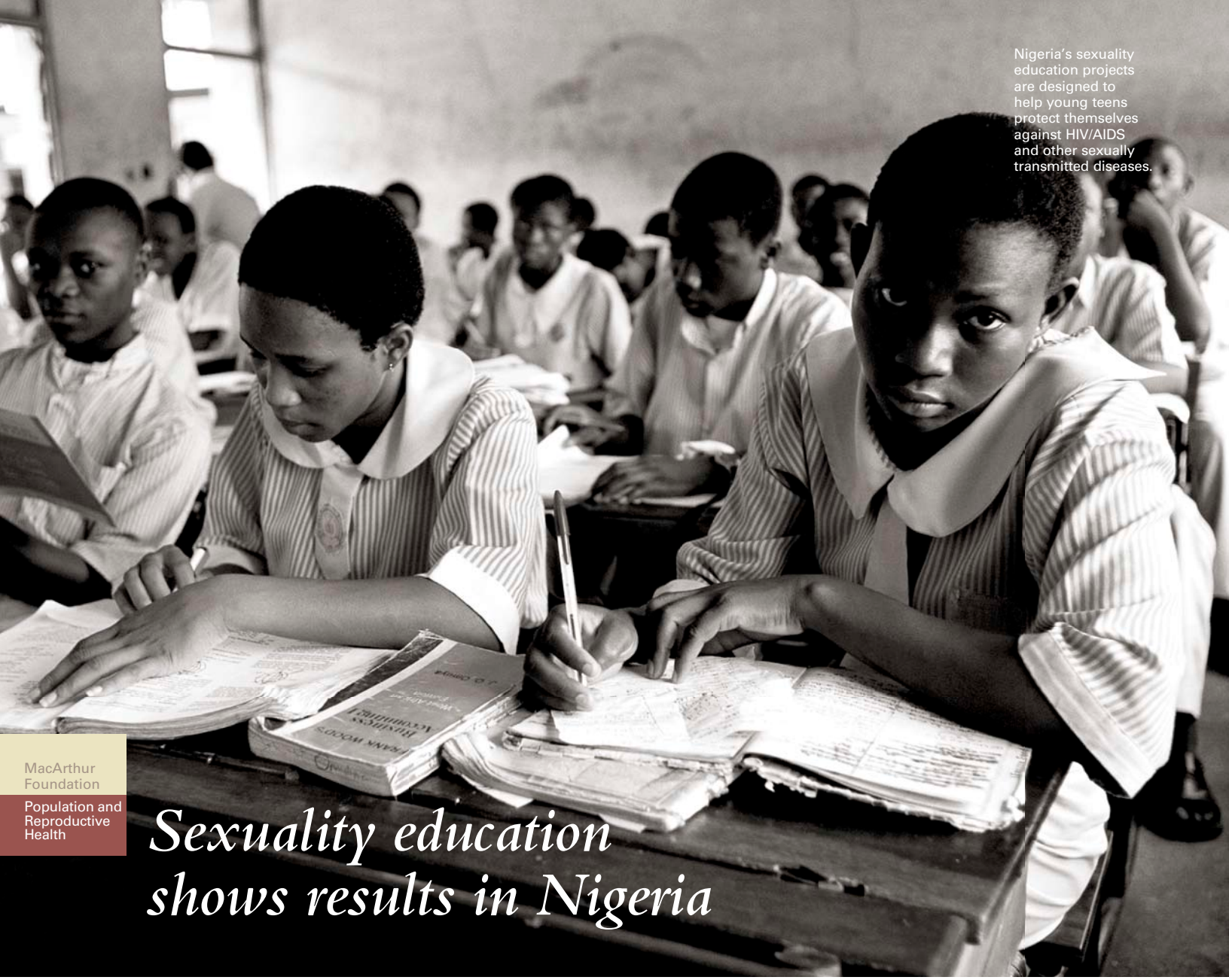

Nigeria's sexuality education projects are designed to help young teens protect themselves against HIV/AIDS and other sexually transmitted diseases.

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Sexuality education shows results in Nigeria

The results of a 2003 survey of 2,466 secondary school students in Lagos were alarming. Many believed that HIV can't be contracted from someone you know very well, that a 10-year-old girl can't get pregnant, and that abstinence is for weak people. Only 15 percent of sexually active students reported they used protection every time they had sex.

The baseline survey was conducted by the Lagos State Ministry of Education in preparation for implementing a new sexuality education curriculum in Lagos schools. "The results were cause for concern because we know that young people between ages 15 and 24 account for the majority of unwanted pregnancies, sexually transmitted diseases, and HIV/AIDS in Nigeria," says Adenike Eseit, a founder of Action Health Incorporated (AHI), one of Nigeria's leading reproductive health organizations. "The survey showed that students lacked even the most basic information about their bodies and how to protect themselves. But at the time there was nothing in the schools about the real life challenges young people face regarding sexuality."

The new curriculum, implemented in the social studies and integrated science classes of 304 public Junior Secondary Schools in Lagos, focuses on adolescent reproductive health — going beyond traditional sex education to encompass such issues as self-esteem, girls' assertiveness, and aspects of good relationships. The goal is that more awareness and knowledge will increase the likelihood that young people will make wise choices about their sexual activities.

