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Study
OF POTENTIAL OPPORTUNITIES IN HEALTHCARE MARKET IN THE KINGDOM OF SAUDI ARABIA

Final Report

June 2008

1- Diagnostic and therapeutic healthcare units.

Report contents

First Part - Diagnostic and therapeutic healthcare units.

Definition

Therapeutic and diagnostic healthcare units are: "Hospitals, medical centers, radiology centers, medical laboratories.. etc"

First Part - Diagnostic and therapeutic healthcare units.

Table of Content:

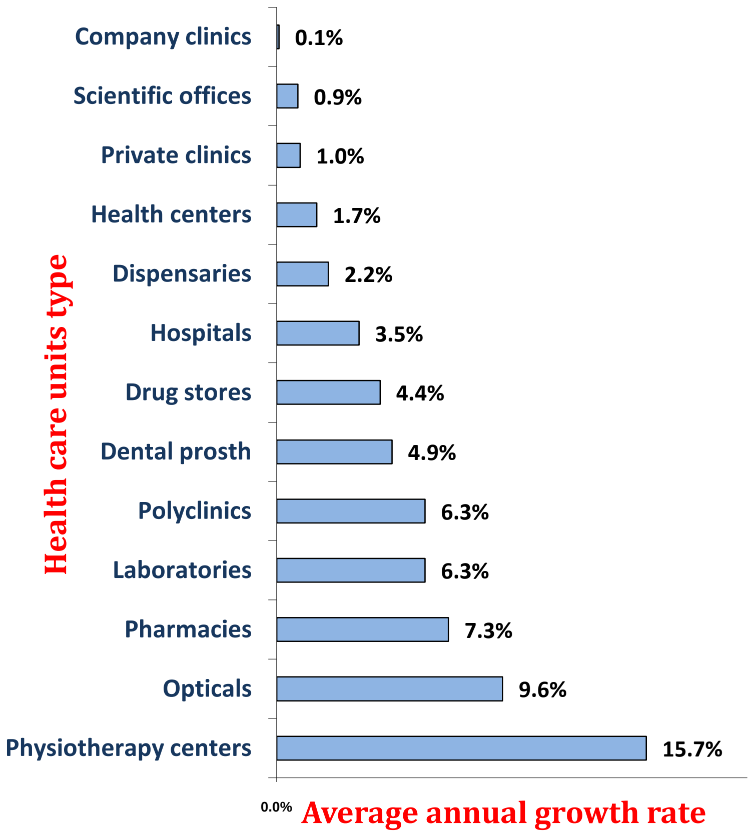
1 Current supply of total healthcare units in KSA (year 1427H)

The current supplier of healthcare in KSA are as follow:

387	Hospitals
1925	Healthcare centers
1057	Dispensaries
81	Laboratories
416	Private clinics
324	Company clinics
586	Polyclinics
4738	Pharmacies
1571	Optical
44	Physiotherapy
97	Dental center
398	Drug stores
55	Scientific office

1/1 Development of healthcare units in KSA during the period 1423/1427H

Healthcare units type	years					Average annual growth rate in %
	1423	1424	1425	1426	1427	
Physiotherapy centers	27	28	38	38	44	15.7
Optical	1108	1189	1359	1477	1571	9.5
Pharmacies	3677	3851	4314	4476	4738	7.3
Laboratories	67	70	81	81	81	6.3
Polyclinics	444	445	544	592	586	6.3
Dental center	81	99	114	97	97	4.9
Drug stores	339	350	384	404	398	4.4
Hospitals	339	350	364	379	387	3.5
Dispensaries	973	1041	1043	1055	1057	2.2
Health centers	1804	1824	1848	1905	1925	1.7
Private clinics	400	401	404	407	416	1.0
Scientific offices	53	54	56	56	55	0.9
Company clinics	325	326	337	322	324	0.1
Total	**9637**	**10028**	**10886**	**11289**	**11623**	**5.2**



Source: Statistical year book 1427H- Ministry of health

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1/2 Current supply of healthcare units in KSA by regions (year 1427H)

Regions	Hospitals	Health centers	Dispensaries	Laboratories	Private clinics	Polyclinics	Company clinics	Pharmacies	Optical	Physio therapy centers	Dental center	Drug stores	Scientific offices
Riyadh	79	361	373	22	197	253	118	1413	572	19	22	217	42
Makkah	86	283	280	42	156	238	73	1408	445	16	46	95	13
Medinah	31	134	39	5	18	41	16	298	68	0	8	13	0
AlQaseem	19	142	40	1	7	11	5	189	48	0	7	7	0
Eastern	62	198	121	2	7	35	102	577	216	3	0	45	0
Assir	32	289	66	3	7	0	2	301	68	2	0	17	0
Tabouk	13	62	29	0	11	2	4	107	23	0	2	3	0
Ha'il	10	88	14	4	3	4	2	119	21	4	3	0	0
Northern boarder	7	40	12	1	1	0	0	40	7	0	7	0	0
Jazan	18	134	29	0	0	0	0	140	30	0	0	1	0
Najran	13	61	19	0	1	0	0	40	8	0	0	0	0
Al-baha	10	86	15	1	7	0	0	72	22	0	0	0	0
Al-Jouf	7	47	20	0	1	2	2	34	43	0	2	0	0
Total	387	1925	1057	81	416	586	324	4738	1571	44	97	398	55

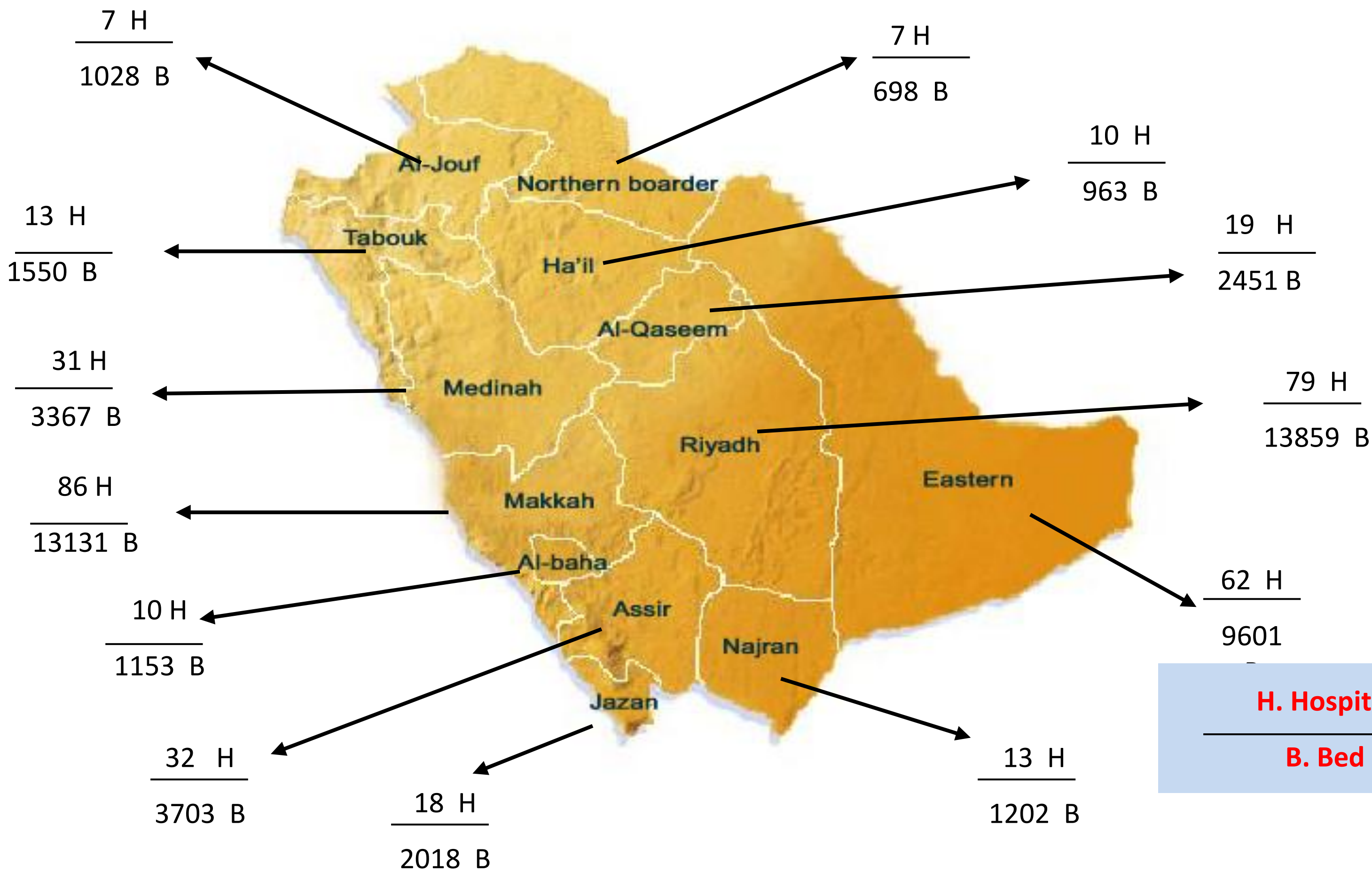
Source: Statistical year book 1427H- Ministry of health

1/3 Current supply of hospitals and their capacities in KSA (year 1427H)

Regions	Number of hospitals				Number of beds			
	Ministry of health	Private sector	Other governmental	Total	Ministry of health	Private sector	Other governmental	Total
Riyadh	40	28	11	79	5791	3892	4176	13859
Makkah	32	45	9	86	7149	3856	2126	13131
Medinah	16	13	2	31	2129	897	341	3367
Al-Qaseem	16	3	0	19	2338	113	0	2451
Eastern	29	23	10	62	4450	2696	2455	9601
Assir	21	9	2	32	2689	750	264	3703
Tabouk	10	1	2	13	944	86	520	1550
Ha'il	9	1	0	10	903	60	0	963
Northern boarder	6	0	1	7	633	0	65	698
Jazan	15	2	1	18	1888	80	50	2018
Najran	10	1	2	13	882	60	260	1202
Al-baha	9	1	0	10	1053	100	0	1153
Al-Jouf	7	0	0	7	1028	0	0	1028
Total	220	127	40	387	31877	12590	10257	54724

Source: Statistical year book 1427H- Ministry of health

1/4 Current supply of hospitals & beds by regions in KSA (year 1427H)



