BANOO JEHANGIR COYAJI

Some one thousand four hundred years ago, Banoo Coyaji's Parsi ancestors departed their Persian homeland and sought refuge in Gujarat on the west coast of India. Zoroastrians, they were in flight from religious persecution under Iran's new conquerors, the Samanid Muslims. By tradition, their priest persuaded the local Indian raja to grant them asylum by dissolving hundreds of grains of sugar in a bowl of milk. "This is what we will do in your country," he said.

And so they did. Obeying the raja's injunctions to adopt the sari and speak the local language, and not to proselytize, the Parsis nonetheless remained distinct. They worshiped in their own fire temples and otherwise kept to their own rites and their own kind. Over the centuries, they put down roots along the Gujarati coast from Cambay to Bombay and thrived as artisans, boatbuilders, merchants, and farmers. During the British Raj, they moved deftly into banking, commerce, and industry and then into law, medicine, and education. Parsis remain prominent in all these fields today, and in the arts as well. Yet, altogether in India, they number less than one hundred thousand people. As Banoo Coyaji points out, "We're not even a minority."

Banoo Coyaji's own paternal grandfather was the headmaster of a small village school in Broach. Through education, his five sons rose higher in the world. One became a doctor, one a dentist, one an income tax commissioner, one a construction company chief executive, and one—Pestonji Kapadia, Banoo Coyaji's father—a civil engineer and architect. While studying engineering at Pune University, Pestonji Kapadia supported himself by teaching drawing at the Convent of Jesus and Mary, a private school for girls. That is where he met his wife, Bapaimai Nusserwanji Mistry, the daughter of a prominent contractor. Banoo, the couple's only child, was born on 7 September 1917 in Bombay.

Banoo spent the first few years of her life in Bombay with her parents. But her mother evidently feared that, without siblings, she would be lonely and spoiled. So when it came time for schooling, she sent Banoo to live in her own parents' household in Pune. There she could attend the Convent of Jesus and Mary and grow up among her aunts, uncles, and cousins. Her grandfather's house was large and bursting with people, including servants and family retainers. "We used to sit down for a meal of twenty, twenty-five at a time," Banoo Coyaji remembers. Banoo's mother often stayed over in Pune

and her father visited every weekend. In their absence, she was looked after by her mother's sister Maneck. "I never felt deprived," Banoo says.

In such a large household, one had to fight for one's existence. This was a good education, she concluded. And there were other lessons. Banoo's grandmother was the family disciplinarian, quite a strict one. She expected the children to be tidy and to make their own beds—never mind the servants. Moreover, as Banoo Coyaji recalls, "She always thought that girls shouldn't be in bed after five o'clock in the morning. It was not the done thing.' This caused some resentment because boys were permitted to sleep as long as they liked. But the habit of rising early stuck with her, she says, "and has stood me in good stead all my life. I do all my major work early in the morning."

The Convent, as she calls it, was an English-language school run by Roman Catholic nuns. Banoo's mother preferred it over other, more "aristocratic" schools, because its six hundred or so students came from all walks of life: "She thought we were really middle class and should remain that way. It didn't matter about my grandfather being a rich man." For all but a year or so, Banoo lived at home and walked daily through nearby fields and the clean streets of Pune to go to school. The Reverend Mother was Spanish and many of the teaching nuns were Irish. Pupils wore uniforms, discipline was strict, and there were Bible lessons. But the nuns did not try to convert non-Christian girls to Catholicism and young Banoo felt completely comfortable there. Indeed, she thrived in its atmosphere of academic rigor and was virtually always first in her class. (The one brief time when she was not, she remembers vividly up till now. "I've always been competitive," she admits.) Banoo attended the Convent of Jesus and Mary for nine years altogether, through her Cambridge Certificate.

Western influences pervaded Banoo Coyaji's childhood. It was taken for granted that children in the family would be educated in English, and even the Parsi-style Gujarati that they spoke at home was larded with English words and phrases. (Years later she had to hire a tutor to teach her Marathi, the regional vernacular.) At the Convent, she danced the ballet and studied French. There was a piano in her grandfather's house and she studied Western classical music for years, acquitting herself admirably before the external examiners of London's Trinity College of Music. (She explains her music lessons this way: "I had a very musical father, and an ambitious mother who made me go.") For five or six years she joined the Girl Guides. "I was brought up in a completely English era," she says.

The Parsis were strongly identified with the British and, indeed, when the Prince of Wales visited Bombay in 1921, Banoo Coyaji's own father composed a welcome song for him. But quietly, the family was nationalist. They supported independence. As for young Banoo, the Prince of Wales' 1921 visit marked her first awareness of

the trouble stirring between Britain and India, and her first encounter with the remarkable Mahatma Gandhi. When the prince arrived, anti-British riots erupted. Even though she was only four, she says, "I vividly remember looking out from the sixth floor of my grandfather's house in Bombay and seeing the streets burning, and hooliganism. And then Gandhiji arrived and there was peace while he was there."

