Promoting Cardiovascular Education, Research and Patient Care

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Academy Moves to Electronic, Instant Communication by Ivan Berkowitz, Winnipeg, Canada

Encouraged by interest around the world in CV Network, we have developed a plan to make the Academy news bulletin more readily accessible. With this issue, our 21st, we make it instantly available ONLINE. We will not print and mail copies. We are reconstructing our website to make it more interactive and timely. We will experiment with a blended BLOG format to allow for reader input.

Thanks to my friends at CTV Winnipeg and the Winnipeg Free Press, we are delighted to be able to add the reports on the dynamic interview with our President-Elect Sir Magdi Yacoub - please visit www.heartconference.com

With our deepest gratitude to ST. JUDE MEDICAL we are able to make available, in a set of 3 DVD's, the extraordinary Symposium which we hosted on October 14, 2006 "FUTURE OF HEART HEALTH". To obtain a copy please go to: "FUTURE OF HEART HEALTH DVDs"

Please do send all observations and constructive criticism to me at: ivan@mts.net
The 7th Annual Meeting of IACS Japan Section
will be held in

Chairman: Akira Matsumori, MD, PhD
Department of Cardiovascular Medicine
Kyoto University Graduate School of Medicine
54 Kawahara-cho Shogoin, Sakyo-ku
Kyoto 606-8507, Japan
e-mail: amat@kuhp.kyoto-u.ac.jp
At the 2nd World Congress of the International Academy of Cardiovascular Sciences, July 14-16, 2006, Japan Section of IACS elected Dr. Jin O-uchi, MD, PhD as the winner of the Young Investigator Award of Japan Section in Cardiovascular Sciences. At this meeting, 10 candidates from different university departments were recommended and Dr. J. O-uchi received this Award.

Dr. O-uchi is researching in the Department of Physiology, Jikei University School of Medicine, Tokyo, Japan, under the guidance of Prof. Satoshi Kurihara. Dr. O-uchi was born in Yokohama, Japan in 1975. After graduating from Jikei University School of Medicine in 2001 (MD), he was trained as an intern in Jikei University Hospital for 2 years. He received his PhD from Jikei University School of Medicine in 2006.

The presentation, for which Dr. O-uchi received the Young Investigator Award, was Intracellular regulation mechanisms of the changes in L-type Ca2+ channel induced by α1-adrenoceptor stimulation. α1-adrenoceptor stimulation plays an important role in the regulation of mammalian cardiac muscle contraction under the physiological and pathophysiological conditions as in the case of β-adrenoceptor stimulation. However, the detail of the signal transduction pathway has still not been clear. Dr. O-uchi’s group recently reported the intracellular mechanisms underlying the potentiation of L-type Ca2+ current during α1-adrenoceptor stimulation. (O-uchi et al., Proc Natl Acad Sci USA, 2005). His group was the first to prove that CaMKII is involved in the mechanism by using the combination of electrophysiological, biochemical and morphological methods. In the presentation, Dr. O-uchi showed that α-adrenoceptor subtypes are coupled to each specific signal transduction pathway and differently modulates L-type Ca2+ current.

Buoyed by having raised more than $40,000 from friends to honour Dr. Naranjan Dhalla’s 70th Birthday, we are encouraged to pursue new initiatives.

To further honour Dr. Dhalla, Drs. Makoto and Brigitte Nagano kindly contributed $2,000 to the Academy’s “Nagano Fund” which funds the Academy’s Annual Award for Distinguished Achievements in Cardiovascular Education.

You may recall, the Academy was most appreciative of donations in memory of Dr. Norman Alpert and Sam Dhalla. I must refer specifically to the donation from the Myles Robinson Memorial Heart Trust which is a model initiative honouring an outstanding businessman whose life was cut far too short by a heart attack. The Robinson family and many friends built a fund which has grown nicely through wise investment policy by the Trustees. Annually, a grant has been made to support heart research by the Myles Robinson Scholar. For the last six years, the Myles Robinson Scholar has been Dr. Ian M. C. Dixon from the Institute of Cardiovascular Sciences at the St. Boniface Hospital Research Centre.

I am delighted to acknowledge donations from my friends on the occasion of my 70th Birthday in November.

We have placed on our web page a form which can be completed for any occasion – happy or sad. Donors can designate a specific fund, initiate a new fund or contribute to the Academy’s new International Initiatives. VISIT: www.heartacademy.org

At the 2nd Korean Congress of the International Academy of Cardiovascular Sciences, July 14-16, 2006, Korea Section of IACS elected Prof. Sung-Won Cho, MD, PhD as the winner of the Young Investigator Award of Korea Section in Cardiovascular Sciences.

At the meeting, 10 candidates from different university departments were recommended and Prof. J. Cho received this Award.

Prof. Cho is researching in the Department of Medicine, Yonsei University College of Medicine, Seoul, Korea, under the guidance of Prof. Duk-Jin Kim. Prof. Cho was born in Busan, Korea in 1979. After graduating from Yonsei University College of Medicine in 2003 (MD), he was trained as an intern in Yonsei University Hospital for 2 years. He received his PhD from Yonsei University School of Medicine in 2006.

The presentation, for which Prof. Cho received the Young Investigator Award, was Intracellular regulation mechanisms of the changes in L-type Ca2+ channel induced by α1-adrenoceptor stimulation. α1-adrenoceptor stimulation plays an important role in the regulation of mammalian cardiac muscle contraction under the physiological and pathophysiological conditions as in the case of β-adrenoceptor stimulation. However, the detail of the signal transduction pathway has still not been clear. Prof. Cho’s group recently reported the intracellular mechanisms underlying the potentiation of L-type Ca2+ current during α1-adrenoceptor stimulation. (Cho et al., Proc Natl Acad Sci USA, 2005). His group was the first to prove that CaMKII is involved in the mechanism by using the combination of electrophysiological, biochemical and morphological methods. In the presentation, Prof. Cho showed that α-adrenoceptor subtypes are coupled to each specific signal transduction pathway and differently modulates L-type Ca2+ current.
Led by the imaginative Chair Prof. Otoni Gomes, the annual conference in Brazil Dec. 7 – 10, 2006 was exceptional. International Congress on Cardiovascular Sciences. Scientific Forum XVI was sponsored by Fundação Cardiovascular São Francisco de Assis – ServCor; Co-sponsored by the International Academy of Cardiovascular Sciences – South American Section; International Society for Heart Research – Latin American Section; Brazilian Academy of Cardiology for Family; and the Brazilian Society of Cardiology. DFCVR-CEX; Brazilian Society of Cardiovascular Surgery, DEPEX; and the American Society of Angiology. Over 500 delegates and speakers attended sessions.

A new highlight of the opening day was a Students’ Congress on Cardiovascular Sciences inspired by Winnipeg’s Young Investigators’ Forums and poster sessions.

