U.S. Commercial Service

Medical Technologies Market in Turkey

Brief Market Report

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Turkey: Medical Technologies and Healthcare Market and Opportunities for U.S. Companies – 2013

What Is The Size of the Turkish Medical Technologies and Healthcare Market?

Turkey has a population of 75 million people and is a growing market for medical technologies and healthcare services. Although, the Ministry of Health (MoH) (www.saglik.gov.tr) is the largest provider of healthcare and the only public provider of preventive healthcare services in Turkey, there is a rapidly growing presence of private sector in the system. Additionally, the MoH is the policy setter and national regulator. In fiscal year 2013, TL17 Billion (approximately $10 billion) was allocated to the MoH budget which translates to 4.4% of the country's total budget, an increase from 2.2% in 2002. In the same period, per capita health spending grew from $330 to $780. Considering the average OECD country per capita healthcare spending was $2386in 2012, as well as Turkey's growing income and government programs, there is significant growth potential in this market. Please refer to the below table to see the recent growth trend in Turkish medical sector and forecast of the size of the market for 2013 and 2014.

(Unit: USD millions)	2011	2012	2013 (estimated)	2014 (estimated)
Total Market Size	2,403	2,603	2,790	2,990
Total Local Production	360	390	418	508
Total Exports	192	156	139	179
Total Imports	2,234	2,369	2,511	2,661
Imports from the U.S.	335	355	377	400
Exchange Rate: 1 USD	TL 1.88	TL 1.85	TL 1.85	TL 1.85

Total Market Size = (Total Local Production + Total Imports) – (Total Exports)
Data Sources: Industry feedback, Turkish Ministry of Industry reports

How Is the Turkish Healthcare System Structured?

Turkey has a 2-level approach to the delivery of public healthcare services. First-level treatment is delivered by family practitioners who are appointed to population groups of 3,000 people living in the same area. For illnesses requiring further treatment, patients are referred by family practitioners to second-level treatment facilities, which are 'state' and 'university' hospitals.

The MoH builds and operates the 'state hospitals' which constitute 57% of the current hospital stock and 62% of current hospital bed capacity in Turkey. Doctors working in these hospitals are appointed by the MoH. All people living in Turkey can benefit from being treated in these hospitals. If they are 'universal healthcare insurance'' holders, all of their expenses are reimbursed by the Social Security Institute (SGK) (www.sgk.gov.tr). University hospitals are attached to medical schools. In addition to acting as training and education centers for the medical industry, university hospitals function as the state hospitals for healthcare consumers. Private hospitals are also regulated by the MoH; however, investment, management and delivery of medical services in these facilities are the responsibility of their investors. Please refer to the below table to see the distribution of hospitals and hospital bed capacity by ownership.

	2002				2011				Growth %	
Type	# of hospitals	%	# of hospital beds	%	# of hospitals	%	# of hospital beds	%	# of hospitals	# of hospital beds
Ministry of Health	774	**67%**	107,394	**65%**	840	**58%**	121,297	**62%**	8.5%	12%
University	50	**4%**	26,341	**16%**	65	**4%**	34,802	**18%**	30%	32%
Private	271	**23%**	12,387	**8%**	503	**35%**	31,648	**16%**	85%	155%
Other	61	**6%**	18,349	**12%**	45	**3%**	6,757	**4%**	-26%	-63%
Total	**1,156**		**164,471**		**1,453**		**194,504**		**26%**	**19%**

Data source: Turkish Ministry of Health

There is an emerging group of hospitals that will be built and managed by the Public-Private-Partnership (PPP) model. The MoH, which had been the sole builder of state hospitals, has recently been contracting out the construction and management of 29 healthcare campuses around Turkey. Each campus will house 2,000 to 4,000 beds divided among general and specialized hospitals, laboratories, and accompanying recreational areas. International tenders are being opened for the contracting of each of these hospitals to consortiums composed of construction companies, architectural designers, operators, and medical technologies companies. The winning consortium of each project will finance the construction and will operate the campus for 25 years against guaranteed annual lease payments to be made by the MoH. Some tenders have already been finalized. When construction of all these campuses is finished, 45,000 beds will have been renovated. You may get more information on these projects at http://www.kamuozel.gov.tr/koo/?q=en/main-page

How Is the Turkish Healthcare Insurance System Structured?

The 'universal healthcare insurance' system is administered by the Turkish Social Security Institute. Ninety-five per cent of the population is covered under this system and may benefit from healthcare services delivered by state, university and even some private hospitals at no charge. Various local and international healthcare insurance companies, which cover 2.3 % of the population (translating to 1.7 million people) with a premium, are also present in the market.

