

BENCHMARKS OF FAIRNESS FOR HEALTH CARE REFORM IN THAILAND-COMBINING EVIDENCE WITH OPINION OF THE CIVIC GROUP

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Abstract. The concept of the Benchmarks of Fairness was tried in Thailand before the big reform of universal coverage policy in 2001. The first phase of the Benchmarks in 1999 involved the analysis of the national health reform proposal as well as the analysis of ongoing field trials of health reforms in two provinces. Though the participants were predominately health personnel, the results suggested the power of combining qualitative viewpoints of participants with the quantitative indicators within the province to move health reforms to more equitable, more efficient and more democratic directions. The second phase of the Benchmarks of Fairness, therefore, tested the possibility of involving wider participation of the civic groups related, and not-related to health, in assessing their provincial health system. The health achievements of the provinces as measured by 81 indicators, in the 9 benchmarks, were provided to the civic groups before focus group discussions in 10 selected provinces to facilitate discussions based on evidence. More qualitative data were obtained from the discussions as well as their judgements on the fairness of their provincial health system. Having completed this second phase, it was recommended that the benchmarks tool could be further endorsed as the basis for monitoring the progress of health reform by province and the effect of health care decentralization. To accomplish this monitoring, the civic groups should have continuous access to evidence, in line with the benchmarks, and they should be provided with the opportunity to express their views, which is helpful in monitoring fairness in the long run.

INTRODUCTION

The concept of the Benchmarks of Fairness (Daniels *et al*, 1996) was first tried in Thailand in 1999 when health care reform was at the pilot phase in some provinces (Pannarunothai and Srithamrongsawat, 2001). The first phase of the Benchmarks involved the analysis of a national health reform proposal as well as the analysis of an ongoing field trial of health reform in two provinces. Though the participants were predominately health personnel, the results suggested the benefits of combining the qualitative viewpoints of participants with the quantitative indicators within the province to move health reform in a more equitable, efficient and democratic direction.

The second phase of the Benchmarks of Fairness was proposed to test the possibility of involving a wider range of participants, civic groups related and not-related to health, in assessing the provincial health system. Data collection during the second phase occurred at the beginning of two major innovations. The first was the implementation of universal health coverage 2001. The second, the onset of the former government's policy on decentralization. These two innovations provided a good opportunity to evaluate the equity and democratic processes of health system reform.

Why involve a civil group?

Civic engagement in national development has been widely utilized (Reuben, 2002; Loewenson, 2003a). Civil society is defined as "the social arena that exists between the state and citizen and is not part of the state or the market (for profit sector)" (Loewenson, 2003b). This involvement is not a "shadow state", "an

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extension of the state, an extension of the market, family, friends or neighbors (Deakin, 2001). Wise governments do not deny the role of civil societies but promote them in order to achieve societal goals where government action faces limitations. Successes from civic involvement are demonstrable at various levels, from environmental issues at the village level to access to anti-retroviral treatment at the international health level (Loewenson, 2003a).

Development of civil society in Thailand has been diverse. A more democratic atmosphere is conducive to the transparency of authoritative bureaucracies and the growth of civil society. Members of civil society are either ordinary people or civil servants who see the opportunity of better achieving societal goals if they work under the umbrella of civil society (Chanthanon-Good, 2000). From anti-smoking campaigns twenty years ago to anti-corruption programs in drug purchasing, these are a few examples of young rural doctors and other health personnel who are civil servants working successfully through the civil society mechanism in Thailand. Even the successes of the 1997 constitution and the acceptance of universal health coverage policies in Thailand are the combination of 3 components: social movements working through civil society, knowledge produced by academicians (most of whom are civil servants) and politicians (Wasi, 2000). The civil groups in this paper include non-government organizations outside state involvement and organizations closely linked to or run by active or retired civil servants.

Experiences during the first phase of the Benchmarks of Fairness in Thailand proved that health personnel involved in health system reform can discuss and judge changes with minimal hard data support. Comparing with other countries revealed equity not bound by religious or cultural factors but rather experiences within the health system (Daniels *et al*, 2000). The second phase was proposed to test the possibility of involving other groups besides health personnel in assessing the health system. The civic groups selected were classified as health-related and non-health-related. This phase focused on the extensive use of quantitative data to support qualitative judgements.

