



Human & Health

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Contents

4. An overview of the health care system of Tunisia, Nabil M Kronfol
7. CHINA'S HEALTH CARE: THE EVOLVING SYSTEM, DR ABDO JURJUS
11. ACCREDITATION OF HOSPITALS IN LEBANON
16. An Overview of Hospital Accreditation: Dr. Rania A. Tohme
23. What you should know About your Pacemaker? Suzane Sahily, Samer Nasr
27. Diabetic Retinopathy A major sight threatening disease, Alex Jalkh
30. La démarche compétence dans les Hôpitaux: Dr. Patrick Tabchoury
33. LES DECHETS HOSPITALIERS, Dr. Gabriel Sabé, Mr. Michel Sabé
41. SITUATION DE LA TUBERCULOSE AU LIBAN, Dr Béatrice Chami, Dr Antoine Saadé
47. COMMENTAIRES DU SYNDICAT DES HÔPITAUX Concernant la nouvelle procédure d'accréditation
52. Infos

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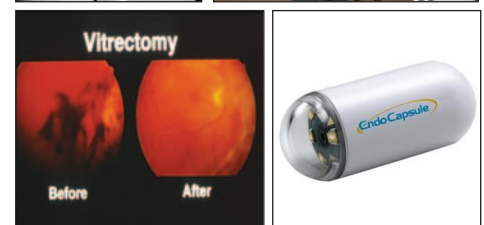
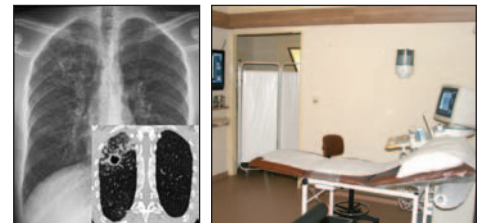
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An overview of the health care system of Tunisia

Nabil M Kronfol MD, DrPH

Tunisia: the Country

- Situated at the northern tip of the African continent on the shores of the Mediterranean, bordered to the west by Algeria and to the south-west by the Libyan Arab Jamahiriya,
- Tunisia has a surface area of 154 350 km². It is divided into 24 governorates, which are in turn subdivided into 263 administrative delegations and grouped into 7 large socioeconomic regions.
- The total population was estimated to be 9,888,000 inhabitants on 1 July 2003. The urbanization rate is 63.4% (33% in 1956, 54.3% in 1985). The coastal regions cover about a third of the territory and comprise 67% of the total population and 90% of the industrial activity.

Economic Development

- Tunisia was the poorest country within the Maghreb at the time of independence, with poor natural resources. In 2004, Tunisia is considered the most prosperous. GDP per capita (2003) is \$ 2,240 US\$ (1,930 US\$ for Algeria, 1,310 US\$ for Morocco, 1,850 \$ for Egypt and \$ 1,390 for Jordan. In addition, the Tunisian economy is the most dynamic, with a yearly growth rate of 5.5% over the past 30 years.
- Economic adjustment legislation was enforced in the 80s.
- Inflation has been kept between 2-3% over the past 10 years.
- The economy is considered liberal at the scale of 70%, one of the most liberal in the Mediterranean region.
- This economic growth has led to a marked improvement in the various human development indicators. Basic Social services are usually defined as priority axes of the development policy (human resources development; ensuring essential food consumption, education, health, social security, poverty reduction, employment...). Public expenditures on social services are evaluated at around 20 % of GDP as compared to 9% in Jordan and 6-7% in Egypt.
- Illiteracy has also decreased since independence with a major increase in the various levels of education of the population. The rate of schooling has been 97% in the primary cycle and 68% in the secondary. The number of

students has registered an exponential growth having surpassed 300,000 currently and is expected to reach 500,000 in 2010.

- According to the Human Development Report of 2002, Tunisia had caught up with Jordan and Turkey and was ranked 92nd although it ranked 69 on the international ranking of GDP per capita. Its ranking has improved to 65 if one considers only the health dimension. By 2015, Tunisia should achieve, or exceed, all the UN Millennium Development Goals.
- The infant mortality rate that was 130/1000 in 1970 has decreased to 21/1000; the life expectancy at birth is currently 73.2 years up from only 58 years in 1975. The natural growth of the population has come down remarkably in the past four decades due to determined social policies and has now reached 1.12% only.
- However, this achievement has led to the new challenge of population ageing. It is projected that by 2029, the age bracket of 60+ years will be greater than that of the under 14 years. Tunisia will grow old well before its neighbors.
- WTO and GATT have created a real international dynamism with strengthening of the regional network. In 1994, Tunisia signed the agreements of Marrakech that finalized its entry into the WTO. In 1995, similar agreements were signed with the European Union that provided for the free exchange and removed custom duty spread over 12 years (ending in 2008). Tunisia was the first country from the South to sign the Euromed Treaty with the EU.
- The liberalization of the economy was further reinforced by joining the free exchange zone with the Arab countries, as of 2008, along with bilateral trade agreements with Egypt, Morocco and other countries in the Maghreb and the Levant.
- The liberalization of international trade was concretized with the 1992 decision to float the Tunisian Dinar that was further reinforced by FDI and development partnerships.
- Furthermore, Tunisia committed itself to apply the multilateral regulations concerning the trade in goods and services (GATS), the respect of intellectual and industrial property rights and the progressive commitments related to negotiations and trade.

