

付表1. 医籍登録年分類別就業地域別の1980年および2002年医師分布(クロス集計)

		就業地域	2002年			全国
			大都市	市部	郡部	
0群: (1979- 1980年)	1980年	大都市	1,633	1,526	277	3,436
		%	47.5	44.4	8.1	100
		市部	956	3,957	818	5,731
		%	16.7	69.0	14.3	100
		郡部	139	608	251	998
		%	13.9	60.9	25.2	100
		全国	2,728	6,091	1,346	10,165
		%	26.8	59.9	13.2	100
1群: (1977- 1978年)	1980年	大都市	1,193	1,073	193	2,459
		%	48.5	43.6	7.8	100
		市部	804	3,190	668	4,662
		%	17.2	68.4	14.3	100
		郡部	144	421	210	775
		%	18.6	54.3	27.1	100
		全国	2,141	4,684	1,071	7,896
		%	27.1	59.3	13.6	100
2群: (1975- 1976年)	1980年	大都市	1,086	973	190	2,249
		%	48.3	43.3	8.4	100
		市部	597	2,642	535	3,774
		%	15.8	70.0	14.2	100
		郡部	84	382	173	639
		%	13.1	59.8	27.1	100
		全国	1,767	3,997	898	6,662
		%	26.5	60.0	13.5	100
3群: (1973- 1974年)	1980年	大都市	1,061	829	157	2,047
		%	51.8	40.5	7.7	100
		市部	515	2,622	423	3,560
		%	14.5	73.7	11.9	100
		郡部	74	290	202	566
		%	13.1	51.2	35.7	100
		全国	1,650	3,741	782	6,173
		%	26.7	60.6	12.7	100
4群: (1971- 1972年)	1980年	大都市	1,004	605	122	1,731
		%	58.0	35.0	7.0	100
		市部	411	2,552	392	3,355
		%	12.3	76.1	11.7	100
		郡部	72	277	245	594
		%	12.1	46.6	41.2	100
		全国	1,487	3,434	759	5,680

		%	26.2	60.5	13.4	100
5群: (1969- 1970年)	1980年	大都市	1,144	527	116	1,787
		%	64.0	29.5	6.5	100
		市部	396	2,778	334	3,508
		%	11.3	79.2	9.5	100
		郡部	71	301	319	691
		%	10.3	43.6	46.2	100
		全国	1,611	3,606	769	5,986
		%	26.9	60.2	12.8	100
6群: (1967- 1968年)	1980年	大都市	1,182	387	78	1,647
		%	71.8	23.5	4.7	100
		市部	385	3,144	270	3,799
		%	10.1	82.8	7.1	100
		郡部	67	256	377	700
		%	9.6	36.6	53.9	100
		全国	1,634	3,787	725	6,146
		%	26.6	61.6	11.8	100
7群: (1965- 1966年)	1980年	大都市	859	230	58	1,147
		%	74.9	20.1	5.1	100
		市部	241	2,303	151	2,695
		%	8.9	85.5	5.6	100
		郡部	34	155	331	520
		%	6.5	29.8	63.7	100
		全国	1,134	2,688	540	4,362
		%	26.0	61.6	12.4	100
8群: (1963- 1964年)	1980年	大都市	888	226	32	1,146
		%	77.5	19.7	2.8	100
		市部	196	2,260	134	2,590
		%	7.6	87.3	5.2	100
		郡部	28	151	344	523
		%	5.4	28.9	65.8	100
		全国	1,112	2,637	510	4,259
		%	26.1	61.9	12.0	100
9群: (1962年 及び以前)	1980年	大都市	9,324	1,077	207	10,608
		%	87.9	10.2	2.0	100
		市部	1,205	18,454	824	20,483
		%	5.9	90.1	4.0	100
		郡部	250	901	3,506	4,657
		%	5.4	19.3	75.3	100
		全国	10,779	20,432	4,537	35,748
		%	30.2	57.2	12.7	100

別紙 4

研究成果の刊行に関する一覧表

雑誌

発表者氏名	論文タイトル	発表誌名	巻号	頁	出版年
Inoue K, Matsumoto M, Sawada T	Evaluation of a medical school for rural doctors	Journal of Rural Health	in pres	in press	2006 (予定)

学会発表

発表者氏名	論文タイトル	学会名	開催地	出版年
Kobayashi Y, Toyokawa S	Examination of “Spill-over Effects” of the Policy Expanding the Number of Medical Schools in Japan	The 5 th World Congress of International Health Economic Association (iHEA)	Barcelona, Spain	July 2005

Examination of "Spill-over Effects" of the Policy Expanding the Number of Medical Schools in Japan

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Introduction

In the 1970s, because of the shortage of physicians and their maldistribution, the number of medical schools nearly doubled in Japan.

Although the policy has eased the overall shortage of physicians, many directors in rural hospitals are facing the difficulty in recruiting physicians.

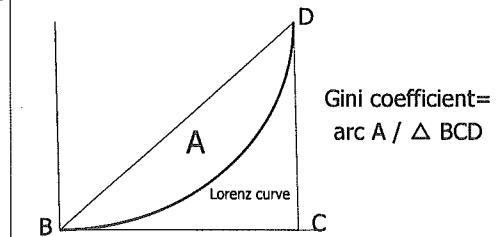
We examined the effects on physician distribution of the policy of increasing the medical schools.

Methods

From the data of national census and physician registry, we analyzed the number of physicians in relation to the population in all municipal bodies in Japan (approximately 3,200).

Also, we calculated the Gini coefficients for physician distribution, using the cumulative percentages of physicians and the population in each municipalities according to the ascending order of the physician/population ratio.

Gini coefficient



Results

Number of Physicians in Japan between 1970 and 2000

	1970	1980	1990	2000
Number of Physicians	113,214	148,815	203,797	255,792
Physician/100,000 population	109	127	165	202

Changes in physician per 100,000 population in municipal bodies by size of population (Median)

	1980	1990	2000
<5,000	48.3	53.0	62.3
<10,000	49.9	55.6	66.7
<30,000	60.6	76.5	92.4
<50,000	84.8	114.2	144.7
<100,000	90.2	120.4	144.8
<300,000	108.9	142.9	173.9
300,000<	138.5	163.7	196.5

Changes in Gini coefficients

	1980	1990	2000
Gini coefficient	0.331	0.340	0.334

Summing up ...

Gini coefficient shows that there was no improvement between 1980 and 2000.
 In terms of the number of physicians, those municipalities with a population more than 50,000 gained proportionally more physicians, those with fewer than 10,000 showed little gain.

Reasons for maldistribution

- Professional isolation
- Tendency of specialization
- Family's disadvantages (education, culture, shopping, etc.)
- Fee-for-services (The payment system favors "the volume")

Where have physicians gone?

	1980	2000	%increase
Internal medicine	69,038	98,457	143%
Surgery	27,626	35,309	128%
Pediatrics	33,286	33,580	101%
Cardiology	10,033	20,455	204%
Psychiatry	5,896	12,363	210%
Anesthesiology	3,277	8,427	257%
Neurosurgery	2,944	6,767	230%

Conclusions

Despite the doubling of the number of physicians, the "spill-over effects" has not been observed in smaller municipalities.
 The ageing of Japanese society and advances in medical technologies has increased the demand for physicians.