MATERIALS AND METHODS

Both quantitative and qualitative methods were used to demonstrate the usefulness of benchmarks in assessing the health system. The nature of the benchmarks requires extensive quantitative data for longitudinal comparison to demonstrate trends for improvement and cross-sectional comparison to facilitate ranking between subgroups of populations. Details of sources of data used to produce the tables have been presented elsewhere (Faramnuayphol and Pannarunothai, 2003).

The quantitative element of this research included compilation of existing health and health-related data by province and the pre- and post-discussion scoring by the participants of group discussions.

The qualitative element was the focus group discussions. The discussions were conducted from June to December 2001, when the universal health coverage policy was officially implemented for the first year.

Ten out of 76 provinces in Thailand were selected purposely for this study to reflect differences in region. They reflected different cultures in different parts of Thailand (Chiang Mai, Phayao and Phrae for the North; Khon Kaen and Nakhon Ratchasima for the Northeast; Ayutthaya and Ratchaburi for the Central; and Pattani, Phuket and Songkhla for the South). In each province, 8 focus group discussions were conducted by the same team of facilitators. Members of the first four groups were government officers: health care managers at the provincial level; health providers at the provincial level, health providers at the subdistrict level and representatives of the local governments. The other four groups were civic groups: a health civic group in an urban area, a health civic group in a rural area, a non-health civic group in an urban area and a non-health civic group in a rural area. Each group discussion consisted of 8-10 participants, the discussion lasted about an hour.

Before the discussion, each participant was asked to fill in a questionnaire comparing the situation of the provincial health system today and the situation three years ago in 46 questions covering the 9 benchmarks. A score of +5

to -5 was allowed for each question representing the greatest improvement (+5) to the worst situation (-5), while 0 was for no change. After the pretest questionnaire, the group was given a 15 minute-presentation as well as a fact sheet of quantitative data covering 81 indicators of 9 benchmarks (Table 2). Then, the group discussed the issues for each benchmark. The discussion was tape recorded for qualitative analysis. When the discussion was over, the participants were asked to fill in the same 46 item-questionnaire to see whether they changed their judgements for each benchmark. The 4 civic groups in each province had freedom to skip the benchmark 7 administrative efficiency, since they might not know what was going on with administrative cost.

RESULTS

The results are presented in 3 parts. The distribution of quantitative data by province, according to the 9 benchmarks is presented first to help understand the nature of the data used to facilitate value judgement. Then, the scores of the benchmarks from the pre- and post-focus group discussion are presented to highlight variations among the different groups of participants. The next part describes the compatibility of the qualitative and quantitative data. Details of these results have been presented elsewhere (Faramnuayphol and Pannarunothai, 2003).

Distribution of quantitative data by benchmarks

In order to provide evidence to demonstrate the achievement of the health system for each province, the 81 indicators are listed according to the 9 benchmarks. Data from the various sources has been compiled (Table 2). The authors feel this database is the first comprehensive compilation of health and health-related data by province. Twenty-three indicators for benchmark 1 intersectoral public health had a low variation [lowest coefficient of variation (standard deviation divided by the mean) of 0.01 for life expectancy by province]. It can be implied that the differences between the 75 provinces (excluding Bangkok) are low. Large variations in the indicators of the benchmark 1 were found in population density and gross provincial product

for geographical area (CV 1.19 and 0.89, respectively).

Large variations in data were found for benchmark 9 patient and provider autonomy, especially in seeking inpatient care at private hospitals (CV 1.04), for benchmark 7 administrative efficiency: cost at regional and general hospital and the cost at health center (CV 0.90), and in benchmark 5 equitable financing: the discrimination index of household health expenditure (CV 0.85).

These indicators were deemed difficult for participants of the focus group discussion to comprehend. Hence, simpler presentations were made using a geographical information system (color province map) and league table (ranking of province according to the direction of the indicator).

Score judgement from focus group discussion

As presented earlier, the judgement of each participant in the focus group discussion was captured by a score ranging from +5 to -5 for the 46 questions during the pre- and post-discussion evaluation. It was expected that many people would increase their score after discussion (Fig 1), because they had better understanding of the issue in the province. Selection bias could be demonstrated by high scores for the health civic group (most were village health volunteers who worked closely with health providers) compared to the non-health civic groups (Fig 2). Scores given by health providers (included health care managers and local governments) were generally lower than other groups (except for benchmark 1) suggesting that outsiders were more supportive of changes while insiders were more realistic about changes.

