

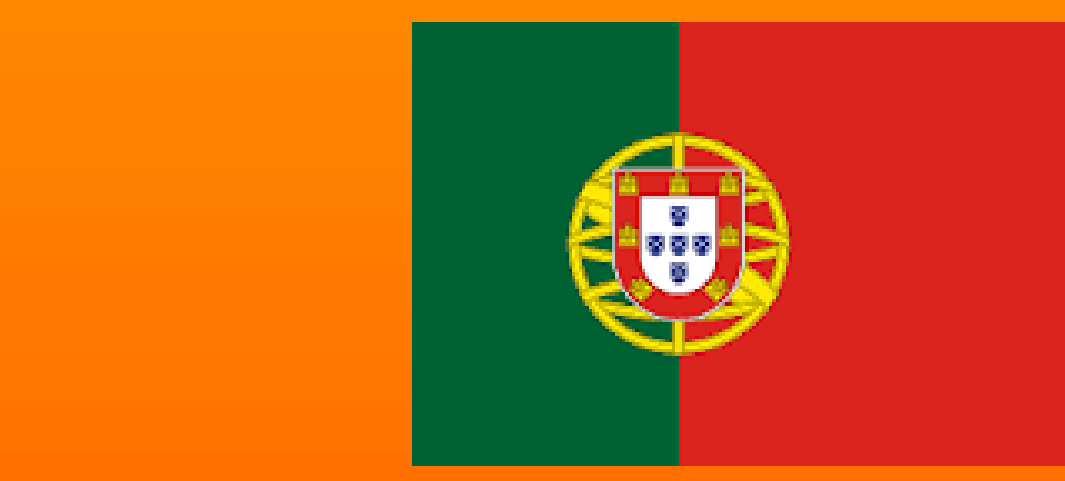
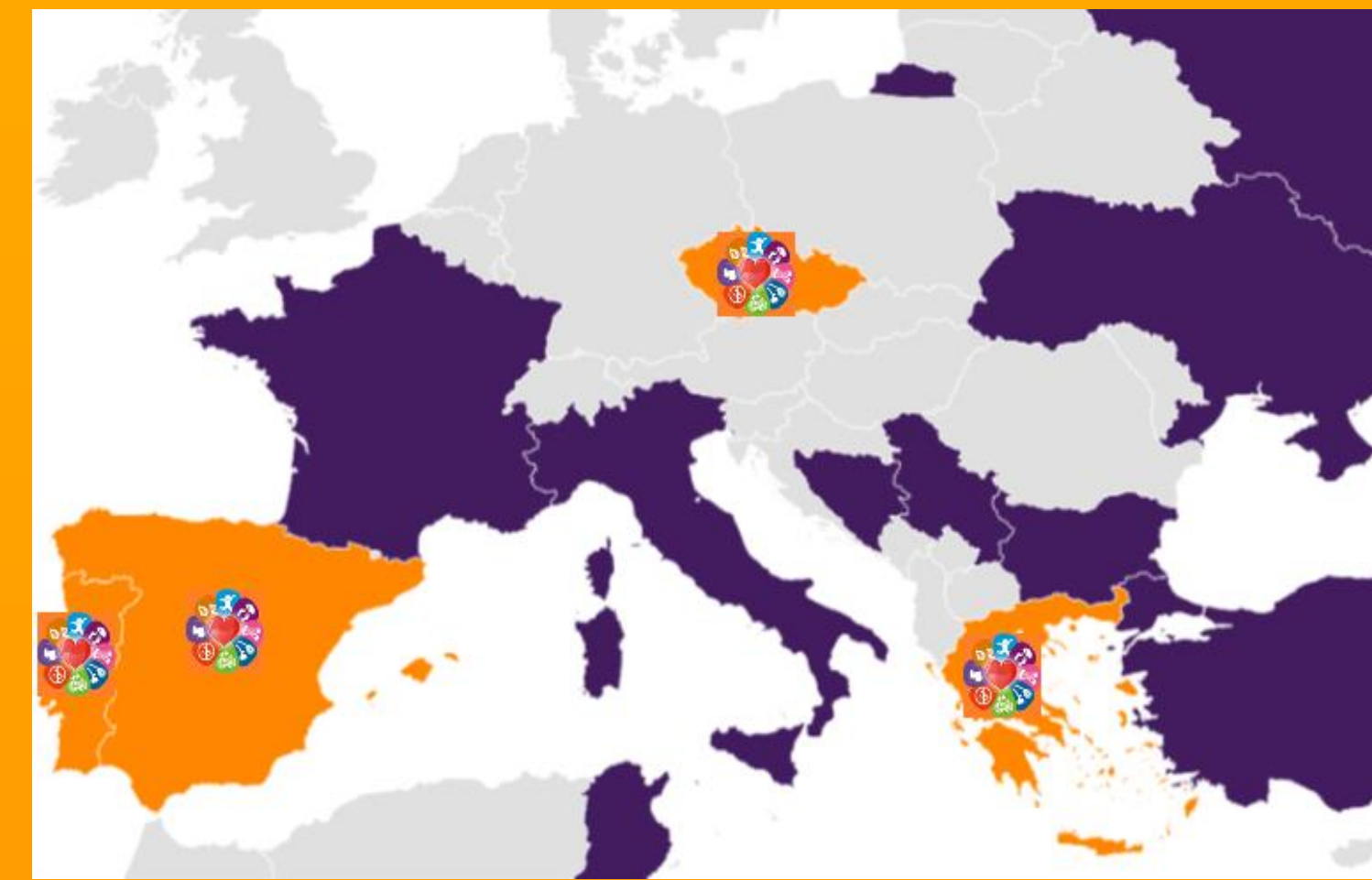
# FOR LIFE AFTER MYOCARDIAL INFARCTION: 12 MONTHS RESULTS OF NURSE ASSISTED SECONDARY PREVENTION INTERVENTION ON STEMI PATIENTS CLINICAL OUTCOMES.

