INDIRECT TRANSFER TO CATHETERIZATION LABORATORY FOR ST ELEVATION MYOCARDIAL INFARCTION IS ASSOCIATED WITH MORTALITY INDEPENDENT OF SYSTEM DELAYS: INSIGHTS FROM THE -PCI REGISTRY

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BACKGROUND

First medical contact (FMC)-to-balloon time is associated with outcome of ST-elevation myocardial infarction (STEMI). We aimed to assess the impact on mortality and the determinants of indirect versus direct transfer to the cardiac catheterization laboratory (CCL) independent of system delays

METHODS

We analyzed data from 2206 STEMI patients consecutively included in a prospective multiregional percutaneous coronary intervention (PCI) registry. The primary endpoint was 1-year mortality. The impact of indirect admission to CCL on mortality was assessed using Cox models adjusted on FMC-to-balloon time and covariables unequally distributed between groups. A multivariable logistic regression model assessed determinants of indirect transfer.

RESULTS

A total of 359 (16.3%) and 1847 (83.7%) were indirectly and directly admitted for PCI.
Indirect admission was associated with higher risk features, different FMCs and suboptimal pre-PCI antithrombotic therapy.
At 1-year follow-up, 51 (14.6%) and 137 (7.7%) were dead in the indirect and direct admission groups respectively (adjusted-HR 1.73 ; 95%CI 1.22-2.45).
The association of indirect admission with mortality was independent of pre-FMC and FMC characteristics.
Older age, paramedics- and private physician-FMCs were independent determinants of indirect admission (adjusted-HRs 1.02 per year, 95%CI 1.003-1.03; 5.94, 95%CI 5.94 3.89-9.01; 3.41; 95%CI 1.86-6.2, respectively).

CONCLUSION

Our study showed that, indirect admission to PCI for STEMI is associated with 1-year mortality independent of FMC to balloon time and should be considered as an indicator of quality of care.
Indirect admission is associated with higher-risk features and suboptimal antithrombotic therapy. Older age, paramedics-FMC and self-presentation to a private physician were independently associated with indirect admission.
Our study, supports population education especially targeting elderly, more adequately dispatched FMC and improved pre-CCL management.