FOREIGN SPEAKERS included:

Prof. Dr. Alberto Crottogini - Argentina
Prof. Dr. Anthony Panos - USA
Prof. Dr. Calogerino Diego Borzellino – Venezuela
Prof. Dr. Dinender Kumar – USA
Prof. Dr. Domingos Sávio Souza - Sweden
Prof. Dr. Ganghong Tian – Canada
Prof. Dr. Igor Rudez - Croácia
Prof. Ivan Berkowitz - Canada
Prof. Dr. Maja Sostaric – Slovenia
Prof. Dr. Maximo Guida - Venezuela

Prof. Dr. Michael Dashwood - England
Prof. Dr. Naranjan S. Dhalla - Canada
Prof. Dr. Pascal Dohmen - Germany
Prof. Dr. Pawan K. Singal – Canada
Prof. Dr. Ricardo Gelpi - Argentina
Prof. Dr. Soon-Ok Cha - Sweden
Prof. Dr. Sylvain Chauvaud - France
Prof. Dr. Tomas A. Salerno - USA

The 2007 Conference is planned for Belo Horizonte, Brazil, October 4 - 6 with a most significant addition of the INTERNATIONAL MEETING, SOUTH AMERICAN CHAPTER of Le Club Mitrale at Hopital Europeen Georges Pompidou.
Draft Program

SCIENTIFIC FORUM XVII - INTERNATIONAL CONGRESS OF CARDIOVASCULAR SCIENCES
INTERNATIONAL CONGRESS OF EXTRACORPOREAL CIRCULATION
XXV BRAZILIAN CONGRESS ON EXTRACORPOREAL CIRCULATION
XI SOUTH-AMERICAN SYMPOSIUM INTERNATIONAL ACADEMY OF CARDIOVASCULAR SCIENCE III INTERNATIONAL MEETING
AMERICAN SOCIETY OF ANGIOLOGY BRAZILIAN CHAPTER
VI INTERNATIONAL FORUM ON APPLIED CARDIOVASCULAR PHYSIOLOGY
XII PROF. DR. TOMAS A. SALERNO SYMPOSIUM
V PROF. DR. TOFY MUSSIVAND SYMPOSIUM
III PROF. DR. NARANJAN S. DHALLA FORUM ON APPLIED CARDIOVASCULAR RESEARCH
II PROF. DR. PAWAN K. SINGAL SYMPOSIUM: ANTIOXIDANT AND CELL THERAPY IN HEART FAILURE
II PROF. DR. RICARDO GELPI SYMPOSIUM
XXIII MEETING OF PROF. DR. E. J. ZERBINI DISCIPLES
VI MEETING OF PROF. DR. DOMINGOS J. MORAES DISCIPLES
III SCIENTIFIC MEETING OF PROF. DOMINGO M. BRAILE FRIENDS
III SYMPOSIUM ON CARDIOLOGY FOR THE FAMILY
IV STUDENT’S BRAZILIAN CONGRESS ON CARDIOLOGY
ECUMENIC FORUM IX

I INTERNATIONAL MEETING SOUTH AMERICAN CHAPTER of Le Club Mitrale at Hopital Europeen Georges Pompidou
CHAIRMANSHP: Prof. Dr. Sylvain Chauvaud - France Prof. Dr. Otoni M. Gomes – Brazil

Draft PROGRAM: OCTOBER 6, SATURDAY

SPONSORED BY: SÃO FRANCISCO DE ASSIS CARDIOVASCULAR FOUNDATION / SERVCOR
HÔPITAL EUROPÉEN GEORGES POMPIDOU- DEPARTMENT OF CARDIAC SURGERY / Paris-France
BRAZILIAN SOCIETY OF CARDIOVASCULAR SURGERY

NATIONAL CO-SPONSORSHIP
Brazilian Society of Cardiovascular Surgery, Brazilian Society of Cardiology
UFMG – Minas Gerais Federal University – Surgery Department

INTERNATIONAL CO-SPONSORSHIP
Hopital Europeen Georges Pompidou - France
Departement de Chirurgie Cardio-Vasculaire . Pr. A. Deloche – Pr. J-N Fabiani
Memorial Jackson Hospital - University of Miami - USA
Cardiothoracic Surgery Department Prof. T. Salerno
Winnipeg Cardiac Sciences Program- Canada
Medical Director and Head of Cardiac Surgery - Dr. Alan H. Menkis
Institute for Biodiagnostic National Research Council of Canada
Biosystem Group – Prof. Roxanne Deslauriers
Ottawa Heart Institute – University of Ottawa
Chair of Bioengineering Devices – Prof. Tofy Mussivand
IACS - International Academy of Cardiovascular Sciences
Cheine L’Espoir-Université de Paris, France

08:00 a.m. - WELCOME

08:30 LECTURES
Coordination: Prof. Dr. Domingo M. Braile - SP
Prof. Dr. Luciano Cabral Albuquerque - RS
- Anatomy Role in Mitral Valve Disease and Surgical Approach Decision  
  Prof. Dr. Alexandre Ciappina Hueb - SP

- Myocardial Protection in Mitral Valve Surgery: Technique and Controversy  
  Prof. Dr. Tomas A. Salerno - USA

- Use of Magnetic Resonance Imaging and Spectroscopy in Development of New Techniques for Myocardial Preservation  
  Prof. Dr. Ganghong Tian - Canada

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| 09:40 | **COLOQUY - CHILDREN’S MITRAL VALVE SURGERY**                       | Coordination: Prof. Dr. José Teles de Mendonça - SE  
Dr. Antônio Augusto Ramalho Motta - MG  
Speakers:  
Prof. Dr. Marcelo B. Jatene - SP  
Prof. Dr. Fábio Said Sallum - PR  
Prof. Dr. Carlos Roberto Ribeiro Moraes - PE  
Prof. Dr. Miguel Angel Maluf - SP  
Discussion |
| 10:40 | **Coffee**                                                            |                                                                        |
| 11:00 | **COLOQUY - TECHNIQUES AND CONTROVERSY IN MITRAL VALVE REPAIR**      | Coordination: Prof. Dr. Eduardo Augusto Victor Rocha - MG  
Dr. Melchior Luiz Lima - ES  
Speakers:  
Prof. Dr. Francisco Gregori Junior - PR  
Prof. Dr. Mario Osvaldo Vrandecic Peredo - MG  
Prof. Dr. Evandro César Vidal Osterne - DF  
Prof. Dr. Pablo Maria A. Pomerantzeff - SP  
Discussion |
| 12:00 | **Interval**                                                          |                                                                        |
| 13:30 | **COLOQUY - ATRIAL FIBRILLATION APPROACH IN MITRAL VALVE DISEASE**   | Coordination: Prof. Dr. Sérgio Luiz da Silva - RJ  
Dr. José Oscar Reis Brito - RJ  
Speakers:  
Dr. Pedro Rocha Paniáguia - DF  
Dr. Bruno Botelho Pinheiro - GO  
Prof. Dr. José Jazbik Sobrinho - RJ  
Prof. Dr. Alexandre Visconti Brick - DF  
Discussion |
| 14:30 | **LECTURES**                                                          |                                                                        |
|       | - Less invasive and robotic mitral valve surgery                      |                                                                        |  
Prof. Dr. Alan Menkis - Canada  
- Conservative surgery in degenerative mitral valve insufficiency  
Prof. Dr. Sylvain Chauvaud - France |
| 15:10 | **COLOQUY - MITRAL VALVE SURGICAL APPROACH IN HEART FAILURE - TECHNIQUES AND CONTROVERSY** | Coordination: Prof. Dr. Fernando Antônio Lucchese - RS  
Dr. Ricardo Adala Benfatti - MS  
Speakers:  
Prof. Dr. Geraldo Paulino Santana Filho - GO  
Prof. Dr. Eduardo Sérgio Bastos - RJ  
Prof. Dr. Luiz Boro Puig - SP  
Prof. Dr. Walter José Gomes - SP  
Prof. Dr. Ênio Buffolo - SP  
Prof. Dr. José Carlos Dorsa Vieira Pontes - MS  
Discussion |
### 16:30 - Coffee

