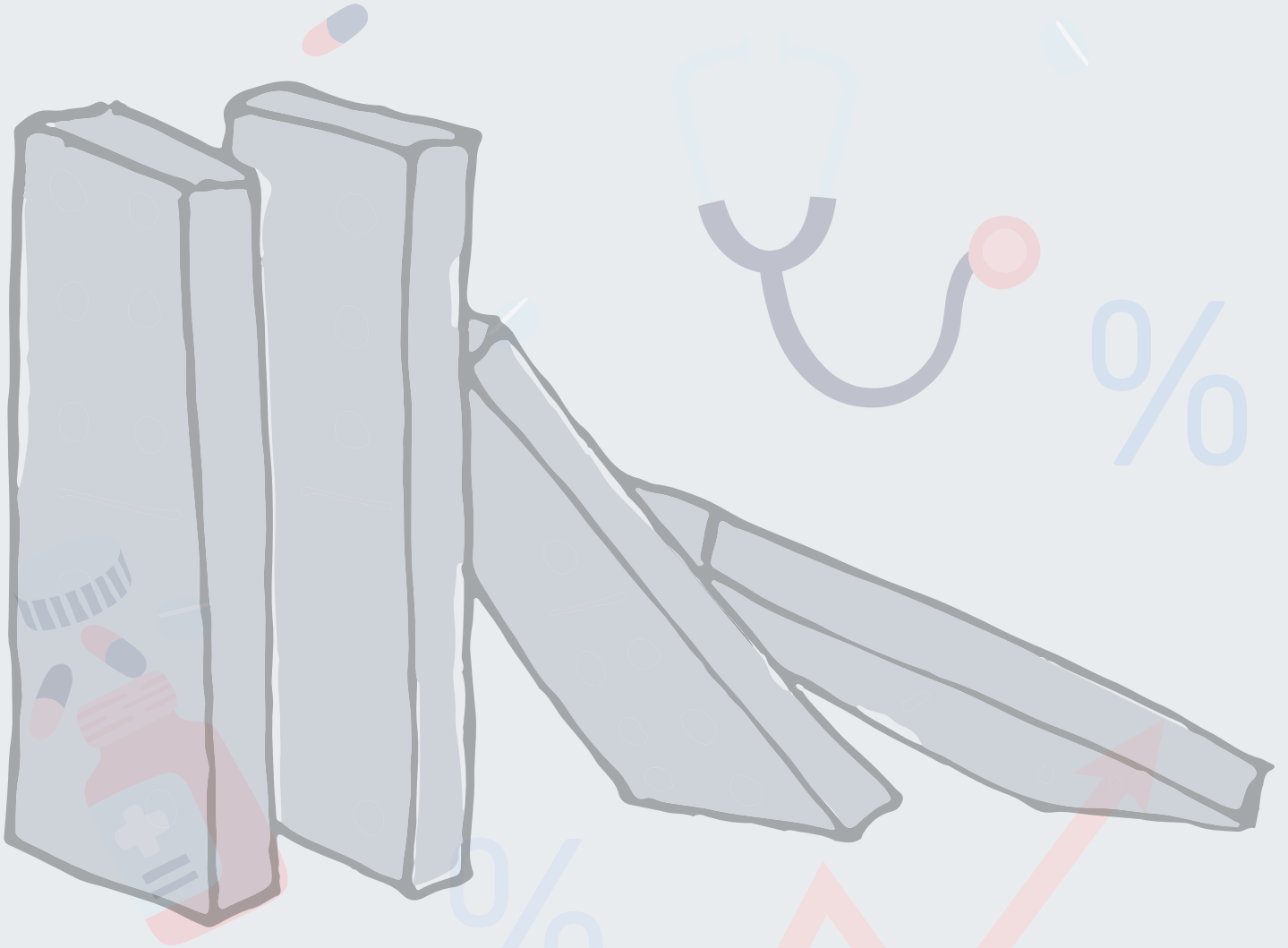




AL BAWALA

Austerity, A Chronic Condition of Public Health



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Abstract

This paper uses public health indicators and national and regional statistics to examine the health and sustainability of the healthcare system in Tunisia. While public expenditure on health has nominally been growing in the post-revolutionary period, we find that investment in public health has not kept up with population growth, continues to suffer greatly from regional disparities, and still fails to fund efficient preventative services. All indicators suggest that a public health crisis was inevitable in the face of an exogenous factor that would put stress on the whole system at the same time, such as the COVID-19 pandemic. The decay of the Tunisian health sector has not only been critical in the outcome of the pandemic, but it also continues to impact the delivery of day-to-day medical services. In a country that suffers greatly from poverty and inequality, the neoliberal austerity model of development that the health sector has followed has caused significant damage and suffering to generations of Tunisians. As exposed in our work, through more progressive tax rates, more equitable distribution of the fiscal effort, as well as more investment in fighting tax fraud and evasion, the Tunisian government is capable of significantly increasing its revenues and allocating them to the healthcare sector, among others.

Introduction

Starting in 2020, the outbreak of the COVID-19 pandemic has been testing the capacities of global healthcare systems and social protection policies. In Tunisia, it has quickly exposed the stark reality of the overall decay of the public health system and its collapsing infrastructure. Characterized by the continuous saturation of healthcare services as well as harsh regional disparities, the breakdown of the Tunisian healthcare system is not only the result of corruption and mismanagement of public funds but is also the direct result of the fiscal and budgetary policies of the state that have left public services gravely underfunded and in continuous deterioration for several decades.

Similar to many developing countries, the development of the fiscal and budgetary policies of the Tunisian state since the 1980s has been heavily marked by the neoliberal economic model. Following its logic of economic liberalization, Tunisia has adopted fiscal policies that have weakened the country's ability to mobilize its own resources, pushing the country dangerously into a cycle of austerity and indebtedness.¹ Following the Tunisian revolution, the fragility of public services, particularly in the healthcare system, continued to worsen as the fiscal policies of the Structural Adjustment Plan continued almost unchallenged.

In the face of the COVID-19 pandemic, Tunisian authorities have relied on several waves of strict lockdowns and a variety of social distancing regulations. Yet, regardless of the social measures aimed at slowing the spread of the virus, in the face of severe shortages of equipment, medical personnel, and life-saving medicine essential healthcare services have experienced widespread disruptions leading to the highest mortality rate per capita in Africa and the Middle East², exposing how fragile and underfunded the Tunisian healthcare system truly has become.

It should be noted that Tunisia has signed the Abuja Agreement in 2001, pledging to allocate 15% of its overall budget for healthcare. Although the budget for public health indicates a continuous increase in health expenditures from 1629 million Dinars in FY 2015 to 2141 million Dinars in FY 2019, the year preceding the pandemic, public health expenditure as a percentage of the overall state budget retreated from 5.86% in FY 2015 to 4.95% in FY 2019. In fact, this agreement constitutes only one of many national and international laws and conventions ratified by Tunisia that guarantee the right to healthcare and regulate access to it, the none respect of which has led to the breakdown of the healthcare system in the face of Covid-19.

This paper aims to study and expose the weaknesses of the Tunisian healthcare sector and look at the main factors behind these weaknesses. Were the resources allocated for public health in the years preceding the pandemic adequate to build a robust system, and were mobilized resources in the years of the pandemic adequate to meet the scale of the crisis? Guided by these questions, the paper takes a budgetary approach to the public health question with the goal of recommending fiscal and budgetary policies and practices to build a just and robust system that can withstand future challenges.

1 Amine Bouzaine, "La justice fiscale en Tunisie : un idéal piétiné par les politiques d'endettement", AL Bawsala, November 2021, <https://budget.marsad.tn/ar/blog/reports/2022/laadl-lgby-fy-tons-khyr-ag-hdth-syst-ltdyn>

2 Johns Hopkins University Coronavirus Resource Center, MORTALITY ANALYSES, accessed July 2022, <https://coronavirus.jhu.edu/data/mortality>

01

**Diagnosing the
healthcare system**

The legal basis for the right to health

The right to health is protected at the highest legal level by Tunisia's 2014 constitution, as its 38th article states that:

"Health is a right for every human being. The state shall guarantee preventative health care and treatment for every citizen and provide the means necessary to ensure the safety and quality of health services.

The state shall ensure free health care for those without means and those with limited income. It shall guarantee the right to social assistance in accordance with the law."³

Ratified by Tunisia in 1985, the right to healthcare and social protection are highlighted in the Universal Declaration of Human Rights.⁴ Similarly, the right to health is also highlighted in the International Covenant on Economic, Social and Cultural Rights, which Tunisia has also ratified, and whose 12th article states that:

"1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."

According to the covenant, the right to healthcare is made up of the interrelated and essential elements of availability, accessibility, acceptability, and quality.⁵ However, it should be noted that the right to health is not limited just to access to healthcare services in hospitals and clinics, but is much broader in its conception.⁶

But, despite all these national and international laws and conventions, Tunisia still has a long way to go in order to respect and guarantee access to this right.

The failure to guarantee the right to health

The failure to guarantee the right to health took many dimensions during the pandemic, where issues abounded, from the lack of ICU Units (Figure 1) to the slow pace of vaccinations. In fact, Tunisia was very slow to implement an effective COVID-19 vaccination strategy until July 2021, leaving the country vulnerable to the catastrophic wave of that summer.⁷ Even though there has been considerable progress in vaccination against

3 Constitute project, Tunisia's Constitution of 2014, June 2021, https://www.constituteproject.org/constitution/Tunisia_2014.pdf

4 Article 25 of the Universal Declaration of Human Rights

"(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

(2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection."

5 UN Office of the High Commissioner for Human Rights, CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12), August 2000, available at: <https://www.refworld.org/pdfid/4538838d0.pdf>

6 According to the second paragraph of the International Covenant on Economic, Social and Cultural Rights:

"The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:

(a) The provision for the reduction of the stillbirth-rate and of infant mortality and for the healthy development of the child;
(b) The improvement of all aspects of environmental and industrial hygiene;
(c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases;
(d) The creation of conditions which would assure to all medical service and medical attention in the event of sickness."

7 The failure to guarantee the right to health took many dimensions during the pandemic, where issues abounded, from the lack of ICU Units (Figure 1) to the slow pace of vaccinations. In fact, Tunisia was very slow to implement an effective COVID-19 vaccination strategy until July 2021, leaving the country vulnerable to the catastrophic wave of that summer .

COVID-19, Tunisia still ranks below developed countries such as Finland and Switzerland, but also developing countries such as Chile, Cuba, and Morocco (Figure2).

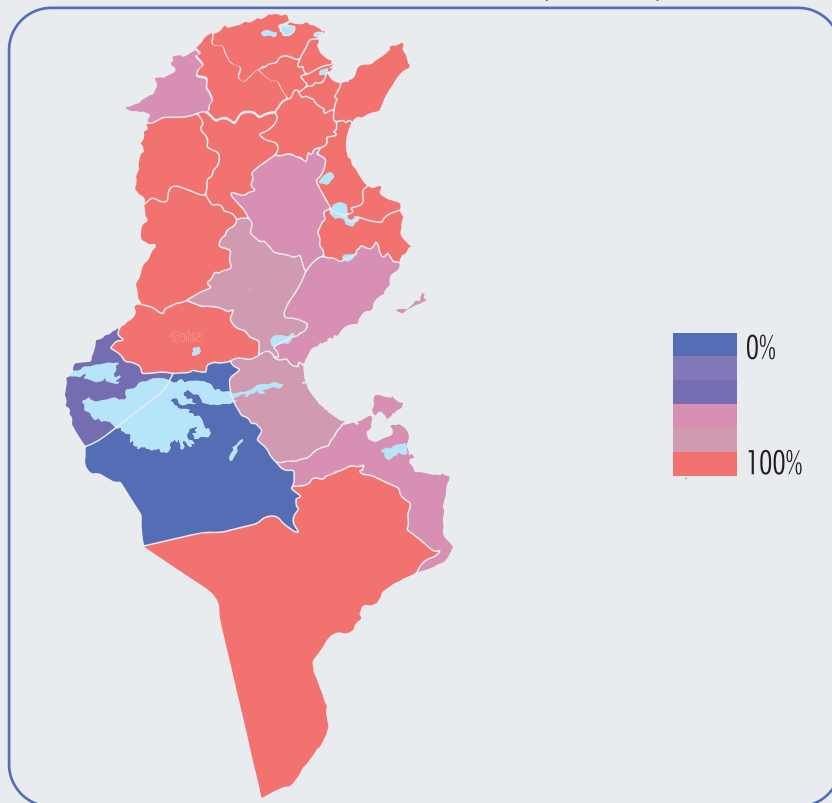


Figure 1: Capacity of ICU Units in Public Hospitals 21st of June 2021 (Source: Ministry of Health)⁸

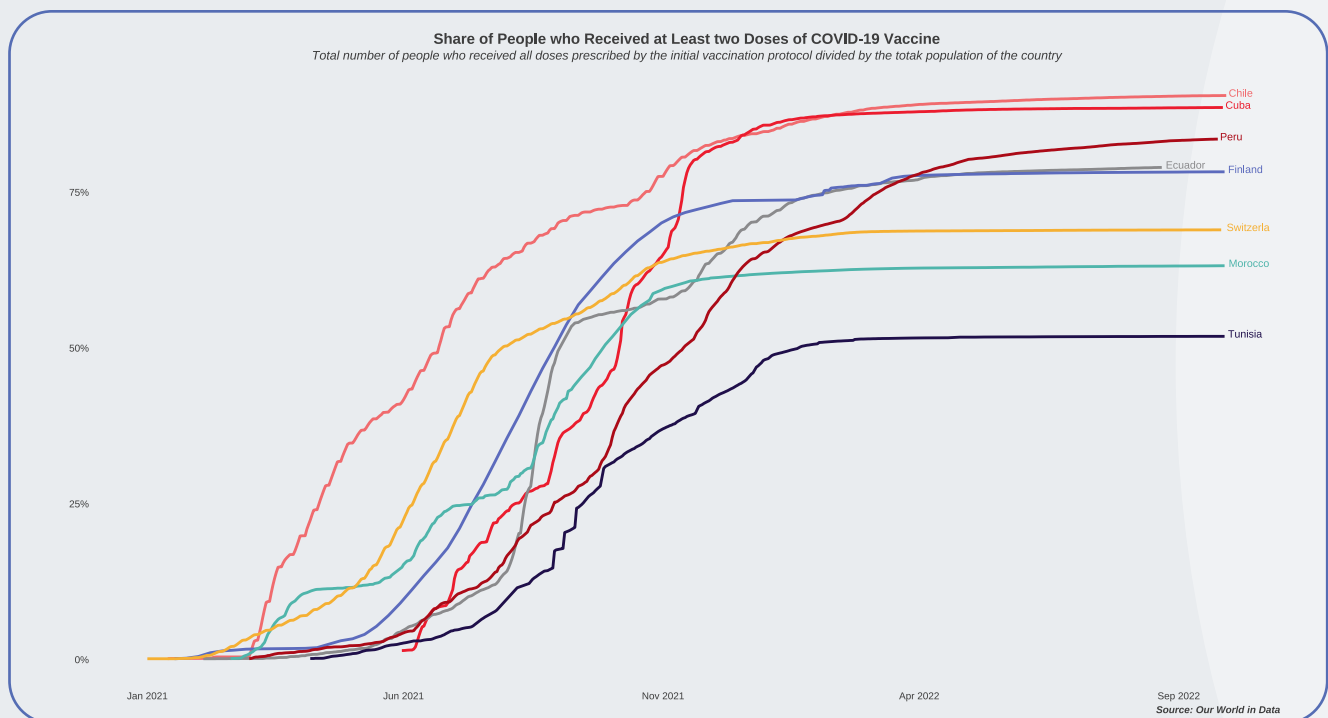


Figure 2: Share of People who Received at Least two Doses of COVID-19 Vaccine (Source: Our World in Data)⁹

⁸ Ministry of Health Facebook page, posted 22nd of June 2021, Accessed June 23, 2021 <https://www.facebook.com/santetunisie.rns.tn/photos/pcb.4245030148869390/4245029722202766>

⁹ Our World in Data, "Coronavirus (COVID-19) Vaccinations - Statistics and Research," Our World in Data, accessed June 23, 2021, <https://ourworldindata.org/covid-vaccinations?country=TUN>.

However, similar to most topics explored in this paper, COVID-19 vaccination rates are inequitably distributed among the different regions of the country, with the highest concentration being at coastal regions (Figure 3).

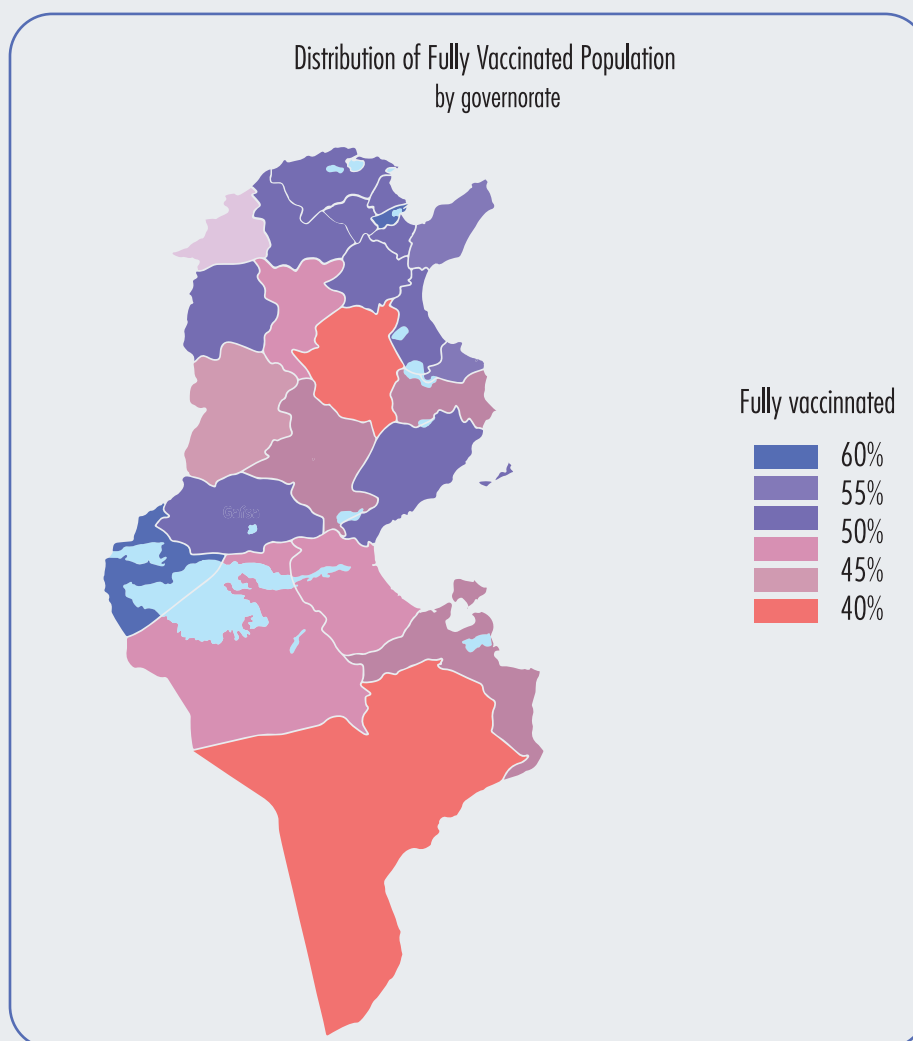


Figure 3: Distribution of Fully Vaccinated Population by Governate as of March 17th 2022
(Source: Evax.tn)¹⁰

As has been made abundantly clear both prior to and following the pandemic, the Tunisian healthcare system suffers from a lack of quality services and is not resilient to emergency situations. Additionally, Tunisians are generally dissatisfied with the services they receive through it. Before trying to understand the causes behind this failure, it is important to tackle some of its manifestations, and how it impacts the health and daily lives of service users.

This section will offer an overview of sanitary infrastructure, and the human and material resources of the healthcare sector. The overall trend is of a shortage in the aforementioned categories, and a significant inequitable distribution in them.

Human resources

As it will be shown in this section, there is a stark shortage of medical personnel in Tunisia. This shortage varies in severity based on the region, as well as specialization (doctors, nurses, midwives, and technicians).

¹⁰ Evax.tn, Vaccination Open Data, March 2022. <https://evax.tn/vaccinationOD.html>

Doctors

There is a shocking shortage of doctors in Tunisia, especially in certain medical and surgical specialties. The number of total physicians per 1,000 people in Tunisia was at 1.3.¹¹ In the public sector, general medicine practitioners have increased from 3414 in 2017 to 4225 in 2019 (0.36 per 1000 people), the number of specialist doctors has seen a sharp decline in the same time period from 3339 to 2318 (0.19 per 1000).¹²

The shortage in human resources also includes the specialist surgical workforce. Their national average is 11.54 per 100,000 population (2014), well below the world average of 30.53 (2015), as well as below those of other countries such as, Honduras (60 in 2014), Finland (76 in 2014), and Cuba (100.89 in 2017).¹³

This shortage is inequitably distributed among regions. As Figure 4 shows, the density of doctors per 10 000 inhabitants differs by region with mostly coastal areas having higher averages.

