FMC French Medical Institute for Children

Building on Current Successes

The French Medical Institute for Children (FMIC) was founded in 2006 in a unique public-private partnership between the Governments of Afghanistan and France, a French NGO – La Chaine de L'Espoir/Enfants Afghans and the Aga Khan Development Network through the Aga Khan University. The Institute has risen to the challenge of charting a course towards sustainable health solutions for Afghanistan. Advances have been made in both immediate service delivery and long-term policy planning.

VISION FOR FMIC

FMIC will develop into a sustainable institute of excellence providing exemplary and safe care, teaching and research, which positively impacts the health indicators of Afghanistan and surrounding regions.

MISSION STATEMENT

- To provide exemplary quality and safe care to the patients
- To ensure accessibility of services, both physical and financial, such that needy patients are cared for with respect and dignity
- To develop new services in response to public needs and expectations as resources permit on an economically viable and sustainable basis
- To develop the institution into an academic centre that develops local and regional health human resources as

leaders and leads to human resource sustainability

 To carry out programmes and assigned missions in a manner that would enhance the ability of the Institute to move towards sustainability



Picture shows the mother and child picture at FMIC entrance. The painting has become a symbol of hope for the people of Afghanistan.

BACKGROUND

FMIC was formally inaugurated in 2006, when it opened its doors to offer health care of the highest standard in the country and at par with the best medical institutions in the region. Starting with pediatric surgical care including general and orthopedic surgery, FMIC was soon providing services in pediatric medicine, cardiology, neurosurgery, cardiac surgery, pediatric plastic surgery and anesthesia.

It is now an 85-bed hospital which also includes 15 intensive care beds. The hospital is equipped with state-of-the art CT scanning facilities, MRI, general radiology and ultrasound. It houses a pharmacy, a well-equipped laboratory and four operating theatres. FMIC also has tele-medicine links with the Aga Khan University Karachi Pakistan, Bamyan Provincial Hospital, Faizabad Provincial Hospital, Kandahar and Mirwais Regional Hospital in Afghanistan and Khorog General Oblast Hospital in Tajikistan.

KEY FMIC THEMES

1. Improve Quality, Patient Care and Safety

2. Ensure that the Philanthropic Mission of FMIC and its Partners are being met

3. Ensure greater Accessibility to FMIC

4. Develop Human Resources

5. Improve Financial Sustainability and further strengthening internal controls

6. Expansion of Services

7. Implement Capital Projects

8. Strengthen and expand Academic programmes

9. Expand eHealth Initiatives

Picture below shows the existing structure and construction site for phase II (Women's Wing)



SIGNIFICANT MILESTONES

- FMIC is the first hospital in Afghanistan which has achieved the ISO 9001:2008 certification.
- FMIC is the first hospital in Afghanistan to perform both open and closed heart surgeries by a local cardiac surgeon without the help of a foreign surgeon. From inception, we have done over 1,800 cardiac surgeries.
- For the first time in Afghanistan, surgery for 'esophageal atresia' (a disorder of the digestive system in which the esophagus does not develop properly) was performed.

The case was presented at the Annual Congress of the French Society of Pediatrics held in Nantes in June 2008 and subsequently published in the *Archives de Pediatrie*.

- Independent diagnosis and treatment of 'sequential co-existence of esophageal atresia and hypertrophic pyloric stenosis' – a rare medical condition, the occurrence of which is only reported in medical literature in a handful of instances.
- Performing for the first time in Afghanistan a radiological reduction of 'intussusception' (where a small part of the small intestine retreats into another section of the intestine) avoiding the need for complicated surgery.
- Independently treating 'congenital lobar emphysema' (a respiratory disease that occurs in infants where air enters the lungs but cannot leave easily)
- Introduction of neonatal surgeries.
- Establish FMIC's name as a quality health care brand in Afghanistan

- Establishment of first state of the art intensive care services (ICU) in Afghanistan.
- Successfully running a Postgraduate Medical Education (PGME) programme.
- Successful system migration of Hospital and Financial Information Systems.
- Significant improvement in programmatic and financial sustainability.
- State of the Art imaging services 128 slice CT scan, MRI, fluoroscopy etc.
- Successful capacity building programme



FMIC under its wings has highly trained healthcare team. FMIC cardiologist examines a child

FMIC has a team of highly trained Afghan cardiac surgeons who perform heart surgeries



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The First Neonatal intensive care services (ICU) in Afghanistan.