H. Hospital
B. Bed

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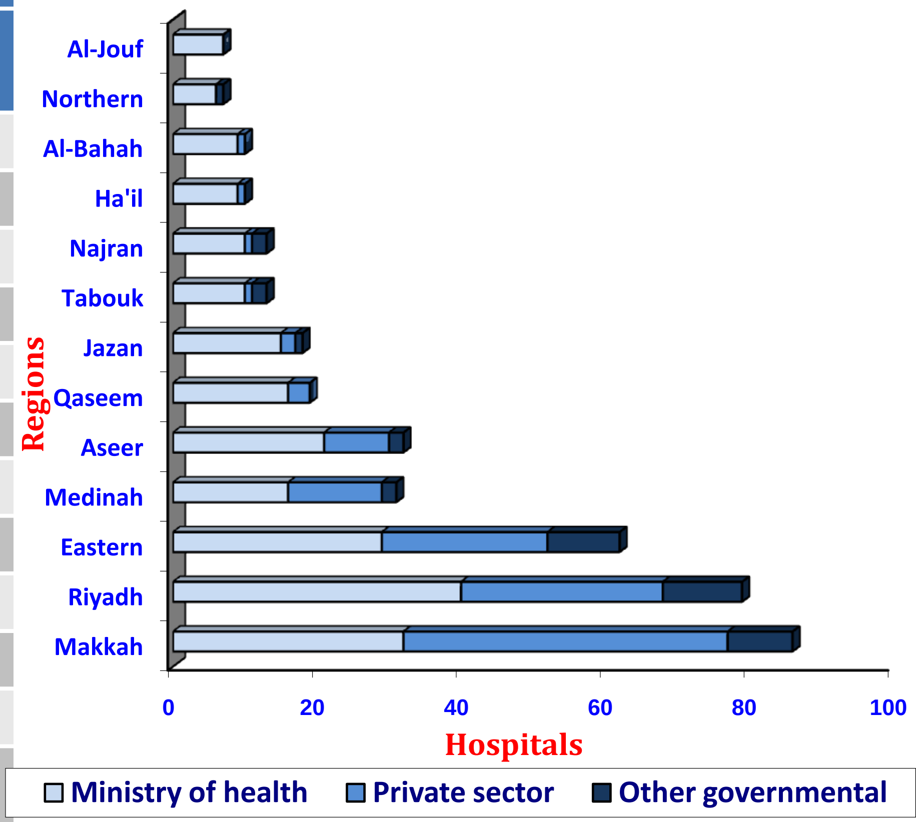
1/5 Current supply of hospitals by regions in 1427H

Regions	Number of hospitals				
	Ministry of health	Private sector	Other governmental	Total	%
Makkah	32	45	9	86	22.2%
Riyadh	40	28	11	79	20.4%
Eastern	29	23	10	62	16%
Medinah	16	13	2	31	8%
Assir	21	9	2	32	8.3%
Al-Qaseem	16	3	0	19	4.9%
Jazan	15	2	1	18	4.7%
Tabouk	10	1	2	13	3.4%
Najran	10	1	2	13	3.4%
Ha'il	9	1	0	10	2.6%
Al-baha	9	1	0	10	2.6%
Northern boarder	6	0	1	7	1.8%
Al-Jouf	7	0	0	7	1.8%
Total	**220**	**127**	**40**	**387**	**100%**
%	**56.8%**	**22.8%**	**10.4%**	**100%**	



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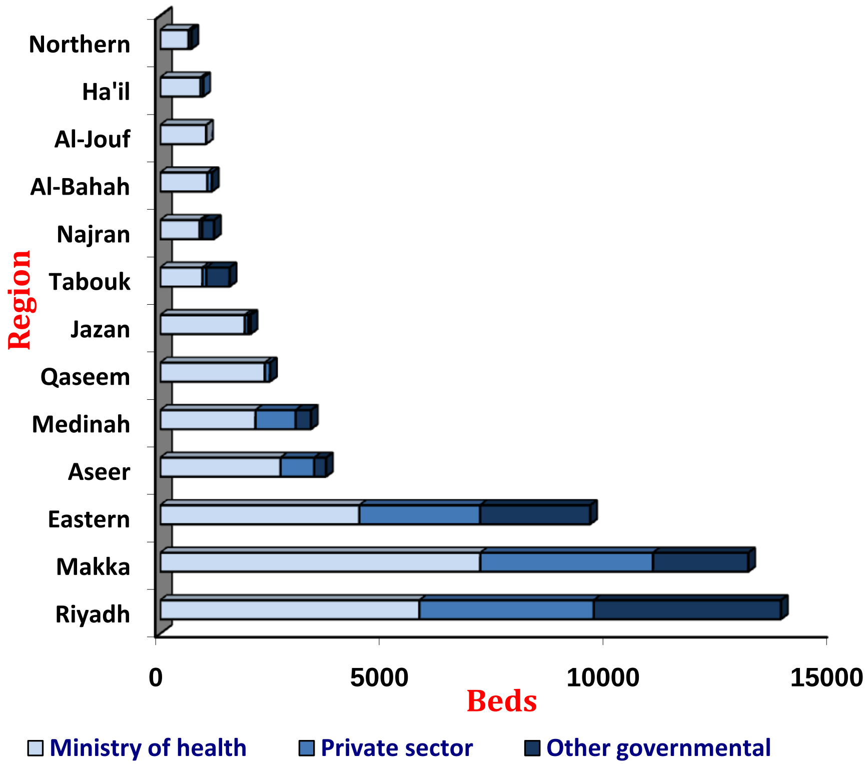
1/6 Number of beds available at hospitals by regions in 1427H

regions	Number of beds				
	Ministry of health	Private sector	Other governmental	Total	%
Riyadh	5791	3892	4176	13859	25.3
Makkah	7149	3856	2126	13131	24
Eastern	4450	2696	2455	9601	17.5
Assir	2689	750	264	3703	6.8
Medinah	2129	897	341	3367	6.2
Al-Qaseem	2338	113	0	2451	4.5
Jazan	1888	80	50	2018	3.7
Tabouk	944	86	520	1550	2.8
Najran	882	60	260	1202	2.2
Al-baha	1053	100	0	1153	2.1
Ha'il	903	60	0	963	1.8
Al-Jouf	1028	0	0	1028	1.9
Northern boarder	633	0	65	698	1.3
Total	31877	12590	10257	54724	100
%	58.3%	23%	18.7%	100%	



Source: Statistical year book 1427H- Ministry of health

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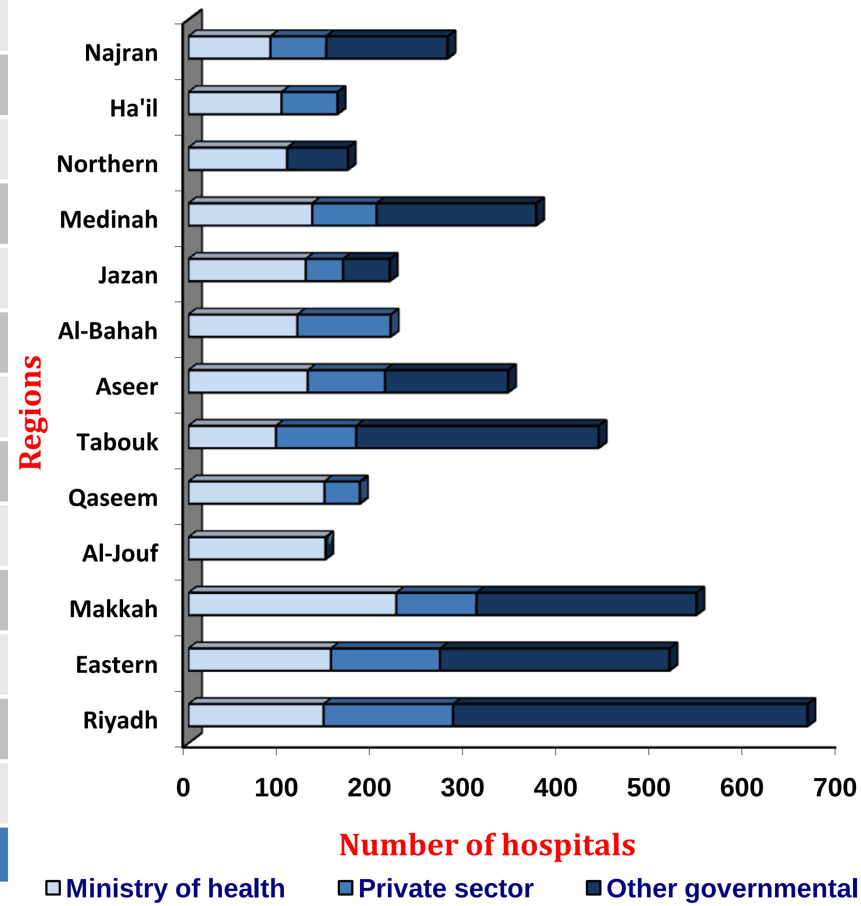
1/7 Average number of beds per hospital

Regions	Average number of beds per hospital			
	Ministry of health	Private sector	Other governmental	Average
Riyadh	145	139	380	175
Eastern	153	117	246	155
Makkah	223	86	236	153
Al-Jouf	147	0	0	147
Al-Qaseem	146	38	0	129
Tabouk	94	86	260	119
Assir	128	83	132	116
Al-baha	117	100	0	115
Jazan	126	40	50	112
Medinah	133	69	171	109
Northern boarder	106	0	65	100
Ha'il	100	60	0	96
Najran	88	60	130	92
Total	145	99	256	141

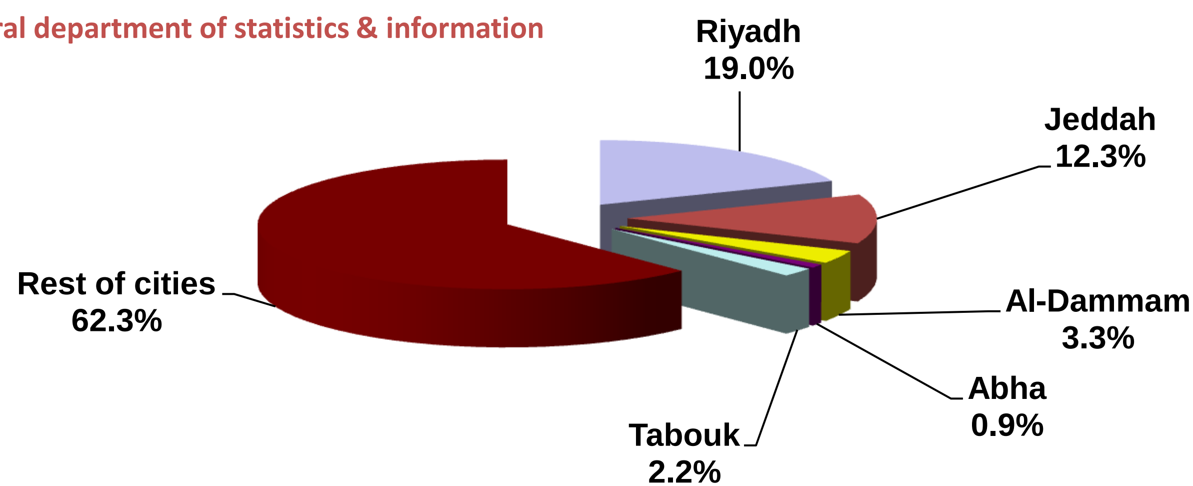


Source: Estimations of the research team work

1/8 Why focus on the following five major cities: “Riyadh - Jeddah- Al-Dammam - Abha - Tabouk”

%37.7 of total population		
City	**Population (in thousands)**	**%**
Riyadh	4517	19
Jeddah	2924	12.3
Al-Dammam	785	3.3
Abha	214	0.9
Tabouk	523	2.2
Cities’ total	**8963**	**37.7**
Rest of cities	**14811**	**62.3**
Total of KSA	**23775**	**100**

