

# School of Telemedicine and Biomedical Informatics

## Sanjay Gandhi Postgraduate Institute of Medical Sciences



**National Resource Center,**  
*(Telemedicine Division, Ministry of Health & Family Welfare, Govt. of India)*

*Journey of Last Two Decades*

[www.stbmi.ac.in](http://www.stbmi.ac.in)

# Introduction

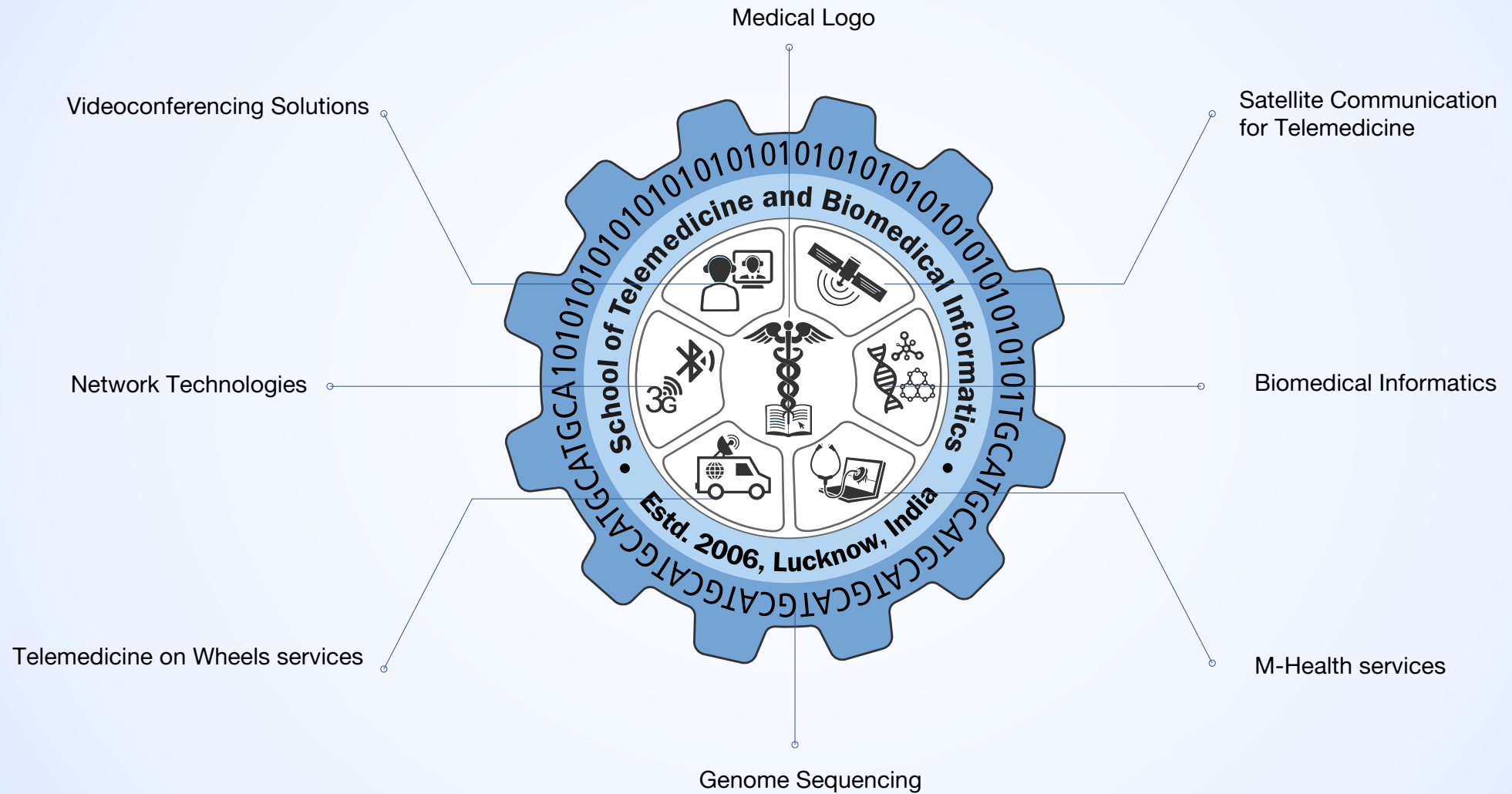


The School of Telemedicine & Biomedical Informatics has been established by the Sanjay Gandhi Postgraduate Institute of Medical Sciences (SGPGIMS), Lucknow with the financial support of the Government of Uttar Pradesh and the Department of Information Technology, Ministry of Communication & IT, Government of India with the objective of creating human resources in various fields of Healthcare Information Technology e.g. Telemedicine, Hospital Information Management System, Public Health Informatics, Nursing Informatics, Digital Medical Library, Medical Multimedia & Animation, Bioinformatics, Medical Imaging Informatics, Cancer Informatics, Artificial Intelligence & Clinical Decision support system in Medicine, e-learning in Medicine, Surgical Informatics, Virtual Reality & Medical Simulation etc. This is the first academic institution of its kind dedicated exclusively to the emerging arena of health care informatics in a public funded academic medical institutional setup.

Telemedicine activities at SGPGIMS were initiated in the year 1999 in the form of testing the concept of information and communication technology in the field of medicine. Telemedicine, as defined by WHO, is delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technology for exchange of valid information for diagnosis, treatment and prevention of diseases and injuries, research and evaluation, and for continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities.

