Mongolian Emergency Service
Hospital Hygiene Project
MeshHp.mn

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Report of the 7th visit to Ulaanbaatar 5 – 12 May, 2012

A German delegation visited UB from 5 to 12 May, 2012.

Participants

- Mr Reinhard Paß, Mayor of the city of Essen (May 5 – 9)
- Mr Thomas Lembeck, Vice director of Fire Brigade of Essen (May 5 – 12)
- Prof Walter Popp, Head of MeshHp project (May 5 – 16)
- Mr Jörg Spors, Chief hygienist of Fire Brigade of Essen (May 5 – 12)
- Mr Markus Braun, President of German Healthcare Export Group (May 10 – 12)
- Prof. Eckhard Nagel, Medical Director of University Clinics of Essen (May 7 – 10)
- Dr. Birgit Ross, Hospital Hygiene, University Clinics of Essen (May 5 – 12)
- Mrs Angelika Köster, German MoH (May 7 – 12)
- Mrs Galina Manthei, German MoH (May 7 – 12)
- Mr Friedhelm Wagner, Ministry of Economy, State North Rhine-Westfalia (May 5 – 12)
- Mr Peter Lindner, MMM company (May 9 – 13).

The group was accompanied by the embassy of Germany:
- Mr Peter Schaller, Ambassador
- Mr Klaus Wendelberger, Vice Ambassador
- Mr Patrick Kreuz

Meetings

Meeting at the embassy of Germany with Ambassador Peter Schaller.

Meeting with Mayor of City Ulaanbaatar, Mr G. Munkhbaatar, and signing of a cooperating treaty of the cities of Ulaanbaatar and Essen. The main areas of cooperation will be healthcare sector and emergency services.

Agreement between the cities of Essen and Ulaanbaatar on Cooperation in the field of Health Care

Mindful of the spirit of partnership and friendly relations existing between the Federal Republic of Germany and Mongolia, most recently manifested in the "Joint declaration on the comprehensive partnership between Mongolia and the Federal Republic of Germany" dated 5 September 2008, the cities of Essen and Ulaanbaatar hereby conclude the following Agreement.

Article 1
Cooperation between the Cities
The two cities agree to continue their current cooperation in the field of health care and to support it at the administrative level.

Article 2
Scope
The partnership will be effectuated through joint projects by various city institutions and by other institutions located within the cities and will cover the fields of health care and emergency services.

Article 3
Expenses of cooperation
In order to guarantee a partnership of equals, the expenses incurred by visitors staying in either city (board and lodging) shall be borne by the respective hosting city. It is however the aim of the two cities to jointly find sponsors.

Article 4
Validity
This agreement shall be concluded for a period of 5 years. It will be automatically extended for a further 5 years if it is not terminated in writing by either side 6 months before the end of any such 5 year period.

Done at Ulan Bator on 7 May 2012 in duplicate in the German, Mongolian and English languages, all three texts being authentic. In case of divergent interpretations of the German and Mongolian texts, the English text shall prevail.

For the City of Ulaanbaatar

Mayor of Ulaanbaatar
Munkhbayar

For the City of Essen

Mayor of Essen
Paß

Visit to the National Central Hospital No 1, partner of MeshHp project.

Meeting with the Mongolian Minister of Health, Mr N. Khurelbaatar. Within this meeting Prof. Nagel announced that support might be given in blood bank development and postgraduate training courses.

Visit to Emergency Medical Service Center, partner of MeshHp project.

Visit to Chingeltei District hospital, partner of MeshHp project.

Reception at the German embassy.

Meeting with Prof. Ts. Lhagvasuren, dean of Health Science University of Mongolia. Also in this meeting, Prof. Nagel hinted to possible cooperation in blood bank development and postgraduate training courses.

Meeting with Dr. S. Tuul, head of Health Department of the City of Ulaanbaatar. Mr Kreuz was presented with a medal as good healthcare worker of Ulaanbaatar because of his extraordinary work for MeshHp project.

Meeting with Mr C. Bodart, Senior Health Expert of Asian Development Bank (ADB). It will be considered whether German MoH will be partner in the Fifth Health Sector Development Project of ADB.

Meeting with representatives of Monos company (pharmaceutical production). Dr. Walter had a second visit to the Monos School of Pharmacy and old production area later in the week.