How Does the Turkish Healthcare Reimbursement System Work?

There are two government bodies, SGK and MOh, which are involved in reimbursing healthcare expenses incurred by healthcare institutions. These institutions include state hospitals, university hospitals and some private hospitals that have agreements with the SGK for delivering healthcare services at reimbursement prices established by SGK.

SGK reimburses expenses incurred by using the treatment type and medical device listed in the Healthcare Implementation Communique (SUT). The SUT is revised every few years to include new medical technologies, equipment, techniques, and an updated reimbursement price list. In order for medical equipment to be listed in SUT, it has to be registered in the National Databank managed by the MoH. Products listed in the National Databank are assessed by SGK for their reimbursability and if approved, they can be reimbursed and can also be proposed in public procurement tenders.

People with no healthcare insurance can get treatment at any hospital in Turkey by paying for expenses out of pocket. If a person has private healthcare insurance, reimbursement is made by the insurance company to the healthcare facility.

How Can U.S. Medical Technologies Companies Enter the Turkish Market?

U.S. companies that want to market their products in Turkey should either open their own offices in Turkey or work with a distributor who will import, market and distribute their products in Turkey. For SMEs, it may be better if they work with a distributor initially before opening their own offices as this will give them a chance to understand market dynamics.

Unless there is a specific need for multiple distributors, for most medical equipment and devices, one distributor, managing a reseller channel to market the products it represents, is enough to cover all of Turkey.

Turkey has a Customs Union Agreement with the European Union (EU) which led to Turkey's almost adapting most of its medical equipment directives to fit with those of the EU. This necessitates that Turkey requires CE Mark certification for medical devices and it means that U.S. manufacturers that can currently export to a country in EU, have probably already met all the requirements for exporting to Turkey as well. As Turkey's official language is Turkish, labels on medical devices and their manuals have to be in Turkish.

Once a U.S. company chooses a Turkish company to distribute its products in Turkey and completes the necessary certification and documentation for exporting to Turkey, its distributor has to register the products in the MoH managed National Databank. Following this, if the U.S. company wants to be in the SGK managed reimbursement system (SUT), it has to agree on the reimbursement price established by SGK for that product group. If that product group is not listed in SUT, the U.S. company and its distributor have to present the product and its technology to SGK to convince them why the product should be included in SUT. If the U.S. company does not want to be part of SUT, it would lose its chance to sell to the large public sector and can only sell to the private sector.

What Are Some of the Trends in the Turkish Healthcare System?

1) Major Health Problems Diagnosed by Physicians:

MoH keeps statistics of the diagnoses medical doctors make in Turkey in order to identify the most prevalent health problems in Turkey. In the table below, you may see types of health problems mostly diagnosed by doctors in 2010. Treatment methods and medical devices that can deliver recovery to patients using innovative technologies but still at affordable pricing levels by the reimbursement agency, SGK, would have potential for success in the Turkish market.

Table 3.8 Distribution of 15 and 15+ Aged Individuals' Morbidity/ Health Problems Diagnosed by Physician, by Sex and Residence, (%), 2010

