

Direct to Computed Tomography (CT) Protocol and Door-To-Needle Time: A Systematic Review

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BACKGROUND

- Door-to-needle (DTN) time is a crucial metric that measures the effectiveness of using intravenous thrombolysis in the treatment of patients with acute ischemic stroke (AIS) that come to the Emergency Department (ED).
- Implementation of a Direct to Computed Tomography (CT) protocol is a strategy to reduce the time it takes from when an individual arrives at the hospital until they receive treatment.

OBJECTIVES

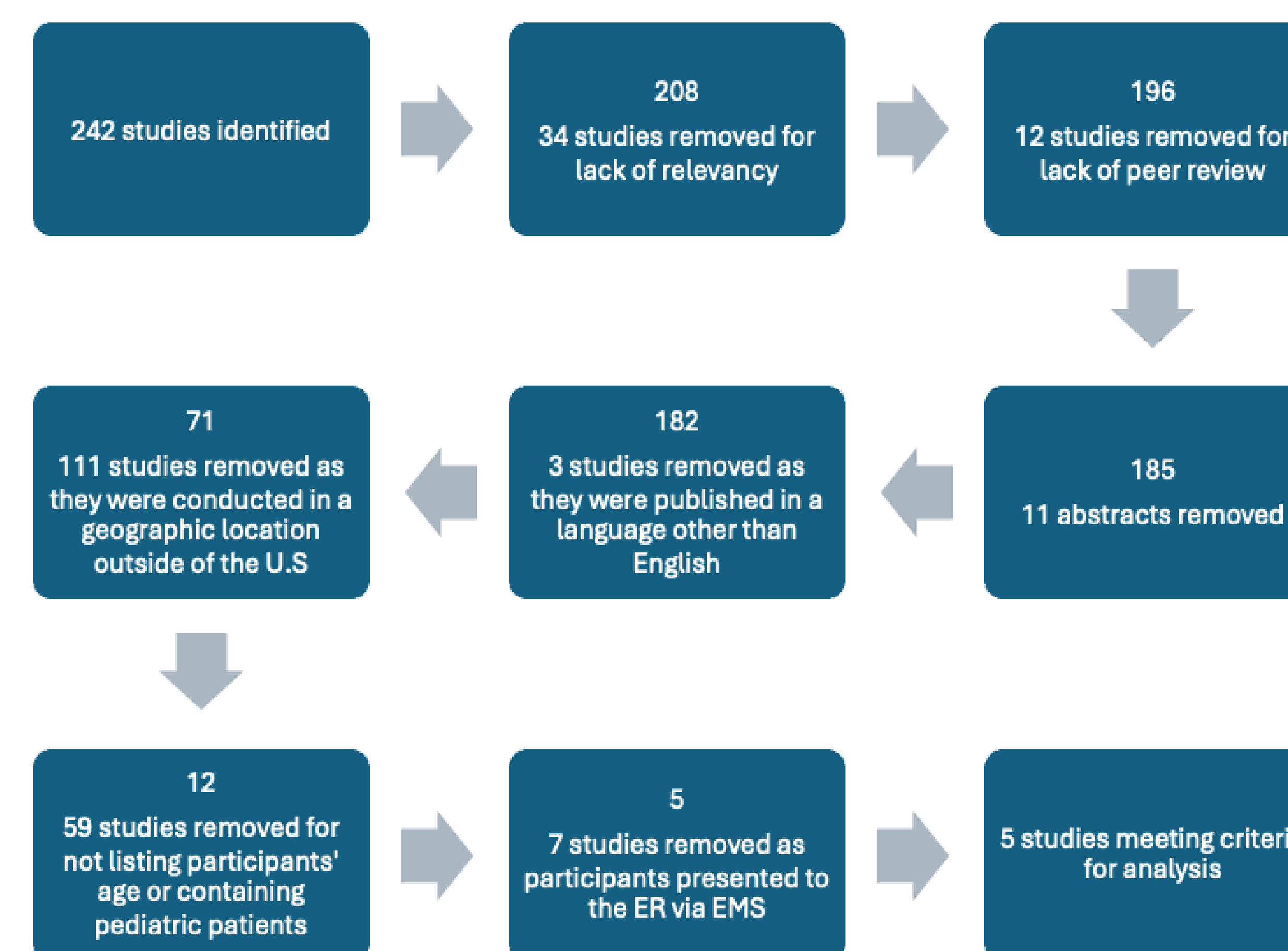
- To evaluate the effectiveness of a Direct to CT protocol in reducing the DTN time among patients that walk into the ED via triage and synthesize available best evidence in current peer-reviewed literature associated with direct to CT protocol and its impact on DTN time.



