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AKUMC Annual Report : 1992

Aga Khan University Medical Centre

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"In everything we do we must look to the future, seeking always to think creatively, to innovate and to improve. I urge all those who are involved with The Aga Khan University now or in the years to come, whether they be trustees, faculty, staff or students, never to forget that the future is in their hands. It will be upon them that the performance and reputation of this University will depend and it will be through them that the University will, or will not, achieve the position among the world's institutions of higher learning which its founders have envisaged."

His Highness the Aga Khan
Chancellor
16 March 1983
PRESIDENT'S MESSAGE

It gives me great pleasure to present this inaugural Annual Report of the Aga Khan University’s Faculty of Health Sciences and the University Hospital - collectively known as The Aga Khan University Medical Centre (AKUMC). While in the past we have been providing regular updates on the development and activities of the Medical Centre to our donors, the growing number of our friends and well-wishers has necessitated the need for a more formal report. We plan to publish such yearly reports on a regular basis.

In many ways 1992 marked a turning point for the Medical Centre, as it came closer to fulfilling one of its major objectives to serve as a national resource. The Faculty of Health Sciences responded to the Government of Pakistan’s request for assistance in the formulation of its health policies, and collaborated with the Government of Sindh in assisting two World Bank sponsored programmes - the Family Health Project and the School Nutrition Programme. The first programme is geared towards extending primary health care facilities to the entire Province of Sindh, and the second towards improving the nutritional status of primary school children in selected school districts of Sindh. Along with the outreach efforts of the School of Nursing, these initiatives have increasingly enhanced the relevance of the Medical Centre to the society in which it functions.

Meanwhile, the Aga Khan University Hospital moved an important step towards financial stability in 1992, as revenue covered its operating costs as well as the equivalent of two-thirds of its depreciation charges.

The Medical Centre Committee, appointed in 1991 by His Highness, worked actively through 1992 to review both the programmes and the financial aspects of the Medical Centre. The Committee is composed of some Trustees of AKU and Board members of the Hospital. Its final report is to be submitted to the University and Hospital Boards by the middle of 1993.

The Chancellor's Commission, a distinguished group of academicians and professionals, was also appointed by His Highness to advise on the University’s next era of growth, and met for the first time in October 1992. The Commission is identifying objectives and themes that would characterize the development of AKU over the next 25 years, and is expected to submit its report to the Chancellor in 1994.

As AKU's first educational offering outside Health Sciences, the Board of Trustees granted formal approval this year for the establishment of the Institute for Educational Development (IED). The objective of IED will be to enhance the quality of education and status of the teaching profession in Pakistan by providing teachers with intensive in-service training courses as well as conducting research into teaching and policy aspects relevant to schools in developing countries. The University is grateful to the Aga Khan Foundation (AKF) and the Aga Khan Education Services (AKES), whose collaboration made it possible to evolve this new approach to teacher training. In implementing this programme, the IED will rely on active partnerships with the Universities of Oxford and Toronto. Funding of $12.5 million, over the first 6 years of operation, will be provided jointly by the Commission of the European Communities (CEC), Canadian International Development Agency (CIDA), United Nations Development Programme (UNDP) and AKF.

In conclusion, on behalf of the Boards of the University and the Hospital, and everyone at the Medical Centre, I would like to convey our gratitude to all our well-wishers for their continued support. The Medical Centre is also indebted to the Governments of Pakistan and Sindh, whose various agencies provided much help and encouragement. Without the invaluable guidance from His Highness the Aga Khan, sponsor of this US$300 million Medical Centre, and the Boards of the University and the Hospital, AKUMC could not have achieved so much during the difficult period of its early growth and development. Our special gratitude must go to the donors who have been particularly instrumental in the ascent of this Institution. To the faculty and staff of the Medical Centre as well as its volunteers, who have played a pivotal role in its operation and growth, goes our particular appreciation.

Shamsh Kassim-Lakha
President
The Aga Khan University Medical Centre
While every year in the life of an organization as young as the Aga Khan University Hospital (AKUH) can be described as a "milestone", the advances made in 1992 were truly significant. It has been a year of strengthening, consolidating and prudent strategic redirection for the Hospital.