From the overall scores in Table 1, we can see that problem issues clustered around benchmarks 1, 3, 7 and 9, whereas issues with high scores were found in benchmarks 2 and 4. If we take the average of these 10 provinces, there were 3 indicators with good scores (higher than 2.5): coverage of services, found in benchmark 1 (scored 2.92); coverage of health insurance, found in benchmark 2 (scored 2.75) and education status, found in benchmark 1 (scored 2.53). The lowest average scores were also concen-

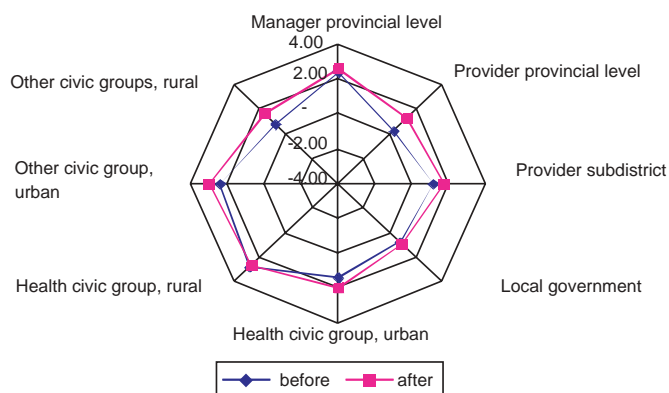


Fig 1-Comparison of overall scores of all benchmarks before and after discussion by different groups of participants (—◆— before, —■— after discussion). (+5 means greatest improvement compared to before reform, -5 means the worst comparing today with the previous three years).

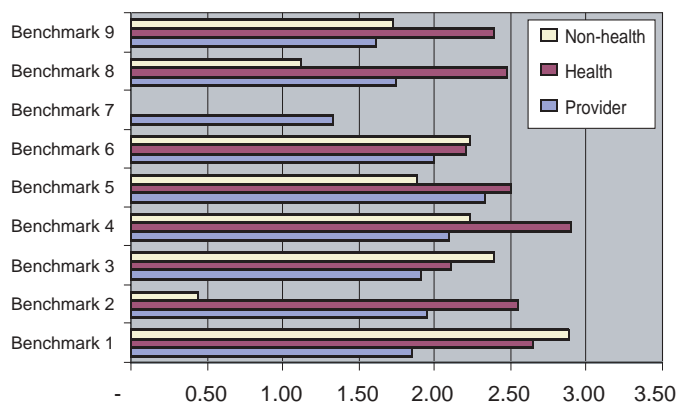


Fig 2-Average scores by benchmarks of fairness at the end of discussion given by non-health civic groups (urban and rural), health civic groups (urban and rural) and health providers (provincial and subdistrict levels). A full score of +5 means the greatest improvement comparing today with the previous three years. Benchmark 1 Intersectoral public health, Benchmark 2 Financial accessibility, Benchmark 3 Other factors affecting accessibility, Benchmark 4 Equity in health service utilization, Benchmark 5 Equity in financial contribution, Benchmark 6 Efficiency and quality of service, Benchmark 7 Administrative efficiency, Benchmark 8 Community participation, Benchmark 9 Autonomy of patient and provider.

trated within benchmark 1: economic condition (scored 0.13), demographic condition (scored 0.76) and environmental condition (scored 0.91). This suggests a high awareness of other factors

related to health while health system factors were more satisfactory.

Combining qualitative and quantitative data

The scores found are in line with data from the qualitative method. Most of the focus group discussions agreed that social improvements provided better opportunity for the population. Education and accessibility to necessary public utilities provided people with better access to health. Improvements in transportation, health insurance coverage, and more supply side led to better primary care coverage and health care access. The participants realized that many problems were the consequence of social developments, *eg* environmental problems, overcrowding, and industrial pollution. An economic crisis also created social problems, such as crime, drug addiction, mental health problems and HIV/AIDS. High mortality was the consequence of more accidents, chronic diseases, non-communicable diseases, and cancer. The rural areas were still faced with a scarcity of health resources and a maldistribution of human resources. Services concentrated in the hospital led to overcrowded hospitals, and a greater total health care cost, though people still lacked appropriate health care.