GOVERNANCE AND MANAGEMENT

Governance in an organization is accountable to ensure quality of its services, safeguarding high standards of care and ensuring financial sustainability. FMIC's four party partnership is indeed a professional model of Public-Private collaboration in Afghanistan. Its governance is dealt by the Provisional Operating Committee (POC). The governance has clear roles and defined responsibilities to ensure and evaluate the performance of the hospital in line with their set missions. This has been achieved over the last eight years and is ready for replication in other programmes as well. The POC has created a vibrant vision and developed a road map for sustained programmatic achievement.

The management is responsible in ensuring that the vision is carried further. The management has developed models to manage the hospital with evidence based best practices of other international hospitals. The management is also aligning individuals, sections, departments, divisions and hospital's overall objectives with the vision of the institution. Further, there are clear defined boundaries between governance and management, so both can perform their roles adequately. Since 2006 when the POC was established, all partners have fulfilled their responsibilities which has built a trust and understanding among themselves where the partners feel respect for each other and are able to drive the vision forward.

LESSONS LEARNED

- How to run public private partnerships along with their dynamics and principles
- Ensuring governance in partnerships
- How to work with multi partners and achieve objectives
- How to choose partners and work on fulfilling their agreed contributions
- Developing good relations with government and ensuring commitments are met

- Working successfully with different government bodies
- Ensuring good hospital management
- Making tangible contributions in improving health systems
- FMIC experience can be replicated for success elsewhere



Patient showing Medical Record to access treatment at FMIC

All services are computerized at the hospital and linked through highly advanced computers

BUILDING LOCAL CAPACITY

FMIC's over-arching human resources mission is to develop national staff thereby ensuring a pool of qualified health professionals in all areas of health care delivery, leadership and administration to carry out the operations of FMIC. This is being done with a medium to long term vision of requiring minimal support from long-term expatriate staff. Through the help of Agence Française de Développement (AFD), Government of France (GoF) and Aga Khan Development Network (AKDN) funding, a capacity building plan is currently being implemented. In a short period of time, FMIC has conducted a remarkable amount of training. Most training takes place onsite and is complemented by long and short-term missions to France and Pakistan. Since 2006, 433 national staff received overseas training including for pediatric and cardiac surgery in France (at Necker Hospital), anesthesiology in India, ICU care in Germany and training in nursing and quality improvement in Pakistan (Aga Khan University Hospital, Karachi). Offsite training in Kabul has also taken place through partnerships with the Institute for Health Sciences, Roshan and NGOs Focus Humanitarian Assistance and Handicap International.

CONTINUING MEDICAL EDUCATION

Along with clinical development, Continuing Medical Education (CME) is also provided at FMIC to enable physicians and nurses working elsewhere in Kabul to update skills in their area of specialization. Most CME is conducted by FMIC's local physicians and is complemented with some training from expatriate missions. Areas of training include lab diagnosis of infections, orthopedics, radiology, medicine, plastic surgery, cardiology and cardiac surgery.



Particulars	2007-11	2012	2013	Total
Number of CMEs	52	18	19	89
Number of Physicians attended	1701	800	667	3262
FMIC Physicians	760	104	99	1057
Non-FMIC Physicians	941	696	568	2205

Table – 1 Continuing Medical Education

Testimonials

"FMIC have made some commendable achievements regards to human resource development. The expansion of services, increased leadership of Afghan staff and its established reputation as a leader in care and quality are a few of the highlighted achievements. In a short period of time, FMIC has raised its profile and reputation in the sector, becoming a popular choice for training of health professionals."

From Report of Third Party evaluation of FMIC's Human Resource Capacity Building Programme

DEVELOPING NURSING CAPACITY

FMIC's Nursing Services is central to supporting the realisation of hospital's mission to promote optimal health and wellness for the children of Afghanistan. Nursing staff of the hospital is also committed to employ the most up-to-date knowledge and practices of nursing field to care of their patients, in an effort to maintain the highest professional standards.

