

Good health and happiness: Medical equipment improves lives in Tunisia



Islamic Development Bank Group

Providing high-quality health services is a priority in every country. But for many years, Tunisia's people suffered from inadequate medical facilities, caused by a number of issues.

There were problems with the lack of modern medical equipment and beds nationally. Regional hospitals, located far away from the capital, Tunis, were even more under-equipped: there was an absence of specialized medical services; old buildings and equipment were out of date; and many lacked sufficient trained staff and managers, or adequate management systems. The medical emergency service subsector, the Service d'Aide Medical Urgente, was particularly underdeveloped.

In the face of these problems, the Government of Tunisia realized it needed to act. In 2003, the Islamic Development Bank (IsDB) stepped in to provide financing for essential medical equipment in 97 Tunisian hospitals. This has greatly improved the level of care provided throughout the country, benefitting around 3.6 million people.

Thanks to this argon laser, staff at Mahdia regional hospital can now treat patients who would otherwise have lost their sight.



The need to strengthen health services

The project aimed to strengthen Tunisia's health service provision through the construction of new health facilities, the expansion of specialized medical services, and the acquisition of supplies and medical equipment for regional hospitals.

Establishing universal health care and equitable access to health services has long been part of the Government of Tunisia's national strategy. This project contributed to Tunisia's '10th Development Plan (2005–2010)' for the health sector, which outlined the need to:

- ◆ strengthen referral systems and the national capacity to plan, regulate and monitor the health service
- ◆ improve resource utilization and the efficiency of service delivery
- ◆ decentralize health services to regional authorities.

There were seven main project components:

(1) new health facilities; (2) the provision of medical furniture; (3) the supply of medical equipment for the new hospitals; (4) new medical equipment for existing university hospitals; (5) high-technology medical equipment; (6) maintenance equipment; and (7) ambulances and specially equipped vehicles to access remote areas. Further components

included support for the Project Management Unit. Work began in 2004 and ended in 2010.

The total project cost was US\$77.29. IsDB provided US\$28.85 (37.4 per cent) through an instalment sale financing for the supply of medical equipment and vehicles. The Government of Tunisia contributed US\$32.57 (42.1 per cent) with a further US\$15.87 (20.5 per cent) from the European Investment Bank. Combined, this paid for the building of two new hospitals and two maternity units, specialized medical equipment and three blood-collection vehicles.

Together, these greatly improved people's access to high-quality healthcare. This in turn contributed to direct health benefits, including reduced maternal and infant mortality – maternal mortality in Tunisia fell from 44.8 per 100,000 live births in 2003 to 16.7 in 2012 – and increased life expectancy. Further benefits included improved knowledge among Tunisia's medical staff and management regarding new equipment and its use.

The number of medical facilities also increased. A post-evaluation report by IsDB in 2015 recorded that the Government's contribution to the project provided 2,733 new hospital beds, increasing the national stock by more than 16 per cent. By 2014, there were 19,632 beds in 174 public hospitals nationally – an average of 1.84 beds per 1000 inhabitants.



A new state-of-the-art echograph allows a doctor to accurately diagnose a medical complication.

A nationwide impact

The project benefitted the whole of Tunisia, including many inland and disadvantaged areas. The two new maternity centres were built in Kairouan and Kasserine, both small

towns in central Tunisia; the two new regional hospitals are in Bizerte and Tabarka. And the new equipment purchased with IsDB financing (see box) was distributed among 97 hospitals throughout Tunisia.

The Tunisia health services project by numbers . . .

US\$28.85 million – IsDB's contribution to the total project cost

2,733 – new hospital beds provided

2 – new regional hospitals

2 – new regional maternity centres

3.6 million – people benefitting from improved health services

97 – the number of regional, peripheral and university hospitals that obtained new equipment and vehicles directly through IsDB funding, which included:



6
scanners



19
X-ray units



57
operating tables



6
angiographs



22
endoscopes



33
ultrasound units



12
complete
dental units



26
dialysis
machines



38
cardiographs



14
defibrillators



30
ambulances



30
specialized
4x4 vehicles

“We want better health services for all the people of our region . . .

our children deserve improved health and better lives”

– Mr Aidi Moktai, Head of Equipment Supply, Kairouan regional hospital

New equipment saves lives

Situated 230 km south of Tunis, the Mahdia regional hospital serves a population of 440,000. For many years, it didn't provide any specialized services for these people. But since receiving a range of new equipment in 2004, it can now offer so much more to its patients.

