

*Health System Evaluation
in Kurdistan*

هه‌ئسه‌نگاندنی سیسته‌می تهن‌دروستی

کوردستان

تقییم النظم الصحیة فی کوردستان

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Presentation Outline

- Health System Evaluation **تقييم النظم الصحية**
 1. Performance **الانجاز**
 2. Attainment **الفعالية**
- Resources in Iraq & Kurdistan **الموارد**

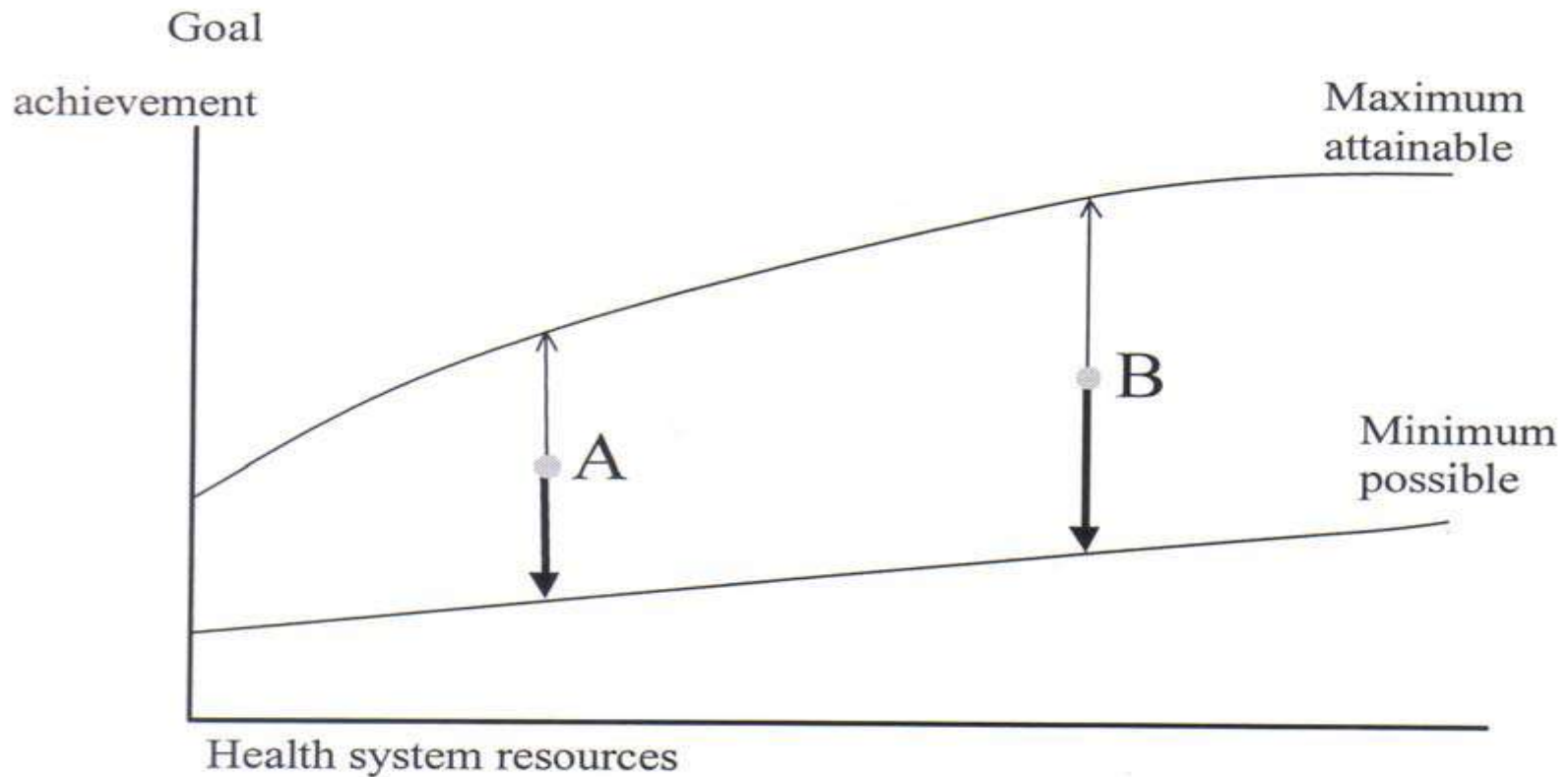
Evaluation of the health system

1. Performance (الانجاز): means the best that can be achieved with the same available resources
2. Attainment (الفعالية): How to measure the outcomes (good health, responsiveness & fair financings).
3. HALE (العمر الصحي المتوقع): Health Adjusted Life Expectancy

Performance

- Governance and leadership
- Financing, financial protection
- Human resources and physical resources
- Information
- Service provision: availability and quality
- Coverage of services

Attainment / الأداء / الفعالية



Health System Performance

Stewardship

defining sector strategies, clarifying roles, managing competing demands

Human resources

having a sufficient and productive workforce

Information

ensuring the generation and use of Information and knowledge

Financing

ensuring fair and sustainable financing, with financial protection

Service provision

*ensuring adequate drugs, equipment, infrastructure
improving organization, management and quality of services*

Responsiveness

by treating people with dignity, and ensuring confidentiality, irrespective of who they are

Coverage

reaching those who need it

Quality & safety

*services of adequate **quality** and **safe** harmful practices are reduced*

Efficiency

*ensure that resources are used 'wisely'
Interventions that are relevant*

Financial protection

ensure people are able to avoid impoverishing health expenditures.

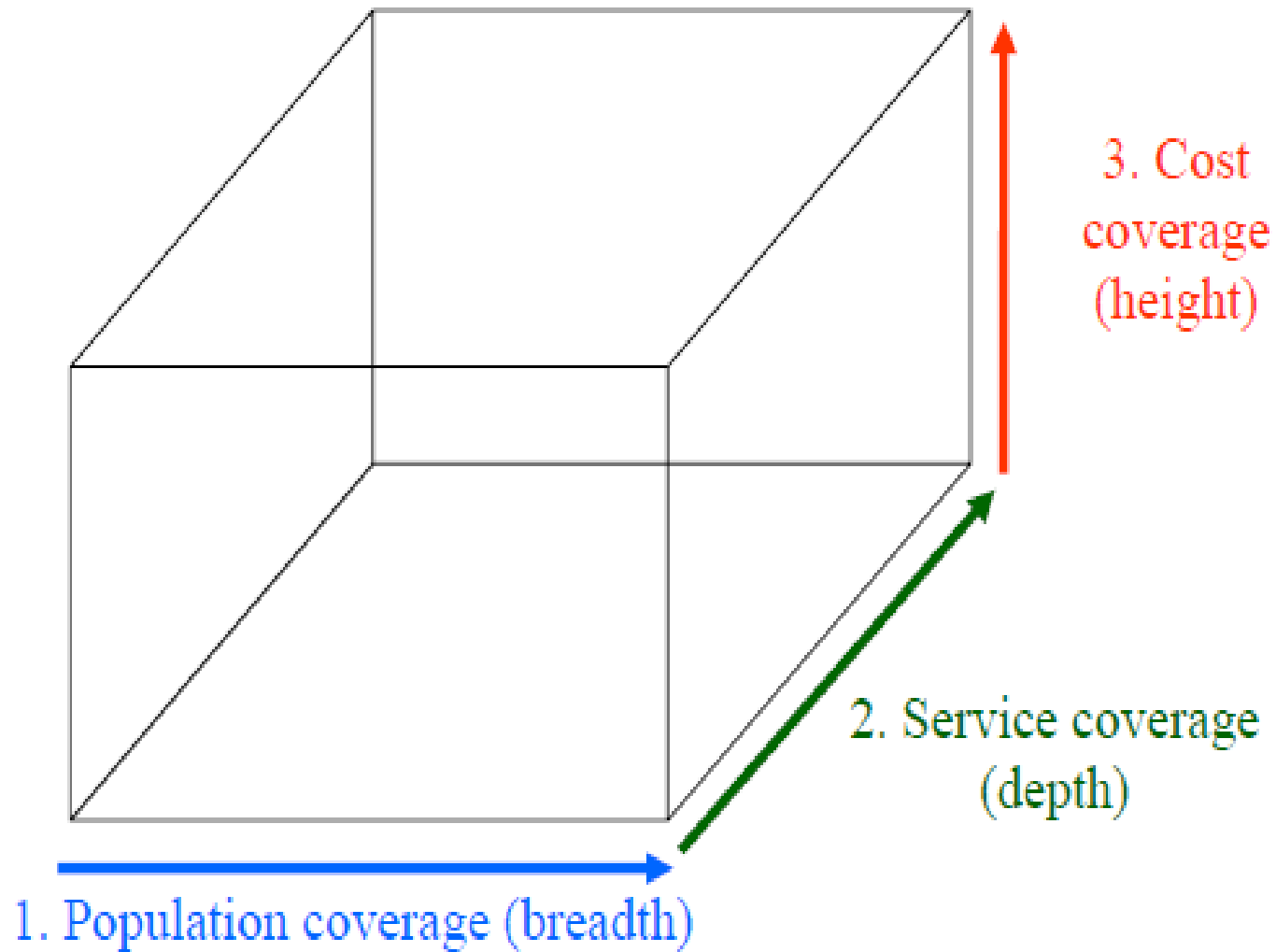
Health outcomes

Equitable distribution

FUNCTIONS

GOALS OF THE SYSTEM

Figure 2. The Three Dimensions of Coverage Decisions



ATTAINMENT (الفعالية)