New Services

Inpatient and outpatient volumes registered a marked increase, and during 1992 the Hospital treated 20,990 inpatients and 249,683 outpatients. New initiatives were undertaken to enhance the quality of patient care services to accommodate growing volumes. On the inpatient side:

- A 14 bed day-care Oncology service for Chemotherapy was implemented.

- The Orthopaedic and General Surgical faculty acquired equipment and expertise in Arthroscopic and Laparoscopic surgery. This technique involves minimal surgery and is less costly for patients.

- To reduce pressure on the main Intensive Care Unit, and to provide care to patients in appropriate settings, a 5 bed special care "step down" unit was established in the Departments of Medicine and Paediatrics.

- The installation of cardiac monitors on the medical floor of the Private Wing now enables physicians to extend timely care to critically ill patients in that area.

Consistent with worldwide medical care trends, AKUH has emphasized an "alternate delivery" strategy, i.e., the provision of more extensive care in the outpatient, ambulatory setting.

This strategy seeks to make more productive use of the Hospital’s facilities and to provide more convenient, cost-effective care to our patients. It also enables AKUH to expand clinical programmes with minimal requirement for scarce nursing manpower. In 1992, a number of important new outpatient initiatives were launched:

- Additional and efficiently designed space was provided for the Endoscopy suite.

- More space was made available for Day Care Surgery, where volumes increased by 12% over the previous year.

- A Psychiatric Day Care Centre, staffed by a qualified Occupational Therapist, now meets an important need of psychiatric patients.

- Audiometry and Speech Therapy
Services were added to meet growing demands.

- The Physiotherapy Department, in collaboration with the Orthopaedic Service, now operates a Sports Injury Rehabilitation Clinic.
- Orthopaedic Surgeons and Rheumatologists initiated a Clinic to jointly manage arthritic patients.
- Additional Paediatric sub-specialty Clinics were implemented, including Paediatric Cardiology and Neurology.
- For the convenience of AKUH patients, "Walk-In Clinics", extending into late evening hours, are now offered in General Medicine and Paediatric Services.

These Hospital services were implemented in response to widely felt but inadequately met needs of the people of Karachi. Consistent with its philosophy, the development of innovative health services continues to be an integral part of the mission of the Hospital and plays a significant role in development of its future programmes.

Human Resources

The Hospital's greatest assets are its people, and it continues to attract highly qualified individuals by offering an invigorating professional environment and challenging career opportunities. Arrangements were made with the Karolinska Institute in Stockholm (Sweden) to train AKUH Paediatricians in sub-specialties.
such as Childhood Neurology, Rheumatology, Allergies, Infectious Diseases and Endocrinology. Professor Bo Lindblad, also from the Karolinska Institute, filled the Chair of Paediatrics vacated by Professor Majid Molla of Bangladesh, who completed a noteworthy 6 year term. During 1992 there was a 9% expansion (over 1991) in the number of registered nurses on board, and more significantly a much needed increase in first line nursing management (56% over 1991). The increase was the outcome of aggressive management initiatives as well as the growing external reputation of AKUH.

Postgraduate (residency) training continues to play an important role in providing patient care services at AKUH, and developing individuals to assume future faculty positions here and throughout the country. There are presently 113 residents in nine clinical training programmes. In 1992, thirteen residents graduated from the residency training and twelve of them assumed positions on either the faculty or staff of the Hospital and University.

Achievements and Initiatives

Dr. Javed Akhtar, an AKUH resident achieved an important 'first' by graduating as Pakistan's first trained Emergency Room Physician. He went on to attain his Fellowship from the Royal College of Surgeons, Edinburgh, in Accident and Emergency Medicine and Surgery.

- For the past seven years a Quality Assurance Programme at the AKUH has ensured the provision and maintenance of quality services. This programme sets gradually ascending goals and motivates Hospital personnel towards higher standards in quality of care. In 1992, AKUH additionally undertook a process of continuous quality improvement in all spheres of patient care and service delivery. This involves an on-going appraisal of Hospital services and strengthening of weak areas. A Management Engineering Department was established, and its quantitative analysis and systems improvement techniques have significantly aided the Hospital's efforts towards Total Quality Management (TQM).