A few years later, during vacations at another of the family houses—this one on the seashore near Bulsar—Banoo and her cousins often saw Gandhi walking along the beach. "As soon as we saw him, we used to run down," she says. On one such occasion, the magnetic Gandhi was collecting money for the *harijans*, or Untouchables.

"Where did you all come from?" he asked them.

"From that house," they answered, pointing to the large family beach house on the rise.

"Your people must be very rich," he said.

"Yes," they said.

"Then you get a hundred rupees, each one of you, for the Harijan Fund," said Gandhi.

"So," Banoo Coyaji continues the story, "we went back to the house and we badgered our uncles and aunts until they gave us a hundred rupee note. And the next day we went running down to Gandhiji to give to the Harijan Fund."

Banoo Coyaji says, "My father was a very clever man, but I adored my mother." Having married young, Bapaimai Nusserwanji Mistry had not attained a high education. But Banoo remembers her as a loving caregiver, not only for her daughter but for all members of the family. "If there was anybody ill in the family, anywhere, she would be there first. If there was anybody in trouble, she would be there first. She *gave* of herself," she says. But there was another figure in the family circle that Banoo also came to adore. He was not a relative, but the family doctor. Edulji Coyaji was a general practitioner famous in Pune for treating the poor as well as the rich. Banoo remembers him as "a wonderful, wonderful family physician. I revered him." As her thoughts turned to her own future, it was Dr. Coyaji to whom she turned. When she had finished her Cambridge Certificate with five distinctions, she went to him and asked, "What do you think I should do?" And he said, "You should become a doctor."

In Bombay, sixteen-year-old Banoo entered Saint Xavier's College for two years of premedical training and then embarked on medical school proper at Grant Medical College, also in Bombay. She completed her M.D. degree in late 1940. Banoo Coyaji remembers being in awe of the strict, inspiring doctors who lectured at Grant. She studied with characteristic fervor, now buoyed by a new development in her private life.

While on a family holiday in 1935 at Mahabaleshwar, a hill station seventy-five miles south of Pune, Banoo met Jehangir Coyaji,

the youngest brother of her idol and mentor. Jehangir had just returned from Purdue University in the United States where he had studied engineering (Banoo Coyaji refers to him as a "boiler maker from Purdue") and was being roundly feted by local matrons with marriageable daughters. He seemed to have fled to Mahabaleshwar to escape this very ordeal. Although he was fourteen years older than Banoo, the two took an immediate liking to each other. Their courtship was prolonged over the next five years, as Banoo completed her medical degree; but from that first meeting the die was cast. Both families were happy with the match and on 24 February 1941, shortly after Banoo received her degree in medicine, they were married.

Newlywed Banoo Coyaji immediately began her residency in gynecology at Grant Medical College. Under the direction of the esteemed Dr. V. N. Shirodkar, she completed it during the next year and a half, during which time she also gave birth to her first and only child. Kurus, a son, was born on 7 August 1942, by caesarian section—a fact that led Jehangir, fearing for Banoo, to foreclose the idea of any further children. In 1943, the family set up house in Pune, where Jehangir worked for the Pune Electric Supply Company. Instead of practicing gynecology, Banoo assisted Dr. Edulji Coyaji in his general practice. This she did quite happily and even now she says, "I am a gynecologist by profession but I am a general practitioner at heart."

Here is how Banoo Coyaji describes what happened next. "In those days, we didn't do much arguing. We did as we were told. At least I did. One day I was seeing patients and Dr. Coyaji sent for me. He said, 'From tomorrow morning you are to go to the KEM Hospital.' I just looked surprised. He said, 'Sardar Moodliar—that's the chairman of the hospital committee—needs a doctor badly. His doctor has fallen ill and they are without a doctor and they want you to come.' So I said, all right. The next day I went to the KEM Hospital. And I am there still."

King Edward Memorial Hospital had been founded by Pune's leading citizens in 1912 to commemorate King Edward VII, who died that year. It was a private charity hospital that subsisted on a small endowment and donations. Long ago, local residents had taken to calling it KEM, sounding out the letters. When Banoo Coyaji entered its doors on the fourteenth of May 1944, it had only forty beds. Since the hospital's only other doctor was on sick leave, she says, "I was immediately in charge." Most of KEM's patients were poor Hindu women. Although KEM was primarily a maternity hospital, the staff had to be prepared for any emergency, all the more so because poor women feared any hospital and only went there when they were desperate. Arriving in carts from the villages, they came with obstructed labor, or in pain from a tooth abscess, or with an infected appendix. Medical director Banoo Coyaji and another female doctor plus three nurses made up KEM's entire professional staff. To keep up with

the need, they often worked eighteen hours a day. "We did everything," she says.

By the time Banoo Coyaji joined KEM, her Pune grandparents had died and the big house that she had been brought up in had been sold. She, Jehangir, and Kurus moved into an apartment built right on top of the hospital. Working downstairs and living upstairs, she could look closely after Kurus and be on hand at crucial hours of the day, such as when he returned from school. Moreover, Jehangir's office at the Pune Electric Supply Company was just across the street. At particularly trying times, Banoo's mother would appear from Bombay "like an angel." Banoo describes this arrangement as "very comfortable for me." Despite the backbreaking hours, she thrived.