FMIC's Nursing Services began in 2005, with a team of 20 Afghan nurses and one French nurse. Now FMIC nursing division has a team of 115 national Afghan nurses providing support to the hospital's 85-bed facility, which includes the intensive care unit, the operation suite, the emergency department and the infection control department. All FMIC nurses are certified in Basic Life Support, Paediatric Advanced Life Support, intravenous (IV) cannulation and medication

In 2008, the Division initiated Nursing Education Services (NES) to conduct on job training and nursing credentialing at FMIC. From 2008 date, NES has conducted 650 sessions on different nursing care related subjects. Besides, nurses have been going to AKUH Karachi for clinical attachment in different pediatric wards to gain the experience of nursing care of international standards and have hands-on practice for skills under supervision.

Today 97% nurses at FMIC are certified on international standards for Intravenous Cannulation, 100% nurses for Basic Life Support (BLS), and 90% nurses for Medication. Most of the ICU nurses are certified for critical care courses and designated as Critical Care Nurses (CCN) and the Division has initiated to get nurses certified for Pediatric Advanced Life Support (PALS); both these initiatives are setting the standard of intensive nursing care in Afghanistan. On the completion of eight years of FMIC, nurses are on the way in training towards leadership roles such as shift supervisors, assistant head nurses, head nurses and nursing instructors.

Standards of care has been maintained through continuous development, implementation and monitoring of nursing policies; the first policy was developed in 2006 and today the Division owns 70 Policies and maintains a quality index of 95% for its compliance.

Infection Control programme for hospital is another area the Nursing Division has initiated in 2008 and expanded over the last five years. International Infection Control (IC) nurse was inducted in 2008 and was responsible for implementing universal guidelines of Centre for Disease Control (CDC). The Infection Control Programme is overseen by the multidisciplinary Infection Control Committee and implemented by the Infection Control Team.

Moreover, Nursing Division collaborates with neighboring institutions and provides training support to the Ghazanfer Institute for Health Sciences and Kabul Medical University in providing clinical placement and mentorship for nurses graduating from their programme.

From 2010, the Division provides training sessions through eLearning to Bamyan provincial hospital, Faizabad hospital, Kandahar Mirwais Hospital and Khorog hospital which is making FMIC's training resources accessible for health care providers to the community at large.

POSTGRADUATE MEDICAL EDUCATION PROGRAMME

In March 2012, FMIC achieved another milestone and implemented the Postgraduate Medical Education Programme (PGME) in Paediatric Medicine and Paediatric Surgery starting with three residents in each disciplines. Five new disciplines were added in April 2013 in Pathology, Radiology, Aneasthesiology, Orthopaedics and Cardiology. The initial funding has been provided by the Department of Foreign Affairs, Trade and Development (DFATD), formerly known as Canadian International Development Agency (CIDA).

A purpose built pre-fabricated PGME building has been built for the programme which includes offices of PGME faculty and residents, a state-of-the-art skills lab, a library, classrooms and other teaching and learning facilities. Plans are to add new residency programmes in Intensive Care, Gyne/obs and Cardiac Surgery in 2016.

The PGME programme at FMIC is in line with Ministry of Public Health's requirements, and is supported by PGME programme of Aga Khan University.



In next five years, more than 80 residents will graduate from the PGME programme in different disciplines

Testimonials

"It is imperative that students complete their practical, and FMIC provides an attachment that is hard to compare with others – technology, attitudes of staff in teaching, experience, and exposure" Ghazanfar Institute of Health Sciences, Head of Physiotherapy"

The quality of training provided by FMIC is superior, for what is available here in Afghanistan, which cannot be compared with any other institution. Especially lab trainings are high quality". Dean, Faculty of Pharmacy, Kabul University



FMIC offers high quality services with state of art medical equipment

QUALITY ASSURANCE

With determination and effective contribution of the FMIC staff, the institute was able to receive ISO 9001: 2008 certification for Quality Management System (QMS) for patient care support services in March 2009. FMIC became the first health care organization in Afghanistan to receive this certificate. Each passing year has raised the bar and expectation of the quality standards for FMIC with the vision of becoming a Center of Excellence in Central Asia. After putting Quality Management Systems in place, FMIC has begun its journey towards improving the clinical quality standards. Using a Customer Focused Quality Approach, FMIC is striving to customers' expectations meet through maintaining a customer feedback mechanism. Different quality indicators are maintained to

gauge the quality trends at the hospital. The Quality Assurance department of FMIC is taking steps to introduce standards of Joint Commission International (JCI) in order to continue improving towards patient safety and clinical effectiveness. In this regards Members of Quality Department have attended AKUH Colloquium from September 23 - 28, 2013 in Karachi on the 5th edition of JCI Standards. Standards of new edition are more stringent, detailed and reflect greater emphasis on patient safety. A formal road map, task force, core team and multifunction teams have been formalized as the way forward. FMIC is working hard to achieve compliance to the new standards of JCI.