### 16:45 - Colloquy - Atrioventricular Valves Dysfunction and Treatment in Heart Transplantation Patients

**Coordination:** Prof. Dr. Walter Labanca Arantes - RJ  
Dr. Jandir Ferreira Gomes Júnior - MS

**Speakers:**  
Prof. Dr. Noedir A. G. Stolf - SP  
Prof. Dr. Alfredo I. Fiorelli - SP  
Prof. Dr. Fernando Antônio Lucchese - RS  
Prof. Dr. Walter José Gomes - SP

**Discussion**

### 17:25 - Lecture

**Coordination:** Prof. Dr. Luciano Cabral Albuquerque - RS  
Dr. Amaury Edgardo Mont’Serrat A. S. Dias - MS

- New Bioengineering Frontiers in Heart Valve Treatment  
  Prof. Dr. Pascal Dohmen - Germany
- The William - Frames – Nakagawa - Dubost Atrial Fibrillation Approach in Mitral Valve Surgery  
  Prof. Dr. Otoni Moreira Gomes - MG

### 18:00 - Colloquy - Mitral Valve Substitution Advances and Challenges

**Coordination:** Prof. Dr. Henrique Murad - RJ  
Prof. Dr. Mauro Paes Leme de Sá - RJ

**Speakers:**  
Prof. Dr. Hélio Pereira Magalhães - SP  
Prof. Dr. Francisco Diniz Affonso da Costa - PR  
Prof. Dr. Mario Osvaldo Vrandecic Peredo - MG  
Prof. Dr. Domingo M. Braile - SP  
Prof. Dr. Pablo Maria A. Pomerantzeff - SP

**Discussion**

### 19:30 - Adjournment

### 21:00 - Social Meeting

**Minas Gerais Cardiovascular Surgery Society Reception**

Information and Registration: [www.servcor.com](http://www.servcor.com)

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**People and Places**

**Developing Cardiovascular Sciences, Education and Care in Angola**

by Denoel M. Oliveira, Rio de Janeiro, Brazil

Angola suffered from a civil war for more than 30 years. This period degraded the quality and availability of health care. Logistical problems with supply and distribution of equipment as well as the lack of physical security impeded the provision of health care throughout the country, and public health services existed only in areas under government control. The rest of the country depended on international and private relief organizations.

Most of Angola’s estimated forty-five hospitals, all government operated, were located in urban areas. Conditions in the hospitals, however, were often deplorable. Poor sanitation, a lack of basic equipment, and disruptions in water and electrical services were common. Trained medical personnel were in chronic short supply … in the late 1980s, Angola had only 230 native-born doctors, and only 30 percent of the population had access to health services. Most physicians, nurses, technicians, and national health advisers were foreigners—principally Cubans, East and West Europeans, and South Americans. In
1986 there were about 800 physicians in Angola (1 per 10,250 people—a very low ratio even by African standards) and 10,500 nurses. A Western source reported in February 1989 that 323 physicians, or 41 percent of the total number of doctors in government-controlled areas, were Cubans. The government had placed a high priority on health and medical training programs, requiring that all foreign medical personnel teach classes in medicine, in addition to performing their clinical duties. However, even foreign physicians were not trained sufficiently to spread good medical education or information.

Since 2001 a group of Brazilians started Project CONEXTIONS, an international relief project to help Portuguese speaking countries. Due to similarities in language, culture and epidemiology, Brazil is a good country to help Angola develop not only in medicine but in other areas as well.

Following the Academy’s South American meeting in Rio on December 10, 2006, Ivan Berkowitz presented to the CONEXTIONS team and discussed “Promotion of Heart Health.”

To indicate support, Prof. Dr. Denoel M. Oliveira was named the Academy’s Director of Development (Portuguese Africa).

Later in December, a group of Brazilians went to Angola to start some medical actions of Project CONEXTIONS in the cities of Luanda and Lubango. With the support of the International Academy of Cardiovascular Sciences, Prof. Oliveira and his colleges initiated several training actions and some lectures on cardiovascular diagnoses, procedures and prevention.

Over the course of 15 days the team worked promoting actions on education and training of the staff of CEML (Centro Evangélico de Medicina do Lubango) a newly and well equipped hospital. The training based on practical presentations, case discussions and lectures on cardiovascular diseases and prevention, rheumatic fever, hypertension and atherosclerosis were the most discussed topics, but special attention was given to rheumatic fever prevention and treatment. Meanwhile Dr. Stephen Foster, Medical Director of CEML, became very interested in developing cardiovascular treatment and prevention program in his own institution. The idea is to start the program this year with the construction of the first Intensive Care Unit in the city. Opening this facility would add the possibility to treat cases of cerebral vascular problems and myocardial infarction. Actions on rheumatic fever prevention will be taken this year during several Public Health Forums designed to inform the lay population. The power and applicability of this method was seen on this trip when more than 300 people took part in a Public Forum on Cardiovascular Prevention. After a lecture of about 50 minutes, lay population discussed for more than 90 minutes topics related to prevention and treatment of diabetes, hypertension and rheumatic fever.

