Health of Children in the Czech Republic

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Content:

• Demografy data
• Natality, Fertility, Life expectancy, Mortality
• Infant mortality
• Health care system for children
• Children morbidity
• Children mortality
• Children injuries
• Conclusions
THE CZECH REPUBLIC
Population in the Czech Republic by age

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inhabitants</td>
<td>10 287 189</td>
</tr>
<tr>
<td>Children 0-14</td>
<td>14.4%</td>
</tr>
<tr>
<td>Adult</td>
<td>71.2%</td>
</tr>
<tr>
<td>Old people over 65</td>
<td>14.4%</td>
</tr>
</tbody>
</table>
Population in the Czech Republic

• Population is ageing:
  low natality + decreasing mortality + survival of older persons

• Low natality:
  Natality and fertility are slowly increasing, 1.33 children per 1 woman at fertile age
Population by age to 1.7.

Source: Czech Statistical Office
Trend of proportion of population aged 0-14 years, 65 and more years and Age preference index, in 1950 - 2006

Source: Czech Statistical Office
Age preference index, in Europe

Source: databaze Health for All - WHO
Trend of Age preference index in selected european countries, in 1990 - 2006

Source: databaze Health for All - WHO
Crude birth rate, in Europe

Source: databaze Health for All - WHO
Trend of Crude natality rate in selected european countries, in 1990 - 2006

Source: databaze Health for All - WHO
Total fertility rate

Source: databaze Health for All - WHO
Trend of Total fertility rate in selected European countries, in 1990 - 2006

Source: databaze Health for All - WHO
Fertility in the CR and selected countries

Source: WHO Euro

Velebil 2007
Life expectancy

73.45 for men
79.67 for women
Mortality rate

• Half of all deaths were caused by diseases of the circulatory system, while neoplasm, was the second most frequent, caused 27% deaths

(men - MN of respiratory system, women – MN of breast)
Standardized mortality rate - males

- RUS (2002)
- UKR (2002)
- LTU (2002)
- HUN (2002)
- SVK (2002)
- POL (2002)
- SVN (2002)
- IRE (2001)
- FIN (2002)
- LUX (2002)
- DEU (2001)
- FRA (2000)
- NOR (2001)
- GRE (2001)
- SWE (2001)
- ICE (2001)

- zhoubné novotvary
- nemoci oběhové soustavy
- vnější příčiny
- ostatní
Standardized mortality rate - females

- RUS (2002)
- BLR (2002)
- BUL (2002)
- HUN (2002)
- CRO (2002)
- CZE (2002)
- POL (2002)
- SVN (2002)
- POR (2002)
- MAT (2002)
- GRE (2001)
- FIN (2002)
- NOR (2001)
- ICE (2001)
- ITA (2001)
- SPA (2001)

- malignant neoplasms
- dis. of the circulatory system
- external causes
- other
Infant mortality

- Infant mortality 3.3 per mill
  Per 1000 live born children only 3.3 died in the 1st year of life.
  (Low neonatal mortality - in the first 6 days of life)

- This level is historically the lowest.
Infant mortality rate

Source: database Health for All - WHO
Trend of infant mortality rate in selected European countries, in 1990 - 2006

Source: databaze Health for All - WHO
Infant deaths per 1000 live births

Source: WHO Euro

Velebil 2007
Trend of infant mortality rate, in 1950 - 2006

Source: Czech Statistical Office
Trend of mortality rates of children till 1 year of age in 1960 - 2006

Source: Czech Statistical Office
Percent of normal birthweight babies in the CR and selected countries

Source: WHO Euro Velebil 2007
Cesarean sections in the CR and selected countries

Source: WHO Euro Velebil 2007
Proportion of twin deliveries in the Czech Republic in 1995-2006

Source: WHO CC in Perinatal Medicine, Prague

Velebil 2007
Abortions per 1000 live births

Source: WHO Euro

Velebil 2007
Low infant mortality - causes

The high quality of prenatal and neonatal care.

• Preventive care about pregnant women – paid from public health insurance
  – High coverage (98.6% receiving prenatal care).
  – Early registration (81.8% in 1st trimester)
  – More than 6 visits
  – Ultrasound screening
• Hospital deliveries (99.8% of all births)
• 12 perinatal centres, equipped with top-quality diagnostic and therapeutic technology and highly educated staff. These workplaces are closely connected with specialized intermediary centres of neonatal care for premature newborns or newborns with low birth weight.
• Frequency of LBW 7.2%
Perinatal mortality is at very low level despite of influence of changing conditions:

- Aging population, increasing proportion of older mothers
- Increasing proportion of LBW
- Increasing proportion of multiple pregnancies
- Increasing proportion of woman without pregnant care
Medical Care in the CR

• Medical care in the CR is mostly paid by public medical insurance, which is obligatory by law.
Medical care for children

• Medical care for children in the CR was and is still at a high level.