DISCUSSION

The Benchmarks of Fairness study, phase 2 in Thailand provided experiences and tools to use for broader groups of people. As discovered during the first phase, sensitivity to equity was not effected by socio-cultural factors (Daniels *et al*, 2000). Lay people who participated in this phase were keen to discuss the benchmarks and the current situation.

The quantitative tool compiled secondary data from various sources, *eg* routine reports, electronic databases and surveys. Simple descriptive statistics were used to compare the

Table 1
Average scores from 8 focus group discussions covering 46 questions and by province.

Province		N1	N2	N3	NE1	NE2	S1	S2	S3	C1	C2	Average
1.1	Overall health status	0.99	1.39	0.81	0.78	1.78	0.69	1.20	1.68	1.55	1.94	1.28
1.2	Specific health status	1.01	1.98	1.39	1.41	1.52	1.05	1.41	0.73	2.24	1.77	1.45
1.3	Coverage of health service	2.76	3.39	2.90	3.08	3.17	2.37	2.47	2.40	3.33	3.34	2.92
1.4	Environment	0.78	2.11	1.47	1.02	1.16	0.59	0.62	0.55	0.43	0.41	0.91
1.5	Demographic condition	0.57	2.00	1.22	0.02	0.68	0.17	0.57	0.78	0.48	1.08	0.76
1.6	Economic status	0.55	0.96	-0.55	-0.86	-0.10	1.39	-0.12	-0.39	-0.24	0.67	0.13
1.7	Educational condition	2.48	2.83	2.82	2.43	2.40	2.46	1.59	2.59	2.47	3.21	2.53
1.8	Resource deprivation	2.10	2.24	1.82	1.94	1.94	2.12	1.12	2.12	1.65	2.44	1.95
1.9	Intersectoral collaboration	2.08	2.76	2.32	2.29	2.42	1.96	1.92	2.03	2.41	2.71	2.29
B1	Intersectoral public health	1.85	2.43	2.00	1.88	2.07	1.70	1.34	1.81	2.38	2.19	1.96
2.1	Coverage of health insurance	2.51	3.07	2.49	3.05	2.79	2.78	1.76	2.78	3.38	2.88	2.75
2.2	Coverage of health benefit	2.59	2.85	2.19	2.95	2.57	2.56	1.67	1.73	3.18	2.58	2.49
2.3	Household health expenditure	1.61	1.95	1.63	2.00	2.00	1.82	0.98	0.81	1.94	1.86	1.66
B2	Financial accessibility	1.87	2.08	2.11	2.38	2.32	2.25	1.31	1.45	1.85	2.16	1.98
3.1	Distribution of resource	1.33	1.77	1.34	1.53	1.19	1.21	0.60	0.56	1.85	2.36	1.37
3.2	Workload of health service	1.28	1.24	1.03	0.90	0.44	1.19	0.53	0.30	1.89	1.91	1.07
3.3	Factors affecting accessibility	1.54	2.07	1.82	2.19	2.13	1.81	1.21	1.03	2.03	2.32	1.81
3.4	Health service utilization	2.09	2.38	2.15	2.41	2.06	2.20	1.21	1.10	2.47	2.48	2.05
B3	Non financial factors affecting accessibility	1.56	2.21	1.88	2.05	1.77	1.79	1.33	1.14	2.17	2.16	1.81
4.1	Coverage of utilization	1.85	2.61	2.13	2.71	2.26	2.21	1.66	1.61	2.53	2.64	2.22
4.2	Primary care utilization	2.45	2.55	2.28	2.76	2.42	2.47	1.64	2.25	2.91	2.78	2.45
4.3	Continuity of care	2.01	2.38	2.08	2.29	1.81	1.73	1.47	1.70	2.70	2.39	2.06
4.4	Comprehensiveness of care	2.29	2.53	2.17	2.42	2.31	1.84	1.18	2.26	2.86	2.83	2.27
4.5	Equity of care	1.75	1.80	1.94	2.36	1.87	1.95	0.68	1.80	2.19	2.28	1.86
B4	Equity in health service utilization	1.93	2.31	2.16	2.23	2.12	1.88	1.34	1.98	2.45	2.55	2.10