Meeting with Mr D. Terbishdagva, head of German-Mongolian group of Members of Parliament. Dr. Walter might have some visits during next stay to family pracitioners and hospitals in the ger district for which Mr Tserbisdagva is in Parliament.

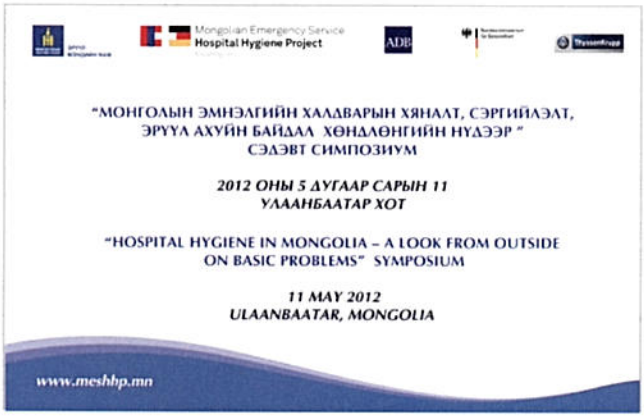
Visit to National Central Hospital No 2, partner of MeshHp project.

Meeting with members of Mongolisch-Deutsche Brücke (MDB), Alumnis. Problems of Mongolian doctors are approval as medical doctor in Germany and transport of human tissues to Germany for research. This might be addressed during the next consultations of both ministries.

Meeting with Mrs. M. Dagva and Mr Yves Mathieu, Lux Dev project, in Shastin Hospital. Topics were construction plan of operating area (therefore second meeting of Dr. Walter and both of them took place) and training of staff in the near future.

Besides that, some of the participants had additional business meetings on their own interests.

Symposium on May 11



Initiated and co-organized by the MeshHp group, the first Symposium "Hospital hygiene in Mongolia took place in the Mongolian MoH on May 11. It was opened by Viceminister Mrs. J. Tsolmon, Mr K. Wendelberger (German embassy) and Mrs. A. Köster (German MoH). It was attended by 150 participants, mainly from Ulaanbaatar, but also from different aimags.
Mr Kreuz was presented with another medal from the MoH because of his extraordinary work for MeshHp project.

Symposium: Hospital Hygiene in Mongolia – a look from outside on basic problems

Date: 11 May, 2012

Venue: MOH Conference Hall

Participants: Epidemiologist, Hygienists, Quality managers from Central Hospital, Second Hospital, Shastin Hospital, District and Private hospitals

Total participants: 150

Agenda

Time	Activity / Presentations	Name/Responsible
08.30	**Registration**	Union of Hygienist
09.00	Opening speech	Vice minister, Ambassador
	Group photo	
09.30	*Background of Meshh project*	Dr.Ulambayar, Chingeltei Distrcit Hospital, Coordinator of Meshh project
09.45	*Hospital hygiene in Mongolia – a look from outside on basic problems*	Prof.Walter Popp, Essen University Clinic, Germany
10.30	*Implementation of Meshh project at the Central Hospital*	Dr.Myadagmaa, National Central Hospital
11.00	**Coffee break**	
11.15	Implementation of Meshh project at Chingeltei District Hospital	Dr.Ulambayar, Chingeltei District Hospital
11.30	Introduction of Meshh project website	Ms.Khandaa, Meshh project webmaster
11.45	*Preoperative prophylaxis. Antibiotics policy*	Dr.Birgit Ross, Essen University Clinic, Germany
13.00	**Lunch**	
14.00	*View on basic problems in emergency service*	Mr.Jorg Spors, Firebrigade, Essen,Germany
15.00	*Implementation of Meshh project at the State Emergency Center*	Dr.Ariunbold, Vice Director , State Emergency Center
15.30	Lessons to be learn, wrap up	Dr.Tsolmon, NCCD, Head of Hygienists Union
16.00	**Closure**	

Parallel activities within the MeshHp project

Dr. Birgit Ross did not attend the official delegation and worked in the project.