- Good health
- Responsiveness
- Fair financings

Measurement of Attainment

HEALTH SYSTEM GOALS		
	LEVEL	DISTRIBUTION
Health	✓	✓
Responsiveness	✓	✓
Fairness in financing		✓

Quality **Equity**

Efficiency

Classic Health Status Indicators

- According to the WHO (2008), the indicators of health care system performance depend on four main issues, these are the following:
 - 1. Mortality and burden of disease
 - 2. Health service coverage
 - 3. Risk factors
 - 4. Health system resource

❑ **1. Mortality and Burden of Disease**

❑ **A. Mortality:**

- ❑ 1. Life expectancy at birth
- ❑ 2. Healthy Life expectancy(Hale) at birth(years)
- ❑ 3. Neonatal mortality rate (per 1000 live births)
- ❑ 4. Under five mortality rate (probability of dying by age 5 per 1000 live births)
- ❑ 5. Infant mortality rate (per 1000 life births)
- ❑ 6. Adult mortality (probability of dying between 15 to 60 years per 1000 population)
- ❑ 7. Maternal mortality ratio (per 100 000 live births)
- ❑ 8. Deaths due to HIV/AIDS (per 100 000 population)
- ❑ 9. Deaths due to tuberculosis (per 100 000 population)
- ❑ 10. Age standardized mortality rates by cause (per 100 000 populations)
- ❑ 11. Distribution of years of life lost by broader causes (percentage of total)
- ❑ 12. Distribution of causes of death among children aged <5 years (percentage of total)

□ **B. Morbidity:**

- 1. Prevalence of tuberculosis (per 100 000 population)
- 2. Incidence of Tuberculosis (per 100 000 population per year)
- 3. HIV prevalence among adults aged \geq 15 years (per 100 000 population)
- 4. Number of confirmed cases of poliomyelitis

□ **2. Health Service Coverage**

- 1. Antenatal care coverage (percentage)
- 2. Birth attendance by skilled personnel (percentage)
- 3. Birth by caesarean section (percentage)
- 4. Immunization coverage among 1-year olds
- 5. Children 6-59 months who received vitamin A supplementation (percentage)
- 6. Children aged < 5 years sleeping under insecticide treated bed nets (percentage)
- 7. Children aged < 5 years who received any antimalarial for fever (percentage)
- 8. Children aged < 5 years with ARI symptoms taken to facility(percentage)
- 9. Children < 5 years with diarrhea receiving oral rehydration therapy (percentage)
- 10. Contraceptive prevalence rate (percentage)
- 11. Women who have had PAP smear (percentage)
- 12. Women who have had mammography (percentage)
- 13. HIV infected pregnant women receiving antiretroviral therapy for PMTCT (percentage)
- 14. Antiretroviral therapy coverage among people with advanced HIV infections (percentage)
- 15. Tuberculosis detection rate under DOTS (percentage)
- 16. Tuberculosis treatment success under DOTS (percentage)

❑ **3. Risk factors**

- ❑ 1. Access to improved drinking water sources and to improved sanitation (percentage)
- ❑ 2. Population using solid fuels (percentage)
- ❑ 3. Low birth weight newborns (percentage)
- ❑ 4. Children aged < 5 years
- ❑ 5. Adults aged ≥ 15 years who are obese (percentage)
- ❑ 6. Per capita recorded alcohol consumption (liters of pure alcohol) among adults (≥ 15 years)
- ❑ 7. Prevalence of current tobacco use among adults aged ≥ 15 years
- ❑ 8. Prevalence of current tobacco use among adolescents (13-15 years)
- ❑ 9. Prevalence of condom use by young people (15-24 years) at higher risk sex

- ❑ **4. Health system resources**

- ❑ **I. Human resources for health**

- ❑ 1. Number of physicians (per 10 000) populations
- ❑ 2. Number of nursing and midwifery personnel (per 10 000) population
- ❑ 3. Number of dentistry personnel (per 10 000) population
- ❑ 4. Number of pharmaceutical personnel (per 10 000) population
- ❑ 5. Number of environmental and public health workers (per 10 000) population
- ❑ 6. Number of community and traditional health workers (per 10 000) population
- ❑ 7. Number of laboratory health workers (per 10 000 population)
- ❑ 8. Number of other health service providers (per 10 000) population
- ❑ 9. Ratio of nurses and midwives to physicians
- ❑ 10. Ratio of health management and support workers to health service providers

- **II. National Health accounts**

- 1. Total expenditure on health as a percentage of gross domestic product (GDP)
- 2. General government expenditure on health as a percentage of total expenditure on health
- 3. Private expenditure on health as a percentage of total expenditure on health
- 4. General government expenditure on health as a percentage of total government expenditure
- 5. External resources for health as a percentage of total expenditure on health
- 6. Social security expenditure on health as a percentage of general government expenditure on health
- 7. Out of pocket expenditure as a percentage of private expenditure on health
- 8. Private prepaid plans as a percentage of private expenditure on health
- 9. Per capita total expenditure on health at average exchange rate (US\$)
- 10. Per capita government expenditure on health at average exchange rate (US\$)
- **3.4.4. Health Adjusted Life Expectancy (HALE)**

