The Family Income Ratio of Barcelona and its impact on treatment delays and one-year mortality in 3173 cases of STEMI treated at the Codi IAM network

H. Tizon Marcos[1], J. Marrugat[1], B. Vaquerizo[1], A. Ariza[2], R.M. Lidon[3], X. Carrillo[4], J. Garcia-Picart[5], J.F. Garcia-Munoz[6], R. Millan[1], N. Ribas[1], E. Menendez[7], X. Duran[1], P. Poirier[8], F. Mauri Farre[9]

[1]Hospital del Mar Medical Research Institute (IMIM), Barcelona, Spain; [2]University Hospital of Bellvitge, Cardiology department, Hospitalet De Llobregat, Spain; [3]University Hospital Vall d'Hebron, Cardiology department, Barcelona, Spain; [4]Germans Trias i Pujol University Hospital, Barcelona, Spain; [5]Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; [6]University Hospital Mutua de Terrassa, Terrassa, Spain; [7]Hospital del Mar, Cardiology department, Barcelona, Spain; [8]Centre de Recherche de IInstitut Universitaire de Cardiologie et de Pneumologie de Quebec, Quebec, Canada; [9]Department of Health, Barcelona, Spain

On behalf of Codi IAM investigators

Funding Acknowledgement: Type of funding source: None

Introduction: STEMI networks have spread reperfusion and have decreased treatment delays.Increased treatment times have a negative impact on mortality after STEMI.The Family Income Ratio of Barcelona (FIRB) is an indicator that combines economic and socio-cultural welfare that is annually documented at the different Barcelona's neighborhoods by the Barcelona Public Health Office.

Purpose: To evaluate if FIRB has a prognostic impact on STEMI treatment times and mortality on patients of Barcelona city treated in the Codi IAM Network with primary PCI.

Methods: Analysis of all data from "Codi IAM Network" from STEMI treatment in Barcelona city from 2010 to 2016 -including treatment delays, clinical risk factors and 1-year all-cause mortality- and corresponding FIRB for each patient and episode.FIRB is divided into tertiles.Multilevel analysis is performed to obtain factors associated to EKG-opening artery time and cox-regression on 1-year all-cause mortality.

Results: 3173 cases of STEMI were included with a mean age of 65±13, 25% women,21% diabetes mellitus and 42% hypertension.Characteristics of population, treatment and mortality per FIRB tertile is shown in Table 1.Multilevel analysis showed that age,diabetes mellitus,heart failure at admission,FIRB and who performed first care were associated to EKG-Opening Artery Time (all $p<0.003$).However,only age,heart failure at admission,who performed first care and EKG-opening artery time>120min were significantly associated to 1-year all-cause mortality ($p<0.005$) but not FIRB.

Conclusions: Patients at the lower FIRB treated for STEMI in Barcelona showed younger age,worse cardiovascular profile and longer treatment delays.Longer EKG-open artery time was associated to diabetes mellitus, heart failure, first assistance care and lower FIRB.One-year all-cause mortality was not associated to FIRB.

	Low FIRB	Mid FIRB	High FIRB	P
Age, years	64±14	65±13	66±13	0.025
Female sex, %	26	25	25	0.6
Diabetes mellitus, %	21	20	18	0.001
Hypertension, %	43	46	35	0.01
Dyslipidaemia, %	37	36	25	0.001
First assistance, %				
Ambulance	50	47	46	
PPCI-hospital	23	27	28	0.001
Family practitioner	19	15	12	
Killip I,%	76	79	79	0.09
EKG-Open Artery,min	89 (71–118)	85 (67–116)	83 (65–114)	0.001
1-year mortality, %	13	11	12	0.2

PPCI: Primary PCI.