In 2005 a follow-up survey showed that the program was yielding positive results. Students who had been taught from the curriculum had significantly increased their knowledge and shown positive changes in attitudes. For example, 81 percent of students now agreed that people their age should wait until they are older before they have sex, up from 68 percent two years earlier.

"Among the most encouraging trends is that the program is changing the way boys and girls interact," says Eseit. "Girls said the curriculum is positively influencing boys' behavior toward them. Both

Building a base of evidence

Research promotes political will for maternal health

Reducing maternal death has recently taken on greater urgency in Nigeria. While attending a retreat on maternal and infant death earlier this year, Nigerian President Olusegun Obasanjo was alarmed by what he heard: that Nigeria has the world's second highest number of maternal deaths, with nearly 55,000 women dying each year from preventable pregnancy-related complications.

Upon hearing these disheartening numbers, Obasanjo immediately turned to a maternal mortality expert in the room, Friday Okonofua, and asked, "What can we do?" Okonofua, a professor of gynecology and obstetrics at the University of Benin College of Medical Sciences, had recently co-authored a report on increasing political will for reducing maternal mortality in Nigeria, and the president's query meant the issue had captured attention at the highest level of government. A few weeks later, Obasanjo named Okonofua his Honorary Advisor on Maternal and Child Health — a move that offers hope that maternal health is becoming a higher political priority in Nigeria.

"Maternal mortality ought to attract a lot of attention because it is such an enormous tragedy worldwide," says Jeremy Shiffman, a political scientist and public health researcher at Syracuse University who used a Foundation grant to co-author *The State of Political Priority for Safe Motherhood in Nigeria* with Okonofua. "But political leaders are burdened with thousands of issues, multiple political pressures, and limited resources. To change that, we need to see maternal mortality not just as a moral and a medical issue but as a political issue — one that requires good research that allows advocates to be strategic in affecting policy."

Reducing maternal mortality and morbidity emerged as a global priority two decades ago, yet levels of maternal death have not declined significantly in the developing world. Although knowledge of medical and public health interventions is substantial, and most maternal deaths are preventable, half a million women die each year from complications of pregnancy and childbirth. Another 15 million suffer life-threatening disabilities.

Why are rates of maternal mortality not decreasing? At a London meeting in 2004 to mark the tenth anniversary of the International Conference on Population Development, political will was cited as the missing ingredient in global reduction of maternal deaths. Compared to other health concerns, maternal mortality reduction is given low priority on government health agendas or is missing altogether.

"There is a real dearth of research on how to ensure that political leaders pay attention to safe motherhood and do something about it," says Shiffman. Using a process of intensive interviews, document analysis, and direct observation, he and his co-authors assessed the strength of political will for reducing maternal mortality in Honduras, Guatemala, Indonesia, India, and Nigeria. They also identified the key factors that must be available in a country to generate political will, ranging from credible evidence of a significant problem to a united network of advocates who have identified a clear set of national policy priorities.

With Foundation funds, Shiffman and his co-authors completed national-level studies in India and Nigeria. In India, which has the highest total number of maternal deaths in the world, political will to reduce maternal mortality was deemed moderate — but it recently has been on an upswing (see story, page 3). And in Nigeria, where political will was deemed low, "there is a real window of opportunity for change," Shiffman says, citing the country's 1999 transition to democracy, the recent increased interest of President Obasanjo, evidence at the national level of the extent of the problem, growing numbers of individuals in the safe motherhood policy community, and international pressure to reach Millennium Development Goals by 2015.

"There are good reasons to be optimistic about Nigeria," says Shiffman, "if we can take advantage of this critical moment."

boys and girls showed a better understanding of a girl's right to refuse sex. And students reported learning new skills in negotiation and friendship."

AHI provided leadership in developing the curriculum and advocating for its adoption nationally — a move that set Nigeria far ahead of most countries in the world. Lagos is the first state to launch a full-scale implementation of the curriculum in the school system. Now a number of nonprofits are working closely with state-level ministries of education in six states to train teachers and adapt the course to local contexts.

"We're committed to helping our young people lead a better and healthier life," said Professor Kunle Lawal, the commissioner of education for Lagos State.

"The new curriculum is an effective step in this direction — and now our task is to continue to improve this program and to reach as many youth as possible."

Confronting cultural realities

Research conducted by the World Health Organization in 1993 found that sexuality education delays the onset of sexual activity and increases safer sexual practices by those already sexually active. Yet in Nigeria, as in many parts of the world, sexuality education often meets strong opposition on grounds of religion or tradition and culture.

"In Northern Nigeria, and in Kano in particular (with its predominantly Muslim population), sexuality and reproductive health education is frowned upon," says Hajiya Mairo Bello, director of the Adolescent Health and Information Project (AHIP), a MacArthur grantee and a pioneering NGO working with young people. "Due to controversies related to adolescent sexuality and the general lack of knowledge, very few organizations in Northern Nigeria have adequate reproductive health care services for adolescents."