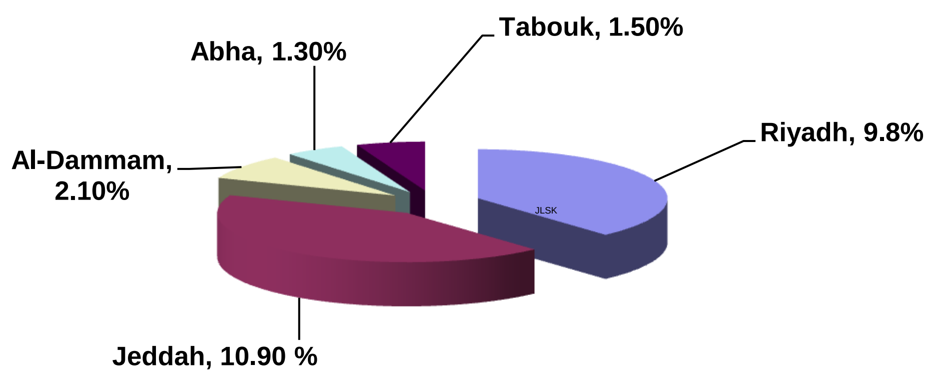
Source: Central department of statistics & information



1/8 Why focus on the following five major cities: “Riyadh - Jedda - Al-Dammam - Abha - Tabouk”

25.6% of total hospitals		
City	Number of hospitals	%
Riyadh	38	9.8
Jeddah	42	10.9
Al-Dammam	8	2.1
Abha	5	1.3
Tabouk	6	1.5
Cities’ total	99	25.6
Rest of cities	288	74.4
Total of KSA	387	100

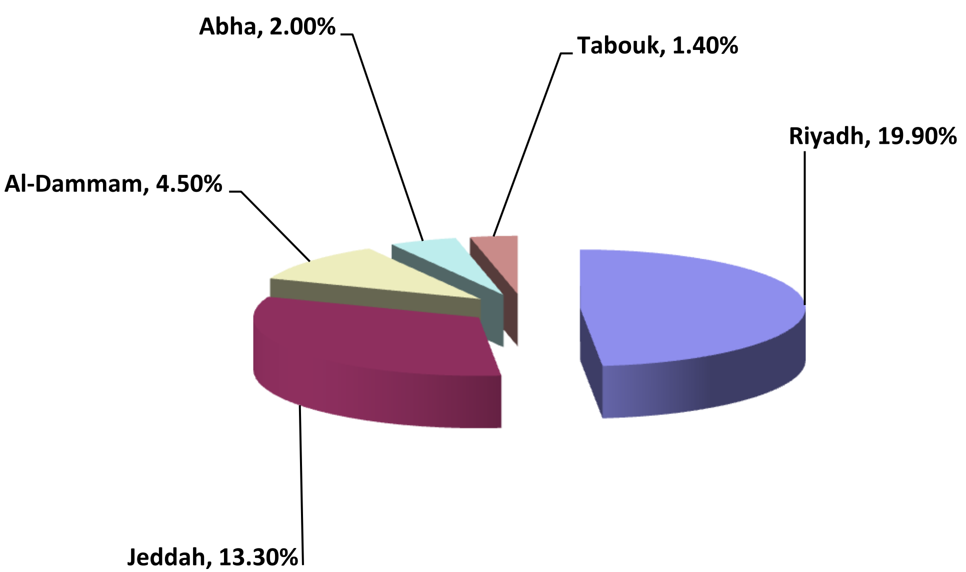
Source: -Directorates of health affairs in cities-Ministry of health - Field survey



1/8 Why focus on the following five major cities: “Riyadh - Jedda - Al-Dammam - Abha - Tabouk”

41.1 % of total beds		
City	**Number of beds**	**%**
Riyadh	10894	19.9
Jeddah	7293	13.3
Al-Dammam	2491	4.5
Abha	1091	2.0
Tabouk	740	1.4
Cities’ total	**22509**	**41.1**
Rest of cities	**32215**	**58.9**
Total of KSA	**54724**	**100**

Source: -Directorates of health affairs in cities- Ministry of health - Field survey



1/9 Current supply of hospitals and their capacities in the five major cities in KSA

City	Number of hospitals				
	Ministry of health	Private sector	Other governmental	Total	%
Jeddah	9	29	4	42	42.4%
Riyadh	8	20	10	38	38.4
AlDammam	4	3	1	8	8.1%
Tabouk	4	1	1	6	6.1%
Abha	2	3	0	5	5.1%
Total	**27**	**56**	**16**	**99**	**100**
	27.3	**56.6%**	**16.1%**	**100%**	

Source: Directorates of health affairs in cities-Ministry of health
- Field survey

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1/9 Current supply of hospitals and their capacities in the five major cities in KSA

City	Number of beds				
	Ministry of health	Private sector	Other governmental	Total	%
Riyadh	3720	2692	4482	10894	48.4%
Jeddah	2396	2747	2150	7293	32.4%
AlDammam	1681	710	100	2491	11.1%
Abha	850	241	0	1091	4.8%
Tabouk	514	106	120	740	3.3%
Total	**9161**	**6496**	**6852**	**22509**	**100%**
%	**40.7%**	**28.9%**	**30.4%**	**100%**	

Source: Directorates of health affairs in cities-Ministry of health
- Field survey

1/10 Potential supply of healthcare units in KSA and healthcare sector targets during the upcoming three years till year 1432H

Target during plan years	Types of health care units	Capacity (beds)	Estimated cost (million SR)
70	General hospitals	7000	5900
8	Gynecology & obstetric hospitals	1850	1100
15	Psychiatry hospitals	3050	1800
20	Medical tower	4750	10600
1010	Primary care facilities + 420 + 150) (440	-	3600
20	Diabetes and hypertension Centers	-	110
1	National medical labs	-	120
4	Health faculties	-	280
1148	Total	16650	23510

Source: Ministry of health

2.Current demand on healthcare services in KSA

Major factors affecting the demand on healthcare services in KSA:

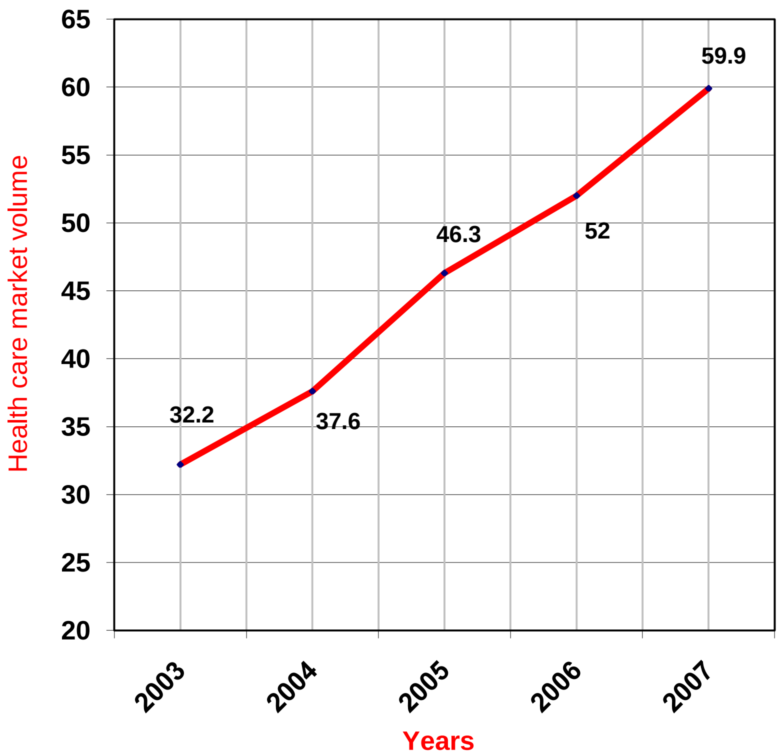
1. High population annual growth rate.
2. The obligatory insurance on foreign labor and the rest of the population at a later time.
3. The increase in the volume of elderly population.
4. The spread of affluence diseases, such as Diabetes mellitus, Hypertension and Cardiac diseases.
5. The GDP value and the annual growth rates.
6. Sufficiency of available healthcare units.
    - Hospital Beds to population ratio
    - Inpatient visits to hospital rates
    - Average length of stay at hospitals for treatment
    - Beds' utilization rates at hospitals
7. Physicians and patients behavior and their satisfaction with healthcare services.

2/1 Development of population in KSA during the period 2003-2008 & its annual growth rates

- The size of annual expenditures on healthcare services, according to the World Health Organization (WHO) and the World Bank, is estimated between 3.8% & 4.3% of GDP in current prices.
- Hence, the healthcare services' market size in KSA is estimated at about 56.6 billion SR in 2007 as follows:

Year	GDP in current prices (billion SR)	Expenditures on healthcare services (billion SR)
2003	804.6	32.2
2004	938.8	37.6
2005	1157.4	46.3
2006	1301.1	52
2007	1414	56.6

Source: Ministry of economy & planning



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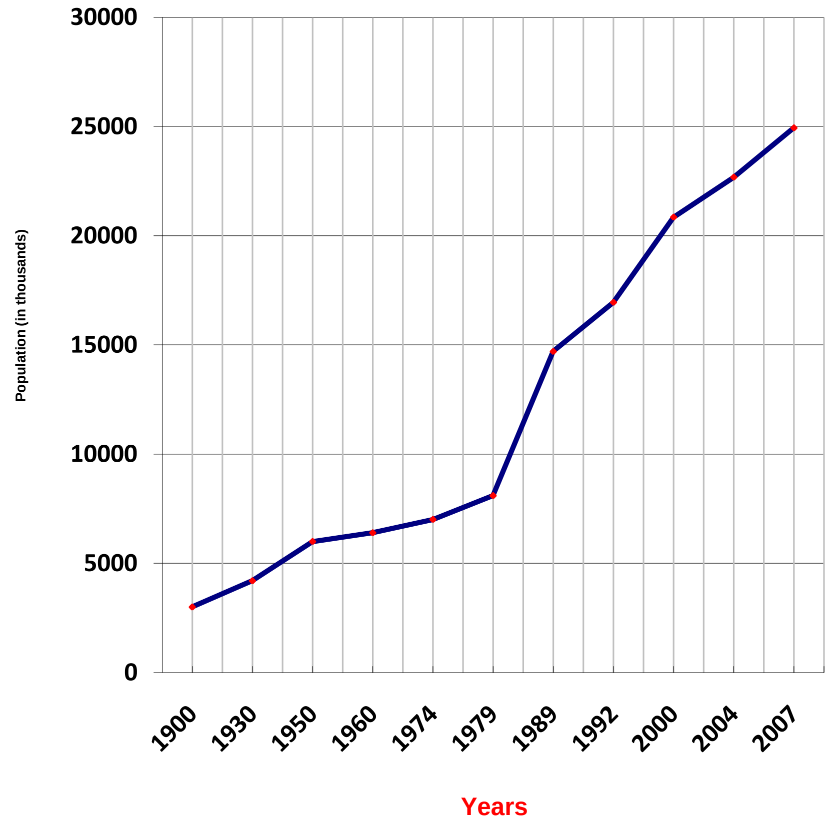
2/1 Development of population in KSA during the period 1900-2008 & its annual growth rates

Year	Population (in thousands)	Average annual growth volume (in thousands)	Average growth rate	
			during the period	annually
1900	3000	-	-	-
1930	4200	40	%40	%1.3
1950	6000	90	%43	%2.1
1960	6400	40	%7	%0.7
1974	7009	44	%9.5	%0.7
1979	8100	40	%5	%0.5
1989	14700	660	%81	%8.1
1992	16948	749	%15	%5
2000	20847	487	%23	%2.9
2004	22678	457	%8.8	%2.2
2007	23775	570	%4.8	%2.4



Source: - Ministry of economy & planning
- Central department of statistics & information

