

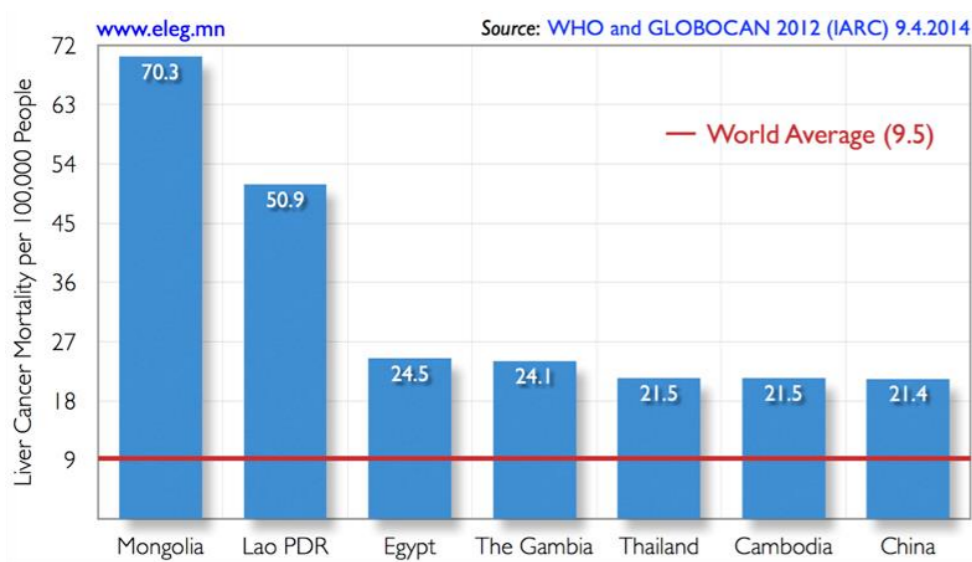
# Hepatitis Prevention, Control, and Elimination Program in Mongolia: A Global Model for Eliminating Major Cancer-Causing Infectious Diseases

Naranbaatar Dashdorj<sup>1,2,3,4</sup>, Andreas S. Bungert<sup>1,4</sup>, Dahgwahdorj Yagaanbuyant<sup>1,5,6,7,8</sup>, Zulkhuu Genden<sup>1,5,6</sup>, Batdelger Dendev<sup>6,6,7</sup>, Davaadorj Duger<sup>6,8,9</sup>, Erdenebileg Enkhbayar<sup>1</sup>, Surenkhuu Narankhuu<sup>1,4</sup>, Oyun-Erdene Battulga<sup>1</sup>, Asenguli Imashkhan<sup>1,3</sup>, Ayush Dagvadorj<sup>1,3</sup>, Uurtsaikh Baatarsuren<sup>1</sup>, Maral Myanganbayar<sup>1</sup>, Batbayar Tserendorj<sup>1</sup>, Battuvshin Surepurev<sup>1</sup>, Uranchimeg Dagva<sup>1,3,4</sup>, and Naranjargal Dashdorj<sup>1,5,6</sup>

<sup>1</sup>Onom Foundation, <sup>2</sup>Mongolian Academy of Sciences, <sup>3</sup>Mongolian Laboratory Network, <sup>4</sup>Medical Information Technology Association of Mongolia, <sup>5</sup>Liver Center, <sup>6</sup>Mongolian Society of Hepatology, <sup>7</sup>National Center for Communicable Diseases, <sup>8</sup>Mongolian National University of Medical Sciences, <sup>9</sup>Mongolian Gastroenterology Association