In northern Nigeria, half of all women become mothers by age 16, and the average woman gives birth to more than six children. "The situation is sustained by practices such as early teenage marriage, polygamy, and limited education for girls," Bello says. "In societies like those in northern Nigeria where early marriage is the norm, adolescent girls are often withdrawn from school in order to get

married, and girls who become pregnant are expelled from school."

AHIP has long worked with young people in and out of schools through a youth center, a peer sexuality program, and extensive sports programs for boys and girls. It provides mentoring and training to other youth-oriented organizations throughout Northern Nigeria seeking to replicate the success of its activities. Now, with funding from MacArthur, AHIP is working with the State Ministry of Education to implement the national sexuality curriculum in 50 secondary schools in Kano. Its efforts will include building additional support for the project, developing a teacher's manual and student textbook tailored to the local environment, training teachers, and monitoring and evaluating the program.

AHIP has forged partnerships with religious, traditional, and government leaders. The organization has the support of the Emir of Kano, and his son, also a traditional ruler, is the chair of the AHIP board. "Over the years, we've survived serious challenges to our work," says Bello. "Fortunately, AHIP is gifted with a tenacious belief in protecting and preserving a prosperous and healthy future for young people."

Below: MacArthur grantee AHIP women's basketball team in Northern Nigeria.

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Low Tech; High Impact

Using the anti-shock garment to save lives

By the time the 29 year-old woman arrived at the emergency room of the University College Hospital in Ibadan, Nigeria, she was unconscious. She had no blood pressure or pulse. Five days earlier, she had given birth, and now she was dying from profuse post-partum bleeding. The family members who accompanied her began the rituals of mourning. "They were crying, falling to the floor, tearing at their garments," recalls emergency obstetrician Dr. Oladosu Ojengbede.

But Ojengbede and his staff had been trained in the use of the anti-shock garment (also known as Life Wrap). Originally developed for battlefield use, the device has the potential to save lives and protect hundreds of thousands of women from the effects of post-partum hemorrhage.

Made of lightweight neoprene, the garment resembles the bottom part of a wetsuit. It can be manufactured inexpensively and is reusable up to 100 times. When the suit's five Velcro closures are tightened around the patient's body, the compression stops blood from flowing to the lower extremities and forces it back to the heart, lungs, and brain to counteract the shock.

The results are immediate and dramatic. A few minutes after the suit was applied to Ojengbede's patient, she began to revive. Summoned to her bedside, her relatives watched in amazement as the woman raised her hand and asked where she was.

"You can imagine their sheer joy," says Ojengbede. "The relatives nicknamed her 'Ayorunbo' for 'the person who has gone to heaven and returned.'"

Ojengbede has seen or heard many similar stories since the anti-shock garment was introduced in Nigeria as part of a MacArthur-funded study carried out by the Women's Global Health Imperative at the University of California-San Francisco and the University of Ibadan. Pilot studies took place in Egypt, where the garment was used to keep women alive in busy urban hospitals while they waited up to 36 hours for a blood transfusion. Early results indicated that those treated with the garment lost half as much blood as those treated using standard methods, and the use of the garment saved more lives.

