

# HOSPITAL INTRODUCTION: CLINICS & TECHNOLOGY

University of Sumatera Utara,  
Haji Adam Malik Central General Hospital  
Medan

**dr. Imelda Rey, Sp.PD, dr. Leonardo Basa Dairy, Sp.PD-KGEH,  
dr. OK Yulizal, Sp.PD, dr. Taufik Sungkar, Sp.PD**



The Indonesian Society for  
Digestive Endoscopy (ISDE)



Universitas Indonesia



Cipto Mangunkusumo National  
General Hospital Jakarta



Telemedicine Development  
Center of Asia (TEMDEC)

# Outline

- Hospital profiles and its existing telemedicine set-up, activities and plans
  - introduction of clinics/surgery/endoscopy profiles, medical needs for telemedicine
  - Hospital Telemedicine resource: staff, internet, equipment set-up, experience, current problems

# Introduction of University of Sumatera Utara , Adam Malik General Hospital

- Place

Adam Malik Hospital was built in 21 Juli 1993

Address in Jalan Bunga Lau No. 17, Medan

This hospital is a teaching hospital Grade A



# Introduction of University of Sumatera Utara, Adam Malik Central General Hospital

- Human Resource (clinician in gastroentero hepatology)
  - Prof. Dr. Lukman Hakim Zain , SpPD-KGEH
  - Prof. Dr. Gontar Alamsyah Siregar, Sp.PD-KGEH
  - Dr. Mabel Sihombing ,Sp.PD-KGEH
  - Dr. Juwita Sembiring, Sp.PD-KGEH
  - Dr. Leonardo Basa Dairy, Sp.PD-KGEH
  - Dr, Masrul Lubis, SpPD-KGEH
  - Dr. Ilhamd, SpPD-KGEH
  - Dr. Taufik sungkar, Sp.PD
  - Dr. Imelda Rey, Sp.PD
  - Dr. OK .Yulizal Sp.PD (fellowship)
  - Dr. Dumawan Harris Parhusip, Sp.PD (fellowship)

# Introduction of University of Sumatera Utara , Adam Malik General Hospital

- Main or Flagship service

planned as a hospital for care for referral center in North Sumatera Province, with main service Cardiology intervention, Hemodialysis care, and in digestive tract , especially Gastrointestinal bleeding cases, by providing quality services such as abdominal ultrasound, endoscopy, ERCP, and colonoscopy

- Bed Occupancy

- Bed Occupancy rate in our hospital almost 100 %
- 600 beds

# Medical Needs for Telemedicine

- Existing telemedicine set-up and activities
  - At this time, telemedicine tools available in H.Adam Malik Hospital is still standard equipment such as wifi, laptop with camera.
  - In Gastroenterohepatology division , telemedicine activity ever undertaken directly 1 times with sources from Japan
- Future plans
  - Improving Telemedicine equipment and connection quality across all region of H.Adam Malik Hospital
- Expecting fields other than endoscopy/surgery, such as infection, dermatology, etc.
  - Liver transplantation
  - Radio frequency ablation
  - Therapeutic endoscopy such as stenting, dilation, ESD, EMR, EUS

