

HEPATITIS FREE MONGOLIA

2017–2019
DORNOD AIMAG



Members of the Ulaanbaatar Rotary Club, the host Rotary Club in Mongolia.

Since 2011, FIRE - Flagstaff International Relief Effort has been conducting liver screenings in rural Mongolia. FIRE's screenings are in direct support of the World Health Organization (WHO) strategy to eliminate viral hepatitis by 2030 and the Mongolian Government's "Healthy Liver" Program (HLP) to eliminate viral hepatitis by 2020.

The Government of Mongolia launched the national "Healthy Liver" Program in May 2017. As of late 2019, only 47% of those eligible for free testing have participated in the program and only 35% of those who tested positive for hepatitis C have accessed the free treatment. Participation in screening and treatment for viral hepatitis needs to be improved across Mongolia to stay on target for eliminating hepatitis C in 2020.

From 2017 to 2019, FIRE in partnership with the Ulaanbaatar Rotary Club and with the support of many other funders and partners including Rotary Foundation through GGI529067 and Gilead Sciences, conducted "Hepatitis Free Mongolia" in Dornod province with supplemental activities in Tov province to help increase awareness and voluntary participation in the national Healthy Liver program.

Screening and Testing

5,017 people were screened through this project in 14 locations across Dornod Province, including the province center and all counties. Most of these participants did not have national health insurance. Without insurance, Mongolians are not able to participate in the “Healthy Liver” program.

Our target population was anyone who had not been tested for hepatitis, thereby reaching the poorest population with the greatest need for these tests. Of the people screened, 20% were over 50 years of age, 23% were between 40-49 years old and 56% were aged 20 to 39.

The poorer and uninsured population are more difficult to reach. They often lacked transportation to travel to the screening, connection to media to learn about the activities and/or were unable to leave work to come to the events. To resolve these issues, we worked closely with the Provincial Health Department to use their mobile clinic, setting it up in the central market. We also traveled to large factories and government offices to screen their employees, and to very remote Bag and Family Clinics around the Provincial capital.



An Ultrasound examination.



Community members waiting to be screened.



A FibroScan examination.



Testing the blood samples for hepatitis B and C.



A Hepatologist counseling a community member.

While many of the people screened did not have insurance at the time of our event, we feel confident that most of those who tested positive would get insurance in order to receive the free treatment provided by the government. Insurance is provided by employers or through a self-pay system for those self-employed or unemployed.

For HBV we used a rapid test from Guangzhou Wondfo Biotech called “One Step HBV Test” with a serum/plasma sensitivity: HBsAg (100%), HBsAb (99.2%), HBeAg (98.5%), HBeAb(98.2%), HBcAb (97.5) Specificity: HBsAg (98.3%), HBsAb (96.0%), HBeAg (96.9%), HBeAb(97.0%), HBcAb (95.5%). For HCV we used “One Step Hepatitis C Virus Test” also from Guangzhou Wondfo Biotech, Sensitivity: 99.0%, Specificity: 99.8%

We used the only portable FibroScan machine in the country. This was the first time a FibroScan machine was ever taken outside of Ulaanbaatar.

From the 5,017 people tested, the following tests and results were found;

- 1,966 people were vaccinated against hepatitis B
- 2,588 ultrasound examinations were given
- 1,419 FibroScan examinations were given
- 1,897 people were seen by a hepatologist
- 105 people were seen by an oncologist
- 300 people were tested for AFP
- 733 (14.6%) people tested positive for HBV
- 446 (8.9%) people tested positive for HCV
- 45 (.9%) people tested positive for both HBV and HCV
- 181 people were found to have cirrhosis
- 352 people were found to have fatty liver
- 44 people were suspected of having liver cancer
- 11 people were suspected of having some other kind of cancer

The 44 people that were suspected of having liver cancer (HCC) were sent to the National Center for Cancer for further testing. All 44 cases were first-time diagnoses. We have followed these 44 people since the screening. Today, their status is as follows;

- 16 people had started treatment such as TACE, RFA and surgery
- 6 people were diagnosed too late for treatment
- 1 patient died within 1 month of our screening event
- 4 people have a nodule in cirrhotic liver and are now being followed by regular doctor visits
- 9 people did not have liver cancer yet but will need to be followed by a doctor
- 3 people did not go to for further examination due to financial constraints



The mobile clinic at the Choibalsan central market.

Community Awareness Activities

In collaboration with the local governor's office and local health department, we conducted a community awareness fair in the province center. During the fair, community members were educated through the distribution of pamphlets and posters and speakers and information booths which included doctors from the local clinics. The fair was family oriented with singing and dancing performances and activities for all ages. National and local TV stations broadcast several interviews and news stories about the event.