It was three years after Banoo Coyaji joined KEM that the long political struggle between India's nationalists and Britain was finally resolved. This struggle had never been far from her thoughts. Moreover, in 1942, a dramatic event had seemed to link the history of the independence movement to the private history of her family. Gandhi's historic meeting with Congress Party leaders to launch the "Quit India Movement" convened in the park next to the hospital in Bombay in which Kurus was born on the very same day! The Quit India resolution was passed on the following day, and the day after—9 August 1942—British authorities arrested Gandhi and many other Congress Party leaders. Immediately, riotous protests broke out in the city, leaving mother and child Coyaji bereft of nurses in the beleaguered hospital. Five years later, on 15 August 1947, Banoo and Jehangir walked together to a government office in Pune to observe the end of the British Raj in India. To the strains of "God Save the King," they watched as the British flag was drawn down. Then the band played the Indian national anthem and the Indian flag rose slowly to the top of the flagpole. "I don't cry easily," she says. "But there were tears rolling down my eyes and my husband's eyes when we saw that."

It was about this time that Banoo Coyaji introduced her first major innovation at KEM. Her work confronted her daily with the unhealthy consequences for women of having too many children, or of having children too early, or too late, or at too close intervals. Drawing inspiration from Maharishi Kerve, whom she describes as "a great liberator of Indian women," she opened Pune's first birth control clinic. Aided by Shakuntala Prangpe, a social worker and devoted family-planning advocate who now joined KEM's staff, Coyaji taught the nurses how important fertility control was to women's health. She launched birth control classes for local women and, at her clinic, provided the practical means as well. Meanwhile, Coyaji says, she and Shakuntala "spoke about it everywhere we could," even though bringing it up in polite society, as her grandmother might have said, was not the done thing.

Alongside this innovation came many others. Indeed, during the many years that followed, Banoo Coyaji devoted herself to building KEM. By popular demand, a men's ward was added in the early 1950s. Then, as the need arose and funds permitted, Coyaji added consultant specialists to the staff—in medicine, surgery, pediatrics. KEM had long trained nurses, but in the early 1960s it became a certified teaching hospital affiliated with B. J. Medical College in Pune. Thus, in a few short decades, KEM grew to become a full-fledged general hospital and one of the leading charitable institutions in Pune, India's ninth largest city.

To pay for this transformation, Banoo Coyaji had to raise money constantly. She called upon the generosity of families long associated with the hospital and its board of trustees, such as the Moodliars, who are South Indian, and the Parsi Pudumjis. She prevailed upon the Turf Club to dedicate one race day a year to support hospitals. At each ten-year anniversary, she organized major fund-raising drives. And constantly, she begged and borrowed from Pune's wealthy citizens, including her own well-to-do private patients. "Anybody I could get interested in this hospital," she says, "I got interested." All the while she took no pay herself from KEM. As each new windfall arrived, Coyaji seized the opportunity to add a new piece of equipment here, a new ward there. "The hospital was really not constructed as it should have been," she admits, but "grew and grew like Alice in Wonderland."

Life was full. Despite the heavy demands of running KEM, Banoo Coyaji and her husband led a busy social life involving dancing at Pune's local clubs and outings to concerts and the cinema. They took in races at the Turf Club. A friend of hers, F. D. Wadia, owned a stud farm and, for some years, Banoo kept two mares there and bred at least one champion racehorse. During the same years, she became involved in a Marathi-language newspaper called *Sakal*, or Morning. *Sakal*, known for its feisty editorial independence, was the brainchild of one N. B. Parulekar, a journalist who held a doctorate in philosophy from Columbia University and who was a trustee and honorary secretary of KEM. When Parulekar was suddenly called away from Pune in 1956, Coyaji says she incautiously volunteered to "manage the press while you are away." Parulekar was gone for six weeks, during which time she learned the ropes of the newspaper business and formed a permanent attachment to *Sakal*. Parulekar made her director and she stayed on.

"All this went on merrily," Banoo Coyaji says, "until the late 1960s when I took a breather to think about what I was doing." What bothered her was the condition in which so many of KEM's patients arrived at the hospital. "Patients would come to my door," she says, "seriously ill, dying, or in carts with one baby delivered and the other baby still inside, or with an arm sticking out." What was happening on the outside? she wondered. What was happening in the villages?

"It was a very sad thing," she reflects, but in those days very few doctors strayed far from hospitals and clinics and their own privileged social circles. They were woefully ignorant of the life conditions and habits of the vast majority of people. "I knew nothing," she admits.