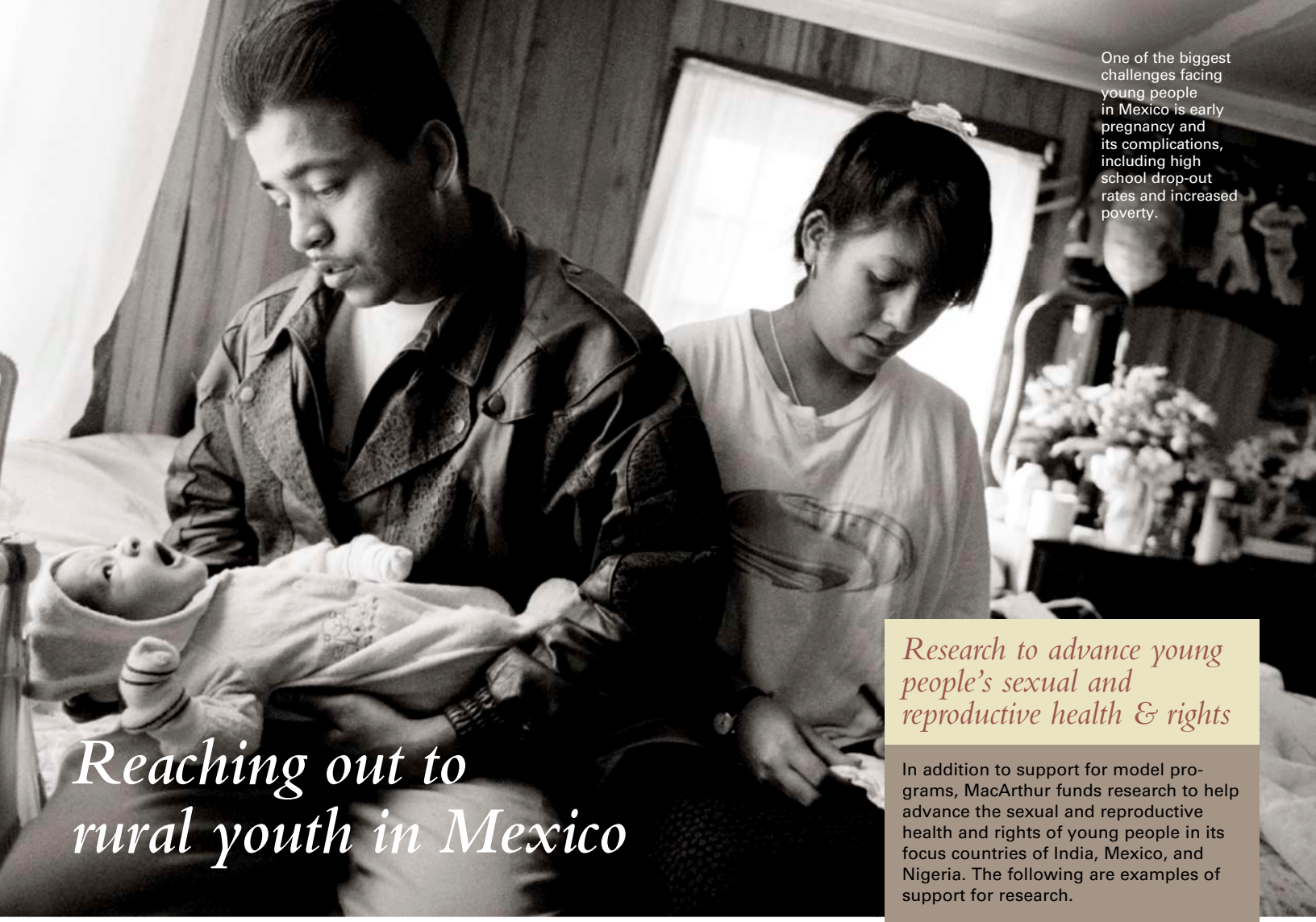
In Nigeria, the study is focusing not only on hospital use but also on rural health care stations, where the suit is being tested as a first aid tool until women can be transported to better-equipped treatment facilities.

The garment's success is having a ripple effect, Ojengbede says. "Once word gets back to a village that a woman has survived, more families are willing to seek treatment for obstetrical hemorrhaging."

Because the early results proved so promising, MacArthur has invested $400,000 to expand the study in Egypt in an effort to yield statistically significant evidence of the suit's effectiveness. If the study provides scientific proof that the garment works, MacArthur has plans to support scaled up use of the suit to the point where government agencies can incorporate it into standard health care. "We believe the anti-shock garment holds great potential to save tens of thousands of lives each year," says Jonathan Fanton, President of the MacArthur Foundation. "It could be a very simple solution to a seemingly intractable problem."

Rigorous studies like those underwritten by MacArthur are critical to convincing the medical establishment and gaining the imprimatur of global health organizations, says Suellen Miller, a professor of public health at the University of California-San Francisco who directs Women's Global Health Imperative's Safe Motherhood Programs and coordinates the anti-shock garment study. "Once it's deemed an essential device, donor agencies such as UNICEF and USAID will be willing to pay for it," Miller explains.

More than 500,000 maternal deaths occur worldwide annually, mostly in developing countries. Of these deaths, 30 percent — the largest single percentage — are due to obstetrical hemorrhaging. "For years, health care workers have had to stand by helplessly and watch these women die of something that's almost entirely preventable," says Ojengbede. "Now, there's hope."



One of the biggest challenges facing young people in Mexico is early pregnancy and its complications, including high school drop-out rates and increased poverty.

Reaching out to rural youth in Mexico

Mexico, the second most populous country in Latin America, has experienced a youth boom. Nearly 32 million people between the ages of 10 and 24 live in Mexico, the youngest demographic in the history of the country. "These young people will have a huge effect on the future social and economic development of our country," says Norma Barreiro, director of Thais Desarrollo Social, a leading NGO that works with young people on issues related to sexual and reproductive health. "We must do everything we can to seize this opportunity to invest in their health and well-being."

One of the most serious challenges facing young people in Mexico is early pregnancy and its consequences, including maternal morbidity and mortality, school drop-out, reduced income, and migration to northern states or the U.S. The average person in Mexico marries at age 19, and 15 percent of births are to teens between the ages of 15 and 19. In many rural and indigenous Mexican communities, marriages and births are common even much younger. Yet youth in remote areas are the least likely of anyone in Mexico to have access to reliable information and resources regarding reproductive health.

In 1998, IMSS Oportunidades, a Mexican government health provider of reproductive and sexual health services working in 17 states, created a special program for rural adolescents. With its 3,500 rural health centers throughout Mexico, IMSS Oportunidades has the potential to reach 2.4 million indigenous young people in Mexico. Yet lack of resources, health staff stretched thin from serving large numbers of people, and entrenched adult attitudes toward adolescents and sexuality have prevented the government's youth outreach program from fulfilling its potential.

