## ACTUAL PROBLEMS OF INCREASING RESISTANCE TO ANTIBIOTICS AMONG CYPRIOTS

Tatis Anastasia, Timanyuk Iryna National University of Pharmacy timanjuk@rambler.ru

The people of Cyprus can buy antibiotics at any pharmacy without a prescription. Every Greek considers it necessary have in their first aid kit a pack of antibiotics, just in case. For example, on average a pack of Amoxil for Cyprus is €5. So it is no surprise that the Greeks have developed the highest levels of resistance to antibacterial infections such as e coli and klebsiella pneumonia: they are closely followed by the Cypriots. It means that Greek hospital doctors face a new threat, apart from staff shortages and lack of resources, a pneumonia causing superbug that most antibiotics can't kill and a population that has become immune.

The danger of the unregulated use of antibiotics has long been known, and as penicillin-based compounds fail to work, the drug companies are in a furious race to be one step ahead of the mutating bacteria. It is known that nine out of ten sore throats are viral and treatment by antibiotics useless and yet Greeks are used to using the pharmacy as a village shop. In small rural communities and on the islands the pharmacist, although highly trained, will often dispense drugs on demand.

The UK's Chief Medical Officer, issued a frightening warning this week saying the situation was so serious that she could envisage an 'apocalyptic' scenario where in 20 years people having operations would die from routine infections because we had run out of drugs to treat them. It has made her ask for the resistance to frontline antibiotics to be added to the government's national risk register of civil emergencies.

The problem is compounded now by a growing trend for people to self diagnose from the internet and then, even in the UK, where the dispensing of drugs is highly regulated, to order from companies online based abroad. What makes people do this is convenience. Too often people are frustrated by not being able to obtain

doctors appointments and then when they finally do they are told to go away, rest and take an ibuprofen. But workplace law means without doctors' certificates you lose pay, busy lives demand people to be on their feet 24/7 and people are frightened to call in sick for fear of losing their job.

Often enough antibiotic are purchased through e-commerce. Certainly this is one of the causes of antibiotic resistance movement, but on the other hand selling online increases competition. For example, competition between sellers will tend to be more vigorous when search costs, menu costs and transactions costs are low; and when buyers have a wide choice of suppliers. To some extent, these arguments do not fully apply to the market for community pharmacy services, as price and fee regulation limits the extent to which price competition can take place (see the following section). However, mentions that internet pharmacies (as well as mail order pharmacies and home delivery services) may have some additional advantages for consumers: prices, especially of OTC drugs, may be lower; privacy-sensitive medicinal products (e.g. contraceptives, incontinence products, AIDS inhibitors) can be ordered with more anonymity etc.

Chronic drug users do not have to go to a pharmacy every time they have to repeat their prescription. Furthermore, mail order pharmacies and internet shops typically form a competitive fringe that requires less sunk investment, even though the distribution must be conducted from a community pharmacy. Naturally, a prescription from physician or specialist is still required for obtaining prescription drugs from a mail order or internet pharmacy. The long-distance sale of drugs typically diminishes the ability for medication control by a pharmacist.

Related to this issue is the mandatory insurance coverage against medical expenses by consumers. This indirectly affects the structure of the market for community pharmacy services, as demand for drugs will be less elastic (in some cases even inelastic), leaving community pharmacies with some market power.

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