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Letter to the Editor

Challenges and strategies in the prevention of dengue: A challenge for public health



Desafíos y estrategias en la prevención del dengue: un reto para la salud pública

Dear Editor,

Dengue, an endemic and epidemic viral disease transmitted by *Aedes aegypti* mosquitoes, is known for being the most significant arbovirus disease worldwide in terms of morbidity. These mosquitoes have developed adaptations to survive in urban and suburban environments, establishing close coexistence with humans in increasingly densely populated areas. Their ability to adapt is mainly manifested in high temperature areas and in the rainy season, when they reproduce in stagnant waters.¹

The origin or resurgence of dengue is attributed to the combination of various determining factors that facilitate the presence of the mosquito vector in the environment. These factors include changes in rainfall patterns due to climate change, limitations in vector control programmes, limited availability of drinking water, population growth and rapid urbanisation, inadequate waste management, shortages of healthcare personnel and population movements from one region to another.^{2,3}

The article "*Rapid diagnostic tests for dengue would reduce hospitalizations, healthcare costs and antibiotic prescriptions in Spain: A cost-effectiveness analysis*"⁴ argues that the introduction of rapid diagnostic tests for dengue would allow faster and more accurate identification of cases, which would facilitate timely and targeted treatment. The increased speed would make it possible for immediate local interventions, reducing the likelihood of outbreaks. In addition, it would avoid unnecessary treatments by differentiating dengue from similar diseases, thus contributing to the control of virus transmission. Early detection would also help drive the promotion of preventive measures in the community, strengthening public health and encouraging preventive practices. This measure would not only contribute to alleviating the hospital burden, but could also have a positive impact on the efficiency of the healthcare system by optimising resources and improving care for patients affected by this disease.^{5,6}

For this reason, I believe it is crucial to reinforce the care provided in primary healthcare, reserving hospitals for the most serious cases of dengue. Unfortunately, the lower levels of healthcare have been neglected for years and even more so in the context of the COVID-19 pandemic.⁷

In this regard, there are proposals for the implementation of education strategies and policies supported by both governments and the media in endemic tropical regions.⁸ This approach should start from the earliest stages of school, enabling children to acquire knowledge and disseminate information from a young age. In these initial stages, playful educational tools such as stories and

drawings depicting images of dengue symptoms can be used. At primary school, activities such as word searches and crossword puzzles related to the disease could be incorporated. For secondary school, training, orientation talks, field practice and role-plays with invented situations are suggested. Finally, at the level of higher education, interventions should aim to strengthen students' knowledge, with an emphasis on raising awareness about the importance of primary prevention.^{9,10}

Health promotion, as a key function of public health, generates an undeniable impact by promoting the perspective of addressing problems in comprehensive terms, involving the population in a joint and integrated way.

In summary, the problem of the dengue epidemic is complex, not only because of its magnitude, but also because of the various elements that have to be taken into account to control it. These elements are changing due to exclusionary policies and changes in social, economic, and even cultural aspects.

Ethical considerations

Informed consent was not required because the information was collected from secondary sources.

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Conflicts of interest

The author has no conflicts of interest to declare.

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Considerations to the comments on the recommendations of the Spanish Antibigram Committee (COESANT) for the preparation of Cumulative Antibiotic Sensitivity Reports



Consideraciones sobre los comentarios a las recomendaciones del Comité Español del Antibiógrama (COESANT) para la realización de los informes de sensibilidad antibiótica acumulada

Dear Editor,

In response to the letter from Brezmes et al.,¹ which raises important points in reference to the publication by the Spanish Antibigram Committee (COESANT)² on the preparation of cumulative antibiotic susceptibility reports, we would like to issue the following reflections.

The percentage thresholds of sensitive strains for recommending empirical use of antibiotics are disputed as they have to be adapted to the type of combination of microorganisms and antimicrobials, but also to the type of pathology, among other factors, which make it impossible to give a general recommendation. Both the publication mentioned by the authors³ and others⁴ highlight the need for different thresholds depending, above all, on the severity of the clinical signs and symptoms and on the antimicrobial. As such, thresholds of >80% may be valid, for example, for urinary tract infections and possibly >95% for severe infections such as meningitis.⁴ This is why the generic 80% proposed threshold must be considered with many nuances and should force us to be more restrictive in severe infections.

Moreover, one of the difficulties encountered by many clinical microbiology laboratories, following the new guidelines of the European Committee on Antimicrobial Susceptibility Testing (EUCAST),⁵ is to make it understood that the current category indicates that the antimicrobial is susceptible with increased exposure. The fact of highlighting the percentages in colours and marking the “S+Is” in yellow when the percentage of “S” alone does not exceed 80% but 80% is exceeded when adding the “I”, and only highlighting in green those cases where the “S” alone already exceeds 80%, may lead to the interpretation that the antibiotics marked in yellow behave as resistant and not as susceptible. This is the case, for example, for *Pseudomonas aeruginosa* in the table presented by Brezmes et al.,¹ where only aminoglycosides and colistin are shown in green while, for example, cefepime with 87% of I strains (susceptible with increased exposure) would appear in yellow, suggesting lower activity than those in green.

Although we appreciate the authors' attempt to improve the understanding of cumulative antibiotic susceptibility reports, we at COESANT believe that efforts should focus primarily on ensuring that these reports provide clear and quality information

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through homogeneous and standardised preparation in all centres, which is the intention of the recommendations published by this committee.

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