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Report of the visit to Ulaanbaatar 7 – 16 September, 2019

Participant:
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Christine Schoppe, St. Elisabeth Gruppe Herne
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Jörg Spors, Firebrigade Essen
Michael Rossburg, MVZ Dr. Eberhard, Dortmund
Annette Simonis, Charite, Berlin

This was the fifth visit in the project (2018-2020) **"Primär- und Sekundärprävention sowie aufsuchende Prävention bei Hepatitis B/C und Tuberkulose in der Mongolei" („Primary and seconday prevention as well as visiting prevention of hepatitis B/C and tuberculosis in Mongolia"**) funded by German Ministry of Health.
The project includes visits and interviews in different hospitals and health care units in Ulaabaatar as well as 4 aimag center hospitals and different sum hospitals.
Detailed results of these will be given in a separate report, presumably in the first half of 2020.
So within this report we mainly mention important results and informations out of the project topics.

At the end, you will also find the report of Jörg Spors about his work at Emergency Service Center 103 and the report of Michael Rossburg about his visit to the lab.

Hospitals

On 10 September we drove to **Dalanzadgad**, center of Southgobi aimag.

There we visited the **aimag center hospital** and met Mrs Duumaam (responsible for infectious diseases in city health department and active in MNA - Mongolian Nurses Association -) and director of hospital Dr Boldbaatar.
The old inpatients hospital was renovated because Oyu Tolgoi wants better standards for their workers (270 km away, going by flight). Also they built very new outpatient area. We saw the new outpatient area:

Basically hygiene at sinks is very different. Some have dispensers with fluid soap, paper towels and disinfectant, some have only soap and textile towels. There should be a similar standard for all sinks (disinfectant, fluid soap, paper towels).

In dentist unit, there are 3 stools. Hand pieces are wrapped with plastic outside for each patient, but no cleaning of channels. Dr Simonis will make separate report.

In endoscopy, they do gastroscopy and coloscopy. Biopsy tongs, polypectomy loops and syringes (to stop bleeding) are single-use.
Endoscopes are reprocessed manually and then in half automate with Sekusept cleaner and disinfectant. For manual reprocessing they have 3 big sinks with cleaner, disinfectant and water.
Rinsing of channels during endoscopy has to be done with syringe. Drying is done with 70 % ethanol.
No hand disinfectant seen in the unit!

There are new posters when to use hand disinfectant and what jewelry is not allowed – quite good.

Then we went to CSSD which is part of Health V. The head there was complaining a lot: Health V installation is still not ready. She has had 2 days training in Hospital No 2 in UB some time ago when she did not have any new equipment.
Nearly every of the new doors are stucking.
They got 1 washer disinfector and 2 autoclaves. So they have too many autoclaves or not enough washer disinfectors and the last one will stop the process. Washer disinfector is going through, autoclaves not. After some trial washer disinfector was going in error modus and until now no one came to have a look and help.
There is one plasma sterilizer and one new ethylene oxide (EO) sterilizer with a bottle.

EO is forbidden in Mongolia! How can a project under MoH deliver an EO sterilizer which is not allowed by the same ministry?
It should not be used because it is too dangerous. Also they have a plasma sterilizer for the same thermolabile products.
Usually they get a drying oven in Health V, it is missing.
They got 3 sinks and 2 tables nobody knows what they are for. Also there is an ultrasound sink.
In some rooms are cooling units, in others not.

In infectious ward, there are five beds. As everywhere, open tb is inpatient for 56 days at least, some more months therapy after that at home. They get masks only from Global Fund and they were said that they can use them for 40 hours. Also they use the sacks for masks which we already saw elsewhere.

Single use gowns are used until "they are dirty". Salary is 30 % higher as usual. 40 % are positive in testing but all got BCG vaccination. So testing may deliver positive result also because of BCG vaccination.
Also children today get BCG vaccination in first 24 hours.

Lab is also part of Health V. See Michael´s report below.

Also we visited **Hanhongor sum hospital**:
We talked with director, epidemologist and different further people.
The sum has 1,900 people. The hospital has 19 workers and 5 beds. At the moment 1 patient is inpatient with a rip fracture by car accident. They divided the sum in 4 bags. For each bag a doctor is driving to the families. Also they make meetings in the sum center and then they make some medical activities, teaching, taking blood for screening and so on.
The workers are vaccinated against hepatitis B with 3 shots. No antibodies measured until now.
In the 19 workers are 2 carriers of hep B (10 %) and 3 for hep C (16 %). For last ones the titers were measured and too low for therapy. They are under control.
Hepatitis screening: 1,500 should have been screened, but only 1,100 were screened. Over 100 were positive for hep B (> 9 %) and over 100 for hep C (> 9 %).
All positives go to aimag center.