Tele-consultation with Faizabad Hospital

eHEALTH

The eHealth project launched in 2007 has been successfully expanding its linkages with other Aga Khan Health Service, Afghanistan (AKHS-A) and Aga Khan Health Services, Tajikistan (AKHS-T) facilities. Since the physical access to quality medical services is a major challenge in other provinces, mainly due to poverty, poor infrastructure and lack of information about the availability of services the facility is used for tele-consultations, tele-radiology, telepathology and eLearning sessions. More than 11,000 patients have benefited from the facility since its inception, while more than 3,000 healthcare providers were trained through eLearning.



eLearning sessions with Bamyan and Faizabad provincial hospitals

Particulars	2007	2008	2009	2010	2011	2012	2013	Total
Tele-Radiology	99	166	365	641	1,031	1421	1491	5,214
Tele-Consultations	-	-	-	40	1,206	2577	1892	5,715
Tele-Pathology	-	-	-	9	173	130	88	400
eLearning	-	369	420	400	335	785	1085	3394
Total	99	535	785	1090	2,745	4913	4556	14,723

Table -2 eHealth utilization since 2007

HOSPITAL PERFORMANCE

Since the beginning, FMIC has continued to experience sustained growth in almost all inpatient and outpatient activities of the hospital, as volumes meet their budgeted targets in almost all areas.

Particulars	2005-09*	2010	2011	2012	2013	Total
Key Volumes and Statistics						
Admissions	10,498	4,596	4,534	4,825	4,934	29,387
Surgeries (Other than	3,790	1,819	1,919	2,036	1,974	11,538
Cardiac Surgeries	621	285	195	270	312	1,683
Day Surgeries	640	209	381	441	481	2,152
Lithotripsy Procedures	171	66	9	106	60	412
Physiotherapy	7,088	2,250	3,232	3,997	3,625	20,192
Endoscopy	1,030	700	729	518	512	3,489
Clinic Visits	178,987	76,850	80,248	83,684	86 <i>,</i> 853	506,622
CT Scan	28,694	11,816	10,962	9,933	10,536	71,941
Ultrasound	28,052	9,811	9,424	10,285	10,251	67,823
MRI	869	3,558	3,990	3,383	4,028	15,828
General Radiology and Mammography	75,413	30,657	26,448	26,097	24,664	183,279
Laboratory	694,931	293,918	283,175	281,493	297,040	1,850,557

Table -3-Hospital Volumes since 2005

*Hospital operations began in November 2005.

FMIC offers 24/7 medical services with highly trained, compassionate and committed staff













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PATIENT WELFARE SERVICES

One of the core missions of FMIC is to provide accessible quality health care to the local population without any discrimination. Various public and private entities contribute to the Patient Welfare Programme including Roshan Telecommunications, Government of France and Government of Afghanistan. Tables 4 and 5 describe the details of Patient Welfare Programme at FMIC since inception.

In 2013, \$3.76M Patient Welfare was provided to 45,110 patients [inpatient: 4,052, outpatient: 41,058] The lower number of beneficiaries with slightly higher Patient Welfare disbursement represents higher inpatient activities mainly cardiac surgeries in 2013 (312 surgeries compared to 270 surgeries in 2012). Cardiac Surgeries require higher Patient Welfare support. Patients from all 34 provinces of Afghanistan came to FMIC for treatment and received support from the Patient Welfare programme.

Patient Welfare spending represents 36% of overall gross revenue of the hospital, whereas inpatient patient welfare represents 62% of inpatient gross revenues and outpatient patient welfare represents 16% of outpatient gross revenues.

