SPECIAL ARTICLE

21st Century Health Care for Children in Afghanistan?

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ABBREVIATIONS. MCH, maternal child health clinic; CAI, Child Advocacy International.

Primary and secondary health care systems for children in Afghanistan are barely functioning. On average, 4 children die each day in the main children's hospital in Kabul, Afghanistan of preventable/easily treatable illnesses. Strategies to help pediatricians from advantaged countries address this unethical situation include advocacy, twinning (individual or departmental sponsorship of a children's hospital unit, a maternal child health (MCH) clinic or of an Afghan pediatrician), and the acquisition of medical equipment and supplies. Integration of community and hospital health care for children is promoted as the key strategy, with a particular emphasis on continuing medical education and morale building in local medical staff to maintain the practice of pediatrics in the country. Measures to reduce suffering are as important as those designed to save lives.

UN Convention on the Rights of the Child (International Law in 1990)

Article 38 Point 4

In accordance with their obligations under International Humanitarian law to protect the civilian population in armed conflicts, States Parties shall take all feasible measures to ensure protection and care of children who are affected by an armed conflict.

Constant fear and recently witnessing one of their parents being blown apart by a rocket left the two sisters shown in Fig 1 mute. Do we believe that such children are inherently different from those living in advantaged countries such as the United Kingdom or the United States? Do they feel the pain of injury, illness, and loss of a beloved relative any less? Do they have different dreams? We can not know. However, from an ethical standpoint as pediatricians and human beings, how long can we continue to accept the extreme poverty and armed conflict that impacts on so many children in disadvantaged countries such as Afghanistan?[1–12]

We believe that many health professionals and particularly pediatricians from advantaged countries want to help. However, they do not have the framework in which to apply their skills and experience in a way that will make a difference while continuing to be able to work in their own country and fulfill the needs of their own families.

The situation in Afghanistan is worthy of special attention from pediatricians. Nineteen years of armed conflict have decimated the country. Common childhood illnesses kill children made vulnerable by malnutrition. Excessive numbers of infants are born with congenital abnormalities that are probably the result of maternal malnutrition during early fetal development. Birth asphyxia is largely untreated. Hospitals have been bombed and looted and most health professionals have left the country. Maternal child health clinics (MCH) are sparse and mostly in urban areas where they are run by international aid agencies rather than the local government. Medical education has been halted with few publications or books later than 1986 available. Although relative peace has returned to some areas of the country, the economy is so weak that little can be done by the ruling authorities to improve the situation. There is the ever-present threat of incoming rockets, shells, or, worst of all, the personal invasion of one's home by militant forces.[12] On top of all this, the people carry a fear that should a family member and particularly a child fall ill or be injured, there is little or no medical help available. This is not a place where the United Nations Convention on the Rights of the Child[13] has any meaning. The appalling statistics on infant, child, and maternal mortality rates speak for themselves (see Table 1), but even these are probably an underestimate of the true figures, as the majority of the population never receive the attention of a health care worker.

SITUATION IN TWO HOSPITALS CARING FOR CHILDREN IN KABUL, AFGHANISTAN

During visits to Afghanistan, in October 1997, March and June 1998, surveys of and direct experi-

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Fig 1. These sisters are mute after the death of one of their parents. They are standing outside a day care center in Kabul, Afghanistan.

ence of working in two hospitals in Kabul illustrate the desperate crisis affecting neonatal, pediatric, and maternity secondary health care in Afghanistan.

The Indira Ghandi Children's Hospital

This is the only hospital with pediatric surgery and teaching facilities in Afghanistan.

It was built in 1972 and initially called the "Institute of Child Health Kabul." Originally there were 130 beds including pediatric medicine and surgery, ear, nose, and throat surgery, and neonatal medicine. It was the main center in the country for training undergraduate and postgraduate medical students. There was a local diploma in child health training scheme and a similar scheme for pediatric surgeons. The institute had an academic link with the "All India Institute of Medical Science," in Delhi, India. Seriously ill children were admitted from Kabul and its suburbs, and the hospital served as a tertiary referral center for patients from all over the country. The inpatient beds were increased to 195 just before the war. After the invasion of Afghanistan in 1979, there was a reduction in financial support from the governments of the time leading to near closure of the hospital. The Indian government, in the early 1980s, donated equipment to the hospital and gave it its present name. The hospital is once again on the verge of collapsing. It now has 250 to 300 beds. Apart from a minute input from international donors, there is an almost complete absence of medical equipment and supplies.

