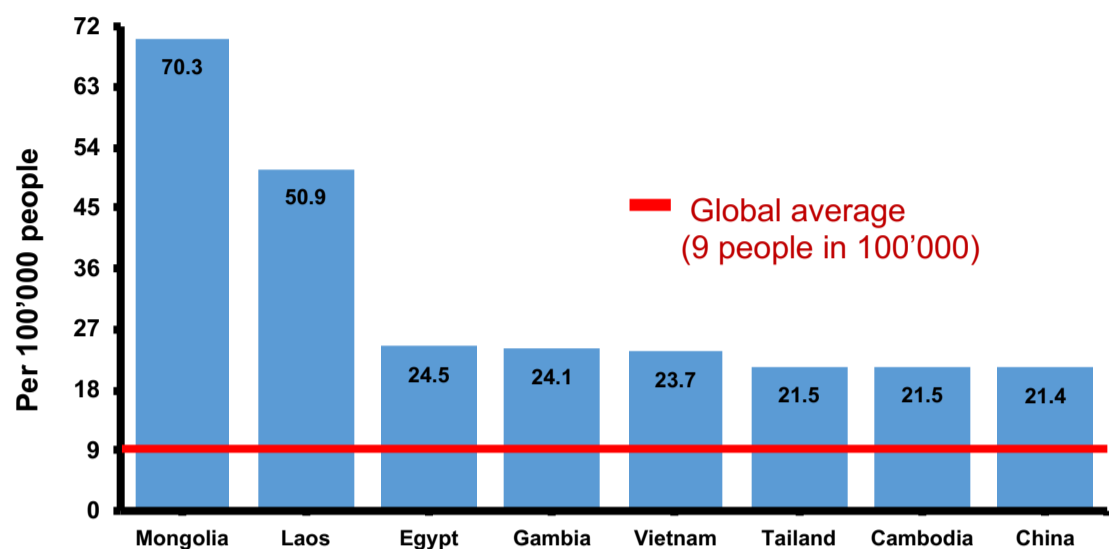


Prevalence of HBsAg and anti-HCV among Mongolian healthcare workers and emergency responders

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BACKGROUND

Chronic hepatitis B (HBV), hepatitis C (HCV) and hepatitis D (HDV) prevalence constitutes nearly 90% of liver cirrhosis and hepatocellular carcinoma (HCC) mortalities in Mongolia, which is eight times higher than the global average (Figure 1) (1).



It is widely known that these infections are mostly nosocomial infections before disposable syringes were introduced (3). It is vital to establish viral hepatitis infection status of individuals who work in close contact with the public. Thus, we conducted screening among healthcare workers and emergency responders for HBsAg and anti-HCV positivity within the framework of Hepatitis, Prevention, Control and Elimination Program in Mongolia.

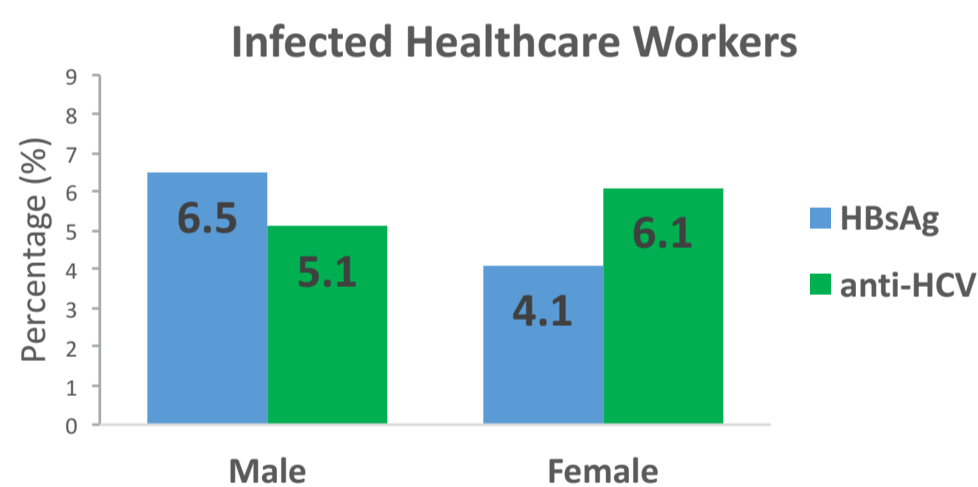


Figure 4. The prevalence of HBsAg and anti-HCV among healthcare workers by gender. Prevalence of HBsAg was higher in males than in females, while prevalence of anti-HCV was slightly higher in females than in males.