Table 4: Patient Welfare Statistics

Description	2006-10	2011	2012	2013	Total
Inpatient Welfare Volumes FMIC	13,019	3,486	3,488	3,092	23,085
Welfare Volumes – Children's House	706	714	893	752	3,065
Welfare Volumes – ARCS	170	53	101	208	532
Outpatient Welfare Volumes FMIC	101,048	41,846	39,473	38,428	220,795
Outpatient Welfare Children's House	4,346	2,248	2,704	2,630	11,928
Total Welfare Volumes	119,289	48,347	46,659	45,110	259,405

Table 5: Patient Welfare Spending (USD\$ in Millions)

S#	Description	2006-10	2011	2012	2013	Total
1	Inpatient Welfare	7.41	2.54	2.75	2.88	15.58
2	Outpatient Welfare	1.78	1.05	1.01	0.88	4.72
	Total	9.19	3.59	3.76	3.76	20.30





LA CHAINE ENFANTS AFGHANS (Children's House)

Initiated in March 2008 and operated by La Chaine de L'Espoir, Enfants Afghans (Children's House), this project's aim is to access and ensure free treatment as well as appropriate specialized surgical care to the most vulnerable and poor children at FMIC. These children are provided with accommodation and receive a 20% discount on cost of their care (excluding pharmacy and consulting clinic charges). Moreover, they facilitate access from the provinces by referrals from Ministry of Public Health (MoPH) or registered and well established organizations such as the International Committee of the Red Cross (ICRC) or others. So far 3065 patients have availed admission facilities 12,000 and nearly outpatient visits.



In 2013, 908 children were newly registered, 5913 clinical consultations and 987 surgeries were funded.

A new building is under construction to expand the Children's House to become a Mother and Children's House in 2015, funded by the Government of France.

Design of New Mothers and Child House





 Horizontal bands of the existing Phase I buildings have been used for the façade solution of the new extension.

- The horizontal element wil be used as a service box by running of plumbing and heating pipes.
- Locally available brick is proposed to introduce color and texture ; it is also suggested that for full integration of the old and the new, that the meta balustrades railing of the existing building be replaced with brick parapet wall.

FUTURE EXPANSIONS – SHORT TERM-PHASE II

The FMIC was originally envisioned as a mother and child hospital to be built in two phases. The first phase, the children's hospital, was inaugurated in 2006 and has been operating very successfully. Planning for the expansion of the children's hospital was already ongoing when French Foreign Minister Bernard Kouchner visited Kabul in April 2008 and expressed the French Government's interest in supporting the expansion. The subsequent Afghanistan Donor's Conference in Paris solidified funding of a € 9 million grant from the French Government through AFD that will be matched with an additional €9 million from His Highness the Aga Khan. The €18 M will partly finance the expansion to include the maternal facility and the balance to be made available for Phase III.

FMIC-Phase II

The maternal facility is envisaged to provide superior obstetric and gynecological care, and also contribute to the training and qualification of health care professionals. It would function as part of an integrated health delivery system interconnected with health services within Afghanistan and the region. In line with national priorities, the hospital would contribute to health promotion and disease prevention and play a leadership role in developing women's health services in the region.

The building of the maternal facility is currently in progress and will be commissioned in 2015. It includes 52 obstetrics/gynaecology beds, 14 neonatal beds along with facilities for clinics, laboratory, radiology, teaching and other support services.

NEW SERVICES AT FMIC STARTING IN 2014 INCLUDES

1. Vision and Dental Care Services: FMIC in 2014 will initiate high quality and comprehensive vision and dental care services with state of the art modern equipment for the people of Afghanistan.

2. Adult Cardiac Services: As there are no adult cardiac services available in Afghanistan, hence many people who have the ability to afford care are going to nearby regions for their treatment. Keeping in view this acute need of the Afghan people, FMIC management is establishing a 17 bedded adult cardiac care unit including Cath-lab facility, which will provide services for interventional cardiology and cardiac surgery services.

3. Neurosciences: Disorders of the Central and Peripheral Nervous Systems are also on the rise in Afghanistan. Unfortunately, diagnosis and treatment of these services are very rare in Afghanistan. To evaluate the brain, spinal cord and cranial nerves, FMIC in 2014 has initiated neurosciences services which includes diagnostic clinics with facility of Electroencephalogram (EEG) for both adult and children population . The clinic also provides Electromyography (EMG) and Nerve Conduction Study (NCS) to differentiate nerve disorders from muscle disorders.