ATTAINMENT

- Good health
- Responsiveness
- Fair financings

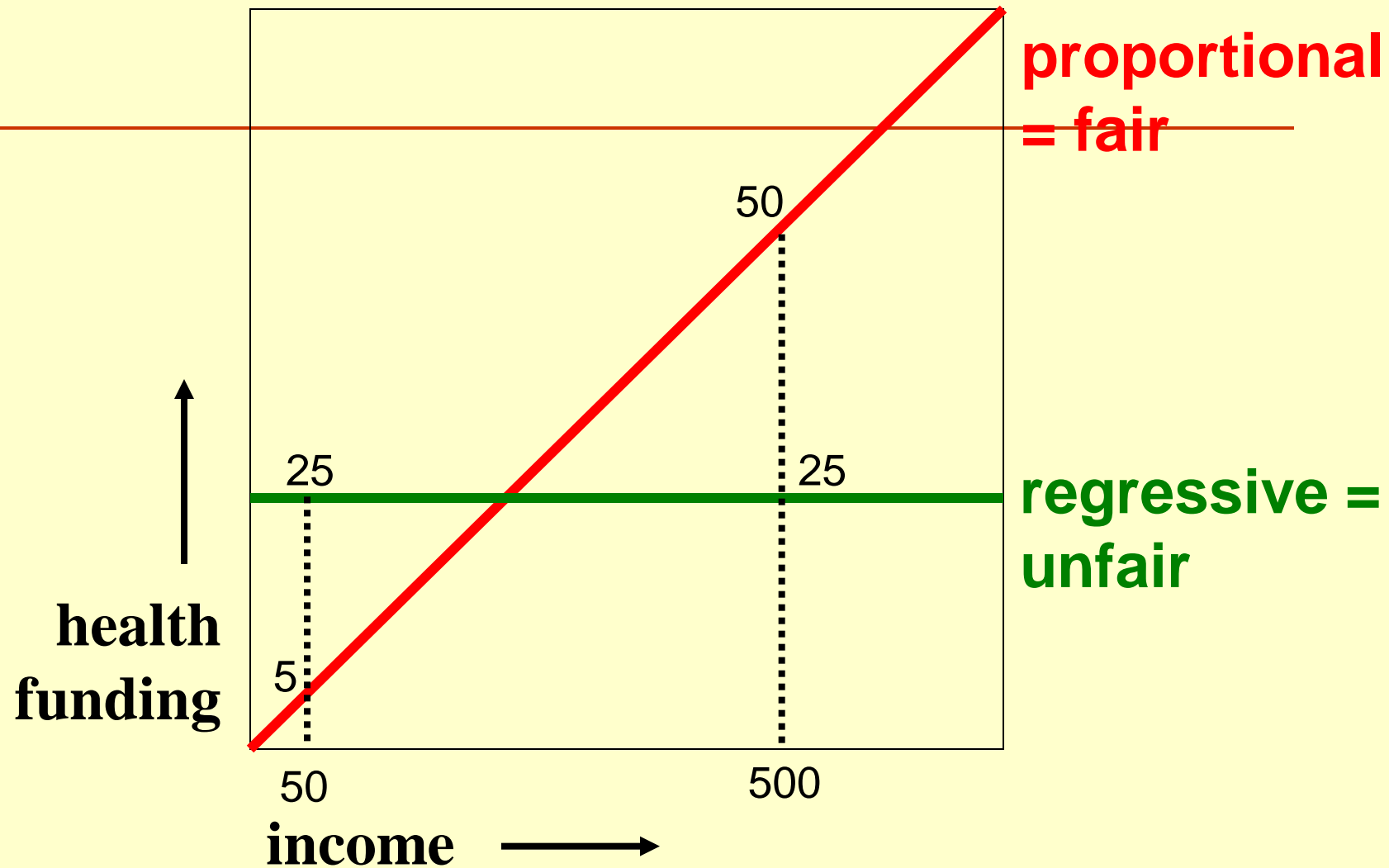
The level of responsiveness

مدى الاستجابة

- based on seven elements
 1. dignity, 2. autonomy, 3. confidentiality (together called respect of persons), and
 4. prompt attention, 5. quality of basic amenities (services),
 6. access to social support networks during and
 7. choice of care provider (client orientation).
- Iraq ranks **104**th while Germany ranks **5**th.

ATTAINMENT (الفعالية)

- Good health
- Responsiveness
- Fair financings (عدالة المساهمة المالية)



HALE, DALE

(Healthy life expectancy)

العمر الصحيح المتوقع

- Represent the number of years of life expected to live in full health
- Life expectancy is adjusted to allow for the fact that people live part of their lives in less than full health.

Advantages of HALE

- Easy to define healthy life expectancy to non specialized audience
- Is measured in units of (years) which is clear for ordinary audience
- HALE is the best summary measure to measure the health status in different countries

Human and Infrastructure Resources:

Indicator	Iraq 2005	Iraq 2006	EU 2006
Physicians per 10,000 population	2.0	7	32
Dentists per 10,000 population	0.31	1	5
Pharmacists per 10,000 population	0.30	1	5
Nursing and midwifery personnel per 10000 population	5.0	13	78
Hospital beds per 10,000 population	4.2	13	63
Primary health care units and centers	0.54	N/A	

Table 6: Human Resources in the Iraqi Health System.

Source: WHO regional office (2008); WHO (2008b)

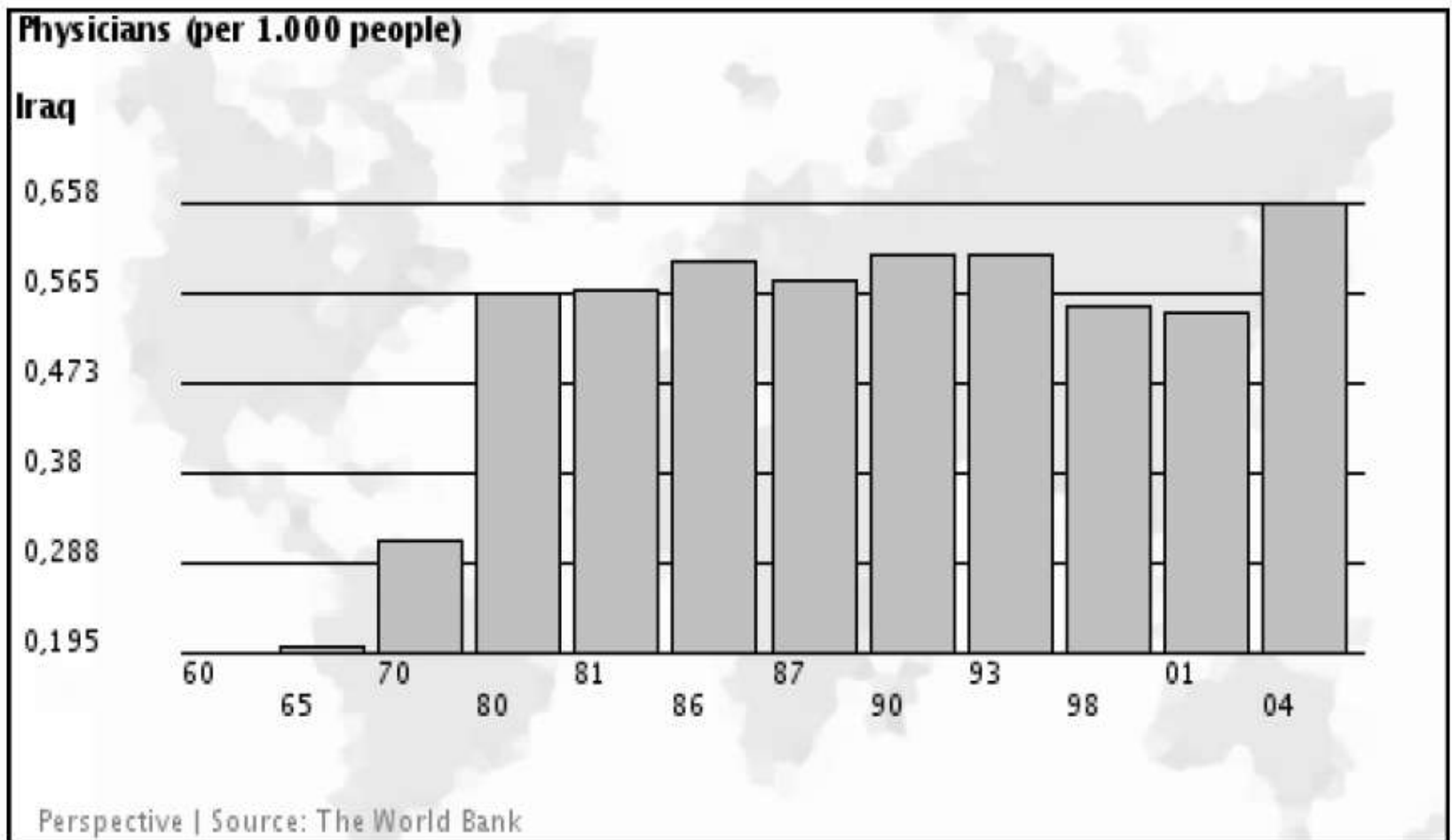
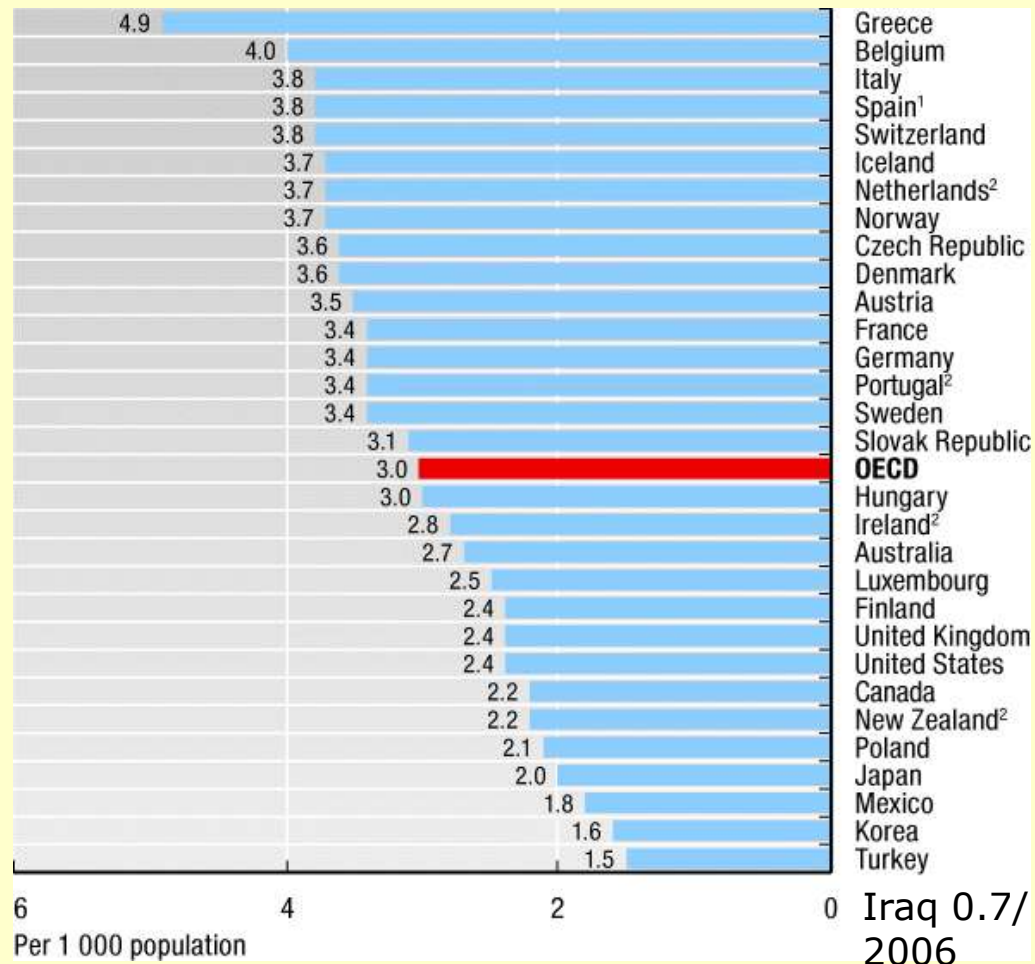


