EU Doctors Turn to Last-Ditch Antibiotics as Resistance Grows

Doctors are increasingly having to turn to last-ditch antibiotics due to growing drug-resistant superbug infections in Europe, EU health officials said on Friday.

The problem is being fuelled by misuse of antibiotics by community and hospital doctors, according to the European Centre for Disease Prevention and Control (ECDC), which monitors disease across the European Union.

In several member states between 25% and more than 60% of bloodstream infections caused by one type of pneumonia bug were found to have combined resistance to multiple antibiotics, the ECDC said.

"For the patients who are infected with these bacteria, few last-line antibiotics ... remain available," said Marc Sprenger, the ECDC's director.

The Stockholm-based agency described antibiotic resistance as a "very serious threat to the health of European citizens" and one that leads to increasing healthcare costs, extra long stays in hospitals, treatment failures, and sometimes death.

Latest data from the ECDC show a "significant increasing trend" over the last four years in multi-drug resistant infections in more than a third of countries in the region, in particular those caused by Klebsiella pneumoniae and E. coli bacteria, the ECDC said.

K. pneumoniae is a common cause of pneumonia, urinary tract and bloodstream infections in hospital patients, while E.coli is a common cause of food poisoning as well as urinary infections.

The ECDC also warned that the percentage of K. pneumoniae infections that are resistant to the very last line of antibiotics - the class of powerful drugs known as carbapenems - is "already high and increasing in some EU countries".
To a large extent, antibiotic resistance is driven by the misuse and overuse of antibiotics, which encourages bacteria to develop new ways of overcoming them.

Experts say primary care doctors are partly to blame for prescribing antibiotics for patients who demand them unnecessarily, and hospitals are also guilty of overuse.

Latest data for 2010 show the highest user of antibiotics in Europe is Greece, which has a defined daily dose (DDD) rate of 39.4 per 1,000 people per day, while Estonia is the lowest user at 11.1 DDD per 1,000 people.

Between 2009 and 2010, three countries - Britain, Iceland and Latvia, showed an increase of antibiotic use outside of hospitals.

In can be a vicious circle.

Adding to worries that rates of deadly multiple drug resistant superbugs will rise further, the ECDC noted that consumption of carbapenems increased significantly from 2007 to 2010.

**Better news on MRSA**

Sprenger added, however, that there was some good news in data showing that in the past few years, infections with the superbug MRSA, or meticillin-resistant Staphylococcus aureus (MRSA), have either decreased or stabilised in most EU countries.

"Nevertheless, we must remain vigilant, as the percentage of Staphylococcus aureus resistant to meticillin remains above 25% in more than one fourth of the reporting countries, mainly in Southern and Eastern Europe," he said in a statement.

Part of the problem with growing antibiotic resistance worldwide is that there is little commercial incentive for pharmaceutical companies to invest in new drugs that may be held in reserve and only used as last-line weapons.

There are few new antibiotics on the horizon and experts are worried that only a few big drug firms, such as GlaxoSmithKline and AstraZeneca, still have strong antibiotic research and development programs.
Robert-Jan Smits, director-general for research and innovation at the European Commission, said the "worrying growth of antibiotic resistance ... calls for a dedicated research effort". He added that the Commission had put more money this year than ever into research on resistance.