Regarding medical education, some lectures were done in order to start a program of continuous training. Scientific meetings gathering doctors from Brazil and Angola will be held in 2007 in hospitals of Luanda and Lubango creating a movement towards a larger meeting in 2008 or 2009. This year Project CONEXTIONS will send about 5,000 books to create a medical library in the city of Lubango and organize net chats to discuss cases and put professionals in permanent contact. During this trip, good contacts were made with the Department of Health of Angola in order to coordinate cardiovascular projects. Angolan Consul in Rio de Janeiro, Dr. Ismael Diogo is the president of FESA (Fundação Eduardo dos Santos). Dr. Ismael made contact and discussed ways to consolidate connections between FESA, CONEXTIONS and International Academy of Cardiovascular Sciences to introduce cardiovascular projects in Angola.
In the premises of the exceptional five-star world-class resort, Hotel Playa Pesquero in Holguín, Cuba, the International Symposium on Cardiovascular Research was held from January 25 to 27, 2007, with the participation of more than 120 delegates from Canada, the United States, Turkey, Costa Rica, Mexico, El Salvador, Spain and Cuba. The symposium was organized by the Department of Biomedical Research of Holguín Teaching Hospital and sponsored by the International Academy of Cardiovascular Sciences (IACS) and the Cuban Cardiology Society.

This excellent scientific exchange was an enormous opportunity to be updated on the most advanced knowledge about cardiovascular research where the papers of world-renowned and Cuban personalities in this field stood out among which it is worthwhile to identify the Academy leaders in attendance – Prof. Naranjan Dhalla, Executive Director; Prof. Grant Pierce, Director of Scientific Affairs; Ivan Berkowitz, MBA and Director of Development; Prof. Stephen Schaeffer and Prof. Belma Turan, IACS Fellows; as well as Prof. Balwant Tuana and Prof. Larry Hryshko.

Among the lectures given by the specialists it is appropriate to point out “Subcellular targets for the treatment of diabetic cardiomyopathy” by Prof. Dhalla; “Endothelial dysfunction and heart failure” by Prof. Rodríguez Leyva; “The association of infectious disease with atherosclerosis” by Prof. Pierce; “Gender related differences in local Ca2+ releases in normal and diabetic rat cardiomyocytes” by Prof. Turan; “Therapeutic potential of Na-Ca exchange inhibitors” by Prof. Hryshko; “Physiology of the obstructive sleep apnea in relation to the cardiovascular system and the impact of its intervention” by Prof. Kassissiaand; “Role of the cell cycle regulator E2F6 in cardiac development and left ventricular remodeling after myocardial infarction” by Prof. Tuana; “Overexpression of the AT1 receptor in the heart leads to hypertrophy, dilatation, fibrosis and congestive heart failure, an observation attributed to the effect of angiotensin II on ventricular remodeling” by Prof. Schaffer; and “Promotion of Cardiovascular Health” by Ivan Berkowitz.

Most interesting dissertations were delivered by cardiologists and cardiovascular surgeons from the Cuban Cardiac Centers of Santiago de Cuba, Villa Clara and Havana City, including topics such as cardiac transplantation of stem cells in Cuba, surgical alternatives to cardiac transplantation, cardiovascular hemodynamics and the diagnostic use of multi-slice CT scans in cardiology.

Inspired by having attended two Young Investigators Forums in Winnipeg, Dr. Delfín imaginatively added a Special Session of Young Investigators. He emulated, even exceeded, the high standards of Canadian hospitality he enjoyed also attending the major global
conferences in 2001 and 2006. The Cuban cuisine and entertainment was exceptional! Credit must be given to our hosts at Hotel Playa Pesquero – their standards of service, the facilities, and attention to design and cleanliness will compare to facilities anywhere in the world!

During the closing ceremony of the Symposium, Dr. Delfín Rodríguez Leyva, intellectual author and main designer of this project and Dr. Roberto Torres, Director of Holguín Teaching Hospital, in their respective speeches, thanked the collaboration given by the authorities from the provincial government and the provincial direction of health in order to achieve the success of the Symposium and issued a first viva-voce call aimed at organizing the II Symposium with the same level of excellence and greater numbers of Cuban and foreign delegates.

Serious discussions ensued on subjects of international support for improving the quality of cardiovascular education in Cuba. Specifically, the Academy will develop plans for study abroad by Cuban doctors; attendance by Cubans at Meetings; supplying new and used equipment; and collecting books and journals to build libraries in Cuba. Visitors were most interested to meet professors and students from the Cuba’s amazing Latin American School of Medicine which is providing free medical training for more than 3,000 students from impoverished areas of the world including more than 100 from the USA.

Editor’s Note: “We are delighted to report that through the initiative of Mary Houghton, Executive Editor of The Gray Sheet/The Silver Sheet published by Elsevier, a collection of books were delivered to libraries in Cuba in early March 2007. We are most grateful to Ms Houghton for her leadership in this project.”

ADVANCES IN HEART HEALTH

Exceptional Quit-Smoking Program Offers New Hope for Canadians

An exceptionally effective smoking cessation program that results in more than 44% of participants remaining smoke-free for 6 months or more is being hailed as a new national model for use across the country. Developed by the University of Ottawa Heart Institute (UOHI) and supported in part by the Government of Canada, the so-called Ottawa Model will be implemented in two major health districts in the country.

The Ottawa Model is a hospital-based program involving a unique combination of consult and intervention, information, follow-up and feedback. At UOHI, about 1,500 in-patient smokers are identified annually and more than 98% participate in the Heart Institute’s program. Between 30% and 50% each year remain smoke-free for six months or longer. The program is now being replicated in 12 hospitals in the Champlain region of Ontario and is being used to assist all smoking patients, not just those with heart disease.

“The Ottawa Model leads to a significant increase in long term cessation rates,” said Dr. Andrew Pipe, director, Prevention & Rehabilitation, UOHI. “Health is improved, more lives are saved, and demands on the health care system are reduced. By assisting other regions to use this proven approach, we hope to help more smokers quit and enhance both their health and the quality of their lives.”

With federal government funding, two regions – River Valley Health (RVH) in New Brunswick and the Vancouver Coastal Health (VCH) in British Columbia – will be the first to adopt and implement the Ottawa Model. In the RVH region, some 23% of the population smoke. In the VCH service area about 16% of the people are smokers. For comparison, about 20% or 24,000 patients admitted to the 12 regional hospitals currently served by the Ottawa Model are smokers.
RVH is the largest geographic health region in New Brunswick, delivering bilingual care and services to close to 170,000 people, including five First Nation communities, in over 20 locations in a geographic area exceeding 23,000 square kilometers. Services are provided through acute care facilities, community health centres, a collaborative health clinic, specialty units, and a wide range of community and home care services.

“As one of the largest health authorities in New Brunswick, this project will provide us with an ability to institutionalize smoking cessation as part of our standard of care,” said Anne Marie Atkinson, Health Promotion and Wellness Consultant, River Valley Health. “The Ottawa Model will contribute to our targets of further reducing our regional smoking rate, reducing hospitalizations and deaths from chronic diseases associated with tobacco use, and promoting a more healthy lifestyle.”

VCH provides a full range of health care services ranging from hospital treatment to community-based residential, home health, mental health and public health services. VCH provides services to 25% of British Columbia’s population, with 17 regional districts and 15 First Nation communities. VCH delivers care through 14 acute care facilities, 24,500 qualified staff and two diagnostic and treatment centres, over a geographic span of 54,000 square kilometers.

