

# Mongolia in Brief

Capital:

**Ulaanbaatar**

Language:

**Mongolian**

Land:

**1 564 116 km<sup>2</sup> (19th)**

People:

**2 646 000**

Main industries:

**Agriculture, Natural resource**



Flag



Coat of Arms





# Telemedicine support on Maternal and Newborn Health in remote provinces of Mongolia

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# Background

## Telemedicine is:

- An application of modern technology and T-communications
- Dissemination of knowledge and experience
- Continuous education for medical personnel

# Background

- Telemedicine support on Maternal and Newborn Health in remote provinces of Mongolia
- Established maternal and newborn health telemedicine network
- Maternal and Child Health Research Centre and 8 provinces

## Aim was to assess:

- Improvement the quality of maternal and newborn services for the rural population
- Strengthening capacity building of medical professionals

# Design and methodology

## The data were collected through:

Document reviews

Interviews UNFPA staff, 82 specialists interviewed from 8 project sites, Maternal Child Health Research Centre, National Oncology Centre

## The data were analyzed:

Using qualitative and quantitative methods

# Implementation

- Telemedicine Networking between rural and urban health facilities
- Equipment installation at MCHRC as reference hospital and provided by 38 types of modern medical equipments
- This was an essential part of networking at the central site in order to provide clinical consultations, discuss and exchange expertise of clinical cases and images transferred from local hospitals



# Implementation

- Established 4 aspects of clinical networking between reference and rural hospitals
  - ✓ prenatal diagnostic ultrasound
  - ✓ high risk antenatal care
  - ✓ fetal monitoring
  - ✓ colposcopy based cervical screening
- Networking ensured
  - ✓ early diagnosis
  - ✓ integrity of delivering obstetric and neonatal care services

# Prenatal diagnostic ultrasound network

- Devoted to rationale judgments of clinical case images received from local hospitals and diagnosed by Ultrasound diagnostic equipment
- 55 cases in 2009 and 10 cases in the second quarter of 2010 were also verified congenital fetal abnormality
- % of ultrasound images to suspect congenital fetal malformation transferred by local hospitals was accounted for 30.9% of total consulted clinical cases

# High risk antenatal care network

- Online and offline consultation in high risk antenatal care for patients with pregnancy associated disorders
- Telemedicine network system enabled to make clinical case management in 31 patients with pregnancy associated morbidity in 2008 and the number of cases consulted increased to 112 in 2009 from 18 cases managed in 2010, respectively
- % of cases on high risk antenatal care management received from local hospitals was accounted for 69.1% of total consulted clinical cases

# Cardiotocography (CTG) based fetal monitoring network

- An electronic method of simultaneously recording fetal heart rate (FHR), fetal movements and uterine contractions to identify the presence of fetal hypoxia
- However, only the few cases of ante partum fetal assessment consulted
- Poor knowledge and skills in the interpretation of CTGs and disagreement about appropriate interventions

# Colposcopy based cervical screening network

- Digital colposcopy is a promising technology for the detection of cervical intraepithelial neoplasia
- This network was not only operated within the reference and local hospitals, but it has expanded to connection of Tele pathology networking on Pap smear screening at the National Cancer Centre
- Colposcopy based cervical screening network has fully been offered a great opportunity to early detect precancerous cervical pathology
- % of cervical cases consulted was accounted for 13.3% from the total gynecological cases

# Results

In total, 714 cases were group discussed on a Web based iPath software platform, out of which:

64.2% of consulted cases were obstetric disorders  
21.7% were gynecological cases and  
4.7% were neonatal cases

% of the locally managed cases out of the total consulted cases was accounted for 43,7%

% of referred cases to upper level of care in Ulaanbaatar city was accounted for 14.1%

# Clinical effectiveness

- Maternal and Neonatal mortality rates, complications of pregnancy, child birth and postpartum period and referral rates were showing a trend to decrease
- Additionally, the early antenatal care and quality and accessibility improved due to upgrading of equipment, distance consultation and training of related professionals

# Conclusions

- Well organized system for exchange of medical information and knowledge played a key role in:
  - ✓ improving the quality of maternal and child healthcare services
  - ✓ providing continuous education for the medical personnel working at hospitals in remote areas
- increased clinical judgement of local service providers for patient management
- The initiative has contributed to develop E-Health strategy approved by Minister's order # 450 dated on 31 December, 2009





**Thank you for  
your attention**