



THE SUPPLY OF OUTPATIENT SERVICES AND ITS GEOGRAPHICAL DISTRIBUTION WITHIN THE REGIONS OF THE CZECH REPUBLIC

Ing. Jana Rozmarinová



Introduction

- Healthcare system in the Czech Republic – important part of the public sector
- Equal quality of care for everyone as an important public policy goal
- Measuring inequalities - practice that fosters continuous improvement within health care systems (WHO, OECD)
- Geographical point of view in relation to the political aim

Studies measuring inequalities considering measuring inequalities in HC supply from the geographical point of view

International

- Gini coefficient (e.g. Chang, 1998; Horev, 2004; Jian 2015; Omrani-Khoo, 2013; Mobaraki, 2013; Chen, 2014; Gravelle 2001)
- Robin Hood index (Wilkinson 2000, Inequitable distribution of GP in Australia)

Czech Republic

- Gini coefficient, Robin Hood index (Dlouhý, 2000)
- Dlouhý (2018) describes possibility of measurement of the geographic inequality in the case of multiple health resources with the data envelopment analysis (DEA)

Aim of the paper

- To analyse the differences in supply of the outpatient care and dentist care among Czechs Regions
- To analyse the activities made by the central government and government of the regions and health insurance companies

Methodology

Data

- The data of the location of outpatient practitioners and dentists
- Institute of Health Information and Statistics of the Czech Republic
- Years 2003, 2013
- Outpatient physicians - both those with independent practices and those from hospital department
- Special care - dentists

Method

- Calculation of the number of physician per 10 000
- Calculation of the measurement of inequality
- Document analysis (regional governments, central government)

Measurement of the inequalities

- The absolute range and the relative range
 - Simple indicators based on the extreme values
- The Gini Coefficient
 - originally used for measuring the income inequalities in the society
 - approached from the summary of the Lorenz Curve of the income distribution
- The Robin Hood index
 - The proportion of the supply (amount of outpatient physicians or amount of dentist) which is needed to be redistributed so to reach a perfect equality among the regions. (0 – perfect equality, 1 – perfect inequality))

Results

Region	Population		2003		2013		Physicians	Dentists
	2003	2013	Physicians	Dentists	Physicians	Dentists	Change in %	Change in %
Prague	1,161,851	1,244,762	49.37	9.67	59.33	11.66	20.2	20.7
Středočeský	1,131,402	1,297,209	21.57	4.67	21.76	4.77	0.9	2.3
Jihočeský	624,958	636,443	25.55	6.10	29.49	6.43	15.4	5.4
Plzeňský	549,307	572,882	31.11	7.32	32.76	7.38	5.3	0.9
Karlovarský	304,078	300,999	23.58	5.26	27.71	5.68	17.5	8.0
Ústecký	819,851	825,842	23.54	5.07	24.69	5.15	4.9	1.4
Liberecký	427,096	438,473	23.25	5.48	26.36	5.77	13.4	5.3
Královéhradecký	547,720	552,053	28.72	6.46	33.35	7.21	16.1	11.5
Pardubický	506,389	515,781	24.92	5.59	26.64	5.87	6.9	5.1
Vysočina	517,572	510,522	22.30	5.47	24.82	6.17	11.3	12.8
Jihomoravský	1,121,669	1,168,577	30.31	6.78	34.87	7.91	15.0	16.7
Olomoucký	636,227	636,659	28.40	6.52	32.51	7.08	14.5	8.6
Zlínský	592,300	586,594	24.06	6.43	27.96	7.14	16.2	11.0
Moravskoslezský	1,261,229	1,223,923	25.09	5.65	28.59	6.55	13.9	16.1
Czech Republic	10,201,649	10,512,732	27.27	6.18	30.3	6.77	11.1	9.5

Results

Inequality Measure	Physicians	
	2003	2013
Absolute range	27.8	37.57
Relative Range	1.02	1.22
Robin Hood index (in%)	5.8	6.6
Gini coefficient	0.1102	0.1259

Results

Inequality Measure	Dentists	
	2003	2013
Absolute range	5	6.89
Relative Range	1.00	1.02
Robin Hood index (in %)	7.1	8.2
Gini coefficient	0.0983	0.1832

The institutions and their efforts to a better geographical distribution of health care services

2017 Ministry of Health of the Czech Republic

- subsidies will be provided to new practitioner od pediatrician in disadvantages areas
- aim of the program should ensure sufficient availability of dental care in all regions of the Czech Republic
- list of areas with limited availability of care

2018 Ministry of Health of the Czech Republic

- subsidies will be provided to 100 new dentists
- aim of the program should ensure sufficient availability of dental care in all regions of the Czech Republic
- list of areas with limited availability of care

Government of the regions

- The governments of individual regions especially those, where the care is lacking rarely mention this problem in their strategic plans.
- The only region Ústecký, emphasizes that the average number of the outpatient is deeply below the average values for the Czech Republic.
- Further, the text describes the development of outpatient health care in the Region as insufficient.

Conclusion

- The supply of the outpatient is not equally distributed
- We identified the region with the lowest number of the physician (dentist) per 10 000 (Středočeský, Vysočina, Liberecký, Ústecký)
- measurement of inequalities shows, that the trend to a higher inequality over time (2003 – 2013) is increasing
- Measurement of inequalities show that the distribution of outpatient care tends to unequal distribution from 2003 to 2013
- Comparison with previous research (Dlouhý, the tendency to more inequitable distribution is emphasized on the data for 1996 and 2002)
- Central government reacts with subsidy providing in 2017, 2018
- Government regions activities – only Ústecký region describe region's disadvantage in its strategic plans
- Future research challenge – a research to determine implications for health outcomes



Thank you for Your attention