# USG ROOM



# ERCP ROOM



OLYMPUS EVIS EXERA III

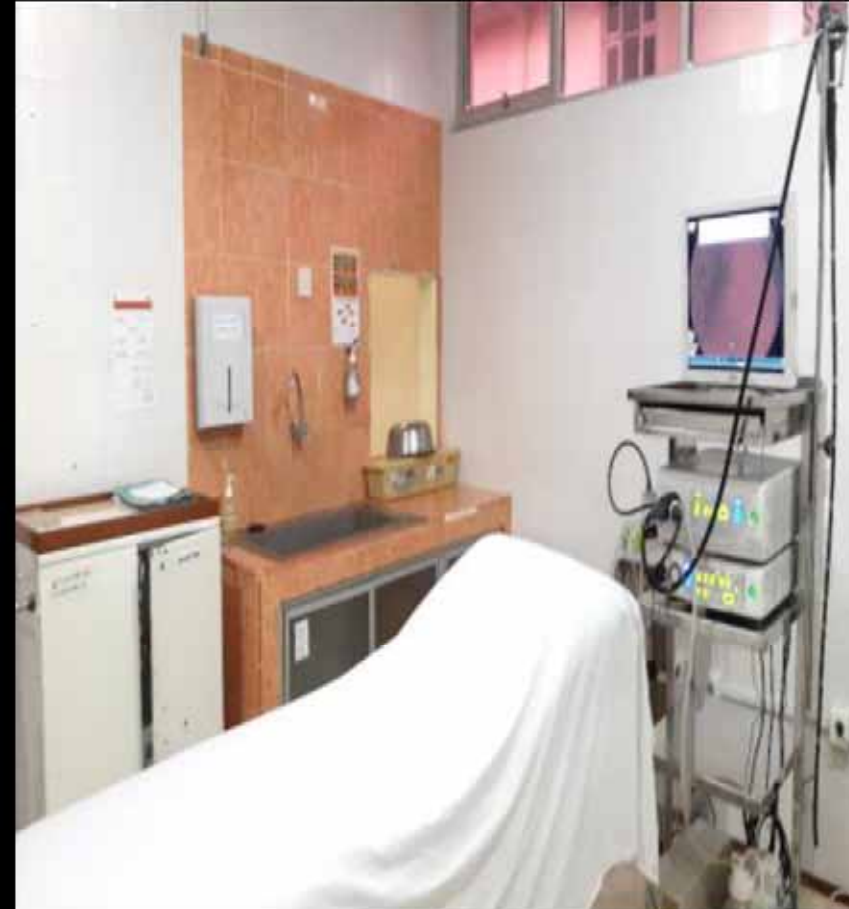


# FIBROSCAN ROOM



Echosens SN/N/30188

# GASTROSCOPY ROOM



# COLONOSCOPY ROOM



FUJINON EPX 4 450 HD



OLYMPUS EVIS EXERA III

# USG ABDOMEN



Medison Accuvix XG

# ERCP Tools



# Kolonoskopi Tools



Fujinon CDL 1909 A PV 490A 178

# Hospital Telemedicine Resource

## Key Persons

- Doctors (Division of Gastroenterology-Hepatology, Department of Internal Medicine, Faculty of Medicine, H Adam Malik Central General Hospital, University of Sumatera Utara)

1. Dr. Leonardo B Dairy, SpPD-KGEH
2. Dr. Imelda Rey, M.Ked (PD), SpPD



# Hospital Telemedicine Resource

## Key Persons

- Engineer (Division of Gastroenterology-Hepatology, Department of Internal Medicine, Faculty of Medicine, H Adam Malik Central General Hospital, University of Sumatera Utara)

1. Dr. OK. Yulizal, SpPD





# Hospital Telemedicine Resource

## Key Persons

- Coordinator (Division of Gastroenterology-Hepatology, Department of Internal Medicine, Faculty of Medicine, H Adam Malik Central General Hospital, University of Sumatera Utara)

1. Dr. Taufik Sungkar, M.Ked (PD), SpPD



# Hospital Telemedicine Resource

- Internet

- Broadband Wireless Access (15 Mhz) : BOLT! Super 4G LTE
- ADSL ; 1-100 mbps : Speedy ADSL (Telkom Indonesia)

- Equipment

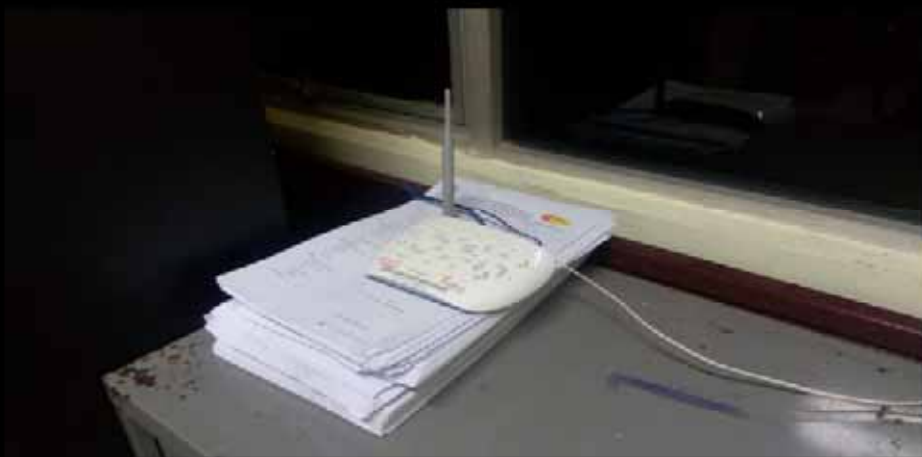
- Teleconference room
- Teleconference devices (hardware i.e. POLYCOM or software i.e. VIDYO or SKYPE )

- Experience

- First teleconference with Division of Gastroenterology University of Indonesia, University of

Kyushu and others on 12 Aug 2015

# TELECONFERENCE ROOM



## TELECONFERENCE DEVICES



BOLT! SUPER 4G LTE



TELKOM SPEEDY ADSL  
WITH ROUTER



SOFTWARE :

# Hospital Telemedicine Resource

## CURRENT PROBLEM

### Persons

- Lack of expert IT persons

### Network and Telecommunication Infrastructure

- Low bandwidth
  - Longer time for data transfer
  - Poor video quality
  - Unstable data transfer
- Still no minimum standard of telemedicine hardware : processor/memory, interfaces, peripheral, clinical devices, video conferencing units, communication network, satellite
- Still no fix and standardization of software

# Hospital Telemedicine Resource

## EXPECTATION

### Persons and Events

- Education and training in telemedicine regularly
- Events of telemedicine regularly

### Network and Telecommunication Infrastructure

- Standard of bandwidth, ISP and Satellite
- Standardization of telemedicine hardware : processor/memory, interfaces, peripheral, clinical devices, video conferencing units
- Fix and standardization of software

Thank you