



Congresso  
**Novas Fronteiras em Cardiologia**  
11 a 13 de Fevereiro.2011  
Hotel Vila Galé Evora

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# Angioplastia Primária em Portugal. Como implementar o “Stent for Life” no nosso País

Hélder Pereira

# Stent for Life Initiative

## Portugal



**Hélder Pereira, MD, FESC, FACC**

SFL Portugal Champion, APIC Secretary

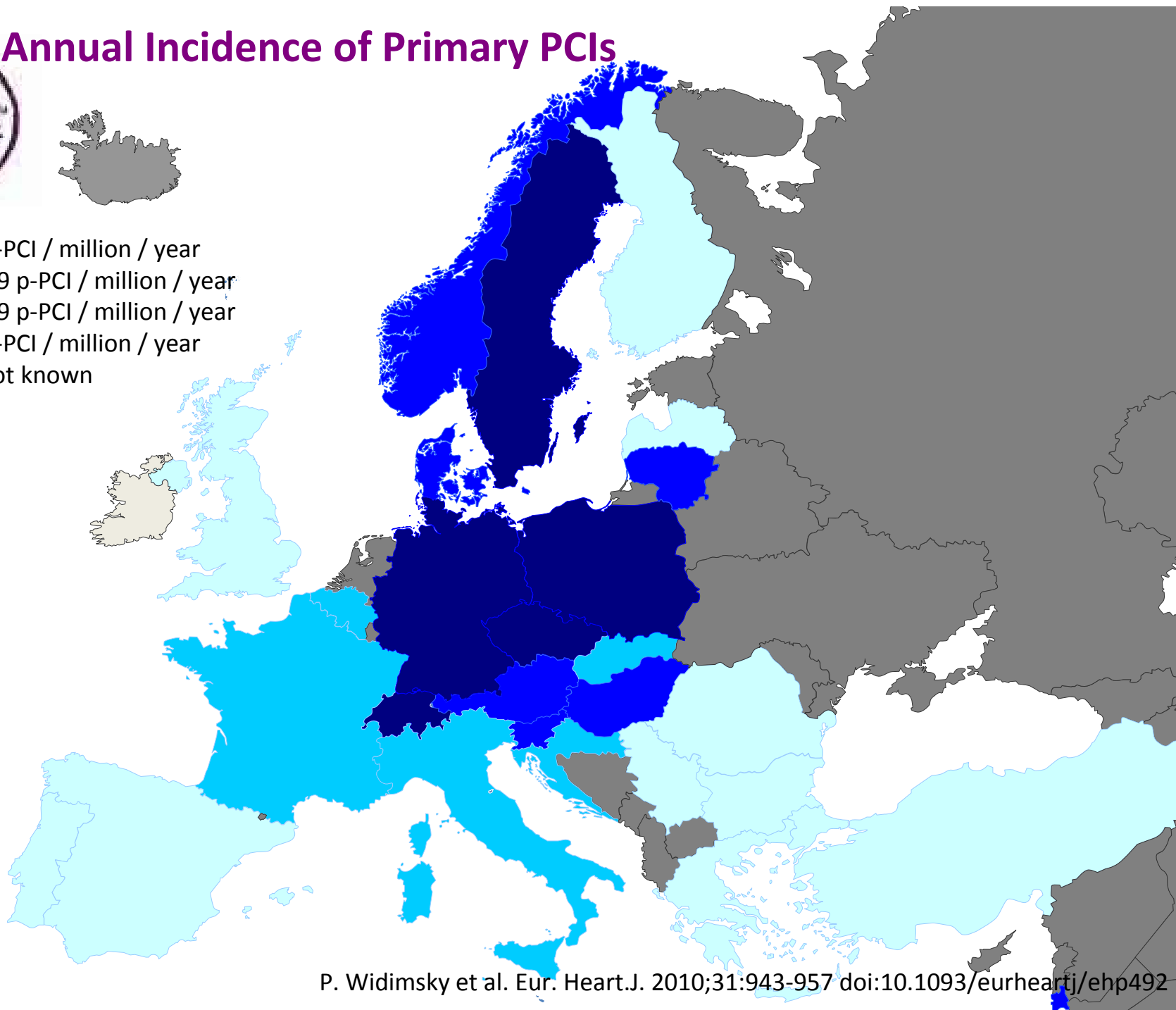
Department of Cardiology

Hospital Garcia de Orta, Almada, Portugal



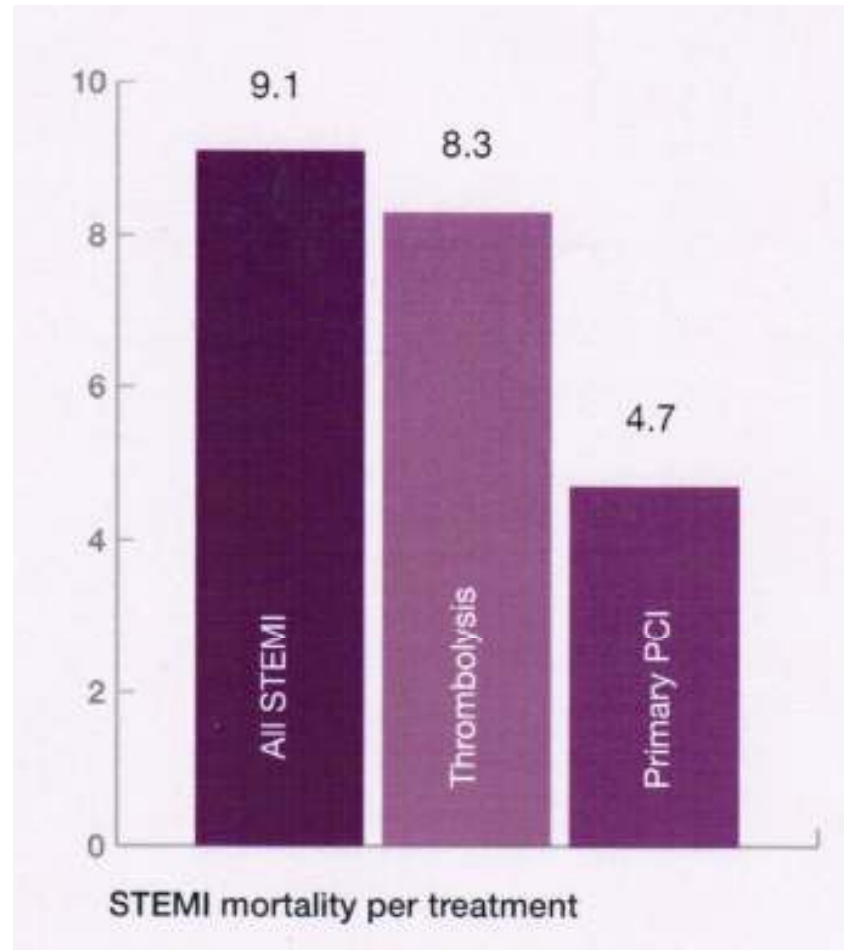
## Annual Incidence of Primary PCIs

- $\geq 600$  p-PCI / million / year
- 400-599 p-PCI / million / year
- 200-399 p-PCI / million / year
- $< 200$  p-PCI / million / year
- Data not known





## Stent for Life Initiative



# Stent for Life INITIATIVE

To improve the delivery and patient access to the life saving indications of PCI thereby reduce the mortality and morbidity of patients suffering from acute coronary syndromes.



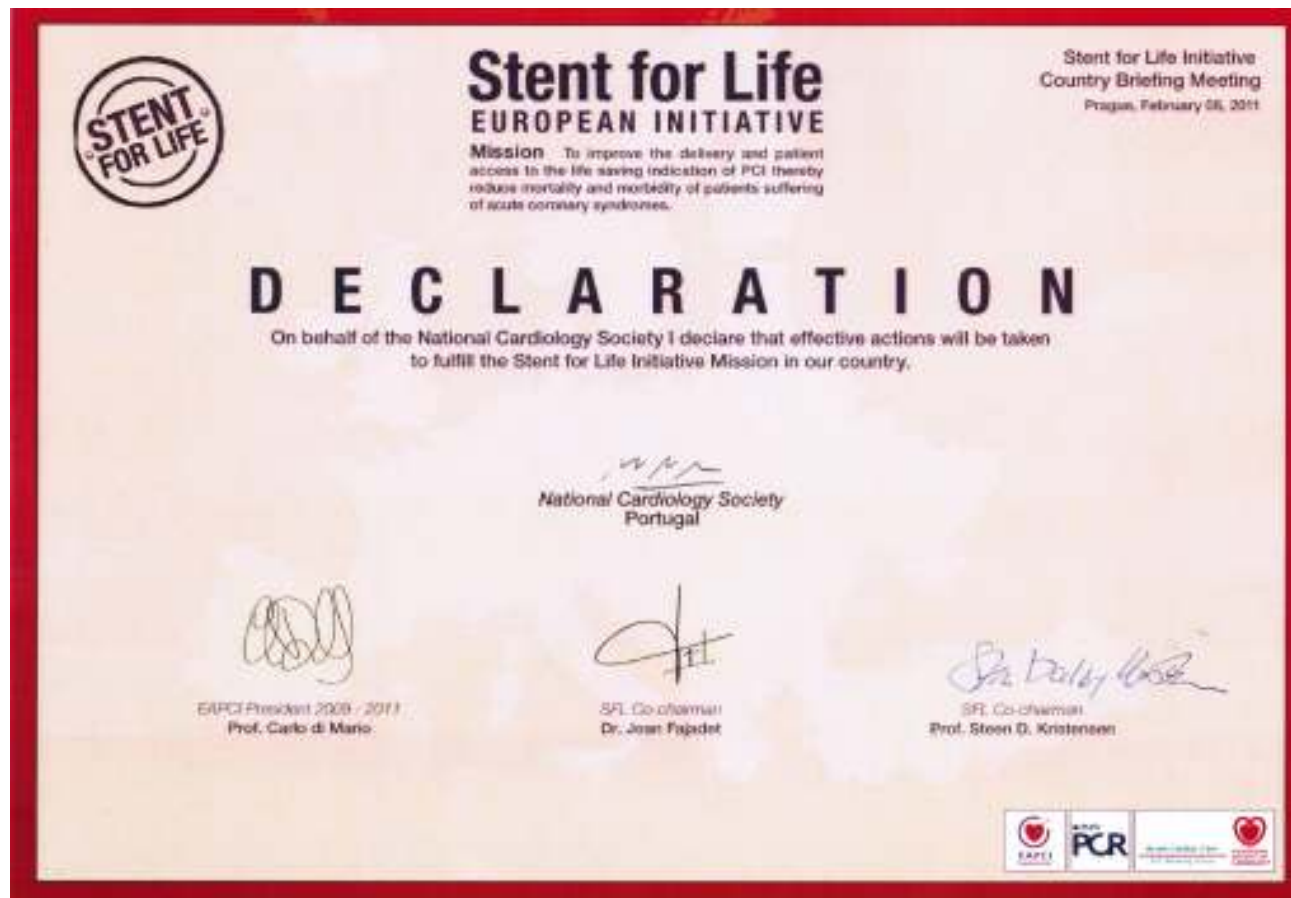
[www.stentforlife.com](http://www.stentforlife.com)