The doctors' salaries are approximately $7 to $10 per month and often the government does not have the money to pay even this small amount. To feed their families, doctors must find other sources of income. Many doctors have left the hospital, either to look for work in Pakistan or to take up other occupations, which pay enough to support their families. Several doctors are working on mine clearance. Despite these problems, a core of approximately 50 doctors continue to do their best to provide a service for the children. Unfortunately, there are very few who have completed their specialist training in pediatrics. Moreover, they are extremely demoralized and are exposed 3 to 4 times every day to the preventable deaths of children, particularly those <5 years of age.

Mothers undertake most of the nursing, and sleep on the floor next to each "bed" (a rusty, dirty, springless contraption with a stained mattress). The children stay in their street clothes and during busy times of the year there may be 2 or 3 children in each bed.

One of the most frequent and fatal problems is acute respiratory infection (bronchiolitis/pneumonia). Until our visit in March 1998 (see below) there was only one oxygen concentrator in the whole hospital. This overheated after 20 minutes of use. Occasionally a cylinder of industrial oxygen (possibly contaminated) becomes available, but this is usually reserved for the operating room. Antibiotics are given by 8 hourly intramuscular injections. A disposable syringe and needle may be used more than 100 times before being discarded. There was no monitoring equipment (even in the operating room). In one ward, using a donated pulse oximeter, 6 children were found to have oxygen saturation levels <80%.

The toilets were filthy and represented a health hazard. Frequently there is no running water in the wards. The main central heating system has long been defunct. When heating is available it is provided by primitive wood or diesel stoves placed in the middle of wards that release noxious fumes that worsen respiratory infections. Electricity is available for most of the time but almost all of the lighting is broken, and until recently there were bare (live) wires protruding from the walls in many of the wards.

Although some immunization of children is being carried out, it is woefully inadequate, particularly outside Kabul and poor records are kept. Frequently, there are children presenting with tetanus, diphtheria, measles, typhoid, tuberculosis, poliomyelitis, hepatitis, and pertussis. They die painfully from these preventable conditions. Epiglottitis and meningitis attributable to *Haemophilus influenzae* infections are common.

Investigations are rarely available, making diagnoses dependent on clinical skills and guesswork. The practice of a reasonable standard of pediatric medicine is impossible. There were no urine stick tests and blood hematology/biochemical profiles are

TABLE 1. Relative Mortality Rates in Children and Mothers[14]

	Population in Millions	Gross National Product per Capita in US Dollars	Under 5 Year Mortality Rate per 1000 Live Births	Number of Deaths Under 5 Years per Day/58 Million People*	Maternal Mortality Rate per 100 000 Live Births	Number of Maternal Deaths During Pregnancy or Delivery per Year/ 58 Million People*
Afghanistan	20	280	257	2129	1700	51 321
United States	263	25 880	10	24	12	107
United Kingdom	58	18 340	7	16	9	70

* The information is standardized to a unit equal to the population of the United Kingdom (58 million).

a major procedure that are rarely performed because of a lack of supplies.

During our first visit, a mother asked us to help her 8-year-old son who was in severe pain with a grossly swollen abdomen, generalized edema, and dyspnea. Despite our medical education and experience, we could make little progress in suggesting an appropriate treatment. Clearly the most immediate issue was to relieve his suffering with a powerful analgesic. The most powerful analgesic available in the hospital was at that time paracetamol (pentazocine is now available and we are trying to introduce other more appropriate opioids, such as morphine).

There are extremely competent Afghani surgeons but no anesthetic machine, intermittent diathermy, and limited surgical instruments. Major operations are performed under a light dose of ketamine (the anesthetists are frightened of hypoventilation because there is often no oxygen present and no monitoring). Conditions are far from sterile. There is no autoclave, surgical gloves are washed and reused. During the summer, flies enter the operating room through the broken windows. Many children die from postoperative infections.

We saw a girl 10 years old whose bowel had perforated because of a *Salmonella typhimurium* infection (a common complication) undergoing a laparotomy. She was moaning, moving, and clearly inadequately anesthetized. Postoperatively she received paracetamol to control pain.

Until recently (see below) this hospital had the only neonatal ward in Kabul. Only one of the four ancient incubators was working and even that had a cracked lid. We witnessed premature infants being "incubated" in front of a two-bar electric fire (Fig 2). We also saw a infant 36 hours old who was the only surviving child of a mother who had already suffered seven successive neonatal deaths (Fig 3). The infant, weighing 1.8 kg, was cyanosed and was intermittently receiving oxygen from the one oxygen concentrator present in the hospital. There was no available incubator for this infant who was hypothermic and died the day after our visit. This is a daily occurrence in this hospital.