Figure 12: Physicians per 1000 People. Source: World Perspective (2008)

Practising Physicians per 1 000 Populations, 2005



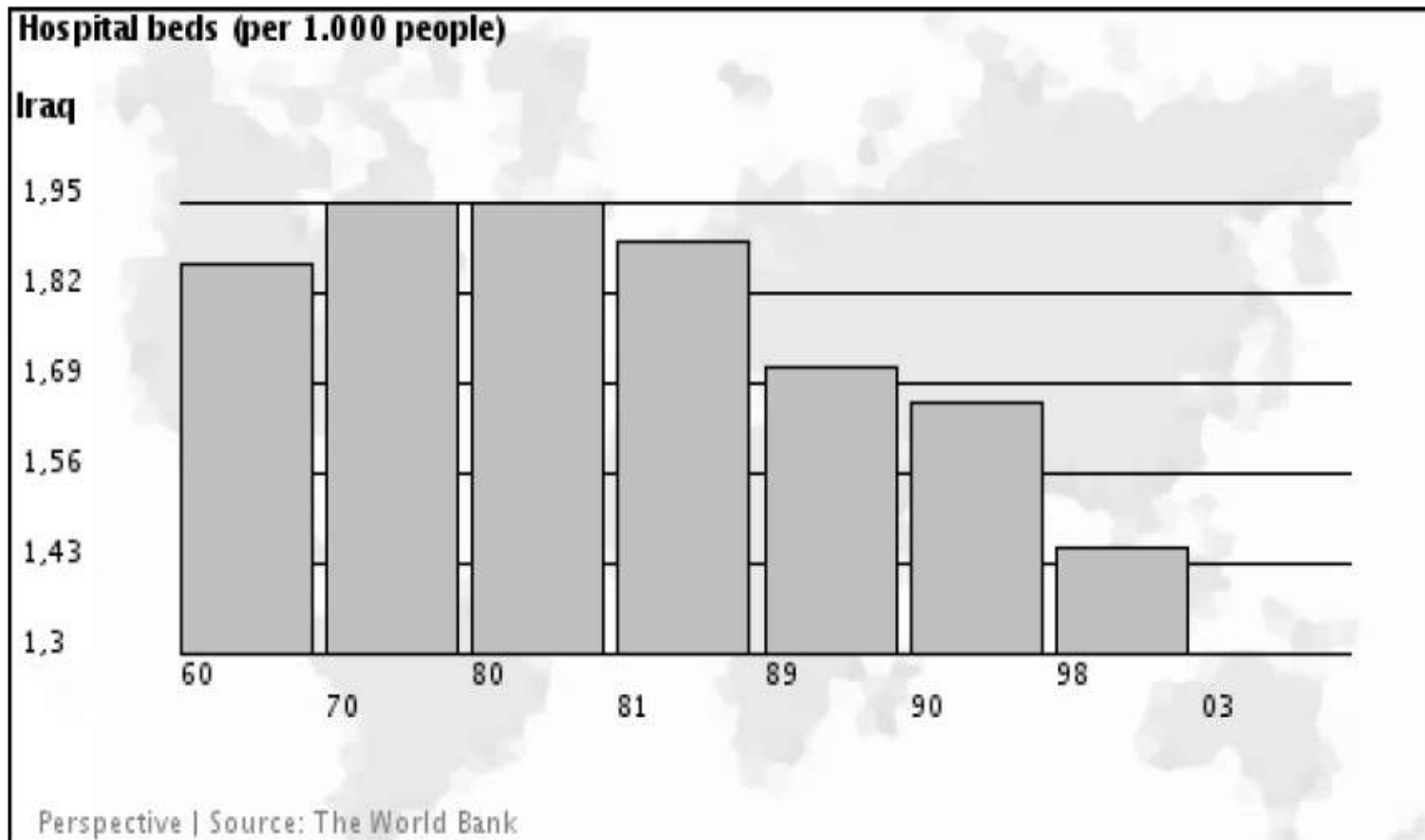


Figure 14: Hospital Beds per 1000 People in Iraq. Source: World Perspective (2008)

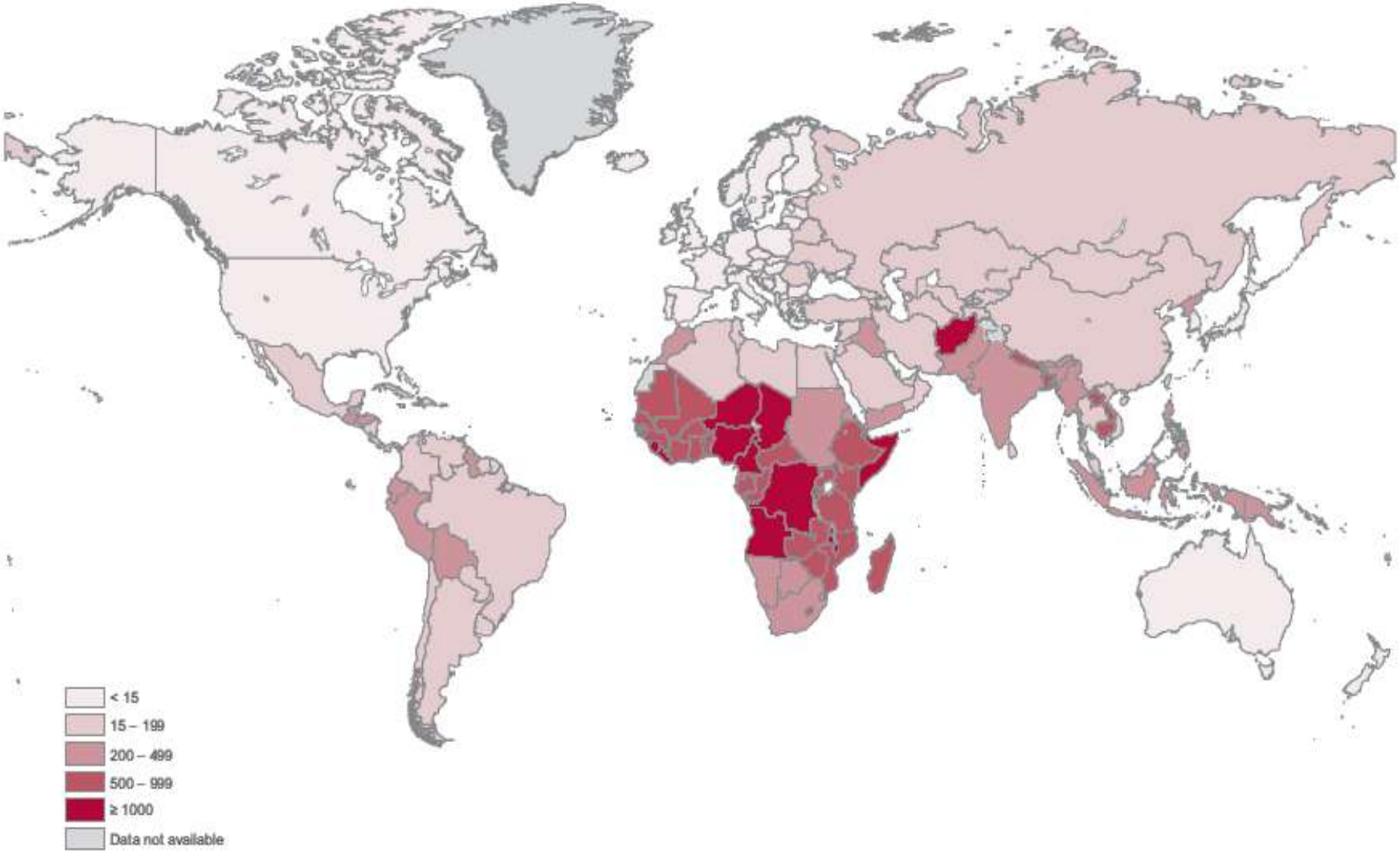
Countries	Hospital Beds (per 10,000)	Year
Iraq	4.2	2005
Sweden	30	2004
US	33	2003
Ireland	35	2004
Canada	36	2003
Portugal	36	2003
Spain	37	2004
Australia	40	2003
Denmark	40	2003
UK	40	2003
Italy	41	2003
Norway	43	2004
Netherlands	46	2002
Switzerland	59	2003
New Zealand	60	2002
Finland	69	2004
France	76	2003
Austria	83	2003
Germany	86	2004
Japan	129	2001
OECD Average	54	



