



<b>Title</b>	<b>Organizational and Economic Issues in the Management of Patients with Acute ST-Segment Elevation Myocardial Infarction (STEMI)</b>
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## Aim

To shed light on the scientific, organizational, and contextual issues concerning optimal management of patients suffering from acute myocardial infarction with ST-segment elevation.

## Conclusions and results

In Quebec, an estimated 4800 patients are hospitalized each year for acute myocardial infarction with ST-segment elevation (STEMI). The immediate cause of this serious condition is the occlusion of a coronary artery by a thrombus that must be urgently cleared to minimize irreversible damage to the cardiac muscle. Two treatments can be used for this purpose, fibrinolysis and primary percutaneous coronary intervention (PPCI), both of which are recommended in North American and European clinical practice guidelines. According to these guidelines and available evidence, it cannot be affirmed that one of these reperfusion methods is superior to the other for all patients in all clinical situations, at all times of the day. In this context, the best treatment for a particular patient will be that which is clinically appropriate and administered in a timely fashion, ie, within recommended delays. Such management depends on optimal organization and delivery of care and services.

This report examines the applicability of current evidence and clinical guidelines for Québec, by considering the context of care and related issues with respect to organization and resources, and describes approaches that can reduce delays to treatment.

## Recommendations

AETMIS recommends that: 1) fibrinolysis and PPCI be recognized as complementary modes of intervention where the choice of treatment depends on a variety of clinical and practical considerations; 2) treatment delays be minimized for both therapies, at each point of care from emergency medical services to the initial receiving hospital and to PCI hospitals that may re-

ceive patients for PPCI; 3) recourse to PPCI not be the preferred option when the expected door-to-balloon time exceeds the delay recommended in clinical practice guidelines, and that the initial decision to proceed to fibrinolysis or PPCI be based on an evaluation of the individual patient's risk profile and the anticipated delays to both treatments; 4) performance monitoring of prehospital ECG initiatives be implemented at the local, regional, and provincial levels; 5) pilot projects for the administration of prehospital fibrinolysis be considered, particularly in remote regions, as a strategy to markedly reduce delays to reperfusion; 6) interested and concerned organizations establish protocols of understanding and encourage discussion between the diverse participants in STEMI care and collaboration between hospitals and ambulance services; 7) training in emergency medicine and cardiology include theoretical and practical education on both reperfusion treatments; 8) performance be monitored at the provincial level across the continuum of care and that regular, timely feedback be provided to all caregivers involved; and 9) incentives be introduced to facilitate and reinforce appropriate use of fibrinolysis and PPCI by health professionals and institutions.

## Methods

Review of scientific and grey literature, synthesis and qualitative analysis of clinical guidelines, qualitative review of economic issues, and analysis of contextual data.

## Further research/reviews required

Economic analysis of STEMI management in Québec.