

## How Is the UAE Using Genomics?

---

One of the leading children's hospitals in the UAE has announced it will embark on a two-year trial of using genomics in critically ill youngsters in collaboration with an American expert on the subject. Al Jalila Children's Specialty Hospital, which is located in Dubai, has inked an agreement with Illumina, a California-based global leader in genomics.

The announcement was made to coincide with World Children's Day and the trial is expected to begin before the end of 2022. It is hoped that the study can help to shed some light on the effectiveness of the clinical use of rapid whole genomic sequencing (rWGS) in both neonatal and paediatric wings of hospitals throughout the region.

### What is genomics?

Genomics is the science of studying the sequence of genetic or epigenetic information in organisms and how these sequences relate to their bodily functions and development. Although genomics does not refer exclusively to human genes, but also those contained in plants, pathogens and vectors, the work carried out at Al Jalila will focus specifically on human child genomics.

Genomics have proven to be highly effective in diagnosing disorders in humans, with whole genomic sequencing an efficient and affordable method of gleaning as much information as possible from just a single test. As the name suggests, rWGS accelerates this diagnosis process and in the past, has shown positive results in over 50% of child patients.

### Al Jalila leading the way

The research will be undertaken by Al Jalila Children's Genomics Centre, which operates to the highest standards of accuracy, consistency and quality; indeed, its excellence is certified by its CAP accreditation. Using its ultra-modern laboratory and fully kitted-out clinic, it provides genomic testing and counselling services for both children and adults alike.

Now, it hopes to provide yet another breakthrough in the field through its pioneering trial with Illumina. The study will encompass 200 youngsters under the age of 18, some of whom will be infants and half of which are expected to be Emiratis by birth. Their parents will also be included in the research for segregation analysis purposes.

### Working with the best

Al Jalila has chosen to work with Illumina on this project due to the latter's lofty reputation in the world of genome sequencing. They will be offering their expertise in sequencing reagents and analytical tools to provide greater insights into the rWGS process and its results.

“This is an important partnership that could lead to significant breakthroughs in the way critically ill patients in the Middle East are treated,” [explained Dr Abdulla Ibrahim Al Khayat](#), CEO of Al Jalila. “The agreement demonstrates our intent to work with the best in the genome sector and leverage state-of-the-art technologies to help these genetically under-represented patients and their families from across the region.”