Symposium

In Southgobi aimag center hospital we had a symposium with 120 participants, organized together with MNA and the hospital:

Time	Topic	Name
10.00-10.10	Opening	Südgobi hospital director/Popp
10.10-10.30	BMG project introduction	Walter Popp
10.30-11.10	Mikrobiology – statistics and multiresistent bacteria	Michael Roßburg
11.10-12.20	Hepatitis B/ C and Tbc	Heike Kamphusmann, Christine Schoppe
12.20-13.30	Photo, then lunch	
13.30-14.30	CSSD and endoscopy	Walter Popp
14.30-15.10	Reprocessing in dental medicine	Anette Simonis
15.10-15.40	Medclean LLC contribution in IPC	Suv-Erdene Tomorbaatar
15.40-16.10	Discussion	
16.10-16.20	Closing	Southgobi hospital director/Popp

Meetings

Peter Renzel – accompanied by all Germans - met **UB mayor Amarsaichan** and Dr Tumurbaatar, head of city health department. A closer cooperation is planned between both cities, starting with the project of Firebrigade Essen (see below – next steps).

Also we met the **new German ambassador Mr Rosenberg** and had a talk with him and deputy ambassador Dr. Fernau.

Social contacts

On the first weekend, we had nice trips outside UB, visiting Manzushir monastery and a herder family.

We had a nice dinner with the directors of Maternity hospitals 1 – 3.

In Southgobi, we had an invitation to the family of Odgerel who is working in MedClean company.

In Southgobi, we visited highlights like Eagles´ Canyon, Khongorin Els and Flaming Cliffs.

By chance, with Khongorin Els was a dune festival and Jörg participated in the dune run. He came on third place, running for UB Emergency Service 103, and was the only foreign runner.

Next steps

A **group of nurses** from **Mongolian nurses association** will come from 19 - 26 October, 2019, including

- Mrs Nyamsuren,
- 3 nurses,
- Dr Gantumur (translator). She will stay one week longer for training.

A **group of MeshHp nurses** will come to Germany from 11-18 January, 2020. Topic will be mainly education of nurses, also with regard to hepatitis and tb. Members will be

- each one nurse from Maternity hospitals No 1-3,
- one from Sukhbaatar district hospital
- one from Chingeltej district hospital,
- Dr. Gantumur for translation.

Walter Popp, Marina Lorsch and Adelheid Jones will go to UB from 1-8 February, 2020, to have a look for tattoo and beauty studios.

From 14-23 March, 2020, **15 firefighters from Essen** will go to UB together with Jörg and Walter to make training in Emergency Service Center 103 (see also report of Jörg at the end).

Dr Uyanga from hospital No 2 will come for training from 11 to 23 May, 2020.

Another trip to UB will be 5-13 June, 2020. Also Peter Renzel will join again and we will have 10 years anniversary symposium of MeshHp.

A **private trip** will be done in July 2020, organised by Dr Purevdash and Dr Gantumur, starting with Naadam, going to Kharkhorin, Erdene zuu, Arkhangai aimag and to the north. Prof Walter will organize the German participants.

Prof Walter, Jörg and others from Essen Fire Brigade and City Department are invited to **90 years anniversary of Emergency Center 103** on 20 October, 2020.

Walter Popp, 3 October, 2019

Jörg Spors
Fire Brigade Essen
Germany

Report of the visit to Ulaanbaatar (Emergency Medical Service 103 UB) 06 – 16 September, 2019

Participants:
Jörg Spors, Fire Brigade Essen
Prof.Dr.Walter Popp, HyKomed, Dortmund

This is the report about our working at the Emergency Medical Service 103 UB.
The focus of our work was to train the doctors, drivers (paramedics) and nurses of the Emergency Medical Service 103 UB and the exchange of experience in the sector of emergency services and the emergency medicine. Also we wanted to see, what changes have occurred for the Emergency Service in the last years?

