

Introduction

- The local "CODE STEMI" protocol involves early identification of STEMI patients via electronic interpretation of pre-hospital ECGs (pECG), pre-hospital contact with the interventional cardiologist, and direct transport to a PCI-capable center, often bypassing emergency departments (ED) in non-PCI capable centres

Objective

- To determine if paramedics can safely transport STEMI patients in a single municipality

Primary Outcome

- A composite of adverse events (AEs) occurring during transport, including cardiac arrest, hemodynamic instability, respiratory distress, decrease in level of consciousness, and need for diversion to the nearest hospital

Secondary Outcome

- Intervention by the paramedic

Methods

- This was a retrospective review of all EMS-transported CODE STEMI patients in 2010
- Patient demographics, vital signs, time intervals, and EMS training level were extracted into a study-specific Excel database
- Pre-defined AEs and pre-hospital interventions were also recorded in the database
- Patients were included if a STEMI was identified in the field
- Patients were excluded if there was no pECG, the pECG was non-diagnostic (including LBBB), if hemodynamic instability precluded CODE STEMI activation, or if the ambulance call report (ACR) was unavailable

Results

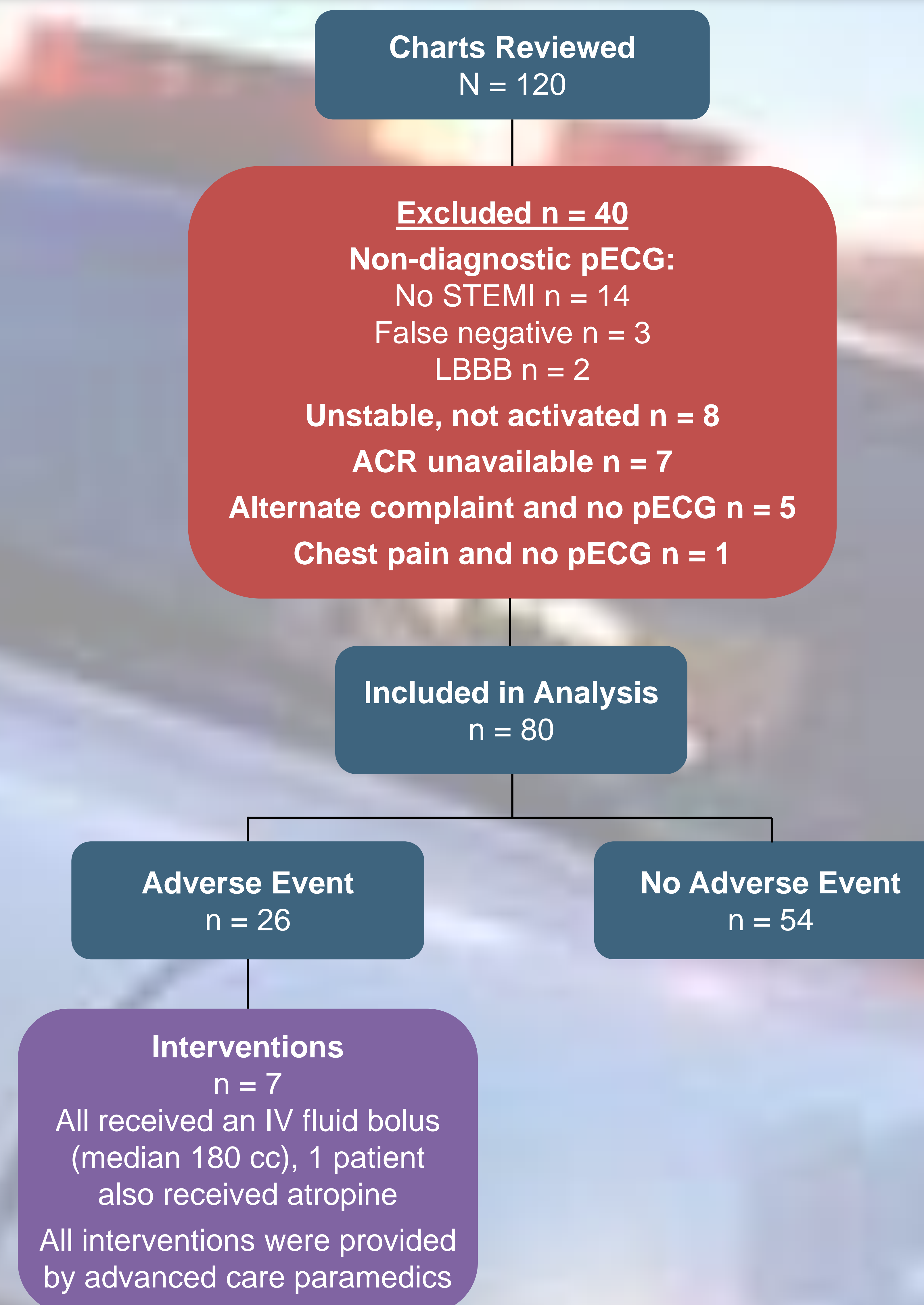


Figure 1. Flow diagram of retrospective findings

25 (31.2%) patients were transported by primary care paramedics

Table 1. A summary of AEs. 26 (32.5%) patients experienced a total of 31 AEs during assessment and transport

