

The first state-wide Health Information Exchange (HIE) in the Middle East

Orion Health Case Study:
Malaffi

Abu Dhabi

malaffi.ae



Customer Name

Abu Dhabi Health Data Services

Project Name

Malaffi (Arabic for 'my file'), The Abu Dhabi Health Information Exchange (ADHIE)

Location

Abu Dhabi, United Arab Emirates

Population

3 million

Organisation Type

Public Private Partnership

Connected facilities

411¹

Number of system users

More than 15,500

Products Implemented

Orion Health Amadeus (Health Information Platform)

Key Benefits

- Improved patient safety and quality of care by providing healthcare providers access to their patients' unified medical records
- Increased efficiency, patient experience and satisfaction by reducing unnecessary duplication
- Smoother transitions of care and better care coordination

¹ Statistics as of February 2020. The updated progress report is available on Malaffi's website: malaffi.ae/malaffi-progress-report

Abu Dhabi is the largest emirate in the UAE, and its capital, the City of Abu Dhabi, is also the federal capital of the UAE. The Emirate has an insurance-based healthcare system, with more than 2,000 public and private healthcare providers. The DOH is the regulatory body of the healthcare sector.

The Challenge

Healthcare systems around the world annually waste more than a trillion dollars of healthcare spend, from unnecessary administration, avoidable lab and radiology testing, and re-admissions of patients into hospitals.

Health information stored in silos

Prior to Malaffi, healthcare providers in Abu Dhabi were not able to seamlessly access and share patient information between their Electronic Medical Record (EMR) systems. Abu Dhabi Health Services Company (SEHA), the operator of all public healthcare facilities in the Emirate (including 15 hospitals), has used one EMR system since 2008², but information stored on it was not shared with other facilities outside of the SEHA network. ***In practice, doctors were still relying on patient testimonies to develop medical histories.***

The DOH recognised the need to centrally and efficiently store, exchange and analyse the enormous amounts of data being created in healthcare daily. They wanted to use advanced technologies such as machine learning and AI to drive this digital transformation of their healthcare system, for a happier and healthier Abu Dhabi. With this in mind, the objective was set to deliver a ***best-in-class HIE platform***, to guarantee the success of connecting all Abu Dhabi healthcare providers, with the ultimate goal to improve the quality of healthcare and patient outcomes.

The vision was to connect healthcare in Abu Dhabi to support communities on their journey to good health, happiness and prosperity. Malaffi is part of the DOH's strategic priorities and is a key component in the digital transformation of the healthcare system in Abu Dhabi.

² Gulf News: gulfnews.com/uae/health/unified-medical-record-established-in-abu-dhabi-1.61618374

The Customer

Abu Dhabi Health Data Services-SP LLC, a company established to design, develop, implement, maintain, and operate Malaffi, as Public Private Partnership between the Department of Health - Abu Dhabi (DOH) and Injazat Data Systems, a subsidiary ultimately of Mubadala Investment Company.

In August 2018, a public private partnership (PPP) was signed between the DOH and Injazat Data Systems, a subsidiary ultimately of Mubadala Investment Company, establishing Abu Dhabi Health Data Services, as the company responsible to deliver Malaffi. In November 2018, the DOH published the Policy on the ADHIE, and in January 2019, Orion Health was appointed as the HIE technology provider.

The Solution

Fastest HIE deployment in the world

Malaffi officially launched in January 2019, and only six months later, in July 2019, select users at the first healthcare providers started utilising the system. This short timeline makes Malaffi one of the fastest HIE deployments in the world. Malaffi provides the safe and secure exchange of patient health information that enhances the quality of healthcare and subsequently patient outcomes.

Adding value to clinical decision making

Malaffi was made accessible via a single sign-on function, which enabled users to access Malaffi from a tab within their EMRs. This displayed real-time information from its contributing systems. Initially, encounters, diagnoses, procedures, problems and allergy records were available through the HIE. Later, test results, radiology reports and medication details were added to the system to add more value to clinical decision making.

The Results

Since Malaffi has been live, there has been positive feedback from clinicians across the Emirate on how the HIE is improving both efficiency and quality of care. **As of February 2020, more than 15,500 end users have access to Malaffi and more than 400 facilities have been connected, which represents more than 50% of hospital beds in Abu Dhabi.**



I was able to spare a cancer remission patient from the inconvenience of repeating blood tests during a follow-up visit, as through Malaffi, I accessed the same lab results performed at a SEHA hospital one week before. For my patient, who had already underwent extensive testing and treatment, this was a big relief. For me, this meant that I was able to help my patient right then and there! What a win-win!

Dr. Rahul Goyal,

Family Medicine Physician, MedClinic Al Noor Hospital, HIMSS Future 50 International Leaders

Centralising the medical files of patients has been a positive step that will enable both public and private healthcare providers to gain access to the full medical history of patients, meaning fewer repetitive tests, and a more effective way for clinicians to make accurate diagnoses, especially for chronic conditions such as diabetes. Typically, people with diabetes take a lot of medications, so it is important to be able to control the patient's blood sugar levels and ensure they receive the proper treatment required, no matter which healthcare facility they are treated at.

Dr. Latifa Mohammed,

Family Medicine Consultant, SEHA

Our organisation currently operates two EMR systems – one for the outpatient clinics and another for the hospital. Through the implementation of Malaffi, we were able to integrate these systems which has allowed us to improve the continuum of care for our patients and to enhance the patient experience across the entire patient journey.

Majd Abu Zant,

COO of UEMedical Group, CEO of HealthPlus Specialty Centers



Malaffi empowers our clinicians to provide more accurate and informed diagnoses, which is paramount for providing better care and improving patient outcomes across our clinics.

This is specifically important for Danat Al Emarat because, as a maternity hospital, most of our patients come from another provider and system. Our patients benefit from having data securely and centrally stored which then means less administration for them to deal with and better care from physicians.

Mariano Gonzalez,
Chief Executive Officer, Danat Al Emarat
Hospital for Women and Children

Connected providers include SEHA: Mediclinic Al Noor Hospital; UEMedical group (Danat Al Emarat Hospital, HealthPlus Network of Speciality Centers and Moorfields Eye Hospital); Mubadala Healthcare (Cleveland Clinic Abu Dhabi, Imperial College London Diabetes Centre and HealthPoint); NMC and Kanad Hospital, with many more facilities in the onboarding pipeline. The platform currently safely and securely houses over 45 million unique patient records and connects seven unique EMRs.

Future Developments

Over time, the Malaffi roll-out will progress to connect all 2,000 public and private healthcare providers in Abu Dhabi. There will be a greater focus on clinical adoption and the development of analytics reports to support public health and population health initiatives.

There are ambitions to harness advanced technologies such as artificial intelligence and machine learning, to manage population health, reduce disease progression, promote prevention, improve health outcomes and ultimately prolong life.

Efforts to implement HIE platforms in the other Emirates that will connect with Malaffi are underway in the UAE.

Orion Health

Orion Health is a leading population health management company and the world's #1 HIE provider with over 55+ HIEs and customers in over 15 countries globally. Our population health solutions are used in over 30 countries by more than 300,000 clinicians.

Orion Health provides an open platform, which enables access to healthcare for more than 100 million patients globally. This platform delivers solutions for interoperability, population health management and machine learning for Health Information Exchanges (HIEs) worldwide.

Find out more at: orionhealth.com