

A life-saving centre of excellence: The new Ibra Hospital in Ash-Sharqiyah, Oman



Islamic Development Bank Group

Before a new 200-bed hospital was built at Ibra, 150 kilometres and more than two hours' drive from the Omani capital, Muscat, health care for the people of Northern Ash-Sharqiyah Governorate was basic at best. To remind himself of what things used to be like, the hospital's Executive Director, Dr Abdullah Bashir Al-Manghi, keeps on his office wall a framed photo of one of its predecessors – the Al-Manzfa clinic, a tiny crumbling structure in a desert town, unrecognizable as a medical facility of any kind, which operated from 1964 to 1974.

Even then, local doctors and nurses did their best, but now for them – and more importantly for their patients – the world has changed very significantly.

A new general hospital

Conceived in the early 2000s, Ibra Hospital reflects the decentralized Omani national vision of quality health care in situ for communities and rural areas.

The plan was for a referral hospital with a range of services more typical of a big city than a provincial town with a population of probably less than 40,000 people. The new general hospital, with 16,000 square metres of floor space, would house an outpatients department, an accident and emergency unit, a fracture clinic, a premature baby and maternity units, a range of laboratories, a radiology service, dialysis facilities, a burns unit and operating theatres.

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who make it to Ibra Hospital will live





An as-yet unnamed baby girl in an incubator at Ibra Hospital's Special Baby Care Unit (SCABU). Her mother, Azhar Hamdan Al-Rahbi, went into labour three months early and was rushed to hospital by her husband. The child is off ventilation and gaining weight. The SCABU has many highly qualified and specialized doctors and nurses to look after its tiny charges.

The Islamic Development Bank (IsDB) support – via an *Bai' Al-Muajjal* or 'instalment sale'¹ worth US\$9.34 million – included all medical and non-medical furniture, computers and IT hardware, and five complete packages of medical equipment:

- Fixed medical equipment including CT scanners, X-ray machines, and laboratory and physiotherapy apparatus
- Portable medical equipment
- Piped medical gas
- Surgical instruments
- Biomedical and workshop equipment.

This represented 22 per cent of the total final cost of US\$42.2m; the rest of the project was funded by the Omani Government. Overall, the total bill for the project, which got underway in early 2002, came in just under 11 per cent less than the original estimate, with significant savings attributed to competitive procurement. Ibra Hospital opened its doors in April 2005.

The hospital is now being run on a highly sustainable basis. It has an independent power supply with four large diesel generators, and all buildings include a sustainable water supply

with a modern filtration system and advanced pumps. There is a yearly contract for the maintenance of all equipment supplied under the IsDB component of the project.

Medical care is provided free to nationals but the hospital charges expatriates (some ten per cent of all patients) fees that are comparable with private hospitals in Oman.

Rolling back death on the roads

To impress upon visitors just what his hospital can do and what it means for local people, Dr Al-Manghi likes to tell the story of Muthila, a little girl who was pulled out of a flooded wadi by her desperate father after being submerged off and on for 20 minutes and rushed to hospital in one of its state-of-the-art ambulances. In the language of the emergency room, she was clinically dead on arrival, "but we managed to revive her and she spent a week in our Intensive Care Unit," Dr Al-Manghi says. Now she's running around happily, he adds.

Even allowing for the sometimes extraordinary resilience of children, Muthila's is surely the

With this equipment, we save at least **ten babies** a month

kind of story that makes doctors like Abdul Nasser Awadh choose emergency medicine as a specialism in the first place. "We had more than 1,200 RTA [road traffic accident] cases last year," he says. "But we lost very few patients. Once they get here, we can resuscitate them immediately."

'RTA' is an acronym that hangs over Ibra Hospital day and night, 365 days a year, and presents its staff with both their greatest challenges and perhaps their greatest rewards. Near Dr Awadh, the emergency room's chief staff nurse, Ibrahim Abdullah Al-Sinawi, tidies one of its four modern defibrillators, used to administer controlled electric shocks to patients whose hearts have stopped. Frequently those hearts belong to young people – often young men who have just got their driving licences – brought to hospital on the edge of life after horrific crashes on the nearby Highway 23, the lethal single-carriageway main route to the capital and the rest of Ash-Sharqiyah in the other direction.

Vehicles might easily be converging at 250 kilometres an hour on '23', which Ibra Hospital was built alongside for ease of access. "The killer is speed," says Dr Awadh, "combined with hazards like reckless overtaking and animals wandering on the road." At any one time, say doctors, two of the eight beds in intensive care are likely to be occupied by RTA patients. But the likelihood remains that accident victims who make it to Ibra Hospital, often in air-ambulance helicopters, will live.

