Primary, secondary and tertiary pediatric care in the Czech Republic

Hana Cabrnochová, MD
Society for Primary Pediatric Care
Head

Prof. Jan Janda, MD PhD
Czech Pediatric Society
Secretary

Czech Medical Association of J.E. Purkyne
Czechoslovakia  Population cca 10.2 million
1918- 1992
Czech Republic
since 1993
Member of EU since
1.5.2004
Population cca 10.2 million
1918- 1992
Czech Republic
since 1993
Member of EU since
1.5.2004
Basic information

Czech Republic (CZ) - Demographic data 2006

Population 10,215,000
Population density 129 per sq km
Neonatal mortality rate 2.36%
Infant mortality rate 3.4%
Life expectancy at birth - male 72.03
Life expectancy at birth – female 78.51
GDP (millions of USD) - 168.142
GDP per capita at Purchasing Power Parity: 1USD = 17,80 Czech Crown

(December 2007)
Demographic structure of children in the Czech population 2006

- 0-1 year: 4.5%
- 1-4: 16.9%
- 5-9: 20.8%
- 10-14: 27.8%
- 15-19: 30.0%

2,184,141 children and adolescents

- According the WHO definition a child is defined as a human being up 18 years
- After negotiations with insurance companies, pediatricians are paid taking care of children and adolescents up 19. birthday!!
Basic demographic data – Czech Republic

Population 10,287,189
Children and adolescents 2,130,760
Population density 129/sq km
Neonatal mortality rate 2.3
Infant mortality rate 3.3
Life expectancy at birth -
  male 73.7
  female 79.7

Age distribution of children and adolescents in Czech Republic:

- 0-1 years: 5%
- 1-4 years: 18%
- 5-9 years: 21%
- 10-14 years: 25%
- 15-19 years: 31%
Natality - the last decade
There is a significant increase during the last 2 years.
Nevertheless, in 60thies it was some 200,000 newborns/year
Infant Mortality Rate Czech Republic (CZ) Distribution according age categories

Development of the neonatal and infant mortality

Czech Republic 1960-2005

- 0-6 days
- 7-27 days
- 28-364 days
Infant Mortality Rate- Recent data
Czech Republic (CZ)

Recent data range the CZ as one of the best worldwide

The infant mortality rate was always relatively low, but today it meets the best international standards being better than in many western developed countries.

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>5.9</td>
</tr>
<tr>
<td>1998</td>
<td>5.2</td>
</tr>
<tr>
<td>1999</td>
<td>4.62</td>
</tr>
<tr>
<td>2000</td>
<td>4.09</td>
</tr>
<tr>
<td>2001</td>
<td>3.96</td>
</tr>
<tr>
<td>2002</td>
<td>4.15</td>
</tr>
<tr>
<td>2003</td>
<td>3.9</td>
</tr>
<tr>
<td>2004</td>
<td>3.7</td>
</tr>
<tr>
<td>2005</td>
<td>3.4</td>
</tr>
</tbody>
</table>
Primary pediatric care in CZ

There was a long tradition of the „pure pediatric system“ in the former Czechoslovakia. That system continues also today. GP’s are not involved taking care of children and adolescents !!

Every child is to be registered at a pediatrician

Czech pediatrician is regarded not as specialist, but as GP for children and adolescents
(General Pediatric Practitioner)= GPP

Children and adolescents aged 0 -19 years are registered at pediatricians at 98%
Three systems of primary care of children in Europe

1. Pure pediatric system (only pediatricians, in some cases up 18th/19th year (e.g. Czech Republic)
2. Combined system (e.g. Germany)
3. General practitioners system only (e.g. United Kingdom)

See also: Demography of Pediatric Primary Care in Europe: Delivery of Care and Training. PEDIATRICS Vol. 109 No. 5 May 2002, pp. 788-796 (UNEPSA task force) see the UNEPSA- website: http://www.unepsa.org/information_publication.htm

Free access: UNEPSA- website www.unepsa.org
Care of children in Europe
(UNEPSA- Task Force)

Population < 15 years: 158 million
Pediatricians serving the children: 167 444
The median number of children/pediatrician 2094
(nevertheless variation from 401 to 15 150!!)

1. A pediatric system existed in 12 countries (more than 70% of children served by pediatricians)
2. Combined system in 16 countries (ca 50% children served by pediatricians, 50% by GPs)
3. General practitioners system (only GPs, no pediatricians at all providing the primary care)
Care of children in Europe
(UNEPSA- Task Force)

In 14 of 34 countries, pediatricians worked in various aspects of community medicine, such as developmental pediatrics, well-infant care, school physicians.