• Essential medical care for children is covered by public health insurance. The state pays insurance premiums for children and adolescents until the time of completion of preparation for a profession (maximally to 26 years of age).
• Practically all children are born in maternity hospitals and are (mostly) examined by a pediatrician immediately after birth.

• During their stay in the maternity hospital, all children undergo screening tests for phenylketonuria, hypothyroidism, cararacts, congenital adrenal hyperplasia – and are vaccinated against TBC.

• Screening examinations are also performed on the hip joints and on the hearing in children with congenital hypothyroidism

• Newborn screening is being gradually extended.
• Preventive care for children begins in the prenatal and perinatal period with cooperation between obstetricians, geneticists and pediatricians.

• General practitioners for children and adolescents provide primary medical care for children in the CR.

• Chronically ill or handicapped children are included in dispensary groups, in which they are monitored to a greater degree by a pediatrician and the relevant specialists. Roughly every fifth child is examined annually in the dispensary care of pediatricians.
• Contemporary pediatrics has a well-introduced system of preventive examinations and an immunization program based on a vaccination calendar paid from public medical insurance.

• The law enables /stipulates 11 preventive examinations up to the age of 18 months and then two-year intervals as the frequency of preventive medical examinations from 3 years of age of the child.
Health of Children of the CR

• In spite of the very good level of medical care for the children, the state of health of the child population of the CR is not improving substantially.
• There is no apparent reduction in sickness rate of children and adolescents. There is an extremely high rate of sickness from acute respiratory diseases, especially amongst children attending preschool facilities.
• There are a lot of serious injuries, increasing number of allergic diseases, diabetes, diseases of the nervous system and behavioural disorders.
• Reduced physical activity and unhealthy eating habits are also leading to greater numbers of obese children and adolescents in the CR.
• There is no reduction in the numbers of neglected, maltreated and abused children – including commercially and sexually abused children.
• An increase has occurred in the syndrome of hazardous behaviour amongst adolescents.
The proportion of diseases followed up in children by chapters of ICD - 10, age group 0 - 14

- Respiratory system: 25.3%
- Nervous system: 22.8%
- Endocrine: 7.2%
- Diseases of the skin: 11.9%
- Other: 32.8%

Source: The Institute of Health Information and Statistics of the Czech Republic
The proportion of diseases followed up in children by chapters of ICD - 10, age group 15 - 18

- Respiratory system: 21.6%
- Musculoskeletal system: 9.7%
- Nervous system: 25.5%
- Endocrine system: 9.6%
- Other: 33.6%

Source: The Institute of Health Information and Statistics of the Czech Republic
Trend of the number of followed up children for Diabetes mellitus per 100,000 registered patients in age group 0-14 and 15-18

Source: The Institute of Health Information and Statistics of the Czech Republic
Trend of the number of allergic children per 1,000 registered patients in age group 0 - 14 and 15 - 18

Source: The Institute of Health Information and Statistics of the Czech Republic
Trend of the number of followed up children for Asthma per 100,000 registered patients in age group 0 - 14 and 15 - 18

Source: The Institute of Health Information and Statistics of the Czech Republic
Trend of the number of followed up children for Obesity per 100 000 registered patients in age group 0 - 14 and 15 - 18

Source: The Institute of Health Information and Statistics of the Czech Republic
Trend of regular smoking of boys in the period of 1994 – 2006
Vývoj pravidelného kuřáctví u chlapců v období 1994 až 2006

![Diagram showing the percentage of regular smoking among boys aged 11, 13, and 15 years old from 1994 to 2006.](image-url)
Trend of regular boys’ beer drinking

in the period of 1994 – 2006
Vývoj pravidelného pití piva u chlapců v období 1994 až 2006

<table>
<thead>
<tr>
<th>Rok</th>
<th>11 let</th>
<th>13 let</th>
<th>15 let</th>
</tr>
</thead>
<tbody>
<tr>
<td>1994</td>
<td>35,4</td>
<td>14,9</td>
<td>16,4</td>
</tr>
<tr>
<td>1998</td>
<td>29,3</td>
<td>14,5</td>
<td>10,5</td>
</tr>
<tr>
<td>2002</td>
<td>36,9</td>
<td>21,1</td>
<td>9,3</td>
</tr>
<tr>
<td>2006</td>
<td>35,8</td>
<td>14,9</td>
<td>9,1</td>
</tr>
</tbody>
</table>
Beer drinking 6x and more during last 30 days