Diseases/Health problems	Rural			Urban			Turkey		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Back Musculoskeletal System Disorders (Lumbago, Back Hernia etc.)	10,1	18,2	14,4	8,9	15,6	12,3	9,3	16,5	12,9
High Blood Pressure (Hypertension)	10,3	19,9	15,3	7,7	15,3	11,5	8,4	16,8	12,7
Rheumatismal Joint Disease (Rheumatoid Arthritis)	7,7	16,5	12,3	4,5	11,6	8,0	5,4	13,1	9,3
Stomach Ulcer (Gastric Ulcer)	8,4	12,1	10,4	6,0	10,2	8,1	6,7	10,8	8,8
Osteoarthritis (Osteoarthritis, Arthrosis, Joint Degeneration)	5,6	13,1	9,5	3,5	9,8	6,7	4,1	10,8	7,5
Anemia (Iron Deficiency Anemia)	1,8	11,1	6,6	1,6	12,7	7,2	1,7	12,2	7,0
Sinusitis (Inflammation of Sinus)	5,0	7,8	6,5	5,5	8,2	6,9	5,4	8,1	6,7
Neck Musculoskeletal System Disorders (Neck Pain, Neck Hernia, etc.)	3,7	8,5	6,2	2,9	9,0	6,0	3,1	8,9	6,1
Diabetes	4,4	7,5	6,0	4,6	7,6	6,1	4,5	7,5	6,0
Migraine and Severe Headache	2,5	8,9	5,8	2,4	8,6	5,5	2,4	8,7	5,6
Allergy, Such as Rhinitis, Eye Inflammation, Dermatitis, Food Allergy or Other (Allergic Asthma Excluded)	3,5	5,3	4,5	4,0	6,8	5,4	3,9	6,3	5,1
Asthma (Allergic Asthma Included)	4,2	5,7	5,0	3,3	6,2	4,8	3,6	6,0	4,8
Coronary Heart Disease (Angina Pectoris, Chest Pain, Spasm)	5,2	5,3	5,3	3,8	3,7	3,7	4,2	4,2	4,2
Chronic Obstructive Pulmonary Disease (Emphysema, Chronic Bronchitis)	4,9	5,0	4,9	3,8	3,8	3,8	4,2	4,2	4,2
Thyroid Disease	1,2	5,3	3,3	0,9	5,6	3,3	1,0	5,5	3,3
Chronic Depression	1,3	2,8	2,1	1,2	4,1	2,7	1,2	3,7	2,5
Urinary Incontinence, Problems in Controlling the Bladder	2,1	3,7	2,9	1,1	2,6	1,8	1,3	2,9	2,2
Chronic Heart Failure	2,3	2,3	2,3	1,1	1,8	1,5	1,5	2,0	1,7
Other Psychological Health Problems	1,4	2,2	1,8	1,2	2,0	1,6	1,3	2,1	1,7
Hepatitis	2,2	1,3	1,7	1,6	1,1	1,4	1,8	1,2	1,5
Permanent Injury or Defect Caused By An Accident	2,7	0,6	1,6	1,8	0,7	1,3	2,1	0,7	1,4
Myocardial Infarction (Heart Attack)	2,4	1,1	1,7	1,3	0,6	1,0	1,7	0,8	1,2
Stroke (Cerebral Hemorrhage, Cerebral Thrombosis)	1,6	1,6	1,6	1,0	0,8	0,9	1,2	1,0	1,1
Duodenal Ulcer	1,1	1,3	1,2	0,9	1,1	1,0	1,0	1,2	1,1
Chronic Anxiety	0,3	0,7	0,5	0,2	0,9	0,5	0,3	0,8	0,5
Cirrhosis of the Liver, Liver Dysfunction	0,6	0,8	0,7	0,4	0,4	0,4	0,5	0,5	0,5
Cancer (Malign, Malignant, Leukemia, Lymphoma Included)	0,2	0,3	0,3	0,5	0,5	0,5	0,4	0,5	0,5

Source: TURKSTAT Health Interview Survey 2010

2) Number of Surgical Procedures by Years and Hospital Types:

The table below shows that number of surgical procedures done in Turkey grew by 162% since 2002. Major reason is the increase in the number of private hospitals that have been established since then. However, having said this, number of surgical procedures done in state and university hospitals also grew by one-fold. U.S. companies with innovative, non-invasive surgical devices that can reduce the amount of hospitalization of patients would have potential in Turkey.

Table 7.6. Number of Surgical Operations by Years and Sectors, Turkey

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Ministry of Health	1.072.417	1.130.023	1.442.076	1.689.797	1.985.405	2.217.413	2.464.291	1.829.919	2.039.021	2.209.326
University	307.108	326.441	375.473	452.326	508.129	560.275	638.028	546.903	576.547	617.477
Private	218.837	236.906	260.114	392.671	579.771	787.297	1.086.975	1.131.431	1.215.159	1.373.774
Total	1.598.362	1.693.370	2.077.663	2.534.794	3.073.305	3.564.985	4.189.294	3.508.253	3.830.727	4.200.577

Source: General Directorate for Health Services

3) Number of Organ Transplantations by Years

Turkey has a strong base of surgeons doing organ transplantation operations for which there are 17 licences medical centers. All these centers require advanced operating rooms and intensive care units. As can be seen in the table below, number of organ transplantations grew by five-fold in the last ten years. Very recently, Turkish surgeons have been successful in full face transplantation.