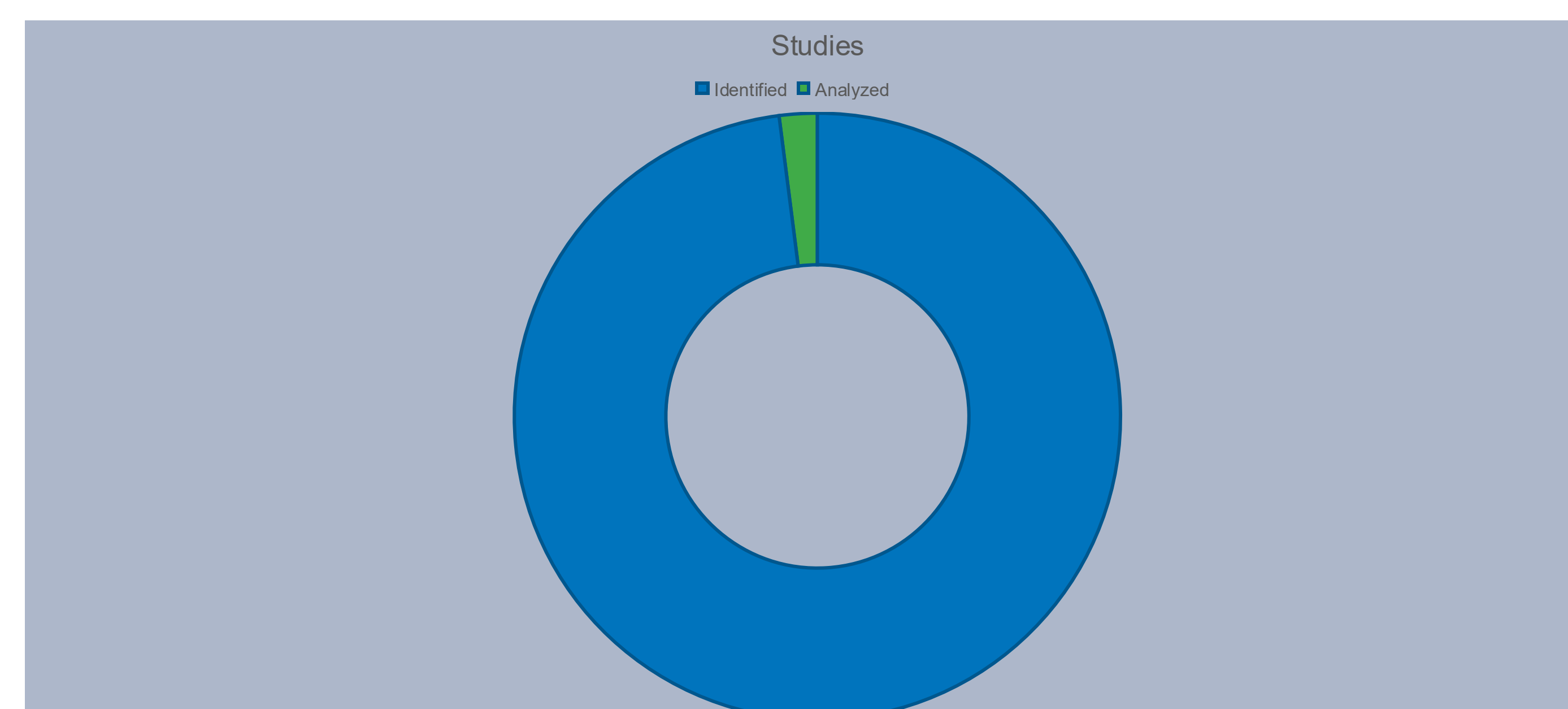
METHODS

- Online databases were accessed, including CINAHL, Cochrane, and Medline. Data extracted from the studies in the review are presented in narrative form and tables were used to summarize characteristics and findings of the studies.

Figure I. PRISMA flow diagram for included and excluded studies.



RESULTS



CONCLUSION

- Timely administration of tPA or tNK intravenously is essential to guarantee its safety and efficacy in the treatment of AIS. Research studies, offer an overview that a direct to CT protocol has a direct impact on DTN time in ambulatory patients who arrive at the ED.
- The research findings demonstrate a significant improvement in the overall mortality rates from the pre-intervention period to the post intervention period. These findings indicate that the reduced DTN time as a result of the Direct to CT protocol have a significant impact on health outcomes.
- The study found large opportunities to minimize DTN times by focusing on improving hospital processes to avoid system delays. By immediate screening techniques like direct to CT and eliminating unnecessary steps, prompt treatment is provided for patients with AIS. Implementing a direct to CT protocol for ambulatory patients arriving in the ED will reduce DTN time and decrease overall mortality rates compared to not having a protocol.

REFERENCES and FULL ARTICLE

References



Full Article



ENGLEWOOD HEALTH
THE KAPLEN INSTITUTE FOR NURSING EXCELLENCE

