

# The iLCoGS - THE LANCET Commission on Global Surgery

## CENTER OF EXCELLENCE INNOVATIONS FOR RURAL SURGERY

### SEESHA - KARUNYA UNIVERSITY

Global Surgery



CoE i LCoGS India

Implementing the Lancet Commission Report on Global Surgery in India



#### BACKGROUND

The Lancet commission on Global Health and Boston Children's Hospital and the Program in Global Surgery and Social Change was generously awarded \$500,000 to support the advancement of surgical systems as a part of public health in India. The funding was built around a five-year plan that would center around locally-identified priorities for improving surgical care, strengthen domestic resources and capabilities, and help advance a research and policy agenda. The generous gift allowed for the establishment of a Mumbai-based Secretariat that will drive the process forward. The Secretariat, entitled "Implementing LCoGS-India" is headed by Dr. Nobhojit Roy.

As part of the program SEESHA and KARUNYA UNIVERSITY was chosen as the "Center of Excellence for Innovation" rural surgery and is headed by Dr. Gnanaraj Jesudian, Urologist and rural surgeon who is the Director of Medical Services at SEESHA and an Adjunct Professor at Karunya University.

#### OBJECTIVES

- The center would route all rural surgery specific research through the iLCoGS CoE and request Association of rural surgeons of India and International Federation of rural surgeons to collect and record earlier rural surgery innovations at the center
- The center would network with Lancet commission on Global surgery, PGSSC of Harvard University, SEESHA and KU and apply for various projects and funding
- The center would liaise with other organizations to help the innovations reach the rural patients



## THE CURRENT STATUS

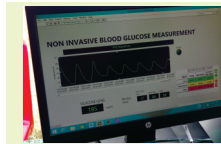
SEESHA and the various engineering and other departments at Karunya University work together at the iLCoGS CoE. Lancet, SEESHA and KU provided the seed funding for the initial set of projects and helped applying for larger projects. During the first six months seven applications were made and funding received for one of them. The projects through the center have won the DST Lockheed Martin award and GE Sustainable health award since the inception. There were 29 publications during the last 6 months.

The iLCoGS CoE does the monitoring of the various projects and has a weekly meeting to update the progress of the projects. MOU have been signed with SITRA and STAAN biomedical engineering Pvt Ltd and talks are on for MOU with Medtronics and Sri Chitra Tirunal Medical Institute and TiMed.

## SOME OF THE CURRENT PROJECTS



The Easy Position Easy Fix stirrups: This helps with endoscopic treatment of renal stones and other surgeries in lithotomy position



Non Invasive Blood Tests: Non invasive blood sugar and hemoglobin measurement

Gas less Laparoscopic Surgeries: These make laparoscopic surgeries possible under easily available spinal anesthesia without the need for bottled gases thus making them available in rural areas.

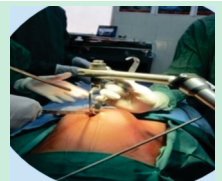


Image Processing: To help fog and glare removal during laparoscopic and endoscopic surgeries and image fusion and 3 D printing processing



The Low Cost Vacuum Therapy and Dressing Materials: These are especially useful for treatment of non healing wounds in diabetic patients



Post Operative Monitoring System



Laparoscopic Suturing techniques



Low Cost Camera for Gas Less Laparoscopic Surgeries

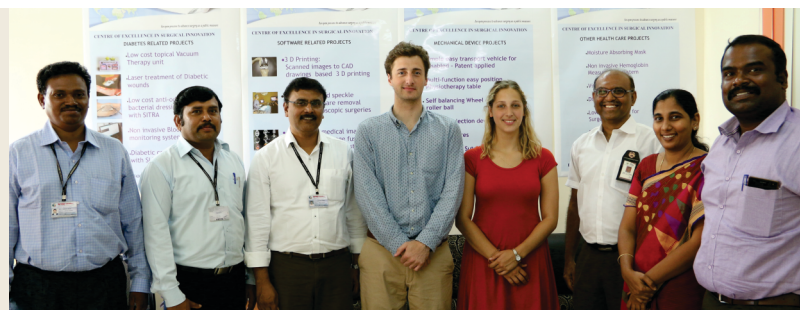
Self Balancing Wheel Chair and Other Patient Mobilizing Devices



Comprehensive CPR system

## FUTURE PLANS

- To organize innovation competitions and make the center an innovations hub for rural surgery
- To collect and record all rural surgery related innovations
- To make the center a place for training in the innovative techniques and innovator for rural surgery



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