# Stent for Life Initiative

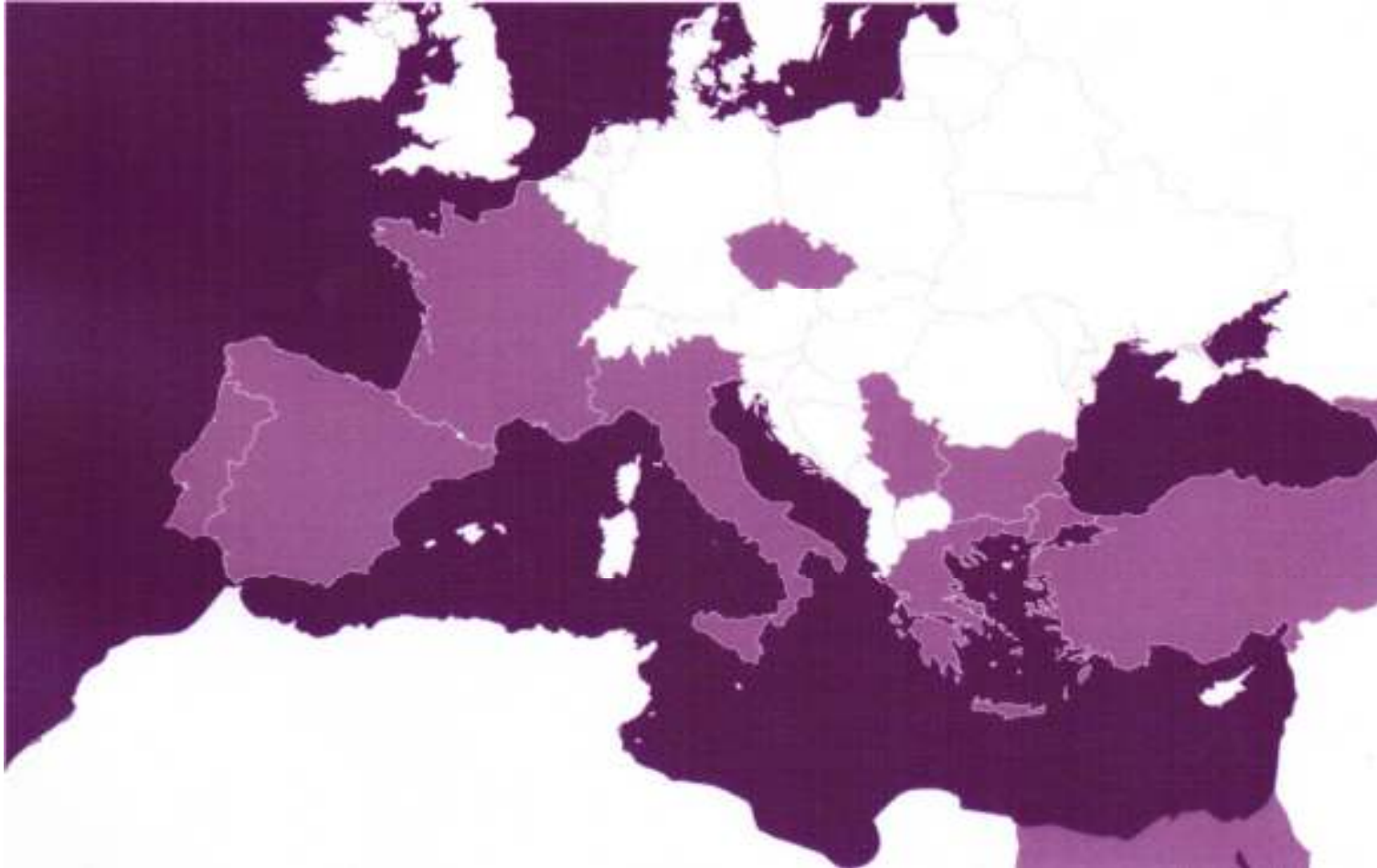
Prague 8 Feb 2011







## Stent for Life Initiative



2011: ten countries



## Implement an Action Plan to Increase Primary-PCI

- 1- Define regions/countries with an unmet medical need in the optimal treatment of ACS.
- 2- Implement an action program to increase patient access to primary PCI where indicated:

*To increase the use of primary PCI to more than 70% among all ST segment elevation myocardial infarction patients,*

*To achieve primary PCI rates of more than 600 per one million inhabitants per year,*

*To offer 24/7 service for primary PCI procedures at all invasive facilities to cover the country STEMI population need.*

J.Knot: How to set up an effective national primary angioplasty network: lessons learned from five European countries (EuroIntervention, August 2009).





## **Implement an Action Plan to Increase Primary-PCI**

***To increase the use of primary PCI  
to more than 70% among all  
ST segment elevation myocardial infarction patients***

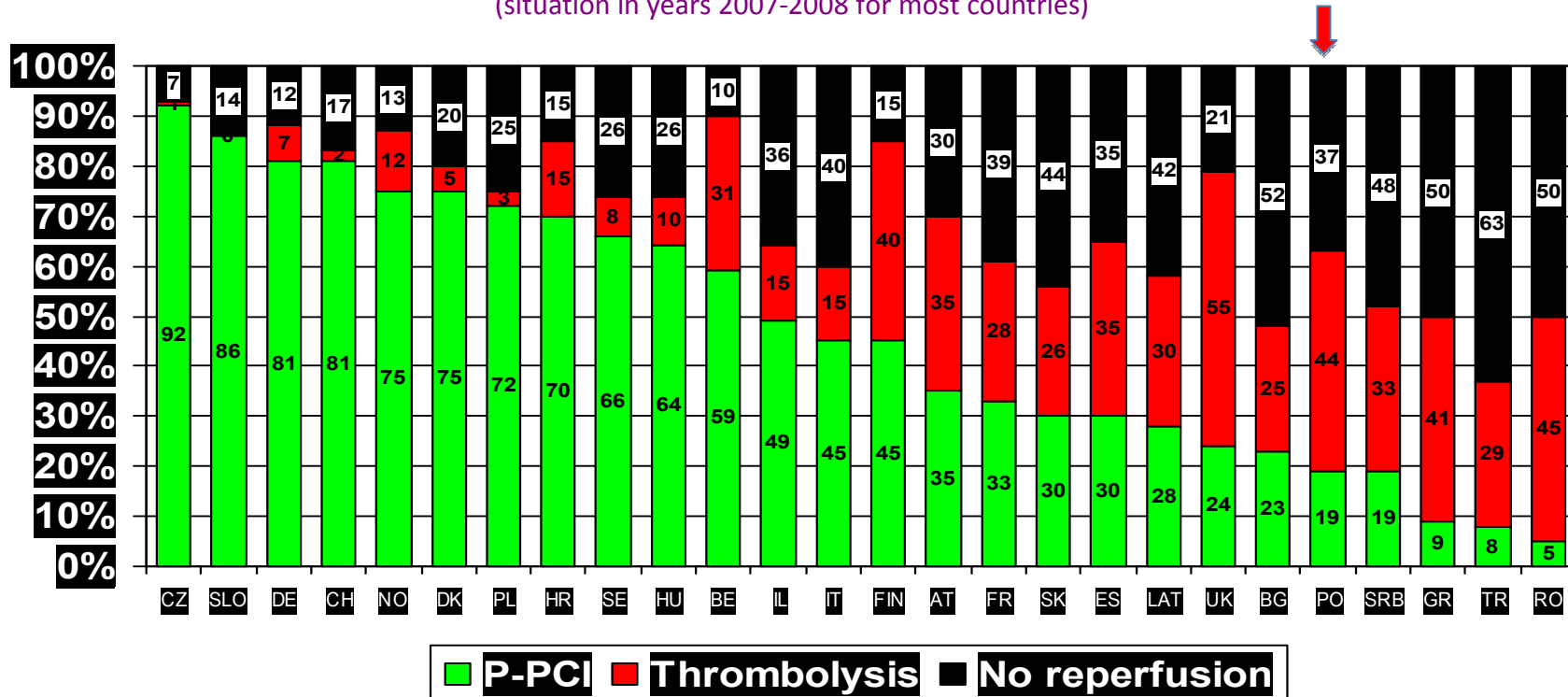


# Implement an Action Plan to Increase Primary-PCI

*To increase the use of primary PCI  
to more than 70% among all ST segment elevation myocardial infarction patients,*

## Reperfusion Therapies Differ in Countries

(situation in years 2007-2008 for most countries)



Reperfusion therapy for ST elevation acute myocardial infarction in Europe:  
description of the current situation in 30 countries.  
P. Widimsky et al. Eur. Heart.J. 2010;31:943-957 doi:10.1093/eurheartj/ehp492

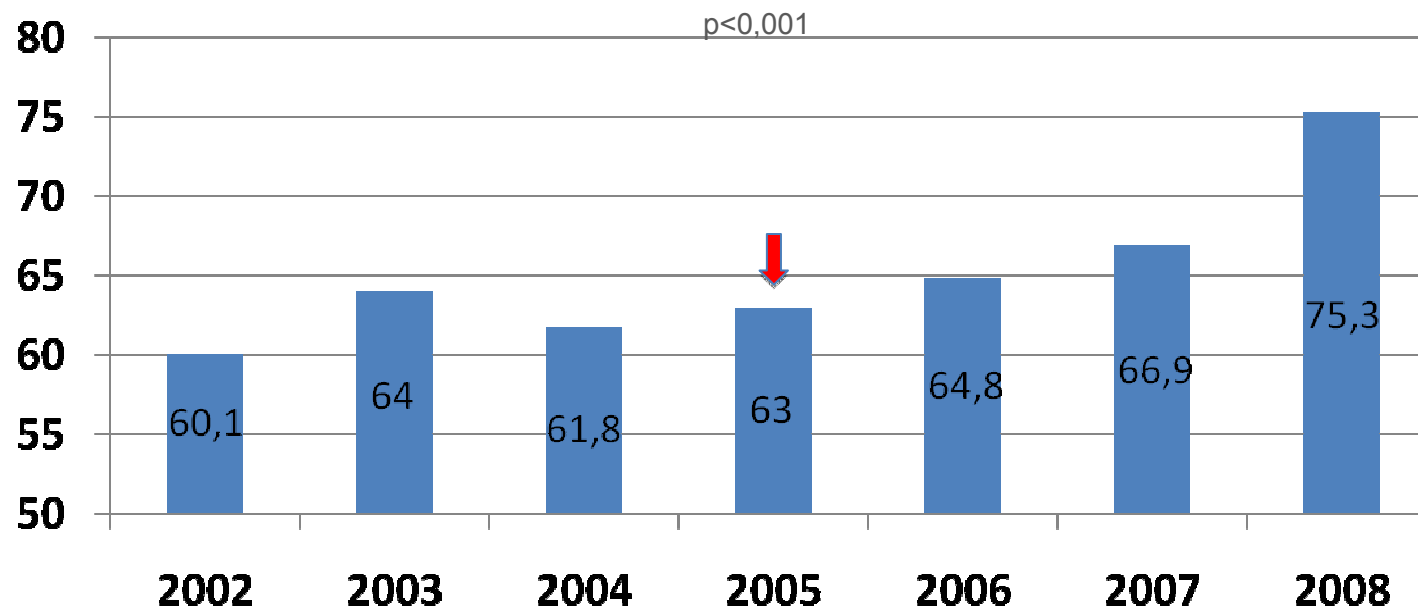


# Implement an Action Plan to Increase Primary-PCI

*To increase the use of primary PCI  
to more than 70% among all ST segment elevation myocardial infarction patients,*