To jumpstart efforts to reach youth in the poorest and most marginalized rural municipalities in Mexico, IMSS Oportunidades has

Research to advance young people's sexual and reproductive health & rights

In addition to support for model programs, MacArthur funds research to help advance the sexual and reproductive health and rights of young people in its focus countries of India, Mexico, and Nigeria. The following are examples of support for research.

International Institute for Population Sciences
$600,000 to investigate the sexual and reproductive health, behaviors and needs of youth in six Indian states in collaboration with the Population Council.

Sangath
$225,000 to develop, implement and evaluate a population-based, integrated model for improving young people's sexual and reproductive health in an urban and rural setting in the Indian state of Goa.

International Women's Health Coalition and Action Health Incorporated
Two grants totaling $825,000 for a longitudinal study on the implementation and outcomes of a sexuality education curriculum in public junior secondary schools in Lagos State, Nigeria.

Investigación en Salud y Demografía
Two grants totaling $367,500 for a quasi-experimental longitudinal survey on young people in the Mexican state of Oaxaca, intended to both increase knowledge of the attitudes and behaviors of rural youth and assess the impact of an intervention being carried out by a local organization, Mexfam.

Fundar

Using budget analysis to improve maternal health

Reducing maternal mortality is a moral issue, says Helena Hofbauer, executive director of Fundar: Center for Analysis and Research, a democracy building organization in Mexico that analyzes information relating to government programs, policies and budgets to influence public policy. But since 2002, with support from the Foundation, Fundar has been using objective budget analysis to bring accountability and transparency to Mexico's publicly financed maternal health services. Fundar's work has shown that it is possible to galvanize support by dispensing with emotion and ideology and framing the issue in what Hofbauer calls "the language of power": numbers. "You can't ignore numbers," Hofbauer says. "Especially when it's numbers that the government itself produces."

Before Fundar's involvement, there was little, if any, connection between the government's stated objectives in the area of maternal health and actual public spending. Fundar follows the money — scrutinizing vast amounts of budget-related data generated by the Mexican Congress and the Ministry of Health. Partner researchers in three states undertake the complicated tasks of deciphering state-level budgets and monitoring local level implementation of maternal health programs. They share this information with Fundar and jointly compare and analyze needs, allocations and expenditures. The researchers often find a considerable gap between budget allocation and what is actually delivered — or, as Hofbauer puts it, "between numbers and rhetoric."

"We've identified, for instance, that clinics that should be operating around the clock are only open some days for a few hours, that women have to pay for services that should be free," says Hofbauer. In 2002, researchers undertook the task of combing through the details of the country's health budget to identify spending that should be earmarked for maternal health. Their efforts resulted in greater transparency in decentralized health funds, which for the first time were specifically earmarked for women's reproductive health at the state level. "This was a major victory," says Hofbauer. "Never before had anyone scrutinized the health budget to determine whether funds were being allocated for and actually spent on the most needy, especially poor, rural women in Chiapas, Oaxaca and Guerrero states. Women's reproductive health historically has been overlooked, and the 2002 study helped to make it a higher priority."

More recently, evidence amassed by Fundar helped support a March 2005 decision by the Ministry of Health

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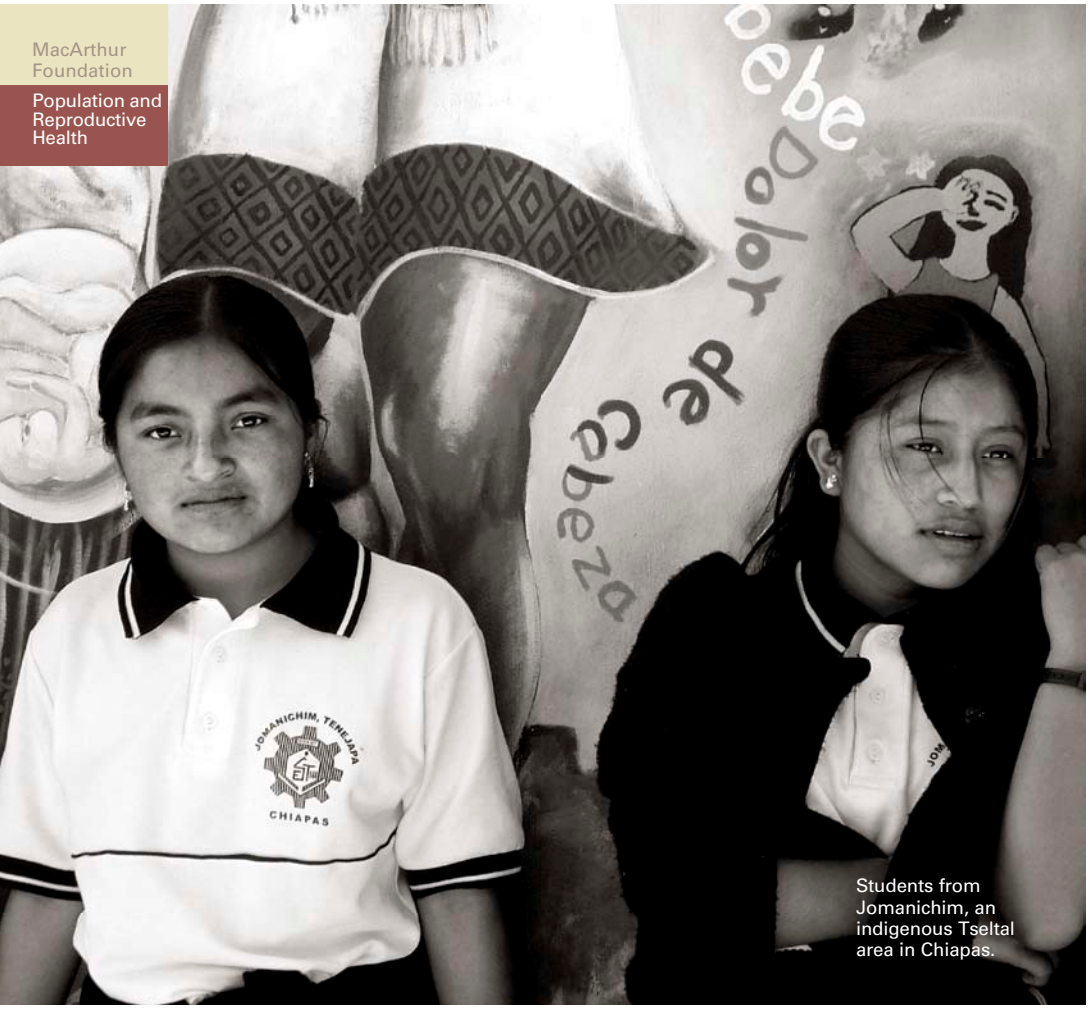

