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## #ISICEM19: Custom-built antibiotic stewardship for the ED - Dr. Michael Pulia



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At the [39th International Symposium on Intensive Care and Emergency Medicine](#), Dr. Michael Pulia discussed the challenges of antibiotic stewardship. Dr. Pulia, Assistant Professor at the BerbeeWalsh Department of Emergency Medicine, serves as Medical Director for the ED antibiotic stewardship quality improvement programme at the University of Wisconsin.

At this year's #ISCIEM19 Symposium, Dr. Pulia pointed out that there was a need to implement antibiotic stewardship programmes that cover the emergency department. This is necessary keeping in mind the fact that approximately three-quarters of patients in the US are admitted to the hospital via the emergency department. Therefore, the initial diagnosis is typically handled in the ED, and this then dictates which antibiotics are prescribed downstream.

He also stated that antibiotic stewardship programmes that are designed for the ED should be led by someone inside the ED as they would have a greater understanding of the way emergency medicine works. Many times, the techniques and approaches used in the inpatient setting cannot be applied in the ED. This aspect could also be one of the reasons why antibiotic stewardship has not been a priority in the ED because existing programmes do not completely understand how the ED operates and what specific barriers physicians in the ED face with respect to antibiotic prescribing.

Based on his analysis and the research programmes Dr. Pulia has initiated, antibiotic over-prescription is seen more often in infections of the skin and soft tissue infections, urinary tract infections, and respiratory tract infections. In order to further understand the reasons for this trend of over-prescription, Dr. Pulia is conducting the largest clinical study using a heat-sensing camera to distinguish cellulitis from other nonbacterial skin conditions. The goal is to understand how physicians make prescribing decisions for skin and soft tissue infections. His analysis indicates that physicians tend to prescribe antibiotics if they see even a remote possibility of cellulitis. Dr. Pulia believes that it is important to train physicians to more effectively determine whether redness of the leg is related to cellulitis.

In addition, Dr. Pulia is also involved in investigating the use of procalcitonin in the ED to help distinguish between bacterial and viral pneumonia as this could help reduce antibiotic exposure for pneumonia and respiratory tract infections.

Dr. Pulia emphasised that hospitals need to implement their own antibiotic stewardship programmes within emergency departments because they are an important setting for stewardship.

Source: ISICEM 2019/ Dr. Pulia's presentation

Image Credit: University of Wisconsin

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