## Portuguese Registry ACS 2002/8

STEMI: Reperfusion:



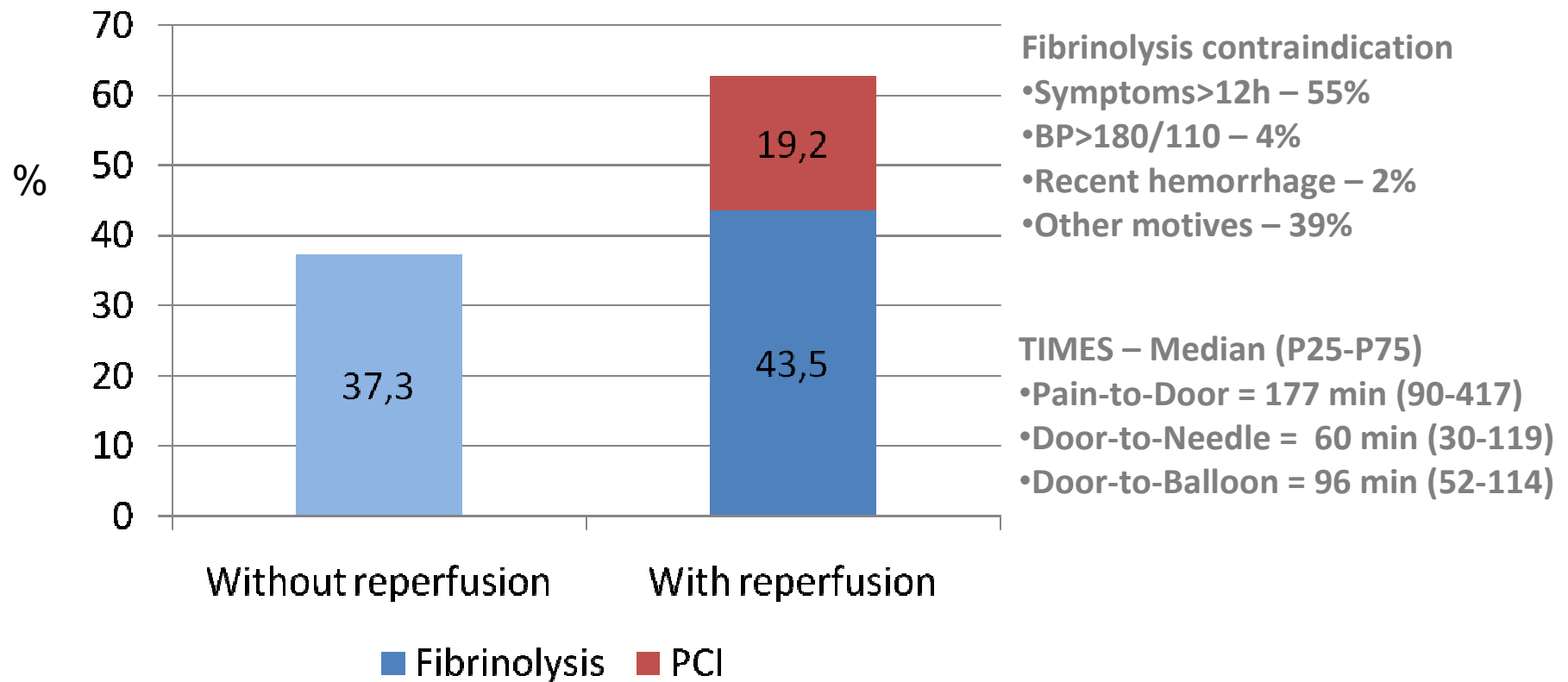


# Implement an Action Plan to Increase Primary-PCI

*To increase the use of primary PCI  
to more than 70% among all ST segment elevation myocardial infarction patients,*

## Portuguese Registry ACS 2002-8 RESULTS

### STEMI: Reperfusion:





## Implement an Action Plan to Increase Primary-PCI

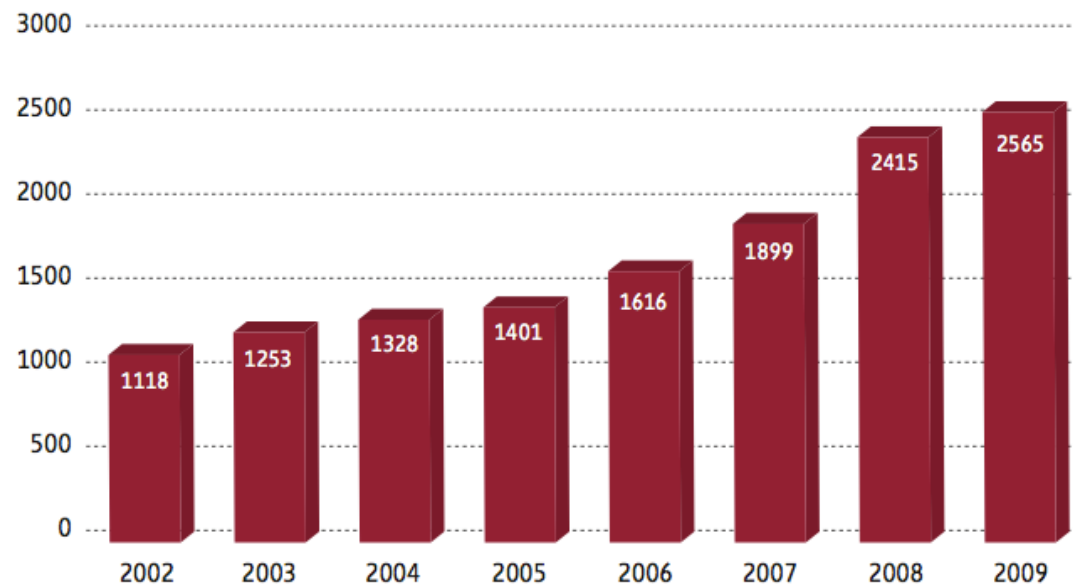
***Achieve primary PCI rates of more than 600 per one million inhabitants per year***



## Implement an Action Plan to Increase Primary-PCI

*Achieve primary PCI rates of more than 600 per one million inhabitants per year*

Evolution of P-PCI from 2002-9:



2009: 239 PPCI/million





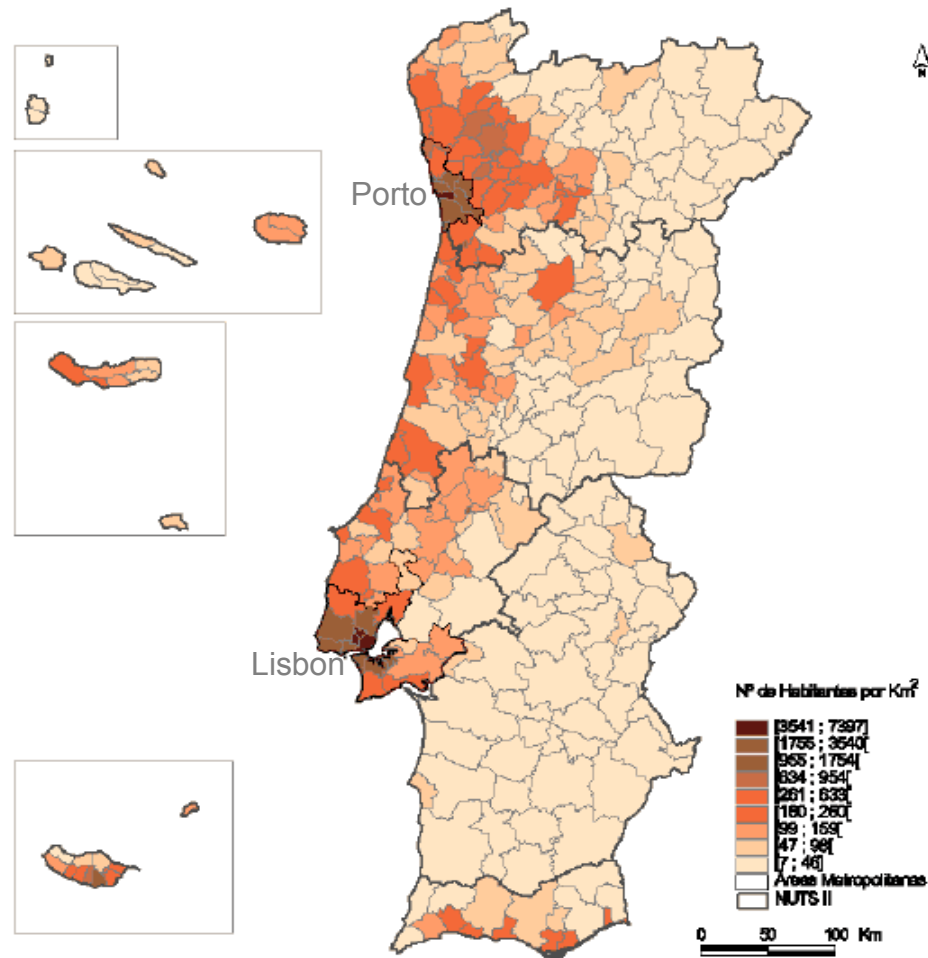
## **Implement an Action Plan to Increase Primary-PCI**

***To offer 24/7 service for primary PCI procedures at  
all invasive facilities  
to cover the country STEMI population need***



# Implement an Action Plan to Increase Primary-PCI

*To offer 24/7 service for primary PCI procedures at all invasive facilities to cover the country STEMI population need*





# Implement an Action Plan to Increase Primary-PCI

*To offer 24/7 service for primary PCI procedures at all invasive facilities to cover the country STEMI population need*