To correct this, Banoo Coyaji began exploring the possibility of extending KEM's services into the countryside, "inspired and aided," she says, "by the great educationist J. P. Naik." She and her colleagues identified a poor rural administrative subdivision in which to begin. The thirty thousand villagers of Vadu Block lived in some twenty-two isolated hamlets scattered across a dry, drought-prone terrain. "If it rained, farmers had something to eat," she says. "If it didn't, they starved." Having found Vadu, Coyaji approached the health secretary of Maharashtra's state government with a bold proposition. "Hand over the block's primary health unit to us," she said, "and let us run it." The startled official promptly agreed. In 1972, KEM set up a small outpatient clinic in Vadu. Maternal and child care and family planning were the early priorities of the program.

Banoo Coyaji's first tentative interventions in Vadu Block coincided with a period of great political tension in India. The national crisis came to a head in 1975 when Prime Minister Indira Gandhi invoked the emergency provisions of India's constitution to suspend civil liberties and impose press censorship. Coyaji and her colleagues at *Sakal* "were dead set against the Emergency," she says. They opposed it vociferously from the start. Like other newspapers, *Sakal* now became subject to censorship. Before publication, its editors were required to submit every page for review by government censors who, as Coyaji puts it, would "scratch out this and scratch out that." As managing director, she received repeated warnings from the government about the paper's attitude. Aside from press censorship, Coyaji also criticized Mrs. Gandhi's population control campaign. Vocal critics of the program charged that the government was forcing millions of men and women to undergo unwanted sterilizations. Although Coyaji knew that such an emotional issue invited exaggerations, she also knew that the program was fraught with some genuine excesses.

Banoo Coyaji surmises that the governor relayed her criticisms to Mrs. Gandhi, for she was soon invited to meet with her personally. And right away. "So we had a long conversation on the population problem of India," she says, "and about what is not being done and what should be done." As a pioneer in the field, Coyaji, of course, believed that the government should promote family planning. "Take strong measures," she told Mrs. Gandhi. "Let one good thing come out of the Emergency." However, she said, it was her view that the subject of birth control should always be approached first from the vantage point of the health and welfare of women. Achieving a stable population should be seen as a by-product of this more fundamental

need, not as an end in itself. Otherwise, excesses were bound to occur. ("Much political capital was made of these so-called excesses," she recalls, "and Indira Gandhi lost the next election as a direct result of this.")

During the same conversation, Mrs. Gandhi asked Banoo Coyaji her opinion of press censorship. Coyaji used the opportunity to complain about the practice of precensorship. "You have all the powers in your hands," she told her. "You can stop the presses any day. Why do you have to have precensorship?" Mrs. Gandhi evidently saw the point. "Yes, yes. I understand," she said, as Coyaji happily remembers the moment. "We will stop it." Although this encounter had its stormy moments—such as when Gandhi flew into a rage when Coyaji implied that, given the Emergency, there would be no more elections—afterwards she sent for Coyaji often to discuss health and population matters. "We became quite friendly after that," she says.

As the Emergency came to an end, Banoo Coyaji was having second thoughts about her rural health project in Vadu. Looking back at this period now, she says, "We did good work there, but we weren't making much of an impact." The first mistake, she concluded, was running the KEM rural unit just as the government ran theirs. Doctors tended to judge their effectiveness by counting the number of patients who crowded into their clinics each day. Like a miniature KEM, the clinics served mainly those individuals who came to them to get medicine, or for emergency treatment. Yet Coyaji wanted to go beyond this and address the basic health needs of rural people, precisely so that these illnesses and emergencies could be prevented in the first place. "I was very dissatisfied," she says.

In 1977, Banoo Coyaji tried a new approach. Accompanied by the state health secretary and the local council president, she and her staff convened a huge meeting of villagers in Vadu Block. At the meeting, she explained that KEM was interested in much more than providing clinic services. "We are interested in maternal and child health, in sanitation, and clean water," she told them. "We are interested in preventive care." She then invited each village to recommend a man and a woman who could be trained to serve as part-time community health volunteers. Generally, Indian villagers tend to be skeptical about such offers, being long accustomed to the unfulfilled promises of their politicians. But KEM's reputation was already established in the area and people quickly joined in. Coyaji emphasized that candidates for the program should be people of standing in the community and should perhaps include individuals with some rudimentary know-how, such as traditional midwives.

"I would like to believe that it was an absolutely democratic process," says Banoo Coyaji. But even if the recruits included "this village headman's sister-in-law and that one's brother-in-law," she says, villagers still felt that these people were *their* people. This

sense of "ownership" on the part of villagers would be a key to the program's success.

Banoo Coyaji and her staff put the newly recruited health volunteers through a three-week training course including the basic tenets of healthy living, village sanitation and personal cleanliness, effective family planning, and the importance of clean water and a good diet. "We taught them," stresses Coyaji, "that medicine is not a part of health." Here also began their education in identifying health problems that needed to be referred to doctors and nurses. Afterwards, armed with certificates ("so they would feel proud of themselves"), the volunteers returned to their villages as community health guides. They formed the grassroots layer of what Coyaji envisioned as a pyramid of healthcare services connecting Vadu's villages at the bottom to KEM at the top.