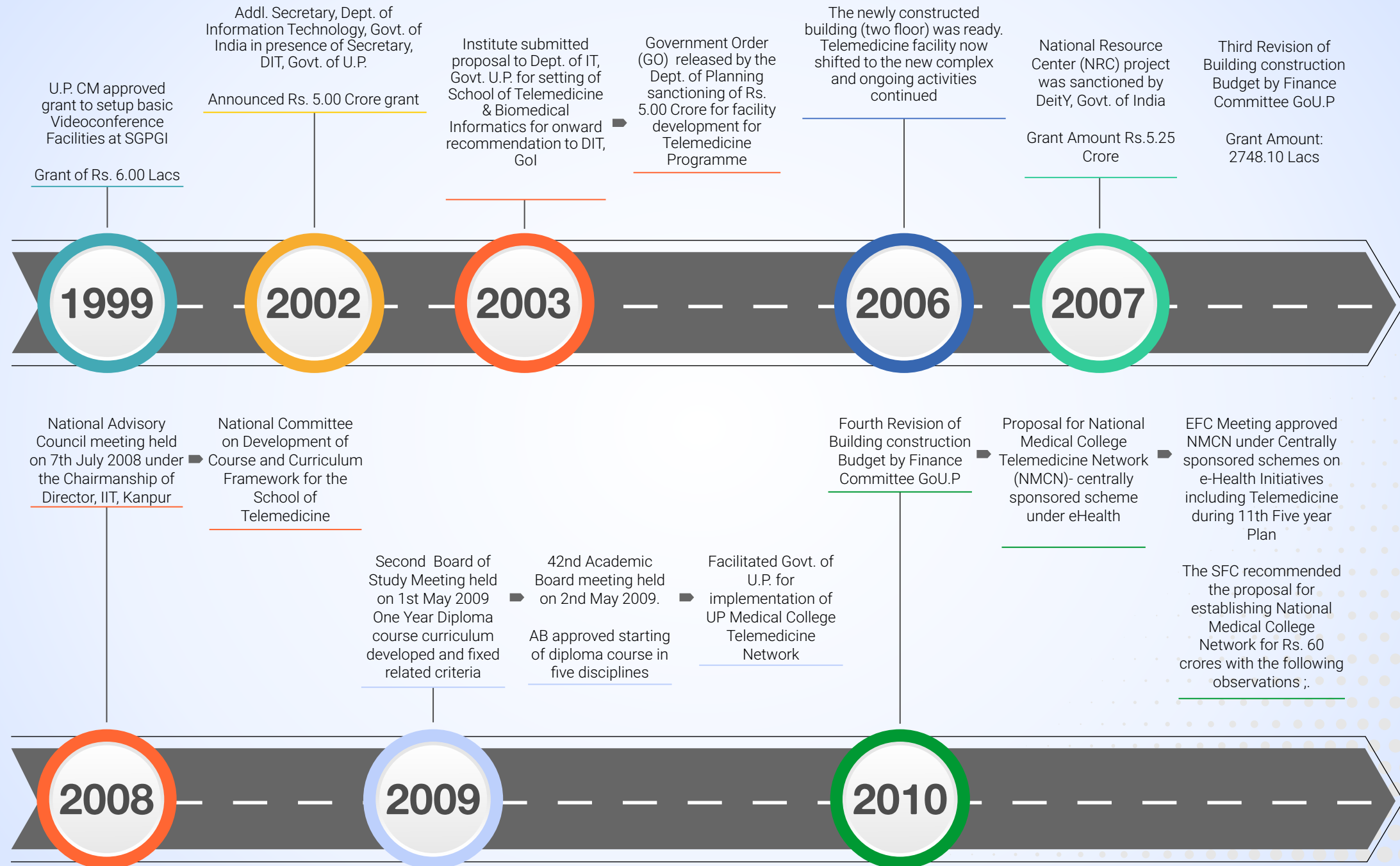


# About Our Logo





# Milestones of STBMI Journey





Ministry of Health & FW recognized National Network Hub and National Resource Center for National Medical College Network by Ministry of Health & Family Welfare, Govt. of India

Grant Rs. 1.00 Crore released to SGPGI

UP CPMT Counseling conducted through Telemedicine Network Dept. of Medical Education, Govt. of U.P.

Ministry of Health & FW recognized National Network Hub and National Resource Center Grant of Rs. 1.32 Crore released to SGPGI

Ministry of Health & FW recognized National Network Hub and National Resource Center Grant of Rs. 3.60 Crore released to SGPGI

Additional Secretary, Ministry of Health & Family Welfare, Govt. of India visited the STBMBI and inaugurated the Camp Office of MOHFW, Govt. of India located in the building of STBMBI

Curriculum based activities could not continue due to local issue

Ministry of Health & FW recognized National Network Hub and National Resource Center

Grant of Rs. 1.00 Crore released to SGPGI

Establishment of Regional Resource Center at IMS, BHU, Varanasi

2011

2014

2015

2016

2017

Establishment of Telemedicine Center at Kashivishwanath Node, SSPG Hospital Varanasi & CHC, Vindhyachal

Ministry of Health & FW recognized National Network Hub and National Resource Center

Establishment of Telemedicine Center at District Hospital, Bahraich

Establishment of Telemedicine Center at NTPC Hospital of Rinhand, Sonebhadra and Meja, Allahabad

Creation of Telemedicine Hub under Ayushman Bharat-Health & Wellness Center by State NHM, Govt. of U.P.

Second Year Grant for the Project "Establishment of Telemedicine Center at NTPC Hospital of Rinhand, Sonebhadra and Meja, Allahabad"

Operation of Smart Health ATM Center in the city of Lucknow under Smart City Lucknow, Govt. of U.P.

Second Year grant for operation of Telemedicine Hub under Ayushman Bharat-Health & Wellness Center by State NHM, Govt. of U.P.