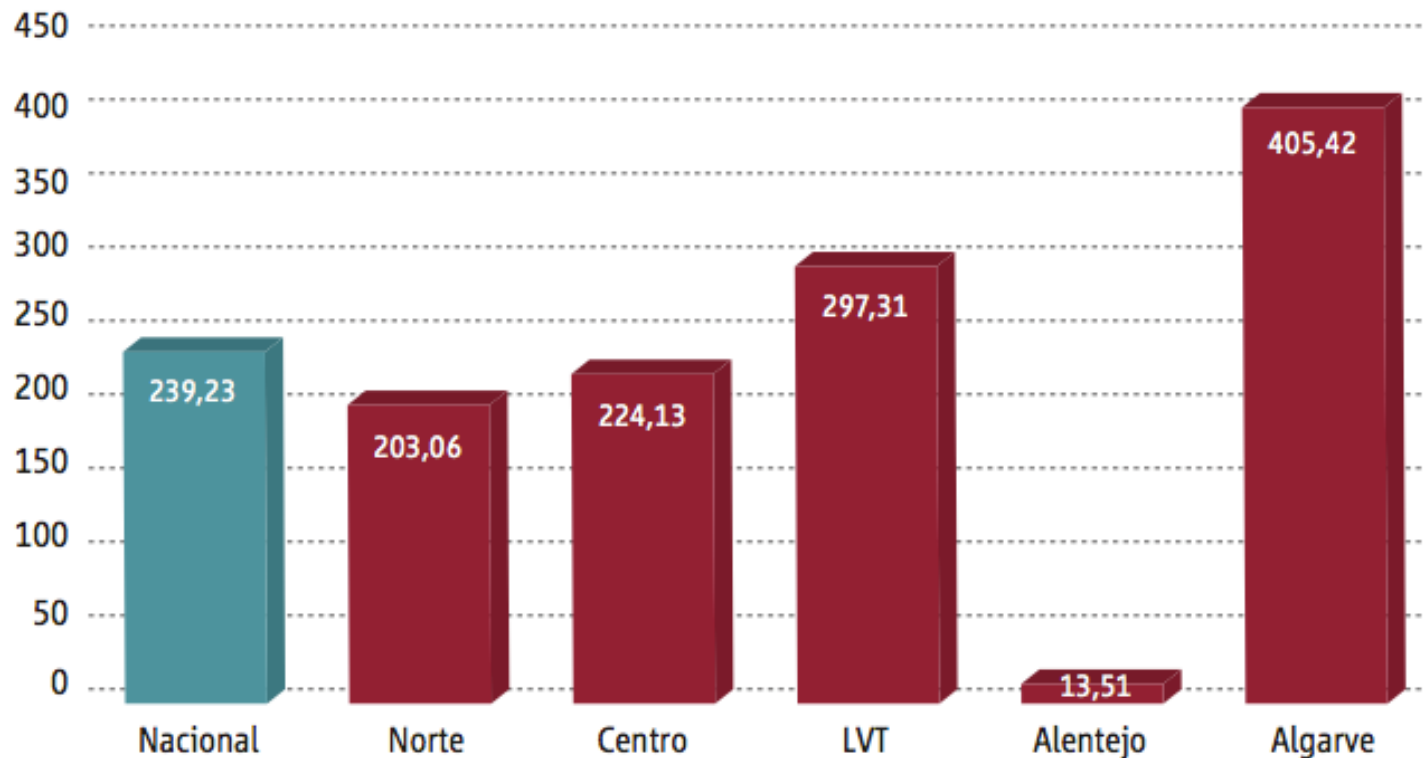




## Implement an Action Plan to Increase Primary-PCI

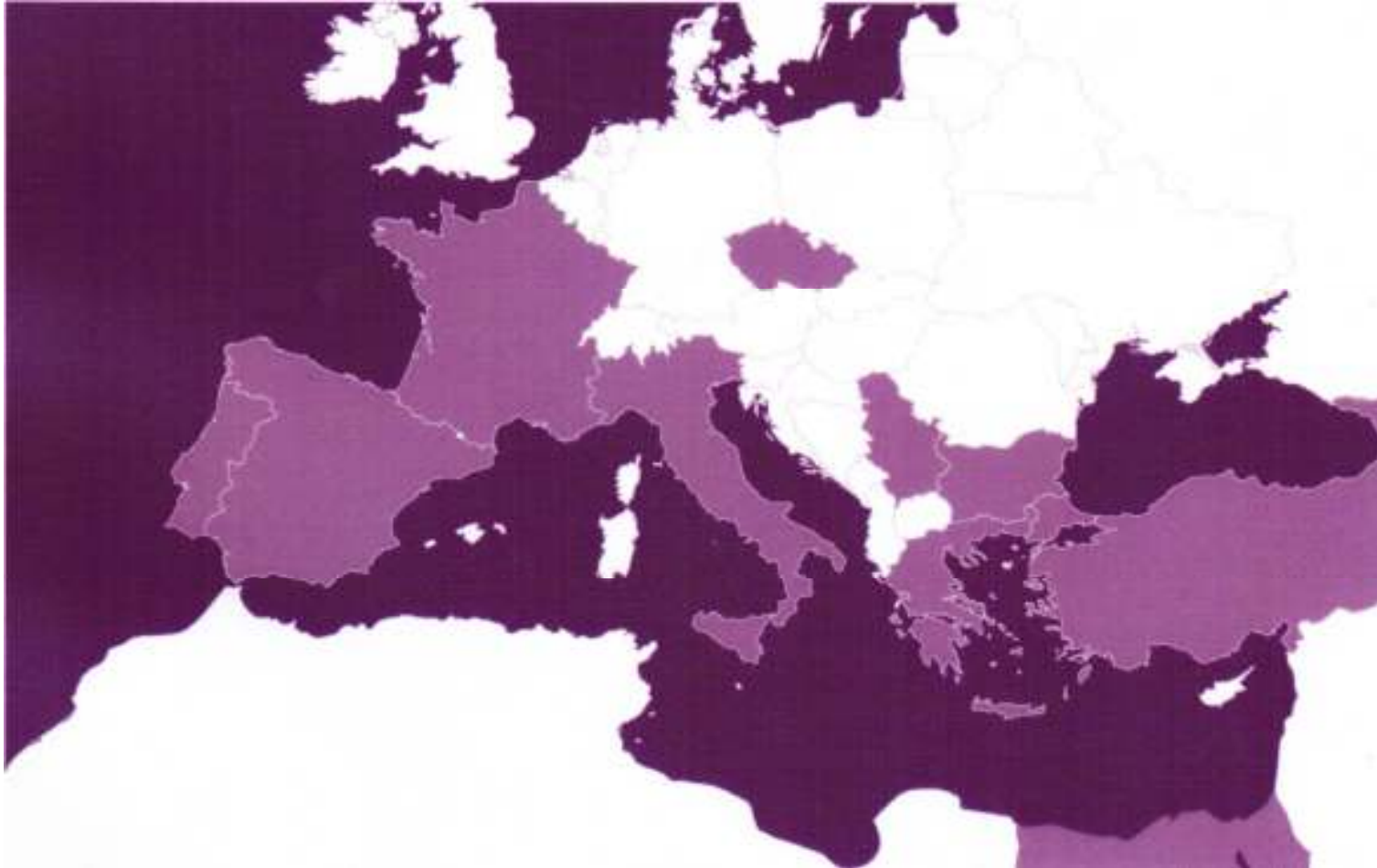
*To offer 24/7 service for primary PCI procedures at all invasive facilities to cover the country STEMI population need*