Table 7.14. Number of Organ Transplantations by Years, All Sectors, Turkey

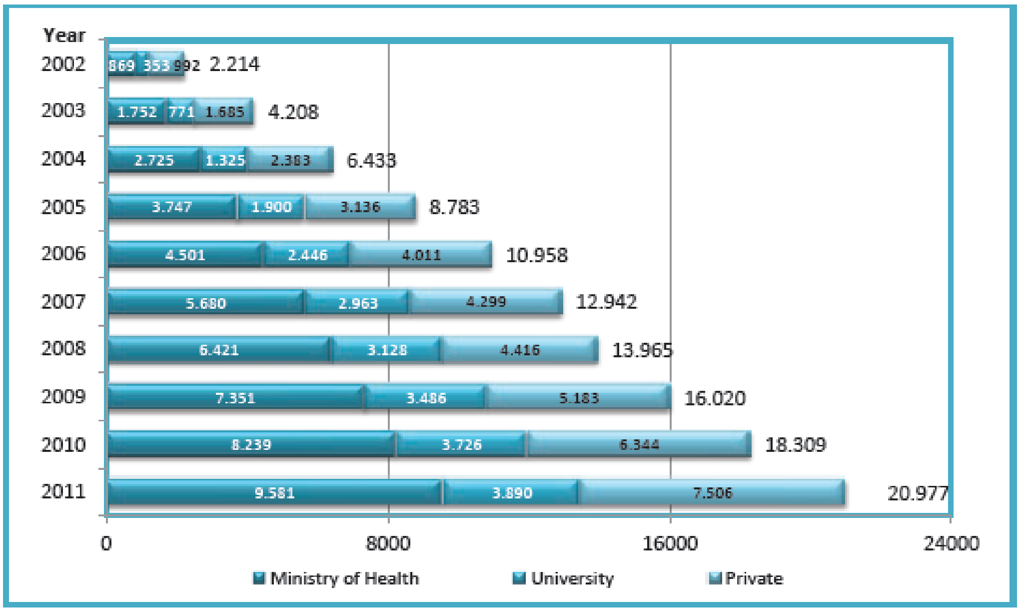
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Kidney	550	605	775	926	949	1.302	1.665	2.362	2.502	2.923
Liver	159	174	245	324	319	473	602	592	695	904
Heart	20	23	33	36	45	61	50	54	86	93
Heart Valve	15	24	7	19	25	159	29	38	18	1
Lung	0	0	2	1	0	1	0	7	3	5
Heart-Lung	0	0	0	0	0	1	3	0	0	0
Pancreas	0	9	37	13	7	9	10	18	29	26
Small Intestine	1	1	1	0	0	3	3	1	3	1
Total	745	836	1.100	1.319	1.345	2.009	2.362	3.072	3.336	3.953

Source: General Directorate for Health Services

4) Replacement of Intensive Care Unit (ICU) Infrastructure and Imaging Devices

In the tables below, you may see the high-growth in the number of ICU units and advanced imaging devices in the last decade in Turkey, though installed base is still below OECD average. According to the industry, some of these units will have to be replaced as some of the installations are of old technology and that some of them are not of good quality; thus, creating major maintenance expense.

Figure 6.8. Total Number of Intensive Care Unit Beds by Years and Sectors, Turkey



Source: General Directorate for Health Services

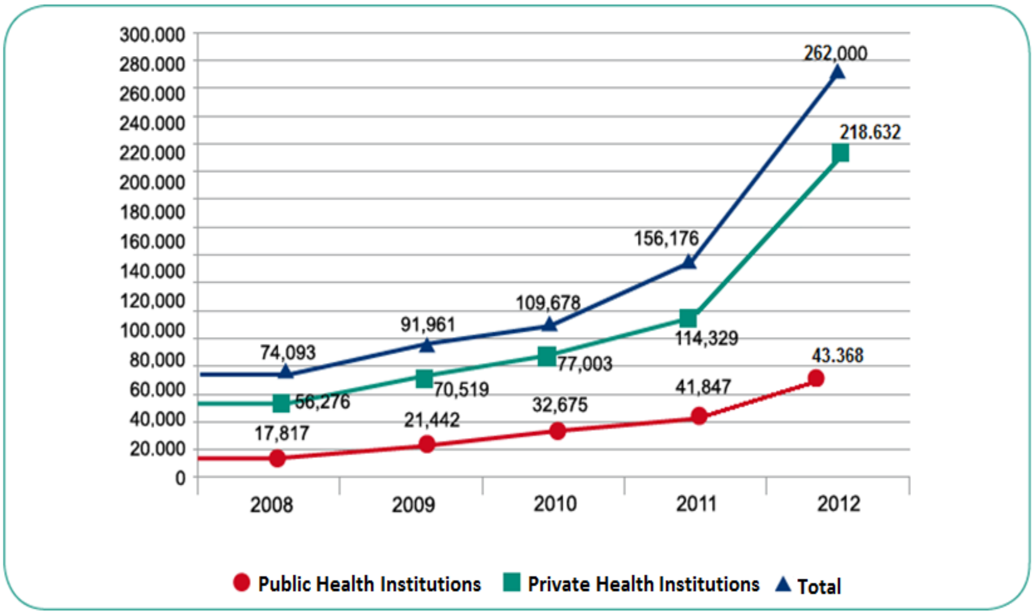
Table 6.4. Number of Devices in Inpatient Health Care Facilities by Years, Turkey