5.1	Government budget support	1.82	2.45	2.11	2.54	2.47	1.89	1.03	1.88	2.73	2.42	2.13
5.2	Difference of health expenditure	1.48	1.61	1.49	1.74	2.11	1.78	0.67	1.25	1.88	2.14	1.62
5.3	Out of pocket payment	1.65	1.93	1.76	1.91	2.10	2.05	1.00	1.75	2.33	2.55	1.90
B5	Equity in financial contribution	1.54	2.02	1.76	1.98	2.15	2.13	1.00	1.69	2.20	2.50	1.90
6.1	Efficiency of health care provision	1.66	1.78	1.44	2.11	1.63	1.07	0.97	1.19	1.70	2.14	1.57
6.2	Unit cost of health service	1.71	1.78	1.61	1.80	1.83	1.79	0.93	1.15	1.84	1.63	1.61
6.3	Standardization of care	2.33	2.15	2.00	2.40	1.90	1.70	1.78	0.90	2.19	2.63	2.00
6.4	Quality of care	2.31	2.13	2.18	2.73	2.15	1.91	1.64	1.62	2.30	2.73	2.17
6.5	Quality improvement process	2.30	2.36	2.32	2.71	2.56	1.79	1.44	1.87	2.18	3.00	2.25
B6	Efficiency and quality of service	2.12	2.29	2.13	2.76	2.21	2.00	1.46	1.83	2.18	2.79	2.18
7.1	Over all health care cost	0.67	1.06	1.41	1.70	1.32	1.13	1.29	1.41	1.63	1.18	1.28
7.2	Proportion of primary care cost	0.86	1.20	1.57	2.00	1.59	0.52	1.80	2.00	2.07	1.68	1.53
7.3	Administrative cost	0.45	1.07	1.50	1.24	1.27	0.88	1.35	1.30	1.15	1.93	1.21
7.4	Cost reduction process	1.21	1.81	1.67	2.00	1.64	0.96	1.60	1.74	2.00	2.50	1.71
7.5	Over provision of care	0.86	1.50	1.40	1.30	1.18	0.64	1.33	1.00	1.32	1.75	1.23
B7	Administrative efficiency	0.89	1.27	1.60	1.62	1.55	0.76	1.43	1.52	1.63	2.11	1.44
8.1	Public report	1.97	2.70	2.20	2.58	2.36	1.88	1.36	2.12	2.18	2.87	2.22
8.2	Transparency of resource use	1.26	2.22	1.59	1.73	1.85	1.39	0.79	1.46	1.82	1.89	1.60
8.3	Opportunity of public opinion	1.65	2.32	2.06	2.31	2.24	1.40	1.29	1.91	1.60	2.47	1.92
8.4	Patient right protection	1.73	1.79	1.77	2.44	1.98	1.50	1.09	1.12	2.19	2.27	1.79
8.5	Participation in laws	1.62	2.16	1.59	1.73	1.81	1.12	1.36	1.32	1.61	2.20	1.65
8.6	Empowerment	1.75	2.32	2.05	2.16	2.21	1.65	1.30	1.75	1.70	2.61	1.95
B8	Community participation	1.72	2.37	1.99	2.03	2.16	1.59	1.27	1.98	1.91	2.60	1.96
9.1	Choices for primary care	1.69	2.52	1.47	1.80	1.46	2.29	0.85	1.68	1.79	1.25	1.68
9.2	Choices for specialized care	1.72	2.02	1.23	1.83	1.49	2.33	1.07	1.38	1.39	1.47	1.59
9.3	Choices for public health service	1.81	2.37	1.55	1.82	1.88	2.28	0.79	1.41	1.93	1.47	1.73
9.4	Choices for private health service	1.52	1.77	1.04	1.00	1.49	1.98	0.67	0.38	1.32	2.02	1.32
9.5	Choices for traditional medicine	2.04	1.81	1.82	1.98	1.58	1.51	1.41	1.74	1.04	1.86	1.68
9.6	Autonomy of provider	1.07	1.56	1.30	1.80	1.91	1.52	1.25	1.85	1.24	1.71	1.52
B9	Autonomy of patient and provider	1.68	2.17	1.59	2.14	1.93	2.19	1.25	1.91	1.93	1.53	1.83
Sum	Overall fairness in health	1.82	2.04	1.96	2.13	2.25	1.95	1.08	1.95	2.09	2.03	1.93

N north, NE northeast, S south, C central. Score from +5 to -5 (+5 the greatest improvement, -5 the very worst, 0 no change, comparing today with the previous 3 years)

Table 2
List of 81 indicators of quantitative data.