*Primary PCI per Million (2009):*





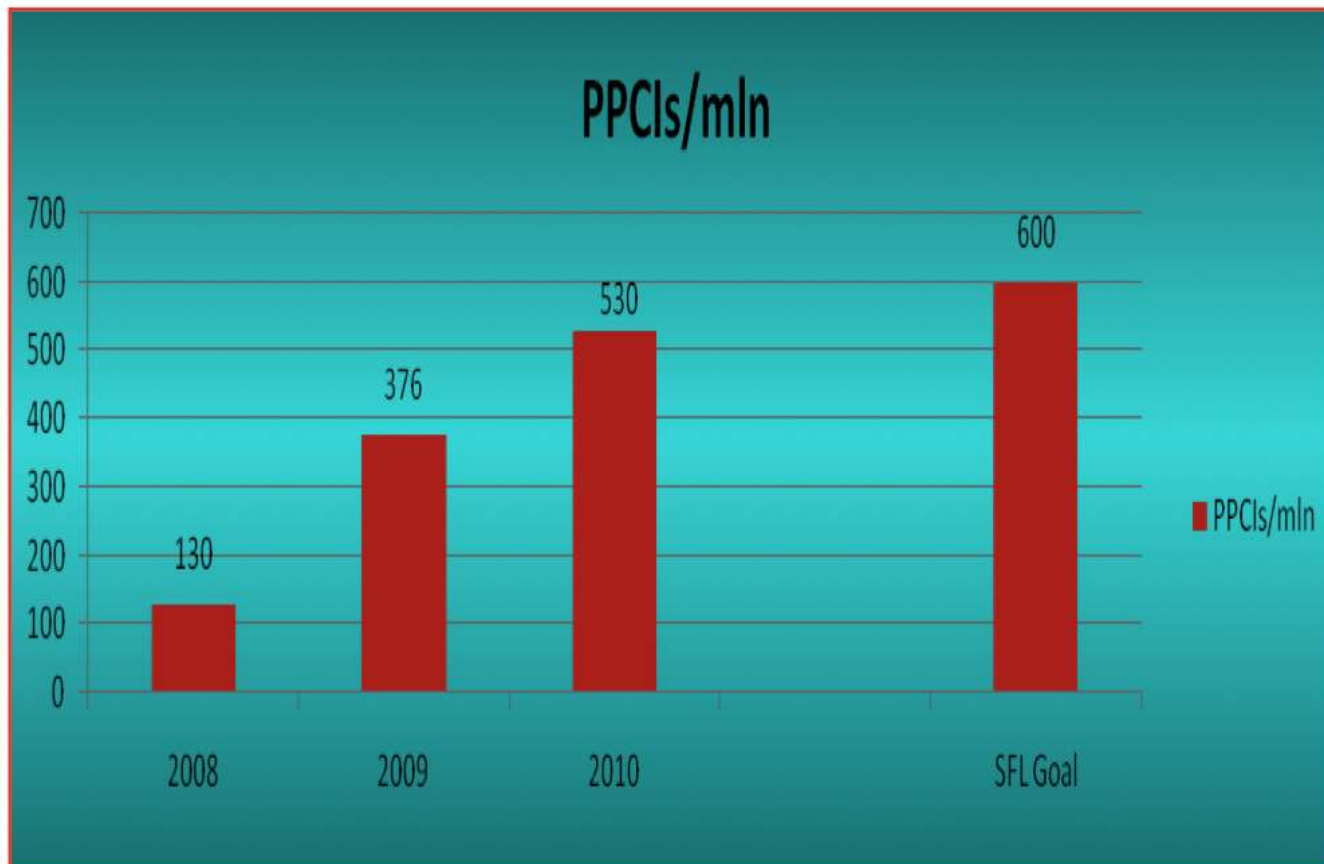
## Stent for Life Initiative





# Bulgaria

## *Goal*







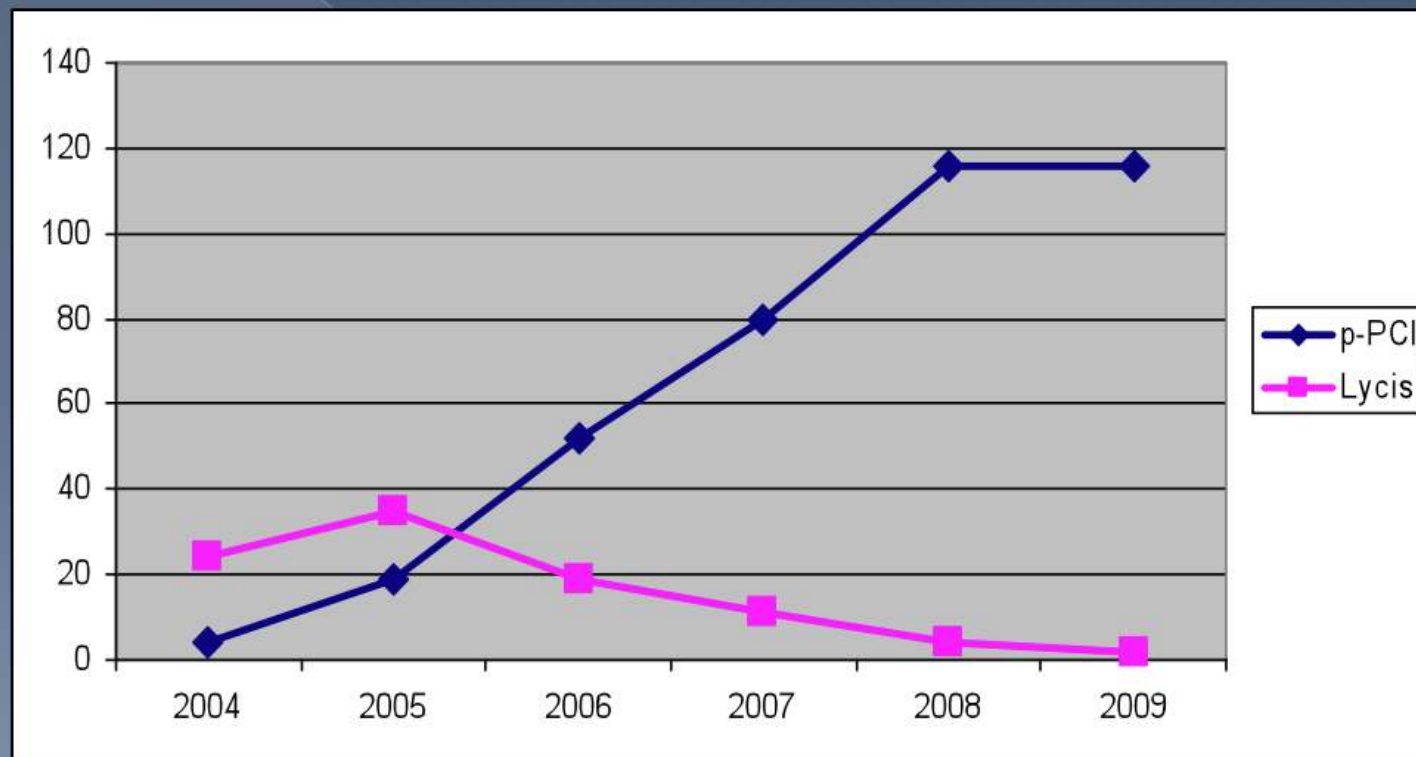
# Greece





## Greece

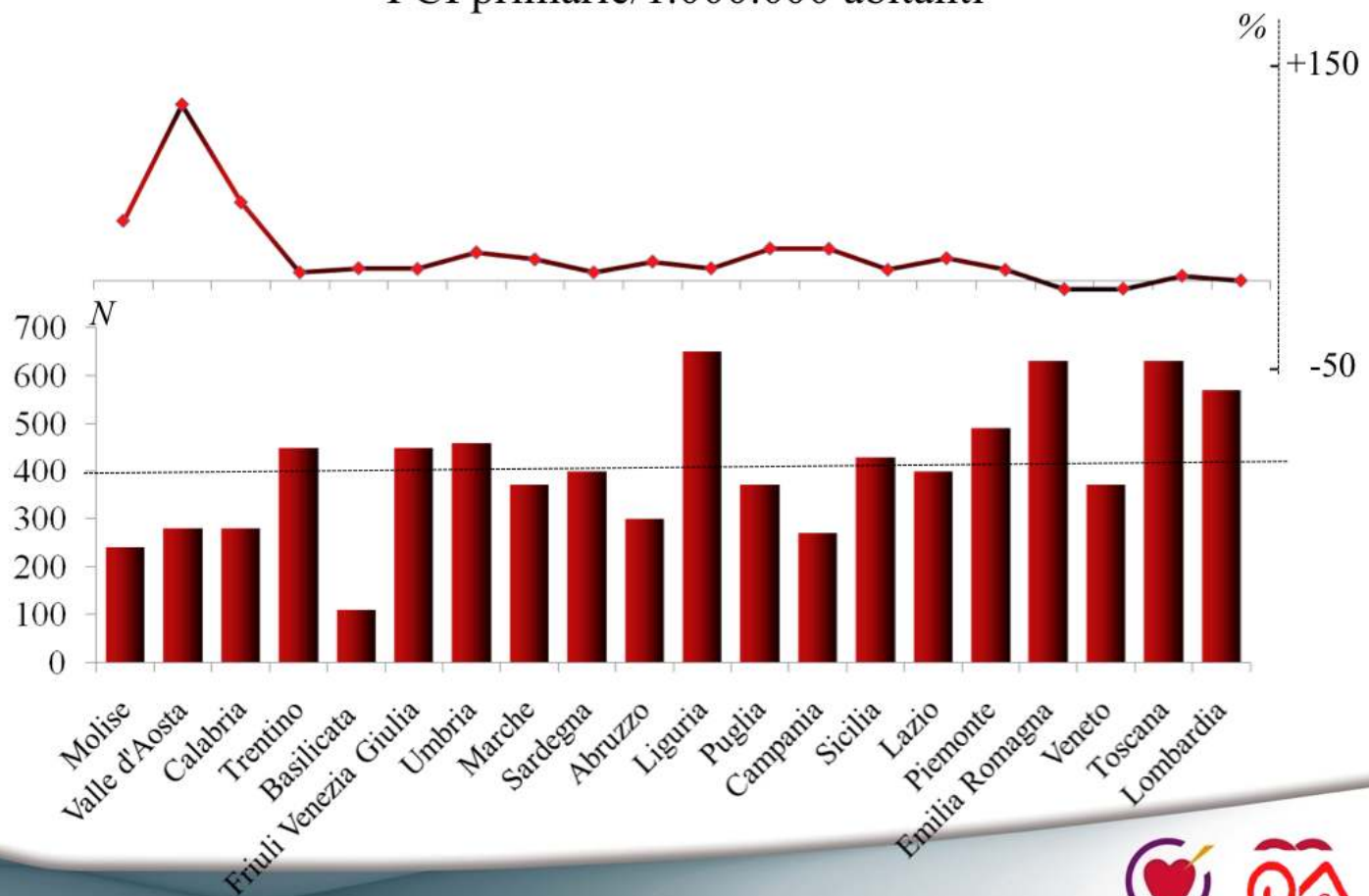
### p-PCI vs Thrombolysis





# Italy

PCI primarie/1.000.000 abitanti



[www.escardio.org/EAPCI](http://www.escardio.org/EAPCI)

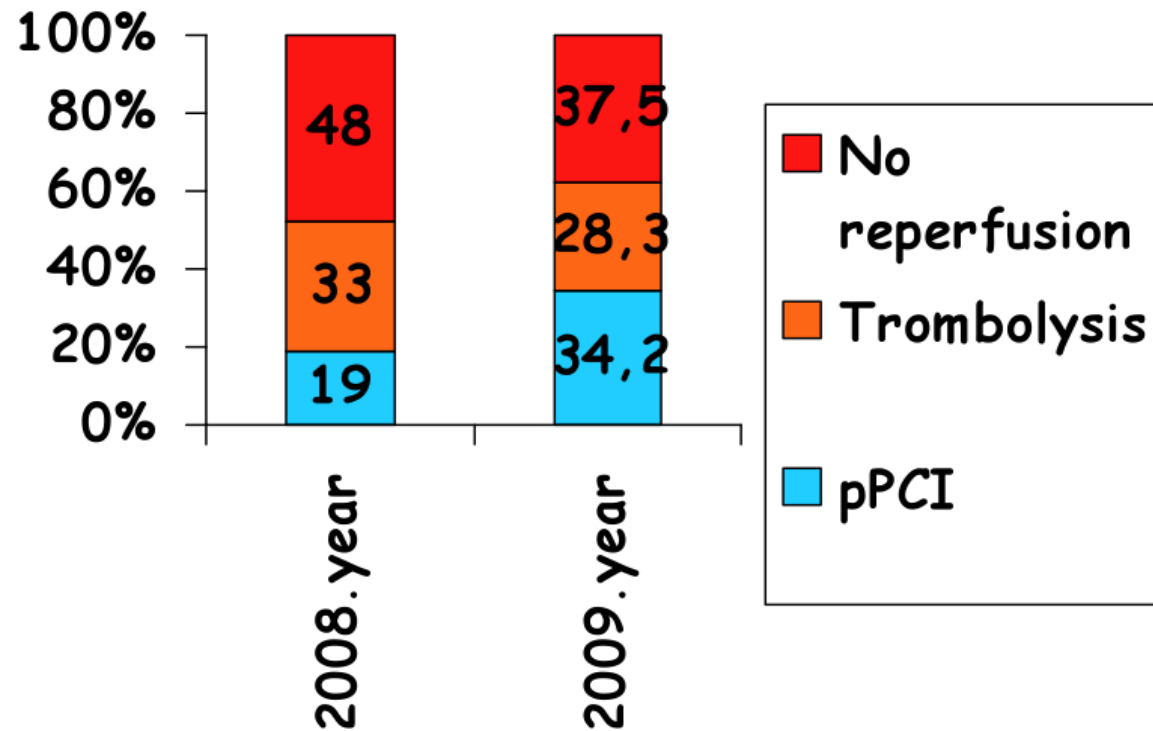
Società Italiana di Cardiologia Invasiva - Gise