Physicians talking to community members at the community awareness fair in Choibalsan.



Physicians talking to community members at the community awareness fair in Choibalsan.

In addition to the community awareness fair, we also spent one week at the central market in the province center distributing information and promoting awareness.

50,000 copies of five types of pamphlets (HBV, HCV, Cirrhosis, Liver cancer, Healthy Liver), 400 copies of a poster, and 4,000 patient record books were printed and distributed to local community members throughout the project.

Vaccination Against Hepatitis B

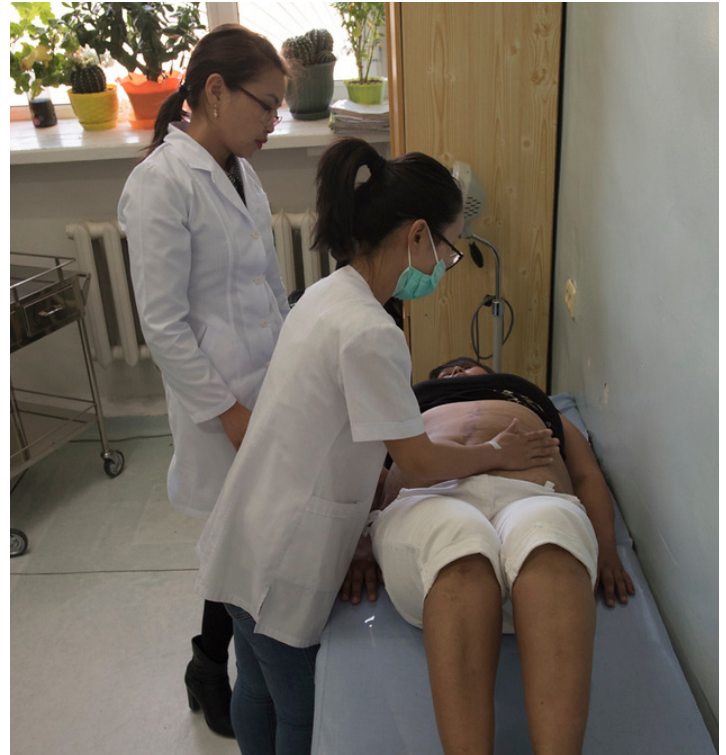
We purchased and delivered all three doses of HBV vaccine for 2,000 participants to the Dornod Province Health Department. The Province Health Department worked with the family and county clinics to successfully vaccinate 1,966 people against hepatitis B.

Training for Local Health Care Workers

36 health care workers from 13 counties, the provincial hospital, and the health department, participated in the classroom training at the provincial capital for two days. All healthcare workers were given one Continuing Medical Education (CME) credit for the two-day training. The local health department, FIRE team members, and the visiting specialist from Ulaanbaatar taught these sessions.

The training included the following topics:

- Basic information on the prevalence of viral hepatitis in Mongolia and throughout the world
- Diagnosis and treatment of B, C and delta hepatitis
- The current situation of liver cancer in Mongolia
- The modern trend of diagnosis and treatment of liver cancer



Bedside training with local physicians and visiting specialists from Ulaanbaatar.



Computers donated to each health care facility in Dornod.



Health care worker classroom training.

400 copies of “Guidelines for the screening, diagnosis, and treatment of viral hepatitis,” which was approved by Ministerial order #249, were printed and distributed to local health care workers.

During this training, we also distributed 20 computers—one computer to each clinic as well as the health department. MobiCom, a Mongolian communications company, donated the processors. These computers will be used for long-term support and interactive training over the Internet.

The visiting specialists from Ulaanbaatar also worked side by side with 16 local health care workers when visiting each hospital, teaching them techniques through a hands-on “shadow training” approach.

Database Support

In collaboration with the Dornod Province Health Department, the 5,017 participants’ information was entered into the Ministry of Health’s patient database.

Advocacy with Community Leaders

Twenty community leaders, business owners, and policy makers, took part in a three-hour meeting. Four speakers, including physicians, FIRE representatives, and government leaders, spoke about the nation’s viral hepatitis and liver cancer morbidity, the current situation of viral hepatitis in Dornod Province, and this project’s results. They also presented ideas on how to care for their community through logistical and financial influences for further solution-based programing.



Advocacy meeting with local Dornod government and community leaders.

Knowledge, Attitude and Practice (KAP) Study

To assess viral hepatitis knowledge, attitudes and practices in the community of Dornod province, 600 people were randomly selected from four counties and four sub-counties to participate in the KAP study. The survey revealed that viral



Students from MNUMS, question Dornod community members during the KAP survey.

hepatitis B and C knowledge is moderate (77.2%), and only (1.8%) had good or satisfactory knowledge.

