THE POWER DATA:
Trends analysis of chronic diseases in Slovakia
by the year 2025

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CHRONIC DISEASES

• Monitoring and subsequent analysis of priority indicators regarding trends in mainly chronic diseases is crucial for state health policy.

• Interpretation of objective outputs provides us with the possibility to present arguments and proposals for effective intervention programmes in order to:
  
  • have healthier population;
  • have stronger economy;
  • minimize negative impacts on the environment;
  • reduce regional disparities (within the country as well as within international comparisons).

• Recommendations on how to ensure the "health" for Europe was formulated in several WHO / EURO documents.

• The most comprehensive material was "Health in the 21st Century" with a focus on evaluating the effectiveness of the adopted measures.
Basic epidemiological indicators of chronic non-communicable diseases

INCIDENCE
- the number of newly diagnosed cases per year (e.g. per 100,000 population)

PREVALENCE
- the actual number of cases alive (e.g. per 100,000 population)

MORTALITY
- SURVIVAL of patients with a given disease/lethality
- PATIENT RISK PROFILE, DIAGNOSTICS, TREATMENT (costs), LIFE QUALITY
- POPULATION AT RISK by age, sex and regions
COLORECTAL CANCER (C18-C21) / Slovakia

**Prevalence** (cases)

- **1990-1999**
  - Prevalence (survival): 8,871
  - Deaths: 6,498 (36%)
  - Total: 15,369

- **2000-2009**
  - Prevalence (survival): 14,419
  - Deaths: 10,344 (43%)
  - Total: 18,843

**Incidence** (cases)

- **1999**
  - Men: 1,630
  - Women: 1,132
  - Total: 2,762

- **2008**
  - Men: 2,178
  - Women: 1,621
  - Total: 3,809

- **2012 (estimate)**
  - Men: 2,347
  - Women: 1,616
  - Total: 3,963

- **2025 ?**
  - Men: 3,065
  - Women: 2,101
  - Total: 5,166

Source: National Cancer Registry of Slovakia (Pleško, Safaei Diba, Obšitníková et al.)
COLORECTAL CANCER (C18-C21) / Slovakia

Mortality

0-64

Per 100,000 population, eur.standard, WHO/EUR

65+

0 50 100 150 200 250 300 350


- men-before revision
- men- after revision
- women before revision
- women after revision

muži pred revíziou
muži po revízií
ženy pred revíziou
ženy po revízií
LUNG CANCER (C33-C34) / Slovakia

### Incidence (cases)

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>1862</td>
<td>321</td>
</tr>
<tr>
<td>2008</td>
<td>1931</td>
<td>594</td>
</tr>
<tr>
<td>2012 (estimate)</td>
<td>1804</td>
<td>727</td>
</tr>
<tr>
<td>2025 ?</td>
<td>1750</td>
<td>1646.5</td>
</tr>
</tbody>
</table>

### Prevalence (cases)

- **Prevalence cases (survival)**
  - 1990-1999: 21,760
  - 2000-2009: 20,521

- **Deaths**
  - 1990-1999: 2,575
  - 2000-2009: 3,191

- **Survival rates**
  - Men: 10%
  - Women: 13%
LUNG CANCER (C33-C34) / Slovakia

Mortality

0-64

65+

Source: National Cancer Registry of Slovakia
BREAST CANCER (women) / Slovakia

Prevalence (cases)

- 1990-1999: 5,989 cases (survival) 62%
- 2000-2009: 6,683 cases (survival) 70%

Incidence (cases)

- y.1999: 1,836 cases
- 2008: 2,639 cases
- 2012 (estimate): 2,643 cases
- 2025: question mark

Mortality

- 0-64: Per 100,000 population, eur.standard, WHO/EURO 62%
- 65+: Per 100,000 population, eur.standard, WHO/EURO 65+
CANCER PROSTATE (C61) / Slovakia

Prevalence (cases)

- 1990-1999: 4,852 (39% prevalence, 3,085 deaths)
- 2000-2009: 6,214 (53% prevalence, 6,990 deaths)

Incidence (cases)

- y.1999: 838
- 2008: 1,758
- 2012 (estimate): 1,934
- 2025?: 4,463

Mortality

- 0-64: Per 100,000 inhab., eur. standard, WHO/EURO
- 65+: Per 100,000 inhab., eur. standard, WHO/EURO
Objective incidence/prevalence of circulatory diseases in the population of SR – absence (exception - myocardial infarction and stroke – data are collected in the national registry since 2007 – NHIC)

Source: National Health Information Centre - Slovakia
CIRCULATORY DISEASES / Slovakia

Mortality

Mortality

CIRCULATORY DISEASES / Slovakia

RESPIRATORY DISEASES/chronic obstructive pulmonary disease (J44)/Slovakia

Diseases due to chronic alcohol consumption / Slovakia

Mortality

Deaths /revision

1- cirrhosis, cardiomyopathy, encephalopathy, chronic pancreatitis, chronic ethyl. abusus, etc.

Deaths due to major chronic diseases in selected EU countries (2012)

<table>
<thead>
<tr>
<th>Country</th>
<th>% of total mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>France *</td>
<td>65.8</td>
</tr>
<tr>
<td>Finland</td>
<td>71.4</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>72.4</td>
</tr>
<tr>
<td>Germany</td>
<td>74.7</td>
</tr>
<tr>
<td>Austria</td>
<td>76.5</td>
</tr>
<tr>
<td>Greece</td>
<td>76.5</td>
</tr>
<tr>
<td>Slovenia</td>
<td>78.3</td>
</tr>
<tr>
<td>Poland</td>
<td>81.6</td>
</tr>
<tr>
<td>Estonia</td>
<td>81.6</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>81.2</td>
</tr>
<tr>
<td>Croatia</td>
<td>79.1</td>
</tr>
<tr>
<td>Slovakia</td>
<td>76.6</td>
</tr>
<tr>
<td>Hungary</td>
<td>81.1</td>
</tr>
<tr>
<td>Lithuania</td>
<td>81.3</td>
</tr>
<tr>
<td>Latvia</td>
<td>79.4</td>
</tr>
<tr>
<td>Romania</td>
<td>86.7</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>86.5</td>
</tr>
</tbody>
</table>

Per 100 000 population, EUR standard, EU population (2010)

Source: EUROSTAT 2015, Slovakia - data after revision
Conclusions 1.

Conditions for more objective information / interpretation of the population health status in the SR:

Positive

✓ Gradual shaping/ expansion of the information system under the administration of the National Health Information Centre (the tradition)
  ▪ statistical reports on the activity of outpatient units
  ▪ database of hospitalised patients

✓ Reports electronization ( currently with some shortcomings)

✓ e-Health – its application into practice (?)
✓ Staff enthusiasm in the Department of Health Registries
✓ Good cooperation with the Statistical Office of the SR
Negatives/shortcomings

- The data objectivity in the annual outpatient unit reports does not correspond with the reality (risk of aggregated data).

- Shortcomings in data reporting to several registries by physicians.

- The absence of effective cooperation between professional public, chief health experts and the Ministry of Health with the aim of obtaining more objective data in the trends and prognosis of the given disease.

- Physicians do not pay enough attention when filling in death certificates and that is why transformation changes in causes of death statistical classification are necessary (e-death certificates/e-birth register, etc.).

- The diversity of methodological approaches when assessing the population health status in the EU (comparing epidemiological indicators can lead to different interpretations / disinformation).
WHO material „Health21“
Opportunity to act together...

- Objective data
- Effective preventive measures
- Improving the population health status
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Graphics: Z.Kuchtová, NHIC