Christina Tonella, Leader, Tobacco Reduction Strategy, Vancouver Coastal Health, said: “In British Columbia, the results of this kind of program will benefit patients and the health care centres in our region. Many patients want to quit smoking when they are hospitalized and welcome specific assistance to help them quit.”

Among its many advantages, the Ottawa Model provides a means of establishing comparable standards and practices across the country, encouraging medical units to collaborate more closely to further cut smoking among Canadians. As well, smoke-free facilities and grounds have made it more important for hospitals to have sensitive, responsive and successful programs to assist smokers.

“The Heart Institute has more than 10 years experience in developing and implementing smoking cessation programs for patients,” said Dr. Pipe. “As the leading cardiovascular care centre in the country, we’re willing to contribute our experience and share our knowledge with anyone, anywhere especially when addressing this important preventive health practice.”

**The Ottawa Model**

The success of the Ottawa Model is based on the systematic identification of smokers and an offer of assistance in helping them to quit. To accomplish this:

- All new medical residents and nurses are provided with one-on-one training in how to manage tobacco dependency.
- All smokers admitted to a hospital are identified and treated with support from a designated nurse counselor and stop-smoking aids. Smoking status is documented in the patient’s record.
- The attending physician or nurse advises all smokers to quit. An order for nicotine replacement therapy is provided by the attending physician.
- A quit plan is developed with smoking patients ready to quit. Nurse counselors are trained in all aspects of nicotine dependence and smoking cessation.
- At discharge, patients are provided with guidance on a smoking withdrawal program with assorted materials including nicotine replacement, if necessary.
- Recommendations to support smoking cessation are written into the patient’s discharge letter and sent to the family physician.
- Patients are contacted at home three, 14 and 30 day intervals every month for six months after discharge by a unique call system. This is a sophisticated integrated voice response technology that tracks the patient’s progress using a detailed series of questions. If any response suggests the patient is having trouble remaining smoke-free or if they’ve started smoking again, a nurse counsellor will call to talk about options and help get the patient back on track. This includes a reference to the Heart Institute’s outpatient smoking cessation clinic.
- Patients are assessed six months after discharge.
Bangladesh is a tiny land of 56997 Sq miles in the South central Asia with a population of 140 million. It is the country of the highest population density in the world. 80 percent of people live in the village and agriculture is their main profession. Territory health care facilities are available in big cities and towns. As the country is dissected by numerous rivers communication is not very easy.

Though communicable diseases have been prevented almost successfully throughout the country but people still are not well aware of Heart Disease, which is the major cause of premature death in the country. For one hundred forty million people, there are only eight cardiac centers (1-Government, 1-Semi government and 6-private) with facilities for Cardiac Surgery and intervention, all are in the Dhaka city only.

Rheumatic heart diseases are still prevalent among the young age groups in rural Bangladesh due to over crowded population, low hygienic and socio-economic condition.

Here is a small study on the “prevalence of coronary heart disease among the rural people of Bangladesh with risk factor analysis” conducted by me and my colleague Dr. Nazmul Alam.
Prevalence of coronary heart disease among the rural people with risk factor analysis
Alam N1, Haque KMA2

Abstract
This prospective study was conducted in a Rural Community Heart Care Centre, Chatkhil, Noakhali for the period of one year from July 01, 2005 to June 30, 2006. Over 300 adult human subjects of coronary heart disease diagnosed by clinical, ECG, x-ray, Echocardiography, biochemical examinations. The objectives of this study were to study the prevalence of coronary heart disease (CHD) among the rural people; to determine age, sex, occupation of rural CHD patients; to study various ECG & biochemical parameters in CHD patients. Out of 300 patients, male-195 (65%) & female-105 (35%). Peak incidence of CHD was observed in 50-59 & 60-69 years age group; 121(40.33%) & 65(21.66%) respectively. Occupational variations show maximum incidence of CHD in businessmen (164 cases, 54.66%). Risk factors analysis showed smoking 63%, hypertension 40% & diabetes 40% cases.

Introduction
Coronary heart disease has been defined as impairment of heart function due to inadequate blood flow to the heart compared to its needs caused by obstructive changes in the coronary circulation1.

It is the cause of 25-30 percent of deaths in most industrialized countries. The WHO has drawn attention to the facts that CHD affects population not only elderly but also young adults due to some unavoidable situation attributed by risk factors.

The natural history of CHD is very variable. Death may occur in the first episode or after a long history of disease2. CHD may manifest itself in many presentation: (a) angina pectoris, (b) heart failure (c) sudden death etc. Non-modifiable risk factors are age, sex, family history, genetic factors, high personality etc. Modifiable risk factors are cigarette smoking, high blood pressure, diabetes, obesity, sedentary works, stress, elevated serum cholesterol level etc.

Aims & Objectives
i. To study the prevalence of coronary heart disease among the rural people.
ii. To determine age, sex & occupation of rural CHD patients.
iii. To study various ECG & biochemical parameters, specially S. lipid components in CHD patients.
iv. Finally to recommend some preventive measures against coronary heart disease.

Materials & Methods
This prospective study was conducted in a rural health centreople - "THE HEART", a Community Heart Care Centre, located in

Chatkhil, Noakhali. Study period was one year i.e. July 01, 2005 to June 30, 2006.

Patients presented with chest pain were selected for study. They were evaluated clinically, followed by ECG, X-ray chest, Echocardiography, biochemical tests (S. lipid profile) etc. were performed.

Data were collected through a prescribed proforma and the results of study were narrated in tabulated forms.

Table-I: Sex distribution of CHD patients (n=300)

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>195</td>
<td>65</td>
</tr>
<tr>
<td>Female</td>
<td>105</td>
<td>35</td>
</tr>
</tbody>
</table>

Table-II: Age distribution of CHD patients (n=300)

<table>
<thead>
<tr>
<th>Age group (in years)</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>30-39</td>
<td>31</td>
<td>10.33</td>
</tr>
<tr>
<td>40-49</td>
<td>48</td>
<td>16</td>
</tr>
<tr>
<td>50-59</td>
<td>121</td>
<td>40.33</td>
</tr>
<tr>
<td>60-69</td>
<td>65</td>
<td>21.66</td>
</tr>
<tr>
<td>70-79</td>
<td>35</td>
<td>11.66</td>
</tr>
</tbody>
</table>

Table-III: Occupation of CHD patients (n=300)

