

What is 'Precision Medicine'?

Historically speaking, pharmacologists, epidemiologists, oncologists and other medical scientists have focused on the disease or illness itself. After understanding everything they possibly can about it, they have then leveraged this information to create vaccines and treatment programmes aimed at preventing and curing it for the whole of the population.

While this one-size-fits-all approach has undoubtedly produced positive results, the digitalisation of our daily lives has led to a proliferation of data on all aspects of our bodies, our diets and routines. This, in tandem with new technologies like AI and machine learning, has created an opportunity for more targeted treatments to be developed. Collectively, this type of approach is known as "precision medicine" – and it's becoming increasingly popular in the UAE, the Middle East and beyond.

Precision medicine on the rise

Precision medicine has already been the subject of scientific research across the world for several years now. It has displayed impressive results in the fields of genomics, regenerative medicine and cancer diagnoses and therapies and its deployment is expected to be expanded to encompass a wide range of other diseases and ailments, both common and rare.

As a result of this widespread and growing influence, the value of the market is expected to enjoy a compound annual growth rate (CAGR) of 11% to reach \$142 billion globally by 2026. In the Middle East and North Africa (MENA) region, it's already estimated to have achieved a net worth of some \$2.51 billion this year by global data and insights experts Netscribes.

The MENA region is expected to benefit particularly from precision medicine in the field of genetics, due to the high predominance of defective genes among its local populace. This anomaly is thought to be the result of a disproportionately high rate of consanguineous marriages and could be assuaged with the use of more targeted and tailored treatment plans. That's especially true if a precise crucial allele reference genome is incorporated into them.

UAE leading the way

As with so many other aspects of healthcare innovation and technology, the UAE is leading the way when it comes to precision medicine. Dubai is home to the Mohammed bin Rashid University of Medicine and Health Sciences (MBRU). Along with the King Faisal Specialist Hospital in Saudi Arabia, the MBRU is one of few learning institutes in the region to have a dedicated biomedical and genomics research centre.

Meanwhile, the Abu Dhabi's Department of Health (DoH) launched the Personalised Precision Medicine Programme for oncology in June of last year. The programme is the first of its kind in the MENA region and is expected to provide a blueprint for others to follow, both on a continental and a global scale.

“Personalised medicine is certainly transforming the healthcare ecosystem for the better, driven by digitalisation and a rapidly rising corpus of knowledge that is redefining how we perceive the origins and development of fatal diseases,” [explains Dr Maryam Matar](#), who served as the chair of the Genetic Diseases Association at the Precision Medicine Exhibit and Summit last May. With institutes, initiatives and events like these, it's clear that the UAE will continue to serve as an inspiration in precision medicine and the wider healthcare sector for years to come.