- Since 1988, when Quality Patient Care was adopted as a top priority by the Aga Khan Health Services (AKHS) institutions in general, and the Senior AKHS Nurses in particular, AKUH has worked with Network health care institutions to establish or upgrade nursing quality assurance, and to introduce the concept of staffing patterns through patient classification and nursing workload analysis. In 1992, AKUH Nursing facilitated two quality assurance workshops, hosted by The Aga Khan Hospital (AKH) Nairobi, with funding from a CIDA grant. Staff nurses from other Aga
Khan Hospitals in Kenya and Tanzania joined their peers at AKH, Nairobi, for these workshops. In addition, a one-day workshop was offered to the total nursing staff of AKH, Mombasa. As of 1993, Quality Assurance Programmes in varying stages of development exist in all Network hospitals.

In keeping with its goal to serve both as a resource centre, and an agent of positive and progressive change, AKUH reached out to hundreds of physicians in the community by providing over forty Continuing Medical Education (CME) Programmes. The topics ranged from Infectious Diseases, Neurology and Oncology, to the management of kidney stones. Seven Health Awareness Seminars were also organized, attended by a large number of Corporate Chief Executives and Medical Officers.

In September, floods in Pakistan caused large scale devastation of life and property. A massive flood relief programme was launched country-wide to alleviate the sufferings of the flood victims. Responding immediately to the call for flood relief the faculty and staff of AKUMC donated a day's salary amounting to over Rs. 600,000. In addition, some 300 volunteers who work in 45 departments at AKUH, cancelled their bi-annual get together in September, and instead donated the funds collected towards flood relief. The students of AKU also organized an 8 kilometre charity walk, where thousands of people participated, generating another Rs. 400,000 for flood relief.

A major technological advancement on Campus was the introduction of new Avion computers from Data General, which replaced the three old MV8000 series machines. The new equipment will help achieve higher levels of efficiency, yield cost savings, and enhance revenues.

For the third consecutive year, AKUMC was the recipient of Pakistan's National Energy Management Award, presented at the International Energy Management Symposium organized by ENERCON, a subsidiary of the Ministry of Planning and Development, Government of Pakistan.

The Medical Centre adopted measures for controlling air-conditioning with time-based computer programmes and replacing mercury vapour and halogen flood lamps with sodium vapour lamps. In 1991, the Hospital saved 427,900 kilowatts of electrical energy, 447,540 hectare cubic metres of gas and 11.6 million gallons of water, translating into a total saving of Rs. 3.1 million.

**Patient Welfare Programme**

Ensuring that its services are available to people from all walks of life has been a key philanthropic mission of AKUH, and each year a significant portion of its operating revenues are dedicated to charity.
The Hospital offers affordable services through substantial direct and indirect welfare support to needy patients, with an outlay in 1992 amounting to Rs. 56 million (US$ 2.2 million).

The drama of human suffering unfolds daily at the Hospital. A glimpse into a few lives that have been aided by the Patient Welfare Programme in 1992 highlights the value of this humanitarian endeavour:

**Sonam** was dying at the age of eighteen. An inconspicuous nail wound on the sole of her right foot had begun to fester, and soon this young student from rural Sindh was in the throes of a raging fever. When she was rushed to the Emergency Room at AKUH she was only half conscious, and her skin had turned blue from lack of oxygen. In the ICU, where she remained for a month, her distress was eased by putting her on controlled ventilation, and carefully treating her with potent antibiotics to counteract life-threatening complications. Her recovery was slow, but to look at her vivacious smile today one could not guess how very close was her encounter with death. Moreover, wedding bells will be ringing for her soon.

**Nasreen** came to AKUH from Multan, a distance of 945 kilometres from Karachi, in the province of Punjab. Her diagnosis was not established and she was being treated for tuberculosis. At AKUH, intensive investigations, with the help of the Hospital's state of the art diagnostic equipment, quickly pointed out that she had a serious circulation problem. Once the diagnosis was confirmed, a "window" was made in her chest cavity and the poor function of her heart and lungs started to correct itself. Today, Nasreen is amongst the top ten students of her class.