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service-holders</td>
<td>105</td>
<td>35</td>
</tr>
<tr>
<td>Businessman</td>
<td>164</td>
<td>54.66</td>
</tr>
<tr>
<td>Teachers</td>
<td>17</td>
<td>5.66</td>
</tr>
<tr>
<td>Day labourers</td>
<td>5</td>
<td>1.66</td>
</tr>
<tr>
<td>Rickshawpilers</td>
<td>3</td>
<td>1.00</td>
</tr>
<tr>
<td>Fishermen</td>
<td>4</td>
<td>1.33</td>
</tr>
<tr>
<td>Beggar</td>
<td>2</td>
<td>0.66</td>
</tr>
</tbody>
</table>

Table-IV: Risk factors in CHD patients (n=300)

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking</td>
<td>189</td>
<td>63</td>
</tr>
<tr>
<td>Hypertension</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>Diabetes</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>Obesity</td>
<td>105</td>
<td>35</td>
</tr>
<tr>
<td>Sedentary works</td>
<td>93</td>
<td>31</td>
</tr>
</tbody>
</table>

1. Dr. Nazmul Alam, MBBS, D.Card, Mphil
   Junior Consultant, Cardiology
   Islânia Eye Hospital, Farmgate, Dhaka.
2. Dr. Kazi Md. Aminul Haque, MBBS, D.Card, FCGP
   Consultant, Cardiology
   Islânia Eye Hospital, Farmgate, Dhaka.
Table-V: Various ECG changes in CHD patients (n=300)

<table>
<thead>
<tr>
<th>ECG changes</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ant. ischaemia</td>
<td>45</td>
<td>15</td>
</tr>
<tr>
<td>Inf. ischaemia</td>
<td>61</td>
<td>20.33</td>
</tr>
<tr>
<td>Lateral ischaemia</td>
<td>47</td>
<td>15.66</td>
</tr>
<tr>
<td>Old MI (Ant)</td>
<td>55</td>
<td>18.33</td>
</tr>
<tr>
<td>Old MI (Inf.)</td>
<td>49</td>
<td>16.33</td>
</tr>
<tr>
<td>OMI (Ant+Inf)</td>
<td>43</td>
<td>14.33</td>
</tr>
</tbody>
</table>

Table-VI: 5. cholesterol status in rural CHD patients (n=300)

<table>
<thead>
<tr>
<th>Cholesterol status</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>Mild elevation &gt;300 mg/dl</td>
<td>67</td>
<td>22.33</td>
</tr>
<tr>
<td>Moderate elevation &gt;350 mg/dl</td>
<td>142</td>
<td>47.33</td>
</tr>
<tr>
<td>Severe elevation &gt;400 mg/dl</td>
<td>70</td>
<td>23.33</td>
</tr>
</tbody>
</table>

Discussion
Table-I showed gender distribution of CHD patients where male-195 cases (65%), female-105 cases (35%). There is less incidence of CHD in female patients most likely due to sex hormonal defence system³.

Table-II showed age distribution of CHD patients. Mostly affected age group is 50-59 years; 121 cases (40.33%), second affected age group is 60-69 years; 65 cases (21.66%). In this study CHD occurred in a very earlier age group, 30-39 years (31 cases, 10.33%); which is almost similar with the findings of Dewans BR & co-workers in 2004 (11.74%)⁴.

Table-III showed various occupation of rural CHD patients. Mostly affected group is businessmen-164 cases (54.66%). Second affected group is service-holders of various categories (105 cases; 35%). Least incidence of CHD was observed in day-labourers (5 cases, 1.66%); Rickshaw puller (3 cases, 1.00%), Fishermen (4 cases, 1.33%), Beggars (2 cases, 0.66%). Mobile, hard working, laborous group showed comparatively less incidence of CHD in other study⁵.

Risk factors in CHD patients were showed in table-IV. Hypertension & diabetes are equally responsible to be the risk factors of CHD. In this rural based study smoking had headed the list (189 cases, 63%). Sedentary works is another detrimental risk factor (93 cases, 31%).

Except 21 cases dyslipidaemias were observed in 279 cases. Moderate elevation of serum total cholesterol was observed in 142 cases (47.33%).

With the advent of urbanization & industrialization rural people are also more inclined to intake fatty food containing saturated fatty acids of various natures & components⁶.

Conclusion
The global scenario of CHD in Bangladesh is worsening day by day. Prevalence rate was found 7.8 & 5.1 percent in males and females respectively. The peak period of CHD was found 51-60 years. Males are affected more than the females. Hypertension and diabetes account for about 40 percent of all cases. Smoking is also found responsible etiologically in a good number of cases. So, our slogan is - "Save the heart from smoking & fat".

Acknowledgement
This research work was conducted with the compliments of Ministry of Science and Information & Communication Technology, Bangladesh.

References
South Asians (Indians, Pakistanis, Bangladeshis and Sri Lankans) have the highest incidence of coronary artery disease (CAD) compared to any other ethnic group in the world. To create awareness, develop educational and preventive programs, I started a society (South Asian Society on Atherosclerosis and Thrombosis, SASAT) in 1993 at the University of Minnesota. Since then, we have organized international conference on “Atherosclerosis and Thrombosis”, every other year in India. We also have published three books on the subject (1. Coronary Artery Disease in South Asians: Epidemiology, Risk Factors and Prevention. Editors: Gundu H. R. Rao and V. V. Kakkar, JP Medical Publishers, New Delhi, India, 2001; 2. Coronary Artery Disease: Risk Promoters, Pathophysiology and Prevention. Editors: Gundu H.R. Rao and S. Thanikachalam, JP Medical Publishers, New Delhi, India. 2005; Type-2 Diabetes in South Asians: Epidemiology, Risk Factors and Prevention: V.Mohan and Gundu H.R.Rao, J.P.Medical Publishers, 2006). SASAT has partially funded a project in India, called “India Heart Watch” which is aimed at evaluating the role life style of people in 21 States of India, on the development of CAD risk

The World Health Organization (WHO) estimates that incidence of diabetes (type-2) will increase by 200% in India in the next two decades. The WHO estimates 60% of the world’s cardiac patients will be Indian by 2010 and half of all deaths in India, probably will be due to CAD by 2015. According to a recent communication (September 20, 2005) by Amitava Banerjee and Bhargavi Rao on ProCor platform (www.procor.org) cardiovascular diseases (CVDs) are not included in the top priority list in the Ninth-Five Year Plan for Health, prepared by the Government of India. This seems to be true of the World Health Organization agenda as well. Indeed, it was India that was responsible for requesting the WHO to initiate a cardiovascular program some fifty years ago. At that time, probably there was no hard data available to suggest that this disease was a major epidemic or a health burden. However, now it is very well recognized that Diabetes, CAD and Cancer constitute a major health burden for the developing countries. Indeed, Cancer and Cardiovascular Diseases together, account for over 72% of the global mortality from non-communicable diseases.

