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Hepatitis B prevalence and risk factors in Georgia
Conflicts of Interest

In relation to this presentation, there are no conflicts of interest.
Survey objectives

Primary Objectives

✧ Calculate HCV & HBV prevalence in Georgia
  • Nation-wide
  • In 6 major cities (including Tbilisi)
  • Several specific geographical regions
  • Urban vs. rural
✧ Determine risk factors

Secondary Objectives

✧ Update 2010 WHO data on prevalence of risk factors for non-communicable diseases (NCDs) – hypertension, obesity, smoking, alcohol misuse, physical activity
Methods

Sample chosen using a stratified, multi-stage cluster design with systematic sampling

Sample: 7,000 adults, ≥18 years of age

Sample size calculated based on:
- Estimated HCV prevalence (6.7%, Tbilisi survey)
- Projected 70% response rate
- Desired precision of estimates (95% confidence interval ± 1%)
Methods

Visit of the field team at household
- interview
- NCD measurements
- Collecting and centrifuging blood

Blood sample was sent to regional lab
- Serum was aliquoted and stored for sending to reference lab.

Results were sent to respondents

Sample was sent to reference lab and tested on HCV and HBV
- Results were prepared
## HBV prevalence

- Total number of interviews – 6330 (90% response rate)
- Total number of blood samples – 6010 (86% response rate)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
<th>Estimated # nationwide ≥18 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-HBc+ (ever infected with HBV)</td>
<td>1634</td>
<td>25.5%</td>
<td>709,922</td>
</tr>
<tr>
<td>HBsAg+ (currently infected with HBV)</td>
<td>188</td>
<td>2.9%</td>
<td>80,736</td>
</tr>
<tr>
<td>HBV/HCV co-infected (HBsAg+/HCV RNA+)</td>
<td>12</td>
<td>0.29%</td>
<td>8,074</td>
</tr>
<tr>
<td>HBV/HCV co-exposure (anti-HBc+/anti-HCV+)</td>
<td>189</td>
<td>3.2%</td>
<td>89,088</td>
</tr>
</tbody>
</table>
Preliminary Results

❖ No statistically significant difference by sex or urban vs. rural
Preliminary Results

Distribution of HBV core antibody+ and HBsAg+ by age groups
Preliminary Results

Distribution of anti-HBc by regions

- Adjara: 33.0%
- Imereti: 30.1%
- Kakheti: 28.4%
- Kvemo Kartli: 27.0%
- Guria: 24.2%
- Samtskhe-Javakheti: 18.8%
- Shida Kartli: 21.4%
- Mtskheta-Mtianeti: 20.2%
- Tbilisi: 22.3%
- Mtianeti: 20.2%
- Javakheti: 18.8%

*not significant
Preliminary Results

Distribution of HBsAg by regions

HBsAg prevalence in Tbilisi vs. three other major cities in the country:
- 5.1% in Batumi
- 5.3% in Kutaisi
- 5.2% in Rustavi

*not significant
Characteristics associated with anti-HBc+ status in multivariate analyses

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>AOR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of blood transfusion</td>
<td>1.6 (1.26-2.03)</td>
</tr>
<tr>
<td>Injection drug use (IDU)</td>
<td>2.7 (1.76-4.21)</td>
</tr>
</tbody>
</table>
Conclusions

✓ The high prevalence of anti-HBc among persons with a history of blood transfusion and IDU could indicate that transmission occurs through these exposures;

✓ These data can be used to identify subgroups and settings where further efforts to improve education, prevention, and safe injection and blood programs could be concentrated;

✓ High prevalence in major cities indicates the need to strengthen infection control regulations and practice in these areas;

✓ High anti-HBc prevalence among adults indicates that vaccination should be expanded to adults as part of Georgia’s HBV prevention efforts;
Acknowledgements

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Centers for Disease Control and Prevention (CDC)

National Statistics Office of Georgia

Survey Team