**Infant mortality rate (IMR)** was lower in countries with a higher income per capita.

**But:** the pediatric system of primary care had a protective effect when looking at IMR as the outcome.

In 75% of the countries, some form of training in pediatric care for pediatricians was reported; the corresponding data for general practitioners was 60% only.
GPP in primary pediatric care in the Czech Republic in 2007

- 2,293 pediatricians
- 9-11 pediatricians/10,000 population up to 19 years
- 98% of GPP’s work on private basis
- The proportion of breast-fed children by the end of the 6th month 46%,
- High number of Baby friendly hospitals awarded by UNICEF
The effectiveness of primary care providing by GPPs

- Responsibility for newborns after discharge from maternity clinic - GPP visits
  - The CZ within 48 hours
  - EU within 14 days
- Preventative examination in all age categories, altogether 18 up to the 19 birthday
- Vaccination schedule – vaccination in children is compulsory, relatively weak campaigns antivaccionists
Czech Health and Vaccination Record

An important tool on the level of primary care.

Property of the family

Records of preventative examinations

Vaccination Records

Special brochure with information for parents and /adolescents

Growth charts

Nomograms of Blood Pressure Evaluation

(Second Task Force percentile nomograms)

The Czech Health and Vaccination Record has been awarded by the European Central of WHO
Addenda to the growth charts in Czech Health and Vaccination Record

Infants psychomotoric development

Blood pressure normal value (Second Task Force Report)
Breastfeeding in Czech Republic 2006

Special board for enhancement of breastfeeding- lactation league organized by neonatologists and pediatricians

% of breast fed infants in years 2000-2006
Proportion of children with acute respiratory disease treated with antibiotics

positive impact of the CRP-examination

Introduction of CRP rapid measurement in pediatric office
Vaccination program in CZ

Coverage level of vaccination (%):

- **BCG**: 98.5% (just activities trying to stop BCG vaccination due to low TBC incidence and too high rate of side and adverse effects)
- **DTP**: 97.0 – 98.7%
- **Polio**: 96.7%
- **MMR**: 96.7
- **HepB**: 87.2%

(all pregnant women are tested for HbsAG and in a positive finding their newborns are immediately vaccinated in maternity clinic)

Please, also see the website:


and www.ockovanideti.cz with some English abstracts
High age of primary care pediatricians, prevalence of women and ageing of pediatricians are becoming a serious problem.

- **age 35 - 49**: 51.9%
- **age 50 - 64**: 45%
- **age 65 +**: 3.6%

- **Female**: 79%
- **Male**: 21%
Secondary pediatric care - Czech Republic
Departments of Pediatrics - in patient care

- **University Hospitals:**
  - Prague, Brno, Pilsen, Olomouc, Hradec Kralove: 7
  - Major Regional Hospital: 4
  - District Hospital: 70

- **Number of licensed beds for children:** 3867
  (including intermed/intermediate intensive care units)

Average length of stay for pediatric patients 4.4 days

- Neonatal units not included

Data scheduled by the end 2006
Specialized pediatric centers

Two major pediatric hospitals:
Prague- Motol and Brno- Černá Pole

Pediatric Hospital Motol- since 2006 under reconstruction

Started originally with more than 700 beds for children under one roof in 1971, one of the largest facilities worldwide with all pediatric subspecialities in a monoblock building under one roof
Specialized pediatric centers: Hematology/Oncology, Cardiology, Cardiosurgery, Diabetology, Nephrology/Renal Transplantation, Central Intensive Care Unit, General Pediatric Surgery, Neurosurgery, Orthopedics, Ophtalmology, Otorhinolaryngology, Ophtalmology, Pediatric Gynecology, Sport Medicine, Center for Injury Prevention, Handicapped Children, etc.
A major center for diagnostics of inborn metabolic errors

- **Department of Pediatrics- Prague- Karlov:**
  (originally the residence of the old Prague orphanage (here was the famous „Prager Findelanstalt“, institution well known to German pediatricians)

- Today an international recognised center specialized for laboratory diagnostics and treatment of inborn metabolic errors.

- **Attached to the 1st Medical Faculty, Charles University Prague-Karlov**
Pediatric training 2007
residency and speciality

- Basic pediatric training     3 years
- Special pediatric training   2 years
  1. Primary care pediatrics   (GPP)
  2. Secondary care pediatrics  
     (attached to hospitals)
  3. Tertiary care pediatricians- pediatric 
     subspecialities, major centers attached to 
     hospitals and university facilities
Pediatric training Czech Republic 2007

subspecialities

- CZ follows recommendation of the EU, the same subspecialities in the framework of pediatrics are recognised.
- The curriculum of a subspecialist involves 5 year basic training (full pediatrician), following at least of 1 year more (trained in an accredited center)
- Curricula adapted to European subspecialities societies
- Please also see: www.unepsa.org/psubsoc.htm
Annual National Meeting of the Czech Pediatric Society with International Participation

In 2008 our meeting starts on 25th of September up 27th of September, place of venue Jihlava, please see the congress website:

www.pediatrie2008.cz
Greetings from Prague, Czech Republic

Invitation to the Czech Pediatric Congress
Sept 25-28th 2008

and

European Pediatric Congress
Europaediatrics 2008, Istanbul,
June 14th - 17th, 2008

www.europaediatrics2008.org/
www.unepsa.org


(Abstracts from world congresses Beijing and Cancún free available, Athens 2007 comes soon)