Overview of the Health care System

Health Service Delivery

- The governmental health sector is predominant in Tunisia at all levels. Medical services are offered through the Ministry of Health as well as through other ministries such as the Ministries of Defense and Interior, as well as the Social Security Fund.
- The services provided by the Ministry of Health are organized through four levels: The primary health care centers (2,200 centers or 1 center for every 4,500 people); the district hospitals that provide maternity services and secondary care, with a capacity of 2,650 beds; the regional hospitals (32) with a bed capacity of 3,500 beds; and the university hospitals and specialized medical centers located in the major cities namely Tunis, Sousse, Monastir and Sfax, with a bed complement of 8,500 beds.
- 95% of population have access to health facilities within at least 5 Km distance. In the public sector, there exist some user fees for curative care. All the personal preventive care is freely delivered to all Tunisian citizens. For medical emergencies, patients can reach all public levels of care, without any restriction. The hospital sector is essentially public: 85% of the beds are owned and managed by the MOH.
- Access to specialists is delivered in the primary health care centres, in particular in the urban centres. Elsewhere, patients are examined initially by general practitioners and get referred to specialists in hospitals when needed. GP gate keeping is being gradually set up within the framework of the health insurance reform.
- A national regulatory authority of pharmaceuticals is managed by the MoPH, through its drug and pharmacy unit coordinating its activities with the national drug control laboratory. The Central Pharmacy of Tunisia, (a public organization within the MoPH), is the sole entity allowed to import drugs for the country through tenders with international pharmaceutical producers.

Health Care Finance and Expenditure

- The percentage of GDP spent on health has remained constant since the 1990s at around 5% a year. The public sector, which provides two thirds of the consultations and 85% of hospitalization, absorbs only 50% of health expenditures. The private practice sector absorbs the other half.
- Total health expenditures per capita are evaluated around 150 USD per capita (2004) and around 5.6% of the GDP. Since the early 2000s, the household and state share is estimated respectively to 50% and 26% while social security contributes with 24% of total health financing. Private insurance plays only a very limited role. Private financing of health has increased since the beginning of the last two decades.
- Household contributions are increasing to the point of non-acceptability. The contributions from the funds, still

low at present, should become dominant with the reform of the health insurance system which is currently under way. This reform aims to sustain the achievements of the health system, particularly in the public sector, in order to ensure equity and better quality of health services. This is planned to be achieved through an optimum public-private partnership, an appropriate mix to control expenditure, the prevention and management of diseases in order to sustain and improve health indicator gains.

- A new strategy is being implemented, encompassing the three following objectives:
 1. The continuously development of primary health care through a program to consolidate the provision of primary health services
 2. The improvement of hospitals' inpatient care by reforming structural and institutional aspects of teaching hospitals.
 3. The reform of legislation rules related to private providers.

Health System Organization and Governance

- The evolution of public sector infrastructure is strongly regulated by the five-year plans for economic and social development which define health public sector investments and by the annual investment and operational budgets.
- Over the last years, public sector has introduced measures to develop and enhance higher levels of management autonomy, especially in the teaching hospitals, to increase flexibility in day-to-day operation and strategic planning.
- The MoPH has also implemented measures to strengthen the management of emergencies, quality assurance and information system. Incentives have been introduced to encourage specialist physicians to exert in underserved regions.
- The MoPH supervises the health sector, through its departments of planning, of legal and juridical procedures and inspection. However, professional orders of medical doctors, dentists and pharmacists are also allowed to supervise in some defined activities.
- There are no accreditation mechanisms for both public and private sector. However, some private facilities have sought "certifications" from international organizations.
- Generally, the management of health sector is centralized, even with the multiple attempts to decentralization at regional departments of public health or hospital level. It remains delegation of tasks than a real delegation of power.
- The mechanisms of accountability in the Tunisian health system are relatively weak due to two main reasons: the scarcity of professional's norms of practice and the absence of a dedicated institution for autonomous evaluation, recognized by professionals and authorities.