## BACKGROUND

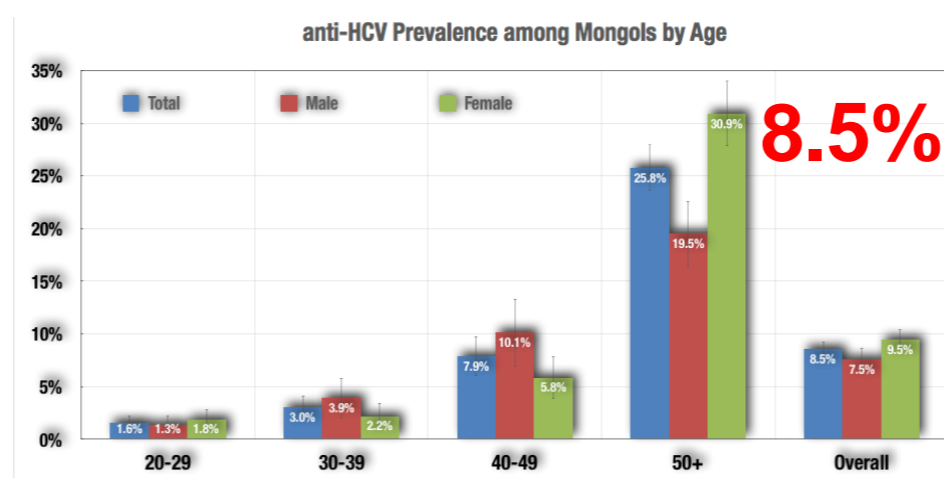
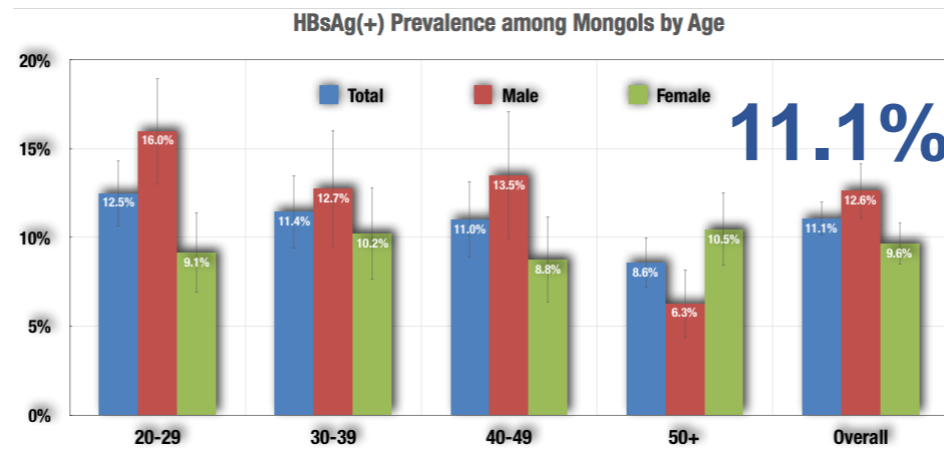
Mongolia has the world's highest rate of liver cancer mortality—nearly eight times the global average. Prevalences of chronic viral hepatitis B, C, and D in Mongolia are at an endemic level and constitute the main cause for Mongolia's world-leading liver cancer mortality rate, which has been steadily increasing over the last decade. At the moment, liver cirrhosis and hepatocellular carcinoma mortalities account for 15% of total annual mortalities in Mongolia. In short, the viral hepatitis endemic is wreaking a havoc in Mongolian society.



## PROGRESS UPDATE

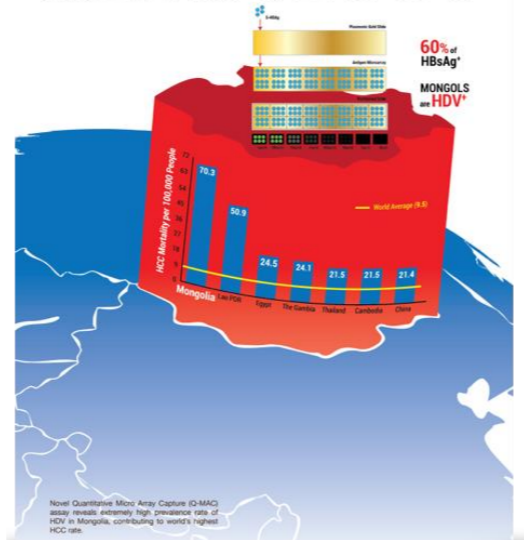
The Onom Foundation, Patient and Civil Society Council, Mongolian Gastroenterology Association, and Mongolian Society of Hepatology initiated the Hepatitis Prevention, Control, and Elimination (HPCE) Program on September 8, 2014. Thanks to the persistent and unwavering effort of these organizations, the Government of Mongolia officially adopted the HPCE Program into the 2016 - 2020 Action Plan on September 9, 2016. The MISSION 2020 of the HPCE Program to eliminate HCV in Mongolia by 2020 and to significantly reduce viral hepatitis induced liver cirrhosis and hepatocellular carcinoma was explicitly stated in the 2016 - 2020 Action Plan of the Government of Mongolia. As of November 22, 2016, branded Sofosbuvir/Ledipasvir (Harvoni) and 4 kinds of generic Sofosbuvir/Ledipasvir are available in Mongolia at prices of US\$300 and US\$150 respectively. In addition, both branded and generic Tenofovir and 2 kinds of generic Entecavir are available in Mongolia. Both branded and generic Tenofovir are subsidized by the Health Insurance Fund, resulting in costs of approximately US\$15 (Viread) and US\$3 (generic Tenofovir) per month. Both branded and generic Sofosbuvir/Ledipasvir are also subsidized by the Health Insurance Fund, resulting in costs of approximately US\$215 (Harvoni) and US\$65 (generic Sofosbuvir/Ledipasvir) per month. More importantly, the Parliament of Mongolia allocated approximately US\$10 million for hepatitis medicines subsidies, US\$2.5 million for hepatitis diagnostics, and US\$4 million for early screening within the 2017 Expenditure Budget of the Health Insurance Fund.

## VIRAL HEPATITIS ENDEMIC IN MONGOLIA



Dashtseren et al. Endemic prevalence of hepatitis B and C in Mongolia: A nationwide survey among Mongolian adults. Journal of Viral Hepatitis 2017 Feb 17. doi: 10.1111/jvh.12697.