Gradually, Banoo Coyaji's new system took root. The community health guides were volunteers and worked only part-time. They were paid 125 rupees a month as honorarium—a small sum yet seventy-five rupees higher than the standard government fee. (KEM made up the difference.) They had omnibus responsibilities. An immediately urgent task was to monitor the health of women and children. For example, the health guides learned to identify pregnant women who were at risk, such as young women expecting their first child, older women with several children, and women with a history of obstetric problems, as well as those with symptoms of anemia, jaundice, or edema. They were taught to monitor low-birth weights, diarrhea, malnutrition, and respiratory infections among the children and to keep careful medical records. Armed with information like this, the guides could refer individuals for more intense monitoring and treatment by the nurses and doctors who periodically visited the village and who were available regularly at nearby health centers. In emergencies, they could help move patients quickly to the help they needed.

Alongside these critical tasks of referral, the community health guides treated minor wounds and ailments themselves and dispensed remedies such as oral rehydration salts for diarrhea. They taught their neighbors how to recognize and cope with the symptoms of chronic malaria and tuberculosis (TB); how to supplement their diets with nutritious homegrown vegetables and fruits; how to protect themselves against waterborne diseases; and how to space and limit the number of their children. They became agents of change. One such person was Narayan Khule, who described his work to a Ford Foundation visitor this way: "In the beginning, people did not understand much about illnesses. They attributed them to God. I first taught them how to keep their homes clean, to cover their drinking water and, if they had a latrine, to clean it. Later, I showed them how to keep their hair and nails free of dirt, and such things as using the wastewater from bathing for growing vegetables and fruit."

Vadu's health guides remained in active dialogue with the KEM staff. At monthly meetings, they received fresh supplies of medications, dressings, sterilized delivery kits, rehydration salts, and birth control aids as well as ongoing instruction from doctors, nurses, and social workers. Every month, a KEM team composed of an obstetrician/gynecologist, a pediatrician, a nutritionist, and a social worker visited each village to treat individual patients, immunize the children, and conduct classes on topics such as family planning. Aided by records kept by village health workers, the team also assessed the general state of nutrition and health in the community.

Banoo Coyaji's health service pyramid had four distinct tiers. At the base was the village itself and its KEM-trained health guides. At the next level was a web of health subcenters staffed by government-appointed multipurpose workers and serving approximately five thousand people each. These subcenters were supervised by the KEM staff at the primary health center in the village of Vadu, to which Coyaji added a thirty-bed hospital with an operating theater. Cases requiring special treatment continued to be referred to KEM in Pune, which guided the entire enterprise. Thus, says Coyaji, "We had a referral system from the last hut in the village up to the teaching hospital and then feedback to the village." KEM's health services were not provided free, although in the countryside the fees were minimal. At the hospital itself, patients paid according to their means, with fully 80 percent receiving free or subsidized medical care. This remains the practice today.

After a few years of successful experimentation along these lines, says Banoo Coyaji, "the Ford Foundation people came to see us. And they said, 'Banoobai, so what? You're doing this in nineteen villages. We want you to scale up. And we'll help pay for it.'" In 1980, therefore, Coyaji and her staff introduced their model into the adjacent blocks of Kendur and Nhavra, where the village councils (*panchayats*) had passed a resolution inviting them to come. Here they attempted to replicate the successes of Vadu, but under certain constraints. In the new areas, there would be the same emphasis on the role of community health guides, and on effective training, record keeping, and swift, judicious referrals. But there would be no traveling clinics or specialist consultants, nor would health guides receive the seventy-five-rupee monthly bonus. Most importantly, in surrendering two additional blocks to the KEM project, the Maharashtra state government did not surrender administrative control over its primary health centers; moreover, when KEM moved in, virtually all of the village and subcenter-level health workers had already been chosen, in many cases inappropriately.

"We thought it would be easy in Kendur-Nhavra," she says, "but it was not so." Conflicts soon arose between health department employees and the KEM managers, who were viewed as unwelcome outsiders. Few of the employees in place had any understanding of

the community health care concept and Banoo Coyaji and her colleagues concluded that thorough retraining was necessary. Among those most in need of retraining were government health supervisors and medical officers themselves. Coyaji found that village-level health guides and other low-ranking employees responded best to KEM's training. Mid-level bureaucrats resisted—by not attending the retraining camps, for example—and tended at first to thwart KEM's attempts to reorder public health priorities in favor of community health. "The middle-level health bureaucracy felt threatened," remembers Coyaji. "It took quite some time for them to realize that we were not monitoring or examining or competing with them, that we were there to help them." After six years of patience and persistence, the basic elements of the Vadu model had taken hold in Kendur-Nhavra and she would say with relief, "We are no longer aliens."

For Banoo Coyaji, this difficult but ultimately successful collaboration with government was of critical importance. "NGOs [nongovernmental organizations] can do very good work on their own, on a small scale," she says. But India's health problems are much too big to be addressed by NGOs alone. "That is why I work with the government," she says. "Whether it is good, bad, or indifferent, it makes no difference." Her links to senior members of the Maharashtra health department helped smooth the way for KEM's acceptance in Vadu and the neighboring blocks, all the more so when it encountered resistance from mid-level health bureaucrats. In just a few short years, Banoo Coyaji's collaborative approach was paying dividends. By 1987, many elements of the Vadu model had been accepted by the state. These included KEM's process for selecting and training village health guides, its insistence upon retraining middle-level health officers and on continuing education for its field staff, and its effective patient referral and grassroots record-keeping systems.