Indirect transfer to catheterization laboratory for primary PCI for STEMI was associated with 1-Year mortality and cardiovascular mortality independent of system delays and pre-hospital characteristics of the patients
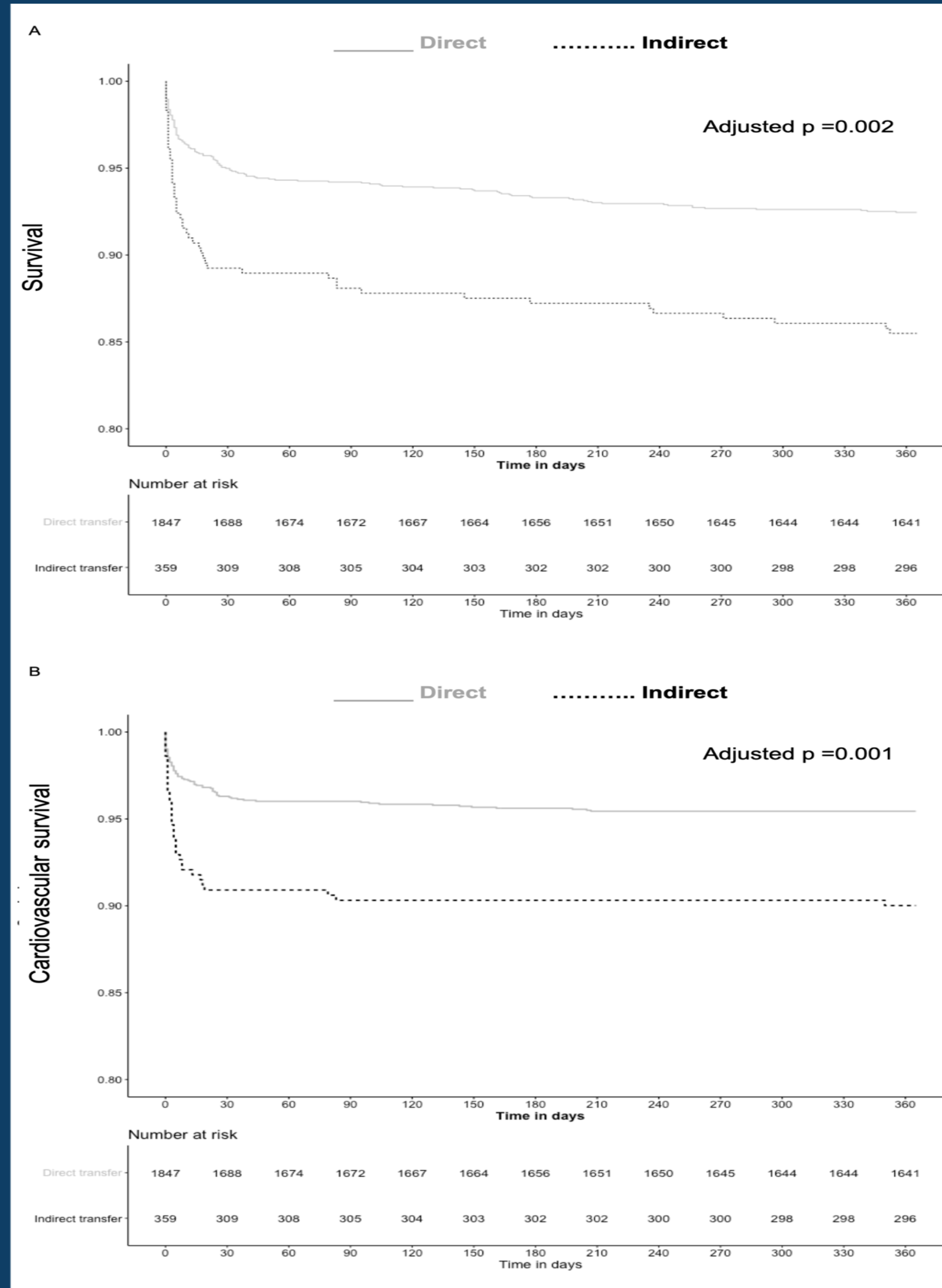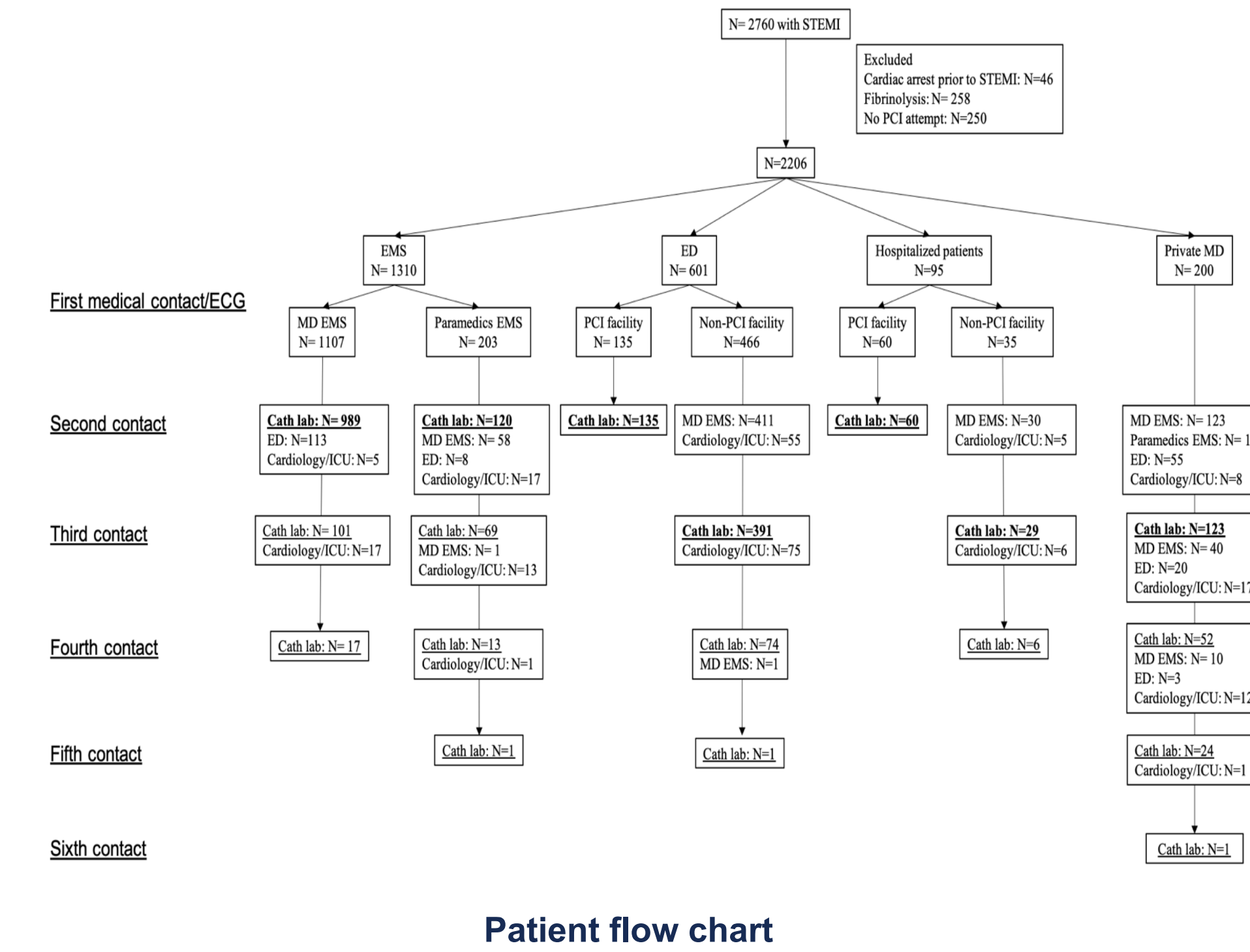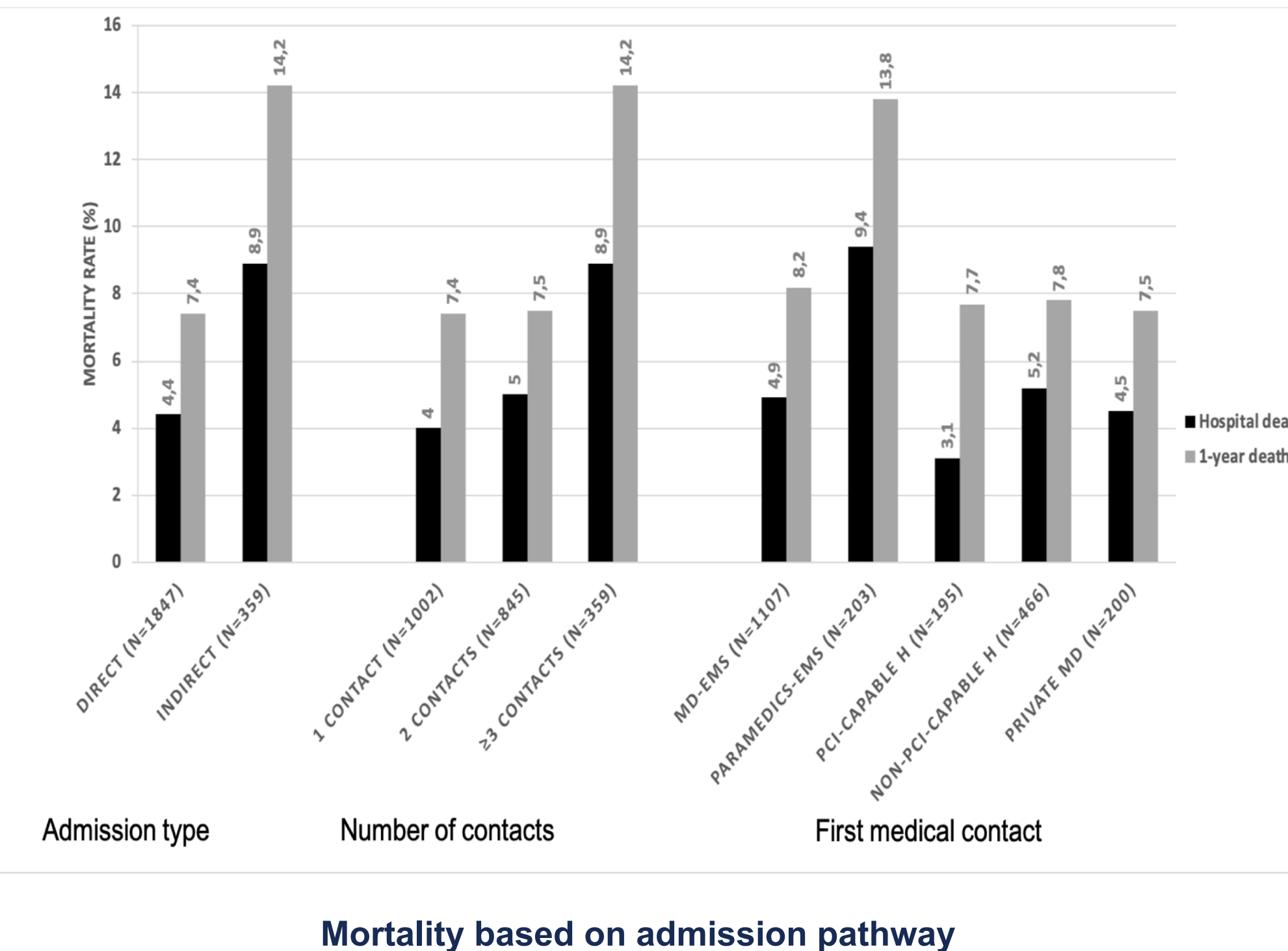

FIGURE 1

Patient flow chart

FIGURE 2

Mortality based on admission pathway

DISCLOSURE INFORMATION

None

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