Emergency Service 103:
The ambulance cars oft the Emergency Medical Service 103 are occupied by one emergency doctor and one nurse or one driver (paramedic). The rescue teams treat emergency patients and they also hold the responsibilities of family doctors in the primary care of patients at home. Per shift (24 hours) there are round about 20-25 emergency calls per ambulance car.
The ambulance cars are different equipped. So for example some ambulance cars are equipped with automated breathing systems (ventilators). But there is no realy a way to use it, because there is no equipment for intubation or breathing management on the cars. In the case of a cardiopulmonary resuscitation patients will not be intubated.
The ambulance cars are only equipped with two bandages and there are no tourniquets. The number oft he bandages must be increased (8-10)!
An extensive infusion therapy is not possible. They need more infusion-bottles on the ambulance cars.
There is a lack of comprehensive emergency equipment for the treatment of trauma patients. The transport of a traumatology patient to the hospital takes too long. There is not a call for an appointment in the traumatology hospital. There is not a functionell rescue chain of trauma. In the hospital there isn´t a trauma team in standby. To reduce the time, the emergency teams oft the ambulance cars could be call the hospital by handy for an appointment, when they started from the accident. So a team could wait in the hospital and you have reduced time (Golden hour of shock!).

Hygiene:
Disposable gloves were consistently used, that was very positive. For hand disinfection on the ambulance cars gauze bottles with alcoholic hand sanitizer are used. The ambulance cars are cleaned once a day according to the hygiene plan which was developed by us in cooperation with the Emergency Service 103 in 2012. In the emergency station are more 500 ml bottles with alcoholic hand santitizer. For the surface disinfection, chloramine is still used.
Daily desinfektion and cleaning of an ambulance car is realy implemented. They did the work very well.

Ambubags will be collected after using at the Emergency Service. The Ambubags will be desinfected outside in a hospital in UB.

This main topics were trained by Jörg Spors in the week from 09- 11, September, 2019:

- wound treatment and wound dressing
- trauma management
- Tourniquet
- surgical emergencies (ophthalmic emergencies, ear-nose and throat emergencies, electricity accidents)
- hygiene and quality management in the area of emergency services

The participants were also drivers (paramedics). There are a lot of new drivers, because the other changed in better payed jobs in other Lands.

There was also a daily meeting with the Chief of the Emergency Medical Service Mr. Purevdash for sharing and discussion about the Training and the Emergency Medical Service 103.

Also there was planed the Projekt in March 2020, when 18 German Paramedics will drive to Mongolia in a cooperation between UB, Stadt Essen and Engagement Global.

What needs to be changed acutely by the Emergency Medical Service 103?

- There must be more bandages on the vehicles (at least 8-10 bandages) and sterile compresses to the wound care and to stop life-threatening bleedings.

- There must be implemented a rescue chain of trauma. It`s very importend!

- For the trauma management a pelvic sling, a tournique and a cervical spine (like a Stifneck) are needed on every ambulance car.

- For the immobilization of fractures there is an easy to handle splint needed, like the SAM splint. The SAM Splint is lightweight, flexible, and requires only wrap or tape to provide the necessary strength to support any fractured or injured limb. An easy to handle splint is needed on every ambulance car.

- They need mobile suction devices, because the existing ones are too unwield.

- Reanimation requires more staff. In Germany for example, resuscitation involves a doctor and 3 paramedics on site (two ambulance cars are used). Thus, the patient can be cared for by a doctor and a paramedic during transport and the resuscitation can be optimally performed. Both vehicles go to the hospital.

- The remaining ambulance cars must be equipped with automated external defibrillators (AED).

- Material for securing the respiratory tract and for the ventilation management (such as laryngeal mask, intubation set, guedel tube) must be procured and loaded on the ambulance cars. The stuff must be trained intensively in the management of the respiratory system.

- Always ensure that every ambulance car have a water bottle (a fresh bottle still mineral water for example, because this water is not contaminated of course), to rinse the eyes of a patient in the case of an ophthalmic emergency like corrosive to the eye (contact with acids or alkalis).

Next steps:

- Further training of the staff (doctors, drivers (paramedics), nurses) (in 2020)

- Intensify the training of the staff

- Writing of a small paperback for paramedics and doctors

Jörg Spors 17 September, 2019

Visiting Laboratory: Microbiology – 2019 09 11 - Report Michael Roßburg

During our stay in the Aimag Center Hospital in Dalanzadgad, I had the opportunity to visit the recently renovated microbiological laboratory in an old adjoining building near the main hospital. The laboratory rooms were bright with new windows or large ceiling lamps. The doors, the walls, the floors - especially the sealing from floor to wall - and the infrastructure / electrical connections looked well-built. All rooms were labelled with security advices (biohazard) and near handwash-sinks one can find posters for handwashing and handdisinfection. Whereas the handwash-sink in the access-room to the Laboratory is equipped with paper towels, there were no paper towels available at any other sink in the examination rooms ! This should be upgraded.