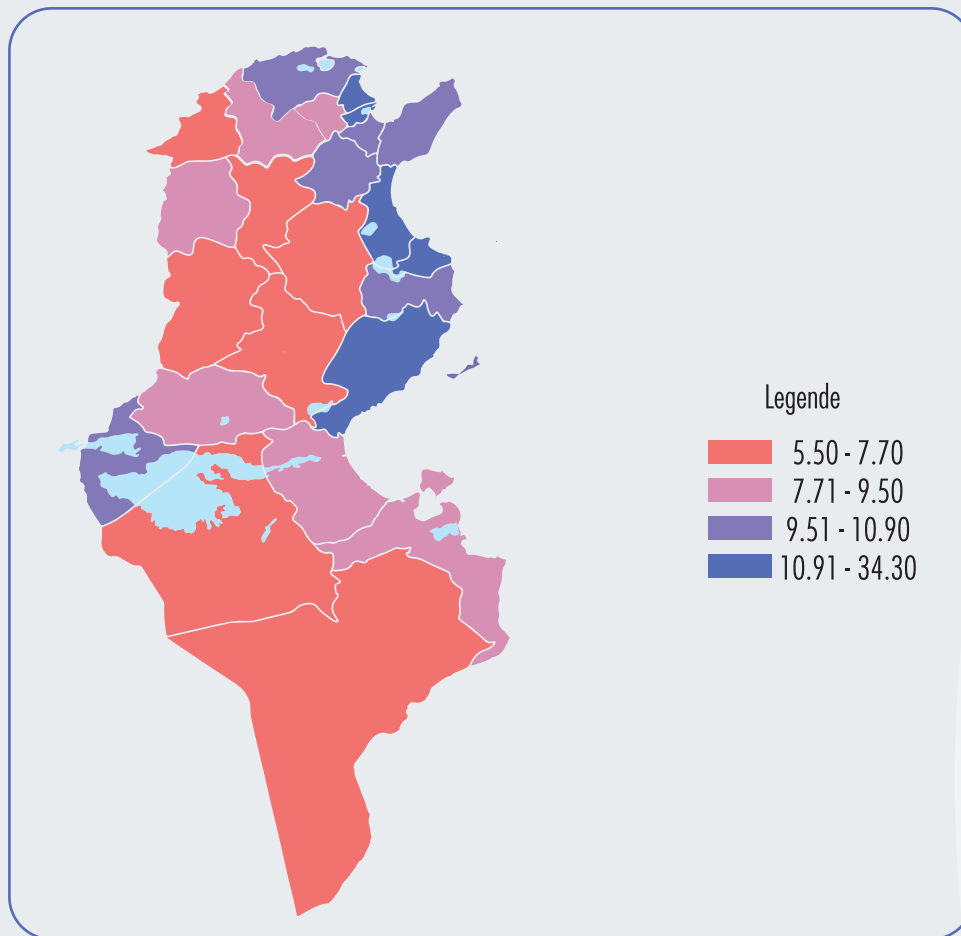


Figure 4: Doctor density per 10 000 inhabitants in 2019 (Source: Ministry of Health)¹⁴

Whereas the national average in 2019 of doctors per 10 000 people (working in both the public and the private sectors) is 13.2, the Center East region scored 16.8 (a 5% increase from the 2017 average), while the Center West had a score of only 6.2, the North West scored 7.6 (a 1% decrease from 2017), and the South East scored 8.6 (a 4%

11 The World Bank, "Physicians (per 1,000 people) - Tunisia", <https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=TN-XN>

12 Ministry of Health. "Carte Sanitaire 2019," June 2021. Page 89.

13 World Bank, "Specialist Surgical Workforce (per 100,000 Population) - Tunisia, World, Cuba." Data. Accessed February 16, 2021. <https://data.worldbank.org/indicator/SH.MED.SAORP5?locations=TN-1W-CU>

14 Ministry of Health. "Carte Sanitaire 2019," June 2021. Page 105.

decrease from 2017).¹⁵

In terms of governorates, the lowest score was recorded in Sidi Bouzid at 5.5, followed by 5.8 in Kasserine, and 7.0 in both Kairouan and Tatouine. Additionally, the biggest decreases in this ratio of doctors per 10 000 people, between 2017 and 2019, were observed in Bizerte -69% (dropping from 31.26 to 9.7) and in Kebili -32% (from 11.31 to 7.7). The lack of equitability in the distribution of human resources is even more pronounced in the density of specialists, as can be seen in Figure 5.

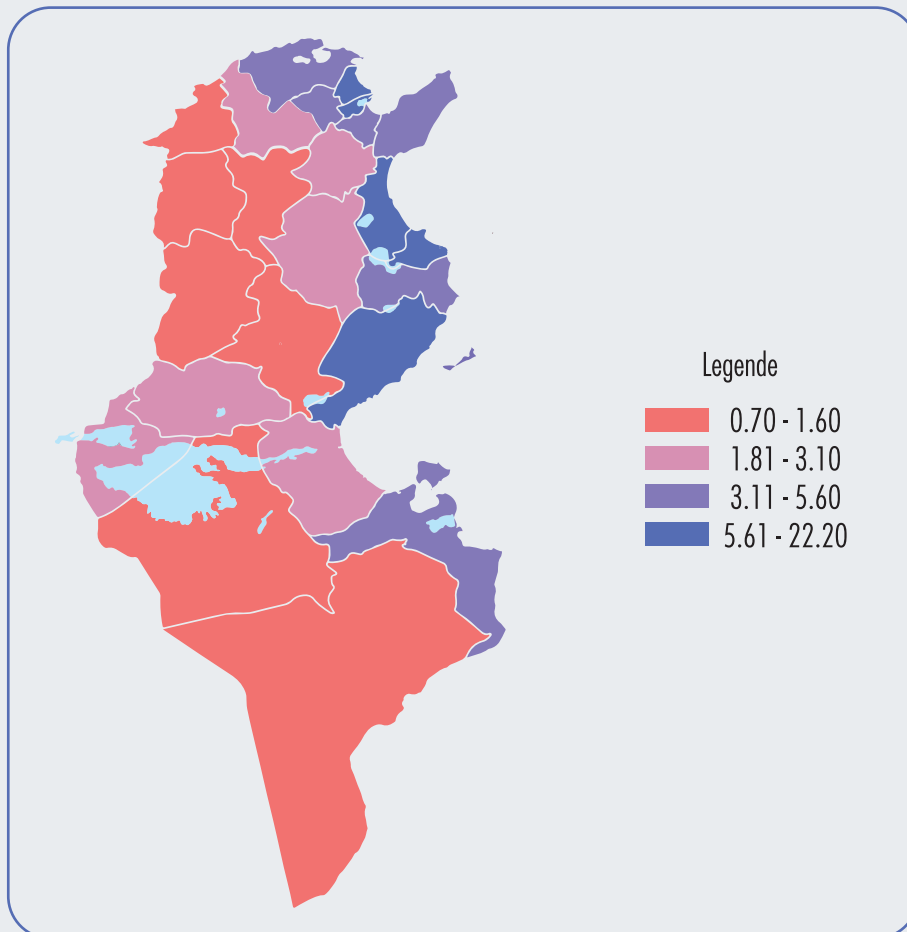


Figure 5: Specialist density per 10 000 people in 2019 (Source: Ministry of Health)¹⁶

The national average of specialist density per 10 000 people in 2019 was 6.63 (a 9.85% decrease from 2017). However, this ratio falls in the South West to 1.9, in the North West to 1.8, and in the Center West to 1.6. The lowest ratio is found at Siliana at 0.7 (a 54.35% decrease from 2017), followed by Tataouine at 0.9, and both Kebili and Kasserine at 1.1 per 10 000 people.¹⁷

In addition to being generally inequitable, the disparities vary across specialties. For instance, the national average ratio of gynecologists per 10 000 people is 2.91. That average falls to 0.71 and 0.72 in Tataouine and Siliana respectively. Governorates such as Siliana and Gafsa have no anesthetists, while Zaghouane, Mednine, and Kebili have no psychiatrists.¹⁸ This clearly shows how disadvantaged interior regions are, especially Western governorates.

These disparities not only lead to having to travel longer distances, and longer waiting periods to receive proper care, but in some cases, to complications, worse health outco-

¹⁵ Ibid.

¹⁶ Ibid. Page 107

¹⁷ Ibid

¹⁸ Ibid. Page 108.

mes and even death for the inhabitants of these areas.

For instance, in 2016 in Tataouine, the country's geographically largest governorate, there were only 11 medical specialists, a number that fell to 4 the following year (as opposed to 387 specialists in Sousse). In the last two years, the governorate has had no Obstetrics and gynecologist.

This is perhaps why, in an open survey on their priorities in terms of healthcare, the top concern for the residents of Tataouine was the issue of the shortage or complete lack of specialists in certain medical fields such as gynecology, medical imagery, cardiology, and ophthalmology.¹⁹

Nurses and midwives

In the last few years, the number of paramedical personnel has seen a slight decrease. Health technicians went from 128,337 in 2017 to 127,710 in 2019. During the same period, the number of nurses declined from 25,893 to 25,030.²⁰

This decline further worsens the shortage of nurses and midwives in Tunisia. In fact, the average of nurses and midwives per 1000 people in Tunisia falls well below the world average and below the WHO recommended ratio. For instance, this average in Cuba reached 7.561 in 2018, whereas the world average is estimated at 3.816 in that same year. In Tunisia, this ratio is calculated at 2.514 (2017)²¹, which is a drop from 2.65 and 2.64 in 2015 and 2016 respectively.²² The ratio is clearly weak, especially when compared with the recommended WHO ratio of 4/1000. This means that Tunisia suffers from a severe nurse and midwife shortage, that is continuously worsening.²³

In terms of national performance in this field, the metrics have been mostly constant. For instance, the number of maternal deaths has been witnessing an improvement from 96 in 2014 to 90 in 2017²⁴. On the other hand, the percentage of pregnant women receiving prenatal care has witnessed a slight deterioration from 98.1 in 2012 to 95.3 in 2018.²⁵ These national metrics, however, are not representative of the experiences of women in many regions in Tunisia. In Tataouine, the aforementioned lack of gynecologists and women's health personnel in general led to a decrease in hospital births, with more women opting for more traditional at-home birth. Additionally, this lack is linked to a higher maternal mortality rate in the governorate, with 80 deaths per 100 000 births in 2013, more than double the national average of 36 deaths per 100 000 births.²⁶

The lack and continuous decrease in human resources, coupled with the increasing demand for healthcare services puts strain on the medical professional, creates barriers to service users, and may lead to worsening health conditions for patients and in cases, even death.

This is further illustrated by the case of the overwhelmed staff at Aziza Othmana Hospital in Tunis (Figure 6).²⁷

19 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019, Page 24.

20 Ministry of Health. "Carte Sanitaire 2019," June 2021. Page 102.

21 World Bank, "Nurses and Midwives (per 1,000 People) - Tunisia, World, Cuba." Data. Accessed February 16, 2021. <https://data.worldbank.org/indicator/SH.MED.NUMW.P3?locations=TN-1W-CU>.

22 "Nursing and Midwifery Personnel Density (per 1000 Population)," World Health Organization (World Health Organization), accessed June 11, 2021, [https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-density-\(per-1000-population\)](https://www.who.int/data/gho/data/indicators/indicator-details/GHO/nursing-and-midwifery-personnel-density-(per-1000-population)).

23 Ibid

24 The World Bank, "Number of maternal deaths - Tunisia", <https://data.worldbank.org/indicator/SH.MMR.DTHS?locations=TN-XN>

25 The World Bank, "Pregnant Women receiving prenatal care (%)" - Tunisia", <https://data.worldbank.org/indicator/SH.STA.ANVC.ZS?locations=TN-XN>

26 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 37.

27 Court of Auditors. "The 31st Annual Report," December 2018. Pages 412-448.

Human resources at the Aziza Othmana Hospital:

This hospital is of national importance as it provides a number of diverse services to a significant number of patients. In 2016 alone, the hospital provided around 69000 outpatient clinic consultations, and its hematology unit serves around 60% of all hematology patients nation-wide. However, this hospital suffers from many issues. One of which is the increasing demand on its services. In fact, the number of patients in the hematology and OBGYN services went from 5947 in 2013 to 8307 in 2016. Additionally, the number of outpatient clinic visits in the OBGYN unit, between 2012 and 2016, increased from 2536 a year to 4971 annually. This increase was faced by a stagnation in the numbers of its human resources, which puts enormous pressure on staff and may lead to more medical mistakes.

Between the years 2012 and 2016, there was an increase of number of patients per:
University doctor in the hematology services from 179 to 245

University doctor in the OBGYN services from 508 to 1241

(inpatient) paramedical staff in the hematology services from 40.6 to 61.3

This is in part due to the fact that 12 doctors, including 4 university professors, left the hospital during that period, and have not been replaced.

It should also be noted that the national and international standards in paramedical staff to hospital bed ratio is 1.5. However, in the isolated units of the hematology services, this ratio was barely 0.4, which puts these vulnerable patients at great risk.

Additionally, in the OBGYN unit, there was only one anesthesiologist and one pediatrician. For the latter, this situation dates back to 2004. Furthermore, in this unit, night shifts between 2013 and 2016 were covered by only one resident doctor which affects overall care and prevents efficiency in emergency situations.

Moreover, despite the significant number of births that occur within this hospital, over 17000 between 2012 and 2016, newborn examinations were ensured by only one doctor since 2004. She ensured all night and afternoon shifts. This situation made it so there were no doctors to fulfill this task when this doctor was on leave or had tasks outside of the hospital. This has led this service being unavailable for 80 days between the July 2015 and June 2017.

The lack of human resources also led to referring 56% of newborns (1300 in numbers) to other hospitals and healthcare facilities for interventions. Due to their young age (80% below 34 weeks), having to transport them in ill-equipped emergency vehicles have led to worsening health conditions and lower chances of survival. A case in point is the death of a newborn in an ambulance in 2016.

Figure 6: Human Resources in the Aziza Othmana Hospital (Source: Court of Auditors) Figure Court of Auditors report on Aziza Othmana Hospital in Tunis²⁸

Lack of Infrastructure and Material Resources

In addition to a lack of human resources, the public healthcare system also suffers from a shortage of material resources such as hospital beds, heavy medical equipment, and other necessities such as personal protective equipment (PPE).²⁹

Since 2011, in the public sector:

- The number of basic healthcare groupings have remained the same at 28.

²⁸ Court of Auditors. "The 31st Annual Report," December 2018. Pages 412-448.

²⁹ Ministry of health, Carte sanitaire 2019, Avril 2021, page 23

- The number of basic health centers has increased by 4% from 2091 to 2176, with only 20% of them ensuring 6-days a week service.
 - The number of district hospitals has increased by less than 1% from 109 to 110.
 - The number of regional hospitals has decreased by 6% from 33 to 31.
 - The number of university hospitals and specialty centers has stagnated at 32.
- Meanwhile, in the private sector facilities have increased at a rate of more than 23% going from 2406 to 2976. (Figure 7).

Sector	Level	Establishment	2011	2012	2013	2014	2015	2016	2017	2018	2019
Public sector	1st line	Basic health grouping	28	28	28	28	28	28	28	28	28
		Basic health centers	2091	2098	2104	2109	2123	2135	2157	2161	2176
		Constituency Hospitals	109	109	108	108	108	108	108	110	110
	2nd line	Regional hospitals	33	33	35	35	35	35	35	31	31
	3rd line	University Hospitals and specialized centers	32	32	32	32	32	32	32	32	32
	Total		2293	2300	2307	2312	2326	2338	2360	2362	2377
Private sector		Medical practice	1902	1935	1972	1975	2006	2038	2050	2127	2172
		Medical lab	324	358	392	415	453	486	511	544	581
		Hemodialysis centers	99	99	99	106	111	115	115	116	117
		Private clinics	81	81	82	88	91	90	98	102	106
		Medical imaging centers	-	-	-	-	-	-	-	312	-
	Total		2406	2473	2545	2584	2661	2729	2774	3201	2976

Figure 7: Evolution of health structures in 2019 (Source: The Ministry of Health)³⁰

Since the public health sector was growing at a rate below that of the population, the rate of inhabitants per public health service has grown over the years. For instance, the number of people per basic health center has increased by 6% between 2010 and 2019 reaching 5358. That number increases when taking into account only centers that work full-time, reaching 12555.

In contrast to the dwindling access to health for Tunisians that can only access the public sector, private healthcare services have only become more available in recent years. When looking at the private health sector, the ratio of inhabitants per private sector facility has steadily decreased. The number of inhabitants per day private practices went from 6593 to 6466, (-2%). For night and emergency private practices, this ratio, in the same period, went from 37409 to 31594 (-15%). As affordability is a critical factor for citizens' ability to enjoy their right to health services, the decline of the number of doctors in the public sector and its rise in the private one presents a critical challenge for many disadvantaged Tunisian families. Though it should be noted that access to the private sector is severely regionally inequitable as 90% of private clinics are in coastal regions.³¹ It should also be noted that the presence of public healthcare facilities does not automatically translate to services. In Tataouine, in 2018 for instance, there were 65 basic health centers. Over half of which (36 centers) only offer clinic hours once a week (32 centers) or twice (3 centers), with one office offering clinic hours only once a month.³²

³⁰ Ibid

³¹ Court of Auditors, the 32nd Annual Report, 2020. Page 212.

³² International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 27

Additionally, the presence of basic health centers, even when working full-time, does not imply the availability of all services. For certain specialties, service-users need to head to regional hospitals or university hospitals. However, access to these facilities is deeply regionally inequitable. As seen in Figure 8, the average distance to a university hospital is 2 KM in Tunis and 37 in Sfax and 84 in Nabeul. However, that distance reaches 333 KM in Touzeur. This is not only highly inconvenient. But it also increases the risk of patients crashing or dying on their way to receiving proper care.

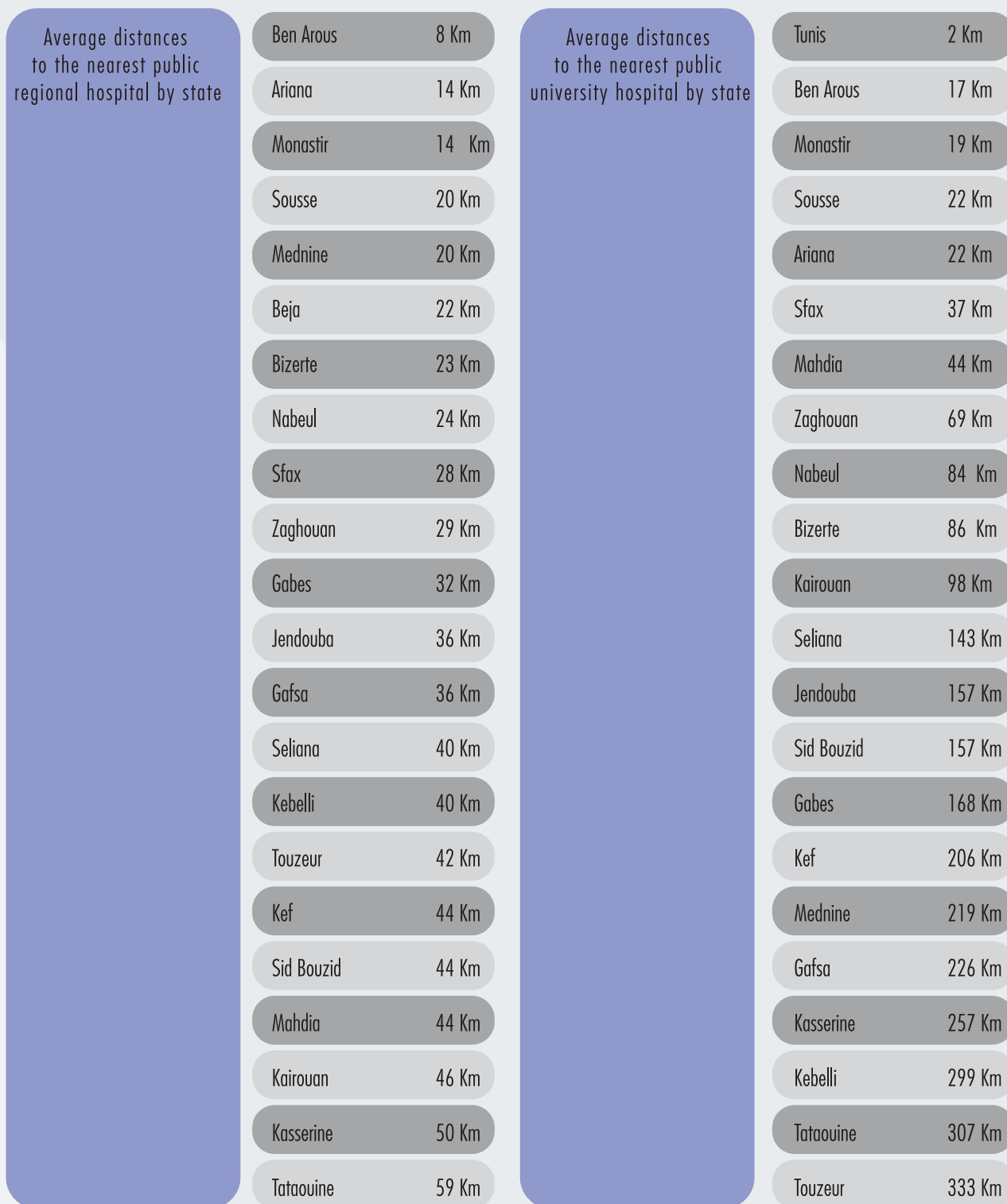


Figure 8: The average distance to public health facilities (Source: International Alert)³³

33 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 40

The shortage in the necessary infrastructure and equipment is also evident through inadequate hospital capacity and the lack of beds available.

The number of hospital capacity in the country has seen a 6% increase between 2017 and 2019, going from the 26,795 to 28,320 beds, though it should be noted that the rate of growth greatly differs between the public sector (3%) and the private sector (17%). But despite this growth, the bed capacity in Tunisian hospitals is not enough.