The unit caring for critically ill children was, until our March 1998 visit, perhaps the most ill-equipped and filthiest of all the wards. While children were often receiving the correct drugs, they had no oxygen, no monitoring of their vital signs, and there was no resuscitation equipment. Frequently there was not even running water. Up to 3 children were sharing each bed. It was a place where the sickest children went to die without analgesic or sedative drugs to relieve their suffering. The only positive feature was the constant presence of their mothers or other female relatives.

Most parents in Kabul live in constant fear that one of their children will require treatment in this hospital.

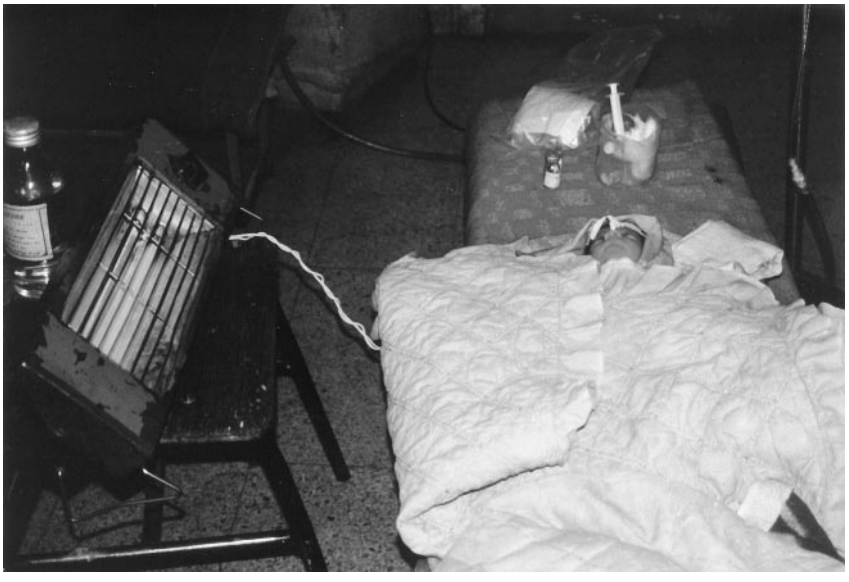

Fig 2. A premature infant being kept warm in the neonatal unit of the Indira Ghandi Children's Hospital in Kabul, Afghanistan.

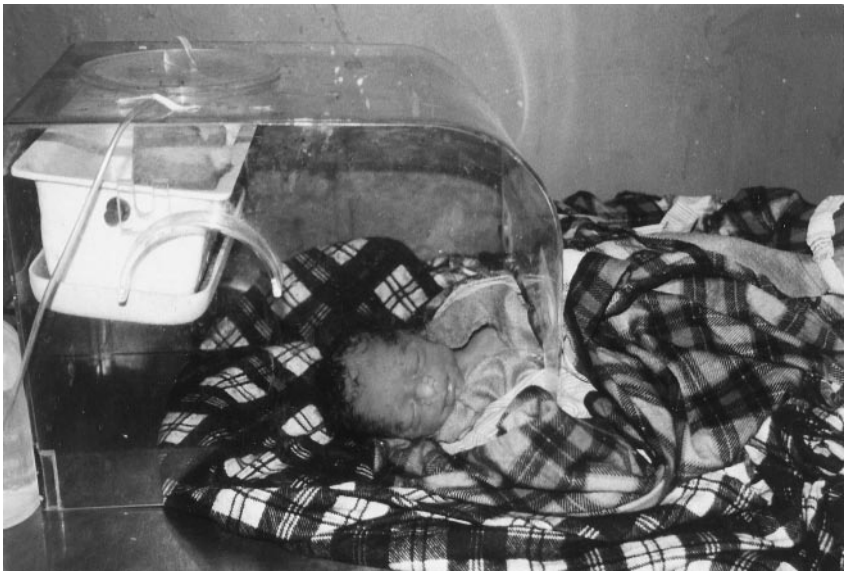

Fig 3. A premature infant weighing 1.8 kg receiving intermittent additional inspired oxygen from an oxygen concentrator. Between bouts of oxygen the infant was clinically cyanosed.