Students from Jomanichim, an indigenous Tseltal area in Chiapas.

joined forces with organizations that are experts in engaging youth. With support from the MacArthur Foundation, these organizations are improving both the supply of reproductive health services and the demand among young people. Thais Desarrollo Social, for example, works directly with rural young people to attract them to reproductive and sexual health services in government clinics. Another organization, Afluentes, trains health care workers to provide services in a way that is sensitive and appealing to young people.

"The government can't do this work without local organizations, and local organizations can't do this work without government," says Celia Escandon, an official with IMSS Oportunidades who was instrumental in establishing one of the partnerships. "Imagine trying to reach people of 57 ethnic groups, speaking about 40 languages and dialects — with different cultures in Oaxaca than in Chiapas, Nayarit, Durango, or Chihuahua. Our staff works hard but they don't have the specialists that nongovernmental organizations have to connect with young people in remote places. Only through collaboration is our work effective."

Thais Desarrollo Social is working to identify and train a corps of high school "youth promoters" in rural communities to lead activities and peer discussions about dating, sexuality, and life choices. Local

to incorporate coverage for hemorrhage, preeclampsia and puerperal infection into Popular Insurance, the government health insurance program designed to cover some 52 million uninsured people. Obstetric emergencies occur in approximately 15 percent of all pregnancies, including those that were expected to be normal; so while standard prenatal screening for risk is important, it must be accompanied by a system prepared for the unexpected — which requires training, medication, infrastructure, and round-the-clock services.

The objectivity and accessibility of Fundar's research have helped create common ground for a wide range of maternal health stakeholders: policymakers, legislators, NGOs, health service providers, and families who have lost wives, mothers, and sisters. "Numbers can be a very confrontational strategy, but they also can be conciliatory," Hofbauer says. "When we were working on emergency obstetric care, we said to the Health Ministry, 'We know you want to do the right thing, we know your budget is constrained — let us help you make that argument to Congress.' We still need to broaden the existing infrastructure to offer services at all levels. But with emergency obstetric care in place, women won't die." Because of their precedent-setting efforts, Fundar received the MacArthur Award for Creative and Effective Institutions in 2006.

With a new government taking office in Mexico in December, Fundar's vigilance and advocacy will be even more important, Hofbauer says. "Historically in Mexico, new governments mean new programs. We'll need to keep reinforcing the benefits of what we're fighting for." Equitable distribution of Popular Insurance funds is of particular concern: past Fundar research showed that government funding for maternal services was four times higher per capita in Nuevo León than in Chiapas — even though Nuevo León had one of the lowest maternal mortality rates, and Chiapas — the poorest state in Mexico — had one of the highest. "The reality is that states with the fewest resources get less funding," says Hofbauer.

Fundar is also exporting its expertise to the World Health Organization and NGOs in Latin America, Asia, Africa, and the United States. "Budget analysis as a tool for reducing maternal mortality has great potential, although it's expensive to build up a capacity devoted to research," Hofbauer says. "But once you get there, you can have one success after another." ■

teens who have demonstrated leadership in their communities are trained to lead health programs and youth services, often in the indigenous language of their community.

Seventeen-year-old Juventino Teran Lucero is a youth promoter in Huehuetlan, a small village about a six hour bus ride from the closest city in the state of San Luis Potosí. Last year he attended a Thais-run, three-day training session with 30 other young people from the region. "I'm a youth promoter because I'm very active, and I enjoy being around people," says Juventino. "My parents said, 'Go ahead — you can be a leader. Learn as much as you can.'" Since then, Juventino has planned events and invited friends and schoolmates to drop in at the Center for Rural Adolescents, a youth-oriented space within the local health center, where at least twice a week games and dialogues encourage learning about staying healthy, preventing unplanned pregnancies, and reaching life goals. He has also trained five other students as leaders. "Everyone loves it and they really participate," he says. "It's not like a teacher telling you something — it's more like friend to friend. The others have learned from me, but really I've learned just as much from them."

