Introduction:
There is a paucity of data assessing the impact on clinical outcomes of anticoagulation strategies for atrial fibrillation (AF) in the critical care population. This review aims to assess the existing literature to evaluate the effectiveness of anticoagulation strategies used in critical care for atrial fibrillation.

Methods:
A systematic literature search was conducted by searching MEDLINE, EMBASE, CENTRAL and PUBMED databases. Studies of adults based on critical care with a diagnosis of AF were eligible.

Results:
1119 studies were identified through the databases and 38 were reviewed by full text. 4 studies were selected for data extraction. A total of 44087 patients were identified with AF, of which 17.8-49.4 % of patients received anticoagulation. The incidence of thromboembolic events ranged from 0-1.4 % in the anticoagulated population and 0-1.3 % in the non-anticoagulated population. Major bleeding events were reported in 3 studies and occurred in 8.6 % of each of the anticoagulated populations. Major bleeding events occurred in 0-7.1 % in the non-anticoagulated groups. 30-day mortality in patients treated with vitamin K antagonists (VKA) was 22.9 % (21.3-24.6) and 30.6 % (28.9-32.4) for untreated patients. Annual mortality was 35.4 % (33.5-37.3) with VKA treatment and 46.3 % (44.4-48.3) without.

Conclusion:
Only 4 studies contained analysable data. Anticoagulated patients had a lower mortality at 30 days and 365 days post admission to critical care, however there was an increased incidence of major bleeding events compared to the non-anticoagulated population. Thromboembolic events were comparable in both cohorts. Data from current literature is scarce and inferences regarding the effectiveness of anticoagulation in patients in critical care with AF requires further investigation and research.