The number of hospital beds per 1000 people in Tunisia in 2017 was 2.18 (it drops to 1.84 when only accounting for the public sector)³⁴, below the world average of 2.9, as well as below other countries such as Malta (4.49), Tajikistan (4.67), and Cuba (5.33). (Figure 9)

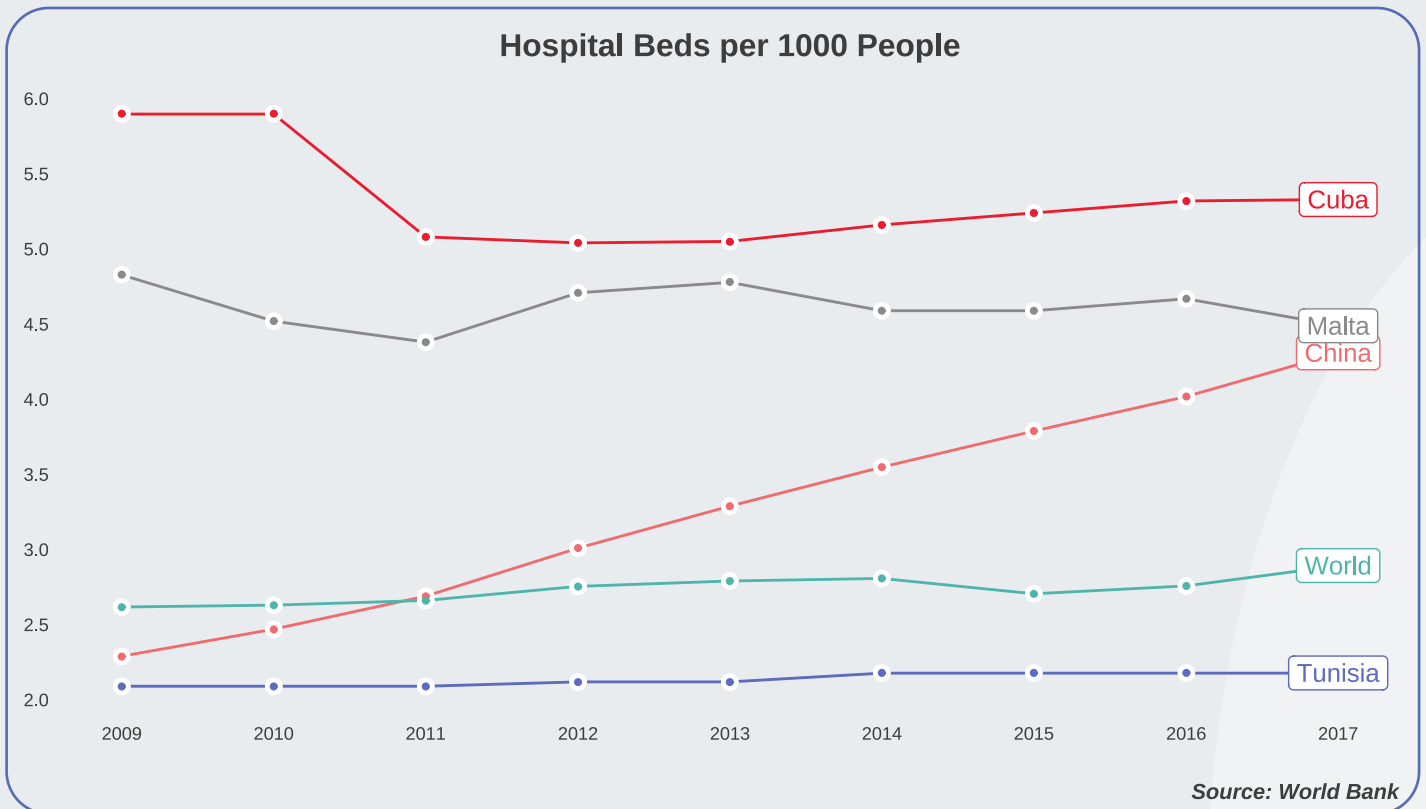


Figure 9.1: Hospital Beds per 1000 People (Source: World Bank)³⁵

As with human resources, the few beds that do exist are inequitably distributed among regions. The national bed per 1000 people in 2019 was 2.43, with the highest density being in Tunis with 6.21, and the lowest being in Sidi Bouzid with 1.06. A shocking disparity to say the least.

34 Ministry of Health. "Carte Sanitaire 2019," June 2021, Page 73.

35 World Bank, "Hospital Beds (per 1,000 People) - Tunisia, World, China, Malta, Cuba" Data, accessed April 14, 2021, <https://data.worldbank.org/indicator/SH.MED.BEDS.ZS?locations=TN-1W-CN-CU-CH&start=2000>.

Gouvernorat	Medical speciality			Surgical Speciality			pediatrics and neonatology			Anesthesia-Resuscitation			Obstetrics and gynaecology			Psychiatry		
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019
Tunis	1603	1666	1672	1303	1306	1346	411	421	421	115	115	115	527	550	550	-	-	-
Ariana	325	325	325	63	63	68	28	28	28	45	45	45	35	35	35	-	-	-
Ben Arous	87	87	91	122	122	148	42	42	42	38	38	48	60	60	60	4	4	4
Mannouba	191	191	191	150	150	150	10	10	10	29	29	29	-	-	-	580	580	580
Grand	2206	2269	2279	1638	1641	1712	491	501	501	227	227	237	622	645	645	584	584	584
Nabeul	444	444	444	226	226	226	90	90	90	20	20	20	140	140	140	22	22	22
Zaghouan	107	107	107	41	41	41	20	20	20	-	-	12	25	25	25	-	-	-
Bizerte	445	445	445	231	231	221	122	122	122	14	14	24	105	105	105	-	-	-
Nord-Est	996	996	996	498	498	488	232	232	232	34	34	56	270	270	270	22	22	22
Béja	268	274	294	145	157	157	50	50	50	10	13	13	81	86	86	-	-	-
Jendouba	354	354	357	149	149	143	92	92	92	6	6	12	56	56	56	24	24	24
Le Kef	340	340	340	115	115	115	40	40	40	8	8	8	60	60	60	15	15	15
Siliana	199	199	199	62	62	48	22	22	22	-	-	-	32	32	32	-	-	-
Nord-	1161	1167	1190	471	483	463	204	204	204	24	27	33	229	234	234	39	39	39
Sousse	638	661	667	423	423	437	145	145	145	58	58	58	140	140	140	30	30	30
Monastir	453	453	453	379	379	379	126	126	126	34	34	34	119	119	119	32	32	32
Mahdia	210	224	224	156	172	172	79	79	79	25	25	25	79	79	79	25	25	25
Sfax	719	731	767	419	434	392	126	132	132	85	85	85	155	155	155	165	165	165
Centre-Est	2020	2069	2111	1377	1408	1380	476	482	482	202	202	202	493	493	493	252	252	252
Kairouan	312	312	312	144	144	144	60	60	60	29	29	25	60	60	60	40	40	40
Kasserine	332	332	332	118	118	118	50	50	50	10	10	10	60	60	60	10	10	10
Sidi Bouzid	190	190	190	108	108	108	40	40	40	6	6	6	55	55	55	-	-	-
Centre-	834	834	834	370	370	370	150	150	150	45	45	41	175	175	175	50	50	50
Gabes	275	310	346	150	150	150	55	55	55	30	30	30	85	85	85	30	30	30
Medénine	296	296	296	245	245	245	94	94	94	30	30	30	108	108	108	6	6	6
Tataouine	105	115	115	62	62	62	32	32	32	10	10	10	30	30	30	-	-	-
Sud-Est	676	721	757	457	457	457	181	181	181	70	70	70	223	223	223	36	36	36
Gafsa	323	323	323	288	288	288	55	55	55	10	10	10	60	60	60	-	-	-
Tozeur	142	142	142	110	110	110	30	30	30	10	10	10	40	40	40	-	-	-
Kébili	140	140	140	100	100	100	30	30	30	8	8	8	32	32	32	-	-	-
Sud-Ouest	605	605	605	498	498	498	115	115	115	28	28	28	132	132	132	0	0	0
Tunisie entière	8498	8661	8772	5309	5355	5368	1849	1865	1865	630	633	667	2144	2172	2172	983	983	983

Figure 9.2: Public hospital beds by governorate and region 2017-2019 (Source: Ministry of Health)

Figure 9.2: Public hospital beds by governorate and region 2017-2019 (Source: Ministry of Health)³⁶

For instance, the Center East has over 200 hospital beds for anesthesia-intensive care (which is necessary for COVID patients), whereas the South West only has 28. Governorates like Zaghouane had none until 2019, whereas Siliana still has 0 beds. Figure 9.2 shows this disparity in detail.

Aside from an absence of services, the small number of beds also leads to overcrowding in hospitals, which, in turn, negatively impacts patients. These cases are perhaps best illustrated in the Court of Auditors' report on Aziza Othmana:

- The World Health Organization recommends that capacity should not reach beyond 40% to 80%, in the Aziza Othmana hospital, despite the number of beds exceeding the number authorized by the Ministry of Health by up to 11%, the capacity of the hospital sometimes exceeded 100% requiring patients to share beds. Between February and March 2013, the overcrowding of the hospital led to the worsening health conditions of at least 4 patients with a C-section, one of which had to be resuscitated.
- Because of limited bed capacity, patients seeking chemotherapy needed to delay their treatment by up to 11 days which severely impacts their chances of recovery.
- Overcrowding also leads to the spread of infections and diseases, including in the hematology department. This, in turn, contributed to the death of 46 and 59 of patients in 2012 and 2013 respectively.³⁷

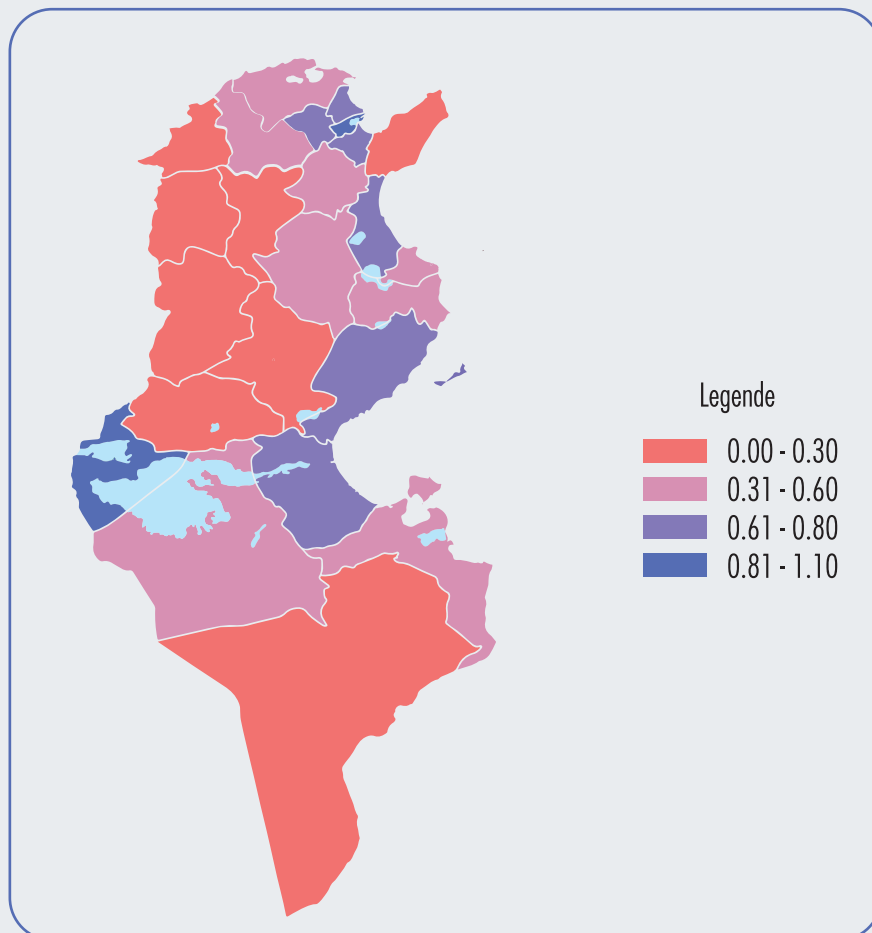


Figure 11: The Ratio of ICU Beds in the Public Sectors per 10 000 people in 2019 (source: Ministry of Health)³⁸

36 Ministry of Health. "Carte Sanitaire 2019," June 2021, Page 60.

37 Court of Auditors. "The 31st Annual Report," December 2018. Pages 419-420.

38 Ministry of Health. "Carte Sanitaire 2019," June 2021, Page 76.

This shortage of beds is also present in other necessary equipment, including heavy equipment such as scanners and MRI machines, as well as personal protective equipment (PPE).

As can be seen by Figure 12, the heavy medical equipment (MRI and Scanners) in the private sector is a lot more prevalent than in the public sector; the number of heavy equipment is estimated at 340 in the private sector as of February 2020, 3 times the amount of equipment in the public sector.³⁹ For instance, there are only 47 scanners in the public sector in 2019 (down from 51 in 2017) versus 140 in the private sector. Likewise, there are 13 MRI machines in the public sector, versus 50 in the private sector (down from 55 in 2017).

Heavy Equipment	Public Sector			Private Sector			Total		
	2017	2018	2019	2017	2018	2019	2017	2018	2019
Scanners	51	50	47	131	135	140	182	185	187
IRM	10	12	13	55	53	50	65	65	63

Figure 12: Imagery heavy equipment, 2019 (Source: Ministry of Health)⁴⁰

Even when looking at the total number of equipment in both the private and the public sectors, these national numbers are still low. In terms of MRI units per 1 000 000 inhabitants, Tunisia has a ratio of around 5.25. As illustrated by Figure 13, this is well below other countries such as Turkey (11.2 in 2018), Lithuania (14 in 2019), Greece (31.9 in 2019), and Finland (28.8 in 2019).

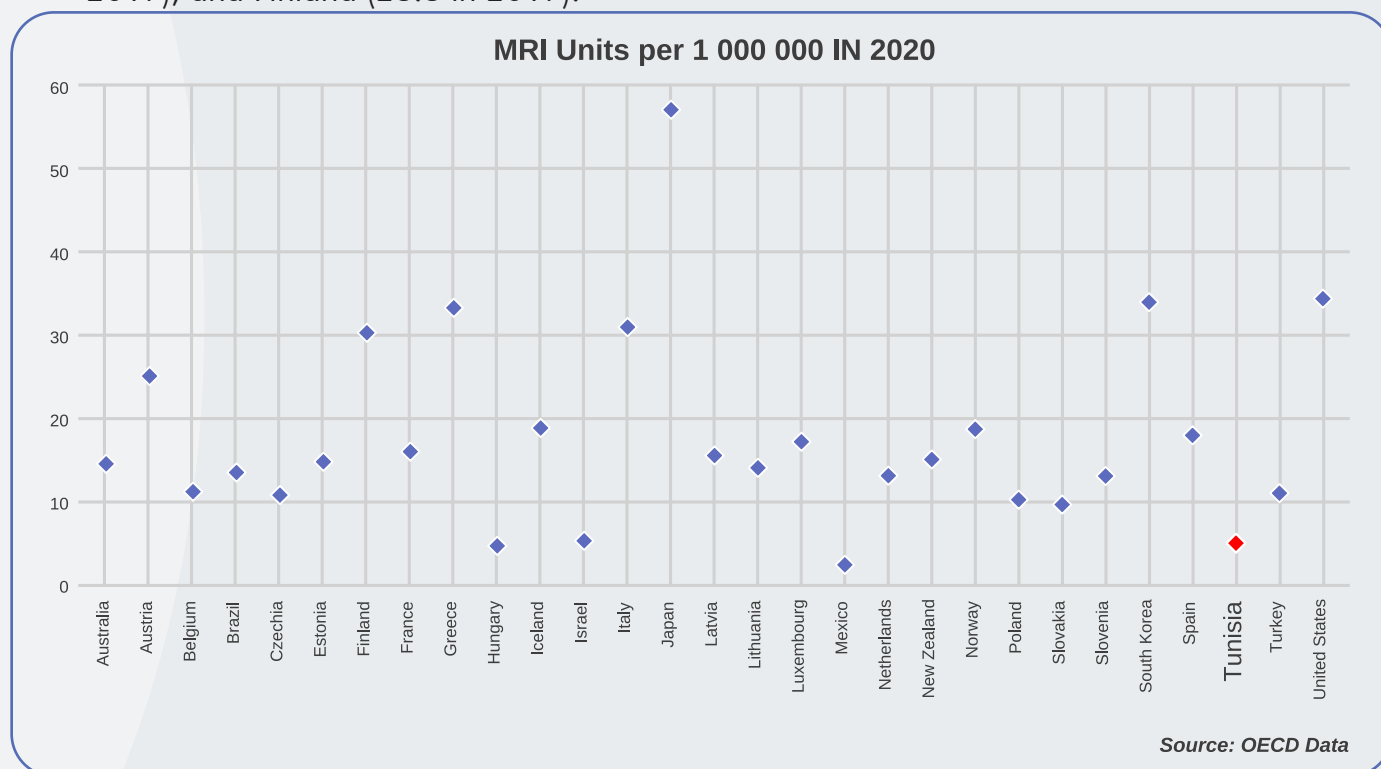


Figure 13: MRI Units per 1 000 000 inhabitants (Source: OECD Data)⁴¹

39 Court of Auditors, the 32nd Annual Report, 2020. Page 210.

40 Ministry of Health. "Carte Sanitaire 2019," June 2021, Page 62.

41 OECD (2021), Mammography machines (indicator). doi: 10.1787/685c9c5e-en (Accessed on 15 June 2021)

The same is applicable to mammography units. The ratio of units per 1 000 000 inhabitants in Tunisia is a little less than 2.33. Again, this number falls short when compared to other countries such as Estonia (10.6 in 2019), Belgium (36.6 in 2017), and Greece (66.8 in 2019) (Figure 14).

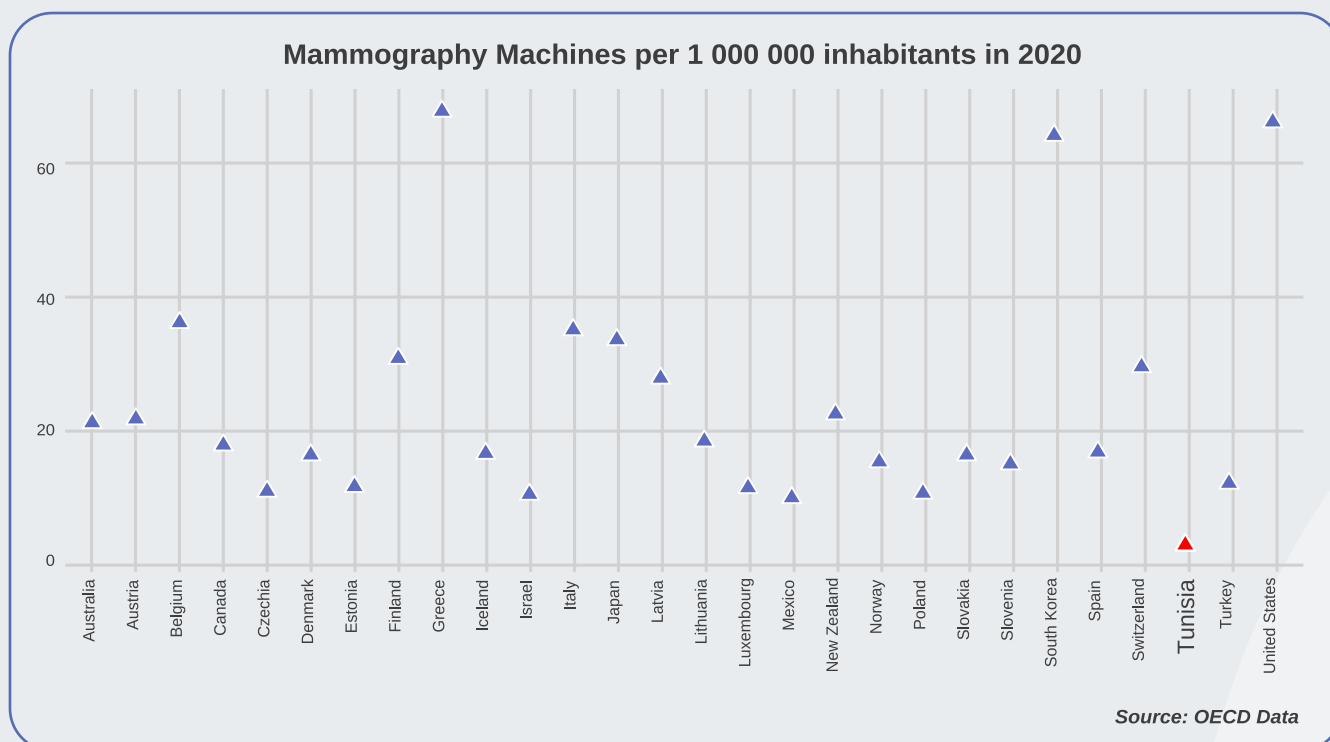


Figure 14: Mammography Machines per 1 000 000 inhabitants (Source: OECD Data)⁴²

As with other aspects of healthcare, this shortage is made worse by the severe regional disparities, such as the South West having no MRI machines in the public sector, and only one unit in the private sector. This disparity is also felt in machines required for women’s health as several governorates, mostly in interior regions, have 0 mammography units. These include Mannouba, Zaghouane, Béja, Siliana, Tataouine, and Kébili. (Figure 15).

⁴² OECD (2021), Mammography machines (indicator). doi: 10.1787/685c9c5e-en (Accessed on 15 June 2021)

Gouvernorat	IRM			Scanner			Salles d'Angiographie Vasculaire Polyvalente			Mammographes					
	Secteur Public	Secteur Privé	Total	Secteur Public	Secteur Privé	Total	Secteur Public	Secteur Privé	Total	Secteur Public	Secteur Privé	Total			
	2017	2018	2019	2017	2018	2019	2017	2018	2019	2017	2018	2019			
Tunis	3	3	3	11	9	8	28	26	26	2	2	2	5	6	6
Ariana	1	1	1	4	4	4	6	8	8	0	0	0	0	1	1
Mannouba	0	0	0	1	1	0	2	2	2	0	0	0	0	0	0
Ben Arous	1	1	1	2	2	2	7	8	8	0	0	0	1	1	1
Grand Tunis	5	5	5	18	16	14	43	44	44	2	2	2	6	8	8
Bizerte	0	0	0	2	2	2	5	5	5	0	0	0	1	1	1
Nabeul	0	0	0	1	1	12	11	11	0	0	0	0	1	1	1
Zaghwan	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0
Nord-Est	0	0	0	4	4	3	18	17	17	0	0	0	1	2	2
Béja	0	0	0	1	1	0	3	3	3	0	0	0	0	0	0
Jendouba	0	1	2	1	1	2	1	2	2	0	0	0	1	1	2
Le Kef	0	0	0	1	1	1	2	2	2	0	0	0	1	1	1
Siliana	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Nord-Ouest	0	1	2	4	4	4	7	8	8	0	0	0	2	2	3
Sousse	1	1	1	3	3	3	10	10	9	1	1	1	1	2	2
Monastir	1	1	1	2	3	3	8	8	9	1	1	1	1	2	2
Mahdia	0	0	0	1	1	1	4	5	5	0	0	0	1	1	1
Centre-Est	2	2	2	6	7	7	22	23	23	2	2	2	3	5	5
Kairouan	0	1	1	2	2	2	5	5	5	0	0	0	1	1	1
Kasserine	0	0	0	1	1	2	2	2	2	0	0	0	1	1	1
Sidi Bouzid	0	0	0	1	1	1	4	3	4	0	0	0	1	1	1
Centre-Ouest	0	1	1	4	4	5	11	10	11	0	0	0	3	3	3
Gabes	1	1	1	1	1	1	2	3	4	0	0	0	1	1	1
Médenine	1	0	0	4	4	4	9	8	10	0	0	0	1	2	2
Tataouine	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
Sfax	1	2	2	5	5	5	16	18	18	1	1	1	2	2	2
Sud-Est	3	3	3	11	11	10	27	29	32	1	1	1	4	5	5
Gafsa	0	0	0	2	2	2	2	3	3	0	0	0	1	1	1
Tozeur	0	0	0	1	1	1	0	0	1	0	0	0	0	1	1
Kébili	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0
Sud-Ouest	0	0	0	4	4	4	3	4	5	0	0	0	1	2	2
Tunisie entière	10	12	13	51	50	47	131	135	140	5	5	5	20	27	28

Figure 15: Regional Distribution of Imagery Heavy Equipment, 2019 (Source: Ministry of Health)

Figure 15: Regional Distribution of Imagery Heavy Equipment, 2019 (Source: Ministry of Health)⁴³
 This shortage not only affects heavy equipment, but also other necessary equipment such as PPE, which is essential especially during the COVID-19 crisis. In a survey by the group Tawhida Ben Cheikh, midwives were asked whether their health establishments received sufficient quantities in PPE (Figure 16). Only 22.4% agreed that they received enough gowns. 37.3% say they received enough masks, 42.9% enough gloves, and 36.6% enough hydroalcoholic gel.