Indeed few of the hospital's modern facilities symbolize the transformation in the level of health care achieved in this part of Oman better than the hospital's paved and lit helipad, just outside the main entrance. "I guess we have an average of one helicopter movement a week," says the hospital's veteran Medical Adviser, Dr Prasada Rao Devisetti – adding a key detail that roughly as many air-ambulances arrive at Ibra Hospital with



Ibra's Hospital's helipad sees an average of one air-ambulance movement a week, but there are now just as many patients inbound as outbound.



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emergency cases as take off for Muscat with the relatively few cases the hospital needs to refer to the capital. He estimates that without the hospital, there would be at least 200 more RTA deaths each year in the region.

Even if it isn't one officially, Ibra now serves as a regional hospital, such is the quality and range of its services, including its four operating theatres. In general, the only referrals Ibra Hospital has to make to Muscat now are neuro-, plastic- and paediatric-surgery cases.

But success breeds success, of course, and thus even greater demand for health care than Ibra Hospital already faces. Managers agree that between them, the emergency and intensive care units provide the greatest scope for future development. Intensive care is exactly that: intensive. Trauma patients absorb a much higher

proportion of medical resources than others; the occupancy rate for its beds overall rarely falls below 85 per cent. For the doctors and nurses who specialize in trauma, the equation is simple: investment means lives saved.

Technology + love = the Special Care Baby Unit

Emergencies and intensive care are together only two areas, if very important ones, where Ibra Hospital can provide data on lives saved. Another is the Special Care Baby Unit, known to hospital staff as the SCABU.

When 22-year-old Azhar Hamdan Al-Rahbi went into labour three months early with her first baby, it was immediately clear the child was in grave danger. "From my green antenatal record card, I knew I was only 24 weeks," she recalls.

“I was very worried.” But behind her in Ibra Hospital’s high-tech SCABU, her as-yet unnamed daughter is now off ventilation and wriggling healthily in her incubator, opening her eyes and responding to her mother’s touch.

The girl, who weighed in at 740 grammes at birth, has just passed the one-kilo threshold. For Azhar and her husband, Husni Mubarak Al-Habzi – by coincidence a medical technician who, like many an anxious expectant father drove his wife to hospital as she endured her contractions in the back seat – relief and joy may just be getting the upper hand over concern. And some of that happiness is reflected in the face of Staff Nurse Sandhya George, who keeps a weather eye on the child from her station in the SCABU.

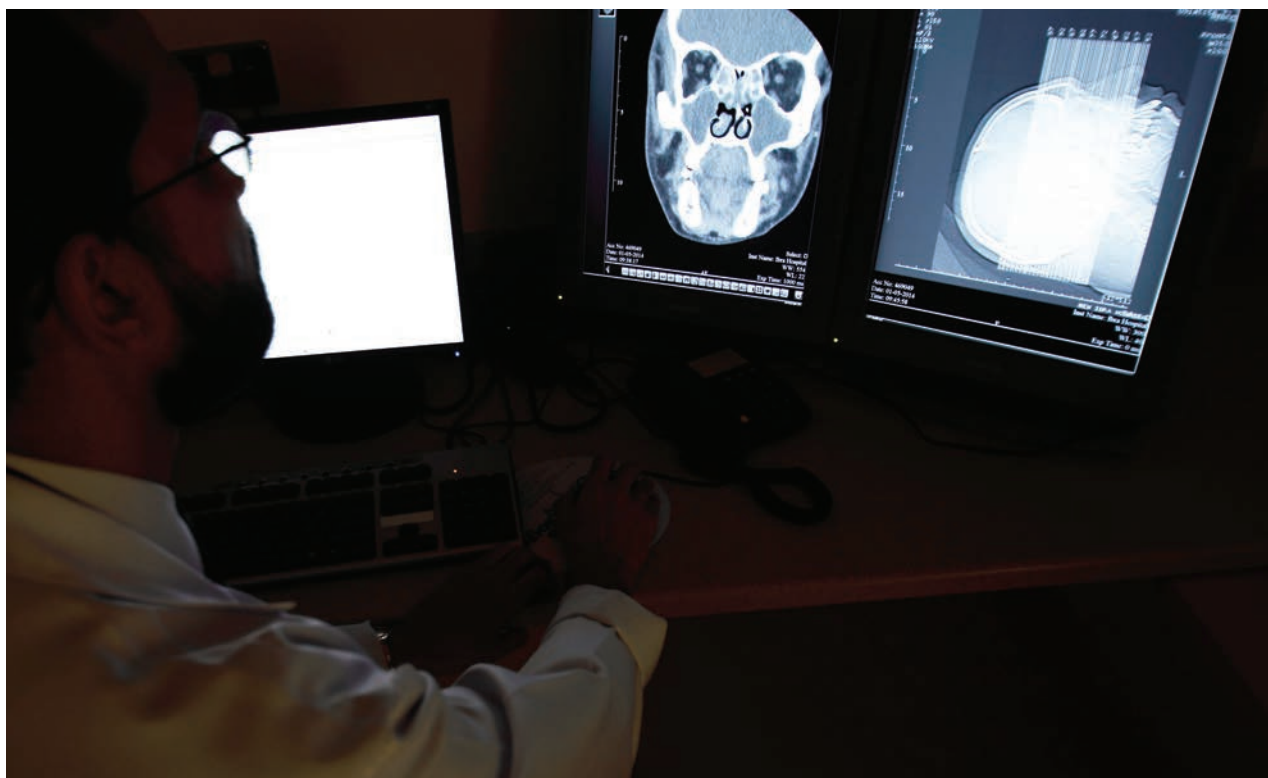
“Sometimes we have three premature babies a day,” says Dr Al-Manghi. “The key breakthrough was the SCABU’s ability to ventilate premature babies,” Dr Devisetti explains. “In the last hospital, they only had oxygen. The simple truth is that babies like Azhar’s would have had no chance of life. With this equipment, I think we save at least ten babies a month.” The new Ibra Hospital, unlike the old one, can also provide Survanta – an important medication for premature babies