HIV in Mongolia

According to talks in the National Center for Infectious Diseases, the situation seems as following:
Official data report 109 HIV positive persons in Mongolia, 80 % or them male.
Men having sex with men are the most affected group. There are three NGOs caring about HIV/MSM.
Global fund estimates more HIV infected persons (> 500) due to the high prevalence in Russia and China. In the last months, lots of migrant workers from these countries came to Mongolia because of mining development. Migrant workers are known to be a risk population for carrying STIs.
All antiretrovirals are available. Doctors caring for HIV patients choose a specific therapy and get the drugs from Global Fund. The most important laboratory examinations (CD4 cells, Viral load) are conducted by Global Fund.
The knowledge about specific therapy is very poor, due to the lack of experience with the disease. MoH insists on following the local guidelines in every case. This is sometimes difficult because the guidelines recording to HIV are from Africa and do not always meet the local problems.
Many (17/109) patients have open lung TB. They are treated with 3 fold (4 fold) antimycobacterial therapy as INH, RMP, PZA, EMB. The doctors have many experience with open lung TB, it is the most common disease in the National Center of Infectious Diseases. Nearly all of the HIV positive people are coinfected with hepatitis B or C, lots of them have syphilis.
In UB, in last years the doctors took care of 6 pregnant women with HIV. No mother to child transmission was observed, but there is no knowledge about the principles of treatment.
The clinic is asked to take part in a campaign "100 % condom use" which they think not to be realistic. This might be true.

Further Ideas:
A doctor from Germany who is experienced in treating HIV should work with them one week and explain the principles of ARV.
The costs might be taken by DAAD or Global Fund, further information will be given by Dr. Birgit. Dr. Birgit promised support by email (not part of MeshHp project).

Visit Hospital No 1, 2 days

Hospital No 1 has about 500 beds; there are about 200,000 outpatients a year, predominantly from the countryside. Patients from Ulaanbaatar are provided in Hospital No 2.

ICU (internal/mixed)
9 beds, 6 ICU, 3 emergency room.
Ventilators: Evita 3 Ventilators (Dräger), as used in Germany about 15 years ago, one per bed.

If patients are ventilated, they have their own nurse (patient – stuff ratio 1 : 1 in ventilated patients in every shift). 4 doctors care for 9 patients (including emergency room).
Mortality on ICU was 30 % in the last month (April), usually mortality is about 10 %.
Empirical antibiotic therapy is always given with Cefotaxime and sometimes Metronidazole, duration usually 7 days.

Patient characteristics:

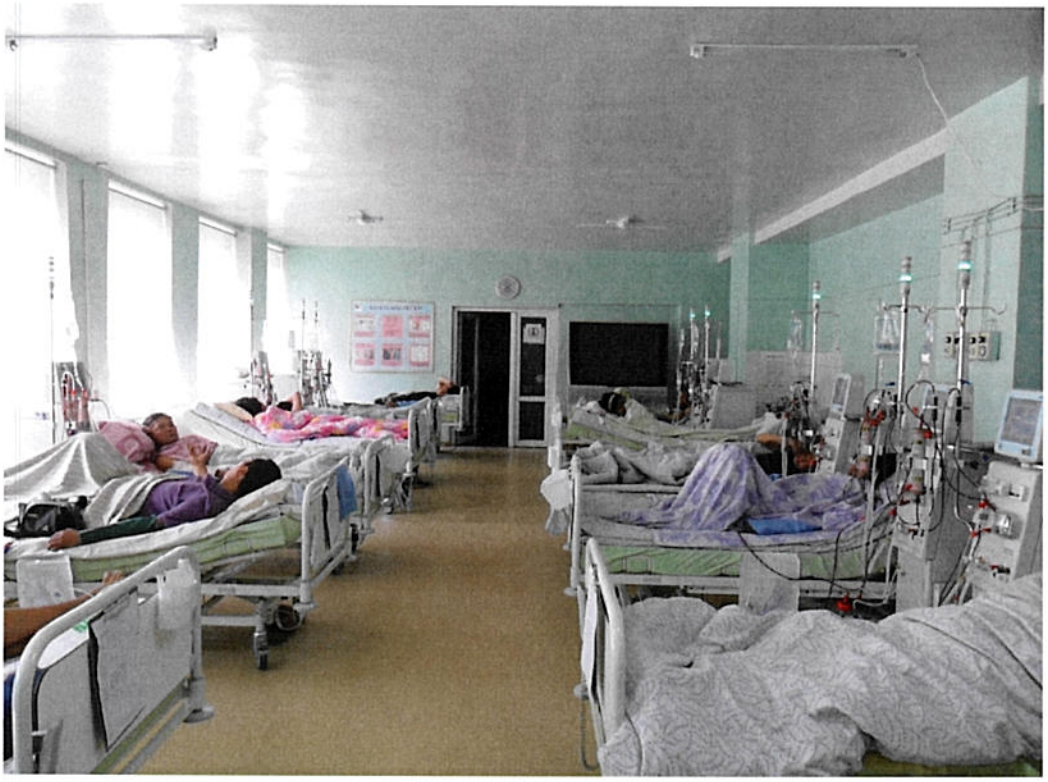
1. 40 years old male patient with Guillan-Barre-Syndrom, received plasmapheresis. Ventilated since 45 days. Plasmapheresis machine was carried to the ICU from a private hospital including fresh frozen plasma derivates (about 40 are used for one procedure).
2. 50 years old male patient, dyspnea and fever; X-ray was performed and shows a big infiltration of the upper lobe strongly suspected to be tuberculosis. I ask for isolation and am told that people like him are on the ICU two times a week, there is no possibility for isolation. A consultant of the National Research Center for Infectious Diseases is expected this afternoon, perhaps he will take the patient to the NCID.
3. 78 years old female patient with perforation of colon transversum, sepsis, ventilated by Evita 3 (SIMV). Antibiotic treatment with cefuroxime. Circulation is forced by dopamine given by perfusor.
4. 29 years old male patient with alcohol intoxication, AST 5000 U/l , ALT 12.000 U/l, Bili x 2, coagulation unknown. Alcohol intoxication is told to be a common problem in Mongolia, but ALT is the highest they saw on this ICU in the past years. It is not clear whether the patient will survive, he is there since two days.
5. Old patient (about 70) with chronic alcohol intoxication and dementia, he is undergoing dialysis on ICU. This must be paid by his family. The family paid as well for computer tomography and gastroscopy (gastroscopy eg about 15 €).
6. 26 years old female patient with right heart cardiac insufficiency due to chronic pulmonary disease. X-ray shows a big heart and an infiltration of the upper right lobe. Whether or not tuberculosis, cannot really be clarified. She is not treated with specific medication for pulmonary hypertension.
7. Old patient (about 70) with stroke has a bed in a single room, supervised by his son. This room is provided for patients with infectious diseases, but now he stays in this room because there is no bed on the neurological ward.

Gastroenterological ward (about 40 beds)
More than 80 % of the patients are in the hospital because of end stage liver disease (ascites, esophageal varices, encephalopathia, etc.) Most of them are carriers of hepatitis B or C ("fifty-fifty"). Less than 10 % of the hepatitis B infected patients are coinfected with hepatitis D virus. Not everybody is examined for Hepatitis D.
Obviously genotyping of hepatitis C is not performed.
The stuff has doubts about quality of results of laboratory.
Many patients have alcohol problems which intensifies their liver problems. Patients with cancer (most common: hepatocellular carcinoma) are transferred immediately to National Cancer Center.
Lamivudine, a nucleosid analogon for the treatment of hepatitis B, is available in Mongolia but only prescribed by private doctors. The price is said to be about 40 € per month. The hospital has no lamivudine.
Treatment of hepatitis C with ribavirine/interferone for Mongolians is performed in foreign countries, e g Bulgaria, it is not paid by the health assurance.

In case of infectious complications such as peritonitis cefotaxime is the most common antibiotic, in cases of severe gastroenteritis metronidazole is used.
Patients with liver cirrhosis and kidney damage have no chance to be dialyzed because of their poor prognosis.

Cardiologie (about 40 beds)
Most common diseases: Arteriosclerosis, coronary heart disease, as expected.
Medication is similar to the medication used in Western countries such as ASS, beta-blockers, nitrates, ACE-blockers.
Antibiotic therapy is described to be performed in myocarditis and endocarditis, most common antibiotic is cefotaxime.

