

Typhoid Cost of Illness: Knowns and Unknowns

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Background: The cost of illness (COI) of a disease includes treatment costs borne by the healthcare system, insurance structure and individuals as well as productivity loss among affected people and their families. Estimation of COI is essential for economic evaluation of disease prevention and control activities that provides evidence for policy decisions. Here we describe knowns and unknowns about typhoid fever COI research based on literature review.

Methods: A literature search was conducted on PubMed and Embase following PRISMA guidelines to identify publications reporting typhoid fever COI. Selected studies are presented descriptively and a list of knowledge and gaps are developed in the area of study design, sample size, location, time and overall methodology.

Results: The review suggests that the current data on typhoid fever COI is scanty, primarily due to scarce and outdated studies. Only three studies from six countries, two conducted more than a decade ago and one with small sample size, presenting 442 episodes with 17 from Africa feed to the knowledge pool of typhoid treatment costs and productivity loss. Besides COI, the long-term sequelae of typhoid fever, frequency of complications and mortality, and its socio-economic implications are other knowledge gaps.

Conclusions: Typhoid fever surveillance programs form an ideal platform for conducting COI and following up on long-term consequences. Such platforms can be used for follow up of laboratory confirmed typhoid fever cases and healthy community control to collect the costs and socio-economic burden at family level for a long duration. These studies in Africa and Asia will help in improving economic burden estimates necessary for cost-effectiveness analysis to aid informed decisions on typhoid prevention and control.