2018

2019

2020

2021

# Projects Completed

## Endocrine Telesurvey Workshop

**Year Started :** 25th October 1999  
**Year Completed :** 29th October 1999 (05 Days)

**Funding / Collaborating Agency**  
 ITI & Lucknow Telecom Dept.

**Project outlay**  
 Sponsor

**Implemented / Executed**  
 Proof of concept on transferring live surgery to remote Institutions.

**Outcome of Project**  
 live surgery transmitted successfully with the high quality of transmission of data, image and voice

## Pilot Project for Tele-education using video conferencing

**Year Started :** January 2000  
**Year Completed :** December 2000

**Funding / Collaborating Agency**  
 Uttar Pradesh Chief M Grant

**Project outlay**  
 Rs.06 Lakhs

**Implemented / Executed**  
 Tele- Education Endocrine Imaging & Endocrine Pathology with PGIMER Chandigarh

**Outcome of Project**  
 Successful

## Tele-health care for the Kailash Mansarovar Pilgrims

**Year Started :** August 2000  
**Year Completed :** September 2000 (Two Months)

**Funding / Collaborating Agency**  
 Kumayun Mandal Vikas Nigam, Online Telemedicine Research & SGPGIMS

**Project outlay**  
 Rs. 02 Lakhs

**Implemented / Executed**  
 Proof of concept on transferring of E.C.G & B.P using INMARSAT satellite at the end route of Kailash Mansarovar Yatra

**Outcome of Project**  
 Successful test the technical feasibility of online transmission of patient health data such as ECG from high altitude.

## Application of telemedicine technology to provide tele- health care during Mela / Festival & Disaster

**Year Started :** January 2001  
**Year Completed :** February 2001

**Funding / Collaborating Agency**  
 Ministry of Electronics and Information Technology (MeitY)

**Project outlay**  
 Rs. 80 Lakhs

**Implemented / Executed**  
 Proof of concept on exchange of medical records using integrated telemedicine network build over ISDN

**Outcome of Project**  
 Successful transfer of Image in real time & store and forward

## SATCOM Orissa Telemedicine Network Project

**Year Started :** March 2003  
**Year Completed :** October 2018

**Funding / Collaborating Agency**  
 Indian Space Research Organization (ISRO)

**Project outlay**  
 Rs.20 Lakhs Approx. Bandwidth cost supported by ISRO (Cost not known)

**Implemented / Executed**  
 Tele-education & Consultation for the three medical colleges of Odisha state using satellite communication

**Outcome of Project**  
 Infrastructure created for Tele-education & Tele-consultation (Total Sessions is 645)

## Uttaranchal Telemedicine Network Project

**Year Started :** April 2004  
**Year Completed :** April 2008

**Funding / Collaborating Agency**  
 Govt. of Uttaranchal

**Project outlay**  
 Rs 73.18 Lakhs

**Implemented / Executed**  
 Tele-education & Tele-health care for the peripheral doctors of two Base hospitals Almora & Srinagar

**Outcome of Project**  
 Infrastructure created for Tele-education & Tele-consultation (Total Sessions is 322)

# Projects Completed

## SGPGIMS- District Hospital Raibareli Telemedicine Network

**Year Started :** 2006  
**Year Completed :** 2019

### Funding / Collaborating Agency

Gas Authority of India Limited (GAIL) Under CSR programme of GAIL India followed by SGPGI

### Project outlay

Rs.40 Lakhs

### Implemented / Executed

Tele-education & Tele-health care for the peripheral doctors

### Outcome of Project

Infrastructure created for Tele-consultation & Tele-CME (Total Sessions is 452)

## UP Tele-radiotherapy Network

**Year Started :** 2007  
**Year Completed :** 2010

### Funding / Collaborating Agency

Dept. of Science and Technology

### Project outlay

Executed by Radiotherapy Dept., SGPGI

### Implemented / Executed

Pilot Project -Tele-education & tele-consultation in the field of Radiotherapy to the 5 Medical Colleges of Uttar Pradesh

### Outcome of Project

Infrastructure created for Tele-education & Tele-consultation in (Total Sessions is 589 till 2019)