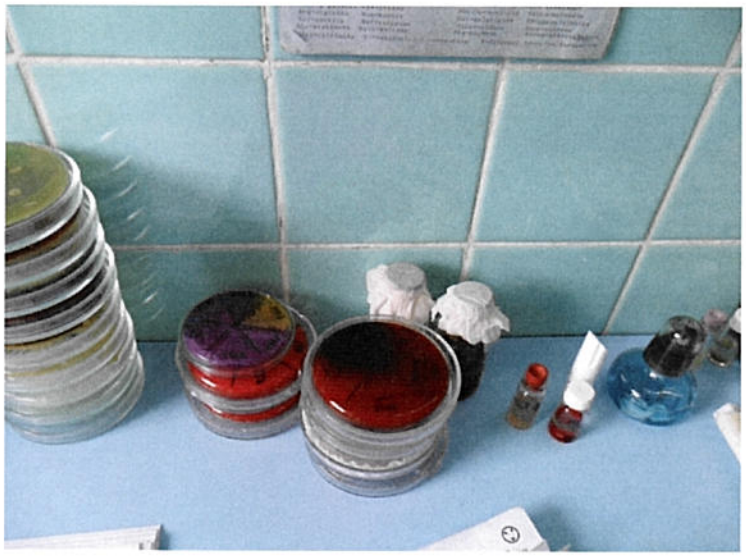
Hemodialysis



Hospital No 1 has 28 dialysis machines. Manufacturer: Fresenius (German), Nipro (Japanese), Doreson (Chinese)
About 170 patients are dialyzed in Hospital No 1, 70 % because of glomerulonephritis. This diagnosis is not proven because kidney punctures are rare. The second most reason of end stage kidney disease is diabetes mellitus. The average age of patients is 40 years. Only 8 of 170 patients are not carriers of Hepatitis B or C.
Peritoneal dialysis will start within the next months.
Dialysis is performed 4 hours 3 times a week in three shifts from 6 am to 11 pm. Only a few patients are dialyzed two times a week. The need of dialysis is much higher, so a second dialysis unit has been established in hospital No 2.
The staff has a special education in dialysis for 3 (6) months.
The water installations/osmosis consists partly from Fresenius, partly from NIPRO. 4 technicians take care of the installations and the machines, they had trainings in

Germany and Japan. Doreson provides direct support in UB, Fresenius and NIPRO give backup via phone/email in case of problems.
Water installations are cleaned with formalin once a month.

Microbiological laboratory



Mikrobiologic Laboratory of Hospital No 1 has different rooms with specific equipment (centrifuges, incubators, etc.) . The rooms look clean and well organized. The daily number of probes is described as "lower as hundred".
A carefully filled laboratory book shows the result of every testing. Tests for MRSA are performed with all Staphylococci aurei isolates; in 2011, 70 Staph. au. were found, 11 of them were MRSA (~15 %). During the years before the number of MRSA was lower (2009: 6, 2010: 7). There is no information of VRE or ESBL.
Antibiotic testing is performed with special test kits.