Evaluation According to WHO Reports

- Health outcome in Iraq is the poorest in the Middle East region
- Iraq is on the top 60 countries with the highest infant, under 5, and maternal mortality rate.
- Cholera outbreak in 2007 (3 315+ve)
- Ranking: 103rd out of 191(from highest to lowest) WHO (2000)
- Deteriorated infrastructure, building, equipment & technologies
- HIV (500 in 2003)

MATERNAL MORTALITY RATIO PER 100 000 LIVE BIRTHS, 2005



Basic health indicators in 2008 (WHO)

- Infant MR 37/1000 { 14}
- Neonatal MR 63/ 1000 { EU 10}
- Under 5 MR male 50, female 43 { EU 18, 14}
- Adult MR(2006) male 607,female 187 { 219, 94}
- Maternal MR 300/100 000 { EU 27}

-
- Life expectancy male 48, female 67(2008) {EU 70, 78}
 - Life expectancy male 65, female 70 (2000)
 - HALE male 49, female 51(2002) {EU 62, 68}

-
- ❑ percentage of population over 60 years is only about 4.5%, Germany it is 20.4
 - ❑ the level of responsiveness based on seven elements of responsiveness which are: 1.dignity, 2.autonomy, 3.confidentiality (together called respect of persons), and 4.prompt attention, 5.quality of basic amenities (services), 6.access to social support networks during and 7.choice of care provider (client orientation). Iraq ranks 104th while Germany ranks 5th.
 - ❑ Other Annexes

Member State	ATTAINMENT OF GOALS						Health expenditure per capita in international dollars	PERFORMANCE	
	Health		Responsiveness		Fairness in financial contribution	Overall goal attainment		On level of health	Overall health system performance
	Level (DALE)	Distribution	Level	Distribution					
Equatorial Guinea	152	151	143	118	134	152	129	174	171
Eritrea	169	167	186	169 – 170	108 – 111	176	187	148	158
Estonia	69	43	66	69	145	48	60	115	77
Ethiopia	182	176	179	179 – 180	138 – 139	186	189	169	180
Fiji	106	71	57 – 58	73 – 74	54 – 55	78	87	124	96
Finland	20	27	19	3 – 38	8 – 11	22	18	44	31
France	3	12	16 – 17	3 – 38	26 – 29	6	4	4	1
Gabon	144	136	118 – 119	101 – 102	84 – 86	141	95	143	139
Gambia	143	155	165 – 167	157	149	153	158	109	146
Georgia	44	61	165 – 167	141	105 – 106	76	125	84	114
Germany	22	20	5	3 – 38	6 – 7	14	3	41	25
Ghana	149	149	132 – 135	146	74 – 75	139	166	158	135
Greece	7	6	36	3 – 38	41	23	30	11	14
Grenada	49	82	63 – 64	84 – 85	147	68	67	49	85
Guatemala	129	106	115 – 117	159	157	113	130	99	78
Guinea	167	166	168 – 169	130 – 131	76 – 78	172	159	160	161
Guinea-Bissau	170	177	184	174	122 – 123	180	156	156	176
Guyana	98	126	114	105 – 106	45 – 47	116	109	104	128
Haiti	153	152	157 – 160	172 – 173	163	145	155	139	138
Honduras	92	119	129	163	178	129	100	48	131
Hungary	62	40	62	58	105 – 106	43	59	105	66
Iceland	19	24	15	3 – 38	12 – 15	16	14	27	15
India	134	153	108 – 110	127	42 – 44	121	133	118	112
Indonesia	103	156	63 – 64	70	73	106	154	90	92
Iran, Islamic Republic of	96	113	100	93 – 94	112 – 113	114	94	58	93
Iraq	126	130	103 – 104	114	56 – 57	124	117	75	103
Ireland	27	13	25	3 – 38	6 – 7	25	25	32	19
Israel	23	7	20 – 21	3 – 38	38 – 40	24	19	40	28

POPULATION ESTIMATES

Member State	Total population (000)	Annual growth rate (%)	Dependency ratio (per 100)		Percentage of population aged 60+ years		Total fertility rate		
			1990	1999	1990	1999	1990	1999	
			1999	1990-1999	1990	1999	1990	1999	1990	1999
56	Equatorial Guinea	442	2.6	87	90	6.4	6.1	5.9	5.5
57	Eritrea	3 719	2.8	88	89	4.4	4.6	6.2	5.6
58	Estonia	1 412	-1.2	51	46	17.2	19.4	1.9	1.3
59	Ethiopia	61 095	2.7	94	96	4.7	4.5	6.8	6.2
60	Fiji	806	1.2	70	57	5.3	7.1	3.1	2.7
61	Finland	5 165	0.4	49	49	18.5	19.7	1.7	1.7
62	France	58 886	0.4	52	53	19.1	20.5	1.8	1.7
63	Gabon	1 197	2.8	76	84	9.2	8.7	5.1	5.3
64	Gambia	1 268	3.6	82	77	4.8	5.1	5.9	5.1
65	Georgia	5 006	-1.0	51	53	15.0	18.1	2.2	1.9
66	Germany	82 178	0.4	45	47	20.4	22.7	1.4	1.3
67	Ghana	19 678	3.0	93	87	4.6	4.9	6.0	5.0
68	Greece	10 626	0.4	49	49	20.0	23.6	1.5	1.3
69	Grenada	93	0.3	63	58	9.1	9.7	4.1	3.6
70	Guatemala	11 090	2.7	97	90	5.1	5.3	5.6	4.8
71	Guinea	7 360	2.8	97	89	4.3	4.4	6.3	5.4
72	Guinea-Bissau	1 187	2.2	85	88	6.6	6.4	6.0	5.6
73	Guyana	855	0.8	60	53	5.9	6.2	2.6	2.3
74	Haiti	8 087	1.8	93	81	5.8	5.5	5.4	4.3
75	Honduras	6 316	2.9	93	83	4.5	5.1	5.1	4.1
76	Hungary	10 076	-0.3	51	47	19.0	19.7	1.8	1.3
77	Iceland	279	1.0	55	54	14.6	14.9	2.2	2.1
78	India	998 056	1.8	69	63	6.9	7.5	3.8	3.0
79	Indonesia	209 255	1.5	65	55	6.3	7.3	3.1	2.5
80	Iran, Islamic Republic of	66 796	1.9	96	72	5.7	6.3	4.9	2.7
81	Iraq	22 450	2.4	89	81	4.5	4.8	5.9	5.1