The highest levels of satisfaction are in ONFP⁴⁴ centers, whereas the lowest are in basic healthcare centers, the forefront public healthcare structure to respond to community health issues in Tunisia, especially in rural and disadvantaged urban communities.

Type of center	PPP				N (Count)
	Gowns	Masks	Gloves	H-A Gel	
Hospital (regional or constituency)	17.6%	25.5%	49%	29.4%	51
Basic healthcare center and PMI	17.2%	27.6%	27.6%	24.1%	58
National Office for Family and Population	40%	72%	64%	60%	25
Other	25.9%	48.1%	44.4%	55.6%	27
Total	22.4%	37.3%	42.9%	36.6%	161

Midwives have checked more than one case, which explains the total for each type of PPP surpassing 100%

Figure 16: Percent of Midwives who Believe their Workplace Received Enough PPP (Source: Belhaj et. al., 2021)⁴⁵

Problems can also be found in the availability of medication.

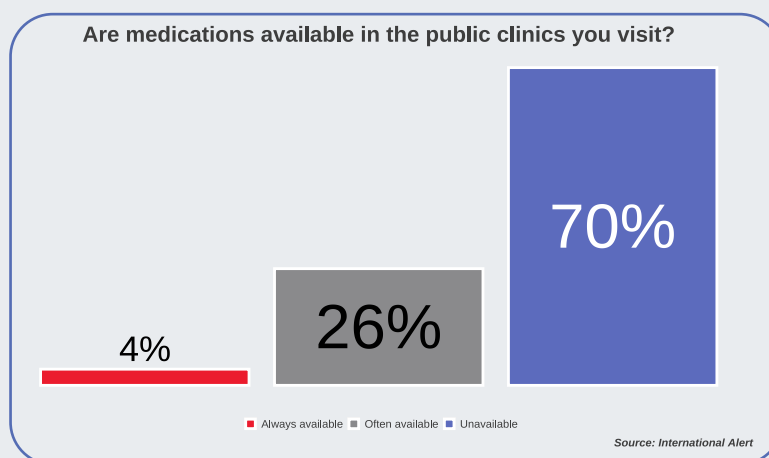


Figure 17: Survey on the Availability of Medication in the Public Health Sector in Tataouine⁴⁶

Though there are no national statistics on the availability of medication, anecdotal and regional evidence seems to point to a chronic absence of medication. In a survey conducted by International Alert in Tataouine (Figure 17), 70% of healthcare patients report that the medications they seek are absent in the healthcare facilities they frequent.⁴⁷

43 Ministry of Health. "Carte Sanitaire 2019," June 2021, Page 63.

44 ONFP= Office national de la Famille et de la population= National office of family and population.

45 H. Belhadj, H. Chekir, S. Hajri, M. Mahfoudhi. "Qualité de la préparation en vue de la deuxième vague de la covid-19 et continuité des services de santé sexuelle et de la reproduction. Résultats de l'enquête en ligne parmi les sages-femmes", Tawhida Ben Cheikh group, JGOMF, V1,14,2021. (2021) Page 42

46 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 56

47 It should be noted that this statistic is the most negative point noted by the study and survey conducted by International Alert.

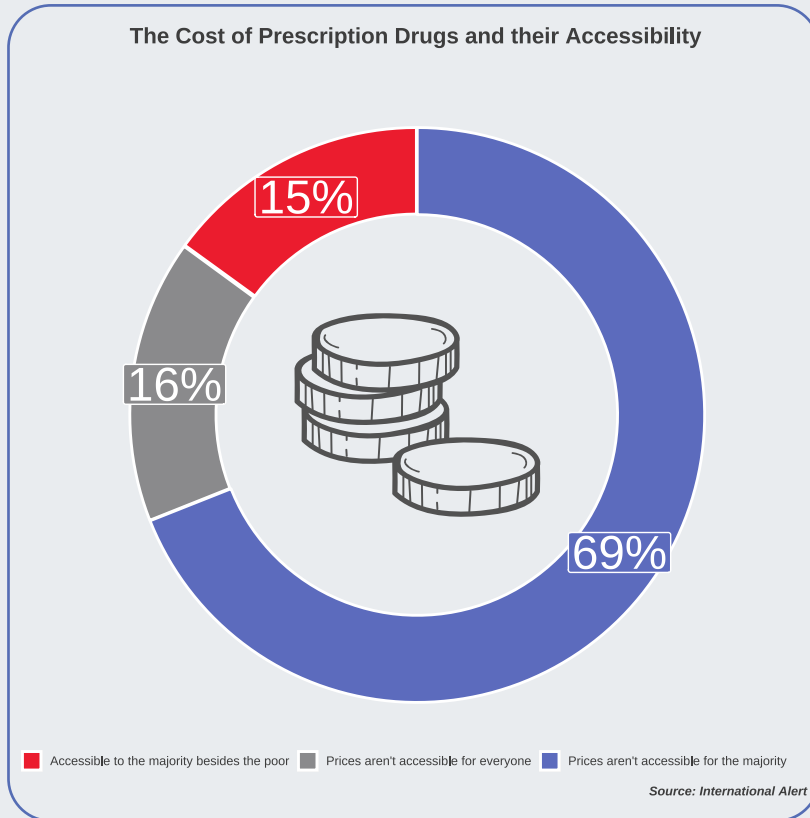


Figure 18: Survey on the Perception of the Prices of Medication in Tataouine (Source: InternationalAlert)48

However, even when available, the cost of medication is seen by most people in the governorate as beyond their purchasing powers. In fact, 69% of respondents say that the prices of medication are unsuitable for most people (Figure 18)49. Despite the existence of health insurance coverage and medical assistance programs for vulnerable populations, household out-of-pocket payments on health care remain high at 38.89%.50 The crisis of the shortage of drugs, perhaps, had reached its pinnacle in 2018 when contraception and the morning-after pill went suddenly out of stock in Tunisia.51 However, the crisis is still ongoing in all regions of the country to different degrees, fueled by problems such as the financial issues of the Central Pharmacy.52 As has been demonstrated here, the healthcare sector in Tunisia suffers from many problems, chief among which is the lack and unequal distribution of human, material resources and infrastructure. But the question remains, what are the causes of such failures? Are the resources being mobilized adequate to meet the scale of the crisis?

48 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 57

49 International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 57
50 World Health Organization, Tunisia: Health System Profile, 2018. https://applications.emro.who.int/docs/Country_profile_2013_EN_15402.pdf

51 Lakhil, Malek. "Pénurie de Médicaments En Tunisie: Aux Origines d'une Maladie sans Docteurs." Nawaat, August 3, 2018. <https://nawaat.org/2018/08/03/penurie-de-medicaments-en-tunisie-aux-origines-dune-maladie-sans-docteurs/>

52 Conseil National de l'Ordre des Pharmaciens de Tunisie (CNOPT), "Rapport Moral et Rapport financier: Exercice 2018-2019", 2020, Page 35.

02

Causes for the Failures of the Healthcare System

Many causes are at the root of the failure of the Tunisian healthcare system to provide the meet the needs of patients in general and in particular during the COVID-19 pandemic. Perhaps chief among them is the chronic and systematic diminishing of financing that the sector suffers from. However, it is also compounded by a multitude of other factors including a lack of prevention services, rampant inequalities on the socio-economic and gender aspect, pollution, etc.

This section will attempt to tackle some of these issues, their manifestations, and how they have led to the failures that we have examined in the first section.

Lack of Financing

Healthcare expenditure is a strong indicator of a country's overall health status and is used in the Human Development Index, and the Social Progress Index, under the health component.

But, while overall health expenditure is important, public healthcare expenditure is particularly so in terms of improving key system indicators.⁵³ In fact, “[e]mpirical findings confirm the important effects of public health expenditure on public health outcomes. These results suggest that countries interested in measures to decrease infant mortality and increase life expectancy should consider expanding public health expenditures as an effective mechanism to reach these goals.”⁵⁴ Additionally, the impact of public expenditure is significantly higher than private expenditure, as the latter has a lower impact on longevity. In fact, research is suggesting that “this might explain the poor evolution of life expectancy in countries with a high amount of private resources devoted to health. In such cases, an extension of public services could give rise to a better outcome from the overall health investment.”⁵⁵ However, this type of expenditure is very low in Tunisia, as the country is not investing in its healthcare sector. As the graph below shows in 2018, the part of public expenditure as % of overall health expenditure is 57.37% as opposed to the 59.54% world average. This number also puts it well below other countries such as Romania (80.13%), Croatia (81.5%), Norway (85.32%), and Cuba (88.9%). Most significantly, a lower percentage means that citizens have to cover more out of their own income.

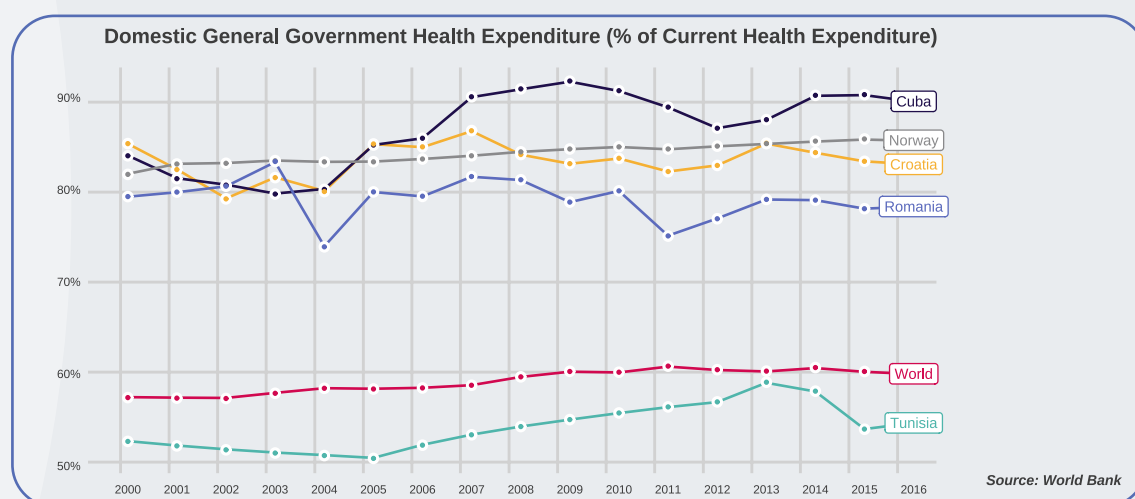


Figure 19: Domestic General Government Health Expenditure as % of Current Health Expenditure⁵⁶

53 Aísa, Rosa, Jesús Clemente, and Fernando Pueyo. “The Influence of (Public) Health Expenditure on Longevity.” *International Journal of Public Health* 59 (June 7, 2014). Page 865.

54 Kim, Tae Kuen, and Shannon R. Lane. «Government health expenditure and public health outcomes: A comparative study among 17 countries and implications for US health care reform.» *American International Journal of Contemporary Research* 3, no. 9 (2013): Page 11.

55 Aísa, Rosa, Jesús Clemente, and Fernando Pueyo. “The Influence of (Public) Health Expenditure on Longevity.” *International Journal of Public Health* 59 (June 7, 2014). Page 865.

56 World Bank, “Domestic General Government Health Expenditure (% of Current Health Expenditure)”, <https://data.worldbank.org/indicator/SH.XPD.GHED.CH.ZS?>

Public health expenditure is also weak when compared to GDP, registering only at 4.18% in 2016, whereas the world average was at 5.87%. It is also below the spending of other countries that are considered leading in the healthcare sectors (Figure 20).

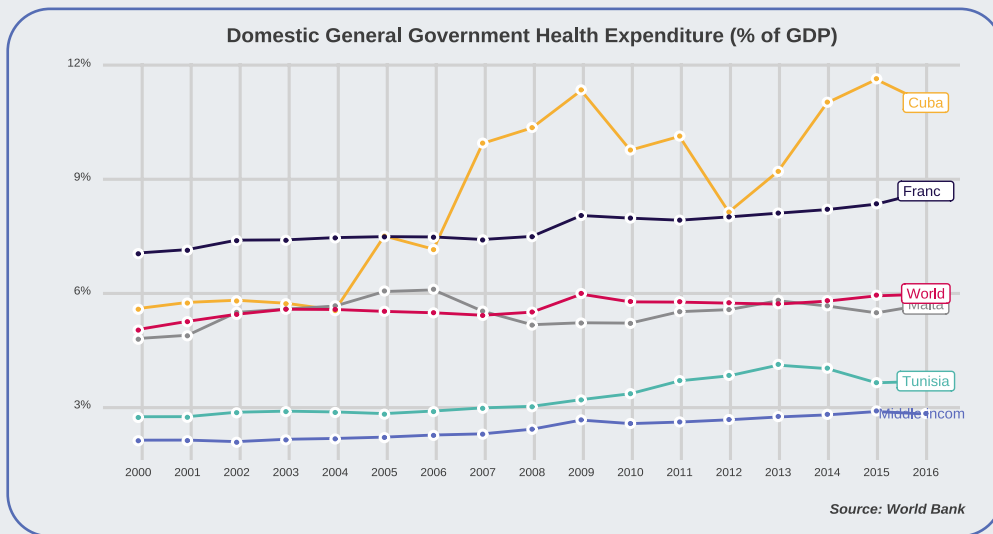


Figure 20: Domestic General Government Expenditure as % of GDP (Source: World Bank) ⁵⁷

Moreover, public health expenditure is also considered weak compared to the overall national budget. It should be noted that Tunisia has signed the Abuja Agreement in 2001, pledging to allocate 15% of its overall budget to healthcare.⁵⁸ In 2022, this number was just 6.89%, a decrease from 2021's 7.22%, despite the pandemic still being in progress.⁵⁹ This figure is even smaller when we consider that in Finance Law 2022, 78% of public healthcare expenditure is dedicated to wages while investment represents only 13% of the budget.⁶⁰

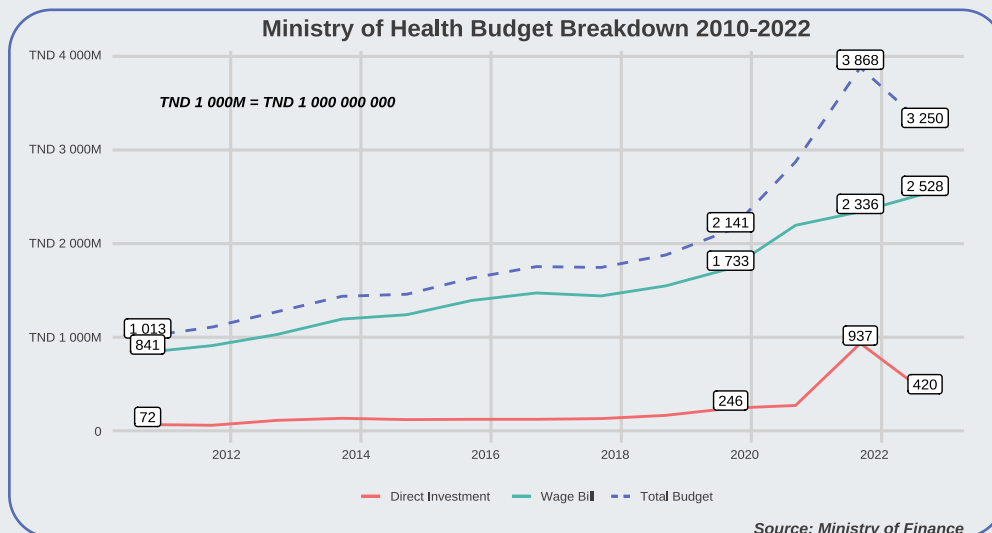


Figure 20B: Direct investment spending on health as a percentage of General Government Health Expenditure (Source: Ministry of Finance)

⁵⁷ World Bank, "Domestic General Government Health Expenditure (% of GDP)", <https://data.worldbank.org/indicator/SH.XPD.GHED.GD.ZS?end=2016&locations=TN-1W-NO-CU-NZ&start=2000>.

⁵⁸ United Nations. "Financement public de la santé en Afrique : 15 % d'un éléphant n'est pas 15 % d'un poulet." AfriqueRenouveau, October 31, 2020. <https://www.un.org/africarenewal/fr/magazine/octobre-2020/financement-public-de-la-sant%C3%A9-en-afrique-15-dun-%C3%A9l%C3%A9phant-nest-pas-15-dun>.

⁵⁹ Finance Law 2022. <https://budget.marsad.tn/ar/opendata/download/819>

⁶⁰ Ibid.

Even when taking into account per capita spending, the country is well below the world average (Figure 21). In 2018, the domestic general government health expenditure per capita in current US\$ in Tunisia was 144.3\$. The global average for the same year was 661.56\$, as in four times that of Tunisia. This average has been falling since 2013, where it was over 170\$. (Figure 22).

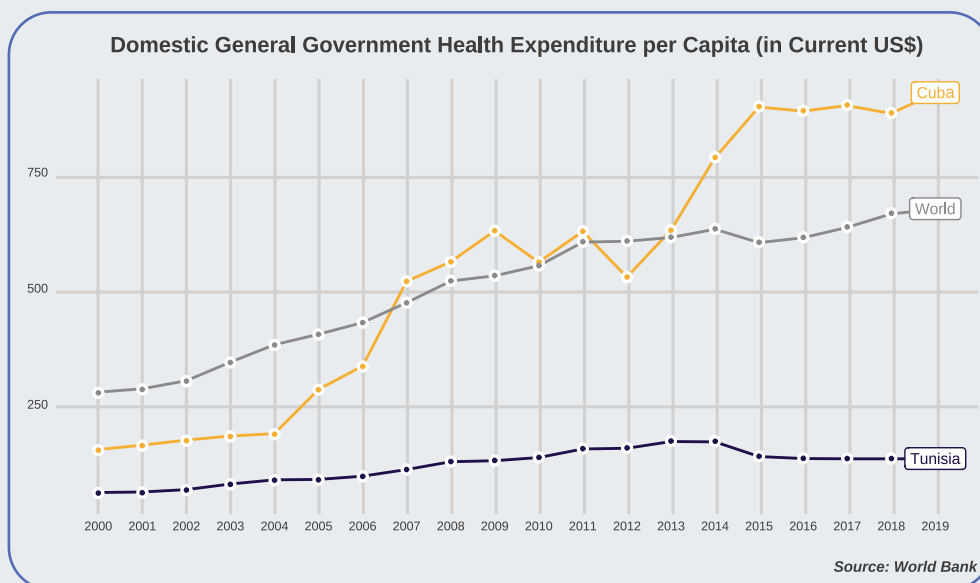


Figure 21: Domestic General Government Health Expenditure per Capita in Current US\$ (Source: World Bank)⁶¹

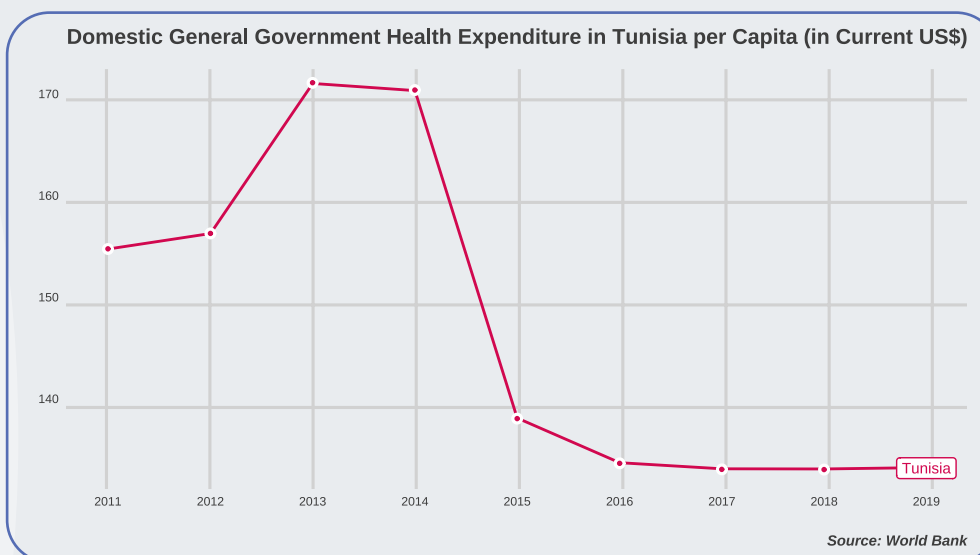


Figure 22: Domestic General Government Health Expenditure per Capita in Tunisia in Current US\$ (Source: World Bank)⁶²

This indicates that the Tunisian government is not investing in healthcare as it should be. The lack of financing has many dangerous repercussions including a shortage of health-care professionals, and the lack of appropriate infrastructure and medical equipment, as explored above.