Causes of death

- Demographic transition and economic development have produced changes in the epidemiological landscape and an

increase in the prevalence of chronic and degenerative diseases and their risk factors (diabetes, hypertension, hyperlipidemia, smoking, accidental injuries, cardiovascular diseases, cancer, mental illness, etc.) and the emergence of problems specific to some groups (the elderly, the young). These problems will pose challenges for the health system, particularly in terms of costs of care.

- According to the National Institute of Public Health (INSP), between 1966 and 1999, the epidemiological profile of the population changed. The share of infant and child deaths in the total mortality has dropped from 31% and 21.7% to 11.7% and 2.8%, respectively, while the share of deaths in people aged over 50 has risen from 33% to 70%. Over the same period, the share of deaths attributable to cardiovascular diseases has risen from 11% (3rd rank) to 23% (1st rank), and that of malignant neoplasms from 3% to 12%
- The proportional share of causes of death in 2001 has a fairly comparable profile in men and in women: diseases of the circulatory system 27.0%, cancer 18.2%; accidental injuries 10.5%; endocrine, nutritional and metabolic diseases 10.4%
- It is also noted that hypertension, diabetes and stroke are the three main diseases causing death in women and there is marked excess mortality rate in women for hypertension (11.3% versus 6.4% for men), diabetes (8.1% versus 5.7%) and fracture of neck of femur (2.6% versus 1%). An excess mortality rate in men is seen for ischemic heart diseases (6.6% versus 3.4% for women), pulmonary diseases (5.1% versus 2.7%), lung cancer (5.2% versus 0.6%) and above all for road traffic accidents (6.2% versus 1.6%).

Human Resources for Health

Human resources are trained in four (4) medical schools, 19 nursing schools and 5 health technicians' schools. Human resource policy is primarily focused on the training of generalists to satisfy the basic health care needs of the population and secondly on the training of specialists.

Physicians

- Data on Human resources for health indicate that Tunisia enjoys 9,450 physicians, of whom 4,641 (49%) are in private practice. Of those, 2,006 are specialists (43.2%), rate of 1 practitioner for 2,142 persons. The distribution though is uneven: the density varies from 1:1,068 in the capital to 1:6,658 in the South-East of the country, a 6x fold.
- Tunisia graduates 600 new physicians every year. This over-production has facilitated access. There are issues related to the type of specialists needed.
- There is little coordination between the scientific professional associations, the health facilities and Government.
- There is little monitoring of quality. Continuing medical education is sporadic and not obligatory.
- Almost half (45%) of the physicians in private practice are

located in the capital. With yet another 24.5% practicing in the Central-East. Together these two regions are home to 70% of the PP physicians while their combined population is only 36.5% of the entire population of Tunisia. If one considers the specialists in PP, 54.6% locate their practice in the capital, 23.2% in the Central-East, a total of 78% of specialists in these two regions alone.

- The reasons for this uneven distribution are many. (One should recall that this uneven distribution is present in the public sector as well).
Economical: The purchasing power of the population is superior in the East of the country. The population tends to have a higher coverage from health insurance companies.
Social: A large proportion of practitioners are natives of these regions. Many may not be familiar with the other parts of the country. In addition, there is a high proportion of women in the medical corps that may find it difficult to move.
Cultural: The medical needs of the population in the East are different from that in the West as far as the private sector is concerned. There are indeed cultural differences.
- Physicians exercise their practice in a private health facility, licensed by the MOH, as per regulatory legislation; or in a group practice or within an NGO duly registered and licensed; or in a medical laboratory; or in occupational medicine and public health within institutions and companies.

Dentists

- Of the 1,650 dentists practicing in Tunisia, 1,125 (68.2%) are in the private sector, a ratio of 1 dentist for 8,835 persons. There is also a mal-distribution of dentists across the country, with a differential density of 1:8. Half of the dentists in the private sector practice in the capital, three quarters in the 2 regions noted above.
- The causes for this distribution are the same as for physicians, to which one may add the lesser perception of the need for oral health in the public (hence less demand), the high costs of dental care (not covered by the funds) and the need for multiple sessions in dental treatment necessitating inconvenience and opportunity costs to the patients and families.
- As was the case for physicians, dentists may exercise their practice in a private health facility, licensed by the MOH, as per regulatory legislation; or in a group practice or within an NGO duly registered and licensed.

