

PRE-LEARNING OF ENGLISH IN PROFICIENCY ON THE SAMPLES OF NEW METHODS OF DRUG DEVELOPMENT IN THE USA

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Introduction. This article deals with the pre-learning of English in proficiency on the samples of new methods of drug development in the USA. Medical technology has come a long way since the invention of eyeglasses and the stethoscope. The broader availability of mobile internet, the expansion of a more affluent middle class, and an aging global population are all driving change in the healthcare industry, and the associated technology is changing faster than ever before. According to a profile of the healthcare industry by the World Economic Forum, more than half of the medical industry's workforce is projected to need at least some reskilling in the near future.

Aim. Many of the most interesting new technologies in medicine need to be used together, and integrated attempts to do so already exist. Some tech-inspired clinics, such as Forward and One Medical, take a concierge-like approach to primary care, putting technology to use in a way that providers get more quality time with their patients. But that is just the beginning. In 2020, the Covid-19 pandemic forced healthcare into the future, and, as a result, several promising medical technologies were tested on a massive scale. In 2021, the question is how those technologies can be used together in a post-pandemic world.

Materials and methods. The development of multiple safe and effective Covid-19 vaccines in less than a year may be remembered as one of the greater scientific accomplishments in human history. The process was sped along not only by regulatory fast-tracking but also by innovations in the ways medical trials are conducted: virtual clinical trials, held mostly online, eased the burden of participation. Combined with a spirit of collaboration rather than competition between pharmaceutical companies, they could pave the way for a bright future in drug development.

Some of the relaxed regulatory procedures around drug development will fade with the Covid-19 pandemic, but innovative approaches to testing and collaboration could linger. An alliance between several pharmaceutical heavyweights—including Gilead, Novartis, and WuXi AppTec—has already begun collaboratively exploring new antiviral treatments and sharing preliminary data. The FDA has released guidelines for virtual trials, opening up a new frontier for the development and testing of new drugs. Once Covid-19 is relegated to the history books, what's next?

Nanomedicine is the medical application of nanotechnology, the technology that operates on the atomic, molecular, or supramolecular scale. For something of such a small size, the potential is huge: nanomedicine has applications in imaging, sensing, diagnosis, and delivery through medical devices. Researchers are finding new ways to use nanomedicine to target individual cells, and in 2021, that research will be put into action. CytImmune Sciences, a leader in cancer nanomedicine, has recently completed a Phase I trial of using gold nanoparticles to target drug delivery to tumors; BlueWillow Biologics, a biopharmaceutical company, has developed nanotech that fights viruses and bacteria. But patients won't have to wait long to see a change: experts say 5G-enabled devices will rapidly bring on a new healthcare paradigm, nicknamed 4P, which is predictive, preventative, personalized, and participatory.

For decades, tricorders have been medical technology's version of the flying car: its origins are in science fiction, and the concept is both elegant and eminently useful. As far back as the 1960s, tricorders were imagined to be palm-sized devices that could quickly and accurately monitor a wide array of vital signs, while also performing simple diagnostics. Unlike flying cars, however, tricorders have finally made the leap from the screen and into users' hands.

Basil Leaf Technologies has rolled out a very real tricorder, known as DxtER. It can be used by the patient, in their own home, without any medical training. With a sophisticated diagnostics engine, DxtER pulls patient data from multiple sources and runs them through algorithms that recognize 34 different health conditions, including stroke, tuberculosis, pneumonia, and diabetes. Live long, and prosper. Digital assistants like Alexa and Google Home have changed the way people interact with technology; in 2021, those digital assistants are taking on a similar role in healthcare. Natural language processing and ambient listening have natural applications in the capture, analysis, and utilization of health data.

In 2020, Epic and Cerner, the designers of the two largest electronic health records (EHR) systems, began integrating voice-enabled virtual assistants on their software. AI startup Saykara has launched a new voice assistant that can listen to, and understand, a physician-patient conversation, without being prompted through voice commands.

The artificial pacemaker, which dates back over 100 years, is still a critical piece of medical technology: over a million patients use them. By delivering electrical impulses to heart muscle chambers, they can prevent or correct life-threatening heart arrhythmias. Remotely monitoring these devices is an essential part of their functionality. Traditionally, that monitoring has been far from optimal, relying on complex interfaces that the patient may not fully understand.

In 2021, pacemakers will get a little bit smarter. By enabling pacemakers with Bluetooth technology, they can be linked with smartphone-based mobile apps that patients better understand and utilize. That, in turn, will improve remote monitoring, and, as a result, patient outcomes. Medtronic, one of the largest medical technology companies in the world, has already rolled out its next-gen patient monitoring system for pacemakers. More will follow.

If it's taking too long to get samples to the lab, why not bring the lab to the samples? That was the idea of researchers at Stanford University, who recently developed what they call "a lab on a chip" based on CRISPR enzyme Cas12. About half the size of a credit card, it contains a complex network of channels smaller than the width of a human hair and can deliver a coronavirus test's results in under 30 minutes.

Results and discussion. Researchers say that the test could be modified to detect other infections, too, by recalibrating the CRISPR enzyme for a different genetic marker. As the Covid-19 pandemic taught the world, testing is the first step in combating infectious disease. With a lab on a chip, that testing can be done quickly, safely, cheaply, and more efficiently.

Wearable CGMs remove the need for intermittent glucose testing and instead keep track of one's blood sugar levels in real time. This allows users to see the immediate impacts of food and exercise, and shape their lifestyles accordingly. It can also catch cases of hyperglycemia immediately. Medical technology companies are jumping in with two feet: Dexcom, a CGM developer, had revenue of \$1.9 billion in 2020 and expects a 15 to 20 percent jump in 2021.

Conclusions. This article explores an underline focus on pre-learning of English in proficiency on the samples of new methods of drug development in the USA.

EPONYMS IN MEDICAL TERMINOLOGY

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Introduction. It is difficult to imagine a field of medicine that does not use eponymous names or eponyms. Most of the eponyms came into use in the 16th - 19th centuries, but are still actively used today.