Ibra patient Salaama Obeid Musalam Al-Harhi has been on dialysis for 15 years. But it has been an altogether better experience since the hospital opened its doors in 2005.

that helps activate their lungs. “Once, every day, we used to pray there would be no premature babies at all!” Dr Devisetti remembers.

The 18-bed SCABU is crammed with technology, including an ultraviolet phototherapy incubator for jaundiced newborns, whose cool blue light seems to lull the sleeping child within. The



Ibra Hospital’s chief radiographer, Mr Thampy K. George, looks at a PACS image of a patient’s deviated nasal septum.

specialist nurses in their pale orange smocks hover quietly around the cots. The staff–patient ratio seems ample and there is no atmosphere of stress or anxiety. All of which must be profoundly reassuring to the new mums sitting quietly on the sidelines.

It is also the case that, in addition to the invaluable contribution made by expatriate medical staff – from South Asia, for example – an increasing proportion of Ibra Hospital’s doctors and highly skilled nurses are Omani. A 2012 evaluation of the Ibra project found that 61 per cent of all hospital staff were local. Now, says Dr Al-Manghi, 65 per cent of the nurses are Omani, “and we hope to recruit more local doctors when they return from their training overseas.”

Revolutionizing radiography

Another important breakthrough – much talked about by medical staff, and one exclusively funded by IsDB – is the hospital’s ‘picture archiving and communications system’ (PACS).

In simple terms, PACS generates digitized X-rays that can be shared on the Omani health

‘Remarkable improvement’ in the picture on diarrhoeal disease

ministry’s secure database or emailed as DICOM-files or JPEG attachments. Gone are the days, at Ibra Hospital, when doctors had to clip negatives to illuminated viewing panels to see what was going on with their patients, who would carry their own X-rays around in large brown envelopes.

Doctors can now call up X-rays on their laptops – the saving in time and money is very significant, insists Mr Thampy K. George, Ibra Hospital’s Supervisor (chief) Radiographer.

PACS is one of the proudest boasts of the Director of the Ministry of Health’s Engineering Department, whose head, Mr Rashid Al-Hagri, explains that while Ibra’s PACS was the first ever

Ibra Hospital by numbers...

US\$9.34 million IsDB contribution under ‘instalment sale’ financing

22% Proportion of total project cost met by IsDB

250,000 Approximate population served directly by the hospital in 2013

200 Beds at full capacity

1,200 Road traffic accident (RTA) cases in 2013

200 Estimated number of RTA casualties who would die annually without Ibra

85% Average minimum level of bed occupancy

65% Proportion of Ibra Hospital nurses who are Omani

2 weeks Average maximum wait for a cataract operation

Success factors

Meeting a defined need

There was little doubt about the level of need for health care in the Ibra region before the hospital was built. The intervention was apt and timely, dovetailing well with the Omani Government's long-standing strategy of bringing quality health care to the provinces. Ibra is a large referral hospital, with a very wide range of specialisms available on site and able to offer a first class service. Established procedures in all departments enable quality measures to be standardized at a high level, meeting global standards.

