Another Way to Attack Bacterial Drug Resistance

By Ruth Kava — August 3, 2016

The fact that many species of bacteria are becoming resistant to our most widely used antibiotics is a matter of increasing concern to physicians and public health officials alike. According to the CDC, [1] "Each year in the United States, at least 2 million people become infected with bacteria that are resistant to antibiotics and at least 23,000 people die each year as a direct result of these infections." The organization also points out [2] that "up to 50% of the time antibiotics are not optimally prescribed, often done so when not needed, incorrect dosing or duration."

In the United States, physicians are urged not to prescribe antibiotics for ailments likely to be caused by viruses such as colds or influenza, because antibiotics won't affect them. But sometimes patients want antibiotics anyway — "just to be safe." What might help this situation is a quick test to determine if an illness is caused by bacteria or viruses, and thus reduce the unnecessary and ineffective use of the drugs for viral ailments. If a physician can tell a patient "this isn't caused by bacteria — this test shows it's viral," it might take some pressure off that prescriber's Some preliminary research [3] from an Oxford University affiliate in Vietnam suggests a way to do this.

Investigators used a rapid test (results in five minutes) for a marker of inflammation and bacterial infection called C-reactive protein (CRP). If an illness was caused by bacteria, the CRP level should increase, but shouldn't do so if it was caused by a virus.

They made the test available at ten primary care centers in Hanoi, Vietnam, and then followed antibiotic prescriptions made for 2000 patients who were or were not tested for CRP. There were significantly fewer prescriptions for antibiotics as a result of using the test, and the resolution of illnesses was not decreased.

Of course, this is is a preliminary study, and must be replicated in other settings. And other reasons for increased levels of CRP should be ruled out. However, if the results of further studies continue to show promise, the next steps would be developing a means to provide these tests in an efficient and cost-effective manner.