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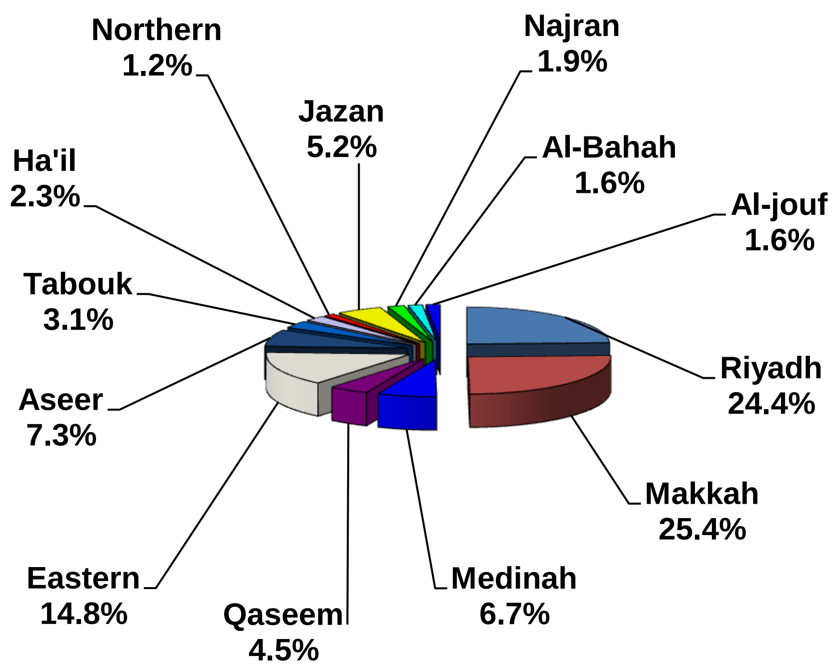
2/2 Population in KSA by regions in 1428/27H and foreign labor percentage

Regions	Number		Total	%
	Saudi	Non-Saudi		
Riyadh	3973.7	1827.4	5801.1	%24.4
Makkah	3725.8	2312.9	6038.7	%25.4
Medinah	1199.4	393.5	1592.9	%6.7
Al-Qaseem	859.1	210.8	1069.9	%4.5
Eastern	2691.7	826.9	3518.6	%14.8
Assir	1471.7	263.8	1735.5	%7.3
Tabouk	636.7	100.3	737	%3.1
Ha'il	470.2	76.6	546.8	%2.3
Northern border	245.1	40.3	285.4	%1.2
Jazan	1032.1	204.1	1236.2	%5.2
Najran	377.6	74.1	451.7	%1.9
Al-baha	330.2	50.2	380.4	%1.6
Al-Jouf	325.6	54.8	380.4	%1.6
Total	**17338.9**	**6435.7**	**23774.6**	**%100**
%	**%72.9**	**%27.1**	**%100**	



Source: Central department of statistics & information

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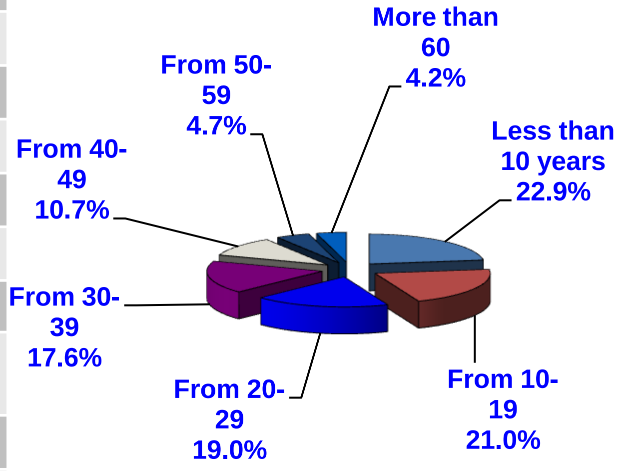
2/3 Population in KSA in 1428/27H by age categories

Regions	Age categories							Total	%
	Less than 10 years	From 10-19	From 20-29	From 30-39	From 40-49	From 50-59	More than 60		
Riyadh	1313.5	1201.8	1084.8	1004.6	610.9	268.5	239.3	5723.4	% 24.1
Makkah	1395.0	1276.4	1152.2	1067.0	648.8	285.2	254.2	6078.8	% 25.6
Medinah	364.0	333.1	300.6	278.4	169.3	74.4	66.3	1586.2	% 6.7
Al-Qaseem	244.5	223.7	201.9	187.0	113.7	50.0	44.5	1065.3	% 4.5
Eastern	808.5	739.8	667.8	618.4	376.0	165.3	147.3	3523.2	% 14.8
Assir	406.2	371.7	335.5	310.7	188.9	83.0	74.0	1769.9	% 7.4
Tabouk	166.5	152.3	137.5	127.3	77.4	34.0	30.3	725.3	% 3.1
Ha'il	126.8	116.0	104.7	97.0	59.0	25.9	23.1	552.5	% 2.3
Northern boarder	67.4	61.6	55.6	51.5	31.3	13.8	12.3	293.6	% 1.2
Jazan	285.8	261.5	236.0	218.6	132.9	58.4	52.1	1245.3	% 5.2
Najran	101.2	92.6	83.5	77.4	47.0	20.7	18.4	440.8	% 1.9
Al-baha	90.9	83.2	75.1	69.6	42.3	18.6	16.6	396.3	% 1.7
Al-Jouf	87.0	79.6	71.9	66.6	40.5	17.8	15.9	379.3	% 1.6
Total	**5457.2**	**4993.3**	**4507.2**	**4174.0**	**2538.1**	**1115.7**	**994.2**	**23779.9**	**% 100**
%	**% 22.9**	**% 21.0**	**% 19.0**	**% 17.6**	**% 10.7**	**% 4.7**	**% 4.2**	**% 100**	



Source: Central department of statistics & information

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2/4 Total visitors to healthcare units under Ministry of Health suffering from affluence diseases in 1428/27H

Diseases	Types of healthcare units	Number of visitors (in thousands)	Average annual growth rate
Diabetes mellitus	Hospitals	403.8	
	Emergency	364.3	
	Health centers	1748.5	
	Total	**2516.6**	**4.7%**
Hypertension	Hospitals	301.5	
	Emergency	401.6	
	Health centers	1156.9	
	Total	**1860**	**8.7%**
Cardiac diseases	Hospitals	273.1	
	Emergency	285.3	
	Health centers	102.4	
	Total	**660.8**	**11%**

Source: Statistical year book 1427H- Ministry of health

2/5 Number of outpatient clinic visitors in Ministry of Health hospitals suffering from affluence diseases in KSA during the period 1423-1427H

Diabetes patients

Region	1423		1427	
	Diabetes disease	Diabetes clinics	Diabetes disease	Diabetes clinics
Riyadh	63774	70043	75583	73085
Makkah	61422	64394	66969	79373
Medinah	21240	19189	27270	35688
Al-Qaseem	36037	38330	49503	42888
Eastern	41986	37062	52967	43525
Assir	38372	39140	36034	36447
Tabouk	10724	9140	12690	14928
Ha'il	19804	17032	15679	15029
Northern boarder	6011	3329	11448	2761
Jazan	28193	23587	21183	17536
Najran	15875	13455	15996	16382
Al-baha	11702	11538	9927	9259
Al-Jouf	13851	10038	8566	12503
Total	368991	356277	403815	399404
Growth rate during the period	-	-	**9.4%**	**12.1**

Source: Ministry of health

2/6 Number of outpatient clinic visitors in Ministry of Health hospitals suffering from affluence diseases in KSA during the period 1423-1427H

Cardiac diseases patients

Region	1423		1427	
	Coronary heart disease	Rheum. &other heart diseases	Coronary heart disease	Rheum. &other heart diseases
Riyadh	10178	4287	14870	22227
Makkah	30913	49329	23263	33431
Medinah	15720	15818	21057	20511
Al-Qaseem	14985	3087	20472	2789
Eastern	13921	10356	17418	9888
Assir	9467	7252	14866	6577
Tabouk	3026	5256	4290	3259
Ha'il	5872	5359	4605	2291
Northern boarder	3963	5670	4227	8854
Jazan	10177	2893	9377	3842
Najran	2654	6052	2211	2959
Al-baha	3046	3576	4286	3669
Al-Jouf	4931	7636	5057	6825
Total	128853	126571	145999	127122
Growth rate during the period			13.3%	0.4%

Source: Ministry of health

2/6 Number of outpatient clinic visitors in Ministry of Health hospitals suffering from affluence diseases in KSA during the period 1423-1427H

Hypertension patients

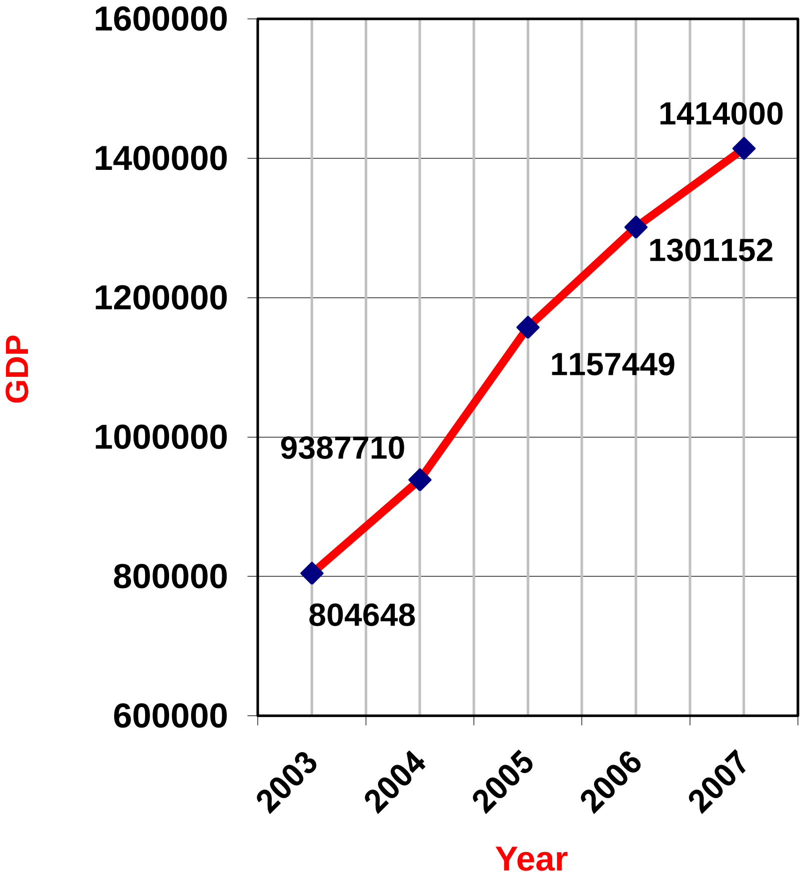
Region	1423	1427
Riyadh	40991	60363
Makkah	38284	36093
Medinah	22883	27064
Al-Qaseem	21356	28027
Eastern	26367	35424
Assir	34540	30707
Tabouk	9953	13429
Ha'il	10861	8493
Northern boarder	5642	9854
Jazan	24753	24015
Najran	10726	8982
Al-baha	5614	7310
Al-Jouf	10208	11723
Total	262178	301484
Growth rate during the period		15%

