

## Use of Thrombolytics for Acute Myocardial Infarctions in Resource-Limited Settings, Globally: A Systematic Literature Review

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**Abstract :** Background: As the global burden of disease shifts from infectious diseases to noncommunicable diseases, there is growing urgency to provide treatment for time-sensitive illnesses, such as ST-Elevation Myocardial Infarctions (STEMIs). The standard of care for STEMIs in developed countries is Percutaneous Coronary Intervention (PCI). However, this is inaccessible in resource-limited settings. Before the discovery of PCI, Streptokinase (STK) and other thrombolytic drugs were first-line treatments for STEMIs. STK has been recognized as a cost-effective and safe treatment for STEMIs; however, in settings which lack access to PCI, it has not become the established second-line therapy. A systematic literature review was conducted to geographically map the use of STK for STEMIs in resource-limited settings. Methods: Our literature review group searched the databases Cinhal, Embase, Ovid, Pubmed, Web of Science, and WHO's Index Medicus. The search terms included 'thrombolytics' AND 'myocardial infarction' AND 'resource-limited' and were restricted to human studies and papers written in English. A considerable number of studies came from Latin America; however, these studies were not written in English and were excluded. The initial search yielded 3,487 articles, which was reduced to 3,196 papers after titles were screened. Three medical professionals then screened abstracts, from which 291 articles were selected for full-text review and 94 papers were chosen for final inclusion. These articles were then analyzed and mapped geographically. Results: This systematic literature review revealed that STK has been used for the treatment of STEMIs in 33 resource-limited countries, with 18 of 94 studies taking place in India. Furthermore, 13 studies occurred in Pakistan, followed by Iran (6), Sri Lanka (5), Brazil (4), China (4), and South Africa (4). Conclusion: Our systematic review revealed that STK has been used for the treatment of STEMIs in 33 resource-limited countries, with the highest utilization occurring in India. This demonstrates that even though STK has high utility for STEMI treatment in resource-limited settings, it still has not become the standard of care. Future research should investigate the barriers preventing the establishment of STK use as second-line treatment after PCI.

**Keywords :** cardiovascular disease, global health, resource-limited setting, ST-Elevation Myocardial Infarction, Streptokinase

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