CONCLUSIONS

The lower HBsAg prevalence among emergency workers and healthcare workers could possibly be due to strengthened vaccination programs in these target groups. Conversely, anti-HCV prevalence among healthcare workers was higher than both general population and emergency workers. This is likely caused by an increased risk of healthcare workers for HCV infection, for instance through contaminated needles.

METHODS

Total of 4745 healthcare workers (average age of 37.2±13.1 years) from 13 different hospitals (12 public, 1 private) were screened for HBsAg and anti-HCV using internal capacities between 2014 and 2016 in Ulaanbaatar, Mongolia.

The emergency responders were screened with on-site rapid tests (CTK Biotech Inc., San Diego, CA) between September and October of 2016. 3806 emergency responders (an average age of 33.2±9.6 years) were screened.

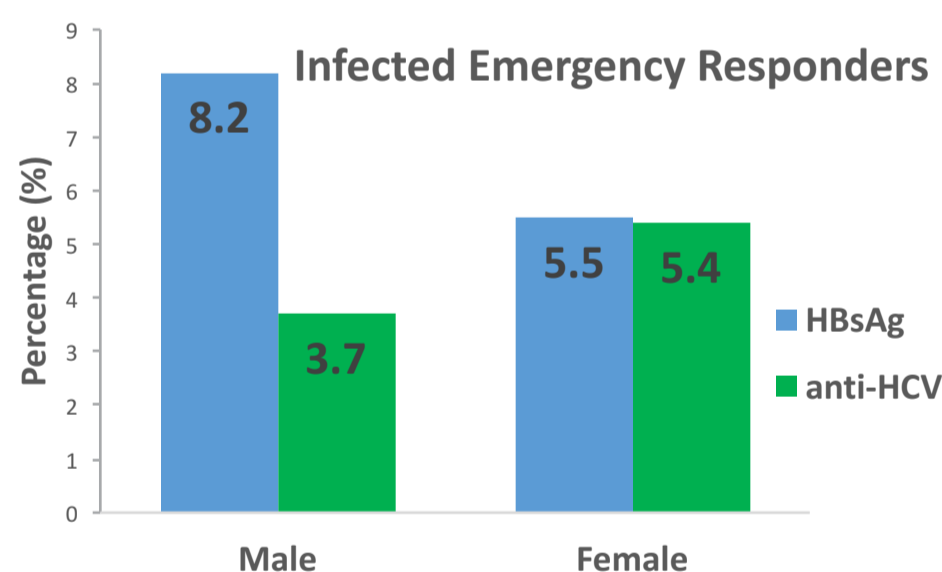


Figure 5. The prevalence of HBsAg and anti-HCV among emergency responders by gender. Prevalence of HBsAg was higher in males than in females. In contrast, prevalence of anti-HCV was higher in females than in males.

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CONFLICTS OF INTEREST

Authors declare no conflict of interest.

RESULTS

The prevalence for HBsAg and anti-HCV among healthcare workers and emergency responders are presented in Figure 2 and 3. Among the healthcare workers, 322 (6.8%) and 504 (10.6%) workers were positive for HBsAg and anti-HCV respectively (Figure 2). On the other hand, the prevalence of HBsAg was 237 (6.2%) and anti-HCV was 197 (5.2%) among emergency responders (Figure 3).