Z. Kaifoszova<sup>1</sup>, O. Hlinomaz<sup>2</sup>, M. Beranova<sup>2</sup>, T. Machulka<sup>3</sup>, S. Belaskova<sup>3</sup>, A. Abreu<sup>4</sup>, H. Pereira<sup>5</sup>, J. Kanakakis<sup>6</sup>, E. Kletsiou<sup>7</sup>, F. Mauri<sup>8</sup>, I. Murua<sup>8</sup>, R. Ceska<sup>9</sup>



ST. ANNE'S UNIVERSITY HOSPITAL BRNO  
INTERNATIONAL CLINICAL RESEARCH CENTER

(1) HELIS Partners Consulting, Prague, Czech Republic (2) ICRC, St. Anne University Hospital, Department of Cardioangiology, Brno, Czech Republic (3) ICRC, St. Anne University Hospital, Institute of Biostatistics, Brno, Czech Republic (4) Hospital de Santa Marta, Cardiology Department, Lisbon, Portugal (5) Hospital Garcia de Orta, Department of Cardiology, Almada, Portugal (6) Alexandra University Hospital, Department of Clinical Therapeutics, Athens, Greece (7) Attikon University Hospital, Athens, Greece (8) Germans Trias i Pujol University Hospital, Badalona, Spain (9) 1<sup>st</sup> School of Medicine and University Hospital, Charles University, Center of Preventive Cardiology, 3rd Dept. Internal Med., Prague, Czech Republic  
E-mail: ota.hlinomaz@fnusa.cz



## INTRODUCTION

In the present era of primary PCI, STEMI patients' survival to hospital discharge improved dramatically. Those patients, who survive to hospital discharge, are at risk for early post discharge hospital readmission. Predictors of 30-day readmission for STEMI patients have not been well studied. However, findings underline that readmissions are quite heterogeneous in nature, and some issues can be resolved, not with more medical procedures, but with education and standardized communication. Patients, who have a clear understanding of their after-hospital care instructions, including how to take their medication, a good knowledge of signs and symptoms of the disease, diet and lifestyle requirements, are 30 percent less likely to be readmitted or visit the emergency department than those who lack this information. Optimization of lifestyle factors by quitting smoking, losing weight, eating right and starting an exercise regimen, including optimal medical treatment with anti-platelets and statins, is the cornerstone of early secondary prevention after myocardial infarction. Patients discharged from the hospital with a clear guideline-oriented treatment recommendation, a checklist of measures to ensure risk modification, can better understand the importance of risk modification and lifestyle change.

## PURPOSE

The aim of a survey is to evaluate an effect of nurse assisted patients' education intervention at discharge from primary PCI hospital by signing a Patient Discharge Contract Letter followed by complex interventions - education sessions at 1, 6 and 12 months, evaluating patients' adherence to his own contractual risk factors objectives.

## METHODS

An international survey For Life After Myocardial Infarction (FLAMI) targeting selected European hospitals was performed in four countries, the Czech Republic, Greece, Portugal, and Spain. Fifteen 24/7 primary PCI hospitals participated in the survey. Hospitalized STEMI patients were enrolled in the survey during 3 months period, followed by 1, 6, and 12-month follow-up sessions. Post-MI education tool-kit was developed including a patient information brochure, a patient discharge contract, and a nurse checklist. Data were collected using an electronic database. STEMI patients treated by revascularization aged 30 – 85 years were enrolled in three survey groups, prospective educated group, prospective non-educated group and retrospective group. STEMI patients with a cardiogenic shock, resuscitation and/or sever complications and concomitant disorders were excluded from the survey.

