Russian Indigenous Peoples and Viral Hepatitis

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Reference Center for Viral Hepatitis
Moscow, Russia
Indigenous peoples of the North, Siberia and
Far East of Russian Federation

More than 40 indigenous peoples with a population from 50,000 to less than 100

Language families:

- **Eskimo-Aleut**
  - Yupik group
  - Aleut group

- **Uralic-Yukagiran**
  - Finno-Ugric branch
  - Samodish branch
  - Yukagir branch

- **Altaic**
  - Turkic branch
  - Mongolic branch
  - Tunguso-Manchurian branch

- **Chukotko-Kamchatran**
  - Ket (isolated language)
  - Nivkh (isolated language)
  - Ainu (isolated language)
Indigenous peoples of the North, Siberia and Far East of Russian Federation

More than 45 indigenous peoples with a population from 50,000 to less than 100

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- Eskimo-Aleut
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Integral Map of Living Conditions in Russia

I – very unfavorable
II – unfavorable
III – relatively unfavorable
IV – relatively favorable
V – moderately favorable
VI – optimal

proposed boundary of the North of Russia
Hepatitis-related mortality rate

Hepatitis B
Incidence of acute HBV in Russia and The Russian Arctic 1998-2016 (per 100 000 population)

>50-fold decrease

The Russian Arctic

Russia


43.8

39.9

0.9

0.8
Coverage with three doses of Hepatitis B Vaccine, Newborns, 1999-2016, Russia

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
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<tbody>
<tr>
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Coverage with three doses of Hepatitis B Vaccine, Newborns, 1999-2016, Russia

Birth dose Hep B Vaccine coverage data is not available

<table>
<thead>
<tr>
<th>Year</th>
<th>Coverage (%)</th>
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<td>2016</td>
<td>97.2</td>
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</tbody>
</table>
Incidence of chronic HBV infection in Russia and The Russian Arctic 1998-2016 (per 100 000 population)

Estimated prevalence of HBsAg in Russia ≈ 2%

7-fold decrease
Prevalence of HBsAg among Indigenous Peoples in Russian Federation

- Teleutes: 10%
- Khants, Komi, Nenets, Selkups: 2%
- Altaians: 13%
- Tuvinians: 11%
- Dolgans, Nganasans: 13%
- Kets: 6%
- Chukchi: 10%
- Yakuts: 10-20%
- Buryats: 7%

Prevalence of HBsAg among Indigenous Peoples in Russian Federation

HDV Infection among HBsAg-positive patients

- Moscow population: n=6000, 13% anti-HDV (+)
- Yakuts: n=671, 28% anti-HDV (+)
- Tuvinians: n=2226, 33% anti-HDV (+)
- Chukchi: n=336, 36% anti-HDV (+)

Hepatitis C
Incidence of CHC in Russia and The Russian Arctic, 1999-2016 (per 100 000 population)

The Russian Arctic

Russia

Estimated prevalence of anti-HCV in Russia ≈ 4%
Prevalence of anti-HCV among Indigenous Peoples in Russian Federation

- Evenks (Khatystyr) n=618: 2.4%
- Evenks (Kystatyam) n=144: 6%
- Evenks (Zhigansk) n=156: 1.3%
- Yukagir (Andryushkino) n=49: 14.2%
- Yakuts (Illbenge) n=105: 3.8%
- Chukchi n=385: 2.3%

Nikitina S.G. 2016, Chulanov V.P. 2013, 2017
Prevalence of Chronic Hepatitis C in different age groups. Russia, 2017

Data from the Federal Registry of Viral Hepatitis patients (2017)
Age-specific Prevalence of anti-HCV among Indigenous Peoples in Sakha (Yakutia)

Prevalence, %

<table>
<thead>
<tr>
<th>Age groups</th>
<th>Prevalence</th>
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<tbody>
<tr>
<td>7-14</td>
<td>4.2</td>
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<tr>
<td>15-19</td>
<td>3</td>
</tr>
<tr>
<td>20-39</td>
<td>8.8</td>
</tr>
<tr>
<td>≥40</td>
<td>10.5</td>
</tr>
</tbody>
</table>

n=949

Nikitina S.G. 2016
Etiology of Liver Cirrhosis in Yakutia

2006

- HBV: 32
- HDV: 14.2
- HCV: 12.2
- Unknown: 8.5

2016

- HBV: 19.6
- HDV: 38.2
- HCV: 33.2
- HBV/HDV+HCV: 7.7

Alexeyeva M.N. 2007
Nikitina S.G. 2016
Marfa Alexeyeva (1946 – 2010)

