

International Medical Center at IIT Kharagpur

A joint project of the Indian Institute of Technology, Kharagpur and the University of California, San Diego Health Sciences

Introduction:

The proposed International Medical Center at IIT Kharagpur (IMC) is a joint project of the Indian Institute of Technology, Kharagpur (IIT KGP) and the University of California, San Diego's Health Sciences Division (UCSD). The IMC will be the first and only academic medical center in India that integrates a School of Medicine, a 300 bed state of the art medical facility and a research and development center, with expertise in the field of medicine, biotechnology, technology and engineering in the US and India. This ambitious project spearheaded by two of the world's foremost academic institutions will create a powerhouse of knowledge, talent and intellectual property on an international scale, comparable to some of the best medical and research organizations in the world.

The next section in this document provides a brief introduction of UCSD Health Sciences and IIT KGP and underscores the importance of this partnership in shaping the future of healthcare in India and the world.

University of California, San Diego Health Sciences:

The University of California, San Diego is one of the five medical school campuses of the University of California University system. Governed by the UC Board of Regents, UCSD is home to some of the most prestigious schools of learning, with a strong emphasis on sciences. The UCSD Medical School is one of the most well respected medical training institutions in the US if not in the world. Much of UCSD's success is made possible by the incredible infrastructure in place at UCSD Health Sciences.

The UCSD Medical Center, sometimes referred to as the Hillcrest Medical Center, is a major research hospital located in the Hillcrest neighborhood of San Diego, CA. Along with the Thornton Hospital in La Jolla, CA, the UCSD Medical Center is the primary teaching center for the UCSD School of Medicine and UCSD School of Pharmacy.

The Hillcrest Medical Center:

While the Hillcrest Medical Center is the primary hospital for the School of Medicine, it is also a premier tertiary care center in the Southern California region. As the region's only academic center, it offers primary care and specialist care services, including a full range of surgery, diagnosis and management of the full range of medical disease, including (genetic disease, neurology, orthopedics, oncology and sleep medicine). The recently renovated 386 bed hospital is also the primary site for such regional services such as the Comprehensive Organ Transplant Program, Bone Marrow Transplant Program, the San Diego Regional Burn Center, Infant Specialty Care Center, the county

only Level I Trauma Center and the National Institutes of Health designated Clinical Research Center.

Thornton Hospital:

UCSD's 120 bed Thornton Hospital and Perlman Ambulatory Care Center opened in the summer of 1993 as a medical/surgical secondary care hospital providing a full range of services such as surgery, cardiology, endocrinology, oncology, reproductive medicine, orthopedics and pulmonary medicine, amongst others.

Shiley Eye Center:

At UCSD's Shiley Eye Center, patients receive the most advanced ophthalmologic care available in the region. From basic eye exams, to the most advanced diagnostic tests and sophisticated surgery, the physicians and staff at the Shiley Eye Center provide comprehensive eye care services in one convenient location.

The Abraham Ratner Children's Eye Center, located adjacent to the Shiley Eye Center works exclusively on pediatric ophthalmology services designed to meet the needs of children and is the only kind of its center in the region.

Services offered at the UCSD Shiley Eye Center include cataract surgery, cornea transplants, glaucoma diagnosis and treatment, low vision services, neuro-ophthalmology, pediatric ophthalmology, refractive surgery, retina care and trauma repair.

Rebecca & John Moores UCSD Cancer Center:

Established in 1979, the Rebecca and John Moores Cancer Center is one of 39 National Cancer Institute designated Comprehensive Cancer Care Centers in North America. Such centers are prominent among leading institutions in the nation dedicated to scientific innovation and clinical excellence. UCSD is the only cancer center in San Diego and Imperial counties to have earned this distinction.

Avantiya Health, LLC:

Founded in 2006, Avantiya Health, LLC is a San Diego, CA based healthcare consulting firm engaged by UCSD to assist with expansion of their international outreach efforts. Since the founders of Avantiya Health, LLC are of Indian ancestry, their effort has been consistently to work in the Indian subcontinent and bring their knowledge and experience to assist in building a robust healthcare system in India. Headquartered in San Diego, CA, Avantiya Health, LLC has offices in New Delhi, Jaipur, Hong Kong and Barcelona and is engaged in projects dealing with continuous quality improvement, healthcare management consulting, introduction and immersion in new markets, healthcare revenue cycle optimization and health information system and informatics. UCSD has retained Avantiya Health, LLC as their consulting firm and representative for projects in India, since January 2009.

Indian Institute of Technology, Kharagpur

The Indian Institute of Technology at Kharagpur was established in May 1951 and was the first IIT in the country. The vast tree-laden campus, spreading over 2100 acres, has a self contained township of over 20,000 inhabitants. Currently IIT KGP has 500 faculty, 1400 employees and 8000 students on the campus. The number is expected to grow substantially in the near future.

The hospital at IIT Kharagpur was named in honor of Dr. B.C. Roy, Chairman of The First Board of Governors. The B.C.Roy Technology Hospital [BCRTH] is located at the center of the IIT KGP Campus. It provides indoor and outdoor medical facilities for students, staff and faculty and their families.

B.C. Roy Technology Hospital currently provides primary care to the Campus Community. The Institute is looking for secondary and tertiary healthcare support for its community through this hospital or its connected hospitals.