Source: Ministry of health

2/7 Development of GDP in current prices during the period 2003-2007

Year	GDP in current prices	Annual growth rate (%)
2003	804648	13.8
2004	938771	16.7
2005	1157449	23.3
2006	1301152	12.4
2007	1414000	8.7

Source: Central department of statistics & information



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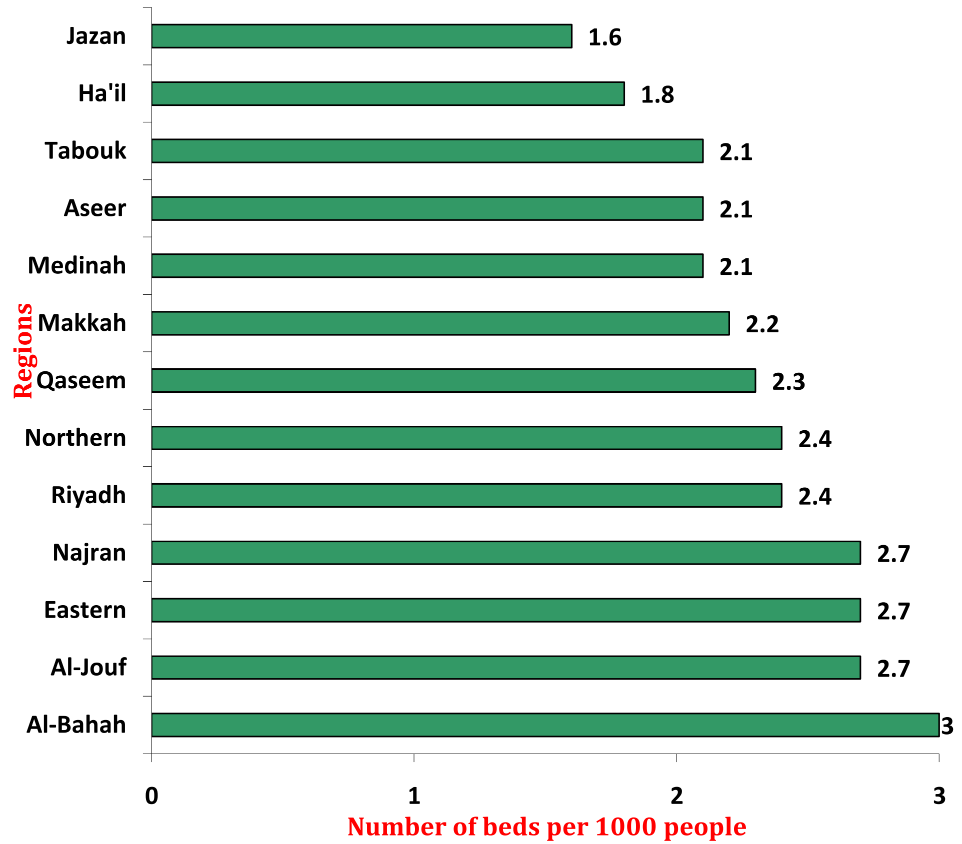
2/8 Available beds per 1000 people by regions in 1428/7H "hospital beds to population ratio"

Regions	Population (in thousands)	Number of beds	Number of beds for each 1000 person
Al-baha	380	1153	3.0
Al-Jouf	380	1028	2.7
Eastern	3519	9601	2.7
Najran	452	1202	2.7
Riyadh	5801	13859	2.4
Northern boarder	285	698	2.4
Al-Qaseem	1070	2451	2.3
Makkah	6038	13131	2.2
Medinah	1593	3367	2.1
Assir	1736	3703	2.1
Tabouk	737	1550	2.1
Ha'il	547	963	1.8
Jazan	1236	2018	1.6
Total	**23773**	**54724**	**2.2**

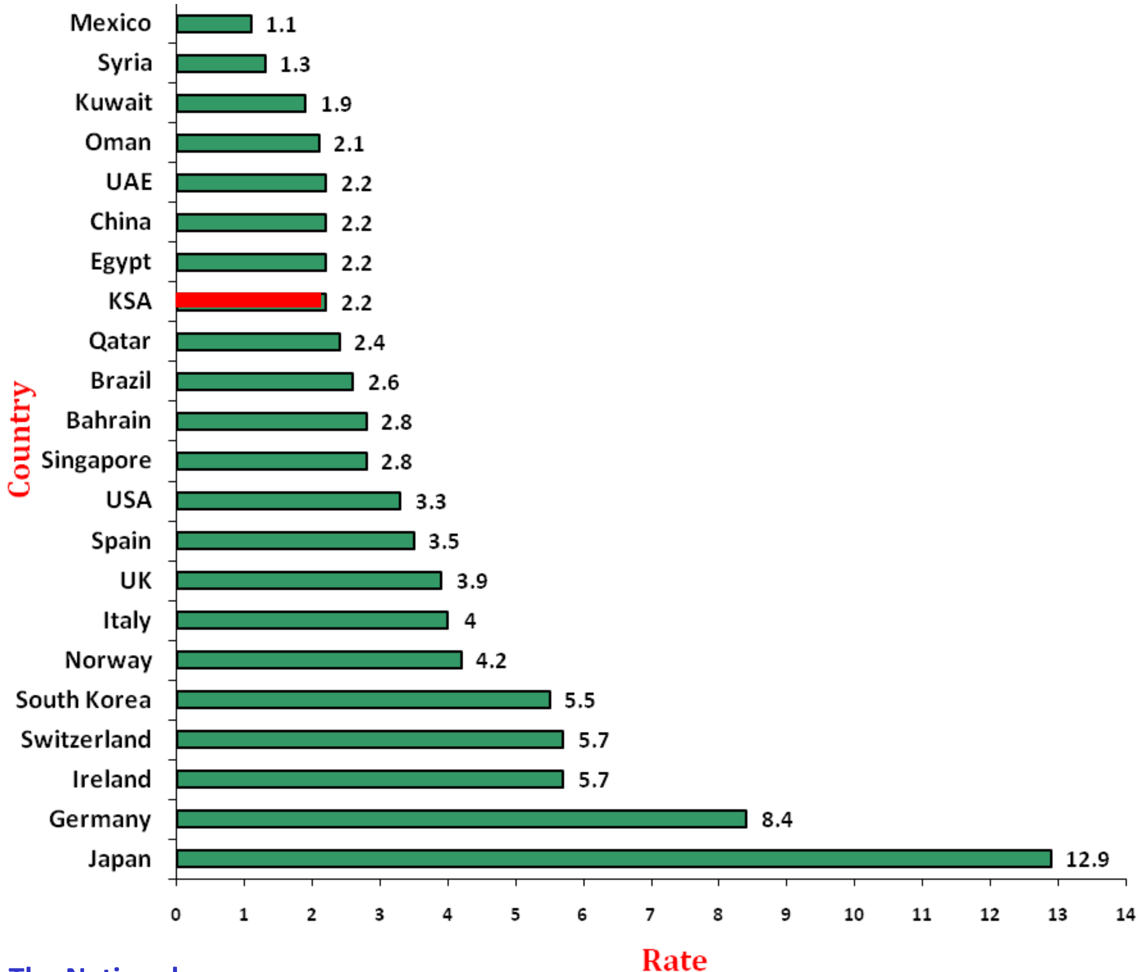


Source: - ministry of health
-Central department of statistics & information

2/9 Average available beds for each 1000 people worldwide in 2007

Country	Rate
Japan	12.9
Germany	8.4
Ireland	5.7
Switzerland	5.7
South Korea	5.5
Norway	4.2
Italy	4
UK	3.9
Spain	3.5
USA	3.3
Singapore	2.8

Country	Rate
Bahrain	2.8
Brazil	2.6
Qatar	2.4
KSA	2.2
Egypt	2.2
China	2.2
UAE	2.2
Oman	2.1
Kuwait	1.9
Syria	1.3
Mexico	1.1



Source: The Economics Department Research Team- The National Commercial Bank

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2/10 Development of Inpatients in Ministry of Health hospitals during the period 1423-1427H

Region	1423	1427
Riyadh	224525	194843
Makkah	73407	75147
Jeddah	78940	73484
Ta'if	56460	73469
Medinah	95517	97268
Al-Qaseem	95609	93968
Eastern	87838	88252
Al-Ahsa	62903	66594
Hafr Al-Baten	20728	24605
Assir	115005	124131
Bishah	10781	16995
Tabouk	50207	49160
Ha'il	53571	63011
Northern boarder	29502	24753
Jazan	78748	120520
Najran	48152	46735
Al-Jouf	58641	45147
Qurayyat	-	23581
Qunfudha	12687	83731
Total	**1299667**	**1432834**
Growth rate during the period	**-**	**10.2%**

2/11 Estimating total inpatients visiting different types of hospitals in KSA in 1427H

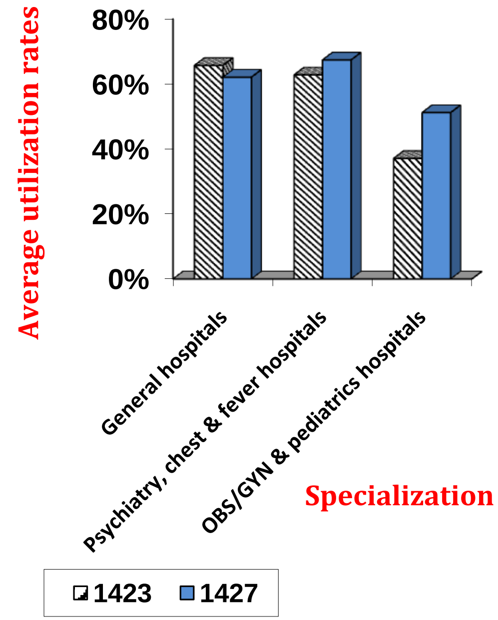
Regions	Population	Number of inpatients visiting hospitals in KSA (in thousands)
Riyadh	5801.1	597.5
Makkah	6038.7	622
Medinah	1592.9	164.1
Al-Qaseem	1069.9	110.2
Eastern	3518.6	362.4
Assir	1735.5	178.8
Tabouk	737	75.9
Ha'il	546.8	56.3
Northern boarder	285.4	29.4
Jazan	1236.2	127.3
Najran	451.7	46.5
Al-baha	380.4	39.2
Al-Jouf	380.4	39.2
Total	**23775**	**2449**

Source: - Ministry of health
- Central department of statistics & information

2/12 Average utilization rates in KSA hospitals during the period 1423-1427

Region	1423			1427		
	General hospitals	Psychiatry, chest & fever hospitals	OBS/GYN & pediatrics hospitals	General hospitals	Psychiatry, chest & fever hospitals	OBS/GYN & pediatrics hospitals
Riyadh	60.4	53.6	43.1	58.9	81.2	50.4
Makkah	57.2	40.4	46.6	67.7	23.3	50.5
Medinah	59.5	97.6	66.5	56.5	90.7	67.1
Al-Qaseem	59.8	93.5	74.9	59.9	98.6	85.3
Eastern	59.3	80.7	55.8	51.3	66	53.1
Assir	38.1	36.9	41.8	43.4	83.6	61.1
Tabouk	63.5	6.4	80.7	65.5	12.4	73.4
Ha'il	93.7	193.2	-	65.1	99.6	71.7
Northern boarder	92.8	38.2	-	76.7	45.6	-
Jazan	81.6	45.2	-	57.8	51.6	-
Najran	85.5	34.4	-	77.7	71	74.2
Al-baha	62.6	64.8	44.2	62.6	79.1	45.5
Al-Jouf	40.6	32.4	28.6	64.3	73	33.7
Average	65.7	62.8	37.1	62.1	67.4	51.2