Medical research was an important component of the relationship between KEM and its rural project. In 1972, Banoo Coyaji seized a rare opportunity to establish a research society at the hospital with public health specialist Dr. V. N. Rao as director. In that year, the government of India offered a 135 percent tax benefit for charitable donations earmarked for research. "This was very attractive to any company," remembers Coyaji. "So we collected nearly a *crore* of rupees in those days." This was a boon of approximately U.S.$1.25 million.

From the beginning, KEM emphasized research linked to its ongoing medical and public health programs and prioritized projects that were "problem-oriented and problem-solving." One example was an investigation sponsored by Leicester University (United Kingdom) of childhood cirrhosis of the liver. Banoo Coyaji likes to point out that it was KEM's young pediatricians (under the direction of Dr. Anand Pandit) who discovered why so many Indian children suffered from the disease. They discerned that the poorest children seemed

to be spared, but that children from moderately better-off families were vulnerable. Copper pots—a mark of relative prosperity compared to the clay pots of the poor—turned out to be the culprit. Boiling milk in copper pots, the researchers learned, leaves a residue of copper in the child's liver that can cause cirrhosis. Discovery of this critical fact led the government of Maharashtra to ban the practice of boiling milk in copper utensils.

KEM researchers, led by Banoo Coyaji personally, also participated in a three-country study on low-birth weight, sponsored in India jointly by the Indian Council for Medical Research (ICMR) and the United States Agency for International Development (USAID). Their research focused on the possible connection between vaginal tract infections and low-birth weights in Indian children, and also examined other possible explanations for low-birth weight, such as intense physical activity by pregnant women and various socioeconomic factors. This study led to a larger World Health Organization (WHO)-sponsored project to investigate why some children survive and others do not. In the "Rural Cohort Study on Child Survival," KEM medical researchers monitored more than three thousand rural children from birth to the age of five to examine factors affecting survival: birth weight, nutrition, sanitation, economic status, and the utilization of health services, among others.

An "intervention component" of the child survival study illustrates another way in which KEM's research activities yielded direct benefits to participants. During home visits, researchers treated the children's family members for common ailments, and referred seriously ill people, unvaccinated children, and possible TB carriers to the health centers for appropriate care.

The fact that most of KEM's research projects have outside funders illustrates another element of Banoo Coyaji's strategy for building KEM and its community health program. "We couldn't do it all alone," she says. "We had to get lateral partners." Many of KEM's lateral partners are international funding and development agencies such as WHO and the Ford Foundation. Coyaji has also developed close working ties with major Western medical schools and research institutions such as Leicester and Oxford Universities in the United Kingdom and Columbia University in the United States.

Just as many of Banoo Coyaji's lateral partners, however, are Indian. The Vadu project's efforts in training village and subcenter health workers, for example, and in advancing female literacy, have been enhanced by her collaboration with the Indian Institute of Education in Pune, the creation of J. P. Naik—"another mentor of mine," she says. The institute develops and promotes techniques for nonformal education. "We provided health inputs to their projects," Coyaji says, "and they provided educational inputs for ours." Another lateral partner is Manibhai Desai of Bharatiya Agro-Industries Foundation (BAIF). Coyaji went to Desai for help in developing

income-generating ideas for Vadu's impoverished villagers. If people remain poor, she realized, "then health programs will fail and family-planning programs will also fail." With Desai's help, she began introducing agro-based village industries such as growing mulberry trees and silkworms in the Vadu project area.

In yet another effort to enhance the material welfare of Vadu's villagers (and the slum-dwelling poor of Pune itself) in 1980, Banoo Coyaji joined with two friends—Adi Patel, a social scientist, and P. C. Parmar, an accountant—to form the United Socio-Economic Development and Research Programme, or UNDARP. UNDARP is a nonprofit NGO through which Coyaji and her collaborators concentrate on projects that KEM itself is unqualified to execute. In a sense, UNDARP is KEM's sister organization for development. It mobilizes funds from the government and donors to provide seed capital, small loans, and technical assistance for income-generating activities in villages—raising poultry, for example, or manufacturing condiments and snacks. It has also helped to fund a variety of village improvements such as wells, soakage pits, catchments for rainwater, smokeless wood-burning stoves, and cow dung gas plants.