## National Telemedicine Resource Center

**Year Started :** 2007  
**Year Completed :** 2011

### Funding / Collaborating Agency

DIT, Ministry of Comm. & IT, Govt. of India

### Project outlay

Rs. 525.58 Lakhs

### Implemented / Executed

Creation of various Laboratories in the field of Telemedicine and Biomedical Informatics for inter-university research and development center

### Outcome of Project

All objectives was fulfilled; Six laboratories have been established and being used for the research, distance education and capacity building (842 Professional have been trained)

## SAARC Telemedicine Project

**Year Started :** 2008  
**Year Completed :** 2018

### Funding / Collaborating Agency

Govt. of India, Ministry of External Affairs

### Project outlay

Rs.28.00 Lakh

### Implemented / Executed

Bhutan, Nepal & Afghanistan countries connected through Telemedicine network for tele-health and tele-educational exchange.

### Outcome of Project

Total Sessions is 307

## Dev. & Maintenance of e-seminar Web Portal on "National Knowledge base on Telemedicine & e-Health"

**Year Started :** April 2007  
**Year Completed :** April 2009

### Funding / Collaborating Agency

Sony, Japan

### Project outlay

Rs.10 Lakh

### Implemented / Executed

Creation of single window web portal to act as a knowledge base on telemedicine and e-health in India

### Outcome of Project

Web Portal <http://telemindia.org> is created

## Uttar Pradesh Medical College Telemedicine Network

**Year Started :** 2010  
**Year Completed :** 2011

### Funding / Collaborating Agency

Dept. of Medical Education Govt. of U.P.

### Project outlay

Sponsored by Govt. of U.P

### Implemented / Executed

Establishment of Telemedicine network in three medical colleges (Allahabad, Meerut & Kanpur)Uttar Pradesh for practicing telemedicine application & eHealth activity

### Outcome of Project

Design a Videoconferencing Suit and Tele-Health Studio at Medical Colleges and Digital Library (Total Sessions is 204)



## Projects Completed

## Tele-ophthalmology Project

**Year Started :** October 2008

**Year Completed :** August 2011

**Funding / Collaborating Agency**

MOH &amp;FW, Govt. of India

## Project outlay

Rs. 28 Lakh

**Implemented / Executed**

Screening and treatment planning for Cataract, Diabetic retinopathy, Glaucoma, refraction error including other eye diseases and post-operative care, tele-follow-up, Tele-consultation through Tele-ophthalmology center at CHC, Bhacharawan ,Uttar Pradesh

## Outcome of Project

Total 2719 patients benefitted.

## Pan Africa Telemedicine Network

Year Started : 2011

Year Completed : 2017

**Funding / Collaborating Agency**

Govt. of India, Ministry of External Affairs

## Project outlay

Sponsored by Ministry of External Affairs Govt. of India

**Implemented / Executed**

SGPGIMS is one of the Twelve super-specialty hospitals in India connected through Telemedicine of 47 African Union countries

## Outcome of Project

To help African countries in Capacity Building by way of imparting quality in Tele education Total Session is 532

## Prevalence of Iodine Deficiency and Goiter in Post Iodization Phase in Gonda District

**Year Started :** May 2016

**Year Completed :** 2018

## Funding / Collaborating Agency

National Thermal Power Corporation (NTPC) Under CSR Project

## Project outlay

Rs. 3.00 Lakh

**Implemented / Executed**

Field Project using mobile telemedicine bus with lab test of primary school children.