**Akbar** paid a heavy price as a result of his previous bout with tuberculosis. His lungs were already crippled, and he had developed large stones in his kidneys. His precarious lung function ruled out the possibility of an operation. The lithotripter at AKUH helped integrate the stones through shock waves, without subjecting his body to the trauma of surgery. Today, Akbar works a twelve hour day to provide for his family.

The lives of these individuals, and many more like them, have been saved by the unconditional generosity and support from an expanding family of donors, well-wishers, and the Hospital's own revenues.
The Aga Khan University (AKU) completed 9 years of its existence in 1992. Retrospectively, these years are a kaleidoscopic mix of diverse and related learning processes. The successes and set-backs, the new programmes developed against a backdrop of tradition, the experience gained in modern clinical settings and in the dark and narrow streets of the 'katchi abadis' (squatter settlements) give AKU its unique position of being both a resource centre and leader in the field of health care today. Young as it is, the University has established itself as a premier institution of higher learning in Pakistan and is gaining recognition internationally.

The School of Nursing has, and continues to contribute to the new and exciting changes taking place in the field of nursing in Pakistan. It is the largest School of Nursing in the country and offers the only BScN programme in Pakistan. Its well educated faculty, experienced in teaching methodologies, serve as mentors and role models for students and junior faculty.

The Medical College has become a training ground for talented young men and women selected on merit and potential for leadership. Its high academic standards and quality of clinical programmes also attract students from overseas. Since 1988 five classes have graduated, amounting to a total of 357 doctors, 88 of them in 1992.

Re-evaluation of the Medical College's curriculum is a continuous process at the University. One such review took place in 1992 to refocus the College's thrust towards primary health care, and provide a more meaningful integration and application of basic sciences with the clinical disciplines. The first phase of changes that resulted from this curriculum review was implemented in October. The relevance of the Medical and Nursing curricula of AKU are also influencing health sciences educational programmes across Pakistan.

In 1992, the Pakistan Medical and Dental Council (PMDC) and the Pakistan Nursing Council (PNC) sought AKU's collaboration in hosting a National Workshop on Priorities in Health Sciences Education. The aim was to create a forum where medical and nursing educators of the country would meet to recognize the urgent need for orienting health sciences educational institutions towards accepting responsibility for the health of defined populations, as well as for the health systems that serve them.

**Research and Faculty Development**

The stimulation of intellectual curiosity and the excitement of discovery are essential components of a dynamic university. It is vital that the learning process be guided
Research plays an integral part in the activities of AKU, and the University is involved in a broad range of investigations with particular emphasis on epidemiology, infectious diseases and health care delivery systems. Faculty members are involved in research areas that are relevant to the needs of the developing world and their efforts have brought continuing recognition to the University as a national resource. In 1992, Dr. M. Anwar Waqar, The Akbarali H. Bandeali Professor and Chairman, Department of Biochemistry, was awarded a Gold Medal for his outstanding contributions to and research in the field of Chemistry, by the Council of the Pakistan Academy of Sciences.

While AKU's research efforts are supported by a number of agencies in Pakistan, the Aga Khan Foundation and AKU's Fund for Faculty Development, the bulk of the grant support comes from overseas agencies such as International Development Research Centre (IDRC), Norwegian Agency for International Development (NORAD), The World Bank, USAID, CIDA, UNICEF, and WHO.

Faculty development is carried out both on-Campus and abroad. Among overseas institutions where faculty members are actively engaged in graduate studies are the London School of Hygiene and Tropical Medicine; Karolinska Institute in Stockholm; Harvard University; the Pennsylvania State University; Johns Hopkins University; the Universities of Arizona, North Carolina, and Minnesota in the USA; McMaster University and the University of British Columbia in Canada; and the University of Sydney in Australia. Such training has been supported by various funding agencies as well as the Aga Khan Foundation and AKU's Fund for Faculty Development.

In the larger context, the aim of the AKU is the diffusion of its expertise and knowledge through...
collaboration with other health services. AKU's Medical College faculty assisted the Aga Khan Health Services in Pakistan to plan primary clinical services for scattered populations in the Northern Areas of the country. In the Ghizer District a primary health care service focusing on maternal and child care is being developed. This service has referral facility to a central station at Singal with the capability of clinical diagnosis and treatment as well as limited surgical care.