The Malalie Maternity Hospital, Kabul, Afghanistan

This hospital is named after a famous Afghan war heroine. It is the leading/tertiary hospital for obstetric care in Afghanistan (8900 births per annum) and treats all complicated pregnancies in the Kabul area. It has 120 beds but only 70 to 80 are open. There has been no new equipment for 8 to 9 years (see Table 2).

Dr Mahmood Nawabi has worked for 17 years in the hospital and has been its president for 7 years. In March 1998, the hospital was warm, hygienic, and efficiently organized despite the gross lack of equipment identified and described below.

There is a staff of 310, including 80 doctors, many of whom have not completed specialist training. Only 3 are fully trained in obstetrics. Ten can undertake cesarean sections and complicated instrumental deliveries. There are 4 male obstetricians who are not permitted to attend women before they enter the operating room or after the operation is over. There are 78 nurses/midwives.

TABLE 2. Equipment in the Malalie Hospital in March 1998

In the postnatal wards
No resuscitation equipment
No oxygen concentrators or cylinders
No phototherapy
No infant scales, no blood glucose monitoring
No electrocardiogram/oxygen monitoring
In the antenatal wards/clinic
No ultrasound machine
No urine stick tests for proteinuria
No blood pressure machines
In the operating rooms
No diathermy, few instruments
No oxygen
No oxygen, blood pressure, electrocardiogram monitoring
No resuscitation equipment for mothers or infants
In the delivery rooms
No resuscitation equipment for the new-born
No oxygen concentrators or oxygen cylinders
No infant scales
No fetal monitoring equipment
In the hospital
Two very old x-ray machines
No recent textbooks, no library, no education materials

There are 23 to 30 deliveries each day (8% of birth weights are <2.50 kg) and approximately 7 to 8 cesarean sections are undertaken every week (4% of births). Until the arrival of the Child Advocacy International (CAI) pediatrician as a medical coordinator, there were no pediatricians working in the hospital. Asphyxia at birth (4% of births have Apgar scores at 5 minutes <5) and during the immediate newborn period was untreated. Until June 1998, there was no equipment for or staff trained in the resuscitation of infants resulting in many deaths and many neurologically damaged children. During a 2-hour assessment visit in June 1998, 3 infants were resuscitated in a 1-hour period by the CAI pediatrician using a donated bag and mask resuscitation system (from Laerdal, Orpington, UK).

There are facilities for cross-matching blood and a well-equipped but basic laboratory supported by Pharmacies Sans Frontiere. This is about to be downscaled because of a reduction in aid by international donors.

There are 4 delivery rooms containing birthing tables but no other equipment.

There is a Baby Friendly Hospital Initiative program established by UNICEF that is making good progress in the hospital.

There are two operating rooms containing only basic equipment. Most cesarean sections are undertaken using ketamine for anesthesia.

Doctors in the hospital are paid at a maximum rate of $5 per month. Sometimes they are not paid for many months on end. They provide a 1 in 4 day and nighttime rotation.

There is a curfew after 9 pm in Kabul. It was reported to us that it would be normal and willingly accepted practice during the night for the Taleban militia to drive mothers in labor and their husbands to the hospital.

Table 2 shows the deficits in equipment identified in this hospital in March 1998:

THE FUTURE

Though Afghanistan has one of the highest maternal, infant, and child mortality rates in the world, the situation has never been as bad as it is now.

What can be done to help? Although the problems are immense even small amounts of assistance will make a significant difference and save lives. Expatriate pediatricians, nurses, and midwives are needed to work in the hospitals and in the community. Here they can provide moral support and bring the local staff up to date. The long period of armed conflict has seriously inhibited medical education, both at the undergraduate level and as part of continuing postgraduate development. The most modern books in the library in the Indira Ghandi Hospital were until recently published in 1985. Funds are urgently needed to provide basic equipment and supplies. Hospitals in advantaged countries could donate out of date but functioning equipment.

Pediatricians are influential members of the societies of advantaged countries and could advocate for the children of Afghanistan by lobbying their politicians to do something about the ongoing armed conflict and the continued influx of weapons across the borders of this country. We can as individuals or at a hospital level sponsor a bed, a ward, a MCH clinic, or an Afghani pediatrician. We can provide education materials such as journals, books, guidelines, computers, and overhead projectors. It is necessary not only to prevent the collapse of hospitals and MCH clinics in Kabul but also to support other areas of Afghanistan where the practice of pediatrics and neonatal medicine is even more compromised.