At a time like this, when immediate action is needed, there seems to be very little interest in India to create a national platform or develop action plans for primary prevention and integrated treatment of these chronic and malignant diseases. I have been watching the growth and activity of the non-communicable disease section of WHO, and I do not see any hope for its expansion or a greater role. I strongly feel the need for a renewed effort from professionals, individuals with interest in community health, NGOs, and professional societies, to develop their own action plans and find ways and means to implement such plans. Furthermore, every attempt should be made to convince the decision making bodies in India, to establish a national platform for the fight against non-communicable diseases. Individual Nations should approach WHO, and request them to prioritize their programs and play a significant role in alleviating these chronic and malignant diseases.

In a recent communication to ProCor, Doctors Banerjee and Rao reviewed the Global picture of CVD, assessed the impact of these diseases on the workforce potential for economic development in the developing nations. They also addressed the need for increased health care workers, funds and infrastructure to improve health care delivery in India. Based on their views on this subject they felt that National strategies to meet the objectives must be developed and effectively implemented by individual countries and on a regional basis. In the same article they also mentioned lack of adequate facilities for diagnosis and treatment and the unaffordable cost of medical care. According to them there are about 35 well-equipped centers for modern diagnosis and treatment located in 6 major metropolitan cities. In these facilities cardiologists perform approximately 40,000 angioplasties a year. Compared to the national need of specialty hospitals for doing interventional procedures, what is available (less than 50 centers) at present is inadequate. In addition, thousands of children are born every year with congenital heart defects. Only a small percentage of these children get needed medical care.

Doctors Banerjee and Rao recognize such problems and raise a pertinent question.

What is adequate or appropriate, especially in countries such as India, where health care facilities are distributed unevenly? It is rather difficult to answer this question. However, each group providing much needed health care in India, should develop their own novel methods, to meet their particular need. For instance, Dr. Madhavan a consultant cardiologist, Apollo Hospital, Madurai, India suggests his idea for a “model clinic” in a letter to editor: Prevention & Control 1:21, 2005. His model clinic is a small room, equipped to measure body mass index (BMI), check blood pressure and urine sugar by dipstick by a trained volunteer. He estimates the cost to run such a clinic to be less than USD100 per month. The cost per patient is estimated to be 20 cents. In his letter he also mentions of another similar clinic already in operation in Tamil Nadu.
The clinic in Karaikudi, Tamil Nadu, India is established by Mrs. Shakuntala Chockalingam of Vancouver, Canada. With funds from Somayya Foundation, a private philanthropy (Letter to the editor Prevention Control 1, 155, 2005), trained volunteers screen individuals at risk for hypertension. She wants to expand her program to include diabetes and provide blood glucose monitoring. However, adding such a simple screening test also costs additional money. Although, I hear people saying that these tests could be done for as low a budget as 10 rupees per assay, I have not found reliable answers or the cost-effective methods. SASAT is working on several ideas for developing low-cost diagnostic methods for monitoring blood pressure as well as blood sugar.

Mohan et al from Madras Diabetes Research Foundation (www.mvdsc.org), Chennai, India have recently described a simplified Indian Diabetes Risk Score (IDRS) for screening Undiagnosed Diabetic Subjects (JAPI 53:759-763, 2005。www.japi.org) They used just four risk factors to come up with IDRS: age, abdominal obesity, family history of diabetes and physical activity. They concluded from their studies that IDRS is useful for identifying undiagnosed subjects in India and could make screening programs more cost effective. Dr. Shashank R. Joshi of Department of Endocrinology, Seth GS Medical & KEM Hospital Mumbai, India, has reviewed this subject in the same journal (JAPI, 53:755-757, 2005). He concludes that IDRS has a sensitivity of 72.5% and specificity of 60.1% and is derived based on the largest population based study on diabetes in India, CURES. Mohan’s group in Chennai is expanding their CURES study to reach over a million people at Chennai with awareness program (Prevention Awareness Counseling Evaluation, PACE) and has targeted screening of over 200,000 individuals for blood sugar free of charge. The advantages of IDRS developed by this group are its simplicity, low cost and are easily applicable for mass screening programs. Many of us feel that IDRS should be tested in other population based studies in India, both rural and urban.

Banerjee and Rao in their communication “integrated treatment and prevention –ischemic heart disease in India” describe a proven, successful community health model by Aravind Eye Hospital, as an example of delivering affordable health care to the rural poor. This group of hospitals (7) has over 4000 beds and has performed 2,225,225 cataract surgeries. According to reliable sources, almost 70% of all surgeries performed are free of charge. They discuss the applicability of this model to cardiology services and suggest their own proposal, which incorporates three principles from the Aravind model to cardiovascular disease in India, using the private specialist services to improve treatment and prevention services.

In the proposed model, the mobile unit includes: 2 ambulances, 3-4 paramedical staff required (including drivers), computers, BP monitors, height/weight measuring capabilities, glucose monitors, cholesterol/lipid monitoring capabilities, basic blood and urine investigation capabilities, communication to hospitals and physicians via cell-phone and internet, access to internet for information and protocols, emergency cardiac drugs, protocols and automated defibrillators (AEDs), and tele-medicine capabilities. Each village (comprising of up to 5000 people) will be visited every 2-3 weeks. The aim will be to screen all people over the age of 40 for CAD and its basic risk factors. In this way the mobile unit is used to recruit people to prevention and refer those requiring treatment to the cardiology hospital. The patient records are fully computerized using EMIS (Egton Medical Informations System). They also describe a new initiative in Coimbatore for reproductive health service which is “piggy-backed” onto existing rural diabetes screening clinics. The novelty of the approach according to them is that it is much more patient-centered without necessarily involving more cardiologists than exist now.

Since the model program described by Doctors Banerjee and Rao is based on the Aravind Eye Hospital Model, in this article, I will briefly describe two ongoing projects in Bangalore, India that have focused their efforts on serving the poor in the area of diabetes and CAD. One is a high-tech project conceived and promoted by Dr. Devi Prasad Shetty, Managing Director of Narayana Hrudayalaya (Narayana Hrudayalaya Heart Hospital: Cardiac Care for the Poor, Harvard Business School. To obtain this article call 1-800-545-7685). The other is a low-tech project conceived and promoted by Dr. S.S. Srikanta, director SAMTVAM, a Diabetes and Endocrinology Clinic (samatvam@vsnl.com).