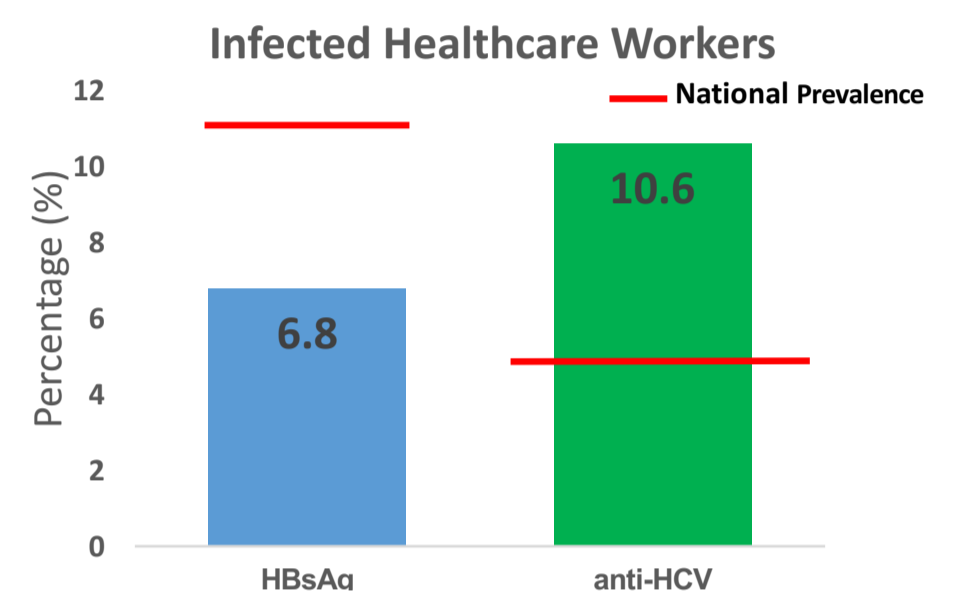


Figure 2. The prevalence of HBsAg among healthcare workers was 6.8% and anti-HCV was 10.6%. Based on the most recent nationwide prevalence study conducted in 2013, the prevalence for HBsAg and anti-HCV among the general population aged 30-49 was at 11.2% and 5.2%, respectively, as indicated by the thin red line.

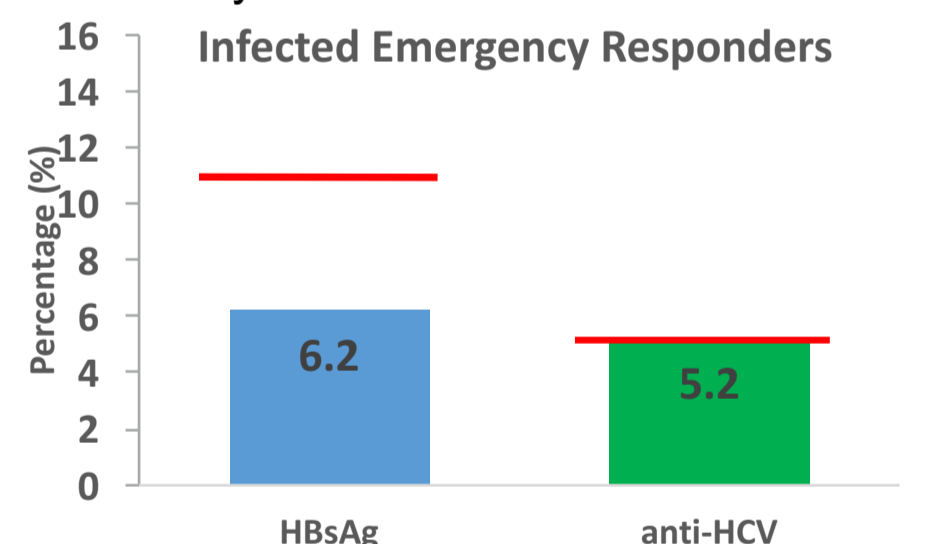


Figure 3. 6.2% and 5.2% of emergency responders were positive for HBsAg and anti-HCV respectively. The thin red line represents the most recent nation prevalence of HBsAg and anti-HCV.

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