

## Introduction

- Prehospital 12 lead electrocardiogram (pECG) acquisition is becoming an important component of the paramedic scope of practice in Ontario
- Valuable information can be captured with a pECG prior to any pre-hospital treatments
- By the time patients are assessed by an emergency department (ED) physician, symptoms may have resolved
- As a result, the initial ED electrocardiogram (ECG) may be normal

## Objectives

### Primary Objective

- To determine if the pECG can potentially influence the ED management of patients not experiencing a STEMI

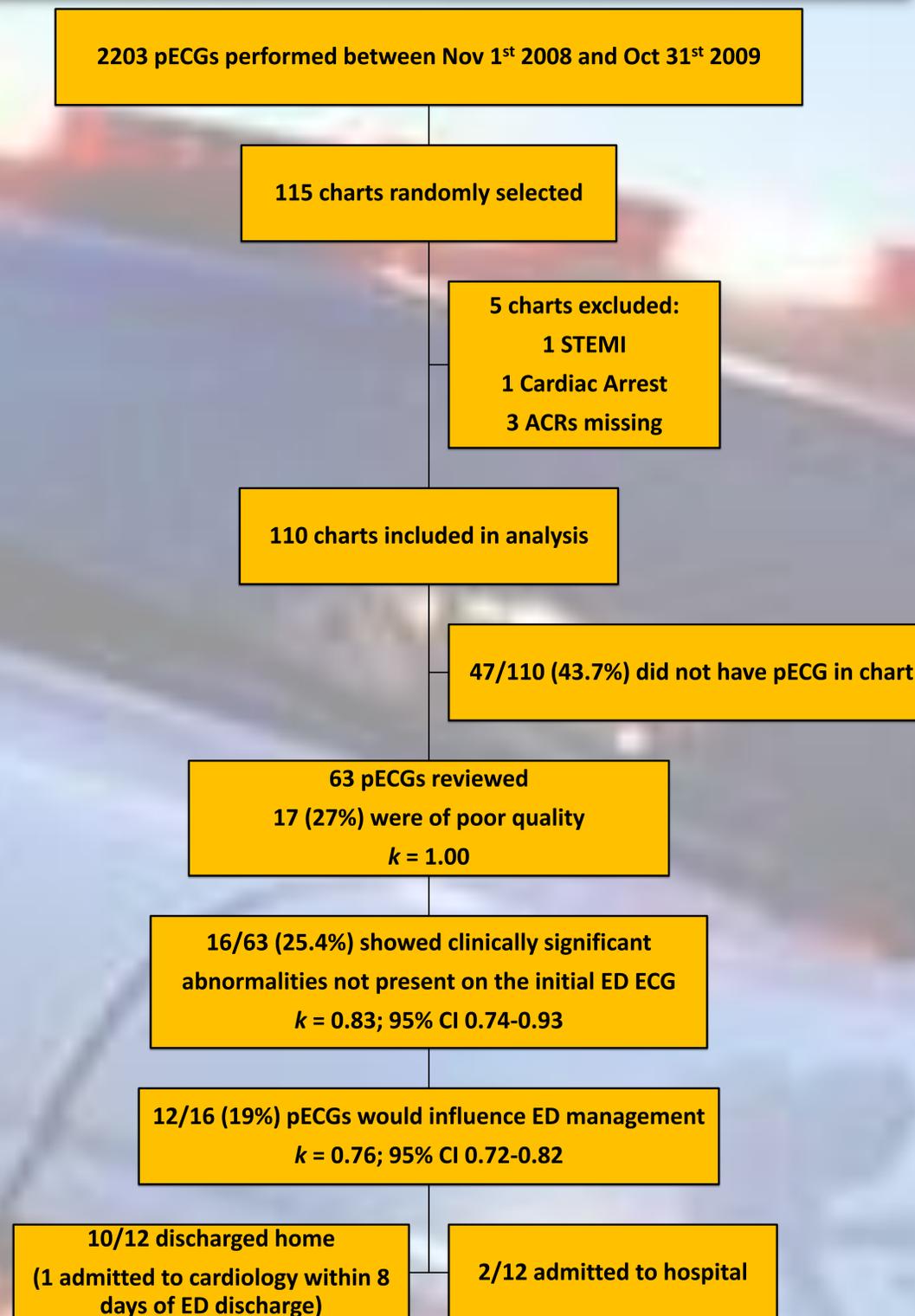
### Secondary Objective

- To determine how many pECGs are available and/or reviewed by the ED physician

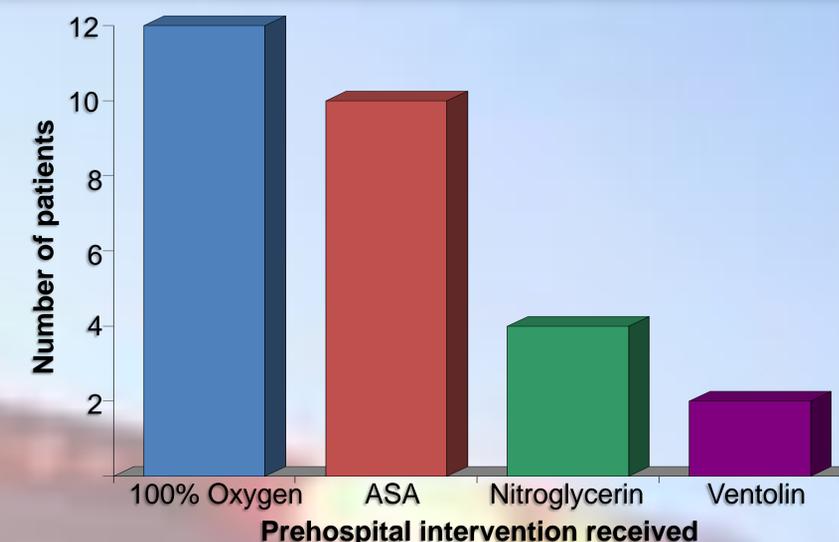
## Methods

- A medical record review was conducted for a random sample of 110 patients  $\geq 18$  years of age who had a pECG between November 1, 2008 and September 31, 2009
- **Exclusion criteria:** STEMI, VSA
- Prehospital ECGs were independently reviewed by 3 investigators trained in ECG interpretation
- Prehospital ECGs were compared to their first ED ECG to determine if there were any clinically significant abnormalities not present in the ED ECG
- If there were clinically significant ECG abnormalities present on the pECG and not on the ED ECG, reviewers determined if it had the potential to change their management
- Inter-rater agreement measured using Cohen's Kappa statistic

## Results



**Figure 1.** Flow diagram of retrospective findings



**Figure 2.** Prehospital interventions received for the 12 patients whose pre-hospital ECG had the potential to influence ED management

## Limitations

- Prehospital ECGs may be reviewed by ED physicians and influencing management, but not documented
- Mechanistic approach to “influencing” management

## Future Directions

- Develop a system to ensure the pECG makes it to the bedside and becomes part of permanent patient chart
- Prospective, quality assurance study to look at utility of the pECG

## Conclusions

- Prehospital ECGs have the potential to influence ED management
- Improvement in paramedic and ED physician documentation can be made