I met Dr. Devi Prasad Shetty when he joined Manipal Heart Hospital in Bangalore, as the Managing Director. At that time, I was accompanied by the President of Children’s Heart Link, an NGO organization in Minneapolis, who wanted to collaborate with this group. Children’s Heart link staff, volunteer doctors and nurses have gone several times since that time, to Bangalore and performed several hundred cardiac procedures for deserving children suffering from heart problems. In the year 2001, Dr Shetty started his own Heart Specialty hospital called Narayana Hrudayalaya (NH: means God’s Compassionate Home) in Bangalore. Now it has more than 500 beds and has 10 operating theatres and two cardiac catheterization units. Since the inauguration of this facility they have completed over 12,000 open-heart surgeries and half of these are pediatric. Because of the excellent reputation of the staff at NH, large number of wealthy patients get admitted for cardiac procedures. Hospital has developed a scheme called Karuna Hrudaya (Kind Heart), which helps those financially constrained. They do open heart procedures for these patients, for 65,000 rupees ($1400) and absorb the remaining cost from funds made by charging those who can afford higher cost. Just like the way Tom Friedman describes of a flat world in his recent book (The World is Flat), Dr Shetty talks about his strategy as “Wal-martization of healthcare”. He has developed several novel schemes to reduce the cost of procedures as well as treatments. With the help of Indian Space Research Organization (ISRO), Bangalore, he has developed an excellent telemedicine program to provide cardiac care for the poor. He has set up nine cardiac care units (CCUs) across India, linked to NH. Indeed, when I was with him last year, he was trying to set up a CCU at the Bangalore Hospital. Since Bangalore is the hub of IT, he has developed software program that allows ECG images to be scanned and transmitted via internet. With the initial success, the State of Karnataka has planned to sponsor 29 additional CCUs. In addition to training doctors, the staff of NH has trained over 700 nurses. Training included minimum of six month period of critical care. Through this high-tech medium even the GPs have access to the expertise available at NH. Since the inception in 2001 NH has performed over 10000 tele-consultations. Both in Bangalore...
and at Calcutta they have mobile cardiac diagnostic laboratories, which go to rural areas as remote as 800 kms away on weekends. On an average each camp screens 400 people a day on a no fee basis. These programs are sponsored or supported by various NGOs like Lion Club, Rotary International and IT companies.

Of all the innumerable things happening at this hospital, the most novel development is an insurance scheme for the care of the poor. The scheme is called Yeshasvini. NH has set up a health insurance scheme for 1.7 million farmers in the State of Karnataka. This scheme was launched in 2002, for farmers belonging to state cooperatives. The way it works according to Ms Lakshmi Mani, Manager, Charitable Wing NH, is for 5 rupees (one cent) a month, cardholders will have access to free treatment at 150 hospitals in 29 districts in the State, for medical procedures costing up to 100,000 rupees. According to the staff less than ten percent of the cardholders would require medical procedures, therefore, the total funds collected will cover the cost of the treatment for those in need.

Dr. S. S. Srikanta is the medical director of SAMATVAM: Endocrinology Diabetes Center in Bangalore. He was trained in the USA at the prestigious Joslin Diabetes Center, Harvard Medical School. Samatavam is a non-profit, charitable trust dedicated to the promotion of human welfare through service of health care, education and research. The special strength of this organization includes merited faculty and staff, on going international collaboration, sincerity and dedication in public service and human good. The diabetes care unit of this clinic currently provides 2 special health care programs targeted to help people with diabetes and their families to obtain the best in comprehensive health care. These programs are administered by a “team” of highly experienced diabetologists, dieticians and nurse educators supported by laboratory services and consultant referrals. They run an outreach program every weekend. They screen at risk individuals for diabetes. These screening programs, which include blood sugar monitoring, are free of charge. Recently I have raised over USD 20,000.00 from the Rotary International USA to improve the diagnostic capabilities of this center.

It will be wonderful to develop a community-based comprehensive health care delivery system for all the rural individuals in India. Recently (Aug 23, 2005) National Rural Employment Guarantee Bill of 2004, was passed by Parliament of India. The Bill guarantees at least one member of every family, 100 days of work, at a minimum wage of 60 rupees per day (500 rupees a month per family). According to the latest estimate, 720 million people live in rural areas in 600 districts. The funds allocated (>12,000 crores) will only cover 200 districts including 150 districts under the Food for Work Program. This simple example reveals the magnitude of the problem. Even at the level of Government, we do not have resources to provide work for all the individuals at rural areas. Therefore, it is hard to envision a national platform or action plan in the near future that will develop a comprehensive prevention and integrated treatment strategy for the non-communicable diseases in India. Before concluding this article, I would like to include a well known saying by Margaret Mead, “Never doubt the capacity of a few dedicated individuals to change the world; in fact, it is the only way it ever has.”

Can such a comprehensive program be developed by public-private partnership? Of course, it can be done, provided we net work with like minded groups and create a suitable dedicated platform. In a recent article in the journal of Science (309:401-404, 2005) Morel et al express their viewpoint on “Health Innovation Networks to Help Developing Countries Address Neglected Diseases”. Improving health of the poorest in the developing world depends on the development of many varieties of health innovations, including, new drugs, vaccines, devices, diagnostic techniques, preventive programs, and integrated treatment programs. According to the authors of this article, some countries are more scientifically advanced than others and are starting to reap benefits from decades of investments in education, health research infrastructure, and manufacturing capacity. They refer to these as innovative developing countries (IDCs). The India-Brazil-South Africa Dialogue Forum, established in June 2003, has a focus on intellectual property, access to medicine, (traditional/alternative), R&D on vaccines and pharmaceutical products to address national health priorities. India has the largest number of FDA approved pharmaceutical companies outside of USA. Since there is a great opportunity to generate revenue in the health care sector in these IDCs, pharmaceutical companies as well as IT companies (Ranbaxy, Reddy’s Lab, GE Medical, Wipro-Biomed, Manipal-Acunova-Life, to name a few) can initiate novel programs to develop comprehensive health care delivery packages for the urban as well as rural populations.

If a private specialty hospital like NH can develop a successful health insurance scheme for the farmers, I have no doubt in my mind, that public-private partnership or some other venture organization also can develop insurance schemes for urban as well as rural populations. Let us assume that we develop two insurance schemes, one for the rural with 10 rupees per month per person, and another for urban with 100 rupees per person per month. Then we will have a total of 120 or 1200 rupees per year. That is about 3 USD or 30 USD per year. If we insure 10 million people then we will have 3 million or 30 million dollars per year. Indian population is young (average 25 years), and as such only 10% of the insured individuals need any medical procedures. Therefore, as is the case in all insurance schemes, the money saved by insuring the healthy individuals will not only pay for all the procedures needed for the not so healthy, but also will pay for the development of all other components of a comprehensive health care delivery package. Components of a comprehensive package according to my vision will include the following components: Bioinformatics, health insurance, outreach programs, cost-effective diagnostic procedures, counseling, life style changes, novel drug development, cost-effective integrated risk management and treatment, cost-effective interventional procedures, rehabilitation-post stroke and rehabilitation-post myocardial infarction.

Cardiovascular disease is preventable. We are aware of the risk factors that promote this chronic disease. As I mentioned during my conversations with President A.P.J. Kalam of India, during a video conference at SASAT 2004 conference (www.sasat.org) in Hyderabad, CVD is a challenge of global proportions. Like his “Wings of Fire” missile project, to be successful, it needs dedicated leaders, teams of specialists, volunteers, public-private partnerships, a national platform and well thought out action plans.
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