The Department of Community Health Sciences

The scope of AKU's curriculum covers a wide range of academic disciplines. Amongst these, one department is unique in its vision and objectives, as it possibly has the most substantial teaching programme in community and health systems in the field of medical education in Pakistan. The programmes and instructions of the Department of Community Health Sciences (CHS) occupy 20% of the curriculum time of AKU's students. The CHS curriculum responds to a major need of developing countries by training students for community involvement through evaluation and resolution of the health and development problems of underserved populations. A number of pilot or prototype programmes, developed by the CHS Department, have influenced health policy, and been incorporated into national, provincial or municipal programmes. Over a five year period (1986-1991) the curative, preventive, and rehabilitative programmes implemented by the Primary Health Care (PHC) units of this Department have reduced infant mortality rate from an average level of 126 infant deaths per 1000 live births, to 64, at the nominal cost of US$4 per person per year, in the urban 'kachi abadis' (squatter settlements) of Karachi.

The agenda of the CHS also includes a working partnership with the Provincial Government to strengthen district health systems, and in 1992 included:

- A Maternal and Infant Mortality survey in the four Provinces of Pakistan.
- A collaborative effort with the Pakistan Medical Research Council on the larger problems of health research policy formulation and research capacity building in Pakistan.
- A major project, funded by the World Bank and undertaken jointly with the Government of Sindh, to proceed upscale from urban and rural prototypes to province-wide health systems development.

These are a few examples of how AKU is building on its fundamental responsibilities in education, research and health systems development, to reach beyond its academic environment to effect policies and programmes in the national interest.
School of Nursing

The Aga Khan University's School of Nursing (AKUSON) offers a three-year Diploma course, with particular emphasis on the care of patients with medical, surgical, paediatric and psychiatric problems. Additionally, a two-year programme leading to a BScN degree is available to Registered Nurses (RNs) with two years of work experience, and is the first programme of its kind in Pakistan.

The AKUSON Programmes have graduated 611 Diploma and 53 BScN graduates since 1983 and 1990, respectively. 1992 marked the 10th Graduation of the Diploma Programme, with 71 graduates. Apart from 6 RNs who could not pursue their careers for reasons of matrimony or migration, the remaining Diploma graduates from the class of '92 have been absorbed into the nursing profession. Of these, five have joined the faculty of AKUSON, 20 have gone on for additional midwifery training, and 40 have taken staff nursing positions at AKUH.

Seventeen students successfully completed the BScN Programme in 1992, bringing the total graduates to date to 53. Two from the Class of '92 were Government of Pakistan sponsored students, one has since been named the Deputy Controller of the Sindh Nurses Examination Board.

The AKUSON Programmes continue to get grant support from a number of aid agencies, such as ODA-UK, CIDA, and AKF-Canada. In 1992, funding for a three year period was received from the Ministry of Women's Development, Government of Pakistan, for the Track I Programme in Diploma studies. This programme prepares students from rural and underprivileged areas, with potential to become RNs but lacking proficiency in English and the sciences. AKUSON is currently negotiating a major proposal with CIDA, in partnership with McMaster University, Ontario, Canada, for a project which will reach out to the Pakistan Nursing Council, RN Diploma and Lady Health Visitor (LHV) Training Schools, and Colleges of Nursing for the further development of the nursing profession in Pakistan.

AKUSON's strong working relationship with the Pakistan Nursing Council and the Pakistan Nursing Federation (PNF) has resulted in several positive developments in the
Was asked by the Ministry of Health to assist a national Nursing Task Force charged with developing the curriculum, based on AKUSON's programme, for the first post-RN BScN Programme in the public sector, to be introduced at the College of Nursing in Islamabad.

Established a Schools of Nursing Network Collaborative Group in Karachi.

Assisted the Manpower Training Sector of the Family Health Project, a Government of Sindh/World Bank project.

Helped influence changes in the PNC regulations for Diploma nursing education, so that married women may now apply to the programme. Age limits were relaxed from 16 to 35 years, and up to 40 years in some cases. Day scholars are now permitted to enroll, as compulsory stay in the hostel is no longer required.

An external evaluation gave the BScN Programme at AKUSON an excellent review. The evaluators stated that the programme is "well underway in meeting international standards of baccalaureate education, and a good investment" for the University. Plans are in hand to conduct a similar evaluation of the Diploma Programme in 1993.