Background and Existing Hospital Infrastructure:

The hospital currently serves around 8000 students, another 12,000 employees and their dependents; an approximate total population of 20,000. By 2012 the student population is expected to increase to 11,000 bringing the total estimated campus population to 25,000. In 2020, the student population is expected to go up to 20,000. Consequently, the faculty would increase to 2000 and non faculty staff number will increase to 15000, thus increasing the overall population to the hospital significantly.

Kharagpur

Kharagpur is a small town centered around the Railway Divisional Headquarters and is located between Howrah (Kolkata) and Jamshedpur and around 120-130 km from each on the National Highway (NH-6) and Howrah-Nagpur-Bombay Railway line. According to the 2001 census, the population is 207,984, with an average literacy rate of 64%. Kharagpur is unique in its mixed ethnicity and linguistic diversity (Hindi, Bengali, English and other regional dialects). There are a number of large and medium industries around Kharagpur town – Tata Bearings, Tata Metaliks, Tata Telcon, Rashmi Ispat, Ramsaroop Loh Udyog and Siemens (erstwhile – Flenders McNeill Gears).

Plan of Action

Timeline of Events:

- UCSD submits a response to the Expression of Interest Document of IIT KGP – June 14, 2009
- Deven Parlikar, President and CEO of Avantiya Health, LLC, a consulting firm retained by UCSD Health Sciences, meets with Professor Acharya, Director of IIT Kharagpur and presents UCSD's credentials and interest in collaborating on this project - June 18, 2009
- IIT KGP responds favorably to UCSD's proposal and agrees to create the IMC as a collaborative entity – June 21, 2009

- IIT KGP Director, Professor Acharya meets with Mr. Kapil Sibal, Union Minister for Human Resources Development in Delhi and gets approval for the proposed project – June 24, 2009
- Professor Acharya nominates Dr. Sudarshan Neogi to visit UCSD – June 25, 2009
- Dr. Sudarshan Neogi visits UCSD and meets with UCSD's Physician In Chief, Dr. Tom McAfee – July 7, 2007
- Dr. Sudarshan Neogi and Professor Acharya invite UCSD officials to attend the IIT Foundation Day celebrations in Kharagpur to announce this partnership – Aug 18, 2009

Roll Out Strategy:

Phase I:

During the first phase of this plan, officials from UCSD and IIT KGP will create a Memorandum of Understanding that outlines the roles and responsibilities of all parties involved in this project with clearly defined action items and deliverables. This MOU will serve as a blue print to create a more detailed plan of action for the proposed project. After successful site visits at IIT KGP by UCSD on June 18, 2009 and to UCSD by IIT KGP on July 7, 2009, Professor Acharya will host UCSD officials at IIT KGP on August 18, 2009 and announce the partnership in presence of union ministers and other dignitaries. Following the announcement, UCSD officials will spend two days working with IIT KGP staff to create a detailed plan of action that outlines the development of the IMC in the following order:

- Develop a business plan and Proforma financial statements for IMC
- Planning and development of a 300 bed academic medical facility
- Curriculum planning and facility development of a world class medical school
- Creating a world class research and development facility.

Phase II:

Once the feasibility study and Proforma financials are completed, a detailed plan will be created by UCSD and IIT KGP with assistance from Avantiya Health, LLC to break down the project into action items and deliverables to meet the 24 month completion deadline set in the Expression of Interest document of IIT KGP. Commencement of the project is anticipated by October 1, 2009.

Per the proposed plan, IMC will provide inpatient and outpatient services in the following areas:

- General Surgery
- Endocrinology
- Ophthalmology
- Otolaryngology
- Pediatric
- Orthopedic Surgery
- Cardiology

- Urology
- Nephrology
- Neurology
- Pulmonary and Critical Care
- Dermatology
- Obstetrics and Gynaecology

The goal of the new proposed center will be to provide services including but not limited to:

- Provide diagnostic tests to support diagnosis
- Provide regular and special tertiary health check-ups.
- Perform major and minor surgery
- Emergency and supportive care to stabilize patients before shifting to specialty hospitals (cardiac/trauma/neurosurgical, etc.)
- Ensure follow-up treatment through affiliation with specialty hospitals
- Create a behavioral and mental health system for counseling for the student and residents in the community.

A Mutual Expression of Interest:

UCSD's mission to partner with strong academic institutions worldwide to create synergistic relationships resulting in the development of high quality patient care delivery systems, of ongoing quality improvement programs and a stellar faculty makes it an ideal partner for this proposed project. In a similar vein, adding a medical school, Hospital and a research and development center to IIT KGP's repertoire only adds to its outstanding academic stature and commitment to development of world class science and technology.

The strong reputation enjoyed by both academic institutions makes this a very strong partnership. Piggybacking on strong faculty and support from both institutions, and addressing shortage of health professional s in India and the US, the outcome of this partnership will create a robust workforce and healthcare quality standards that would be second to none in the south Asian region. UCSD envisions this project to cost between US \$120 to \$150 million, depending on the breadth and depth of services and infrastructure discussed with IIT Kharagpur. Although the project will include much needed charitable services to the indigent population in IIT KGP's service area, UCSD and IIT agree that this project will be a for-profit institution that will be developed by raising required funds from private donors, international grantors and investor groups – private equity, venture capital investment, and by some debt financing.

Contact Information:

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Thank you for your interest