	PROBABILITY OF DYING (per 1000)								LIFE EXPECTANCY AT BIRTH (years)			
	Under age 5 years				Between ages 15 and 59 years				Males		Females	
	Males		Females		Males		Females		Males		Females	
	1999	Uncertainty interval	1999	Uncertainty interval	1999	Uncertainty interval	1999	Uncertainty interval	1999	Uncertainty interval	1999	Uncertainty interval
56	146	129 – 164	131	115 – 145	384	350 – 413	309	281 – 334	51.4	49.4 – 53.5	55.4	53.6 – 57.4
57	144	133 – 159	134	121 – 146	520	481 – 556	514	477 – 548	46.6	44.8 – 48.5	46.5	44.7 – 48.3
58	12	8 – 15	11	7 – 16	341	308 – 377	120	100 – 143	64.4	62.8 – 65.9	75.3	73.9 – 76.5
59	188	171 – 207	177	162 – 194	596	556 – 641	545	505 – 591	41.4	39.3 – 43.5	43.1	40.8 – 45.3
60	25	14 – 42	19	11 – 31	247	194 – 307	141	106 – 186	64.0	61.0 – 66.4	69.2	66.6 – 71.3
61	5	4 – 5	4	4 – 5	148	145 – 150	59	55 – 64	73.4	72.9 – 73.8	80.7	80.1 – 81.4
62	7	6 – 8	5	4 – 6	146	141 – 151	59	56 – 62	74.9	74.4 – 75.3	83.6	83.1 – 84.1
63	94	81 – 109	85	73 – 99	397	366 – 431	336	306 – 368	54.6	52.5 – 56.6	57.5	55.4 – 59.6
64	103	94 – 114	93	85 – 102	351	321 – 378	295	270 – 319	56.0	54.3 – 57.8	58.9	57.4 – 60.6
65	20	14 – 27	16	11 – 22	209	184 – 237	85	70 – 102	69.4	67.8 – 70.9	76.7	75.3 – 77.9
66	6	6 – 7	5	5 – 5	136	128 – 144	67	64 – 70	73.7	73.3 – 74.2	80.1	79.9 – 80.4
67	118	102 – 135	109	95 – 126	376	339 – 413	343	309 – 378	54.2	51.8 – 56.4	55.6	53.2 – 57.7
68	8	7 – 9	7	6 – 7	117	113 – 120	50	47 – 52	75.5	75.3 – 75.7	80.5	80.1 – 80.9
69	27	24 – 30	22	20 – 25	206	192 – 220	109	105 – 113	69.1	68.1 – 70.2	75.9	75.1 – 76.8
70	58	53 – 63	44	40 – 48	326	307 – 343	223	210 – 237	60.2	59.2 – 61.1	64.7	63.9 – 65.6
71	217	201 – 230	193	180 – 208	413	379 – 443	369	338 – 395	46.2	44.4 – 48.1	48.9	47.2 – 50.8
72	207	190 – 236	196	175 – 215	457	423 – 489	411	380 – 440	45.0	42.7 – 47.0	47.0	45.0 – 49.0
73	75	66 – 84	58	51 – 65	242	227 – 256	153	142 – 164	65.6	64.3 – 66.9	72.2	71.1 – 73.3
74	120	110 – 135	111	101 – 126	481	459 – 503	360	341 – 382	50.6	49.1 – 51.7	55.1	53.4 – 56.3
75	42	38 – 46	37	33 – 42	219	205 – 233	168	157 – 180	68.2	67.2 – 69.2	70.8	69.8 – 71.8
76	12	9 – 15	10	9 – 12	292	263 – 325	127	123 – 131	66.3	64.9 – 67.6	75.1	74.5 – 75.7
77	5	4 – 7	3	2 – 4	81	71 – 91	54	45 – 61	76.1	74.8 – 77.4	80.4	78.9 – 81.9
78	97	84 – 110	104	91 – 118	275	261 – 289	217	205 – 229	59.6	58.4 – 60.6	61.2	59.9 – 62.3
79	63	53 – 70	53	49 – 58	240	224 – 257	197	183 – 210	66.6	65.3 – 67.9	69.0	67.9 – 70.1
80	48	41 – 55	42	36 – 48	160	143 – 178	129	120 – 139	66.8	65.5 – 68.0	67.9	67.1 – 68.6
81	67	60 – 79	54	50 – 61	243	220 – 259	208	190 – 220	61.6	60.4 – 62.8	62.8	62.1 – 63.7

Annex Table 5 Health attainment, level and distribution in all Member States, estimates for 1997 and 1999

Rank	Member State	LEVEL ^a								
		Disability-adjusted life expectancy (years)								
		Total population	Males				Females			
			At birth	At birth	Uncertainty interval	At age 60	Uncertainty interval	At birth	Uncertainty interval	At age 60	Uncertainty interval
108	Seychelles	59.3	56.4	55.7 - 57.3	8.6	8.3 - 9.4	62.1	61.5 - 63.0	11.7	11.4 - 12.4
109	Bahamas	59.1	56.7	55.1 - 58.1	11.3	10.5 - 12.1	61.6	59.9 - 63.4	13.0	12.0 - 14.0
110	Morocco	59.1	58.7	57.9 - 59.6	11.5	11.0 - 12.0	59.4	58.4 - 60.4	11.4	10.8 - 12.0
111	Brazil	59.1	55.2	54.4 - 56.1	11.8	11.5 - 12.7	62.9	62.2 - 63.9	14.8	14.4 - 15.8
112	Palau	59.0	57.4	56.1 - 58.5	8.0	7.5 - 8.5	60.7	59.2 - 61.9	9.7	9.1 - 10.4
113	Philippines	58.9	57.1	56.0 - 58.1	10.3	9.7 - 10.9	60.7	59.4 - 61.9	12.4	11.6 - 13.1
114	Syrian Arab Republic	58.8	58.8	57.7 - 59.9	9.7	9.2 - 10.2	58.9	57.6 - 60.2	10.0	9.4 - 10.6
115	Egypt	58.5	58.6	57.7 - 59.5	11.8	11.2 - 12.2	58.3	57.1 - 59.6	11.7	11.1 - 12.4
116	Viet Nam	58.2	56.7	55.6 - 57.9	9.7	9.1 - 10.4	59.6	58.4 - 60.9	10.8	10.1 - 11.5
117	Nicaragua	58.1	56.4	55.3 - 57.4	11.1	10.4 - 11.8	59.9	58.7 - 61.1	12.5	11.7 - 13.2
118	Cape Verde	57.6	54.6	53.0 - 56.2	11.4	10.6 - 12.3	60.6	58.8 - 62.4	15.3	14.2 - 16.4
119	Tuvalu	57.4	57.1	55.7 - 58.3	10.3	9.7 - 10.9	57.6	56.2 - 58.8	9.4	8.8 - 10.0
120	Tajikistan	57.3	55.1	53.5 - 56.5	12.3	11.4 - 13.2	59.4	57.9 - 60.9	15.6	14.7 - 16.4
121	Marshall Islands	56.8	56.0	54.4 - 57.4	10.7	10.0 - 11.4	57.6	55.9 - 59.0	11.1	10.3 - 12.0
122	Kazakhstan	56.4	51.5	50.9 - 52.2	8.8	8.7 - 9.5	61.2	60.8 - 62.0	13.1	12.8 - 13.9
123	Kyrgyzstan	56.3	53.4	52.6 - 54.2	9.6	9.4 - 10.4	59.1	58.3 - 60.1	12.4	12.1 - 13.3
124	Pakistan	55.9	55.0	53.8 - 56.3	11.3	10.5 - 12.1	56.8	54.6 - 57.9	12.6	11.9 - 13.2
125	Kiribati	55.3	53.9	52.4 - 55.3	9.4	8.7 - 10.1	56.6	55.0 - 58.0	11.0	10.3 - 11.7
126	Iraq	55.3	55.4	54.4 - 56.4	9.2	8.7 - 9.8	55.1	53.9 - 56.2	8.2	7.6 - 8.8
127	Solomon Islands	54.9	54.5	53.0 - 55.8	8.8	8.2 - 9.5	55.3	53.7 - 56.7	9.2	8.6 - 9.9
128	Turkmenistan	54.3	51.9	50.6 - 53.3	9.0	8.7 - 10.0	56.7	55.3 - 58.0	10.9	10.6 - 11.8

				DISTRIBUTION ^b			
Expectation of disability at birth (years)		Percentage of lifespan lived with disability		Equality of child survival ^c			
Males	Females	Males	Females	Rank	Member State	Index	Uncertainty interval
8.4	8.4	13.0	11.9	108	Brazil	0.762	0.702 - 0.823
10.3	12.0	15.4	16.3	109	Turkey	0.759	0.616 - 0.902
6.4	7.4	9.8	11.0	110	Algeria	0.753	0.607 - 0.897
8.5	8.8	13.3	12.3	111	Morocco	0.748	0.685 - 0.809
7.1	9.0	11.0	13.0	112	Micronesia, Federated States of	0.747	0.602 - 0.893
7.1	8.7	11.0	12.5	113	Iran, Islamic Republic of	0.745	0.600 - 0.891
5.8	8.2	8.9	12.3	114	Tunisia	0.744	0.678 - 0.817
5.6	7.5	8.8	11.4	115	El Salvador	0.741	0.596 - 0.887
8.0	9.2	12.3	13.3	116	Tuvalu	0.732	0.584 - 0.881
8.4	8.9	13.0	13.0	117	Solomon Islands	0.728	0.585 - 0.873
9.6	11.2	15.0	15.5	118	Bolivia	0.725	0.661 - 0.792
6.8	7.9	10.6	12.1	119	Honduras	0.723	0.575 - 0.873
10.1	10.6	15.5	15.2	120	Marshall Islands	0.712	0.562 - 0.866
7.9	9.5	12.4	14.2	121	Kiribati	0.706	0.556 - 0.860
7.2	8.7	12.3	12.4	122	Kyrgyzstan	0.699	0.545 - 0.856
8.2	9.9	13.3	14.3	123	Cape Verde	0.694	0.543 - 0.848
7.6	8.2	12.1	12.6	124	Tajikistan	0.694	0.540 - 0.850
7.4	8.9	12.1	13.6	125	Bangladesh	0.692	0.626 - 0.763
6.2	7.7	10.0	12.2	126	Guyana	0.691	0.537 - 0.846
7.5	8.7	12.2	13.7	127	Vanuatu	0.686	0.537 - 0.837
9.1	8.6	14.9	13.2	128	South Africa	0.685	0.531 - 0.840
8.1	8.3	13.4	12.8	129	Albania	0.684	0.536 - 0.832
8.9	9.3	14.0	14.9	130	Iraq	0.684	0.535 - 0.832