B Group	Indicators	Direction	Mean	SD	CV	Source of data	Year
1	1 Life expectancy at birth (year)	+	70.89	0.41	0.01	Census data and mortality statistics at MOPH	2000
	Standardized death rate (/1,000)	-	5.82	0.92	0.16	Census data and mortality statistics at MOPH	2000
	Under 5 mortality rate (/1,000)	-	2.12	0.71	0.34	Census data and mortality statistics at MOPH	2000
2	2 Traffic accident rate (/100,000)	-	2,823.40	765.8	0.27	Injury statistics, Department of Medical Services	1998
	Malnutrition under 5	-	7.64%	3.87%	0.51	Monthly report from Provincial Health Office	1999
	Low birth weight	-	6.78%	1.85%	0.27	Provincial Health Survey 2, MOPH	1996
3	3 Complete antenatal care	+	85.26	7.38	0.09	Provincial Health Survey 2, MOPH	1996
	Complete vaccination in children 1-2 yrs	+	82.17	8.73	0.11	Provincial Health Survey 2, MOPH	1996
4	4 Healthy housing	+	88.6	5.7	0.06	Basic minimal need database, Ministry of Interior	1999
	Safe from poisoning	+	94.1	3.5	0.04	Basic minimal need database, Ministry of Interior	1999
	Access to clean drinking water	+	76.60%	13.47%	0.18	Provincial Health Survey 2, MOPH	1996
5	5 Density of population	-	165.3	196.2	1.19	Census data, NSO	2000
	Size of household	-	3.90	0.3	0.08	Census data, NSO	2000
	Dependency ratio	-	0.49	0.07	0.14	MOPH	2000
6	6 Monthly income per capita	+	2,925	1,064	0.36	Socioeconomic Survey, NSO	1998
	Household expenditure per income or household saving	-	86.40%	9.70%	0.11	Socioeconomic Survey, NSO	1998
	GPP per capita	+	59,403	52,898	0.89	Pocket Thailand in Figures 2001	1997
	Gini coefficient	-	0.352	0.065	0.18	Socioeconomic Survey, NSO	1998
	Proportion of household with debt	-	55.60%	13.80%	0.25	Socioeconomic Survey, NSO	1998
	Poverty (with income <1,000 b/month)	-	17.30%	12.10%	0.70	Socioeconomic Survey, NSO	1998
7	7 Index of Human Deprivation (IHD)	-	0.384	0.16	0.42	United Nations Development Program Thailand	1999
	IHD in education	-	0.377	0.175	0.46	United Nations Development Program Thailand	1999
	IHD in health	-	0.380	0.16	0.42	United Nations Development Program Thailand	1999
2	8 High benefit insurance	+	12.22%	6.35%	0.52	Provincial Health Survey 2, MOPH	1996
	Moderate benefit insurance	+	56.72%	10.91%	0.19	Provincial Health Survey 2, MOPH	1996
	No health insurance	-	30.14%	7.91%	0.26	Provincial Health Survey 2, MOPH	1996
9	9 High benefit : No insurance	+	0.44	0.26	0.59	Provincial Health Survey 2, MOPH	1996
	Moderate benefit : No insurance	+	2.30	1.94	0.84	Provincial Health Survey 2, MOPH	1996
	High : Moderate benefit	+	0.25	0.21	0.84	Provincial Health Survey 2, MOPH	1996
10	10 %Household health expenditure	-	5.12%	0.95%	0.19	Socioeconomic Survey, NSO	1998
3	11 Population to doctor ratio	-	6,580	3,179	0.48	Health Resource Survey, MOPH	1999
	Population to bed ratio	-	607	264	0.43	Health Resource Survey, MOPH	1999
12	12 Bed to doctor ratio	-	11	3	0.27	Health Resource Survey, MOPH	1999
	Out-patient visit to doctor ratio	-	2,812	993	0.35	Health Resource Survey, MOPH	1999
	In-patient case to doctor ratio	-	757	254	0.34	Health Resource Survey, MOPH	1999
13	13 Utilization rate OP new case	+	0.46	0.12	0.26	Health Resource Survey, MOPH	1999
	Admission rate	+	12.72%	3.81%	0.30	Health Resource Survey, MOPH	1999
	Occupancy ratio	-	73.60%	12.64%	0.17	Health Resource Survey, MOPH	1999
	% Institutional care	+	66.10%	7.24%	0.11	Health and Welfare Survey, NSO	1996
4	14 Utilization rate: OP visit public sector	+	2.12	0.47	0.22	MOPH	2000
	Admission rate, public hospital	+	10.67%	2.72%	0.25	MOPH	2000
15	15 Utilization rate HC: Hospital	+	0.84	0.33	0.39	MOPH	2000
	Admission rate DH: RH and GH	+	1.18	0.66	0.56	MOPH	2000
	Utilization RH GH: Total OP utilization	-	21%	10.30%	0.49	MOPH	2000
16	16 OP visit per OP new case	+	2.9	0.48	0.17	MOPH	2000
	Referral rate from DH	-	1.86%	0.63%	0.34	MOPH	2000
17	17 % Surgery of total IP in RH GH	+	19.44%	4.84%	0.25	MOPH	2000
	% Health promotion HC	+	15.71%	7.88%	0.50	MOPH	2000
5	18 Discrimination index of household health expenditure	-	2.71	2.31	0.86	Socioeconomic Survey, NSO	1998
6	19 Average LOS	-	4	0.68	0.17	Health Resource Survey, MOPH	1999
	Average LOS DH	-	3.17	0.54	0.17	MOPH	2000
	Average LOS RH GH	-	4.89	0.8	0.16	MOPH	2000