By the mid-1980s, Banoo Coyaji's multifaceted interventions in Vadu were inducing a quiet transformation. Infant mortality and the crude death rates had declined perceptively. Half of the couples in the area were practicing birth control of some kind, compared to 32 percent for the rest of India. Eighty percent of all births were being made safer by KEM-provided sterile birthing kits. (These kits include an outline of a normal baby's footprint; mothers whose newborns possess feet smaller than the diagram are urged to take their babies to a doctor.) Villagers with malaria, TB, leprosy, and other communicable diseases were being identified, referred for treatment, and monitored for follow-up care. Mothers with malnourished children were learning to fortify their diets with locally available vegetables. Children crippled by polio and other handicapped youths were receiving rehabilitative care in KEM facilities. And KEM-assisted women's circles (*mahila mandal*s) were establishing savings schemes and serving as important conduits for health education. Moreover, there were nearly one hundred new bore wells in the area, and two hundred latrines. In many villages, there were also new garden plots, poultry projects, and other micro enterprises. Just as importantly, a major breakthrough in public attitudes about health had occurred. The people of Vadu, long inured to the inevitability of ill health and poverty, had come to value the lessons and services provided by Coyaji's project. They now welcomed them.

At the heart of this modest transformation stood Banoo Coyaji's stalwart community health guides. Their status had risen due to their helpful services and their ability to arrange treatment in KEM clinics and hospitals. People now came to them for advice on any

number of problems, and several of them were elected members of village councils and a few even as village heads.

Yet for all the successes of her program, Banoo Coyaji was troubled. "Working in the villages of India made me realize," she says, "that definitely, but definitely, women are second-class citizens in our society. In their childhood, you see a brother and a sister being brought up together. The brother will get milk, the sister will get water mixed with milk. The brother will be sent to school, the sister will not. In poor families, the men and boys eat first. Then the girls and women eat what is left over." Observing all this in early childhood, says Coyaji, a girl "accepts it as a way of life." This is how the oppression of women is perpetuated.

Increasingly, Banoo Coyaji's thoughts turned to this one vexing problem. What could be done? Her own efforts on behalf of women and children thus far, as well as those of the government of India, had targeted mothers and very young children. Various programs were already in place to address their needs. But for girls from the age of six to the time of their marriages in the mid-to-late teens, there was nothing. Yet it was during these tender years of maturation when their adult attitudes and skills were formed. "These are our future mothers," says Coyaji, yet they have "never been given the opportunity to blossom into individuals" or to develop their "unique qualities of womanhood and latent talents." In the poor rural villages of Vadu Block and adjacent areas, girls rarely attended school for very long. From about the age of seven, they became housekeepers and surrogate mothers for their younger siblings so that their mothers could work for wages outside the household. By the time they reached puberty, their parents were already planning their marriages. Yet few, if any, of them received from their families even the most rudimentary knowledge about their own physical maturation or about sex and family life. "I felt that we must train these girls to have self-awareness and self-esteem," she says, "and that it must be done before they are ten, certainly before they are adolescents."

In 1988, Banoo Coyaji convinced the director of the Indian Council of Medical Research to support an experimental training program for girls—the Young Women's Health and Development Project. One of four national components was entrusted to KEM. To start, Coyaji and her staff invited a group of pre-adolescent and adolescent girls for a seven-day live-in training. "They were not taught the three Rs," she says, "but just living. Cleanliness. How to look after themselves. We were surprised that there were adolescent girls in the village who knew nothing about menstruation." There were also art lessons, handicrafts, and singing. Coyaji marveled at what a difference even this brief intervention seemed to make for the girls. She quickly expanded the project.

In a short period it covered eleven villages. To conduct regular classes for the girls, KEM recruited a team of community welfare workers, women who had finished between seven and ten years of schooling. Under the guidance of KEM supervisors and the project director (a social worker), they gathered their pupils twice a week in makeshift village centers for two-hour sessions. Girls were divided into batches by age: seven to eleven; twelve to fourteen; and fifteen to nineteen. Each girl progressed eventually through a series of fifty to sixty lessons over a period of six months. When they finished, a new batch of girls began the program.

Aside from lessons in health, hygiene, personal development, and family life, the girls also studied population issues, the status of women, and the importance of education for girls. A second component of the program involved learning vocational skills such as sewing, knitting, embroidery, crochet, and making costume jewelry and decorative items. The goal here was to empower the girls economically, either by giving them a potential source of private income or by enhancing their economic value to their families, thus making parents reluctant to marry them off precipitously. Community welfare workers also led the girls in group singing, folk dancing, and games and organized special events for national or local holidays. Embedded in all these activities was the goal of engendering confidence and self-esteem.

One measure of the program's early success was the reluctance of many of the girls to discontinue their association with the program when their own course came to an end. This led, beginning in 1990, to the creation of Vadu's first *kanya mandal*s, or girls' circles, to complement the already established women's circles (*mahila mandal*s). In the *kanya mandal*s, graduates of the Young Women's Project meet twice a month with a KEM community welfare worker to carry on discussions and activities begun under the project. They hold debates and quiz competitions, organize games and local celebrations, and engage in community work. They plant trees, lead village cleanliness campaigns, and teach their younger brothers and sisters good health habits. Their discussions about women's issues, such as the dowry system and early marriages, also spill over into the community and home. Some of the girls are teaching their mothers how to read and write. At the same time, magazines provided by the project encourage the girls to develop their own reading habits. Most of Vadu's villages now have their own *kanya mandal*s.