## Outcome of Project

### Research study on Iodine deficiency



# Projects On-Going

## National Medical College Network (NMCN)

**Year Started :** December 2011

**Year Completed :** Ongoing

### Funding / Collaborating Agency

Ministry of Health & Family Welfare, Govt. of India

### Project outlay

Rs. 1208.00 Lakh  
(Total Grand Received from 2011 to 2020)

### Implemented / Executed

Grant-in-Aid to undertake awareness activities and maintaining the existing infrastructure and activities of National Resource Center (NRC), SGPGIMS, Lucknow

### Outcome of Project

1. eLearning Center, SGPGI
  2. Establishment of Regional Resource Center for Telemedicine (RRC-East) at IMS, BHU
  3. Establishment of Telemedicine at Kashi Vishwanath Node
  4. Establishment of Telemedicine at CHC, Vindhyachal, Mirzapur
- Total Content Created=956, Total Sessions=2994

## Mobile Oncology Telemedicine Bus

**Year Started :** February 2013

**Year Completed :** Ongoing

### Funding / Collaborating Agency

Dr. K L Garg Memorial Charitable Trust, Lucknow

### Project outlay

82 Lakh (CAPEX), 12 Lakh (OPEX) each year  
Total= 8 Yrs =96.00 Lakhs

### Implemented / Executed

Telemedicine over wheel for Rural community outreach programme

### Outcome of Project

Total 19363 patients benefitted.

## Establishment of Telemedicine Center at NTPC Hospitals located at Rihand & Meja

**Year Started :** June, 2019

**Year Completed :** Ongoing

### Funding / Collaborating Agency

National Thermal Power Corporation (NTPC) under CSR

### Project outlay

Rs. 49.90 Lakhs

### Implemented / Executed

Establishment of Telemedicine Health care center focusing on main aspects like telemedicine consultation & follow-ups, tele-education etc using Telemedicine kiosk

### Outcome of Project

1st Exp. Of deploying Telemedicine kiosk using Broad Band Total 283 patients benefitted

## Establishment of Telemedicine Hub at SGPGI under Ayushman Bharat-Health & Wellness Center (AB-HWC)

**Year Started :** May 2020

**Year Completed :** Ongoing

### Funding / Collaborating Agency

National Health Mission (NHM), Govt. of Uttar Pradesh

### Project outlay

Rs. 51.00 Lakhs

### Implemented / Executed

Creating Telemedicine HUB consisting a specialist team of doctor's providing consultation to all sub center and PHC through CDAC esanjeevani software.

### Outcome of Project

Total 10,8848 patients benefitted till date

## Establishment of Telemedicine Hub under Smart City Lucknow Limited, Govt. of U.P.

**Year Started :** February 2021

**Year Completed :** Yet to start

### Funding / Collaborating Agency

Lucknow Smart City Limited (LSCL), Govt. of Uttar Pradesh

### Project outlay

Sponsored by Smart City, Lucknow

### Implemented / Executed

Smart Health ATM center is to be opened across the city of Lucknow under Smart City and STBMI, SGPGI, Lucknow have been identified as HUB for supporting this initiative in terms of technical consultancy and facilitating doctors consultation (General & Specialist)



# STBMI 4 story Building





# Reception





# Telemedicine Hi Tech Lecture Theater





# Surgical Telepresence Suite





# Digital Operation Theater





# Dry Lab Operation Theater





# Dry Lab Discussion Room





# Project Management Unit





## Video Conferencing Suite - I





## Video Conferencing Suite - II





## Video Conferencing Suite - III





## Video Conferencing Suite - IV





# Clinical Decision Support System





# International Collaboration





# National Medical College Network





## National Medical College Network, Board Room





# Content Development Lab





# Studio for Education Content Development





# Library





# Data Center





# Data Center





# **School of Telemedicine and Biomedical Informatics**

Sanjay Gandhi Postgraduate Institute of Medical Sciences

Raebareli Road, Lucknow- 226014, Uttar Pradesh, INDIA



Ph. No. + 91 522 2668010, 2668777

Fax No. +91 522 2668951

Email: [sgpgitelemedicine@yahoo.com](mailto:sgpgitelemedicine@yahoo.com)

Website: [www.sgpgi-telemedicine.org](http://www.sgpgi-telemedicine.org)