If the government does not cover the cost of treatment, it is up to service-users to bear the cost. This translates to higher out-of-pocket expenditure. (Out-of-pocket payments are

⁶¹ World Bank, "Domestic General Government Health Expenditure (% of GDP) - World, Tunisia, Cuba", <https://data.worldbank.org/indicator/SH.XPD.GHED.PC.CD?locations=1W-TN-CU>.

⁶² World Bank, "Domestic General Government Health Expenditure per Capita (Current US\$) - Tunisia", <https://data.worldbank.org/indicator/SH.XPD.GHED.PC.CD?end=2019&locations=TN&start=2011>.

spent on health directly out-of-pocket by households)

As can be seen by Figure 23 in 2018, Tunisia's out-of-pocket expenditure as percentage of current health expenditure stood at 38.89%, more than double the world average of 18.12%.

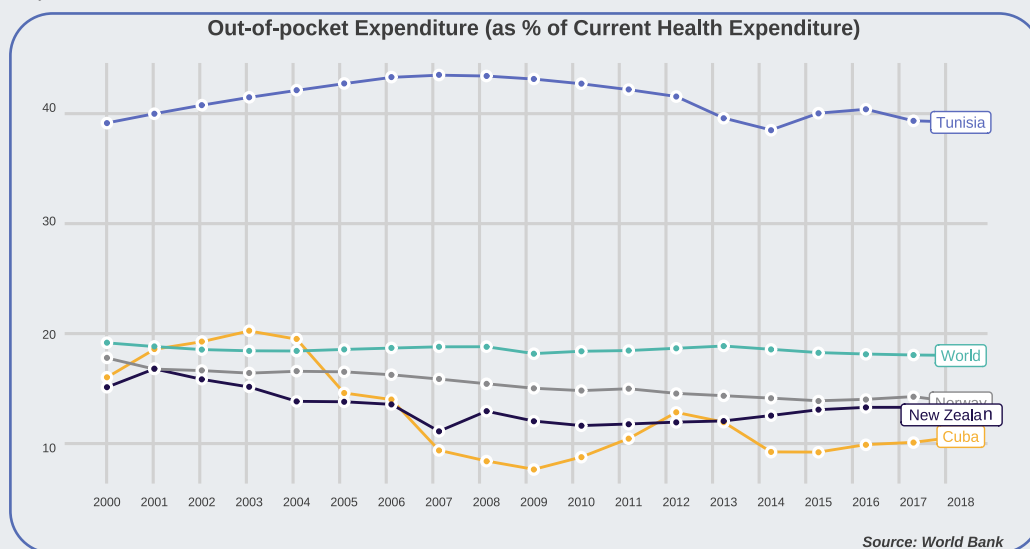


Figure 23: Out-of-pocket Expenditure as % of Current Health Expenditure (Source: World Bank)⁶³

All these indicators clearly show that the Tunisian government is not investing enough in healthcare. This lack of financing has negative repercussions on the human and material resources of the sector, which, in turn, severely affects the quality of services and the satisfaction of service-users, as well as affects their financial situation by putting a high cost on these services. The government needs to allocate more financial resources to this vital and strategic sector, especially in this time of crisis.

The justification usually given is that the government does not currently have resources to spare, as the debt to GDP ratio is high, and the budget deficit is steadily increasing.⁶⁴ The economic crisis is, however, further compounded by the sanitary situation. The manifestations of the worsening of the economic crisis are clear, as Tunisia has registered a negative growth rate (-3% in the first trimester of 2021)⁶⁵, and a high unemployment rate (17.8% in the first trimester of 2021)⁶⁶. The situation is made more difficult by the pressures exerted by different actors, including international financial institutions, to contain the wage bill and reduce spending in the public sector. However, solutions are available, especially in terms of domestic resource mobilization and tax revenues.

As exposed in previous papers⁶⁷, through more progressive tax rates, more equitable distribution of the fiscal effort, as well as more investment in fighting tax fraud and evasion⁶⁸, the Tunisian government is capable of significantly increasing its revenues and allocating it to the healthcare sector, among others. Among policies that aim to reduce economic and social injustices and increase tax revenues, we can mention:

63 World Bank, "Out-of-Pocket Expenditure (% of Current Health Expenditure) - Tunisia, World, Cuba, Norway, New Zealand", <https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?>

64 The Tunisian debt crisis in the context of the COVID-19 pandemic, Friedrich-Ebert-Stiftung, Regional Office Tunisia, 2021. <http://library.fes.de/pdf-files/bueros/tunesien/18509.pdf>

65 INS. "Les Comptes Nationaux Trimestriels, Statistiques | INS." Accessed June 17, 2021. <http://ins.tn/statistiques/72>.

66 INS. "Emploi, Chômage, Statistiques | INS." Accessed June 17, 2021. <http://ins.tn/statistiques/153>.

67 Amine Bouzaiene, « LE PROJET DE LOI DE FINANCES 2019 : SOUS LES PROJECTEURS DE L'ÉQUITÉ FISCALE », April 2019. And, Sahar Mechmech, "The Tunisian Tax Administration: a broken-down instrument", December 2020.

68 Tax fraud and evasion costs around 25 billions dinars, which is the cost of over 2.7 million ICU beds.

- Allocating consumer tax revenues (droit de consommation) directly towards healthcare as this tax is specific to products that are bad for health and the environment.
- Increasing the progressivity of the income tax through the introduction of more brackets, and higher taxes on the high-income earners.
- Imposing a higher VAT rate on luxury products.
- Developing and implementing a wealth tax.
- Reviewing and decreasing inefficient tax incentives.⁶⁹
- Investing in the human and material resources of the tax administration to minimize tax fraud.
- Invest at least 15% of the national budget in public healthcare

In order to contain the pandemic and provide adequate and equitable access to health care services, it is also paramount to request private clinics to meet the challenges of this current sanitary crisis, and to break with the security-based response that the state has towards citizens.

Lack of prevention services

The lack of preventive services is both a factor to and a consequence of the failures of the healthcare system. The quasi-absence of prevention services is a consequence of failure because it stems essentially from a lack of financing.

However, it is not only a consequence, but also a factor to the failing healthcare system, as it contributes to the worsening of health conditions of the population. This, in turn, negatively impacts their quality of life, and necessitates more invasive, costly, and time-consuming treatment. This is why spending on preventative care is considered a profitable long-term investment.⁷⁰

However, prevention services in Tunisia are rare and decreasing over time, including those related to epidemic prevention and response, sexual health, and vaccination.

Epidemic prevention and response

As has been made abundantly clear in 2020, Tunisia, like many other countries, does not have an epidemic fighting strategy and protocol. This explains the hesitancy in taking certain decisions and implementing both the measure and its counterpart at the same time.

This is also reflected in Tunisia's Global Health Security Index (GHS) in 2019. The country scored 33.7 out of a hundred and ranked 122 overall out of 195 countries⁷¹ (Figure 24). Tunisia seems to score in the bottom half of countries in all indicators including prevention, detection, norms, and risks. This includes scoring 27 out of 100 in the prevention of zoonotic diseases which are the cause of the Coronavirus, 0 out of 100 in terms of Emergency Preparedness and Response Planning, and 0 out of 100 in terms of exercising response plans.

⁶⁹ Marsad Budget, "Tax incentives: a Burden on Public Finances",

⁷⁰ Direction des Etudes et de la Planification, Ministry of Health. "Organisation de La Prévention En Tunisie." Accessed June 17, 2021. <http://www.santetunisie.rns.tn/images/preventionvf2020.pdf>. Page 4.

⁷¹ GHS Index. "Tunisia." Accessed June 17, 2021. <https://www.ghsindex.org/country/tunisia/>.

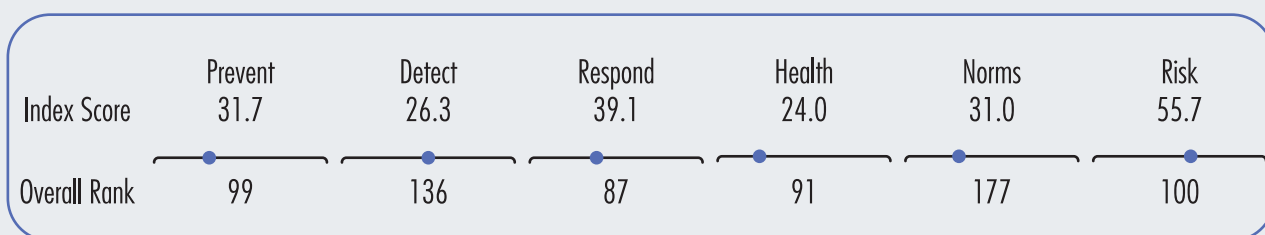


Figure 24: Index and Rank of Tunisia in the components of the GHS 2019 (Source: GHS)

Sexual and reproductive health

Sexual health and family planning services are also suffering. For example, in terms of educating the youth on sexually transmitted infections (STIs), only less than a fifth of young women say that they have a comprehensive knowledge of HIV. These rates differ greatly with the richest 20% of participants being twice as knowledgeable as the 20% poorest, and women in urban areas being also significantly more aware than ones living in rural areas⁷² (Figure 25).



Figure 25: HIV Prevention among Youth by Economic Situation and Urban-Rural Setting in Females (Source: UNICEF)⁷³

In addition to having close to no sexual education, women's health also suffers from an increasing lack of contraception. In fact, the unmet need for contraception in Tunisia drastically increased from 7% of married women (ages 15 to 49) in 2012 to 19.9% in 2018.⁷⁴ This can worsen conditions such as unplanned pregnancies and the participation of women in economic life.

Decreasing Childhood Immunization Rates

Though Tunisia is ahead of several countries in terms of vaccination, those numbers have seen a concerning and dangerous decrease in last couple of years. Taking HepB3 for example, the population of one-year-old children vaccinated fell from 99% in 2006 to 92% in 2019 (Figure 26). Likewise, the percent of children ages 12 to 23 months vaccinated against DPT fell from 99% in 1999 to 97% in 2018 (Figure 27). The decrease of vaccination numbers not only puts the unvaccinated children lives at risk, but they also risk the emergence of new infection epicenters that may turn into pandemics.

⁷² UNICEF, "HIV and AIDS in adolescents", July 2021. <https://data.unicef.org/topic/hiv-aids/>

⁷³ Ibid.

⁷⁴ World Bank, "Unmet Need for Contraception (% of Married Women Ages 15-49) - Tunisia." Data. Accessed February 16, 2021. <https://data.worldbank.org/indicator/SP.UWT.TFRT?locations=TN>

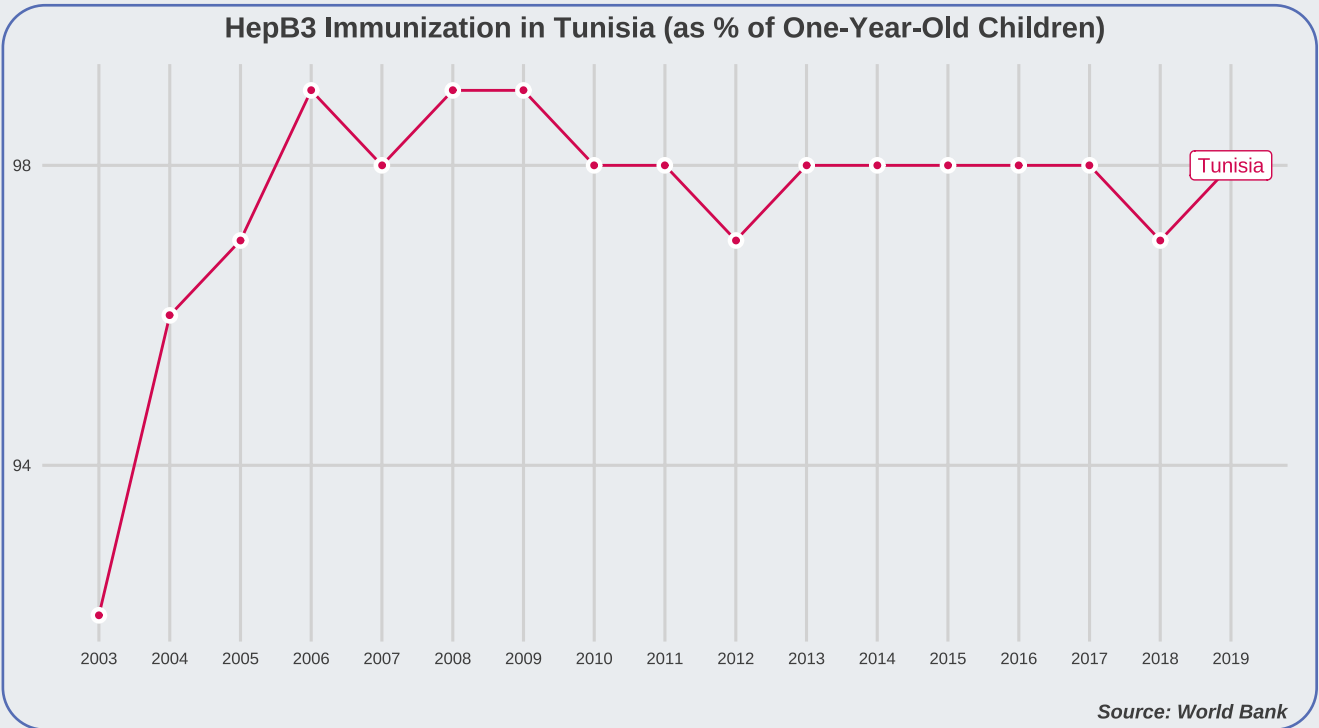


Figure 26: HepB3 Immunization as % of One-year-old children in Tunisia (Source: World Bank)⁷⁵

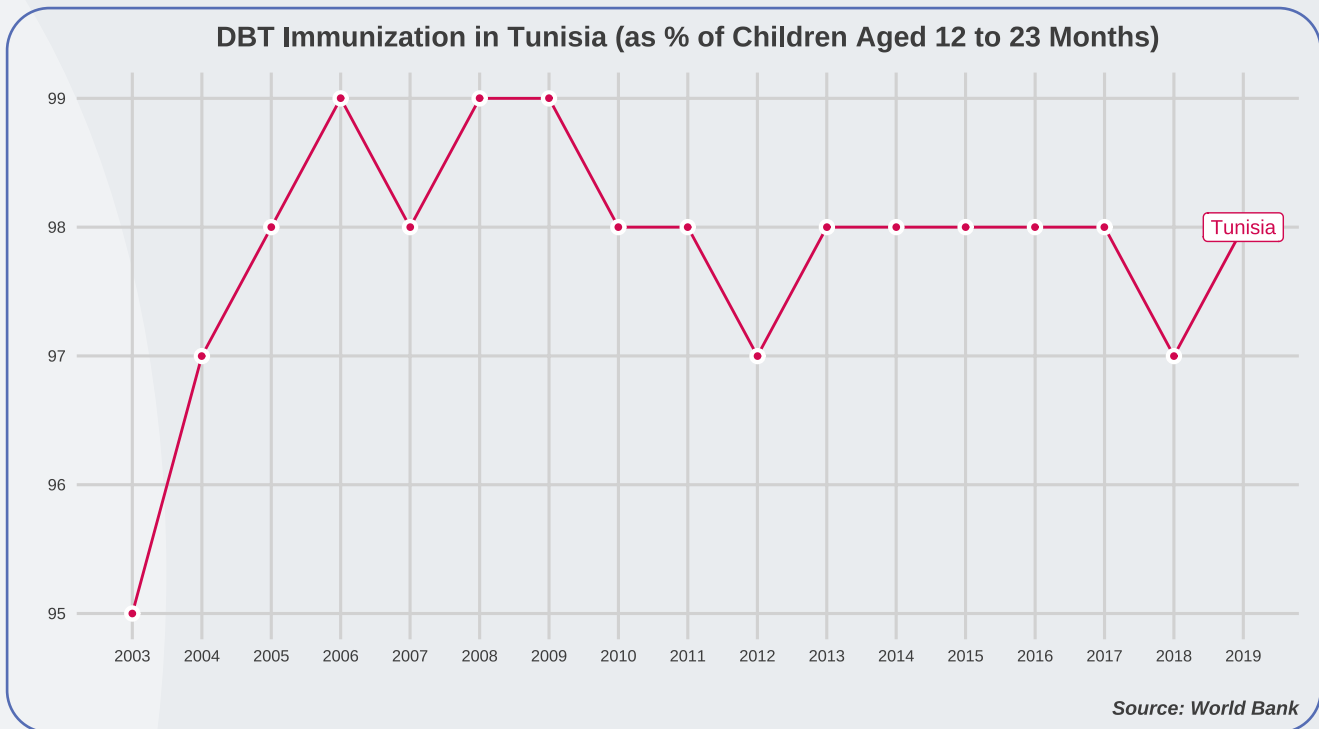


Figure 27: DBT Immunization as % of children ages 12 to 23 months in Tunisia (Source: World Bank)⁷⁶

From the figures, it is clear that the Tunisian government lacks a clear and well-financed prevention strategy that will help keep the legacy of a fully vaccinated population, and that can improve on indicators such as epidemic response and access to quality sexual and reproductive health services.

⁷⁵ World Bank, "Immunization, HepB3 (% of One-Year-Old Children) - Tunisia.". <https://data.worldbank.org/indicator/SH.IMM.HEPB?locations=TN>

⁷⁶ World Bank, "Immunization, DPT (% of Children Ages 12-23 Months) - Tunisia.". <https://data.worldbank.org/indicator/SH.IMM.IDPT?end=2019&locations=TN&start=1999&view=chart>

Rampant inequality

Much like the lack of prevention services, rampant inequalities are both a cause and a consequence of the failures of the healthcare system. As discussed in the first section, the consequences of the failure of the health system are inequitably distributed, especially among the different regions.

But, the inequalities on the socio-economic front also contribute to the overcrowding of health services. Simple conditions that could have been treated at a low cost in public facilities, due to patients not wanting to seek private services because of cost or because of the lack of geographical accessibility to these services, turn into worse problems that are more costly in resources and time to treat.

This section explores the different socio-economic and gender inequalities that exist in the Tunisian Healthcare system, and how they lead to, and are a manifestation of the failures of the public health sector.

Socio-economic Inequality

Poverty is pervasive in Tunisia, with a national poverty rate of 15.3%, however, this rate differs according to many factors including the type of residential areas and region (Figure 28).

Residential area	Population	Poverty rates
Large cities	3,810,734	6.30%
Small and medium-sized municipalities	3,143,090	15.00%
Rural	3,471,488	26.00%
Total	10,425,312	15.30%

Figure 28: Poverty Rates by Residential Area (Source: INS)⁷⁷

As Figure 28 shows, metropolitan areas have a significantly lower poverty rate than the national average at 6.3%, whereas rural areas have a higher poverty rate at 15.3%.

Tunisia's Western regions are also more affected than Eastern ones, with the Center West having a poverty rate of 30.8%, and the North West having a rate of 28.4%. Meanwhile, the poverty rate in the Grand Tunis area is at 5.3% and the North East having a rate of 11.6% (Figure 29).

⁷⁷ INS. "Carte de La Pauvreté En Tunisie, Septembre 2020 | INS." Accessed June 19, 2021. <http://ins.tn/publication/carte-de-la-pauvrete-en-tunisie-septembre-2020>. Page 14

Region	EBCNV 2015				RGPH 2014		
	Poverty rate	Standard error	95% confidence interval		Poverty rate	Standard error	Difference
			Low level	High level			
Grand Tunis	5.3	0.3650	4.6	6.0	6.1	0.2443	0.8
North-East	11.6	0.6001	10.4	12.7	11.9	0.3372	0.3
North-West	28.4	0.7618	26.9	29.9	25.8	0.4360	2.6
Center-East	11.4	0.5346	10.4	12.5	11.7	0.3164	0.3
Center-West	30.8	0.7422	29.3	32.2	29.3	0.4574	1.5
South-East	18.5	0.6347	17.2	19.7	17.8	0.4792	0.7
South-West	17.5	0.6138	16.3	18.8	18.2	0.4399	0.6
Tunisia	15.2	0.2269	14.8	15.6	15.3	0.1802	0.1

Figure 29: Poverty Rate by Region (Source: INS)⁷⁸

In terms of governorates, the highest rates can be found in Kasserine and Kef, with 33.6% and 33.1% respectively. On the other hand, the lowest rates are found in Tunis and Ben Arouse, with 4.6% and 5.6% respectively. (Figure 30).

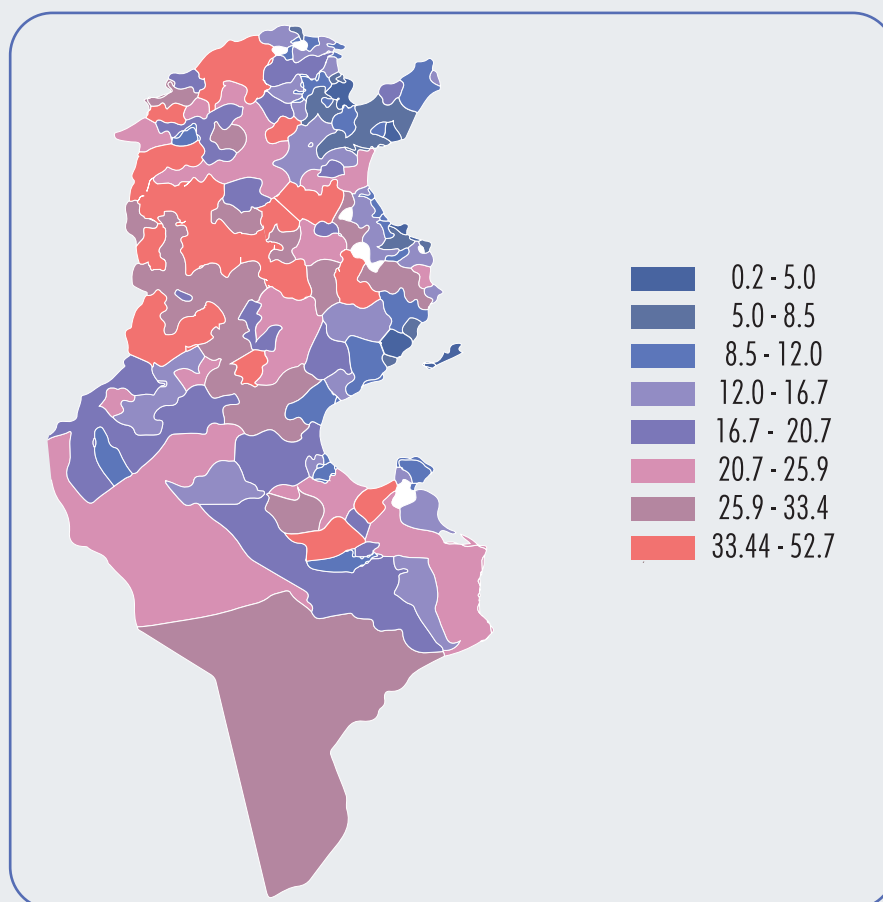


Figure 30: Map of Poverty (Source: INS)⁷⁹

⁷⁸ Ibid. Page 17
⁷⁹ Ibid, Page 22.