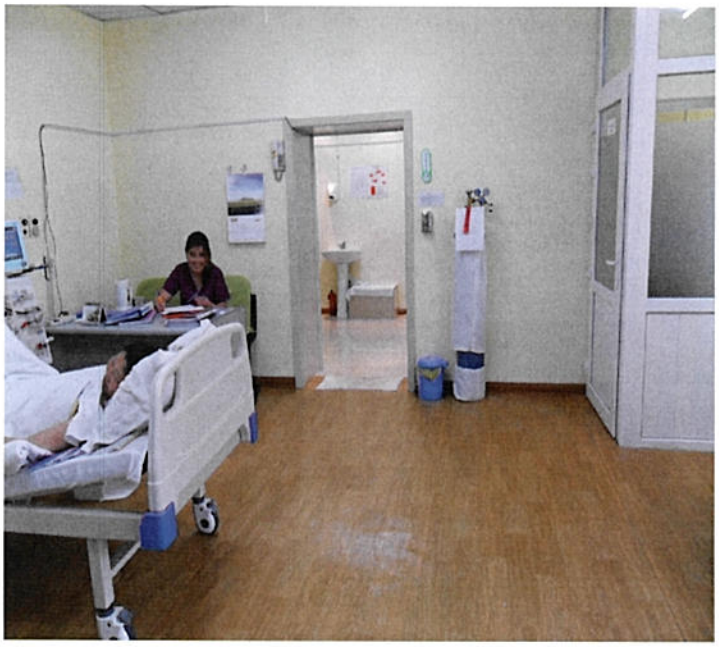
Hospital No 2, Dialysis unit

4 beds with 4 machines (3 NIPRO surdial 55, Japanese, 1 Doreson, Chinese).
At the moment dialysis of 8 patients in 2 shifts, every morning (Monday – Saturday).
Patients with grafts (=shunt) wash their forearms with soap (no liquid soap) and dry with cloth towel. Paper towels are not available, alcoholic handrub is not available as well.
Patient characteristics:

1. polycystic kidney disease
2. urämic acid kidney
3. diabetic nephropathy
4. a young girl (24 J) with attempted suicide by acid, chemical burn of the whole gastrointestinal and (acute?) kidney damage since 8 weeks. She stays in a hospital outside and is carried to hospital No 2 for dialysis 3 times a week. The dialysis is not covered by the assurance, the treatment must be paid by the family.

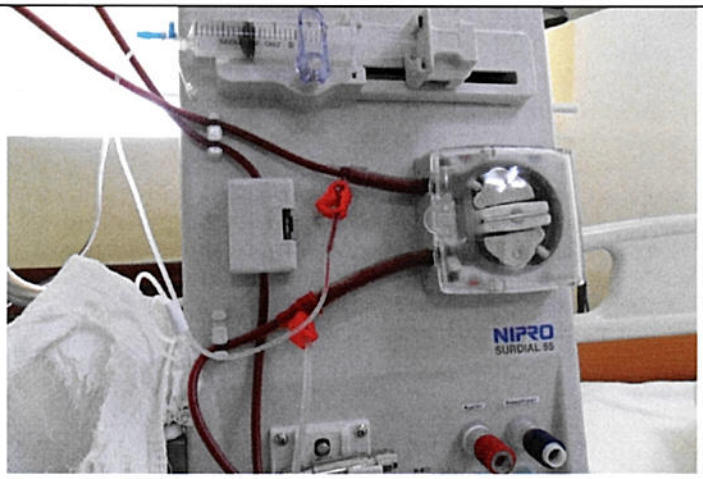
Two of the patient have grafts (= shunt) on the forearm, two patients have Shaldon catheters, one V. subclavia (the young girl) and one V. femoralis.
Shaldon catheters are treated with nonsterile gloves and without surgical mask by using sterile instruments. Disinfection with iodine is performed properly.

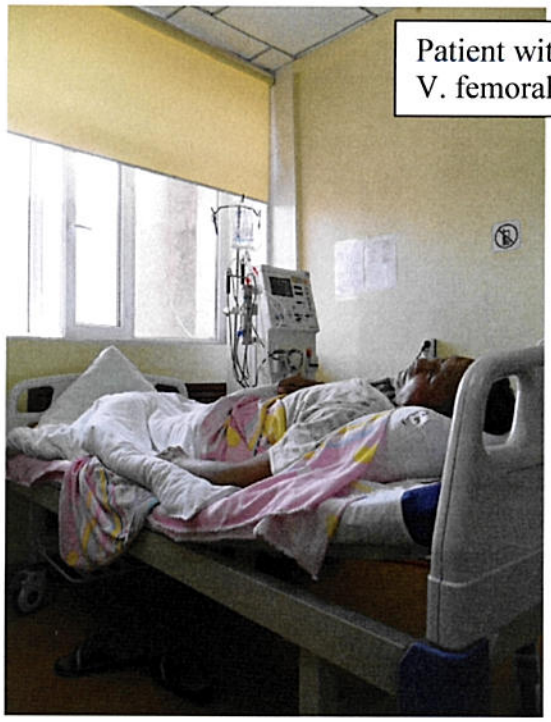
I am told, that Vena femoralis is a preferred location for Shaldon catheters. One of the patients has his femoral catheter since 8 weeks without infections. He did not leave his bed for this time because of the catheter.
All dialysis is performed by double needle procedure. Dialyse membranes and the lines are single used.
After the dialysis the machines are cleaned with acid (lemon acid ?). There is no litmus paper available to perform pH testing. Heating of the machines is not possible.
The osmosis works in the same way as the osmosis in hospital No 1. The dialysis technicians from hospital No 1 take care of the osmosis. It is cleaned with formaline once a month. Testing of bacteria and endotoxin (method really working?) is performed once a month by the technician.



