Hepatitis C Burden in Romania
2016-2017 Evaluation
2018 Challenges

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ROMANIA, HCV EPIDEMICS’ UPDATE

- Total population 20,121,641 persons (2011 Census)

- **Prevalence**: 3.3%,
  - 663,981 persons potentially infected with HCV
    - 85% with potentially viral replication
    - 99% from genotype 1b infections (blood transfusion)
  - 563,406 potentially persons with active progressive disease

- **Incidence**: > 7,500 new cases of infection / year
  - 7,000-8,000 persons diagnosed with active disease / year

- **Romania, top 20 worldwide regarding the number of HCV patients**
  - 6,000 treated persons with DAA in 2016 (1.5%)
The prevalence of HBV, HCV and HIV infection in Romania - a nationwide screening program for surveillance of viral infections

This study is part of the RO 19.02. Project “Strengthening the prevention and control of HIV/AIDS, HBV, HCV in Romania”, financed by the Norway Financial Mechanism 2009-2014, “Public Health Initiatives”.

12 000 persons screened
Median age 46 (IQR: 36, 57) years
62.7% females
Methods

- **Nationwide screening program (2014-2016)**
  - HBsAg, anti-HCV, anti-HIV

- **Confirmation and characterization of positive cases**
  - HBV-DNA, HCV-RNA, HIV-RNA

- **Risk factor assessment**
  - Standardized paper-based questionnaire
  - Romanian population vs. international students

- **Statistical analysis:** IBM SPSS Statistics v.22 (Armonk, USA)
Romania ...

4,9%

3,23%

4,4%

Anuarul Statistic al României [http://www.insse.ro/Anuar%20200S/CAPITOLE/cap2.pdf]
Molnar G. şi col., Bacteriologie, Virusologie, Parazitologie, epidemiologie 1994;30:141-149


Date obținute din campaniile de testare 2014-2015, A Streinu-Cercel nepublicate
HCV testing

HCV hotspots

- <2%
- 2-7%
- >=8%

Positive HCV tests

- 3.3% positive anti-HCV tests => 1.9%
- 60.7% of the positive tests had negative HCV-RNA
- 9 counties in Romania were “HCV-free”
After screening in 2016

- Vaccination decreased the incidence of HBV infection 21-fold

- 12000 persons screened
  - 7.7% positive HBsAg
  - 1.9% confirmed HCV infection
  - 0.4% positive HIV tests

- Targeted outreach programs in the identified hotspots
Knowledge, attitudes and practices of the general population regarding HIV/AIDS, HBV&HCV

Number of cases: 1005    Sample: general population

Gender

- Female: 52%
- Male: 48%

Age

- 18-29 y.o.: 12%
- 30-49 y.o.: 7%
- >49 y.o.: 25%

Average: 46.5 y.o.

Educational level

- Inferior level: 11%
- Medium level: 63%
- Superior level: 26%

Residence area

- Urban: 45%
- Rural: 55%

Disease awareness

How can HCV/HBV be transmitted?

Hepatitis B
96.1% of respondents heard about hepatitis B

Hepatitis C
96.5% of respondents heard about hepatitis C

HIV
97% of respondents heard about HIV

Number of cases: 1005/200    Sample: general population/IDUs

Blood (transfusions, etc)
- General population: 60%, IDUs: 34%
- General population: 28%, IDUs: 24%

Unsterile syringes or needles
- General population: 34%, IDUs: 11%
- General population: 24%, IDUs: 22%

From the dentist's
- General population: 68%, IDUs: 51%
- General population: 22%, IDUs: 14%

Unprotected sex (heterosexual and homosexual)
- General population: 8%, IDUs: 10%
- General population: 8%, IDUs: 10%

Injecting drug use -IDUs
- General population: 68%, IDUs: 51%
- General population: 24%, IDUs: 22%

Mother to child transmission (either during pregnancy or during delivery)
- General population: 8%, IDUs: 10%
- General population: 8%, IDUs: 10%

Manicure, pedicure, barber's shop
- General population: 1%, IDUs: 7%
- General population: 1%, IDUs: 7%

Body fluids transfer
- General population: 1%, IDUs: 5%
- General population: 1%, IDUs: 5%

Lack of hygiene
- General population: 3%
- General population: 4%

Touch (e.g. Hand shaking)
- General population: 1%
- General population: 1%

Airborne, form one person to another
- General population: 1%
- General population: 1%

Food
- General population: 9%
- General population: 9%

Others
- General population: 16%
- General population: 21%

Doesn't know
- General population: 9%
- General population: 1%
Have you ever went through screening for?

Number of cases: 1005/200    Sample: general population/IDUs

37.4% of respondents were screened for hepatitis B/C

85% of respondents were screened for hepatitis B/C

17.7% of respondents were screened for HIV

83% of respondents were screened for HIV
Testing Campaign HCV 2017
- Final Results -
OVERVIEW OF TESTING CAMPAIGN

11,713 tested persons:
• 240 persons tested positive (2.0%)

Testing campaigns in multiple locations:
• 6,556 tested in HOSPITALS PERSONNEL (population at risk tested) (56%)
  • Bacău, Bihor, București, Cluj, Constanța, Dolj,
    Galați, Iași, Mureș, Timiș
• 5,157 tests on STREET Campaign (general population testing) (44%)
  • Bihor, Botoșani, Brașov, București, Cluj, Constanța, Dolj,
    Galați, Iași, Mureș, Suceava

Incidence > national average (3.3%) for general population
• 3.9% positive tests (202) during STREET Campaign
• 0.6% positive tests (38) during HOSPITAL PERSONNEL Campaign

Source: INBIMB
2017 CAMPAIGN OVERVIEW

11,713 tests
• 240 positive tests (2.0%)