Source: Ministry of health



- Worldwide standard utilization average rate is 80%.to prevent:
  - Spread of infection among patients
  - Exhaustion of physicians and nursing staff
  - Deterioration of service quality

2/13 Needs of the five major cities in KSA for healthcare units "from the point of view of the directors of these units"

Quantity

Healthcare units	Riyadh	Jeddah	Al-Dammam	Abha	Tabouk	Total
Hospitals	70%	73%	81%	80%	60%	73%
Dispensaries	60%	56%	67%	38%	67%	58%
radiology centers	84%	79%	67%	38%	67%	68%
Medical laboratories	63%	64%	69%	73%	67%	66%
External clinics	57%	43%	57%	67%	56%	55%

Quality

Healthcare units	Riyadh	Jeddah	Al-Dammam	Abha	Tabouk	Total
Hospitals	76%	84%	76%	73%	97%	77%
Dispensaries	69%	73%	67%	33%	67%	69%
radiology centers	90%	85%	72%	78%	67%	74%
Medical laboratories	70%	79%	72%	78%	67%	72%
External clinics	64%	59%	69%	80%	67%	66%

Source: Field survey

2/14 Needs of the five major cities in KSA for extra healthcare units "from the families' point of view"

Cities	Need for new healthcare units
Jeddah	95%
Al-Dammam	95%
Riyadh	90%
Abha	75%
Tabouk	75%
Total	84%

Reasons	%
The increase in population	26%
Low medical services level at current hospitals	23%
Low number of therapeutic and diagnostic units	21%
Low level of medical efficiencies	20%
High prices of current medical services	6%
Inefficiency of medical equipments in current hospitals	3%
Insufficiency in parking spaces	1%

Source: Field survey

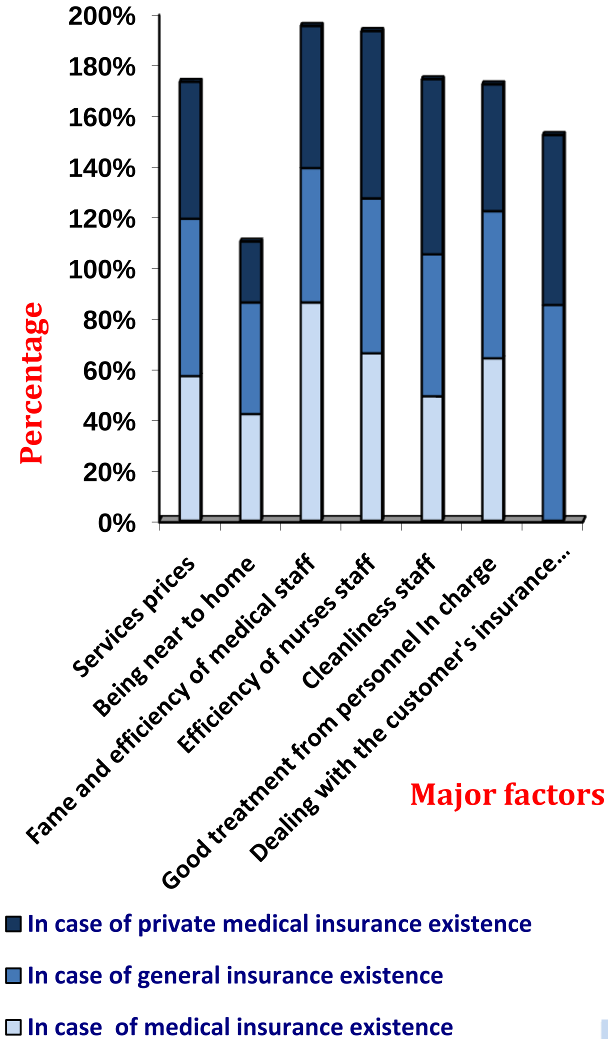
2/15 Major difficulties facing patients who deal with healthcare units

Major difficulties	Riyadh	Jeddah	Al-Dammam	Abha	Tabouk	Total
• Long waiting period for medical check	21%	31%	24%	36%	44%	30%
• The absence of specialists in all fields throughout the day	21%	10%	18%	21%	17%	17%
• Insufficiency in parking spaces	21%	21%	6%	7%	28%	15%
• Creating a file during initial visits takes long time	4%	3%	15%	11%	6%	8%
• High price of medical services	4%	17%	9%	7%	-	8%
• Inefficient physicians, which can lead to inaccurate diagnoses	25%	14%	18%	14%	5%	16%
• Ill treatment from personnel in charge	4%	-	6%	-	-	2%
• Others	-	3%	4%	4%	-	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

2/16 Major factors considered by customers when choosing health care unit to deal with (in KSA)

Major factors	In case of medical insurance existence	In case of general insurance existence	In case of private medical insurance existence
• Services prices	57%	625	54%
• Being near to house	42%	44%	24%
• Fame and efficiency of medical staff	86%	53%	56%
• Efficiency of nurses staff	66%	61%	66%
• Cleanliness level	49%	56%	69%
• Good treatment from personnel in charge	64%	58%	50%
• Dealing with the customer's insurance company	-	85%	67%

Source: Field survey



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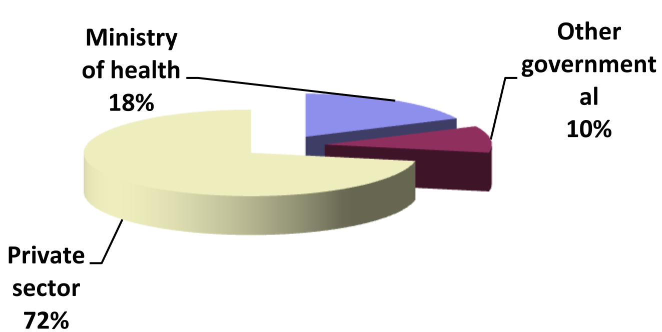
2/17 Patients' preferences in dealing with healthcare units

Ownership type

Cities	Ministry of health	Other governmental	Private sector	Total
Riyadh	10%	-	90%	100%
Jeddah	-	30%	70%	100%
Al-Dammam	-	11%	89%	100%
Abha	50%	10%	40%	100%
Tabouk	30%	-	70%	100%
Total	18%	10%	72%	100%

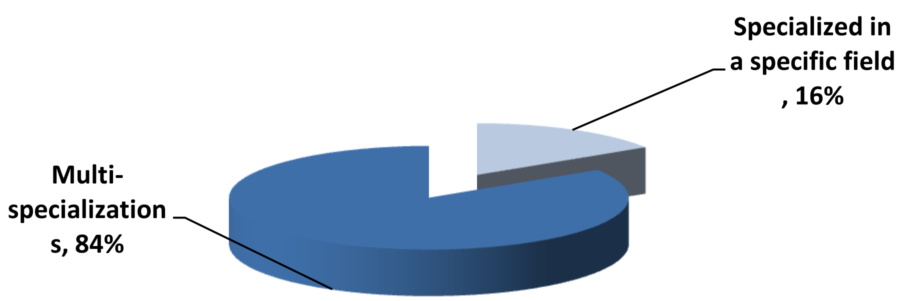
Source: Field survey



Specialization type

Cities	Specialized in a specific field	Multi-specializations	Total
Riyadh	10%	90%	100%
Jeddah	20%	80%	100%
Al-Dammam	20%	80%	100%
Abha	30%	70%	100%
Tabouk	-	100%	100%
Total	16%	84%	100%

Source: Field survey



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2/17 Patients' preferences in dealing with healthcare units

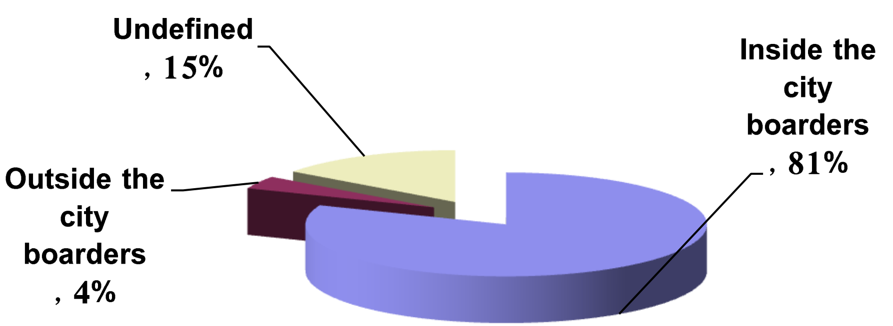
Location

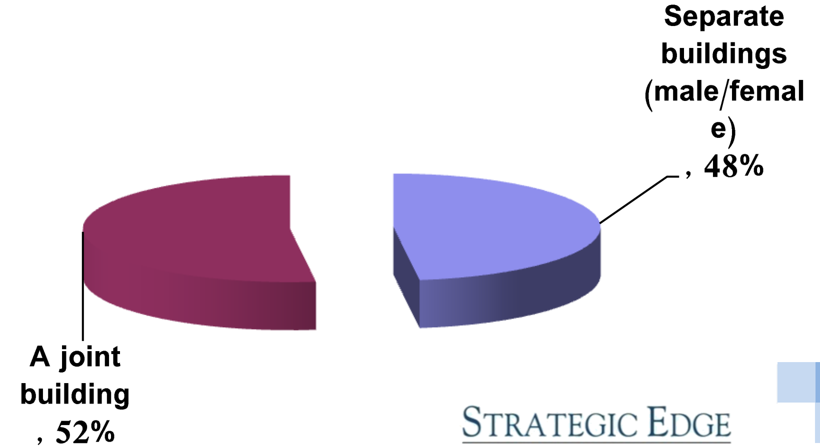
Cities	Inside the city boarders	Outside the city boarders	Undefined	Total
Riyadh	80%	10%	10%	100%
Jeddah	80%	-	20%	100%
Al-Dammam	67%	-	33%	100%
Abha	80%	10%	10%	100%
Tabouk	100%	-	-	100%
Total	81%	4%	15%	100%

Type of customers

Cities	Separate buildings (male/female)	A joint building	Total
Riyadh	40%	60%	100%
Jeddah	44%	56%	100%
Al-Dammam	20%	80%	100%
Abha	50%	50%	100%
Tabouk	89%	11%	100%
Total	48%	52%	100%