During two visits in March and June 1998, our agencies managed to improve conditions in the three most neglected wards in the Indira Ghandi Hospital. These were the unit for critically ill children, the neonatal, and the ear, nose, and throat wards. We were able to deliver and install donated equipment and supplies for 3 to 6 months. This included oxygen concentrators, pulse oximeters, nebulizers, glucometers, syringe pumps, resucitaires, bag and mask resuscitation equipment, electrical and manual suckers, a ventouse, incubators, surgical instruments, and supplies. Two perfectly functioning ultrasound scanners were about to be delivered when the security situation deteriorated so that our international aid work in the country had to be suspended. Throughout the operation we had the support of the Ministry of Public Health of the Taleban Administration and the directors of the hospital. Afghani workmen rewired the electrical system, repainted, and renovated the wards in the Indira Ghandi Hospital. New mattresses and sheets were bought at the local bazaar; the ward furniture was cleaned and repainted. Since her arrival in April 1998, a full-time pediatrician from CAI has been educating staff in the use of the equipment and in the latest ways of managing common illnesses. If the security situation had remained stable, two additional expatriate pediatricians and a female expatriate obstetrician from CAI would have been based and would have been working in Kabul from September 1998.

THE IMPORTANCE OF INTEGRATED CHILD HEALTH CARE

Many humanitarian agencies consider primary health care to be more cost-effective than secondary (hospital) care and for this and other reasons, more worthy of support. We understand but question this dogma and believe that health care for children should always be integrated between the community and the hospital. In countries like Afghanistan most of the trained pediatricians are based in the hospitals. By improving their morale and working conditions, our agencies hope to influence hospital practitioners to realize the importance of preventing illness and accidents in the community and to develop an integrated service that promotes the health of all children in their society. Although equipment and supplies were required to establish a minimum basis for treating seriously ill infants and children much of this equipment was considered redundant in the United Kingdom and the actual cash required to realize these improvements was small. Having a functioning pediatric hospital gives a focal point for pediatricians, both for practice and training, and can be used as a base for projects involving the empowerment of parents and community health workers in preventing serious illnesses/accidents and treating illnesses such as gastroenteritis in the home. Such programs are being developed in collaboration with the Ministry of Public Health. Incentives in the form of family food parcels for many of the pediatricians in the Indira Ghandi Hospital are also being provided by our agencies in an attempt to reduce their dependence on nonmedical work to care for their families. Such incentives are not ideal but may also help to reduce the loss of pediatricians from the country. Cost recovery programs (a small charge based on their ability to pay for families attending the clinics or hospitals) may provide a sustainable way of funding the salaries of medical staff.

Our latest aim, with respect to integrating primary and secondary health care for children, seeks to engage hospital pediatricians, in times when they are not working in the hospital, to undertake sessions in MCH clinics providing primary health care for children in Kabul.

In our opinion, an absence of a basic level of hospital care for children is unethical and demoralizing for the whole community. It is particularly difficult to accept when, as in Afghanistan, it has been previously present and experienced but lost through armed conflict. How can parents accept that the 1 in 4 chance that one of their children will die or be permanently handicapped by a disease that is readily treatable elsewhere in the world? We are not discussing complex illnesses such as leukemia, but the main killers of children in Afghanistan, namely gastroenteritis and acute respiratory infection. In our experience, this is one of the reasons why families with children attempt to seek asylum in other countries. In fact most children in Afghanistan have died as a result of ineffective health care rather than being injured as a direct result of war. It is also important to record here, bearing in mind that the ruling authorities in Kabul themselves

have children, that they find it difficult to accept that international donors insist on funding only primary health care projects.

CONCLUSIONS

Small steps have been taken to restore some hope to the staff of two hospitals and to the suffering children, mothers and fathers of Afghanistan. With a more concerted effort from pediatricians in advantaged countries, integrated child health care throughout Afghanistan could be improved to an ethical level.

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MEDICAL AND ETHICAL IMPERIALISM

A recent commentary in the *New England Journal of Medicine* by Lurie and Wolfe criticized placebo-controlled trials designed to identify simple and effective interventions to prevent maternal–infant HIV transmission in developing countries. . . . [They] propose that studies supported by the US government should provide all participants with the same level of care that is available to Americans . . . [But] imposing the American standard of medical care on all participants in international trials funded by the United States would prevent developed nations from collaborating with countries to identify feasible and affordable means of preventing and treating many diseases. Not only is this considered "medical and ethical imperialism" by colleagues in developing countries; it would also have prevented the development of many interventions, such as oral rehydration, micronutrient supplementation, and low-cost surgical procedures that have dramatically improved health care throughout the world.

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Submitted by Student