Overview of the dialysis unit in Hospital no 2. The room at the left side is the technics room with the osmosis machine.

NIPRO machine with one pump for hemodialysis; heparine syringe; no pressure transducers at all machines





Patient with Shaldon catheter in V. femoralis undergoing dialysis

Presentations

Dr. Birgit gave the following presentations:

Date	Location	Title	Duration	Participants
May 8	Hospital No 2	Hemodialysis	45 min	20
		CPR training (also with Mr Jörg)	80 min	50
May 9	Hospital No 2	Perioperative prophylaxis in surgery	45 min	30
May 10	Hospital No 1	Perioperative prophylaxis in surgery	45 min	20
May 10	National Research Center for Infectious Diseases	Training on MTCT (Mother to child transmission) prophylaxis, principals of antiretroviral therapy	80 min	6

Emergency Service 103:

During the next visits the following activities should be promoted:

- Further training for the drivers (paramedics)
- Hygiene Training for emergency doctors and nurses
- Control of quality of hygiene standards
- Develop specific hygiene regulations for ambulance services
- Improve reprocessing of instruments
- Urgently needed equipment for medical treatment and hygiene has to be bought
- Preparing a textbook of paramedic training and hygiene in ambulances in Mongolian language

- Intensivied emergency medical training for emergency doctors
- Implement alcoholic handrub on all ambulances!!!
- More internships in Germany (practical training, special training for trainers)

Visit of 2 soum hospitals on May 12

Dr. Walter visited two soum hospitals on May 12, together with Dr. Lkhajii and Ms Khandaa.

Basics: Mongolia has 21 aimags and 365 soums.

The first visit was to Erden soum:
The hospital cares for 1,126 families and 3,785 people. There is 160,000 lifestock and 803,000 hectar of area. 4.3 % of the land is settled, the rest is taiga.
There are 5 governmental institutions, 2 schools, 2 Kindergarten. Agriculture is the main income, also some from tourism.
The soum hospital has 4 parts/bugs. It has 6 beds and 24 staff members: 2 doctors, 4 assistant doctors (no doctors, each working in one bug, doing most of all primary care. They call the doctors if needed). The assistants have no transportation, but will get bikes from June on.
Head is a pediatrics.
There are 4,000 outpatients a year, 5,000 patients from outside for prophylaxis, 320 inpatients.
There are nearly no house births. Pregnant women are getting inpatients 14 days before delivery. There are 20 births a year, a lot of births are given in other hospitals including UB.

Delivery room

Container with sterile instruments

Box with drugs for driving to families

Hospital on the right

The distance to the families to care for is maximum 120 km, 3 hours.
There is a nurse and janitor in hospital during night.
The steriliser could not be seen as the door was locked and no key available.
Small wound surgery is done, every patient gets Ciprofloxacin for 5 days in that case.

The second visit was to Bayandelger soum:
The hospital is responsible for 1,300 people. 210,000 hectar. The hospital has 6 beds, 1 doctor, 4 assistant doctors, 4 cars (from a German project).
There are 416 children, 1 school (9 years), 116,000 lifestock.
A coal mining city is 20 km away and a lot of people go there for healthcare.
2 births a year in the hospital, 600 outpatients, 250 inpatients.
Waste is burned outside.
Not every surgery patient (small wounds) is getting Ciprofloxacin.

Front side of hospital

Back side

	
Medical waste incinerator	Emergency room

Next visits

Next visit to Germany

A Mongolian group will come to Essen from (presumably) June 15 to 24, 2012. The group will be 10 people and will consist of staff from National Central Hospital No 2, Chingeltej District Hospital, Emergency Medical Service Center and Union of Hygienists.

Next visit to UB

Dr. Walter and Mr Jörg, presumably with Dr. Roßburg (microbiologist), will come to UB from September 26 (arrival) until October 3 (departure).
Dr. Walter will give a presentation about hospital construction.
Laboratories will be visited by Dr. Roßburg

Walter Popp, 24 May, 2012