Source: Field survey





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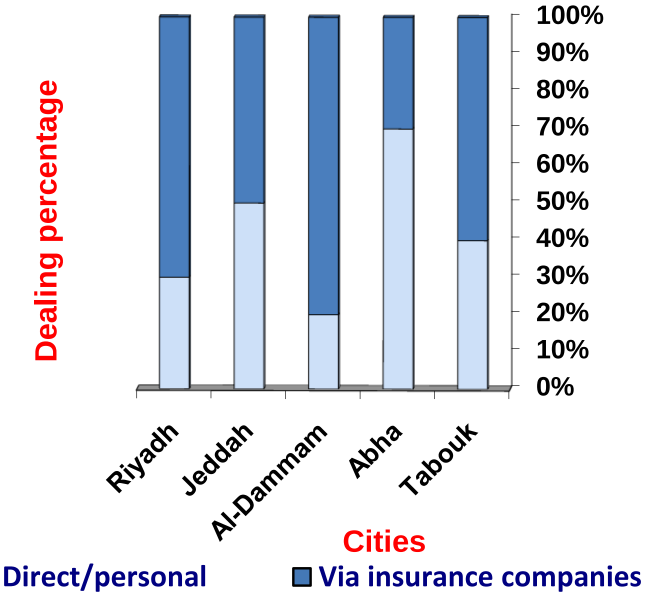
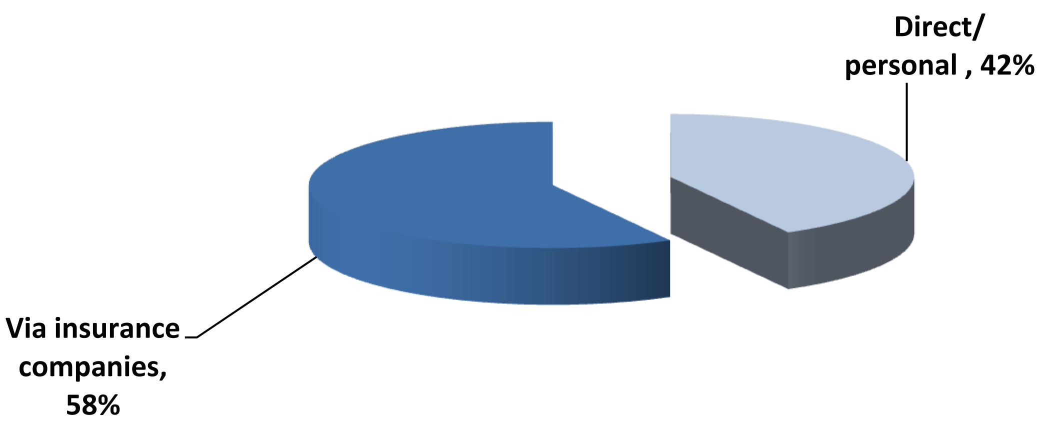
2/18 The samples' way of dealing with healthcare units

Major cities	Direct/ personal	Via insurance companies	Total
Riyadh	30%	70%	100%
Jeddah	50%	50%	100%
Al-Dammam	20%	80%	100%
Abha	70%	30%	100%
Tabouk	40%	60%	100%
Total	42%	58%	100%



Source: Field survey



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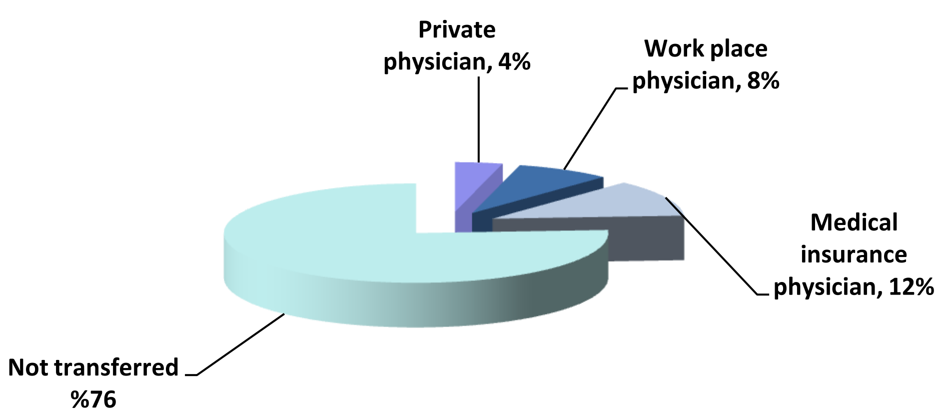
2/19 How inpatients are being transferred to healthcare units

Who transfer to healthcare units	Riyadh	Jeddah	Al-Dammam	Abha	Tabouk	Total
1- Private physician	20%	5%	10%	10%	-	4%
2- Work place physician	-		20%	10%	10%	8%
3- Medical insurance physician	-	10%	20%	-	20%	12%
4- Not transferred :	80%	85%	50%	80%	70%	76%
• Recommended by relatives	60%	77%	30%	50%	61%	58%
• Near to home	25%	-	10%	20%	58%	10%
• Physicians' reputation		8%	10%	10%	9%	8%
Total	100%	100%	100%	100%	100%	100%



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2/20 Major services attracting patients to deal with healthcare units

Major services	Percentage of who mentioned it	Relative importance
• Emergency service availability 24 hours/day	23.3%	12.4%
• Availability of equipped ambulances	9.3%	4.9%
• Efficiency of medical services	37.2%	19.7%
• Usage of the latest technologies in therapy and diagnosis	4.7%	2.5%
• Availability of parking spaces	7%	3.7%
• Efficiency of medical staff	30.2%	16%
• Availability of the entire medical specializations	16.3%	8.6%
• Good treatment of medical staff for patients and visitors	25.6%	13.6%
• Cleanliness level	14%	%7.4
• Increasing landscape within the hospital	2.3%	1.2%
• Availability of sufficient and appropriate waiting areas for patients and visitors	7%	3.7%
• Excellence of hospital location	2.3%	1.2%
• Others	9.4%	5.1%
Total		100%

Source: Field survey

2/21 Number of beds demanded currently and for the upcoming 10 years

Year	Population increase (in thousands)	Number of beds demanded
27/1428	Current shortage	16600
28/1429	570.6	1712
29/1430	584.3	1753
30/1431	598.3	1795
31/1432	612.7	1838
32/1433	627.4	1882
33/1434	642.4	1927
34/1435	657.9	1974
35/1436	673.6	2021
36/1437	689.8	2069
37/1438	706.4	2119
Total		35,690

Source: Estimations of the research team work

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3. Current and potential market opportunities

Key indicators of available market opportunities in the healthcare market in KSA:

- High expenditures of about 59.9 billion SR are directed to the market of healthcare services, growing with the same growth rate of the GDP (current prices), 10% yearly, constituting 4% of the GDP.

- Despite the high number of healthcare units (387 hospitals), and available beds (54724 beds, healthcare centers, outpatient clinics, radiology centers and medical labs exceed 4500 units) the quantitative gap between supply and demand indicates a current shortage of about 16,600 beds and is expected to reach about 35.7 thousand beds by the year 1438.

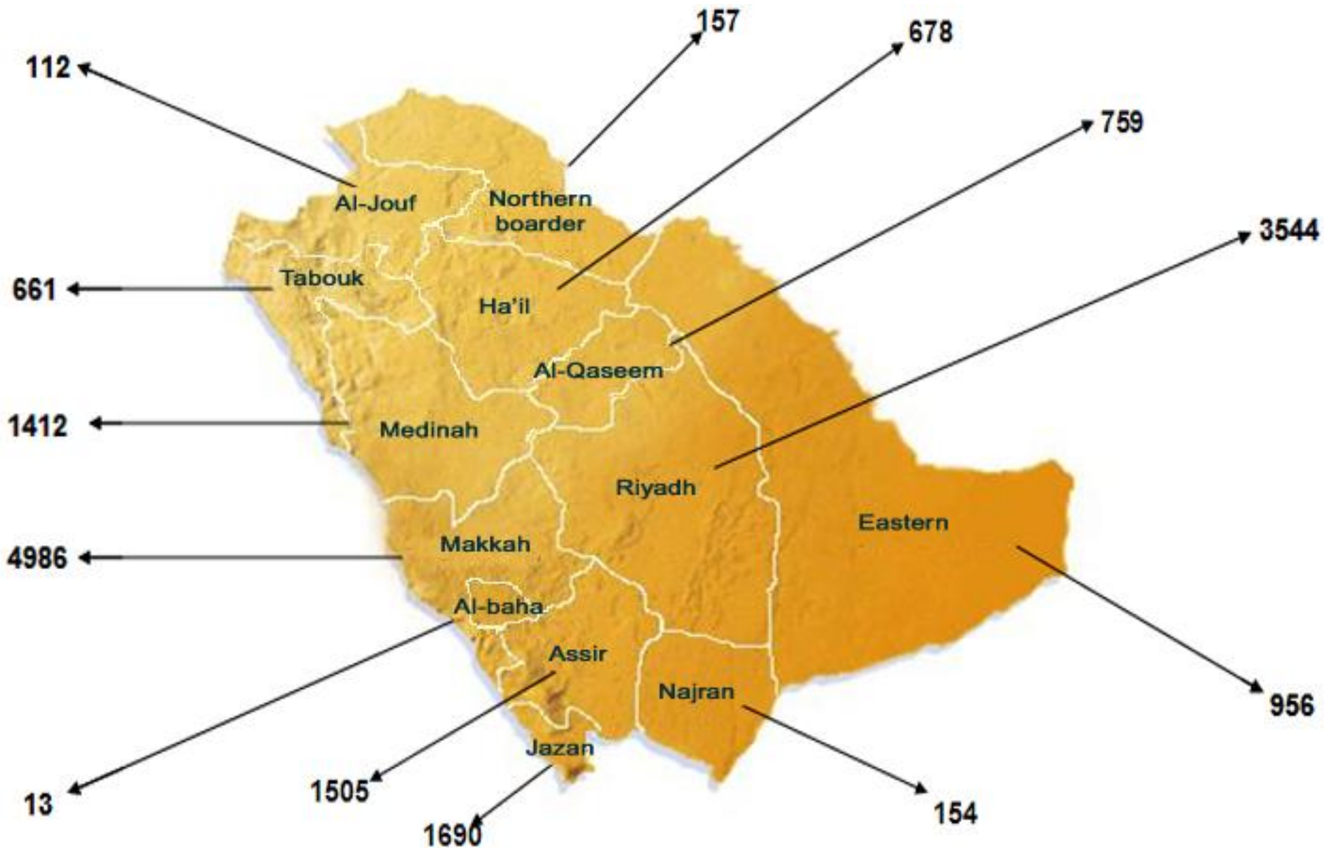
- Considering that the following factors affect demand on healthcare services, it is clear that demand is going to increase significantly during the upcoming years:

3/1 Current quantitative gap between supply & demand of beds in KSA (1428H)

Regions	Current population (in thousands)	Beds needed (3 beds/ 1000 people)	Current available number of Beds	Quantitative gap between supply & demand (number of demanded beds)	%
Al-baha	380	1140	1153	13	-
Al-Jouf	380	1140	1028	112	%0.7
Eastern	3519	10557	9601	956	%5.8
Najran	452	1356	1202	154	%0.9
Riyadh	5801	17403	13859	3544	%21.4
Northern boarder	285	855	698	157	%0.9
Al-Qaseem	1070	3210	2451	759	%4.6
Makkah	6039	18117	13131	4986	%30
Medinah	1593	4779	3367	1412	%8.5
Assir	1736	5208	3707	1505	%9.1
Tabouk	737	2211	1550	661	%4
Ha'il	547	1641	963	678	%4.1
Jazan	1236	3708	2018	1690	%10.2
Total	**23774**	**71322**	**54724**	**16598**	**%100**

Source: -Ministry of health
-Estimations of the research team work

3/2 Present Shortage in the number of beds in KSA regions



3/4 Current Quantitative Gap (1428H) Divided by major Cities

Regions	Health care centers							
	Health centers	Dispensaries	Labs and radiology centers	Clinics	Dental centers	Physiotherapy centers	Pharmacies	Optical
Riyadh	248	-42	7	-145	7	-2	89	-73
Makkah	351	64	-12	-26	-16	2	156	74
Medinah	33	52	3	41	0	5	115	69
Al-Qaseem	-30	21	4	55	-2	3	88	44
Eastern	171	80	16	113	18	8	334	87
Assir	-107	33	6	118	9	3	149	81
Tabouk	15	13	4	37	2	2	84	40
Ha'il	-31	17	-1	31	0	-2	23	26
Northern boarder	-10	4	0	20	-6	1	34	18
Jazan	-4	41	6	90	6	4	180	76
Najran	-14	7	2	32	2	1	77	31
Al-bahah	-46	7	1	21	2	1	26	11
Al-Jouf	-7	2	2	23	0	1	64	-10
Total	571	298	38	410	22	27	1420	474

- Positive figures are considered "shortage"
- Negative figures with (- ve) sign next to them are Considered surplus

3/5 Key indicators of available marketing opportunities in the healthcare market in KSA :

A- Population of KSA which is estimated at about 23.8 million increases by 2.4% annually; twice the global rate estimated at 1.2% annually, which means that it increases annually by about 600 thousand people who need about an extra 1800 beds.