"These young people stand out, even though for cultural reasons some of them are quiet and shy at first," says Norma Barreiro, director of Thais. "They quickly become naturals at building community, listening to adults and peers in an open-minded way, and understanding what it means to have rights to information and to

Population dynamics and economic well-being

The Foundation is supporting work that examines the link between population dynamics and economic well-being. Much of this work focuses on efforts to better understand the potential of the demographic dividend, a theory that asserts that changes in population age structure can be advantageous for economic growth. The goal is to build a base of evidence to evaluate the validity of the theory.

George Washington University
Two grants totaling $150,000 to examine the link between fertility and poor women's economic well-being in Mexico.

Harvard University
Two grants totaling $235,000 to examine variations in the link between age structure and economic performance.

International Center for Research on Women
$113,000 to investigate the role of policies relating to women's education, employment, political participation, and health and well-being in mediating the links between age structure and economic outcomes.

United Nations Population Fund (UNFPA)
$250,000 to build UNFPA country-level staff capacity to understand and utilize in their work the links between population, reproductive health, and poverty.

University of Hawai'i, East-West Center
$380,000 for workshops and follow up activities to advance research to generate a new set of research results and contribute to the creation of a new generation of developing country scholars with relevant knowledge and skills.

University of Texas, Austin
$250,000 to examine variations in the link between age structure and labor markets in Brazil and Mexico.

Yale University and the University of Chicago
Two grants totaling $107,000 to evaluate the impact of interventions on women's reproductive health, economic well-being, and children's education and health development in Bangladesh.

medical attention that enhances life decision making."

In a complementary effort, Afluentes is working with health providers in Mexican government clinics to increase their knowledge and train them to interact more effectively and knowledgably with young people. Afluentes has trained hundreds of IMSS Oportunidades health providers and has attracted the attention of another government agency, the Mexican Health Ministry. With Foundation support, the training methodology Afluentes developed for IMSS Oportunidades will now be used within the Ministry of Health, which has the potential to reach an additional 10 million young people. In addition, Afluentes will design, develop, and promote an Internet-based distance learning system for health care providers.

Since the government began to partner with nongovernmental organizations to test reproductive health model programs and launch them on a larger scale, the government youth health modules have become much more widely used. "More than two million young people have passed through the Youth Centers, and the numbers are growing as they help themselves and their peers," says Celia Escandon. "The government is providing the 'arms' to reach out to young people throughout Mexico, and the work the NGOs are able to do as a result is very good for the future of the country."

For more information

Action Health Incorporated
www.actionhealthinc.org

Afluentes
www.afluentes.org

Centre for Community and Reprodutive Health Services
www.ccrhs.org.ng

Girls Power Initiative
www.gpinigeria.org

Ritinjali (India)
www.ritinjali.org

Thais Desarrolo Social
www.thais.org.mx

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Population and Reproductive Health

The Fund for Leadership Development

Investing in individuals to strengthen the field

In 1990, in a highly unusual effort to identify and strengthen international leaders in the field of population and reproductive health, the MacArthur Foundation launched the Fund for Leadership Development. The fund was designed to recognize and support talented, promising individuals in selected countries in the developing world. Two-year fellowships were made available to mid-career individuals with creative ideas, leadership potential, and the capacity to shape policy and public debate concerning the field of population.

In 1991, the Foundation made its first round of awards to six Brazilians whose interests ranged from adolescent sexual behavior to the politics of women's health. From there, the program expanded to Mexico (1992), Nigeria (1994), and India (1995). Over the years, grants totaling more than $17.5 million to 370 individuals have been instrumental in building a significant force for reproductive health and rights.

The diversity of projects funded through the program is striking. In Nigeria alone, leadership fellows have worked on projects targeting street children, tailors' apprentices, domestic servants, auto mechanics, long distance truck drivers, and naval personnel. Methods for reaching people with health messages range from folk tales to music, from theatre to radio and television.

Many of the fellows have gone on to become leaders in their own countries and beyond; a recent review of the India program showed that more than half of the fellows started institutions that have shaped work in the country over the last decade. Other grant recipients have risen to leadership positions in government and nonprofit organizations, conducted influential research, and trained new generations of young leaders in the field.

Sebastiana Vasquez Gomez, for example, an indigenous midwife from the state of Chiapas in Mexico, received a grant to work on reducing maternal mortality and morbidity. She now runs a state-funded women's health center and has become a spokesperson for indigenous women's rights in national and international settings.

In Nigeria, Bene Madunagu received a grant to train young women to train their peers in issues of sexuality and reproductive health. She has since started Girls Power Initiative, which worked with the Ministry of Education to create a curriculum and teacher training program for in-school sexuality education (see article page 8).