AKUSON enters 1993 ready to maintain the quality of its existing programmes while expanding its outreach activities and strengthening its capacity to serve as a national resource to the nursing profession in Pakistan.

* The Special Students Programme continues to attract students who wish to take individual courses but are not enrolled in the BScN Programme. 'Special' students are allowed to select courses on a space available basis, and are given credit for these courses should they later decide to enroll in the BScN Programme.
Academic Medical Centres are often described as being among the most complex organizations that exist, and their thirst for funding often appears insatiable. The nature of their chosen tasks - the treatment of the sick and injured, the education and training of health professionals and research - is demanding and costly. The Aga Khan University Medical Centre is no exception. As a new organization in the developing world, its challenges are multiplied many times over.

The Aga Khan University

Like most universities, AKU's primary operating expense is people. In 1992, 66% or Rs.126 million of the total application of funds (Rs.191 million) related to staffing expenses. This percentage is likely to increase over the years, because of the need to retain and attract the highest quality faculty and staff. The University's Faculty of Health Sciences will continue to grow in the future and new faculties will be added. The first such beginning will be the Institute for Educational Development, which starts operations in 1993. All of this growth will require major new capital investment.

The University's primary source of operation support is income from its endowment funds and donations. In 1992, 63% or Rs.121 million came from this source thanks to the largesse of its donors. The charts given below demonstrate the University's Source and Application of Funds in 1992.

Currently, as is the case with most new universities, AKU uses all of its endowment income to support current operations; however, as the endowment funds grow, through realization of existing pledges and from new donations, it is the intention of the University that a portion of this income be set aside to protect the endowment from future erosion due to inflation. The University will need to expand its financial base through internal cash generation and external support, such as donations and grants, to perpetuate its current programmes and finance future expansion.
The Aga Khan University Hospital

In a span of just six years from its first full year of operation, the Aga Khan University Hospital has progressed from a cash operating deficit of Rs.84 million in 1986 to a positive cash-flow of Rs.48 million in 1992, before allowing for the expense of depreciation of assets. The positive cash generation amounts to approximately two-thirds of the Hospital's depreciation expense. The 1992 operational results include Rs.28 million spent on underwriting patient welfare subsidies. Besides these subsidies, another Rs.28 million of patient charges were waived for indigent patients through AKUH's Patient Welfare Programme. This direct welfare was achieved through the generosity of its donors. To perpetuate the welfare programme, an AKUH welfare endowment has been created from such donations and only the income is used towards the annual expense of waiving charges for indigent patients. The charts given below illustrate the Hospital's Source and Application of Funds for 1992.

While AKU & AKUH are separate entities, their interests are closely intertwined. In fact, sound progress of the Medical Centre can only be assured if both entities advance simultaneously. Financial self-sufficiency and the ability to self-propel growth are the most challenging goals for academic medical centres. Attaining this at the Aga Khan University Medical Centre will require continuing sound management and innovation, which will ensure that expansion of services can occur while maintaining a tighter control on costs. It is also certain that external support through grants and donations will be crucial to enable the Medical Centre to respond to the challenges and demands of the future.

**Source of Funds (Rs. 511m)**

- **Inpatient Revenue (Rs. 246m)** 48%
- **Outpatient Revenue (Rs. 161m)** 31%
- **Other Operating Revenue (Rs. 25m)** 5%
- **Endowment Income/Donations for Equipment (Rs. 76m)** 15%

**Application of Funds (Rs. 511m)**

- **Direct Welfare (Rs. 28m)** 5%
- **Medical & Surgical Supplies (Rs. 125m)** 24%
- **Administrative & Support (Rs. 62m)** 12%
- **Debt Service/Repayment (Rs. 54m)** 11%
- **Staff Expenses (Rs. 192m)** 38%
- **Projects & Equipment (Rs. 50m)** 10%
- **Through Donations**
In retrospect, 1992 was a year of growth for the Aga Khan University Medical Centre. A year that encompassed caring, sharing, and renewed enthusiasm. Having established high standards, the energy and attention of the AKUMC community will remain focussed on meeting responsibilities that go with the pursuit of excellence.