## Servia

Treatment of STEMI in Serbia

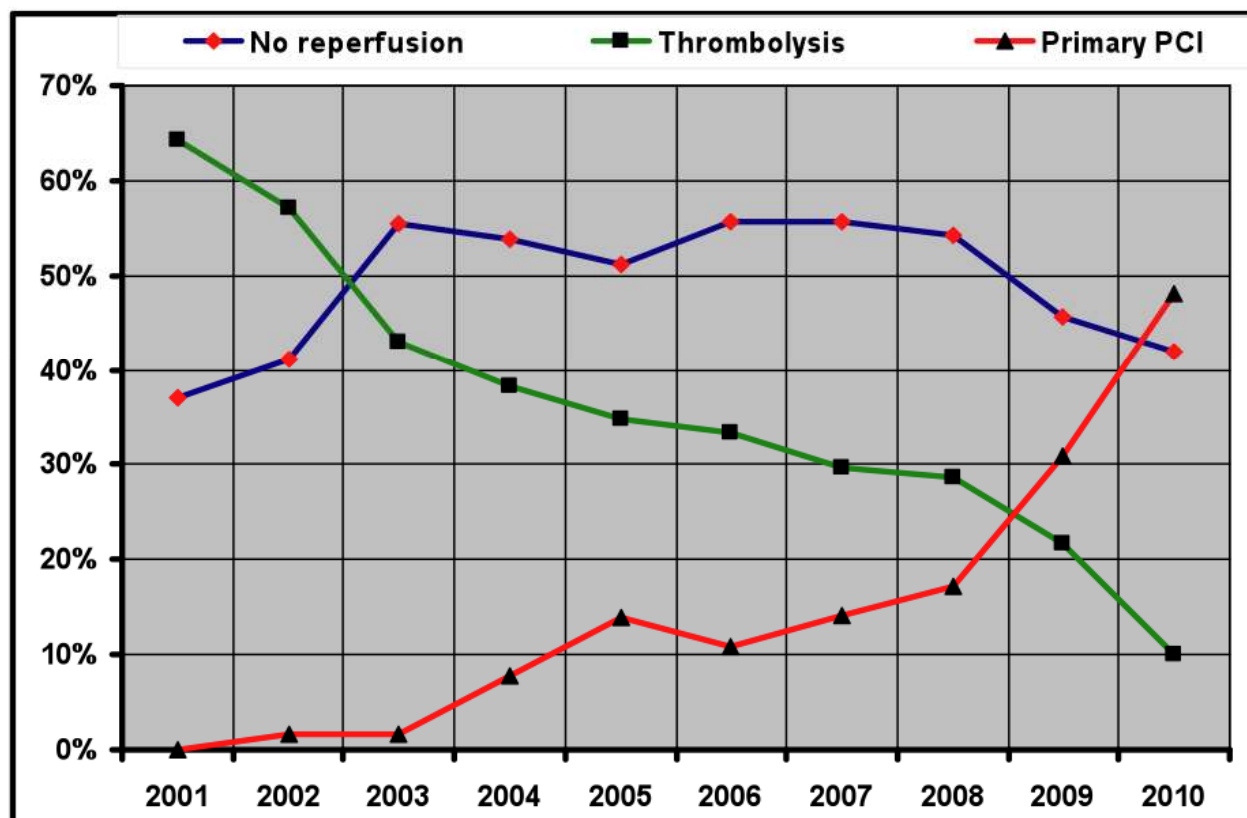




# Romania



**RO-STEMI registry**  
*Primary PCI, thrombolysis and conventional therapy (2001 – 2010)*







## Spain

# Spain: AMI Networks in 2010

- Galicia
- Islas Baleares
- Murcia
- Navarra
- Cataluña
- Castilla la Mancha

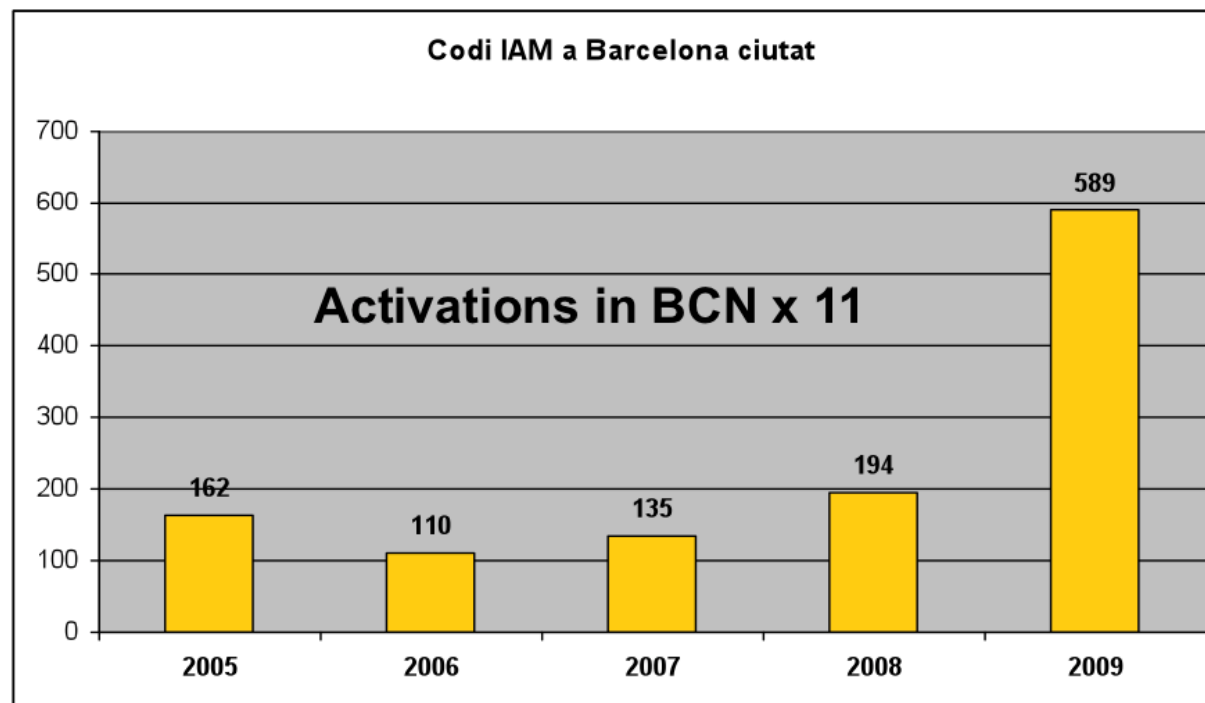






## Spain

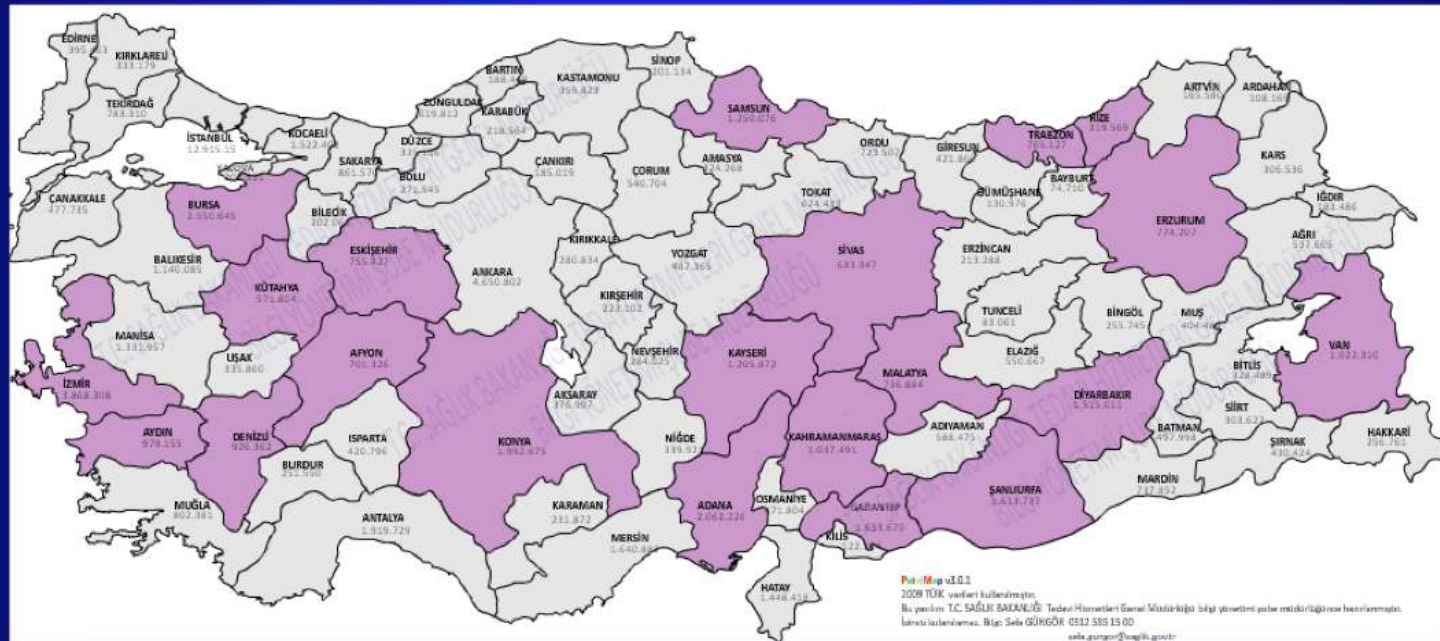
### Evolution of AMI activities in the community of Catalonia, Spain





# Turkey

## Selected city for SFL project





# Turkey

## Trabzon

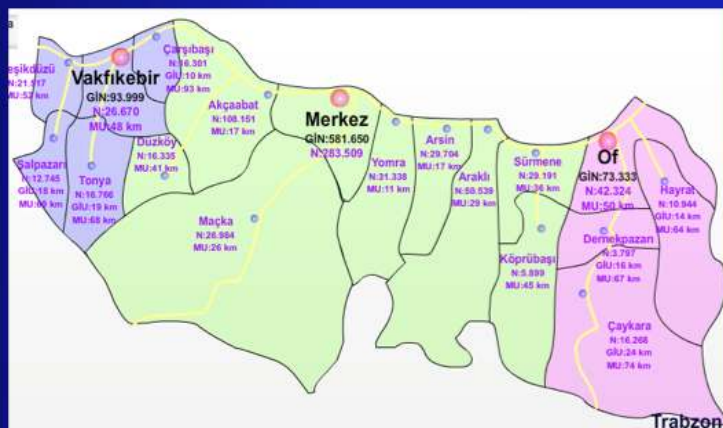
Population: 740.569

Area: 4664 km<sup>2</sup>

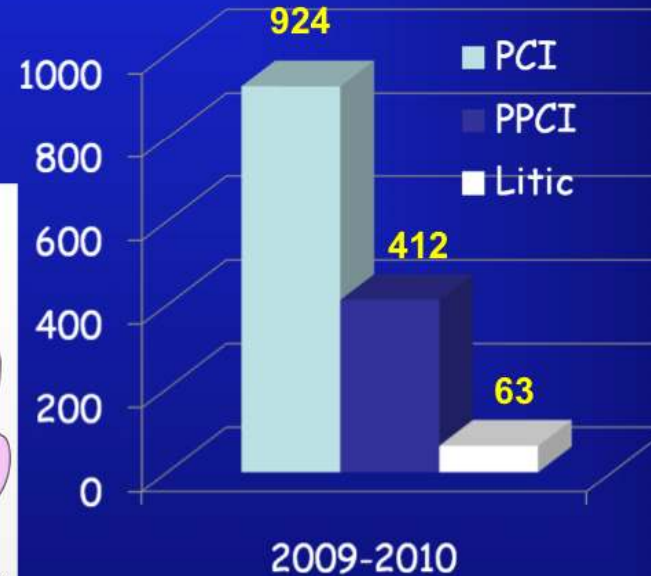
Urban/Rural: %52 - %48

Centers: 2

Ambulance: 16



556 PPCI/1 milion





## **Implement an Action Plan to Increase Primary-PCI**



# Implement an Action Plan to Increase Primary-PCI

- I - Nominate and approve SFL Steering Committee Members;**
- II- Organize SFL Task Force meeting (January 2011) and agree on key program implementation barriers; (barriers and limits);**
- III - Analyze current STEMI network situation (including country map with 24/7 STEMI centers);**
- IV - Present 3 years SFL Initiative objectives to SFL Executive Board (February, Prague);**
- V - Start interview process to hire SFL national project manager;**
- VI - Establish AMI/STEMI registry if not in place;**
- VII - Draft SFL budget**