Poverty is already an obstacle to accessing quality healthcare. However, it is made worse by the lack of health coverage for these vulnerable groups.

There are two main programs of social aid in Tunisia that are aimed at helping these economically disenfranchised groups: “Le Programme National d’Aide aux Familles Nécessiteuses (PNAFN) and Programme d’accès aux soins à tarifs réduits (AMGII).

PNAFN, created in 1986 to reduce the effects of the policies imposed by the IMF with its structural adjustment program, is the only program that offers direct cash transfers to beneficiaries (150 dinars a month) and reaches around 230 000 households. AMG2, created in the 60’s, allows for access to public health services at a reduced cost, though an annual subscription of 10 dinars. In 2016, this program reached 620 000 beneficiaries.⁸⁰

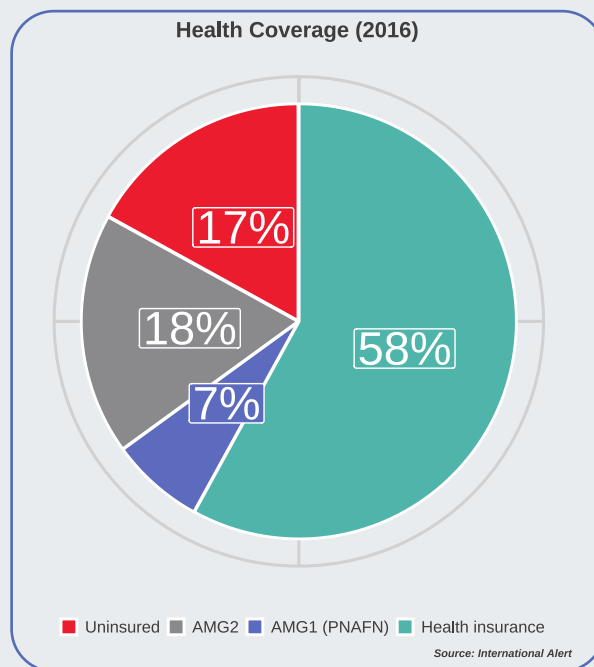


Figure 31: Health coverage in Tunisia 2016 (Source: Ministry of Social Affairs)

However, as of 2016, only 58% of Tunisians have regular health insurance, an additional 7.3% have free health coverage through the AMG1 program (under the PNAFN), and 17.5% have health coverage through the AMG2 program allowing them to have reduced tariffs for health services. This leaves 17.2% of Tunisians completely without health coverage due to being over the income threshold or their disconnection with state structures as workers of the informal sector for example.⁸¹

The uninsured

Of the population of the uninsured, 8.9% are those who have not been declared with the CNSS, 5.6% are unemployed, and 2.6% are in poverty and/or working in the informal sector (Figure 32).⁸²

80 Ibid. Page 16.

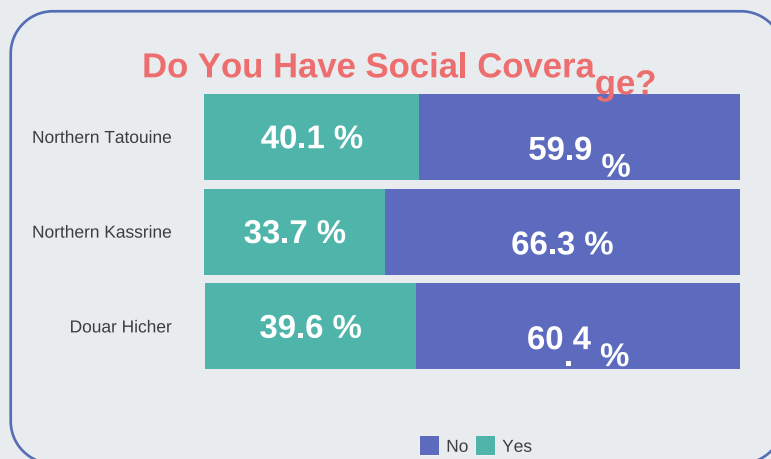
81 Ibid. Page 8

82 Ibid. Page 8

Tunisian population	Coverage by medical assistance		Without health coverage		Total target population of the base
	AMG1	AMG2	Unemployed	Other	
11 295 787	824 482	1 975 459	632 500	297 916	3 730 356
100%	7.3%	17.5%	5.6%	2.6%	33%
Total households	Households				Total Target households
2 972 575	249 843	598 624	446 000	78 618	1 373 085
100%	8.4%	20.1%	15.0%	2.6%	46.1%

Figure 32: Population Distribution by Category (Source: Ministry of Social Affairs)⁸³

The rate of the uninsured and those without social coverage increases in disadvantaged areas. For instance, according to a survey by International Alert, more than one in six people in Tunisia does not have affordable access to public health services with some regions having a higher rate of uninsured.⁸⁴



Source: International Alert

Figure 33: Responses to the Question “Do You Have Social Coverage?” (Source: International Alert)⁸⁵

However, it should be noted that these groups generally do not have a support network or enough income, as most of them are unemployed, implying that they have to bear the full cost of their healthcare.

As most of those without social coverage are unemployed, it is safe to assume that they do not have a steady source of income. Nonetheless, they likely do not have family financial support either. We can approximate their level of family support by looking at the family support that PNAFN beneficiaries got prior to joining the program. As Figure 34 shows, 80.2% of them had no family support whatsoever. The remaining 19.8% had an average additional income from family of 90 dinars per month.

90 dinars a month are not enough to cover the expenses of an entire month, and even less to have enough left over to cover healthcare costs, which average above 20 dinars a month⁸⁶.

⁸³ Ibid.

⁸⁴ International Alert. “شباب في الهوامش” Accessed May 6, 2021. <https://www.international-alert.org/ar/publications/youth-in-the-margins-perceptions-of-religion-and-politics-in-Tunisia>. Page 16-17

⁸⁵ Ibid.

⁸⁶ Calculated based on annual average out-of-pocket expenditure in USD and the average exchange rate

Admission Period	Support	No Support	Total
1984-1999	1.6% (11.5)	12.3% (88.5)	13.9% (100)
2000-2010	7.6% (18)	34.6% (82)	42.2% (100)
2011-2014	10.6% (24)	33.3% (76)	43.9% (100)
Total	19.8% (19.8)	80.2% (80.2)	100% (100)

The values in parentheses indicate the proportion of households that received (and did not receive) family assistance according to the admission period. For example, if we consider only PNAFN beneficiaries admitted to the program during the period from 1984 to 1999, the latter represent 13.9% of all Pnafist households. Among them, 1.6% received family assistance and 12.3% did not. In other words, if we focus exclusively on this group, we can say that 11.5% of this group (excluding) received family support while 88.5% did not.

Figure 34: Family Support before Admission to PNAFN (Source: Ministry of Social Affairs)⁸⁷

But even for those uninsured who do have an income, it is likely that that income is well below the living wage, especially if we do not assume they earn a minimum wage from the formal sector.

The Minimum wage in Tunisia saw its purchasing power decline by an annual rate of -0.2% between 1987 and 2014⁸⁸ (Figure 35). Additionally, as can be seen in Figure 36, the minimum wage in Tunisia has lost its ability to fight poverty. It went from being nearly one and a half times (140%) of the poverty line in 1990 to 65% in 2015, meaning it is not a living wage but rather a poverty wage.

	1990	2000	2005	2010	2015
Poverty line/Month/Household current dinars	92	256	294	362	550
SMIG/poverty line Ratio	140%	73%	76%	75%	65%
PNAFN/Poverty line ratio	16%	14%	15%	16%	27%

Figure 35: Evolution of Minimum Wage and PNAFN compared to the Poverty Line (Source: Ministry of Social Affairs)

in 2018. Though the cost is probably higher as poor families are more likely to have members who suffer from chronic illnesses/ handicaps.

87 Centre de Recherches et D'études Sociales. « Évaluation de La Performance Des Programmes d'assistance Sociale En Tunisie Pour Optimiser Le Ciblage Des Pauvres et Reiner l'avancée de l'informalité », Ministère des Affaires Sociales, mai 2017. Page 156.

88 Ibid. Page 20.

Year	SMIG	Transfers	Absolute increase	PNAFN/SMIG	SMIG*_PCST	PNAFN*_PCST
1987	110.0	7.7	0.0	7%	231.7	16.1
1990	128.0	15.0	1.7	12%	218.1	25.6
1995	159.1	25.8	0.0	16%	207.2	33.6
2000	187.0	36.3	0.0	19%	210.3	40.9
2005	224.0	43.3	0.0	19%	219.4	42.4
2010	272.5	56.7	0.0	22%	218.5	45.4
2011	286.0	68.3	11.7	25%	220.2	52.6
2012	320.0	92.5	24.2	32%	232.6	67.2
2013	325.0	105.0	12.5	33%	222.8	72.0
2014	335.0	115.0	10.0	33%	218.7	75.1
2015	335.0	150.0	35.0	45%		
Average growth (1987-2014)					-0.2%	6.0%

Figure 36: Evolution of PNAFN Cash Transfers and Minimum Wage (Source: Ministry of Social Affairs)⁸⁹

This does not bode well for these vulnerable groups, as it has two likely outcomes, either they forgo treatment, or they get into debt traps as they seek to mobilize resources to cover the cost of their healthcare.

The cycle of poverty and debt in healthcare

- The poor do not benefit from social coverage that will enable them to afford treatment, nor do they have family support to cover it
- Delayed/avoided treatment
- The health condition worsens and becomes more complicated, necessitating more expensive but vital treatment
- They take out consumption loans to cover treatment costs
- More poverty.

In Tunisia, the out-of-pocket expenditure of households is almost totally occurred in the private health sector and particularly in private drugstores (45%)⁹⁰. Though there is no recent research on the impact of health expenditure on the financial situation of poor households in Tunisia, Elgazzar et al. (2010) found that the impoverishing impact of

⁸⁹ Ibid, page 124

⁹⁰ Ines Ayadi & Salma Zouari (2017) Out-of-pocket health spending and equity implications in Tunisia, Middle East Development Journal, 9:1, 1-21, DOI: 10.1080/17938120.2017.1293362

out-of-pocket expenditure in Tunisia in 2005 is about 17.7%⁹¹. The impoverishing effect of healthcare spending is measured by the proportion of households that fall below the poverty line after healthcare payments. In other MENA countries, the impact of health expenditures on the poverty headcount varies between 7.9% in Yemen and 82.9% in West Bank and Gaza.

A credible and accessible public health system is needed to prevent catastrophic health expenditure, and to allow for other strategies, such as safety nets for the poor, to be fully effective.”

Those insured through PNAFN and AMG2

As mentioned above, PNAFN reaches around 250 000 households meaning 8.4% of all households, whereas AMG2 reached 620 000 beneficiary households meaning around 20% of total households.

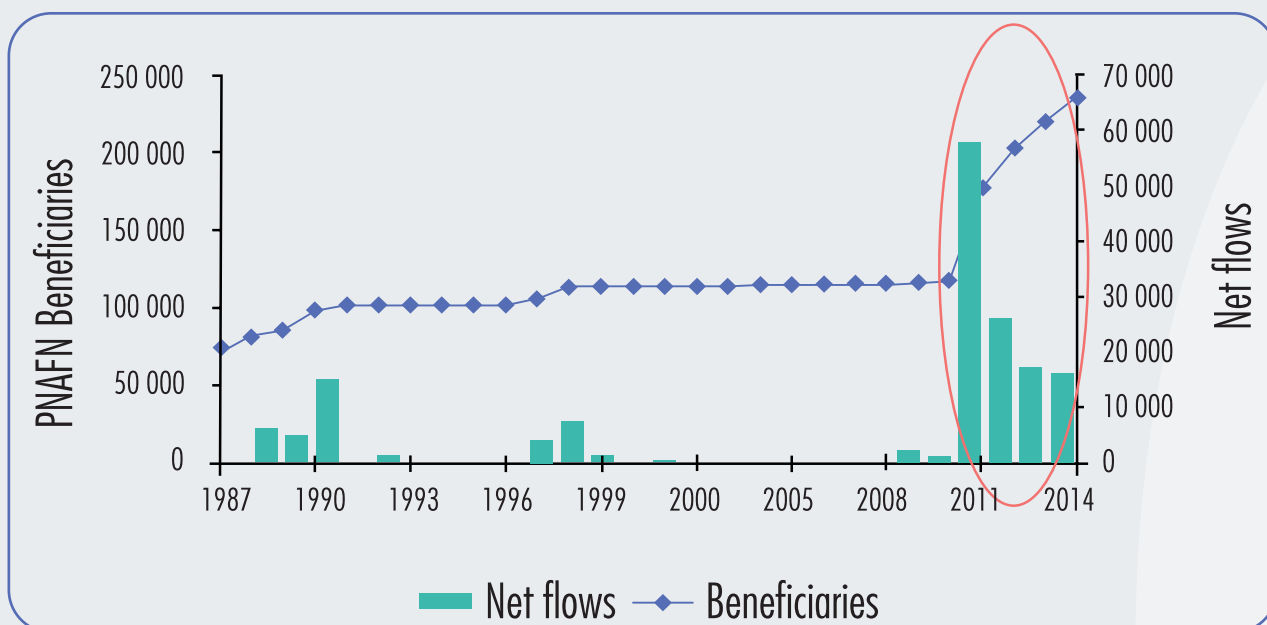


Figure 37: Evolution of PNAFN beneficiaries and their net flows between 1987 and 2014 (Source: Ministry of Social Affairs)⁹²

As can be expected by looking at the data on poverty, most PNAFN and AMG2 beneficiaries come from rural areas (45.75% for PNAFN and 51.44M for AMG2). Furthermore, 50.9% of PNAFN beneficiaries live in Western parts of Tunisia, despite these areas only holding 30% of the population,⁹³ with 21.2% of them in the North West and 19.4% of them in the Center West. (Figure 38).

91 Elgazzar, Heba & Raad, Firas & Arfa, Chokri & Matari, Awad & Salti, Nisreen & Chaaban, Jad & Salehi-Isfahani, Djavad & Fesharaki, Sanaz. (2010). "Who Pays? Out-of-Pocket Health Spending and Equity Implications in the Middle East and North Africa".

92 Ministry of Social Affaires, Centre de Recherches et D'études Sociales. "Évaluation de La Performance Des Programmes d'assistance Sociale En Tunisie Pour Optimiser Le Ciblage Des Pauvres et Reiner l'avancée de l'informalité," May 2017. Page 116

93 Ibid. Page 20.

Level	Distribution of households (in %)				Regional targeting indicator		
	PNAFN	AMGII	Non-targets	Total	PNAFN	AMGII	Non-targets
Metropolitan	17.45	14.51	41.30	33.51	52	43	123
Urban	36.80	34.04	36.47	35.97	102	95	101
Rural	47.75	51.44	22.23	30.52	150	169	73
Total	100	100	100	100			
Population	225 525	588 199	1 899 103	2 712 827			

Figure 38: Distribution of Households and Targeting Indicators (Source: Ministry of Social Affairs)⁹⁴

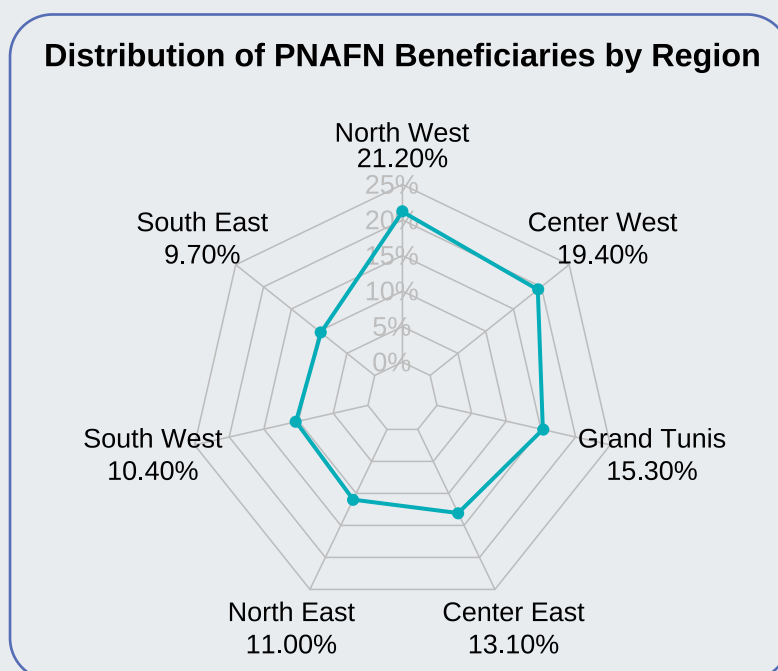


Figure 39: Distribution of PNAFN Beneficiaries by Region (Source: Ministry of Social Affairs)⁹⁵
 The education level is also an important factor in those who are registered with these special aid programs. In fact, 68% of PNAFN beneficiaries and 34% of AMG2 beneficiaries are illiterate, whereas illiteracy in the Tunisian population is estimated at around 29%.⁹⁶

However, though the characteristics of beneficiaries match up with poverty indicators, this does not imply that these programs are good at reaching all people in poverty. The efficiency rate of PNAFN in terms of reducing the severity of poverty is 65.6%. Its rate in reducing the deficit of poverty is 70.3%.⁹⁷ But despite all of this, the program has serious targeting issues. In fact, though it covers over 8% of the population, over half of

⁹⁴ Ibid. Page 165

⁹⁵ Ibid. Page 118.

⁹⁶ Ibid. Page 22.

⁹⁷ Ibid. Page 24,27

the 8.3% of the poorest households do not benefit from it as it has over 50% targeting error (most of the households targeted in error should be registered under AMG2 not PNAFN). In fact, its precision rate is estimated at 47%.⁹⁸

AMG2 has a similar targeting problem. Though it is supposed to target the poorest 21.7% of households after those covered by PNAFN, its targeting only allows it to reach 10.9% of those households, meaning a success rate of about 50.2%.⁹⁹

It should be noted that the beneficiaries that are targeted are rather dissatisfied by the programs. For example, with the increasing cost of living and the privatization of many basic public services including health, PNAFN beneficiaries find that the cash transfers that they receive are insufficient (53.4%) and highly insufficient (40.4%), with only 6.2% considering the cash adequate (Figure 40).

This is not surprising seeing the small size of the amount transferred and the fact that their admission into PNAFN is often correlated with a loss of family financial support.

Amount of aid		Desired amount	
Estimation	Proportion	Monthly amount	Proportion
Sufficient	6.2	150 TND	8.8
Insufficient	53.4	200 TND	39.0
Very insufficient	40.4	250 TND	20.0
		300 TND	20.5
		350 TND or more	11.7
Total	100	Total	100

Figure 40: PNAFN Beneficiaries Perception on the Level of Aid Provided and the Desired Level of Aid (Source: Ministry of Social Affairs)¹⁰⁰

As discussed above, only 19.8% of households received family financial aid prior to entering PNAFN. The average for the family aid for those that do benefit from it is 90 dinars a month.¹⁰¹

However, most of those who benefited from aid prior to being enrolled in the program lose their aid once they are enrolled. The average of those who received aid drops from 90 dinars to 29 dinars. Even if we exclude those whose aid gets cancelled, the average is still less than it was 68 dinars.¹⁰²

98 Ibid. Page 26.

99 Ibid. Page 26.

100 Ibid, Page 155

101 Ibid. Page 156.

102 Ibid. Page 158.

Admission Period	Canceled	Reduced	Constant	Total
1984-1999	1.2%	0.1%	0.3%	1.6%
2000-2010	4.0%	2.0%	2.0%	7.6%
2011-2014	6.2%	1.5%	1.5%	10.6%
Total	11.4%	3.8%	3.8%	19.8%

Figure 41: The Maintaining of Family Support after Admission to PNAFN (Source: Ministry of Social Affairs)¹⁰³ Aside from the problems of targeting and cash transfers, the programs also suffer from a significant lack of human resources, especially in social workers. In the North West for instance, there are 600 households per social worker, in the Center West that number increases to 672 (Figure 42)

	PNAFN	AMGII
Good	25%	12%
Average	37%	37%
Bad	22%	33%
Very bad	16%	18%

Figure 42: Beneficiaries' Perception of Social Workers (Source: Ministry of Social Affairs)¹⁰⁴ This leads to the general dissatisfaction of beneficiaries as only a quarter of PNAFN beneficiaries and an eighth of AMG2 beneficiaries consider social worker performance to be good, with most considering it average to bad. (Figure 43)

¹⁰³ Ibid. Page 158.

¹⁰⁴ Ibid. Page 147.

	Distribution of households	Distribution of social workers	Beneficiaries of the PNAFN	Poor households social workers	Absolute contribution to national poverty
Grand Tunis	25%	18%	15%	202	13.5%
North-East	15%	13%	11%	360	9.0%
North-West	12%	14%	21%	600	19.4%
Center-East	24%	18%	13%	311	12.3%
Center-West	12%	14%	19%	672	27.7%
South-East	7%	13%	10%	294	10.3%
South-West	5%	10%	11%	279	7.7%
National					100%

Figure 43: The Deployment of Social Workers Vis-à-vis Regional Poverty Profiles (Source: Ministry of Social Affairs)¹⁰⁵ Additionally, social workers in certain areas report that the unavailability of vehicles for their transportation is a major obstacle that consistently holds them back from achieving their declared objective, seeing as many of the targeted households live in difficult-to-access places. The lack of on-site visits and activities are also the number one reason why PNAFN and AMG2 beneficiaries express their dissatisfaction with services (Figure 44).