B- Obligatory insurance on foreign labor and their families is estimated to reach about 6.4 million people, while the annual governmental expenditures are estimated at 5.6 billion SR to cover this aspect of healthcare.

C- Increase in the elderly population segment, whose ages exceeded 60, is estimated at about 1.1 million people, representing about 4.5% of the total KSA population and increasing annually by the same increase in population rate, which is 2.4% annually.

D- Spread of affluence diseases, such as Diabetes, Hypertension and cardiac diseases, in the Saudi society, where the number of patients carrying these diseases who visit Ministry of Health hospitals reached about 5037 patients last year. This figure of patients is increasing annually with a rate of 4.7% to 11%.

E- Significant increase in GDP value in current prices as a result of the increase in petroleum prices and other economic activities that reached about 1496 billion SR last year. This figure is also growing at an annual rate of 12% to 15% .

F- Average number of available beds at public and private hospitals in KSA per each 1000 people is 2.2, which is less than the worldwide rate of 3 beds per 1000 people, leading to a shortage in beds estimated at about 16600 beds.

3/5 Key indicators of available marketing opportunities in the healthcare market in KSA :

G- Number of inpatients visiting the KSA public and private hospitals last year is estimated at about 2449 million patients representing about 10.3% of the total population and increasing annually by a rate of 2.4%.

H- Average utilization ratio in KSA hospitals is estimated at about 65% annually, which is not far from the optimum utilization ratio in global hospitals that is estimated at about 80% .

In addition, there are positive indicators abstracted from questionnaires by physicians in healthcare units and patients, assuring us that there is a serious need for establishing new hospitals, radiology centers and medical labs in the five major cities in KSA (Riyadh, Jeddah, Al-Dammam, Abha and Tabouk) because of the following reasons:

- **The increase in population**
- **Low level of medical services at current hospitals**
- **Low number of therapeutic and diagnostic units**
- **Low level of medical efficiencies**
- **High prices of current medical services**
- **Inefficiency of medical equipment in current hospitals**
- **Long waiting period for medical check**

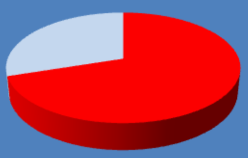
3/6 Therapeutic and Diagnostic Healthcare Opportunities

Level of Competition

High

Capital required

High



Technology Accessibility

Medium

Human Resources Availability

Medium

3/6 Specifications of the most preferred and demanded healthcare units in the Saudi market [The optimal marketing mix]

A- Product planning:

- Hospitals, radiology centers and medical labs in this order are the most demanded healthcare units, baring in mind that hospitals of large sizes and superior levels are rare in most KSA cities.
- Superior private sector healthcare units (hospitals, radiology centers and medical labs) are more preferred and demanded than public and governmental healthcare centers.
- Multi-specialization hospitals are more preferred than specialized hospitals.
- Joint-building healthcare units (male & female) are more preferred for Riyadh, Al-Dammam and Jeddah residents, while separate buildings (buildings for males and others for females) are more preferred for Tabouk residents.

3/6 Specifications of the most preferred and demanded healthcare units in the Saudi market [The optimal marketing mix]

A- Product Planning

- Specialized management companies, preferably foreign ones, that manage hospitals tend to attain a significant level of trust and respect and gain more demand.
- In addition to recruiting experienced and reputable medical staff and consultants, some of them are preferred to be foreigners.
- Cooperation agreements and professional support with worldwide universities increases trust in the hospital and attract more demand.
- Emergency services and ambulance availability 24 hours/day is extremely important.
- Availability of sufficient and appropriate waiting areas for patients and visitors.
- Availability of parking spaces.
- Paying more attention for the appearance and atmosphere of the hospital buildings, interface, entrances and cleanliness.
- Usage of modern technologies in diagnoses and therapy.

3/6 Specifications of the most preferred and demanded healthcare units in the Saudi market [The optimal marketing mix]

B- Pricing:

- Charging appropriate competitive prices for medical services to suit the service quality and level of patients dealing with the hospital.
- Offering discounts and appropriate facilities for governmental agencies, private companies and medical insurance companies.

C- Distribution:

- Establishing hospitals, radiology centers and medical labs within the city is preferred to establishing them outside the city.
- Makkah, Riyadh, Jazan, Assir and Medinah are mostly in need for establishing new healthcare units (hospitals, radiology centers and medical labs) due to the current shortage in beds that is estimated at about 9.9 thousand beds, representing 60% of total current shortage in beds in KSA.

3/6 Specifications of the most preferred and demanded healthcare units in the Saudi market [The optimal marketing mix]

D- Promotion:

- About 75% of healthcare units' patients and visitors (public and private) go there by themselves because they know about it through friends & relatives, not because they were transferred by physicians or insurance companies.
- Hence, it is necessary to pay attention to that segment of customers and direct appropriate promotional media messages to them.
- Medical insurance companies represents a good source for attracting patients to hospitals and realizing appropriate utilization ratios for hospitals. It is necessary to pay them a significant amount of attention and make promotional agreements with them for the hospital.

4. Total market size

- The total market size was 59.9 billion SR in 2007, growing with the same growth rate of the GDP (current prices), 10% yearly.

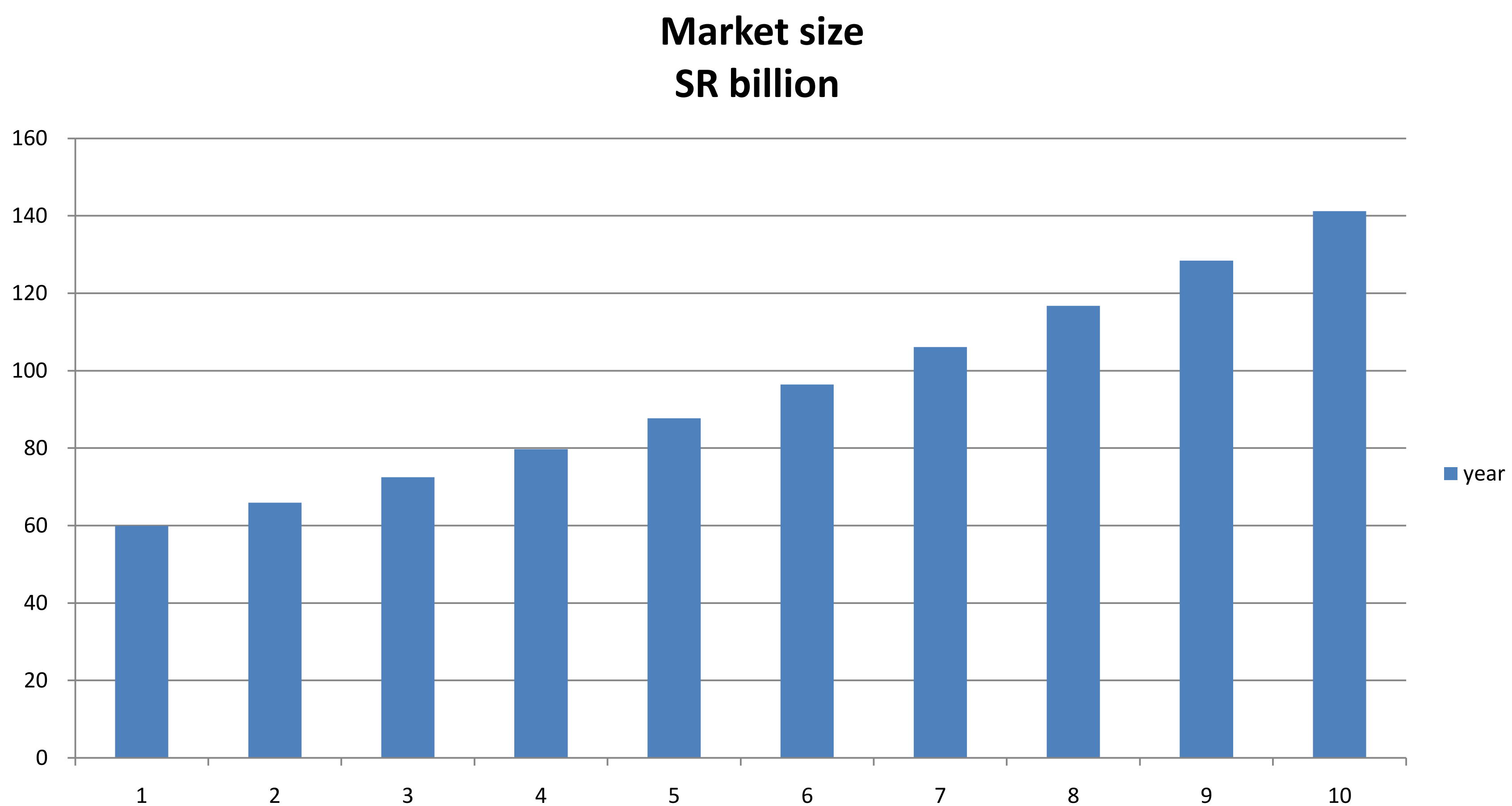
4/1 Projected growth of the market

It is projected that that the total market size will reach to 141 billion SR in ten years if the current growth rate continued.

Total market size (SR billion)

Year	1429	1430	1431	1432	1433	1434	1435	1436	1437
	66	72	80	88	96	106	117	128	141

4/1 Projected growth of the market



5.Market share

- It is projected that the market share for any new healthcare facilities will at least match with the percentage of the demand on hospital beds. A new health care facility with 500 beds will gain a minimum market share of 1%,growthing at a rate of 10% a year

5.Market share

- Despite the high number of healthcare units (currently 387 hospitals while 96 are under construction now), and available beds (54724 beds, healthcare centers, outpatient clinics, radiology centers and medical labs exceed 4500 units) Average number of available beds at public and private hospitals in KSA per each 1000 people is 2.2, which is less than the worldwide rate of 3 beds per 1000 people, leading to a shortage in beds estimated at about 16600 beds and is expected to reach about 35.7 thousand beds by the year 1438.

5.Market share

- Hospitals, radiology centers and medical labs in this order are the most demanded healthcare units, baring in mind that hospitals of large sizes and superior levels are rare in most KSA cities
- Makkah, Riyadh, Jazan, Assir and Medinah are mostly in need for establishing new healthcare units (hospitals, radiology centers and medical labs) due to the current shortage in beds that is estimated at about 9.9 thousand beds, representing 60% of total current shortage in beds in KSA.