

**“My goal is to help at least one million people over the course of my life”**

Zhaksybek Nurtlesov, Lecturer at Nazarbayev University’s School of Medicine and practicing physician, talks about current trends in medicine and what motivates doctors.

**- Zhaksybek, we’re all used to the fact that if someone from Kazakhstan goes to study abroad, it’s normally to learn about ‘corporate finance’ or ‘management’. You’re a rare exception! You got your medical education in London. Tell us what it’s like for a doctor to study abroad? What, in your opinion, are the main differences between studying overseas and studying here in Kazakhstan?**

- You're right: unfortunately, very few Kazakhstanis study medicine abroad. I went to study overseas because of my interest in the British system of medicine – evidence-based medicine was founded in the UK. Epidemiological studies and research in various medical areas constitute a huge layer of data which forms the basis of modern Western medicine. You can joke about it: we always hear ‘British scientists have proved that...’ but research in the medical field has led to – and continues to lead to – huge breakthroughs.

I was interested to learn in the home of evidence-based medicine, the place where medicine started at the level of facts and experiments verified by clinical experience.

When a patient comes to you, to come to a conclusion on what’s ailing them you need to look at all the possible factors. So I'm interested in medicine from the perspective of proper diagnosis.

**- Why UCL, why not another university?**

- UCL has a long tradition in biomedicine and the study of the nervous system. In contrast to Cambridge or Oxford, where patients and the clinical part stand apart, UCL doesn’t separate these aspects of the training. London is an international melting pot so you see many multinational patients with diseases specific to a particular genetic code, in particular the Mediterranean type or Africans. So training as a doctor in London means you get a rich mix of case studies and real patients.

When I moved to London, I was already a third-year student at a Kazakhstani medical university, but there I started again from year one, and studied for six years – which means that in total I spent nine years studying medicine, including a clinical internship.

After graduating last year, I returned to Kazakhstan and took a job at Nazarbayev University in the newly-opened School of Medicine in order to share my knowledge with other students. In parallel, I also work as a practitioner in general therapy to make sure I don’t lose the skills I spent so long acquiring.

Currently I face something of a dilemma: do I continue along the academic path or become a practitioner? If you remain an academic, it can be a bit boring, because you always work at the level of theory, so it’s important for me to do clinical work too. I aim to devote at least 30 per cent of my time to it.

In medicine, you can choose your niche, such as scientific activities, non-stop communication with patients, or opportunities to participate in various projects, including innovation. When I transfer knowledge to students, I realize that I am playing a part in qualitative changes – and I see this as a great mission. At the same time, I am involved in a variety of innovative projects with the aim of helping at least one million people.

**- You both teach at Nazarbayev University and work as a practicing physician. How would you assess the overall level of medical practice in Kazakhstan, and what do you think of the recent legislative changes in this domain?**

- Our healthcare system is certainly changing, and if we compare it to what was happening 20 years ago then yes, there have been positive changes, although the process hasn't perhaps moved as fast as we want. There have been structural changes: general practitioners appeared, and the clinical training requirement on completion of your studies has increased to three years. This means that before you start working, you're effectively on probation for three years or more. This is almost the same as the requirements in Europe. I'm sure it will affect the quality of healthcare. I also agree that a whole layer of problems cannot be solved purely at the legislative level. We'll need to introduce medical insurance to increase the resources available for medicine as well as introduce a quality assessment system for each doctor so that their salaries are linked to their results and to patient outcomes.

At the same time, in addition to legislation, we need to change the attitudes of medical staff. The Soviet healthcare system was fundamentally different from the Western system in that we didn't take a holistic approach to patient health. In the West, their approach to the patient is different: they examine their whole lifestyle and environment rather than just treating their symptoms.

**- Are you disappointed by what you see in practice working as a physician?**

- If I said no, I'd probably be lying. But I was disappointed in Britain, too. The British believe their medicine is outdated and needs changes. In the UK you can get a certain level of service for free, but if you look inside a hospital you will see that patients spend around three hours in a waiting room before they can see a doctor. So yes, we have a Soviet approach to service, but at least it is reasonably fast. The most frustrating thing for me is that in outlying regions patients have to buy antibiotics at their own expense because there are no medications in the hospitals.

Also, our nurses get 50,000 tenge per month while in the West their colleagues earn 2,500 pounds. This clearly affects the prestige of the qualification and the quality of the work they perform. We don't have enough doctors, and of course, it's difficult to expect that physicians will read additional literature and continue to study if their day-to-day workload is too heavy or their time is taken up with dealing with bureaucracy.

**- Why did you decide to go into medicine? Was it from a respect for tradition or from a desire to help people?**

- I was often sick as a child, and spent a lot of time in hospitals. Even back then, I could see that treatment was more effective when doctors were attentive to their patients. So that's why I decided to become a doctor.

**- You're currently engaged in research in the field of epidemiology. What exactly do you study?**

- Along with several other professors, we're looking at the active ingredients in Kazakhstani natural products. Natural products often contain 'good' bacteria, but we don't yet fully understand exactly what these are. Through our research, we aim to gain an understanding of what areas of medicine we can use this knowledge in. For example, honey is officially prescribed for burns, I mean a special variety of honey produced in South Africa, and has already been patented as a cure. After studying the same type of honey produced in Kazakhstan, we hope to be able to understand its medical value.

**- What specialists do you think we need today to create a critical mass for change in the quality of medicine in our country? It's no secret that the level of trust in doctors in Kazakhstan is very low.**

- I don't think it's necessary for more than half of our doctors become super-qualified. Somewhere between five and ten per cent would give us a sufficient critical mass to produce qualitative changes. For this reason, one of the missions of the School of Medicine at Nazarbayev University is to transfer best practices. Basically, treating patients, by which I mean prescribing a set of pills or performing some simple actions, is not that difficult. The most difficult thing is diagnosing correctly. Everything starts with making the correct diagnosis.

**- Medicine is an area that is currently attracting attention and investment from IT companies. What, in your opinion, are the main trends in medicine at the moment?**

- Despite innovations and the introduction of new technology in the field of diagnostics, nothing is possible without humans! For example, a person who feels pain cannot tell a machine or portal exactly where or how he or she feels pain. However, I personally welcome innovation, and believe physicians should be open to new technologies.

I think that a knowledge of programming language is becoming as much of a must-have today as a knowledge of English. IT will increasingly spread to medicine.

As for trends, I think medicine is going to become more specialized and customized. We will no longer prescribe aspirin to everyone – we already have genetic tests that show exactly which medications are more and less effective for a particular patient. This means that the medication we prescribe will vary from person to person, rather than the treatment being the same for everyone. We will develop an individual approach to medicine, with a focus on disease prevention.