Annex Table 6 Responsiveness of health systems, level and distribution in all Member States, WHO indexes, estimates for 1999*

LEVEL				DISTRIBUTION			
Rank	Member State	Index	Uncertainty interval	Rank	Member State	Index	Uncertainty interval
1	United States of America	8.10	7.32 – 8.96	1	United Arab Emirates	1.000	1.000 – 1.000
2	Switzerland	7.44	6.79 – 8.13	2	Bulgaria	0.996	0.994 – 0.997
3	Luxembourg	7.37	6.73 – 8.06	3 – 38	Argentina	0.995	0.992 – 0.997
4	Denmark	7.12	6.55 – 7.73	3 – 38	Australia	0.995	0.993 – 0.997
5	Germany	7.10	6.52 – 7.72	3 – 38	Austria	0.995	0.993 – 0.997
6	Japan	7.00	6.43 – 7.61	3 – 38	Bahamas	0.995	0.992 – 0.997
7 – 8	Canada	6.98	6.44 – 7.54	3 – 38	Bahrain	0.995	0.992 – 0.997
7 – 8	Norway	6.98	6.40 – 7.60	3 – 38	Barbados	0.995	0.993 – 0.997
9	Netherlands	6.92	6.38 – 7.49	3 – 38	Belgium	0.995	0.993 – 0.997
10	Sweden	6.90	6.35 – 7.47	3 – 38	Brunel Darrusalam	0.995	0.993 – 0.997
73 – 74	Romania	5.35	4.96 – 5.76	73 – 74	Fiji	0.956	0.950 – 0.962
73 – 74	South Africa	5.35	5.21 – 5.49	73 – 74	Jamaica	0.956	0.950 – 0.962
75	Seychelles	5.34	4.94 – 5.73	75	Seychelles	0.955	0.948 – 0.961
76 – 79	Belarus	5.32	4.92 – 5.72	76	Libyan Arab Jamahiriya	0.953	0.947 – 0.960
76 – 79	Botswana	5.32	5.15 – 5.49	77 – 78	Dominica	0.949	0.942 – 0.955
76 – 79	Croatia	5.32	4.93 – 5.71	77 – 78	Sri Lanka	0.949	0.941 – 0.956
76 – 79	Ecuador	5.32	5.15 – 5.49	79 – 81	Lebanon	0.947	0.940 – 0.954
80 – 81	Lithuania	5.31	4.90 – 5.71	79 – 81	Suriname	0.947	0.940 – 0.953
80 – 81	Samoa	5.31	4.88 – 5.72	79 – 81	Syrian Arab Republic	0.947	0.940 – 0.954
82	Colombia	5.30	4.92 – 5.68	82	Saint Lucia	0.946	0.938 – 0.953
83	Oman	5.27	4.85 – 5.65	83	Croatia	0.945	0.939 – 0.952
84 – 86	Dominica	5.25	4.86 – 5.64	84 – 85	Brazil	0.944	0.942 – 0.968
84 – 86	Jordan	5.25	4.83 – 5.63	84 – 85	Grenada	0.944	0.937 – 0.951
84 – 86	Saint Lucia	5.25	4.84 – 5.63	86 – 87	Costa Rica	0.943	0.936 – 0.950
87	Suriname	5.23	4.82 – 5.62	86 – 87	Russian Federation	0.943	0.936 – 0.950
88 – 89	China	5.20	4.79 – 5.58	88	Panama	0.939	0.932 – 0.946
88 – 89	Turkmenistan	5.20	4.78 – 5.59	89	Cook Islands	0.938	0.929 – 0.946
90 – 91	Algeria	5.19	4.77 – 5.57	90	Belize	0.937	0.929 – 0.944
90 – 91	Kazakhstan	5.19	4.80 – 5.58	91	Mongolia	0.934	0.916 – 0.952
92	Armenia	5.18	4.77 – 5.57	92	Venezuela, Bolivarian Republic of	0.933	0.925 – 0.941
93	Turkey	5.16	4.74 – 5.53	93 – 94	Colombia	0.931	0.923 – 0.939
94	Tunisia	5.15	4.75 – 5.52	93 – 94	Iran, Islamic Republic of	0.931	0.923 – 0.939
95	Dominican Republic	5.14	4.74 – 5.51	95	The former Yugoslav Republic of Macedonia	0.926	0.915 – 0.935
96	Ukraine	5.13	4.72 – 5.52	96	Kyrgyzstan	0.925	0.915 – 0.933
97	Paraguay	5.12	4.74 – 5.50	97	Tonga	0.921	0.910 – 0.932
98 – 99	Maldives	5.11	4.69 – 5.49	98 – 100	Cuba	0.920	0.909 – 0.930
98 – 99	Marshall Islands	5.11	4.70 – 5.52	98 – 100	Saint Vincent and the Grenadines	0.920	0.911 – 0.929
100	Iran, Islamic Republic of	5.10	4.71 – 5.48	98 – 100	Samoa	0.920	0.908 – 0.930
101	Sri Lanka	5.08	4.69 – 5.47	101 – 102	Gabon	0.919	0.909 – 0.928
102	Egypt	5.06	4.94 – 5.17	101 – 102	Maldives	0.919	0.909 – 0.928
103 – 104	Iraq	5.05	4.63 – 5.43	103	Chile	0.918	0.902 – 0.933

Annex Table 7 Fairness of financial contribution to health systems in all Member States, WHO index, estimates for 1997^a

Rank	Member State	Index	Uncertainty interval
1	Colombia	0.992	0.990 – 0.994
2	Luxembourg	0.981	0.967 – 0.992
3 – 5	Belgium	0.979	0.964 – 0.991
3 – 5	Djibouti	0.979	0.965 – 0.990
3 – 5	Denmark	0.979	0.964 – 0.991
6 – 7	Ireland	0.978	0.965 – 0.989
6 – 7	Germany	0.978	0.964 – 0.989
8 – 11	Norway	0.977	0.962 – 0.990
8 – 11	Japan	0.977	0.961 – 0.990
8 – 11	Finland	0.977	0.961 – 0.990
8 – 11	United Kingdom	0.977	0.963 – 0.988
12 – 15	Austria	0.976	0.959 – 0.991
12 – 15	Libyan Arab Jamahiriya	0.976	0.961 – 0.988
12 – 15	Sweden	0.976	0.959 – 0.990
12 – 15	Iceland	0.976	0.961 – 0.988

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Rank	Member State	Index	Uncertainty interval
54 – 55	United States of America	0.954	0.929 – 0.974
54 – 55	Fiji	0.954	0.938 – 0.969
56 – 57	Iraq	0.952	0.932 – 0.970
56 – 57	Oman	0.952	0.935 – 0.967
58 – 60	Chad	0.951	0.927 – 0.972
58 – 60	Rwanda	0.951	0.920 – 0.975
58 – 60	Portugal	0.951	0.932 – 0.968
61	Bahrain	0.950	0.933 – 0.966
62 – 63	Vanuatu	0.949	0.932 – 0.965
62 – 63	Pakistan	0.949	0.941 – 0.967
64 – 65	Seychelles	0.948	0.923 – 0.969
64 – 65	Costa Rica	0.948	0.921 – 0.970
66 – 67	Saint Lucia	0.947	0.929 – 0.965
66 – 67	Sao Tome and Principe	0.947	0.922 – 0.968

Annex Table 8 Selected national health accounts indicators for all Member States, estimates for 1997^a