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
MRI	58	99	149	199	310	410	517	647	697	781
CT	323	376	446	509	593	675	759	838	904	1.088
ECHO	259	338	391	453	518	598	689	791	881	1.181
Ultrasound	1.005	1.164	1.309	1.493	1.699	1.900	2.117	2.283	2.436	3.775
Doppler Ultrasonography	681	743	805	845	920	1.006	1.095	1.251	1.397	2.091

Source: General Directorate for Health Services

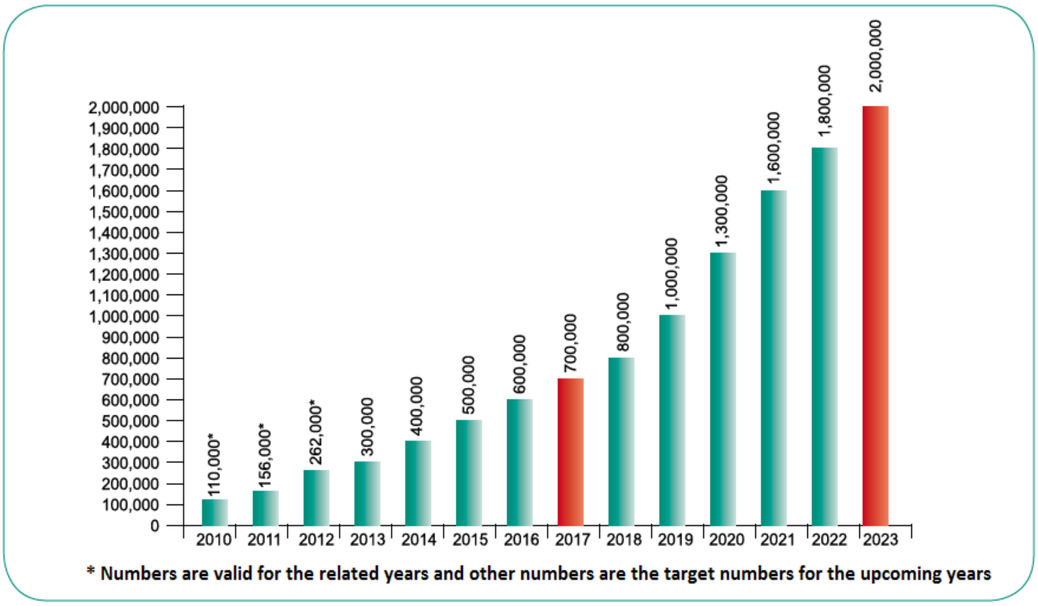
5) Number of International Patients Coming to Turkey

Turkey has become a major healthcare center for patients from countries that are neighboring Turkey and from Europe. The Turkish Government will soon announce a project which will support the construction of healthcare free zones where international patients will receive high-quality healthcare treatment at economical prices. Number of international patients that visited Turkey between the years 2008 and 2012:



Source: Ministry of Health, Department of Health Tourism

Numbers of international patients targeted by the Ministry of Health by 2023 by year:

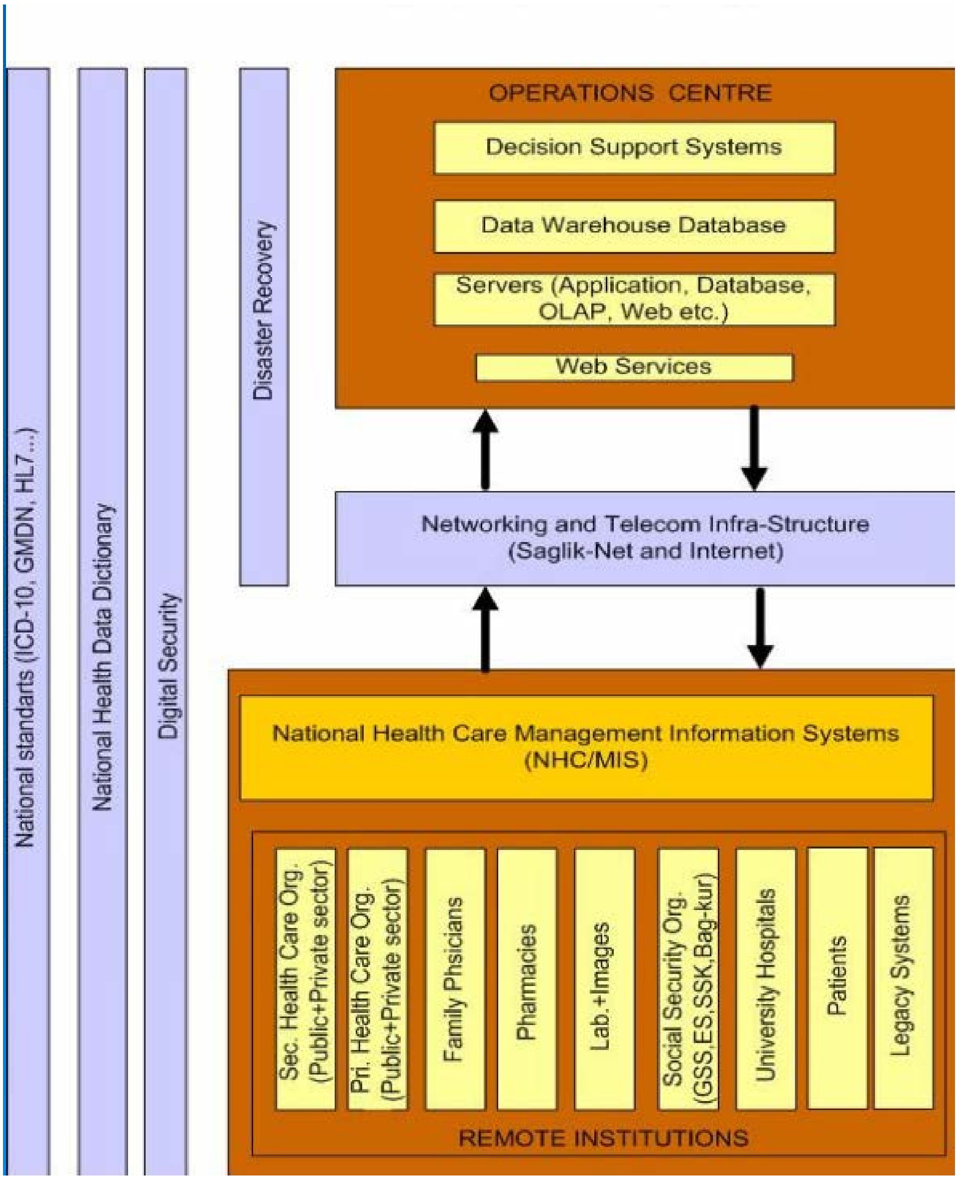


6) E-health Transformation

Turkey has been leading a rather aggressive approach since 2005 towards establishing an electronic system to manage patients' records, reimburse healthcare expenses, manage prescriptions flow, and use tele-medicine for offering healthcare services to remote parts of the country. The Ministry of Health's E-Health Department cooperates with industry to develop various software to reach a position where all elements of Turkish healthcare system will be integrated in the system whose map can be seen in the chart below.

Currently, healthcare records of all patients who visit first-level healthcare facilities are kept electronically and prescriptions are issued likewise. MEDULA system, co-developed SGK and the industry, makes it possible for pharmacies to communicate with SGK real-time for the reimbursement of the prescription amount.

Tele-medicine service has been started by establishing alliances between rural hospitals and central hospitals for the evaluations of radiological and laboratory outputs.



Which Medical Technologies Have Potential in the Turkish Market?

There are about 6,000 companies operating in the Turkish medical equipment and devices market. There are about 100 medical equipment manufacturers in the country, most of which are manufacturing disposables, surgical tools, stents, prosthetics and hospital furniture. In general, all major categories of medical equipment are present in the market both in private and public hospitals. At this point, these institutions look for state-of-the-art and innovative, where possible, minimally invasive or non-invasive, medical equipment and solutions. There is potential for the following medical equipment:

- Advanced pre-screening, imaging and diagnostics devices
- Advanced point-of-care devices
- Advanced surgical devices using robotics technology
- Cancer treatment devices
- Clinical chemistry and laboratory devices and reagents
- E-health and M-health systems
- Implants used in orthopedics and trauma
- Remote patient monitoring devices
- Telemedicine systems

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