In India, Vikram Patel received a grant to research the links between postnatal depression and infant and maternal health in the state of Goa. Trained as a psychiatrist, he went on to found an organization, Sangath, that works to improve the physical health of young people by also taking care of their developmental and emotional health needs. He is now a world expert on mental health in the developing world and recently was named a senior clinical research fellow at the London School of Hygiene and Tropical Medicine.

"We are proud of the contributions the Fund for Leadership Development has made to the field of population over the past 15 years," said Jonathan Fanton, President of the MacArthur Foundation. "Our intention was to invest in individuals who were leaders in their community, but had the potential to influence policy and practice at the national and international levels on issues such as HIV/AIDS, maternal and child health, and the sexual and reproductive health and rights of young people. As a group, their successes have led to great advancements and innovation."

Building bridges; increasing our impact

MacArthur's commitment to the population and reproductive health field is more than just a financial one. Since launching our program nearly 20 years ago, we have developed a team — both in Chicago and on the ground in the countries where we make grants — that has insight into the local conditions and has built important relationships that ensure our grantmaking decisions are timely and strategic.

Our country offices help to facilitate cross-fertilization between practical interventions carried out at the grassroots level and regional and international trends and policy debates. As the story "India delivers new approaches to women's health" on page 3 of this newsletter illustrates, although organizations on the ground are the best equipped to carry out work in their local context, it is the connections they have to groups outside of their communities that leverage this knowledge into lasting policy change. Successful models have limited impact if they can't be adopted and replicated elsewhere. Similarly, policy debates are empty without real life examples of successful practices and approaches.

Maintaining offices in key countries in three regions of the world also has allowed our staff and grantees to share strategies and experiences internationally. For example, lessons learned in Nigeria about how to evaluate the impact of school-based sexuality education (see "Sexuality education shows results in Nigeria," page 8) can provide lessons for similar programs in other countries.

We realize that our financial investments are modest compared to the world's global population and reproductive health challenges, but we consider our contribution as a bridge builder to be important for the field. In addition to encouraging collaboration among grantees, we also promote connections with government and the private sector that advance policy change or innovation. The efforts of Fundar to streamline federal allocations for maternal health in Mexico (see article page 12) is a good example of this cross-sectoral work.

We couldn't do any of this without a foothold in both the communities where the work is carried out and the global population and health arena, where fresh ideas are needed to move beyond the strategies and limited results of past decades and help ensure that progress accelerates in the years ahead.

Judith F. Helzner
Director, Population and Reproductive Health

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About the Foundation
The MacArthur Foundation is a private, independent philanthropic institution that makes grants through four programs.

- The Program on Global Security and Sustainability supports organizations engaged in international issues, including peace and security, conservation and sustainable development, population and reproductive health, and human rights. To aid in this grantmaking, the Foundation maintains offices in India, Mexico, Nigeria, and Russia.
- The Program on Human and Community Development supports organizations working primarily on national issues, including community development, regional policy, digital media and learning, housing, public education, juvenile justice, and mental health policy.
- The General Program supports public interest media and the production of independent documentary films.
- The MacArthur Fellows Program awards five-year, unrestricted fellowships to individuals across all ages and fields who show exceptional merit and the promise of continued creative work.

With assets of approximately $5.5 billion, the Foundation makes grants and low-interest loans totaling approximately $225 million each year.

For more information about the Foundation or its population grantmaking, please email 4answers@macfound.org or visit www.macfound.org.

Jennifer Humke, *Newsletter Editor*

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"The government is very pleased with the program and happy to send government doctors to us," Desai says. So happy, in fact, that it has committed $4.75 million of support to expand to 20 centers across India. In two years, grants totaling $450,000 from MacArthur and other foundations have drawn ten times the original investment. "I don't think we'll stop at emergency obstetric care," Dr. Desai says. "With such a large population in India, there is no end to the good things that can be done with this model."

Guidelines for broader change

Providing training to expand the skills of maternal health caregivers is critical, but it is only part of the solution. Women's health advocates and government officials in India agree that new policies must be put in place to change how, where, and by whom services are delivered to meet the growing need.

In 2004, the Indian government approached the White Ribbon Alliance for Safe Motherhood in India (WRAI) to help them do just that. With primary funding from the Foundation, the Alliance — an advocacy coalition of organizations and individuals — convened stakeholders to develop guidelines for expanding the skills of nurse-midwives to include procedures and care that only physicians had previously been permitted to carry out. The new guidelines, which were adopted in April 2005 by the Indian government, allow nurse-midwives to dispense life-saving drugs and provide safe abortion care. In the short time since their official sanction by the government, a number of international agencies, including UNICEF, have begun to integrate the new guidelines into their work.

"The Foundation's investment in the Alliance came at a critical time," says V. K. Manchanda of India's Ministry of Health and Family Welfare. "WRAI was an important partner in helping us coordinate with various professional bodies and donor agencies."

Over time, the new guidelines are expected to help dramatically increase the supply of caregivers able to offer emergency services to women, especially in the rural areas. "There is a great benefit to working with organizations like WRAI — not only do they have the expertise, but they have the good will to build consensus," says Manchanda. ■

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