A recent development in the Young Women's Project was the completion of a formal training center in the town of Pabal. Inaugurated by Banoo Coyaji in January 1993, the small campus consists of three yellow and ochre dome-shaped structures designed by local architects who specialize in low-cost construction technologies. Many of the project's courses are conducted here, with participants

coming and going by minivan. Some two thousand girls have taken part in the Young Women's Project thus far.

As in all of Banoo Coyaji's projects, this one has a built-in multiplier effect. The girls themselves are the main beneficiaries, but their families also gain. Aside from teaching their siblings cleanliness habits and contributing to family incomes, the girls alert their parents to medical symptoms that require attention and remind their mothers to have their babies vaccinated. As a result, says Coyaji, "We have eliminated tetanus completely from this area." Moreover, the KEM-trained community welfare workers are also beneficiaries. Like their counterparts in the community health program, they too rise in stature and confidence. As one of them said, "Earlier we would be afraid of even sitting on a bus. But now we have the confidence to move about on our own. Besides, my girls get medical attention from KEM's doctors." Thus, they and the young girls they teach become additional components of the KEM-created web of people and institutions that is energizing the rural communities around Pune.

In 1992, Banoo Coyaji added yet another component to this web with the Women's Leadership Project. In this WHO-supported endeavor, another team of community welfare workers is assigned to work directly with mature women through the already established *mahila mandal*s. Expanding well beyond health and family planning, these KEM-trained rural agents help women generate additional income, add physical improvements to their homes and villages, and advance literacy. But they also provide legal advice and encourage women to think about and discuss customs and laws that affect them negatively, such as the dowry system. (Under the dowry system, the family of the bride pays the family of the groom a negotiated sum, often in kind, at the time of marriage.) In this way, Coyaji hopes slowly to chip away at some of the die-hard attitudes and customs that impede the healthy development of rural communities, especially their women.

At seventy-six, Banoo Coyaji still serves as KEM's medical director and, for several years, has been chairperson of the hospital's governing board as well as that of the research center. Although she would be the first to recognize the contributions of KEM's many staff members and supporters—particulary her two senior lieutenants, director of research Dr. V. N. Rao and director of community medicine Dr. N. H. Kulkarni, both of whom are retired government doctors—she is the institution's guiding force. No one thus far has risen to take her place. "I am not a very easy person to work with," she says, "because I want perfection. So maybe when I go, somebody will turn up quite easily. I'm not irreplaceable."

KEM is now a 550-bed teaching hospital with comprehensive services and specialties. Dr. Kurus J. Coyaji, her son, is head of the department of obstetrics and gynecology. Her grandson is a resident in the same department. KEM annually trains more than one hun-

dred medical and nursing students, including some from foreign medical schools such as Columbia University (New York). It receives research support from international institutions such as the WHO, Population Council, Southampton University (United Kingdom), the Ford Foundation, World Bank, and Wellcome Trust. At the same time, it also collaborates with more than a dozen national and state bodies in India, including, prominently, the state government of Maharashtra, the Indian Council of Medical Research, and the national Ministry of Health and Family Welfare. The rural health and women's development projects initiated by Banoo Coyaji now reach some three hundred villages and hundreds of thousands of people. Further expansion is underway. More importantly, strategies and techniques proven sound in her community laboratory are being adapted as part of government programs throughout India. Her own service for many years on India's Central Council of Health and Family Welfare and her inputs into the country's seventh and eighth Five-Year Plans—not to mention her assiduous networking among officials, medical professionals, and like-minded friends in the NGO community and consultancies with numerous international organizations—have helped to ensure that the lessons learned in Pune and Vadu are dispersed widely.

These days, Banoo Coyaji visits her rural projects once a week and continues to guide KEM. Many of her private patients still depend on her. And she is still a director at *Sakal*. But she is slowing down a bit. She stopped doing surgery a few years ago, when her husband Jehangir was incapacitated by a stroke. She cared for him lovingly for eighteen months before he died. Afterwards, she moved from her apartment at KEM to a new private residence on a four-and-a-half-acre farm that she shares with her son and his family. From time to time, she retreats to Mahabaleshwar, the hill station where she met her husband and where for years they kept a small bungalow.

Despite the enormous problems her country faces, Banoo Coyaji is hopeful for India. For all its human shortcomings India's democracy is dynamic. About the future, she likes to quote Jawaharlal Nehru, the country's founding prime minister: "To awaken people, it is the woman who must be awakened. Once she is on the move, the family moves, the village moves, the nation moves." But awakening India's women, Coyaji knows, is a difficult thing. "All social change is slow," she says. And very profound social changes indeed are needed before India's women can achieve their full potential. Rising prosperity and the gradual abatement of stigmatizing customs will help. And education for girls and women is a necessity. But ultimately, she says, "It is on equity that everything depends." So her goal, her real goal for India, is "a nation where men and women are equal in every sense of the word."

As Banoo Coyaji likes to point out, "You have to be an optimist to do this work."

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J.R.R.

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