Investing in these resources is liable to lead to covering more territory and households, both beneficiaries as well as non-beneficiaries.¹⁰⁶

		PNAFN	AMGII
Reasons for satisfaction	Objectivity	30%	33%
	Good knowledge of families	65%	54%
	Availability	27%	26%
Reasons for dissatisfaction	Absence from the field	70%	65%
	Initiation to families	60%	60%
	Lack of objectivity	28%	29%
	Corruption	13%	11%
	Nepotism	19%	15%

Figure 44: Reasons for Satisfaction and Dissatisfaction of PNAFN Beneficiaries (Source: Ministry of Social Affairs)¹⁰⁷

105 Ibid. Page 135.

106 Ibid. Page 139.

107 Ibid. Page 148.

These low precision rates, low cash transfers, and lack of satisfactory social worker presence are mainly due to institutional weaknesses, lack of coordination between the different public services, the lack of human and material resources of the tax administration and its inability to cover the informal sector and verify income declarations or lack thereof, but also the lack of human and material resources of the Ministry of Social Affairs that might have allowed it to do on-site visits to targeted households to better evaluate their needs. This leads to two main problems. The first is the lowering of national tax revenues that, in turn, limits the government's capacity to reinvest those revenues in reducing inequalities. The second is the failure of social programs to properly target poor households, and having to resort to methods such as auto-targeting, and using regional and sociodemographic indicators that can be reasonably linked to socio-economic status.¹⁰⁸

The 2017 report on social programs coming out of the Ministry of Social Affairs links the problems of these programs to socio-economic fallout of the structural adjustment plan promoted by the IMF, "PNAFN has been transformed into a tool to manage poverty and its implication, all while depriving it from the financial, human and logistical resources that allow it to effectively contribute to the significant reduction of poverty that it is supposed to address."¹⁰⁹

Unemployment

As we have discussed, unemployment is a major factor in poverty and increases the likelihood of being uninsured with the loss or absence of employer-linked health coverage. However, it also brings with it other issues.

Aside from putting people at the risk of being uninsured because of the absence of employer-linked coverage, unemployment is also linked to a series of mental health issues, making things worse for an already vulnerable category, and putting pressure on an already fragile mental healthcare sector.^{110 111}

It should be noted that, despite unemployment being more prevalent in women than men, mental health issues relating to unemployment affects men more than women, perhaps as "an effect of men's higher identification with the job role, stronger breadwinning obligations and/or better jobs and thus more to lose from unemployment."¹¹²

As Tunisia's youth unemployment rate is particularly high among young men at 30.7 percent (for ages 15–24), this could be correlated to the higher suicide rate in men than in women¹¹³. In the latest official suicide national survey which dates back to 2015, men

108 Ibid. Page 19-20

109 Ibid. Page 21.

110 Mossakowski KN. The influence of past unemployment duration on symptoms of depression among young women and men in the United States. *Am J Public Health* 2009; 99:1826–32.

111 Thomas C, Benzeval M, Stansfeld SA. Employment transitions and mental health: an analysis from the British household panel survey. *J Epidemiol Commun Health*

112 Backhans, Mona C., and Tomas Hemmingsson. "Unemployment and mental health—who is (not) affected?." *The European Journal of Public Health* 22, no. 3 (2012): 429-433. Page 432.

113 World Bank Group, "Breaking the Barriers to Youth Inclusion", 2014. https://www.worldbank.org/content/dam/Worldbank/document/MNA/tunisia/breaking_the_barriers_to_youth_inclusion_eng_intro.

constituted 72% of all suicide cases despite being a little less than 50% of the population (5557968 men VS 5596404 women in 2015) (Figure 45). The suicide rate per 100000 people was 4.75 for men, more than double that of 1.8 per 100000 people for women.

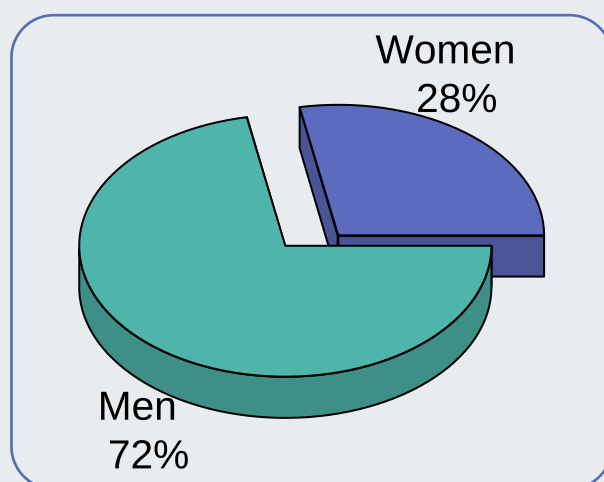


Figure 45: Suicide Cases by Gender (Source: INS)114

It is also further indicated by the age bracket that is most affected by suicide, this being those between 20 and 39, which is also the one affected by unemployment, and which faces serious mental scarring issues because of it¹¹⁵ (Figure 46).

Age group	Population (2015)	Number of suicide cases	Percentage	incidence for 100,000 inhabitants
0-19	3 492 024	49	13.46	1.40
20-39	3 718 073	165	45.33	4.43
40-59	2 637 195	102	28.02	3.86
60-79	1 092 037	42	11.54	3.84
≥80	215 044	6	1.65	2.79
Total	11 154 400	364	100.00	3.29

Figure 46: Suicide Cases by Age Brackets (Source: INS)116

Perhaps the best indicator for the link between mental health and unemployment is seen in the way certain people have chosen to die by suicide, self-immolation being the second most common way with 15.89% of cases.

pdf

114 INS. "Statistiques Nationales Du Suicide En Tunisie Pour l'année 2015," 2016. <http://www.santetunisie.rns.tn/images/docs/anis/statistiquesnationalesdusuicideentunisiepourlannee2015.pdf>.

115 Strandh, Mattias, Anthony Winefield, Karina Nilsson, and Anne Hammarström. "Unemployment and mental health scarring during the life course." *The European Journal of Public Health* 24, no. 3 (2014): 440-445.

116 INS. "Statistiques Nationales Du Suicide En Tunisie Pour l'année 2015," 2016. <http://www.santetunisie.rns.tn/images/docs/anis/statistiquesnationalesdusuicideentunisiepourlannee2015.pdf>.

Method of suicide	Number of cases	Percentage
Physical method		
Hanging	214	58.63
Self-immolation	58	15.89
Drowning	23	6.30
Rush in front of a moving object	13	3.56
Fall from height, defenestration	10	2.74
White arm	4	1.09
Electrocution	1	0.27
Fire arm	1	0.27

Figure 47: Methods of Suicide 2015 (Source: INS)¹¹⁷

This method holds a lot of symbolism in post-revolutionary Tunisia as a hopeless effort by people to demand justice and employment.

Gender Inequality

Much like socio-economic inequalities, gender inequalities are both a cause of the failures of the healthcare system as well as a manifestation of it.

The failure of the healthcare system adds to the unpaid care work that women often have to take on, on their own. For instance, during the first lockdown in March 2020, care facilities and services including elder care, special needs care, house cleaning services, and child care closed down. All this work did not suddenly become unnecessary but rather was taken up, more often than not, by women in an unpaid use of their time and labor. Similarly, as the pandemic progressed, the confinement and economic insecurity of the repeated lockdowns have unleashed an unprecedented setback in their economic rights and conditions as the care of COVID patients or families was often assigned¹¹⁸.

Women are also at the frontlines of the pandemic, as they constitute most healthcare workers at 63.4% of the workforce (but only 39% of the leadership).¹¹⁹ They also constitute most cleaners and grocery workers who were considered essential for the economy and had to work in close contact with customers during the pandemic.¹²⁰ Women also represent the majority of the agricultural workers that have continued to work during the pandemic (58% of agricultural workers but only 4% of land owners).¹²¹

¹¹⁷ Ibid.

¹¹⁸ UN WOMEN. "Tunisian Women in the Face of Covid-19 During and After Confinement," June 2020. Page 5.

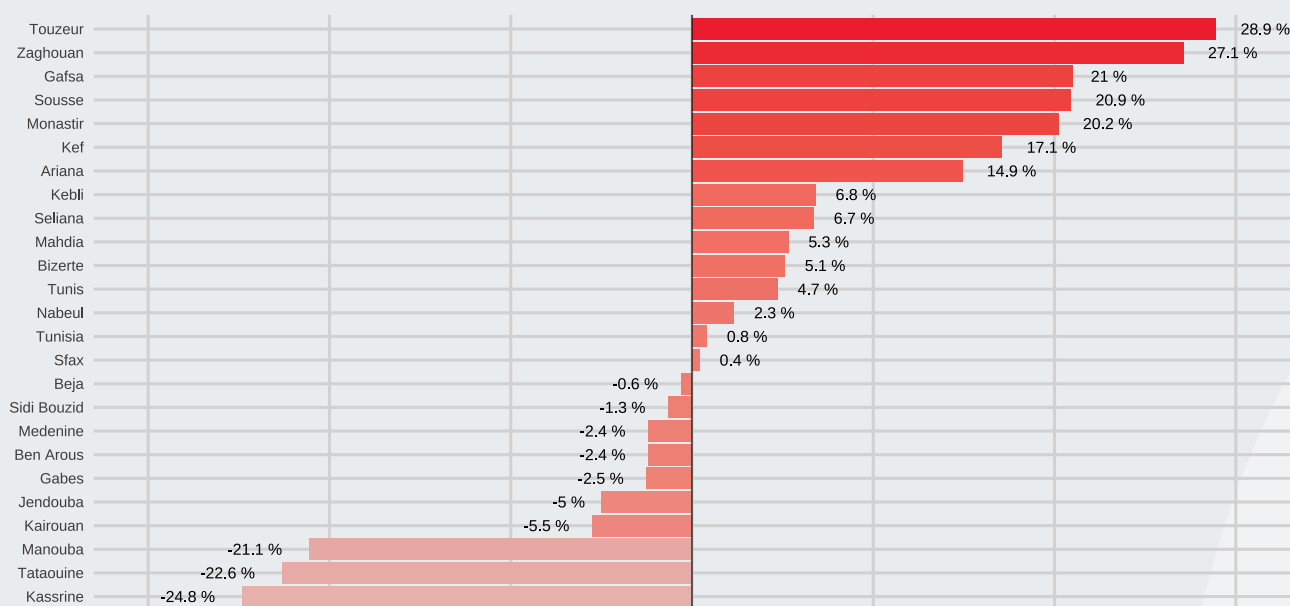
¹¹⁹ Ibid, Page 7.

¹²⁰ Ghassen Salini, Mona Ezzet, Ikbal Ben Moussa, Corona Virus and its Social Repercussions on Women: Crisis Management in Egypt, Tunisia, and Lebanon, Friedrich Ebert Stiftung, Page 27.

¹²¹ UN WOMEN. "Tunisian Women in the Face of Covid-19 During and After Confinement," June 2020. Page 3.

As we've previously discussed, sexual and reproductive health indicators have also deteriorated, mainly due to lack of investment in awareness raising, sexual and reproductive health facilities, and stock shortages. Between 2014 and 2015 for instance, the use of family planning services stagnated with a national average of growth of just 0.8%, with some governorates having a significant negative growth in these services, including Kassrine with -24.8%, Tataouine with -21.6%, and Mannouba with -21.1%.

% of the Evolution of "Family Planning" Services in National Centers of Family and Population
Between 2014 and 2015



Source: International Alert

Figure 48: % of the Evolution of "Family Planning" Services in National Centers of Family and Population Between 2014 and 2015 (Source: International Alert)¹²²

The average use of contraception fell from 62.5% in 2012 to 50.7% in 2019. In that same period, the met need for contraception also decreased from 90% to 71.9% (Figure 49).

Some contraception methods were severely lacking in the market for more than two years (between 2016 and 2019). Inventory shortages also included the contraceptive pill, the morning-after pill, and abortion medication.¹²³

¹²² International Alert. "تقييم مجتمعي للخدمات الصحية العمومية بولاية تطاوين: تشخيص و بدائل" 2019. Page 34

¹²³ Beity, Association. "Rapport urgence beity-covid-19 mars-avril-mai 2020 la covid-19 revelateur et facteur aggravant les inegalites intersectionnelles envers les femmes." Accessed May 6, 2021. <https://beity-tunisie.org/2020/06/rapport-urgence-beity-covid-19-mars-avril-mai-2020-la-covid-19-revelateur-et-facteur-aggravant-les-inegalites-intersectionnelles-envers-les-femmes/>. Page 12.

Indicator	Mics 4 (2012)	Mics 6 (2019)
Prevalence of contraceptive methods	62.5%	50.7%
Needs met with regard to contraception	90.0%	71.9%

Figure 49: Sexual and Reproductive Health Indicators (Source: UN Women)¹²⁴

As we have also discussed, there is a severe shortage of women’s health personnel in some regions, especially gynecologists. In the entire state of Tatouine in 2016, there were four gynecologists and that number fell to 3 in that same year, all of whom worked in the private sector.¹²⁵

However, many women are not able to afford these private sector services, as a most of the poor are women.¹²⁶ As discussed previously, widespread poverty worsens the problems of the healthcare sector. However, poverty in Tunisia is a very gendered concept and experience.

The problem with estimating the poverty level of women is that poverty in most of the world, including in Tunisia, is measured through households, so the data in Tunisia is not disaggregated by gender.

However, multilevel analyses of poverty in Tunisia show that male-headed households are 34% less likely to be in extreme poverty than female-headed households.¹²⁷ This is due to the fact that Tunisian women have many factors that contribute to their likelihood to being poor, for instance, illiteracy. The 2014 census found that the illiteracy rate in men is 12.4%, half of that of women who have an illiteracy rate of 25%. That rate increases to 50% in women between 55 and 64 while the rate for men in that same age group is 19.9%.¹²⁸

Women living in rural areas also have a higher illiteracy rate. According to a recent study by the Tunisian Association of Democratic Women (ATFD), 40% of women in rural areas are illiterate.¹²⁹

Women also suffer from more unemployment. In the first Trimester of 2021, the male unemployment rate is estimated at 15%, whereas the female one is significantly higher at 23.8%. The gaps are higher when looking at unemployment rates of college graduates, with a male unemployment rate of 17.6% in the third trimester of 2020, versus a female

¹²⁴ UN WOMEN. “Gender and Covid-19 in Tunisia: Challenges and Recommendations,” April 2020.

¹²⁵ Ibid. Page 38.

¹²⁶ UN WOMEN. “Tunisian Women in the Face of Covid-19 During and After Confinement,” June 2020. Page 8

¹²⁷ Amara, M., Jemmali, H. “Household and Contextual Indicators of Poverty in Tunisia: A Multilevel Analysis “. Soc Indic Res 137, 113–138 (2018). <https://doi.org/10.1007/s11205-017-1602-8>

¹²⁸ INS, Rapport National Genre Tunisie 2015, Page 12.

¹²⁹ Nay Elrahi, “Rural Women in Tunisia: ‘We Have Been Silent for Too Long’ ” the Guardian, March 30, 2015. <http://www.theguardian.com/global-development/2015/mar/30/rural-women-rights-tunisia-world-social-forum>

unemployment rate of 40.7%.¹³⁰

However, even when women work, they often earn less than men. The gender pay gap in the informal sector is estimated at 35.5%, while in the formal private sector it is estimated at 25.4%.¹³¹

This is why disadvantaged women are so unlikely to be able to afford healthcare services. But this is further compounded by the fact that many women do not have healthcare coverage. Of rural women (who make up 32% of the total female population) only 20% of them have social coverage and only 10% of them benefit from the free healthcare program.¹³² This is especially bad as 60% of rural women suffer from health problems, 93% of which are work-related.¹³³

This is why social and medical security are so important to help women bear the cost of healthcare among other necessary expenses. But, cash transfers in Tunisia are structured by household and, therefore, are sent to the “Chief of the Family”. However, by Tunisian law, that title belongs to the husband by default.

During the pandemic, for instance, 250 million dinars were sent to poor households whose income was impacted by the pandemic and lockdown. Of the 623000 households who have received this transfer, 86.5% went to the male head of the household.¹³⁴

These types of transfers, much like household-based poverty studies, often assume that resources within the same household are equally distributed within the family. It often also assumes that there is no difference in resource allocation between male-led households and female-led households. Both assumptions are unfounded, at base.

Though there are no sex-disaggregated data on how aid is spent in Tunisia, comparative examples may help understand how these cash transfers affect families.

In her book “Invisible Women: Data Bias in a World Designed for Me”, author Caroline Criado Pérez (2019) takes the example of a UK policy where a child benefit tax deduction was given to fathers.¹³⁵ In 1977, this tax deduction was replaced by direct cash transfers to the mother. The author states that “if money were shared equally within households, this transfer of income from wallet to purse should have had no impact on how money was spent. Using the proxy measure of how much Britain was spending on clothes, the researchers found that following the policy change the country saw ‘a substantial in-

130 INS. “Emploi, Chômage, Statistiques | INS.” Accessed June 17, 2021. <http://ins.tn/statistiques/153>.

131 UN WOMEN. “Tunisian Women in the Face of Covid-19 During and After Confinement,” June 2020. Page 8

132 Ibid.

133 Tunis, Nay Elrahi in. “Rural Women in Tunisia: ‘We Have Been Silent for Too Long’ | Nay Elrahi.” the Guardian, March 30, 2015. <http://www.theguardian.com/global-development/2015/mar/30/rural-women-rights-tunisia-world-social-forum>

134 UN WOMEN. “Tunisian Women in the Face of Covid-19 During and After Confinement,” June 2020. Page 9

135 Caroline Criado-Perez, “Invisible Women: Data Bias in a World Designed for Men”, Abrams Press, 2019.

crease in spending on women’s and children’s clothing, relative to men’s clothing.”

Other studies discussed in the book show that “money continues not to be shared equally between couples, and money controlled by women continues to be more likely to be spent on children (a gender-neutral word which itself hides a wealth of inequalities) than money controlled by men.”

We also cannot talk about women’s healthcare without mentioning another epidemic that plagues them: violence.

During the first lockdown, the hotline for services aimed at helping women and children received 9800 calls, 9 times higher than pre-covid numbers.¹³⁶ Of these calls, 2700 were about reporting cases of violence, others were about seeking legal counsel or financial and material aid.

It should be noted that of the calls about violence: 90% were relative to verbal violence, 80% to psychological violence, 76% to physical violence, 37% to economic violence, and 17% to sexual violence. Nonetheless, it should be noted that only about 26% of women victims of violence seek help in Tunisia¹³⁷.

This is not surprising, seeing how violence against women is legitimized as 31% of respondents to a survey agree that women should forgive violence committed against her during this crisis. This number decreases for women respondents at 24% and increases for male respondents at 40%.¹³⁸

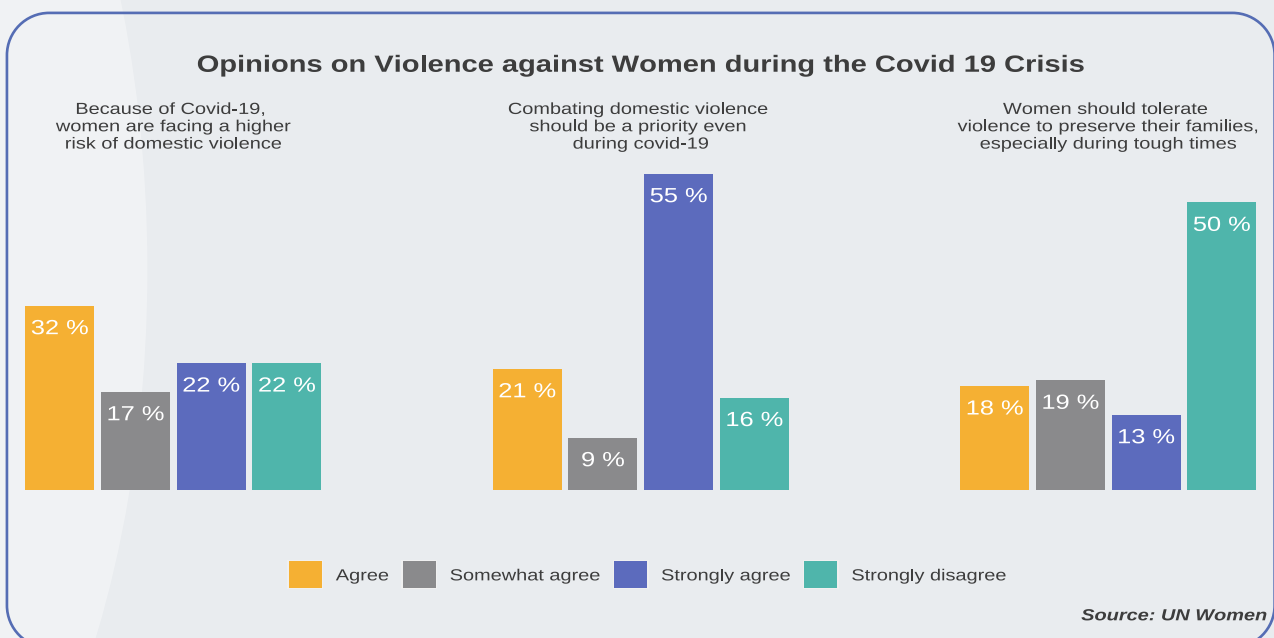


Figure 50: Opinions on violence against women during the Covid 19 Crisis (Source: UN Women)¹³⁹.

¹³⁶ UN WOMEN. “Tunisian Women in the Face of Covid-19 During and After Confinement,” June 2020. Page 5.

¹³⁷ Ibid.

¹³⁸ Ibid.

¹³⁹ Ibid.

It should also be noted that in 2010, only 2.3% identified healthcare professionals as a source of assistance they would seek,¹⁴⁰ implying a failure of the healthcare system to properly offer care, protection, and security for women victims of violence.

This is why the Tunisian government should take measures to address women's healthcare, from collecting sex-disaggregated data, to providing them with appropriate social and healthcare coverage, to allowing them equal access to financial aid, and addressing violence committed against them.