Table 2 (continued).

B Group	Indicators	Direction	Mean	SD	C.V.	Source of data	Year
20	Bed occupancy rate RH GH	-	87.24%	12.11%	0.14	MOPH	2000
	Bed turnover rate RH GH	+	66.27%	11.05%	0.17	MOPH	2000
21	IPD: OP of hospital	-	9.18%	1.58%	0.17	MOPH	2000
	Average relative weight IP of RH GH	+	0.78	0.126	0.16	Diagnosis Related Group database, HIO	1999
22	Unit cost OP at RH GH	-	698	174	0.25	MOPH	2000
	Unit cost IP at RH GH	-	4,523	1,210	0.27	MOPH	2000
	Cost IP day at RH GH	-	925	201	0.22	MOPH	2000
	Cost per RW at RH GH	-	5,884	1,664	0.28	MOPH	2000
23	IP death rate at RH GH	-	2.90%	1.06%	0.37	MOPH	2000
	Abnormal : Normal labor RH GH	-	0.71	0.35	0.49	MOPH	2000
7 24	Total cost per capita	-	895.48	329.43	0.37	MOPH	2000
	Cost at HC per capita	-	99.83	38.78	0.39	MOPH	2000
	Cost at RH GH per capita	-	554.98	313.12	0.56	MOPH	2000
	Estimated total cost per capita	-	826.9	245.2	0.30	Health and Welfare Survey, NSO	1996
25	Total cost: Bed RH GH	-	6,462	1,311	0.20	MOPH	2000
	Total cost: OP RH GH	-	1,270	317	0.25	MOPH	2000
26	Total cost HC: Total cost	+	11.85%	3.99%	0.34	MOPH	2000
	Cost RH GH: Cost HC	-	6.58	5.94	0.90	MOPH	2000
	Estimated cost OP: Total cost	+	68.60%	7.00%	0.10	Health and Welfare Survey, NSO	1996
27	% Labor cost RH GH	-	50.30%	6.90%	0.14	MOPH	2000
	% Management cost RH GH	-	6.80%	1.70%	0.25	MOPH	2000
	% Drug cost RH GH	-	12.50%	5.80%	0.46	MOPH	2000
28	Real cost: Estimated cost	-	1.15	0.48	0.42	MOPH	2000
9 29	% Seeking care at drug store	-	27.20%	6.90%	0.25	Health and Welfare Survey, NSO	1996
	% Seeking care at public sector	+	43.50%	9.30%	0.21	Health and Welfare Survey, NSO	1996
	% Seeking care at private sector	-	22.60%	8.60%	0.38	Health and Welfare Survey, NSO	1996
	% Seeking care for IP at private hospital	-	18.00%	13.90%	0.77	Health and Welfare Survey, NSO	1996
30	Seek OP care Private: Public	+	0.58	0.37	0.64	Health and Welfare Survey, NSO	1996
	Seek IP care Private: Public	+	0.26	0.27	1.04	Health and Welfare Survey, NSO	1996