The level of viral hepatitis B and C knowledge was related to education level and employment status. For instance, among educated and employed people, 2.9% had good knowledge and 81.2% had average knowledge. Herders and students had the lowest level of knowledge with 2.7% having no information, 24.3% had poor knowledge, 73.0% had average knowledge levels. This shows that more education and training is needed for the students and herders.

When the Governor of Dornod province was presented with the results of this KAP study he redirected funds from the provincial budget that were allocated for road construction to conduct a liver health community awareness campaign across the province.

Mini Liver Screening and Health Care Worker Training

On March 26 and 28, 2019, a mini liver screening was organized in Töv Province in collaboration with the province health department. Visiting Fibroscan and ultrasound specialists from Saga University in Japan and a liver specialist from Ulaanbaatar led the activities for 80 individuals who had tested positive for hepatitis B and/or C through the national Healthy Liver Program, but who had not started treatment. Community participants were given an ultrasound and Fibroscan examination, physical examination and counseled by a liver specialist. Participants were strongly encouraged to start treatment and connected to care.

The visiting specialists from Japan and Ulaanbaatar were shadowed by local Töv health care professionals. This side-by-side, bedside training provided extensive capacity building and training on conducting Fibroscan and ultrasound examinations, evaluating the test results and recommendations for follow up care and treatment.

Hepatitis Coordinators Training in Töv and Dornod Provinces

We worked with the Health Center of Saga University, Japan, to organize trainings for the nation's first "Hepatitis Coordinators" in Töv and Dornod province. Saga University developed the training curriculum and materials which were translated into Mongolian. The Hepatitis Coordinator training and coordination program in Saga Japan has been proven to successfully reduce the disease burden. Pamphlets, posters, badges, vests, teaching aids and bags were developed and distributed to the participants for their future work. In both provinces, we worked closely with the Governor's office and the Health Department.

Visiting specialists from Saga University trained 108 participants in Töv province December 5 and 6, 2018 over two, one-day trainings. Participants included health care workers, and health insurance inspectors, from all 26 counties and the province center in Töv.



Banner for the Töv Hepatitis Coordinator training.

Topics for the training included;

- "Healthy Liver" Program of Mongolia and its implementation in Töv province
- The Eradication program for viral hepatitis in Saga, Japan
- Hepatitis Coordinator's roles and responsibilities
- Liver health: the liver's function and factors that harm the liver
- Viral Hepatitis: its diagnosis, treatment, follow up and prevention
- Counseling skills
- Hepatitis coordinator role play

On June 25, 2019 in Dornod Province, 60 participants were trained as Hepatitis Coordinators.

Participants included health care workers, social workers

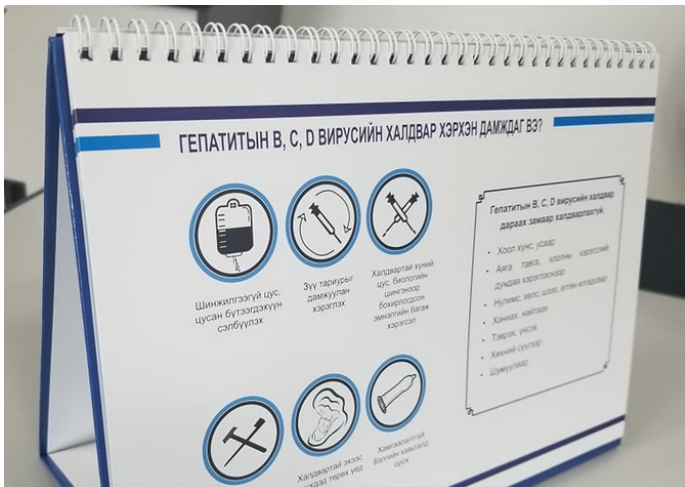


Classroom training for Hepatitis Coordinators in Dornod.

and community volunteers from all 13 counties and the province center. After evaluating the training in Töv province six months earlier, the training methods were expanded to include more interactive approaches including videos, photos, group work and group discussions as well as pre and post-tests to evaluate the effectiveness of the training. A new training manual was created that can also be used by the Hepatitis Coordinators in their work with the community as a visual aid. Training topics were also modified slightly to include;

- Liver health: the liver's function and factors that harm the liver
- Viral Hepatitis: its diagnosis, treatment, follow up and prevention
- Liver cirrhosis and cancer
- The national "Healthy Liver" Program and its implementation in Dornod
- Hepatitis Coordinator's roles and responsibilities
- Behavior changes needed and the steps of Behavior change
- Counseling skills
- Hepatitis Coordinator manual and its usage
- Exercise sessions
- Pre and post tests
- Question and answers from participants

In the behavior change section participants learned about delivering information and assessing their specific audience; the different stages of behavior change and how to assess and address where each individual may be in the process. Specific topics also included counseling techniques, confidentiality issues, sensitivity and empathy. The vest, badge and bags will be helpful to identify the Hepatitis



Visual aid for Hepatitis Coordinators to use with community members.