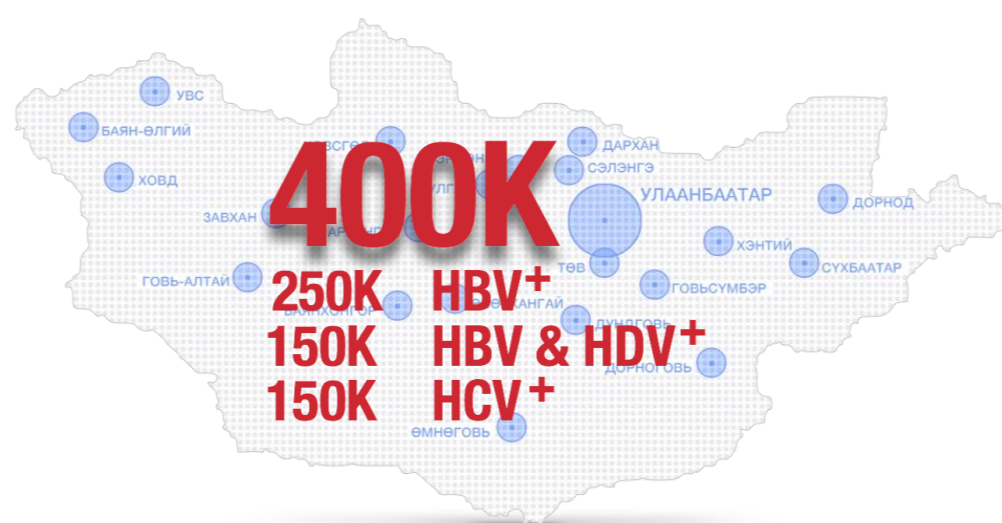
## HEPATOLOGY



60% of HBsAg<sup>+</sup>

MONGOLS are HDV<sup>+</sup>

Chen X, Oidovsambuu O, et al. A novel quantitative microarray antibody capture (Q-MAC) assay identifies an extremely high HDV prevalence amongst HBV infected Mongolians. Hepatology 2016 Nov 23. doi: 10.1002/hep.28957.

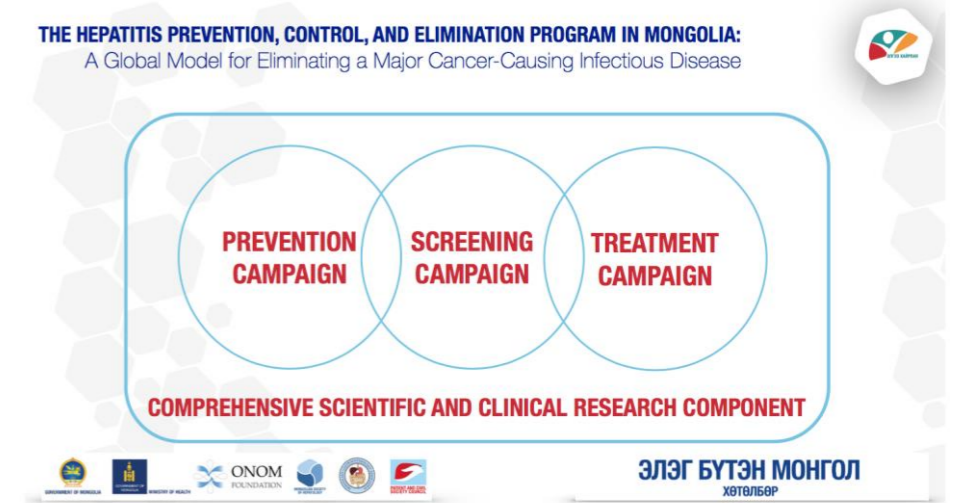


## INITIATING THE CHANGE ON THE GROUND

September 8, 2014  
Formally launched the implementation of the HPCE Program in Ulaanbaatar, Mongolia

2016.03.19

## DELIBERATIVE DEMOCRACY IN ACTION



## CONCRETE RESULTS AND CONCLUSION

Within the Screening Campaign of the HPCE Program in Mongolia, 72,000 Mongolians were screened for hepatitis B, C infections by the Onom Foundation alone as of November 22, 2016. Under the Treatment Campaign of the HPCE Program in Mongolia, over 7000 people with chronic HCV are at different stages of treatment as of November 22, 2016. According to analysis of several hundred randomly selected people with chronic HCV infection, SVR is around 98%. Finally, the Government of Mongolia officially adopted the HPCE Program into the 2016 - 2020 Action Plan with explicit declaration of HCV elimination by 2020 and significant reduction of hepatitis related liver cirrhosis and HCC mortalities. The HPCE Program in Mongolia will serve as a model for other countries in their fight against viral hepatitis.

## CONFLICTS OF INTEREST

Authors declare no conflicts of interest.

## CONTACT INFORMATION

Email address: [nd@onomfoundation.org](mailto:nd@onomfoundation.org)

@ElegMN @HepatitisMongol

<http://youtube.com/OnomSan>

<http://facebook.com/eleg.mn>

<http://Onomfoundation.org>