In the laboratory there were an air conditioner and outlets of a ventilation installed – unfortunately I could not test, if climatisation and ventilation is working.

A member of the microbiology-team guided through the examination units, starting at the access-room of the laboratory. Here are stored some reagents (Vitek cards) and swabs (with media for outpatients / without media for inpatients).
It seems, that there is a sufficient quantity on stock with long lasting expiry date. It was told, that this comfortable situation is result of support / payment by a health project that will end in december 2019.
This availability of enough reagents for all requested examinations should be provided also 2020 !

The room for cleaning laboratory glassware has a new electric 240 liter warmwater tank with energy efficiancy class C (high energy consumption: 6,47 KWh per day / 1390 KWh per year).
Beside it are three sinks for washing glassware installed. I wondered, why the right one is only equipped with an eye-shower. Usually eye-showers are installed additionally nearby water faucets. And the installation of an electric socket very close to a source of water seems to me quite hazardous.

A hygienically very concerning situation could be found in the sinks: sponge, gloves and used damaged glassware on the dirty and wet ground of the sink ... gloves should be placed down on dry areas and damaged glassware should be removed.

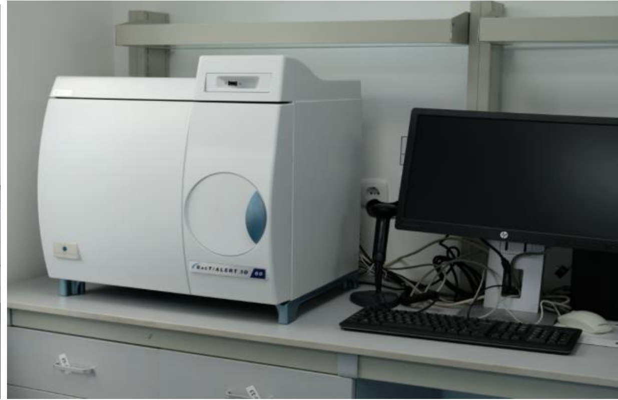
Summarizing it must be said, that the available space in the room for cleaning laboratory glassware is very comfortable – maybe for this usage too much.

It was told, that there are about 100 up to 130 specimen reaching the laboratory a day and the culture media are prepared by themselves. I had no access to the culture media preparation room, but had a look through the window. Everything looks very clean, neat and a bit unused. In this large room one can find mostly new furniture and equipment, but some new equipment was not installed / was out of work.
Laminar air flow not plugged in, not suitable working place for microskope etc.

Prepared media seemed to be available at a sufficient amount – all media are stored at 4.2 °C in a large refrigerator. Even this room has a lot of - only occasionally used – space, but the working areas / tables should be larger.

Moving to the microbiological examination room, one can see on the left a used old working bench – this should be exchanged. A new one is available and not used at an other place.
The staining area for microscopy was clean and well organized – but the microscope is placed at a suboptimal location ... on a movable storage container! A location on a fixed table that enables ergonomic work in a sitting position should be found ... maybe with a higher seat.

It was told, that the equipment for identification of bacteria, susceptibility testing and blood culture system – new VITEK 2 compact and BacT/Alert 60 by BioMerieux - has been delivered and installed a few weeks ago. There was some training and in the future there are some online education options. Specialists for lab-equipment can be contacted by phone and skype.



As far as I could see, the new equipment is not in use for routine diagnostics ... the anaerobic-incubator is not plugged in, gas pressure is zero ...

Some of the indicators for practical microbiological diagnostic were the microscopy and the incubator with 37 °C, filled with a medium amount of inoculated culture media. This amount usually did not correlate with more than 100 specimen a day and it looks like the old fashioned way of diagnostics.

I asked the laboratory technician, if she is happy about the very comfortable situation with renovated rooms, lot of space, new equipment etc. She answered: *Yes, but we have only very few amount of specimen ... rarely blood cultures ...*

As a summary it must be said, that the potential of this new designed and new equipped microbiology is not used at the moment. I hope there is some agenda for development in the near future.
The installation of the whole equipment should be coordinated, pathways for the workflow with the new and modern equipment must be defined, suitable locations for the different methodes / examinations must be found etc..
Maybe there should be some help from experianced mongolian specialists (other laboratories? UB?).
The available equipment enables a good microbiological routine work. There might be more reliable results, more success in treatment patients, more acceptance and understanding for the importance of microbiological diagnostics from physicians / doctors and at least more specimen a day.

Michael Roßburg