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George Institute for Global Health develops online tool for high blood pressure management

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Calculates the average treatment effect seen across hundreds of trials



A first-of-its-kind Blood Pressure Treatment Efficacy Calculator built on data from nearly 500 randomised clinical trials in over 100,000 people allows doctors to see by how much different medications are likely to lower blood pressure.

The research could transform how the condition is managed, allowing doctors to choose a treatment for each patient based on the degree to which they need to lower their blood pressure.

Speaking about the research, Dr Mohammad Abdul Salam, Program Head, Cardiovascular Research, The George Institute for Global Health, Hyderabad, said, “We cannot overlook the importance of controlling high blood pressure effectively and efficiently. Achieving optimal control requires a clear understanding of the efficacy of antihypertensive drugs at different doses and in various combinations. Without clarity on what we want to achieve and how to achieve it, we will not meet our targets. Guidelines define the target blood pressure, while our online tool helps identify which antihypertensive drugs are best suited to reach that target.”

The new tool helps overcome this challenge by calculating the average treatment effect seen across hundreds of trials. It also categorises treatments as low, moderate, and high intensity, based on how much they lower blood pressure (BP) – an approach already routinely used in cholesterol lowering treatment.

A single antihypertensive medication - still the most common way treatment is started - typically lowers systolic BP by just 8-9 mmHg, while most patients need reductions of 15-30 mmHg to reach ideal targets.

The next step is to test this new approach in a clinical trial, where patients will be prescribed treatments based on how much they need to lower their blood pressure, guided by the calculator.