"The new endoscope and ultrasound equipment allow us to make diagnoses that we could not before," explains Mrs Besma Ghodhbene, the hospital's Director. "Our gynaecology services [have also] improved enormously." This is a hugely important change: in 2014, the hospital delivered 5,143 babies – an average of 14 each day.

Other equipment provided by the project has allowed the hospital to undertake operations that were not possible before. "Our ability to treat ophthalmic and renal conditions is hugely enhanced," states Mrs Ghodhbene.

Other regions have experienced similar transformations. Before the project, few hospitals had scanners, forcing many patients to travel hundreds of kilometres for the accurate diagnoses of complicated issues that only a scanner can provide. The project provided six new scanners, which dramatically increased the nationwide availability.

And they have been well used: the new scanner in Kairouan regional hospital performed 41,527 scans from 2007 to 2015. According to Dr Abderahmen



The scanner in Kairouan regional hospital serves a population of around 1 million people. Without it, many patients would have to travel considerable distances to receive specialized diagnoses.

Daadoucha, who works at the hospital, this has been a major boost to the level of care they can provide. "Before, the situation was intolerable," he recalls. "We could just not be sure of certain diagnoses without a scan. And there was no alternative, except to refer patients to the hospital in Sousse [around 60 km away] three times a week." Now, the scanner caters to the whole region. "It has rendered a huge service for the people; sometimes, we perform 55 scans in a day."

"Having specialized medical equipment means that regional hospitals such as ours can treat many more conditions.

Before, [patients] would have to be transferred, sometimes hundreds of kilometres away"

– Mrs Besma Ghodhbene, Director, Mahdia regional hospital

A great leap forward in Bizerte

The new regional hospital in Bizerte, on Tunisia's Mediterranean coast, demonstrates the impact that investments in new infrastructure and services can have. In 2005, the town's old hospital was replaced with a brand new structure, built and equipped by IsDB and its project partners. The hospital, which serves some 800,000 people, now has the only scanner in the region and provides specialized services in a number of fields of medicine.

Dr Lotfi Jammel is the General Medical Supervisor at the hospital and has worked there for more than 20 years. To him, the changes are clear. "In the old hospital, we only had general medical services and some surgery. Now, we have specialized radiology, orthopaedic, cardiology, urology and gastroenterology services." The main advantage is that patients no longer have to travel to Tunis for specialized treatment, he says. "They can receive it here, nearer to their homes and families."

As well as the new equipment, the hospital's capacity has also grown. While the old building had only 70 beds, now there are more than 340. And before, they only had two operating rooms but the new building has seven, with at least three operations performed in each one, every day – sometimes many more. Dr Marnissi Wafa, the Supervisor of the Surgical Unit, believes "we have really seen a major advance in the surgical services here".

The figures support this. They performed 6,125 surgical interventions in 2014, and there were 19,092 admissions, 15,322 (80 per cent) of which were emergencies. They undertook 484,647 biological examinations and 73,403 X-rays. And there were 4,244 births, a quarter of which were successfully completed as caesarean sections. The new hospital has also created jobs: 1,017 staff are employed, including 638 paramedics and 51 specialists.

"There is no comparison – this new hospital has transformed lives. It has been a great leap forward for the region and a great benefit for its people"

– Dr Lotfi Jammel, General Medical Supervisor, Bizerte regional hospital



New specialized equipment for the cardiology unit has allowed diagnoses that were not previously possible at Bizerte regional hospital.

Saving sight – a true gift

The argon laser at Mahdia regional hospital has treated at least 1,600 people every year since it was installed in 2004. The equipment forms an essential part of the health service provision here, being the only ophthalmic unit in the Governorate of Mahdia. Without this, some 20,000 people may have otherwise gone blind, or faced the long waits, journey times and additional costs of travelling to a big city hospital.