- Chief infectious disease specialist of Sakha (Yakutia);
- Developed the first program for treatment of chronic viral hepatitis in Yakutia;
- Since 1995 led the course of infectious diseases and epidemiology at Yakut State University;
- In 2005 founded the Department of Infectious Diseases;
According to the Central Research Institute of Health Organization and Informatization of the Ministry of Health of the Russian Federation
HCC Diagnosis by Tumor Stage: Russia, 2013

[Mirabishvili V.M. et al. Siberian oncology journal, 2015, 2:5-14]
Incidence of Liver Cirrhosis in Russia: 2011-2015

According to the Central Research Institute of Health Organization and Informatization of the Ministry of Health of the Russian Federation

Per 100,000 population

<table>
<thead>
<tr>
<th>Year</th>
<th>Absolute number</th>
<th>Per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>14006</td>
<td>9.8</td>
</tr>
<tr>
<td>2012</td>
<td>14233</td>
<td>9.9</td>
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<td>2013</td>
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<td>9.9</td>
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<tr>
<td>2014</td>
<td>15485</td>
<td>10.6</td>
</tr>
<tr>
<td>2015</td>
<td>18640</td>
<td>12.7</td>
</tr>
</tbody>
</table>

* Код К74 МКБ-10: Фиброз и цирроз печени

According to the Central Research Institute of Health Organization and Informatization of the Ministry of Health of the Russian Federation
Mortality from Liver Cirrhosis (except alcoholic) in Tyva Republic: 2011-2015

According to the Central Research Institute of Health Organization and Informatization of the Ministry of Health of the Russian Federation

Per 100,000 population

- Russia
- Tyva

2011: 27, 43.5
2012: 26.9, 48.2
2013: 26.3, 40.9
2014: 28.9, 46.5
2015: 29.4, 52.1

34,651 cases
# Treatment Options

## Chronic Hepatitis B
- **Nucleo(s/t)ide Analogues**
  - Lamivudine
  - Telbivudine
  - Entecavir
  - Tenofovir
- **IFNs**
  - Standard
  - Pegylated

## Chronic Hepatitis C
- **IFNs**
  - Standard
  - Pegylated
- **Ribavirin**
- **DAAs**
  - Vikeira Pak
  - Daclatasvir/Asunaprevir
  - Simeprevir
  - Narlaprevir
  - Sofosbuvir*  

*registered but not available*
HCV Cascade of care: Russia

- Estimated prevalence: 5,700,000
- Anti-HCV diagnosed: 2,900,000
- HCV RNA tested: 1,600,000
- Linked to care: 592,000
- Treated: 18,300

Prevalence, diagnosed, tested, linked, and treated percentages are indicated as 51%, 55%, 37%, and 3%, respectively.
1. Viral Hepatitis B and C disproportionately affect indigenous peoples in Russian Federation. Prevalence of HBV varies from 2 to 20%, prevalence of HCV is up to 14%.

2. Universal Hep B vaccination was implemented in 2002. The coverage with three doses of vaccine is high, however timeliness of the birth dose in indigenous communities is not guaranteed.

3. Hepatitis Delta coinfection rate among indigenous peoples is extremely high. HDV is one of the major cause of the end stage liver disease in these populations.
Summary (2)

5. Proportion of people with liver cirrhosis due to HCV infection is significantly increased during the last 10 years.

6. Morbidity and mortality rates of liver cirrhosis and HCC are very high in Russia, especially among indigenous peoples.

7. Linkage to care and access to antiviral treatment of chronic viral hepatitis in low.

8. National Strategy on Viral Hepatitis and chronic hepatitis treatment programs need to be developed. Problem of Viral Hepatitis in indigenous peoples needs urgent actions.