DH=district hospital; GH=general hospital; GPP=gross provincial product; HC=health center; IP=inpatient; LOS=length of stay; OP=outpatient; RH=regional hospital; RW=relative weight, details of sources of data can be found in Faramnuayphol P and Pannarunothai S (Research report to Rockefeller Foundation, 2003); MOPH=Ministry of Public Health; NSO=National Statistical Office; HIO=Health Insurance Office

ranks of the provinces according to the 81 indicators in the 30 groups of questions. All 75 provinces (except Bangkok) acquired a different rank based on the data regarding health status, economic situation, health care resources, access to health care, quality of health services, cost of care and the people's choice in health services. Lay people further interpreted to their own situation (without hard data provided). They could distinguish equity from equality. Benchmark 1, intersectoral public health, which was not in the original American version (Daniels *et al*, 2000), caused more concern than the other benchmarks.

Health system developments in Thailand has involved lay people since 1970. During the recent health reforms in 2000, people had more

say in the direction and processes of reforms (Chuengsathiansap K, Research report to Health Systems Research Institute, 2004). Many civic groups were observed in various fields, including non-health related ones, trying to raise public awareness to shape a better society with mutual respect (Boonmee, 2005). Civic groups are an important element of health policy development in many countries (Lawrence, 1999; Bryant, 2003).

The members of the civic groups proved to be data-literate. They changed their scores after they saw data comparing their province with the whole country and after focus group discussion. Implicit weighting given to the overall score for each benchmark was individually scored. This was practical for lay people, inline with the pre-

vious development phase.

Apart from the score itself, qualitative data provided more insights into the local situation, because the focus group discussions were undertaken with local people who had experienced the impact of reform. The score allowed comparison across the benchmarks. Experiences in 10 provinces showed that the overall equity in health scores compared with the situation 3 years previously had improved slightly to moderately (the scores varied from +1.08 to +2.25). The highest achievement was equity in extending the coverage and comprehensiveness of the service, which was first implemented nationally during the year of qualitative data collection. The lowest achievement was in administrative efficiency, which was the concern of government officials because the civic groups did not score this benchmark.

This study covered both quantitative and qualitative data. Quantitative data provided each province with a ranking to illustrate the strengths and weaknesses by the benchmarks. These data can also be used to portray the absolute level of development and the target to achieve equity in health. Qualitative data from the focus group discussions can be used as a key for achieving the target of health system development at the local level. People participating in the discussions agreed that giving opportunity to people to comment on their health system, was the best way to improve equity in health. The targets can be at both the policy and the operational levels; to monitor the impact of development and to mobilize people's participation in development.

This research has not yet demonstrated the power of these quantitative and qualitative data in the policy process and policy evaluation at the local level. This assumption needs further study once the health service provision is decentralized to the local government (as stated in the 1997 Constitution) or once the health governance becomes more transparent by involving lay executives in the national and the provincial health boards as proposed in the draft of the National Health Act (Health Systems Reform Office, 2003).

A mechanism to ensure continuous updating of quantitative data and collecting qualita-

tive data should be established at the national and local health levels. This fits well with the proposed function of the national and provincial health boards. A legislative framework is essential for an ongoing process and for the rights of civic groups to get access to health system data. Within a legal framework, the concepts and tools provided by the benchmarks may be used for civic groups to prepare (annual) progress report regarding health system target achievement; the same process the Human Rights Commission uses to prepare the country human rights reports for the United Nations.

For the long term, standardization of the content and the process of quantitative and qualitative data generation is necessary. Quantitative indicators for monitoring health equity should be more relevant, more sensitive and more specific. These indicators should provide ways to improve. They should be easy to collect and should come from various sources to increase acceptability. The selection of members for focus group discussions or for other civic group involvement needs to be carefully designed to cover wider audiences and to receive highly reliable periodic assessments. The Benchmark activities need to take into consideration diversified developments in other countries (Daniels *et al*, 2005).

In conclusion, having carried out this second phase, the benchmarks tool may be used to monitor the progress of health reform by province and the effect of health care decentralization. Civic groups should have ongoing access to the evidence in line with the benchmarks and should be provided with an opportunity to express their views, which is helpful in monitoring the fairness of the reforms.

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