Coordinators making them recognizable, trustworthy agents of service and change in the community.

The Hepatitis Coordinators trained in Dornod were mid-level health care workers, social workers, and health volunteers who work closely with the local primary health care centers. They will distribute and share information about the healthy liver program, viral hepatitis testing, and educate community members one-on-one, person-to-person, directing them to receive the necessary testing and treatments while they are conducting their everyday duties.

A key element to successfully accomplish the national "Healthy Liver" Program goals is to share basic information about viral hepatitis with the general population, and encourage people to get tested and treated. The new Hepatitis Coordinator program will help accomplish this sharing of information.



Trained Hepatitis Coordinators in Dornod.

Closing Ceremony and Concluding Thoughts in Dornod Province

On June 26, 2019 a closing ceremony was conducted in Dornod Province at the Provincial Government Building.

Several speeches were given by the Ulaanbaatar Rotary Club, FIRE and the Dornod Health Department about the project's funding; KAP study; the different program activities; and Dornod's status with the Healthy Liver Program. Participants from the Hepatitis Free Mongolia program and the Hepatitis Coordinator Training also spoke about the benefits they gained from the program and its overall success.

The province Governor expressed his sincere appreciation for the program, what he has learned through the implementation of Hepatitis Free Mongolia and the resulting changes he plans to make. He stated, "Many successful projects stop once the funding or activities finish. This is wrong and local governments should maintain the sustainability of these programs. For example, training of Hepatitis Coordinators is very beneficial to the provincial community, so local entities should work closely with these already trained Hepatitis Coordinators on hepatitis prevention in the province." Based on the result of KAP survey, he expressed his intention to allocate funding for these interventions, and directed Health Department to be more ambitious and develop project proposals regarding improving community awareness on hepatitis; and to work with the Hepatitis Coordinators.



Closing Ceremony in Dornod.

Our sincere appreciation to all of the organizations and individuals who helped to successfully implement "Hepatitis Free Mongolia" in Dornod Province.

Lead Donors



*Rotary funds were collected from 8 Rotary Districts, 28 Rotary Clubs and 19 individual Rotarians representing 6 different countries and matched by Rotary Foundation.

Districts - District 5500 Arizona, District 5490 Arizona, District 5500 Arizona, District 5220 California, District 1120 England, District 3450 Hong Kong, District 4185 Mexico, District 9980 New Zealand. **Clubs** - Rotary Club of Alexandra, Rotary Club of Escalon, Rotary Club of Flagstaff, Rotary Club of Flagstaff Sunrise, Rotary Club of Fountain Hills, Rotary Club of Four Peaks, Rotary Club of Gravesend, Rotary Club of Mesa Sunrise, Rotary Club of Mesa West, Rotary Club of Oaklade, Rotary Club of Payson Rim Country, Rotary Club of Peace Avenue, Rotary Club of Peoria North, Phoenix Rotary 100, Rotary Club of Puebla Industrial, Rotary Club of Sedona Rotary, Rotary Club of Stockton North, Rotary Club of Sun City Del So, Rotary Club of Sun City West, Rotary Club of Surprise, Rotary Club of Tehuacan, Rotary Club of Ulaanbaatar, Rotary Club of Verde Valley, Rotary Club of Waimatu, Rotary Club of Wickenburg, Rotary Club of Williams, Rotary Club of Winslow, Rotary E-Club of the Southwest. **Individuals** - Edward Chan, Stanley Mok, Lucinda General, Pam Cohen, Lynn Gustke, Barb Feder, Eric Speirs, Eric Wolvertson, Derrick Doba, Dino Dullbson, Hoppy Hopkins, Karl Eberhard, LaVelle McCoy, Marianna Bellantoni, Paul Wagner, Richard Lozano, Steve Peru, Tonya Watson, Paul Ferris.

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Additional Partners

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Health Department of Dornod Province • Center for Health Development



Doctors

Bolormaa Buuveibaatar • Buyantogtokh Purevdorj • Munkhdelger Byambaragchaa
Munkhbat Semedperlii • Bujinlkhams Shatarbal • Gandirmaa Od-Ochir • Dulguun Erdene-Ochir
Davaakhuu Buyandelger • Munkhzul Tsetseglen • Ariunaa Ganbold

Fibroscan technicians

Oyungerel Ganbold • Batmunkh Davaakhuu • Enkhtuya Damba • Ariunaa Ganbold