Pharmacists

- 1,653 pharmacists practice within the private sector: 1,455 in private pharmacies (1,290 day and 165 night pharmacies), 87 in the private pharmaceutical industry, 19 in Siphat (Societe des Industries Pharmaceutiques de Tunisie), 48 in pharmaceutical stores, 24 at the Central Pharmacy (Public). 10 pharmacists are representatives of pharmaceutical companies and 10 work in the scientific departments of companies.
- The ratio is 1 pharmacist for every 6,013 inhabitant (all

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told) or 1 for every 6,830 if only private pharmacies are included.

Paramedical staff

- There is 1,002 nursing staff in the private sector, 1 for every 9,920 persons.
- There are also 2,000 technicians working in various labs and clinics (1:3,311 persons). 58% of paramedical staff are located in the capital, 94% in the 2 regions with a density differential of 1:18 with the West of the country.

The private sector

- Private hospitals have existed for a long time in Tunisia. However there have been recently major developments in this sector. In the early 80s, there were only few private small hospitals with less than 1,000 beds all together.
- However, at the beginning of the 90s, and subsequent to the medical and university hospital reforms of 1988, and the legislation encouraging investment, there has been a marked increase in the number of new clinics, diagnostic centers and hospitals that has surpassed all earlier forecasts.
- Health services come under well-defined legal and regulatory norms that have been updated and revised carefully in the early 90s. For the private sector, there are legislations that set standards and norms for equipment, buildings and staff. The control and respect of norms is ensured by MoPH inspection. Accreditation is being considered. There is no certificate of need.
- The Ministry contracts with the private sector in areas where the medical needs of the population are not met through the public sector. Contracts involve general services, gardening, equipment maintenance. In addition, contracts have been extended to imaging when not available in the public institution.
- However there is still a net separation between serving in the public and the private sectors.
- In 1995, amendments were introduced in the regulations concerning university professors whereby some private practice has been permitted, for professors and senior specialists with at least 5 years of experience (Decree 95-1634 of Sep 4 1995). Several hundred physicians now benefit from this amendment.
- Physicians employed in underserved regions receive additional service allowances and are permitted to engage in limited private practice, within the same hospital.
- The information system generally provides valid information on infrastructure and medical equipment. Information on human resources is also acceptable. However, much needs to be done for information on ambulatory care.

Health Facilities in the Private sector

- It is evident that the physical resources of the private sector have increased remarkably over the past two decades (with a multiplier of 2.5) as follows: Medical clinics increased

from 1,717 in 1990 to 4,641 in 2004; Clinics for General practice increased from 1,028 to 2,635; Clinics for specialists from 689 to 2,006; dental clinics from 625 to 1,125; paramedical establishments from 334 to 1,006; pharmacies from 1,055 to 1,530. Medical transport facilities number 77 in 2004; thermal spas 21.

- Private hospitals have increased as well from 33 to 81; the respective bed complement that was 1,142 beds in 1990 became 2,379 in 2004.
- Centers for hemodialysis have increased from 18 to 99, a 5.5 fold increase, due to the increased prevalence of renal failure. It should be noted that the coverage of hemodialysis since 1990 has no limitation or constraints.
- Self-standing centers for imaging and diagnostics increased many folds as well (from 51 to 125). CT scanners from 41 in 2000 to 55 in 2004; Lithotripsy from 3 to 13; MRI from nil to 6; Cobalt therapy from 4 to 5; cardiac catheterization from 5 to 10; laser excimer from 4 to 10.
- There is little data on outpatient utilization in the PS. Information on hospitalization is improving, but no data is readily available.
- There is concern for the dual practice of physicians in both sectors, as some patients may be diverted to the PS, thus causing an undesirable conflict of interest. The origin of this dual practice is the low remuneration of physicians in the public sector.

Conclusion

- All through its development, the Health system of Tunisia has undertaken important changes across all its sectors. These changes were introduced through reforms undertake at different levels.
- An exhaustive situation analysis of the challenges of the health sector reflected through cycles of strategic plans has been undertaken that have been translated into reforms. All along, the overall strategy encompassed the three following objectives:
 - The continuous development of primary health care through a country-wide program of basic medical services assured to the population across the country.
 - The improvement of inpatient care through autonomy and devolution
 - The reforms introduced in the practice of private providers.
 - As regards health care financing, an important reform of the social health insurance is being undertaken.
 - Programs to develop family physicians and improve the competence of physicians and nurses have been introduced in earnest.
- From a country that could only number 16 physicians at independence in 1956, Tunisia has been able through rational social policies, political commitment and economic development to build and develop one of the better performing health systems of the region.