

## **Abuse of antibiotics in viral and other infections as a reason for resistance in Republic of North Macedonia**

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**Introduction and goal:** Antibiotics are important drugs. Infections caused by bacteria (bacterial infections) can be successfully treated with antibiotics. Antibiotics can prevent the spread of the disease; also antibiotics can reduce the serious complications of the disease and prevent death as a possible course of the disease. But many antibiotics that used to be "typical" in treating bacterial infections are now ineffective or less effective. Some drugs do not work against some bacteria at all. When an antibiotic no longer works against certain types of bacteria, those bacteria are said to be resistant or "resistant" to antibiotics. Antibiotic resistance is one of the most serious health problems in the world that requires immediate solution.

**Methods:** We conducted a qualitative study on the social determinants of antibiotic use among community members in northern Macedonia to investigate how access to health care, health knowledge, and income influence patients' antibiotic use practices. The study included semi-structured interviews and a cross-sectional survey. The interview data and the survey of twenty participants were collected in July and August 2021. This study was embedded in a larger study with mixed methods of abusing and dispensing antibiotics among community members and health professionals.

**Results:** Antibiotics and the implications of their abuse were poorly understood by the participants. The low basic level of knowledge about antibiotics was consistent in a range of

educational attainment and health learning experiences at school. In the study, more than half of the participants stated that it was appropriate to discontinue antibiotics after relief of symptoms (65%). Although the populations surveyed are not comparable, it is important to note that 65% is much higher than the 37% found in a recent WHO study on antibiotic use. As in our study, low-income populations are particularly likely to support early cessation of antibiotic treatment. This may be due in part to the interaction between income and knowledge about antibiotics. If patients come from a low-income group and are unaware of the dangers of early discontinuation, it is a logical economic decision to stop taking antibiotics once the symptoms have disappeared.

**Conclusion:** The widespread abuse of antibiotics among these members of the community reinforces the importance of conducting research to develop effective strategies to stem the tide of antibiotic resistance in villages in the Republic of Northern Macedonia.

### **Biography**

Olumchev Sashko was graduated in 1998 at the Faculty of Medicine in Skopje, R. Macedonia. Worked in emergency medical care until 2006. At the Center for Public Health in Gevgelija since 2006. He worked as epidemiology specialist since 2010. Work with refugees from 2016 until today. He is been working in Covid Center from 2020 and Regional Immunization Coordinator since 2006.

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