

## Active surveillance on the pediatric antibiotic use in the age group between 0 and 2 years

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Recent data about pharmaceutical prescription (OSMED 2013) suggest an increasing consumption of antibiotics in pediatric patients especially in the age group between 0 and 2 years. The over-prescription exposes patients to an increased risks of side effects and drug resistance, both representing public health problems. Hence, the need to improve the activity of antibiotic prescribing, in particular in the pediatric population. It is well known that around 80% of respiratory tract infections have a viral etiology. Most international guidelines recommend a no antibiotic prescribing strategy or a delayed antibiotic prescribing strategy for patients with conditions such as acute otitis media, acute sore throat/acute pharyngitis/acute tonsillitis, common cold, acute rhinosinusitis and acute cough/acute bronchitis.

Unfortunately, the use of these drugs is not always based on scientific evidence, giving rise to significant problems in term of therapy efficacy and safety. The present Research Project, an observational, phase IV study promoted by the Regional Center of Pharmacosurveillance of the Regione Molise and managed and coordinated in full for the first time by the Family Pediatrician, aims to evaluate the prescription attitude related to antibiotics in the early pediatric population (0-2 years of age), to disseminate appropriate use of antibiotics in children, and to warn paediatricians about the possible iatrogenic illnesses caused by their improper use. In addition, the project represents a territorial survey of the prescriptive appropriateness and safety of these drugs in children, a necessary prerequisite to assess the risk-benefit ratio of their use.

In particular, we have assessed the antibiotic prescriptions in the pediatric patients of the Molise Region in 2013 between 0-2 years, the age range showing the highest trend for over prescription. We analyzed data from the 37 pediatricians of Molise, using a regional prescriptions database. The results obtained highlighted that 83% of the total pediatric population between 0-2 years, received at least one prescription of antibiotic during 2013. In particular, a total of 7.114 prescriptions were dispensed (60.950,16€ of cost), with amoxicillin/clavulanic acid as the first-choice treatment in 33% of patients.

The project will have a lifespan of one year in order to assess whether the 83% of prescriptions is appropriate in terms of either correct diagnosis or therapy efficacy; furthermore, this value will be compared with the prescription number after 2013.