Girls / Boys
Age structure of first narcotics experience

Beer / Cigarettes / Marihuana / Ecstasy
## Deaths

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>0</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-19</th>
</tr>
</thead>
<tbody>
<tr>
<td>II.</td>
<td>Neoplasms</td>
<td>9.3.2.3.2.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VI.</td>
<td>Diseases of the nervous system</td>
<td>4.2.3.2.3.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IX.</td>
<td>Diseases of the circulatory system</td>
<td>7.7.6.5.4.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X.</td>
<td>Diseases of the respiratory system</td>
<td>6.5.5.4.5.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XVI.</td>
<td>Certain conditions originating in the perinatal period</td>
<td>1.x.x.x.x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XVII.</td>
<td>Congenital malformations, deformations and chromosomal abnormalities</td>
<td>2.4.4.6.6.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XVIII.</td>
<td>Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified</td>
<td>5.10.9.7.8.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>XIX.</td>
<td>Injury, poisoning and certain other consequences of external causes</td>
<td>3.1.1.1.1.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>others</td>
<td>Others</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Order of causes of death

Zdroj dat: Deaths - CZSO
Specific mortality rates - infants

Source: Czech Statistical Office

[Graph showing specific mortality rates for infants by gender and total, with data from 1980 to 2006, indicating a decreasing trend over the years.]
Specific mortality rates - boys

per 1 000 inhabitants in corresponding age group

Source: Czech Statistical Office
Specific mortality rates - girls

per 1 000 inhabitants in corresponding age group

Source: Czech Statistical Office
The proportion of causes of death in children till 1 year of age by chapters of ICD - 10

- Congenital malformations: 18.8%
- Symptoms, signs: 4.0%
- Injury, poisoning: 5.4%
- Nervous system: 4.0%
- Of perinatal period: 58.0%
- Other: 9.9%

Source: The Institute of Health Information and Statistics of the Czech Republic
The proportion of causes of death in children 1 - 14 years old by chapters of ICD - 10

- Nervous system: 15.5%
- Neoplasms: 19.3%
- Injury, poisoning...: 36.2%
- Congenital malformations: 9.7%
- Respiratory system: 5.8%
- Circulatory system: 7.2%
- Other: 6.3%

Source: The Institute of Health Information and Statistics of the Czech Republic
The proportion of causes of death in children 15 - 19 years old 
by chapters of ICD - 10

Injury, poisoning... 73.8%
Respiratory system 2.8%
Circulatory system 4.0%
Nervous system 4.4%
Neoplasms 9.3%
Other 5.6%

Source: The Institute of Health Information and Statistics of the Czech Republic
The Czech Republic ranges among countries with high rate of injuries.

In the Czech Republic accidents are the most common cause of death of children and young adults.

According to statistics, more than 100 children die each year as a result of accidents.

Of these - more than 30% die as a result of traffic accidents.
Injuries mortality – main causes, 2005

- **Children (0-14)**
  - Falls: 40%
  - Traffic accidents: 30%
  - Suicides: 10%
  - Drawing and not specified: 5%
  - Other: 20%

- **Adults (15-64)**
  - Falls: 60%
  - Traffic accidents: 20%
  - Suicides: 10%
  - Drawing and not specified: 5%
  - Other: 5%

- **Seniors (65+)**
  - Falls: 50%
  - Traffic accidents: 30%
  - Suicides: 10%
  - Drawing and not specified: 5%
  - Other: 5%
The most frequent causes of death in 2004 and 2005, children and youth people

- Foreign body entering
- Poisoning
- Toxic effects
- Frostbite and not specified
- Traffic accidents
- Falls
- Traffic accidents
- Drowning
- Other

• NAP is a systematic solution of the intentional and unintentional child injury prevention in children aged 0 - 18 years in the Czech Republic.
• NAP maps the current activities of the Czech Republic in the area of child injury prevention, it evaluates these activities in terms of the strengths and weaknesses, the utilisation of opportunities and diversion of threats, and it establishes the most important tasks of individual ministries for the period of 2007-2017.
• NAP was endorsed by the Czech government on 22 August 2007
• One of the major tasks of the Ministry of Health is the development of the National Registry of Childhood injuries.
Conclusions

• Medical care for children in the CR is at high level
• Infant mortality is very low thanks of high level of perinatal care
• The main cause of children deaths are injuries
• In the CR there is increasing trend of some diseases (diabetes, allergic, asthma, obesity..)
Aimes

• To keep a current level of perinatal care
• To improve a preventive health care system
• To focus on social aspects of health
• To deal with child injuries mortality and morbidity.

– Health of Children / Child Violence and Injury Prevention will be proposed as one of priorities of the Czech Republic chairmanship of the EU in 2009
Thank you for your kind attention

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