Adverse Events	Number
Hypotension (SBP < 90 mmHg)	13
SBP drop of > 30% without hypotension	5
Bradycardia (< 50 bpm)	7
Tachycardia (> 120 bpm) *	4
Decrease in GCS	2
Cardiac arrest	0
Diversion to nearest hospital	0

* One patient required conversion of rapid atrial flutter by the ED physician before PCI

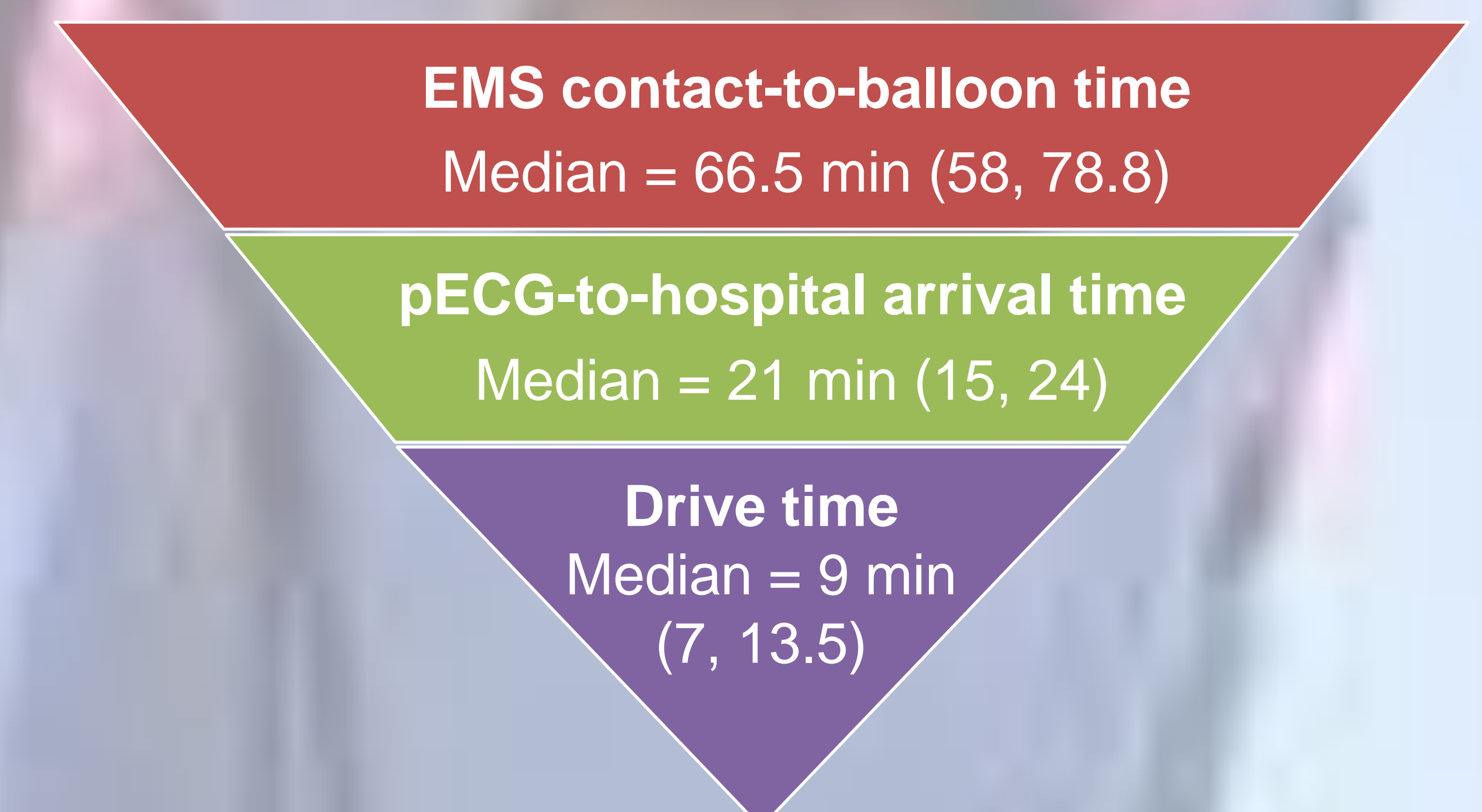


Figure 2. Median (IQR) pertinent time intervals

Conclusions

- A significant number of EMS-activated CODE STEMI patients experienced an AE during paramedic assessment and transport
- The number of interventions was low and no patients died
- The overall transport time was very short
- Further study is required for protocols allowing longer transport times to PCI-capable centres