understand how the heart works with each new case it examines. The ultimate goal is to automate heart disease diagnosis.

3. Telemedicine

Treating patients remotely is already part of the UAE healthcare landscape, with online and app-based medical consultations growing increasingly common. While these consultations still take the format of a video call with a real-life physician, AI is now allowing machines to take the lead via chatbots. When the AI-based app is used, the patient tells the app the symptoms he or she is experiencing. These are then cross referenced with a vast database of disease symptoms and signs to determine a diagnosis and whether a hospital visit is required. Solutions like this mean that patients can receive accurate medical care more quickly than in previous years, which in turn takes the pressure off healthcare systems.

Incorporating AI into practice

As mentioned, the UAE is developing the talent for tech specialists to work and establish companies in the UAE. The next step to successfully incorporate AI into the UAE's healthcare system is the development of clearly-defined ethical standards for the use of AI in healthcare. As we move into a new realm of healthcare, both clinicians and software companies will have to prioritize the safeguarding of patient data to ensure it is never used in non-health related capacities, that confidentiality is always maintained, and data is never passed to third parties without patients' consent.

A regulatory framework will need to be developed to achieve this, and training on best practice will have to be provided for health professionals. Finally, patients themselves will also need to be educated about AI, its advantages, limitations, and applications, while being reassured about the protocols that have been put in place to keep their personal information safe. The gradual introduction of AI into daily living is already occurring through smartphone operating systems and apps.

> **The recent appointment of the country's first Minister for Artificial Intelligence also suggests the UAE is focused on tapping into the benefits offered by using AI in medical research**

Healthcare providers can now build upon this by adopting user-friendly interfaces that are similar to those that members of the public are already used to. This should ensure they embrace, rather than fear, the increasing presence of AI in healthcare. The recent appointment of the country's first Minister for Artificial Intelligence also suggests the UAE is focused on tapping into the benefits offered by using AI in medical research. While AI will certainly impact research and training standards, it could also revolutionize drug development– speeding up a process that currently takes at least a decade and costs around US$2.6 billion per successfully developed drug.

Another key healthcare area that stands to gain much from AI is the training of doctors and medical professionals. With AI, computer algorithms could make adjustments to the types of questions that are asked to take into account the differences between trainees. In fact, AI can take its cue from a large database of different medical scenarios, adapting to different trainees, and learning from previous responses. This allows it to meet the individual needs of medical students and could make exams reflect more accurately the types of situation that doctors would face in a real clinic.

The Immediate Future

With recent survey results suggesting that two-thirds of the Middle East's public are happy to see AI systems being used in healthcare, I am sure new doctors with the ability to use AI tools will replace the old doctors who don't use these AI techniques. It's a change that the UAE's consumers seem ready for– even though many may not realize the full potential of AI in healthcare.

But with so many potential applications for AI on the horizon, what can we realistically expect to see in UAE hospitals and clinics in the near future? While only time can truly tell, the work of home-grown companies points towards AI-based screening of diseases like cancer as a fast-approaching change. And with the development of chatbots that permit quick at-home clinical assessments and diagnoses, it's likely that this service may also become more widely used in the UAE in the very near future. Regardless of which applications are first to market, it is undeniable that change is coming- and that means it's a very exciting time for the healthcare industry.