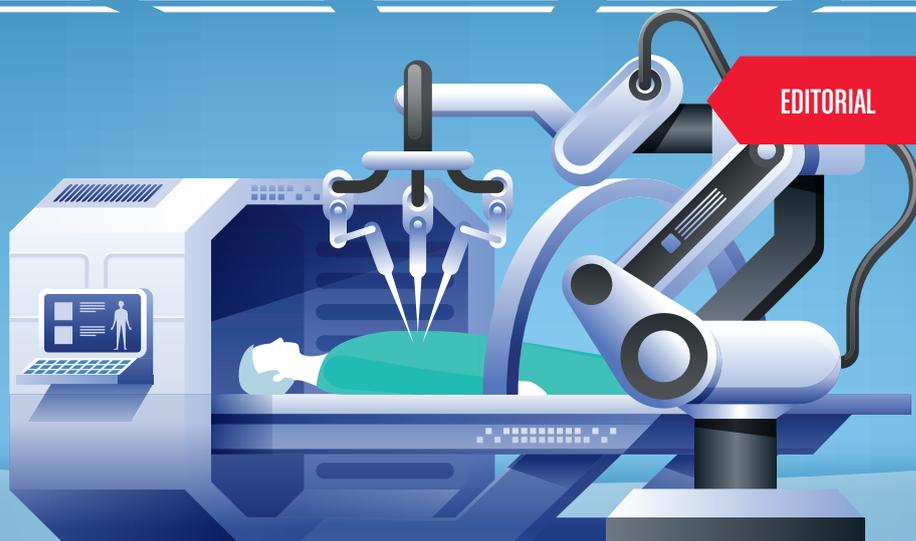


HEALTHCARE ADVANCEMENTS IN MALTA FOR 2019



If I were asked to pinpoint the main healthcare game changers in Malta for 2019, I guess I would mention the introduction of robotics at Mater Dei as well as the roll-out of blockchain technology and the related AI; obviously the ominous spectre of Brexit, which has already been discussed in the last editorial¹ will always be looming in the background.

Exactly three years² ago I have discussed the relevance of using robots in Maltese hospitals; so I was most happy that the last Budget discussed the introduction of robotic surgery in Malta in the forthcoming months, where their main use will initially be during laparoscopic procedures. In essence, robotic surgery uses miniaturized surgical instruments that fit through a series of quarter-inch incisions. These miniaturized instruments, together with a magnified high-definition 3-D camera, are mounted on separate robotic arms, allowing the surgeon maximum range of motion and precision. These arms are controlled from a console located in the operating room. Obvious advantages include less surgeon fatigue, less trauma on the body, minimal scarring and faster recovery time. However, as what happens with changes, resistance may be a challenge. To date only a handful of countries in the EU have adopted this technology so we are really at the forefront of this.

Challenge number two: blockchain. In 2018 the Maltese Parliament approved three laws on blockchain technology making Malta the first country in the world to create a legal framework, so that companies, which work with this technology, can start operating from Malta. Artificial Intelligence also has an important role to play in this ultra-secure store of information, which is blockchain, and

its distributed ledger technology. Artificial intelligence [incorporating failsafe automation systems] within the realm of blockchain has a pivotal role in reducing the incidence of algorithm failures and thus optimising the implementation of blockchain within the realm of healthcare.

In 2017^{3,4} I have already discussed the relevance of blockchain in healthcare. Important considerations include [1] Drug Supply Chain Integrity, ensuring provenance tracking; [2] Cyber Security, in line with Europe's new GDPR, where blockchain is poised to take its place at centre stage in today's economy, and [3] ensuring that blockchain-enabled, time-stamped records of clinical trials, protocols and results effectively address the selective reporting in clinical research - it has been estimated that as much as 50% of clinical trials conducted worldwide go unreported, often because the results are negative.

Not everything is rosy, of course. A major challenge which blockchain poses is the fact that medical data, especially images, are too large for current blockchain storage. But we can manage to overcome this, no? ❄️

Pan Ellul

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