## PATIENT'S DISCHARGE CONTRACT

## RESULTS

We analysed the data from 15 regional STEMI networks and clinical outcomes in patients who completed 12 month follow-up session. In total 860 patients were enrolled, 285 patients in prospective educated, 183 in prospective non-educated and 392 in retrospective group.

### END OF 12 MONTHS FOLLOW-UP

	PROSPECTIVE EDUCATED n=285	PROSPECTIVE NON-EDUCATED n=183	RETROSPECTIVE n=392	p
BMI	27.9±3.9	27.4±5.1	27.7±4.6	NS
Waist (cm)	100.0±11.8	100.5±6.8	100.0±12.0	NS
Weight (kg)	85.0±14.8	85.0±16.7	84.0±15.7	NS
SBP (mmHg)	130.0±15.8	130.0±14.2	130.0±13.1	NS
DBP (mmHg)	77.9±14.2	79.1±16.2	78.3±14.5	NS
Heart rate (min <sup>-1</sup> )	68.0±9.1	70.0±8.7	70.0±10.6	NS
Total chol. (mmol/l)	3.8±1.4	4.2±0.8	3.8±1.2	0.098
<b>LDL (mmol/l)</b>	<b>1.9 ±1.0*</b>	<b>2.4±0.9*</b>	<b>2.1±1.0</b>	<b>0.045</b>
HDL (mmol/l)	1.2±0.8	1.1±0.3	1.1±0.4	0.1
Tg (mmol/l)	1.4±1.2	1.4±0.5	1.4±1.2	NS
<b>Glycaemia (mmol/l)</b>	<b>5.6±2.1*</b>	<b>6.1±2.3*</b>	<b>5.7±2.1</b>	<b>0.036</b>
Creatinin (µmol/l)	75.6±23.0	84.8±37.3	77.6±21.2	NS
Smoking (%)	18.7	21.8	19.5	NS
<b>Cardiac mortality (%)</b>	<b>0.0</b>	<b>5.3</b>	<b>0.8</b>	<b>0.01</b>
<b>Death +nonfatal MI +stroke (%)</b>	<b>2.2</b>	<b>7.3</b>	<b>1.1</b>	<b>0.05</b>

Significant differences were found among groups at the end of 12 months follow-up. LDL cholesterol was 1.9±1.0mmol/l in prospective educated vs. 2.4±0.9mmol/l in prospective non-educated vs. 2.1±1.0mmol/l in retrospective group (p=0.045) and glycaemia 5.6±2.1 vs. 6.1±2.3 vs. 5.7±2.1mmol/l (p=0.036). Total and HDL cholesterol did not differ at the end of follow-up. Total cholesterol was 3.8±1.4mmol/l vs. 4.2±0.8mmol/l vs. 3.8±1.2mmol/l (p=0.098) and HDL cholesterol 1.2±0.4 vs. 1.1±0.3 vs. 1.1±0.4mmol/l (p=0.10). No differences were observed in triglycerides 1.4±1.2 vs. 1.4±0.5 vs. 1.4±1.2mmol/l (p=NS), weight 85±14.8 vs. 85±16.7 vs. 84±15.7kg, waist 100±11.8 vs. 100.5±6.8 vs. 100±12.0cm (p=NS) and BMI 27.9±3.9 vs. 27.4±5.1 vs. 27.7±4.5 (p=NS), systolic blood pressure 130±15.8 vs. 130±14.2 vs. 130±13.1 (p=NS) and heart rate 68±9.1 vs. 70±8.7 vs. 70±10.6 min<sup>-1</sup>(p=NS). The prevalence of smoking was similar 18.7% vs. 21.8% vs. 19.5% in all three groups at 12 months (p=NS). Cardiac mortality was lowest in prospective educated group 0% vs. 5.3% vs. 0.8% (p=0.01). Borderline statistical significant difference was observed in occurrence of the composite endpoint of death, nonfatal myocardial infarction and stroke at 12 months 2.2% vs. 7.3% vs. 1.1% (p=0.05).

### PROSPECTIVE EDUCATED GROUP

	BASELINE	1 MONTH	6 MONTHS	12 MONTHS	P
LDL (mmol/l)	3.3±1.0	1.8±0.8*	2.1±1.0*	1.9±1.0*	0.0001
Smoking (%)	44.4	16.6*	16.1*	18.7*	0.01

### PROSPECTIVE NON-EDUCATED GROUP

	BASELINE	1 MONTH	6 MONTHS	12 MONTHS	P
LDL (mmol/l)	2.8±1.0			2.4±0.9	0.202
Smoking (%)	36.2			21.8	0.01

## CONCLUSION

Standardized nurse assisted education including behavioral intervention and patient self-awareness program led to lower levels of LDL cholesterol, glycaemia and better clinical outcomes in patients after myocardial infarction treated by primary PCI during 12 months follow up period in four European countries.