And the demand for these services is increasing. As Dr Mahamad Anes, an ophthalmologist, explains, some 15–20 per cent of Tunisia's population is diabetic, and 40 per cent of these people have ocular-related problems. A major issue is diabetic retinopathy, a condition in which changes to retinal blood vessels cause them to bleed or leak fluid, distorting a person's vision. This is the most common cause of vision loss among people with diabetes and, if untreated, eventually leads to blindness

According to Dr Anes, a quarter of all the blind people in Tunisia are diabetic, so this equipment was urgently needed. "We see 80 to 100 people every day, around 15,000 every year," he says. "The laser and other specialized equipment, like the visual field machine, have helped us so much."



Mrs Bornia Ammar (left) is 73 years and was losing her sight. But thanks to the new ophthalmic laser, she will retain her ability to see.

Treating dialysis – an increasing urgent issue

Renal problems and the need for dialysis are an increasing problem across Tunisia. Mahdia regional hospital received its first two dialysis machines in 1996, and the project added a further four machines 10 years later. "But we could do with three more," says Dr Mbarek. "We take on 2,600 consultations per year, especially the very poor, whose costs are fully covered by the state."



Mr Hadi Haquoune.

One of these is Mr Hadi Haquoune, who has a regular dialysis session at the hospital. He appreciates the life-saving facilities he now has access to: "What alternative would I have if this service was not here?"

A secure space for mothers and babies

The new maternity centre at Kairouan regional hospital opened its doors in 2007, replacing a much smaller unit that was tucked away in the main hospital building. The floor space expanded from 800 to 3,000 square metres, which has greatly increased the hospital's capacity to deliver babies and treat complications during birth.

"Before, we used to have to refer a large number of patients to Sousse hospital, and this was not good," says gynaecologist Dr Ridha Fatnassi, who is also the Head of the Centre. "Now, we refer very few, as we can treat almost everything here. And with the new ultrasound unit, we are making 60 investigations a day to help with diagnosis."

In 2015, there were 8,163 live births at the new centre. These included 2,880 caesareans; in 2006, in the old unit, there were only 1,375. The number of gynaecological emergencies treated has also doubled.



Life can begin securely and safely at the new maternity centre at Kairouan regional hospital, which has been a lifesaver for many mothers and babies.

But this is still not enough. "We have a 124 per cent occupancy rate, with 70 beds budgeted – we often have to use an extra 40 beds," explains Dr Fatnassi. "And some of the equipment now needs replacing; it is an ongoing struggle."

Success factors

- **High relevance.** The project addressed immediate needs as identified by the Tunisian Ministry of Health, and targeted the regions, hospitals and services that required improvement.
- **Tailored solutions.** Responding to demands with clear, justified objectives helps to guarantee success. The Ministry of Health listened and responded to the needs of its regional hospitals and worked closely with its national health service. As a result, it successfully tailored the selection and acquisition of equipment to the needs of its people.
- **Good planning and coordination.** There was good coordination between the project partners, and agreement about the project's aims and protocols. The project also benefitted from good planning, programming and execution.

"The project provided

essential equipment

that has been very well used and
has proved so valuable"

– Mr Abdaoui Khalifa, Head of Equipment and Medical Supplies, Kairouan regional hospital

Lessons learnt

The project successfully modernized Tunisia's healthcare services and vastly increased the nationwide coverage of high-quality medical facilities. According to Mrs Sonia Khayat, Director General of Public Healthcare Facilities at Tunisia's Ministry of Health, the country now hopes that more local and regional hospitals will benefit in the future. The biggest needs are for a computerized national health information system and targeted training to manage it.

One issue that persists in Tunisia is the reluctance of doctors to work in regional hospitals, a problem that occurs in many other countries. But having modern equipment helps in this regard, and can attract specialists, doctors and interns to some of the country's remoter parts.

Sustainability was the main issue raised by doctors and hospital managers, however. The new medical equipment was – and still is – greatly appreciated and has proved very useful. But many machines now need maintenance, while others need replacing and upgrading. Budgeting for regular upkeep and repair (including basic spare parts) at the project outset could have extended the life of some machines. Healthcare is truly a long-term commitment.

Noun Project icons: Luis Prado, Lastspark, EpicCoders, Michael Thompson, Alex Tai, Patrick Morrison, Sergey Demushkin, Creative Stall

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