Member State	HEALTH EXPENDITURE (%)							PER CAPITA HEALTH EXPENDITURE (US\$)				
	Total expenditure on health as % of GDP	Public expenditure as % of total expenditure on health	Private expenditure as % of total health expenditure	Out-of-pocket expenditure as % of total expenditure on health	Tax-funded and other public expenditure as % of public expenditure on health	Social security expenditure as % of public expenditure on health	Public expenditure on health as % of total public expenditure	Total expenditure at official exchange rate	Out-of-pocket expenditure at official exchange rate	Total expenditure in international dollars	Public expenditure in international dollars	Out-of-pocket expenditure in international dollars ^b
Afghanistan	3.2	40.6	59.4	59.4	100	...	...	2	1	28	11	17
Albania	3.5	77.7	22.3	22.3	82.5	17.5	9.5	26	6	63	49	14
Algeria	3.1	50.8	49.2	49.2	100	...	4.9	44	22	122	62	60
Andorra	7.5	86.7	13.3	13.3	100	...	38.5	1 368	182	1 216	1 055	162
Angola	3.6	59.6	40.4	40.4	100	...	18.2	...	...	47	28	19
Iraq	4.2	58.9	41.1	41.1	100	...	...	251	103	110	65	45

Annex Table 9 Overall health system attainment in all Member States, WHO index, estimates for 1997

Rank	Uncertainty interval	Member State	Index	Uncertainty interval
1	1	Japan	93.4	92.6 – 94.3
2	2 – 8	Switzerland	92.2	91.2 – 93.3
3	2 – 6	Norway	92.2	91.4 – 93.1
4	2 – 11	Sweden	92.0	91.1 – 93.0
5	2 – 11	Luxembourg	92.0	91.0 – 93.0
6	3 – 11	France	91.9	91.0 – 92.9
7	4 – 14	Canada	91.7	90.8 – 92.6
8	4 – 15	Netherlands	91.6	90.7 – 92.5
9	6 – 13	United Kingdom	91.6	90.9 – 92.3
10	6 – 18	Austria	91.5	90.5 – 92.4
11	7 – 21	Italy	91.4	90.5 – 92.2
12	7 – 19	Australia	91.3	90.4 – 92.2
13	7 – 18	Belgium	91.3	90.2 – 92.3
14	8 – 20	Germany	91.3	90.4 – 92.2
15	7 – 24	United States of America	91.1	89.9 – 92.3
120	115 – 127	Tuvalu	70.2	66.0 – 71.0
121	117 – 124	India	70.1	69.3 – 71.0
122	114 – 133	El Salvador	69.6	67.1 – 71.9
123	117 – 131	Kiribati	69.5	67.7 – 70.9
124	120 – 133	Iraq	69.0	67.4 – 70.6
125	118 – 133	Brazil	68.9	67.1 – 70.4
126	122 – 137	Cape Verde	68.3	66.1 – 70.1
127	121 – 136	Tajikistan	68.3	66.2 – 70.1
128	124 – 136	Maldives	68.0	66.2 – 69.5
129	121 – 140	Honduras	67.8	66.0 – 69.8
130	124 – 139	Turkmenistan	67.7	64.9 – 70.4
131	122 – 138	Bangladesh	67.6	65.8 – 69.4
132	118 – 145	China	67.5	65.2 – 69.6

Annex Table 10 Health system performance in all Member States, WHO indexes, estimates for 1997

PERFORMANCE ON HEALTH LEVEL (DALE)					OVERALL PERFORMANCE				
Rank	Uncertainty interval	Member State	Index	Uncertainty interval	Rank	Uncertainty interval	Member State	Index	Uncertainty interval
1	1 – 5	Oman	0.992	0.975 – 1.000	1	1 – 5	France	0.994	0.982 – 1.000
2	1 – 4	Malta	0.989	0.968 – 1.000	2	1 – 5	Italy	0.991	0.978 – 1.000
3	2 – 7	Italy	0.976	0.957 – 0.994	3	1 – 6	San Marino	0.988	0.973 – 1.000
4	2 – 7	France	0.974	0.953 – 0.994	4	2 – 7	Andorra	0.982	0.966 – 0.997
5	2 – 7	San Marino	0.971	0.949 – 0.988	5	3 – 7	Malta	0.978	0.965 – 0.993
6	3 – 8	Spain	0.968	0.948 – 0.989	6	2 – 11	Singapore	0.973	0.947 – 0.998
7	4 – 9	Andorra	0.964	0.942 – 0.980	7	4 – 8	Spain	0.972	0.959 – 0.985
8	3 – 12	Jamaica	0.956	0.928 – 0.986	8	4 – 14	Oman	0.961	0.938 – 0.985
9	7 – 11	Japan	0.945	0.926 – 0.963	9	7 – 12	Austria	0.959	0.946 – 0.972
10	8 – 15	Saudi Arabia	0.936	0.915 – 0.959	10	8 – 11	Japan	0.957	0.948 – 0.965

101	97 – 104	Ukraine	0.711	0.695 – 0.726
102	93 – 111	Thailand	0.710	0.682 – 0.736
103	93 – 109	Bangladesh	0.709	0.684 – 0.735
104	92 – 115	Guyana	0.704	0.672 – 0.738
105	101 – 111	Hungary	0.698	0.682 – 0.714
106	102 – 111	Republic of Moldova	0.696	0.680 – 0.710
107	100 – 113	Republic of Korea	0.694	0.674 – 0.711
108	93 – 121	Niue	0.693	0.650 – 0.731

101	92 – 114	Republic of Moldova	0.639	0.600 – 0.672
102	94 – 113	Bulgaria	0.639	0.617 – 0.660
103	91 – 117	Iraq	0.637	0.597 – 0.669
104	86 – 126	Armenia	0.630	0.566 – 0.682
105	94 – 118	Latvia	0.630	0.589 – 0.665
106	94 – 120	Yugoslavia	0.629	0.586 – 0.664
107	95 – 121	Cook Islands	0.628	0.583 – 0.664
108	94 – 120	Syrian Arab Republic	0.628	0.589 – 0.661

71	65 – 76	Argentina	0.779	0.762 – 0.794
72	67 – 78	United States of America	0.774	0.758 – 0.789
73	61 – 86	Bhutan	0.773	0.748 – 0.797
74	63 – 84	Nicaragua	0.772	0.750 – 0.793
75	65 – 84	Iraq	0.770	0.752 – 0.791

71	58 – 83	Nicaragua	0.733	0.696 – 0.770
72	64 – 84	Belarus	0.723	0.691 – 0.750
73	65 – 82	Lithuania	0.722	0.690 – 0.750
74	63 – 83	Saint Vincent and the Grenadines	0.722	0.686 – 0.754
75	66 – 81	Argentina	0.722	0.695 – 0.747

1. Lack of clear strategy, solid policy, lack of concepts as equity and gender
2. Health system doesn't fit any international module
3. No separation between purchaser and providers
4. Highly centralized, no space for building hospital character
5. Hospital oriented with curative as priority, no system of general or family practice, GP is not regarded as a specialization
6. Weak institutional capacity for planning, and old management style, weak administrative quality, guidelines and accountability
7. No institutionalized structure to promote research on health care
8. Weak surveillance and control of risks

1. Inadequate financial resources are available as it depends totally on the budget of MOH. It is not supported by the peoples contribution(except at the point of need) this forces to decrease the scope of services vertically and horizontally
2. No fair financing. No health insurance, households are prone to catastrophic financial risks, trends of commercialization
3. Payment is government (tax financed) mainly and direct out of pocket payment at the point of need (while modern systems should depend on prepayment).
4. Formal OOP payment in the public sector which is sometimes more than sharing the risk (when high tech. is needed).
5. Corruption and lack of transparency, no effective accounting and observation systems

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6. Fixed hospital budget which depends on inputs not on performance
 7. No guidelines for rationality (reasonability)
 8. Extra sources needed to health because of high demographic growth (twice in 25 years)

Service Provision

(13)

1. Universal coverage
2. Big gap between the available and required health services, minimal quality, no standard of care, no clinical guidelines
3. The public sector is non responsive, this is the core of HS
4. There is no equity according to social, political, and geographical difference (privileged people)
5. There are problems with affordability, availability, and access to the health services
6. PHC doesn't include mental and psychological services.
7. Limited social support for the admitted patients
8. Referral system is not working
9. Private- Public relation is not set properly

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10. PHC is inefficient in consultation time which is very short (2-6) minutes. This is an indicator of insufficiency
 11. Minimal protection against health service risks as hospital infections, lack of consumer protection
 12. Limited patient access to information's about the available health services
 13. Limited involvement in environmental or pollutions

Resources

(6)

1. The number of health staffs are below the standard, doctors no. 7 per 10 000 population while in developed countries 30
2. Deficiency in modern infrastructure, equipments, and buildings. Limited no. of hospital beds 13 per 10 000 population, in developed countries 54
3. Lack of competition between the hospitals for new technology and services
4. Deteriorated programs of training and promotion, and graduation due to out of date regulations
5. Incorrect staffing due to managerial problems
6. Out of date documentation or no documentation

THANKS