IN THE MEDIUM AND LONG-TERM

Plans are already underway to introduce new services and create an expanded health complex with an academic health sciences centre on additional land which has been provided by the Government of Afghanistan. This centre would be a tertiary medical center of excellence and provide both health services and education.

This is part of a vision for an integrated health delivery system which would entail the Aga Khan Development Network's participation and provincial population-based support of community, primary and secondary care. In this context, the Kabul-based entity would serve as an intellectual and tertiary service hub of an integrated system in Afghanistan and potentially other parts of the region. The foundation for a strong partnership with the Government of Afghanistan in health sciences and health sector development is already in place.



Expanded Medical Complex proposed Master Plan

THE EXPANDED HEALTH COMPLEX WOULD PROVIDE:

Inpatient and outpatient specialty care in medicine, surgery, obstetrics, gynecology, pediatrics and psychiatry as well as selected sub-specialties; offering minimal and micro-invasive surgery with capable of serving as a regional referral centre:

1. 24 hour emergency services

2. Comprehensive diagnostic services including a referral laboratory, state of the art imaging (standard and specialized radiology, ultrasound, mammography, CT scan, MRI, nuclear medicine), neurophysiology, cardiopulmonary, physiotherapy and rehabilitation facilities and a pharmacy capable of in-house compounding

3. Resources to provide other selected technical and support services to provincial hospitals operated by AKDN (including through telemedicine)

4. A professional and Continuing Education School utilizing e-learning technologies is being explored

5. Conduct relevant research in community and population based research.

VISION FOR AN INTEGRATED HEALTH DELIVERY NETWORK FOR CENTRAL ASIA

The principal Aga Khan Development Network institutions concerned with health - through AKHS and the AKU - have been moving toward integrated health delivery systems to meet their strategic priorities, national and regional interests recognizing that an integrated system can offer easier access to quality and appropriate services that optimize efficiency. A shared vision is emerging that calls for:

- Strengthening linkages with the Aga Khan institutions, and Governmental and Non-Governmental partners for health care delivery, operational research, and public advocacy;
- Developing a model health care system of coordinated primary and secondary care with centralized tertiary referral;
- 3. Developing capacity for health information and knowledge dissemination;
- Increasing access to healthcare to vulnerable groups in society particularly child-bearing women and children; and
- 5. Building and retaining health human resource capacity that promotes integrated health delivery systems.

An Integrated Health Delivery Network could be defined as a health care system of coordinated community-based, primary and secondary care with a centralized intellectual and tertiary referral hub. This delivery network would be underpinned by processes of governance and quality assurance, risk management and standard operating procedures.

Cross-cutting facilitative elements would include: capacity for health information dissemination, technical assistance, education and training and common standards for quality in human resources and service provision. Collaborations would take place for research and teaching.

Health system development with varying levels of integration is ongoing in Afghanistan, Pakistan, Tajikistan and Kyrgyzstan. Afghanistan has a very clearly articulated Health and Nutrition Sector Strategy which emphasizes coordinated and integrated community health prioritizing mothers and children.

Kyrgyzstan and Tajikistan share a legacy of a robust integrated health delivery system inherited from the Soviet system comprising a network of health facilities focused on providing in-patient care. However, this system has deteriorated considerably and there are significant challenges regarding management, technical capacity and access.

Since the 1980's AKDN has been very active creating a unique community-based model in Pakistan and are the national forerunners in the development of secondary and tertiary care.

ATTRIBUTES OF THE INTEGRATED HEALTH NETWORK

- Improved access to appropriate health services (tertiary, secondary, primary) and cross-sectoral and shared care through a robust referral system.
- Optimization of technical infrastructure and common standard operating process and procedures.
- Addresses the needs of the populations concerned.
- Maximize expertise across the network;
- Efficiency in quality, cost and communication.
- Joint articulation and systematic planning towards agreed strategic objectives.
- Shared protocols for health delivery.
- Shared standards in health care delivery including for human resources, clinical practice, education and training.

Behind Kabul Medical University, Aliabad, Kabul, Afghanistan Telephone: +93 75 202 3912 - 4