Inequality in access to water and sanitation services

The importance of access to water and sanitation services has never been as clear as it was during this pandemic. These services not only allow inhabitants to remain in good health and in sanitary conditions, but also have a major role to play in preventing the spread of epidemics and pandemics. However, much like many of the issues discussed, there are stark regional disparities in the availability of these services.

As Figure 51 shows, the national average of access to drinking water is 90.7%. However, coastal regions such as the Tunis District and the North East have averages well above that. On the other hand, interior regions fall behind with 75.5 for the North West and 67.4% for the Center North. In terms of governorates, Tunis and Monestir have the highest access rates with 99.9% each, and Sidi Bouzid and Jendouba have the lowest rates at 62.9% and 65% respectively.

140 The Advocates for Human Rights, MRA Mobilizing for Rights Associates, "TUNISIA: Submission to the Committee on Economic, Social and Cultural Rights Relating to the Economic, Social, and Cultural Rights of Women for the 59th Session", August 2016. Page 2

Rate of household access to basic drinking water by governorate							
Gouvernorat	2020	2019	2018	2017	2014	2004	1994
Tunis	99,9	99,9	99,9	99,9	99,9	99,4	97,9
Ariana	99,6	99,6	99,6	99,6	99,3	98,3	91,6
Ben arous	99,8	99,8	99,8	99,7	99,5	97,5	95,1
Manouba	98,9	98,7	98,7	98,5	97,3	94,5	—
D.Tunis	99,7	99,7	99,6	99,6	99,3	98,1	95,5
Nabeul	95,3	95,2	95,1	95,1	93,2	85,7	71,1
Zaghuan	85,6	85,3	85,1	84,5	79,6	72,4	53,9
Bizerte	90,7	90,4	89,9	89,4	88,1	80,5	68,8
N.Est	92,5	92,4	92,1	91,8	89,8	82,3	68,2
Beja	83,9	83,6	83,5	82,7	79,3	66,4	54,9
Jendouba	65,0	64,8	63,8	63,1	61,2	55,5	39,1
Le kef	84,6	84,4	84,1	83,7	80,2	63,0	51,4
Siliana	73,0	72,7	72,5	71,3	65,3	57,5	41,9
N.Ouest	75,5	75,3	74,8	74,0	70,7	60,3	46,4
Sousse	97,2	97,2	97,2	97,2	96,8	98,3	91,5
Monastir	99,9	99,9	99,9	99,9	99,9	98,6	96,7
Mahdia	92,6	92,3	92,1	92,0	90,4	84,0	55,5
Sfax	90,7	90,5	90,4	90,4	89,4	83,5	70,1
C.Est	94,7	94,6	94,5	94,5	93,7	90,3	77,9
Kairouan	69,9	69,7	69,6	69,5	68,8	69,1	42,2
Kasserine	68,3	68,3	68,3	67,8	65,1	57,2	39,7
Sidi bouzid	62,9	62,7	62,6	62,4	62,7	52,7	28,9
C.Ouest	67,4	67,2	67,1	66,9	65,9	60,7	37,7
Gabes	96,1	96,0	95,8	95,6	94,7	88,9	77,5
Medenine	97,4	97,3	97,2	97,1	92,9	81,2	61,6
Tataouine	98,0	97,9	97,8	97,6	98,2	84,6	61,7
S.Est	97,0	96,9	96,8	96,6	94,3	84,6	67,6
Gafsa	92,1	92,1	91,8	91,6	90,5	84,2	75,9
Tozeur	98,6	98,5	98,5	98,5	98,0	97,3	95,0
Kebili	98,2	98,0	98,0	98,0	97,7	96,6	89,5
S.Ouest	94,9	94,8	94,6	94,5	93,7	89,6	82,4
TOTAL	90,7	90,6	90,4	90,2	88,9	83,3	70,1

Figure 51: Household Access to Drinking Water (Source: INS)¹⁴¹

The same is true for sanitation services. The national average is already low at 63.1%. That number decreases further in some areas, reaching 39.8% in the South East and 28.7% in the Center West. The lowest rate can be found in Sidi Bouzid at 17.9% (Figure 52).

¹⁴¹ INS. "Rapport Annuel sur les Indicateurs d'Infrastructure 2019." Accessed April 28, 2021. <http://www.ins.tn/fr/publication/rapport-annuel-sur-les-indicateurs-d%E2%80%99infrastructure-2019>

Rate of household connection to the sewage system by governorate							
Gouvernorat	2020	2019	2018	2017	2014	2004	1994
Tunis	98,0	97,8	97,7	97,6	97,2	93,5	88,9
Ariana	86,9	86,7	86,5	86,3	85,7	82,5	44,6
Ben arous	91,5	91,4	91,3	91,3	91,1	86,5	64,7
Manouba	80,0	79,6	79,3	78,9	78,0	69,1	-
D.Tunis	91,2	91,1	91,0	90,9	90,6	86,6	71,2
Nabeul	69,7	69,1	68,5	68,0	66,3	59,1	45,7
Zaghouan	49,1	48,8	48,5	48,2	47,4	39,0	26,3
Bizerte	70,4	70,2	69,9	69,7	69,0	60,3	51,6
N.East	67,6	67,2	66,8	66,4	65,2	57,5	45,9
Beja	49,5	49,4	49,3	49,1	48,8	44,3	38,2
Jendouba	34,5	34,4	34,2	34,0	33,5	27,3	20,5
Le kef	54,4	54,2	54,1	53,9	53,5	49,5	37,6
Siliana	48,8	48,6	48,3	48,1	47,4	37,3	24,9
N.Ouest	45,3	45,1	44,9	44,8	44,3	38,3	29,7
Sousse	82,0	81,7	81,5	81,2	80,5	76,5	57,4
Monastir	86,2	85,8	85,4	85,1	84,0	77,3	46,1
Mahdia	38,1	37,9	37,8	37,6	37,0	26,9	14,0
Sfax	51,2	50,8	50,4	50,0	48,7	41,9	26,5
C.Est	65,0	64,6	64,3	63,9	62,8	55,2	35,6
Kairouan	32,1	32,1	32,0	32,0	31,8	31,2	23,3
Kasserine	34,6	34,4	34,3	34,2	33,9	29,5	17,3
Sidi bouzid	17,9	17,8	17,7	17,6	17,2	13,8	6,0
C.Ouest	28,7	28,6	28,5	28,4	28,1	25,6	16,6
Gabes	64,6	64,4	64,2	64,0	63,3	53,7	25,4
Medenine	20,6	20,4	20,3	20,1	19,7	15,9	5,3
Tataouine	43,5	43,4	43,3	43,2	43,0	27,5	12,2
S.Est	39,8	39,7	39,5	39,4	39,0	31,7	13,9
Gafsa	55,0	54,8	54,6	54,5	53,9	43,3	23,9
Tozeur	67,7	67,6	67,6	67,5	67,4	64,6	41,1
Kebili	35,8	35,7	35,5	35,3	34,9	22,5	6,5
S.Ouest	52,4	52,3	52,2	52,0	51,7	42,3	23,0
TOTAL	63,1	62,9	62,6	62,4	61,7	55,0	39,1

Figure 52: Access to Sanitation Services (Source: INS)¹⁴²

Use of improved sanitation facilities is also highly inequitable, with a ratio of urban to rural use of 1.3. (Figure 53)

¹⁴² Ibid.

Use of improved sanitation facilities (%) 2010, Urban	97.3
Use of improved sanitation facilities (%) 2010, Rural	75
Use of improved sanitation facilities (%) 2010, Ratio of urban to rural	1.3

Figure 53: Access to Sanitation Facilities Urban/Rural (Source: UNICEF)¹⁴³

These numbers are too low to protect inhabitants against diseases that may stem from sanitary conditions, but they also contribute to the spread of diseases, including COVID-19. As inhabitants of rural villages that are not connected to the water system often rely on communal wells, COVID-19 represented a major obstacle for access to water in these areas.

Other Forms of Inequalities

There are, of course, many other forms of inequalities that plague the healthcare system and that we have not discussed in depth, but it is essential to acknowledge them. These include, for example, handicaps and chronic illnesses, which are often correlated with poverty and with the need for special social and health coverage (Figure 54).

	PNAFN	AMGII	Non-targets	Population
Chronic disease	74.1 (261)	55.8 (196)	14.5 (51)	28.4 (100)
Handicap	39.1 (486)	18.2 (226)	1.21 (15)	8.04 (100)
One or the other	82.3 (267)	60.3 (196)	15.5 (50)	30.8 (100)
Both	30.9 (542)	13.7 (240)	0 (0)	5.7 (100)

Figure 54: Proportion of Households Having at Least One Member with a Chronic Condition or a Handicap (Source: Ministry of Social Affairs)¹⁴⁴

Other contributing factors also include pollution, lack of services for youth, sexual orientation and gender identity, etc.

¹⁴³ UNICEF, "Tunisia Statistics", 2021, https://www.unicef.org/infobycountry/Tunisia_statistics.html

¹⁴⁴ Ministry of Social Affaires, Centre de Recherches et D'études Sociales. "Évaluation de La Performance Des Programmes d'assistance Sociale En Tunisie Pour Optimiser Le Ciblage Des Pauvres et Reiner l'avancée de l'informalité," May 2017. Page 179.

Mismanagement

Mismanagement can be intentional (corruption) or unintentional. In either case, it is a major contributing factor to the failure of the healthcare system.

The pharmaceutical component in Tunisian healthcare is characterized by both wastefulness and shortages. The latter we have explained in a previous chapter. The former is evident seeing as pharmaceuticals account for 39% of all health expenditure in 2013, indicating an overconsumption of drugs on all levels.¹⁴⁵

The elevated cost of medication, as perceived by service-users, also stems from having to buy them from private pharmacies with no co-pay or reimbursement due to doctors prescribing medication that may be only available at regional hospitals, or that are outside of nomenclatures used in the public sector. The rational use of medication remains a major weakness in the education and continued training of doctors.¹⁴⁶

To this, according to the Tunisian Association for the Right to Healthcare, is added the risk of overmedication and the use of unnecessary procedures and drugs, especially in the private sector. A report by the Tunisian Association for the Right to Health links this to a few factors. One of them is the absence of a national policy for the rational use of drugs that can be based on a national list of essential medication as recommended by health authorities.

This has led to unfortunate incidents like the one identified by the court of auditors in the polyclinic El Omran, where 11% of the polyclinic's drug supply has turned up missing due mainly to theft. Many cases of medication trafficking across the Algerian and Libyan border were also recorded, "with the pharmaceutical industry's increase sales in certain border regions were between 4 and 7 times the national average"¹⁴⁷

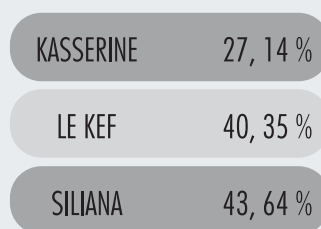


Figure 55: Annual growth in pharmacy sales 2017 (Source: The Observatory Rod Balek Ala Sahtek)¹⁴⁸

But medication is only one area of corruption in the healthcare sector.

¹⁴⁵ Association Tunisienne de Défense du Droit à la Santé. "Rapport Sur Le Droit à La Santé En Tunisie," Octobre 2016. <https://ftdes.net/rapports/ATDDS.pdf>. Page 7

¹⁴⁶ Ibid, page 22

¹⁴⁷ Ibid, page 8-9

¹⁴⁸ Nablia, Dr Sahbi Ben, and Haythem Mekki. "A STUDY ON THE PERCEPTION OF RISKS OF CORRUPTION IN THE HEALTHCARE SECTOR IN TUNISIA." Rod Balek Ala Sahtek, December 2020.

Corruption in healthcare is, however, not just related to drugs and pharmaceuticals, but is generalized and seen as a real and heavy obstacle keeping service users from accessing quality healthcare, especially those who are most economically disadvantaged, as it affects the quality of services and creates a significant loss of resources.

In fact, though perception studies are not the best indicators of corruption, it is still important to note that the healthcare sector was found, through a survey, to be the sector that is seen as most corrupt by citizens, with 63% of respondents to a survey believing it to be corrupt. This score is even higher than the security sectors (52.3%) (Figure 56).

Corruption comes in many forms, and implicates many actors including service providers (bribes, nepotism, patient poaching), actors involved in supply chains, as well as public procurement processes, etc.¹⁴⁹

Sector	2017
Health Sector	63%
Education Sector	43.1%
Social Assistance	39.9%
Customs	46.7%
Justice	29.6%
Security	52.3%
Banking Sector	19.3%
Attribution of Loans	20.3%
Private Sector	21.1%

Figure 56: Distribution of Citizens According to their Views on Corruption and Bribery by Sector in 2017 (Source: RodBalek Ala Sahtek)¹⁵⁰

To study some of the areas of corruption in this sector, we will rely on the study conducted in 2020 by the Tunisian Observatory “Rod Balek Ala Sahtek”.

According to this study, one of the major areas of large systemic corruption is public tenders. “All the interviewed persons are unanimous: This is the most significant risk of corruption where the beneficiaries could get the biggest commissions while the government loses immensely.”¹⁵¹ Risks of corruption in this area include requirements that are tailor made for certain suppliers that restrict the bidding down to one, overestimating the need in certain supplies to pass bigger contracts and having the extra supplies expire or be tossed out when there is no storage place for them, drafting contracts with no non-compliance penalties, no after-sales services or guaranteed maintenance causing equipment to stay defunct for longer...

¹⁴⁹ Association Tunisienne de Défense du Droit à la Santé. “Rapport Sur Le Droit à La Santé En Tunisie,” Octobre 2016. <https://ftdes.net/rapports/ATDDS.pdf>. Page 8-9

¹⁵⁰ Nablia, Dr Sahbi Ben, and Haythem Mekki. “A STUDY ON THE PERCEPTION OF RISKS OF CORRUPTION IN THE HEALTHCARE SECTOR IN TUNISIA.” Rod Balek Ala Sahtek, December 2020.

¹⁵¹ Ibid.

Another area of big, systemic corruption is the buying and selling of heavy equipment. Such acts of corruption include clientelism in the giving of authorizations in the private system, poorly written purchase contracts that do not guarantee maintenance services or quality of products, intentional sabotage of equipment in the public sector which forces doctors to refer patients to the private sector...

Mismanagement and Corruption at the Hospital Aziza Othmana

As discussed above, the hospital Aziza Othmana suffers from a severe lack of human, material, and financial resources. But it also suffers from many incidences of mismanagement.

These include the hospital appointment planning system. This system allows booking appointments online and harmonizes with the in-person appointment taking through an application. However, some staff's insistence on manual appointment taking despite the existence of the application have led to double booking, increased workloads, and the non-respect of priority management when dealing with patients. It is worth mentioning that in a sample of 1701 cases, 36% of patients seem to have had a outpatient consultation without having ever booked an appointment.

Other incidences of mismanagement also include medication. For instance, the hospital received 402900 dinars in medication between the years of 2012-2015 from the Omran Polyclinic that have not been registered within the hospitals inventory. Additionally, the hospital received medication that is estimated at 156400 dinars for patients, between 2013 and 2015, that have already died, including 55200 thousand dinars that the hospital denied having received, despite records showing one of its staff signing for it.

Figure 57: Mismanagement at Aziza Othmana¹⁵²

¹⁵² Court of Auditors. "The 31st Annual Report," December 2018.

Conclusion

This paper uses public health indicators and statistics to examine the strength and sustainability of this vital sector. All indicators suggest that a public health crisis was inevitable in the face of exogenous factors that would put stress on the whole system at the same time. While public expenditure on health has nominally been growing in post-revolutionary Tunisia, public health spending suffers three grave faults.

First, public health spending has not kept up with population growth, which is clearly demonstrated through the retreat of per capita spending from 170\$ in 2013 to 144.3\$ in 2018. Second, investment in the public health sector is minimal, which has left the staff of public health institutions incapable of providing the necessary treatment at the right time due to the lack of equipment and medicine. Last but not least, while Tunisia often ranks higher than average in many indicators lower-middle-income countries, the distribution of public medical services and infrastructure remains severely unequal between regions, this disparity has not only been critical in the outcome of the Covid-19 pandemic, but it also continues to impact the delivery of day-to-day medical services.

Austerity refers to a development model where the private sector is the main lever of growth in an economic vision where the market, through free and undistorted competition, is the regulator and main driver of development and investment. In a country that suffers greatly from poverty and inequality, this neoliberal austerity model of development that the health sector has followed has caused significant suffering and damage to generations of Tunisians. The adverse impact of the commodification of health services, which is conditioned by the profit incentive, became most apparent through the inability of the abandoned public sector to match the scale of the crisis and the unwillingness of the private sector to provide the necessary support at one of the darkest hours of Tunisian history.

It is through the indicators explored in this paper that we see that the previous decade of austerity inhibited the remedying of the existing inequality in access to services across the country while also weakening public health structures across all regions. During this decade, there was only one new district hospital and 85 basic health centers built, while the number of public regional hospitals decreased from 33 to 31. It is true that hospital capacity in the country saw an increase of 6% between 2017 and 2019 going from 26,795 to 28,320 beds. Yet, most of this growth was in the private sector (17%), versus the public sector's meagre growth (3%). However, even if we don't take into consideration the heavy financial barrier, it should be noted that access to the private sector is

unequal at the regional level as 90% of private clinics are located in coastal areas. This inaccessibility of health services has not only been critical in the outcome of the Covid-19 pandemic, but it also continues to impact the delivery of day-to-day medical services years after the start of the pandemic.

Finally, though this paper addressed many issues plaguing the Tunisian healthcare system, many others have not been addressed, but it is important to acknowledge them. These include outdated legislation, unstable housing, poor nutrition, and traffic accidents¹⁵³ Most importantly, risk factors such as smoking and addiction continue to go untreated as 52% of men, 11% of women, and 23.7% of young people (ages 15 to 24) smoke, with these numbers increasing rapidly especially for women. 10 to 13% of adolescents report having consumed drugs at least once.¹⁵⁴

Other problems include the lack of communication with patients as service-users often feel like there is no respect for their dignity when seeking care in the public sector. Multiple witness accounts in the media, and during the social dialogue on health clearly show weaknesses in the process of receiving patients, a lack of respect for patient confidentiality and privacy, the difficulties that patients face in acceding information about their health and their rights, etc.¹⁵⁵ In particular, Tunisian women are often denied their legal right to abortion at public hospitals and are often sent away to the private sector.¹⁵⁶

153 Association Tunisienne de Défense du Droit à la Santé. "Rapport Sur Le Droit à La Santé En Tunisie," Octobre 2016. <https://ftdes.net/rapports/ATDDS.pdf>. Page 6

154 Ibid. Page 17

155 Ibid. Page 7

156 Maffi, Irene, and Malika Affes. "The Right to Abortion in Tunisia after the Revolution of 2011: Legal, Medical, and Social Arrangements as Seen through Seven Abortion Stories." *Health and human rights* vol. 21,2 (2019): 69-78.

Recommendations

The difficulties in financing public health are symptomatic of an unprecedented crisis in public finances in the country's recent history. Recommendations to help alleviate the crisis in public finance have been explored in other papers¹⁵⁷. But for the issues discussed here, we offer the following recommendations:

- The allocation of more resources to the public healthcare sector can be done through:
 - Allocating consumer tax (droit de consommation) revenues directly towards healthcare, as this tax is specific to products that are bad for health and the environment.¹⁵⁸
 - Increasing the progressivity of the income tax towards more brackets, and higher taxes on the high-income earners.
 - reimposing a 29% VAT rate on luxury products targeting the consumption of higher income households.
 - Developing and implementing a wealth tax.
 - Reviewing and decreasing inefficient tax incentives.
 - Investing in the human and material resources of the tax administration to minimize tax fraud.
 - Questioning private clinics to meet the challenges of future sanitary crisis.
 - Invest at least 15% of the national budget in public healthcare
- Channeling these revenues in investments in:
 - Human resources: a massive recruitment in health personnel at all levels; in the medical, paramedical, and clerks. Above all a better regional distribution of these resources, higher salaries, and more specialists (including mental health service providers)
 - Infrastructure with more beds, better equipment including heavy equipment and PPE, and a more equitable distribution of these resources. The Tunisian state needs to invest massively in the interior regions through building hospitals and clinics
 - Medication, along with better management of this component that can through a better role played by the National Body of Health Accreditation

157 Amine Bouzaine, "La justice fiscale, un enjeu de survie à la portée de la tunisie", Al Bawsala, June 2022, https://www.albawsala.com/ar/publications/rapports/20225132?fbclid=IwAR1HAw4zXu1T_YwkYjh3awF3FXRjiEn8ZqOelyBufE2hKSwjTuEyxAW9xJM

158 The spirit of the consumer tax law is to overtax products that are harmful to public health. This tax relies heavily on the taxation of tobacco, alcoholic products and hydrocarbons. Therefore, the allocation of its revenues for public health would be in line with the Organic Budget Law, which opens the possibility of creating a special fund as a legal exception to the principle of non-allocation

avoid instances of corruption and over consumption. This can be achieved (Instance National d'Accréditation en santé) in bettering the quality of services given. This body can ensure the development of best practice references of patient care, and through stricter accreditation of public and private healthcare facilities.¹⁵⁹ It is important to reinforce control efforts and to apply heavy sanctions against those who break the law and put other's health at risk.¹⁶⁰

- Prevention services such as creating a national epidemic response strategy that establishes and clarifies the relationship between the various state structures, investing in sexual and reproductive health education, increasing vaccinations, etc.
- The Ministry of Social affairs, specifically in its human and material resources so that it can reduce the number of the uninsured and better target vulnerable groups. The reduction of poverty can only be done through a comprehensive approach to the financial and health needs of all economically disadvantaged categories.
- Better water and sanitation services for all governorates and all inhabitants be they in rural or urban areas
- Combating gender inequality and addressing issues such as gendered poverty and the violence against women
- It is also vital to address the problems of mismanagement and corruption by:
 - Making processes such as procurement and allocation more transparent.
 - Investing in more control in these processes.
 - Digitizing these processes.
 - Creating templates for procurement contracts that will guarantee the state the highest standards of after-sales and consumer services including maintenance.

159 Association Tunisienne de Défense du Droit à la Santé. "Rapport Sur Le Droit à La Santé En Tunisie," Octobre 2016. <https://ftdes.net/rapports/ATDDS.pdf>. Page 8

160 Ibid. Page 9

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