Management

Even though it's now nearly ten years old, Ibra Hospital still feels new. Its wards and corridors are immaculate, even though the occupancy rate rarely falls below 85 per cent. The 2012 evaluation spoke of "good planning, management and follow-up from the Ministry of Health and hospital leadership." This surely remains the case today.

Professionalism

Even though Oman's public health service, like many around the world, is a diverse mix of nationalities and qualified local staff are still in

relatively short supply, it's clear that the hospital functions as one team with one purpose: to heal. More local medical professionals are being trained and coming online, however, and the government has approved an incentive plan to ensure that the specialisms needed at Ibra and elsewhere can be properly staffed.

Teaching

Ibra Hospital performs an important teaching role. There is continuous medical education on site for all medical staff, implemented and followed up by the hospital itself and the Ministry of Health. There is a lecture hall and external lecturers run courses. Administrative staff receive orientation and on-the-job training on equipment use in all departments.

Adaptability

The hospital has met rising demand for its services that is encouraged by its own success and reputation. Although originally designed as a referral hospital, it still provides primary health care – increasing the workload on both medical and administrative staff. Hundreds of outpatients visit the hospital every day for a huge range of treatments.

installed in a hospital in Oman, there are now eight such systems helping to revolutionize radiography nationwide.

"As a project, Ibra Hospital was very successful," he says. "Unless you have fit, healthy people, you cannot develop the country."

And the list continues. The hospital estimates it is able to save the lives of as many as 300 myocardial infarction patients every year. There has also been what Dr Al-Manghi describes as a "remarkable improvement" in the picture on diarrhoeal disease – not only because of better infrastructure for delivering water to rural areas but also because of the influence of regional medical centres of excellence such as Ibra Hospital.

Waiting times are down. "We're doing most cataract operations within three weeks now," Dr Al-Manghi adds. Many dialysis patients can

be treated locally. Patients like Aqib Masoud Nasser Beni Saad, 45, who travels 80 kilometres three times a week for his dialysis sessions – a formidable burden to be sure, but the alternatives would have been an even longer trek to Muscat and back or nothing.

When the hospital project was fully evaluated by IsDB in 2012, it was catering to a catchment area of some 200,000 people in Masirah, Al-Wosta and Al-Kamil Wa Al-Wafi regions – greatly reducing the need for seriously ill patients to travel to Muscat. But as Oman continues to grow and develop, that number has risen to at least a quarter of a million, according to Dr Devisetti.

"The contribution made by the IsDB is just so great," he says, "and I can say that because I know what was here before. The Bank sowed good seeds and they grew into a tree that bore very sweet fruit. There are just no other words."

Acknowledgements

This story is part of a series in the IsDB Success Stories Special Programme, implemented under the guidance and direction of H.E. the Vice President (Operations), Mr Birama B. Sidibe, and the Director of the Operations Policy and Services Department (OPSD), Mr Mohammad Jamal Al-Saati. The preparation of this success story was managed by Dr Intizar Hussain and Mr Muhammad Ismail of the Operations Policy and Compliance (OPC) Division of the OPSD at IsDB Headquarters in Jeddah, Saudi Arabia.

This success story document is based on the Report and Recommendations of the President for Consideration of an Installment Sale Operation for Ibra Hospital Project in Oman (2002) prepared by the former Country Operations Department-3 (COD-3) of the IsDB, and the 2012 Final Project Post-Evaluation Report prepared by the IsDB's Group Operations Evaluation Department (GOED). The story was supplemented by additional material from field visits to the country by Dr Omar Attiah

of the OPSD and Green Ink, facilitated by the Government of Oman (April 2014).

All direct and indirect contributions by colleagues (in particular Mr Abdelatif Chaieb and Mr Hassan Abdelmagid Musa of the Country Programs Department, Dr Mehtabunisa Currey, Mr Faisal Siddik and Dr Waleed Addas of the OPSD and the Group Operations Evaluation Department) and partners of IsDB for the successful implementation and evaluation of the project, and for the preparation of this document, are gratefully acknowledged.

The assistance is also gratefully acknowledged in Muscat of the Director of the Ministry of Health's Engineering Department, Mr Rashid Al-Hagri, and at Ibra Hospital of the Executive Director, Dr Abdullah Bashir Al-Manghi, the Medical Adviser, Dr Prasada Rao Devisetti, the Supervisor Radiographer, Mr Thampy K. George, and the staff and patients, especially, of the emergency, premature baby and nephrology wards.

¹ A credit sale of an asset, delivered on the spot, in which the purchaser can pay the price of the asset at a future date, either in a lump sum or in instalments.

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