<table>
<thead>
<tr>
<th>County</th>
<th>Total Tests</th>
<th>Positive Tests</th>
<th>Positive Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suceava</td>
<td>318</td>
<td>16</td>
<td>5.0%</td>
</tr>
<tr>
<td>Botoșani</td>
<td>96</td>
<td>3</td>
<td>3.1%</td>
</tr>
<tr>
<td>București</td>
<td>4,907</td>
<td>140</td>
<td>2.9%</td>
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<tr>
<td>Cluj</td>
<td>331</td>
<td>7</td>
<td>2.1%</td>
</tr>
<tr>
<td>Iași</td>
<td>2,636</td>
<td>49</td>
<td>1.9%</td>
</tr>
<tr>
<td>Bihor</td>
<td>216</td>
<td>4</td>
<td>1.9%</td>
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<tr>
<td>Constanța</td>
<td>610</td>
<td>6</td>
<td>1.0%</td>
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<tr>
<td>Mureș</td>
<td>209</td>
<td>2</td>
<td>1.0%</td>
</tr>
<tr>
<td>Timiș</td>
<td>1,000</td>
<td>7</td>
<td>0.7%</td>
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<tr>
<td>Dolj</td>
<td>512</td>
<td>3</td>
<td>0.6%</td>
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<tr>
<td>Galați</td>
<td>487</td>
<td>2</td>
<td>0.4%</td>
</tr>
<tr>
<td>Bacău</td>
<td>318</td>
<td>1</td>
<td>0.3%</td>
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<tr>
<td>Brașov</td>
<td>73</td>
<td>0</td>
<td>0.0%</td>
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</tbody>
</table>

Source: INBIMB
GENDER DISTRIBUTION

11,713 tests => 10,556 valid CNPs

- 8,028 persons female (76%)
- 2,528 persons male (24%)

Source: INBIMB
AGE DISTRIBUTION

11,713 tests => 10,556 valid CNPs

- 6,708 persons 31-60 (64%)
- 41-50 main segment (2,913 persons ≈ 28%)
- 46 years median age

Source: INBIMB
2017 HOSPITALS’ PERSONNEL CAMPAIGN RESULTS

6.556 tests
• 38 positive tests (0,6%)

<table>
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<th>County</th>
<th>Total tests</th>
<th>Positive results</th>
</tr>
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<tbody>
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<td>0</td>
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<tr>
<td>Dolj</td>
<td>488</td>
<td>0</td>
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</tbody>
</table>

Source: INBIMB
2017 STREET CAMPAIGN RESULTS

5.157 tests

- 202 positive tests (3.9%)

<table>
<thead>
<tr>
<th></th>
<th>Total tests</th>
<th>Positive results</th>
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</thead>
<tbody>
<tr>
<td>BIHOR</td>
<td>16</td>
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<tr>
<td>DOLJ</td>
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<tr>
<td>CONSTANȚA</td>
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<td>2</td>
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<tr>
<td>MUREȘ</td>
<td>25</td>
<td>2</td>
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<tr>
<td>CLUJ</td>
<td>86</td>
<td>6</td>
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<tr>
<td>SUCEAVA</td>
<td>318</td>
<td>16</td>
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<td>BUCUREȘTI</td>
<td>3270</td>
<td>134</td>
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<tr>
<td>BOTOȘANI</td>
<td>96</td>
<td>3</td>
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<td>IAȘI</td>
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<tr>
<td>GALAȚI</td>
<td>42</td>
<td>0</td>
</tr>
<tr>
<td>BRAȘOV</td>
<td>73</td>
<td>0</td>
</tr>
</tbody>
</table>

Source: INBIMB
2016 – 2018 DAA Treated patients in Romania

- More than 18 000 patients treated with DAA
- SVR obtained in ≈ 99%
UPDATE OF THE FRAMEWORK CONTRACT 2018-2019
MOH & NATIONAL INSURANCE HOUSE

• HBsAg and
• HCV-ABs lab tests

should be recommended by GPs for all listed patients
GENERAL PRACTITIONERS, A TURNING POINT IN HCV CONTROL

- **Testing**
  - (HCV Ab and HBsAg testing)

- **Patient referral to specialists for diagnosis, confirmation and treatment initiation**

- **Patient management (including treatment adherence)**
# NATIONAL DISEASE REGISTRY, A KEY TOOL

**Configured alerts for each user profile/level**

**Customized menu for each user profile (levels access)**

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## REGISTRUL NAȚIONAL - HEPATITE - HepaReg

### Alegeti optiunea dorita:

1. **NOMENCLATOARE**
   - Aici se gasesc toate nomendatoarele aplicatiei. In nomendatoare sunt salivate valorile predefinite ale anumitor campuri (ex. medici). [Accesat...](#)

2. **LISTA PACIENTI**
   - Lista pacientilor dumneavoastra. [Accesat...](#)

3. **CAUTARE PACIENT**
   - Daca doriți cauirea sau adaugarea unui pacient. [Accesat...](#)

4. **PROGRAMARI IN CURS**
   - Lista programarilor in curs. [Accesat...](#)

### Alerte:

- **Pacienti vizite intarziate:**
  - Pacient 1
  - Pacient 2
  - Pacient 3
- **Vizite astazi:**
  - Pacient 1
  - Pacient 2
  - Pacient 3
CONCLUSIONS

- **Development of National Testing Program**
  - HCV testing in early phases of infection,
  - Eliminating HCV virus as a foundation of a cost-efficient approach

- **Defining of National Prevention Standards**
  - HCV and/or HBV infection can be 100% prevented
  - Action plan at GP and hospital level
  - General population education

- **Development of a free access to treatment policy**
  - Elimination of access to treatment criteria
  - Applying the principle “first referral, first treated”