**I - Nominate and approve  
SFL Steering Committee Members;**





## **SFL Steering Committee Members**

- SFL Champion: Hélder Pereira
- APIC President: Leitão Marques
- Health Ministry Cardiovascular Diseases Coordinator: Rui Ferreira
- National Institute of Medical Emergency (INEM): Miguel Sousa-Oliveira
- APORMED: Paulo Tomaz



**II - Organize SFL Task Force meeting and agree  
on key program implementation barriers;  
(barriers and limits)**



## Present 3 years SFL Initiative objectives to SFL Executive Board

### MACRO level

National Health Service System:

- *Reorganization of EMS (INEM)*
- *Heterogeneity among country regions;*
- *Secondary transportation (non-PPCI centres)*
- *Awareness campaigns for patients*

### MESO level

How hospitals are organized:

- *Strategies, structures, processes, practices;*
- *Numbers of interventional cardiologists and long period of training;*

### MICRO level

Clinical effectiveness, culture, safety, patient experience;



**III - Analyze current STEMI network situation  
(including country map with 24/7 STEMI centers);**



# Analyze current STEMI network situation

Via Verde Coronária  
("Coronary Green Way")  
INEM



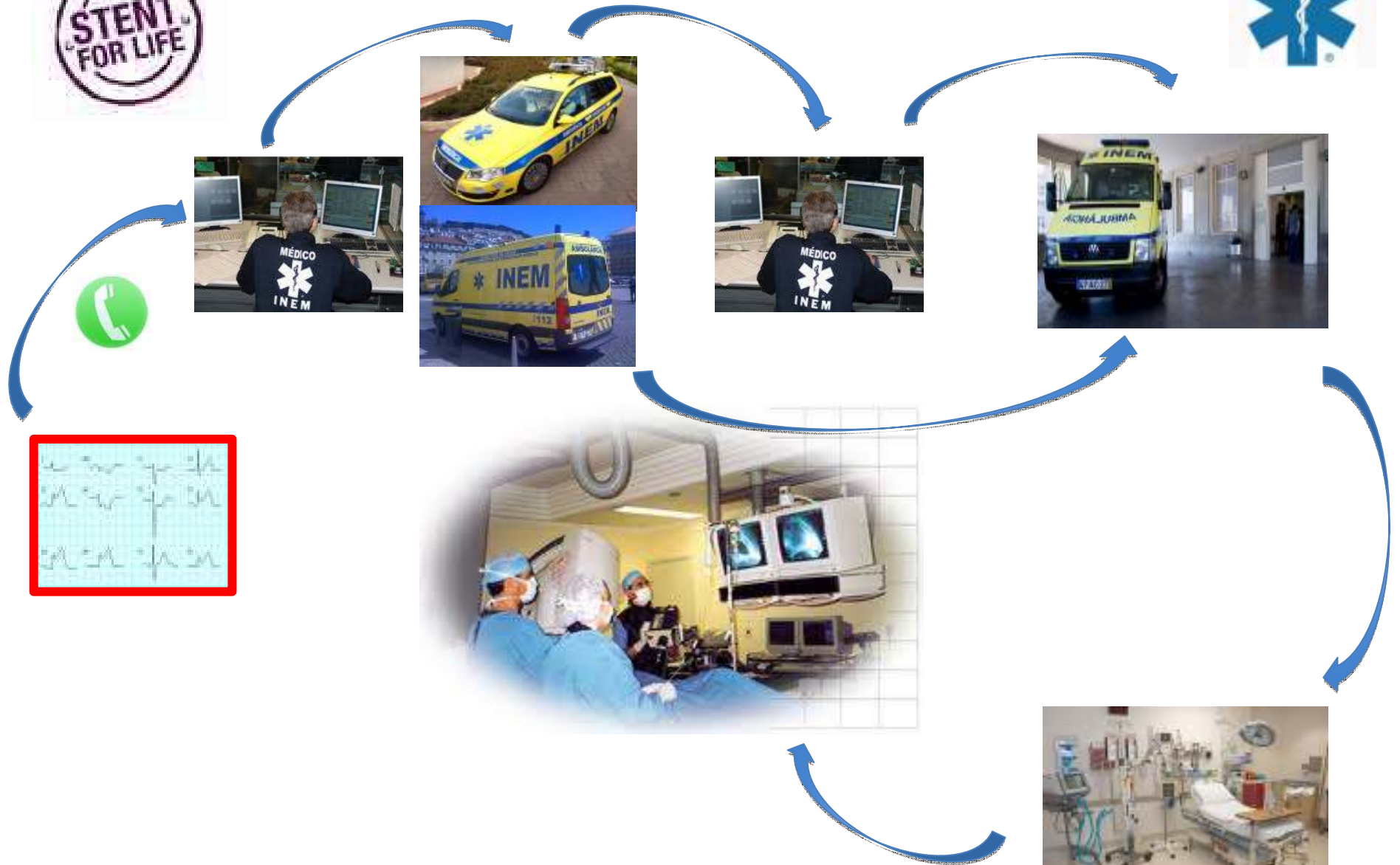
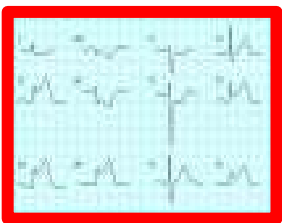
CODU

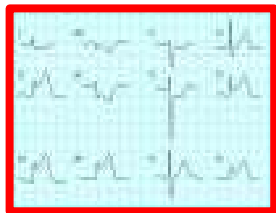


VMER



SIV

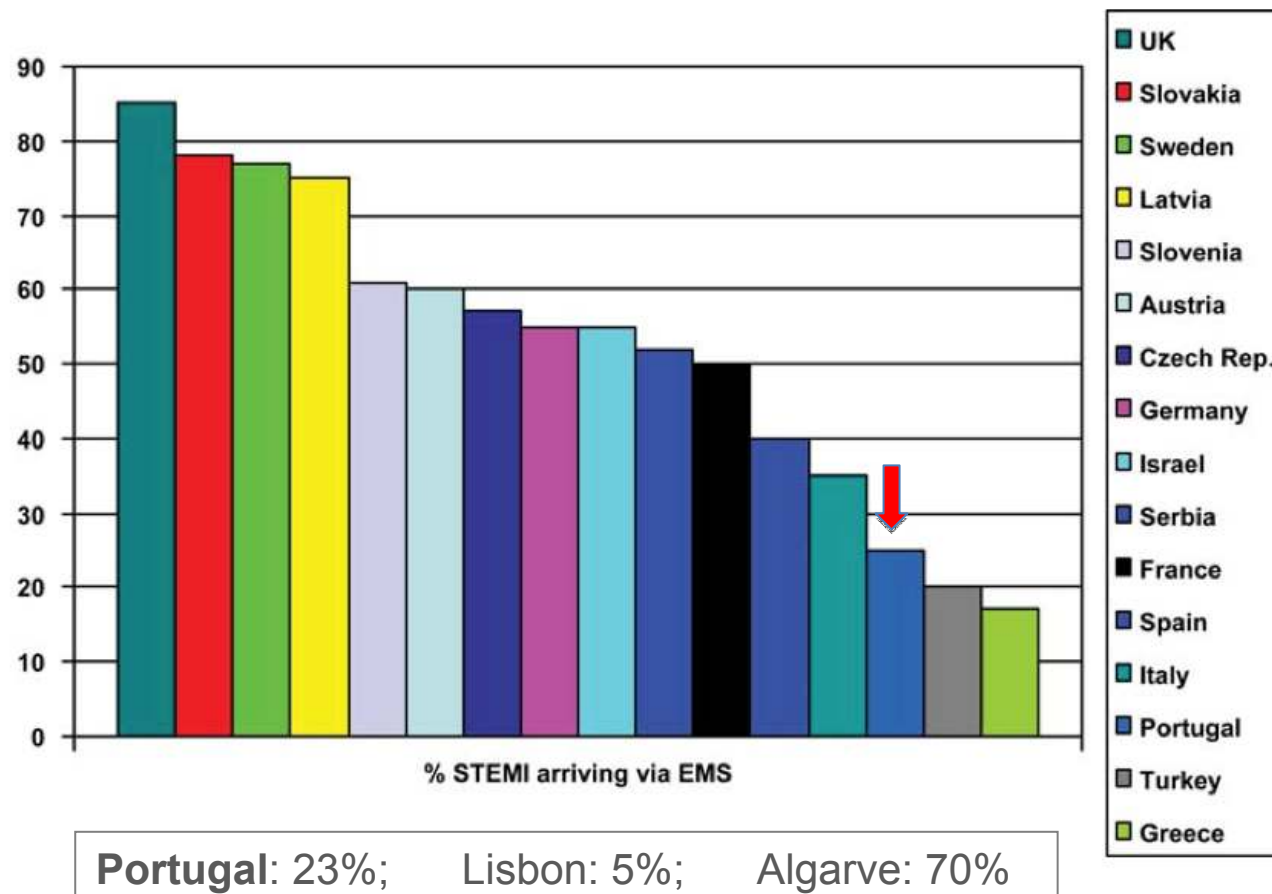






# Analyze current STEMI network situation

Percentage of STEMI patients arriving to the first hospital via EMS services:







# Analyze current STEMI network situation

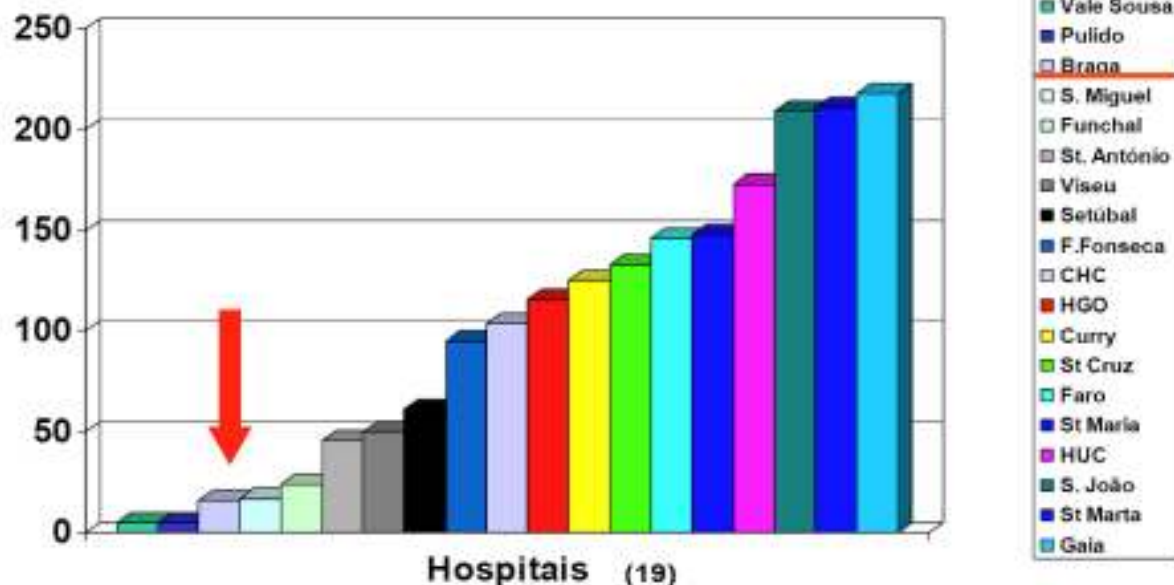
## MINHO



### Angioplastias Primárias 2007



Alto Comissariado  
da Saúde



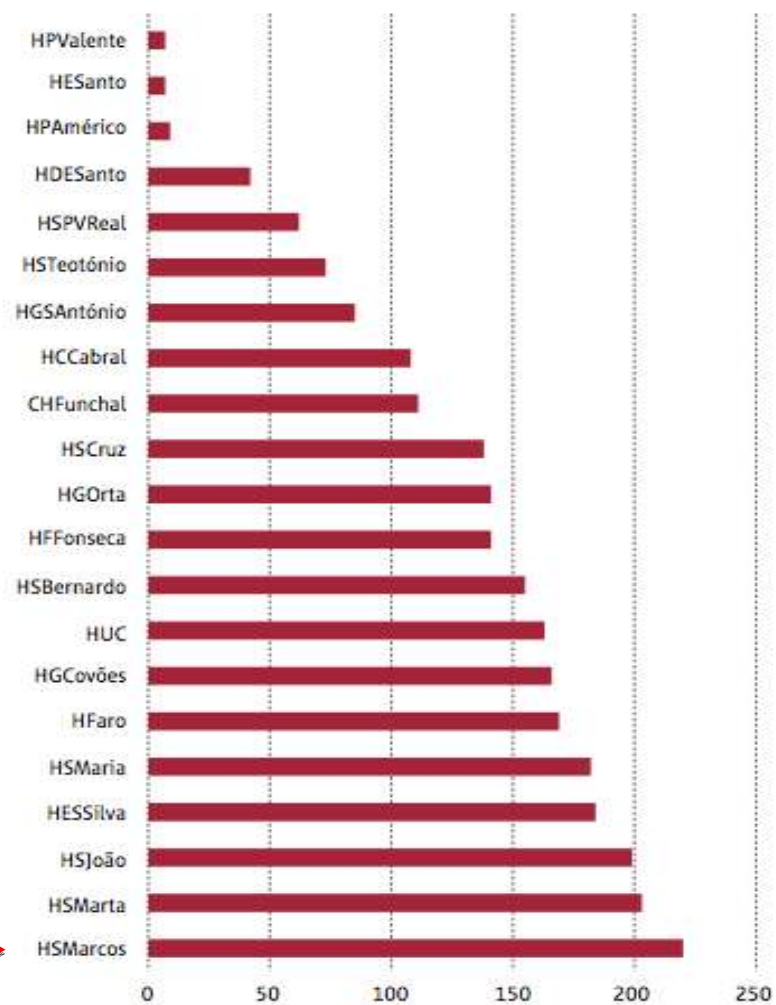


# Analyze current STEMI network situation

## MINHO



ANGIOPLASTIAS PRIMÁRIAS (DOENTES) POR INSTITUIÇÃO (2009)





# Analyze current STEMI network situation

## ALGARVE



Algarve reperfusion rate: 86%

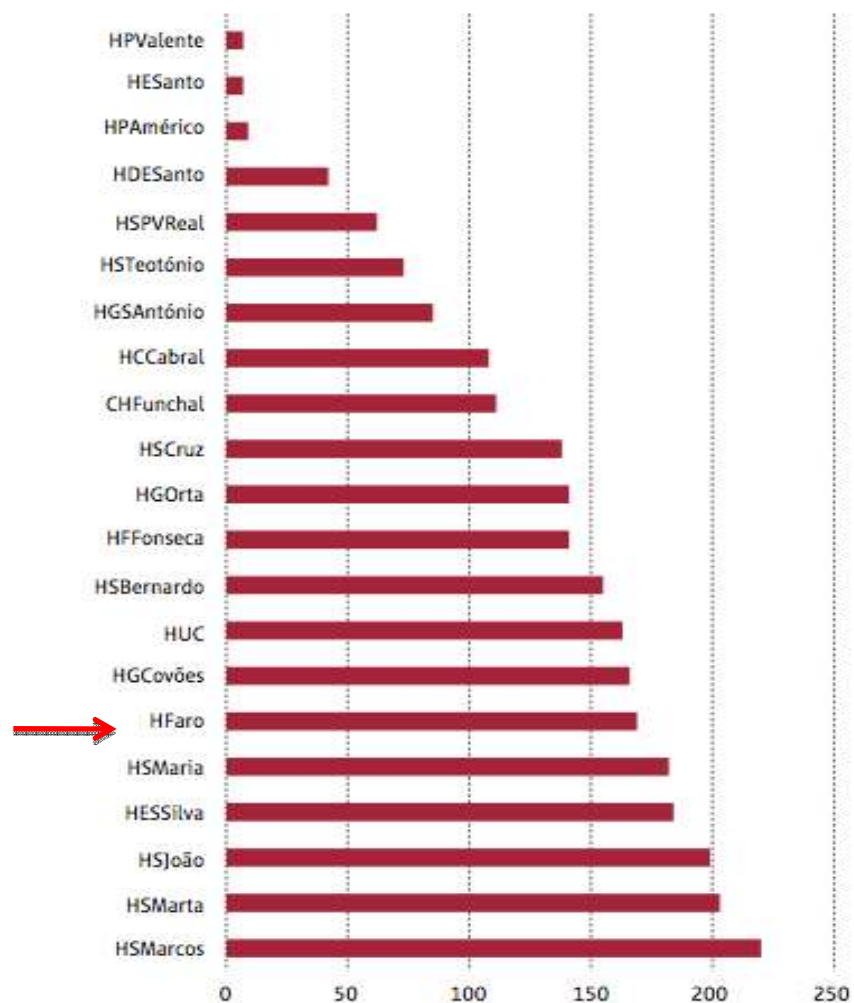


# Analyze current STEMI network situation

## ALGARVE



ANGIOPLASTIAS PRIMÁRIAS (DOENTES) POR INSTITUIÇÃO (2009)





# Analyze current STEMI network situation

## ALGARVE (Faro)



VMER

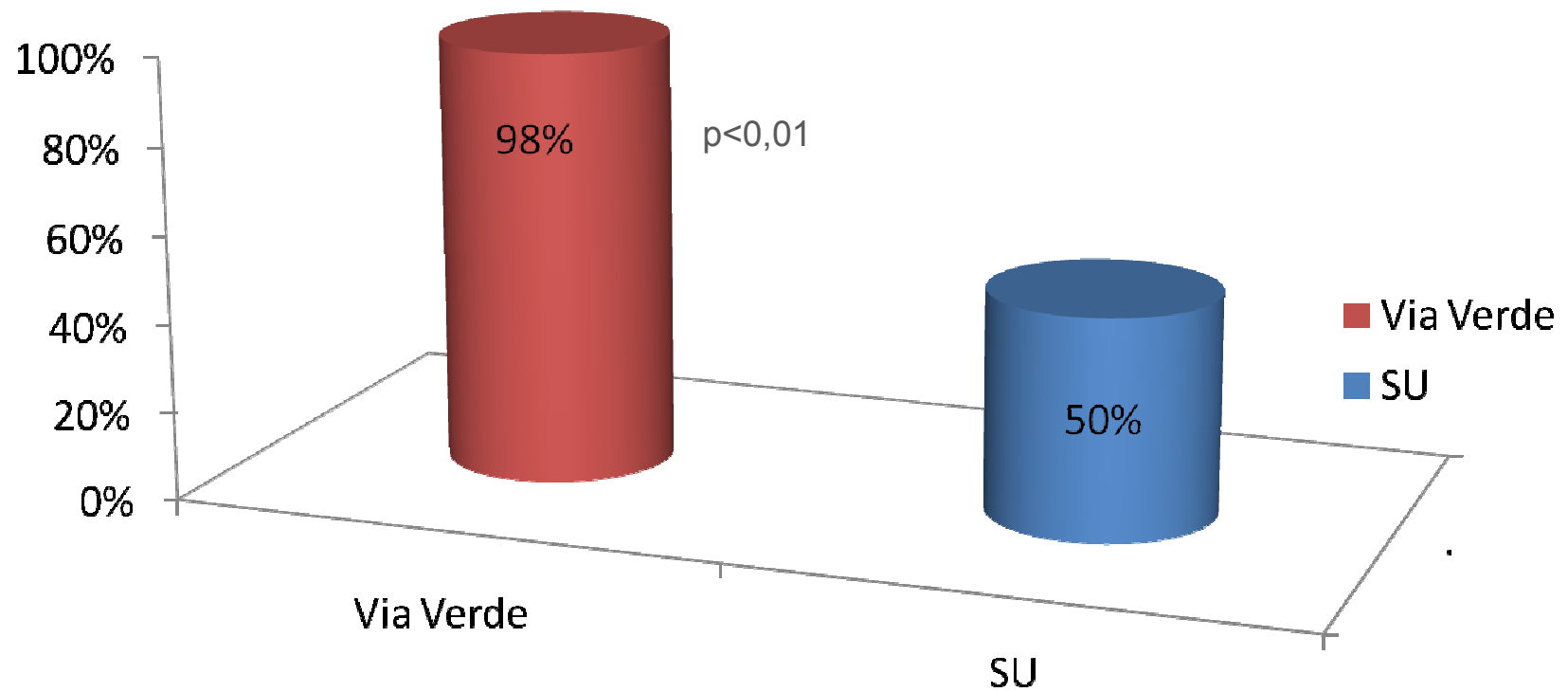
Portugal: 23%;    Lisbon: 5%;    Algarve: 70%



# Analyze current STEMI network situation

## ALGARVE

Door to Balloon Time < 90 min:

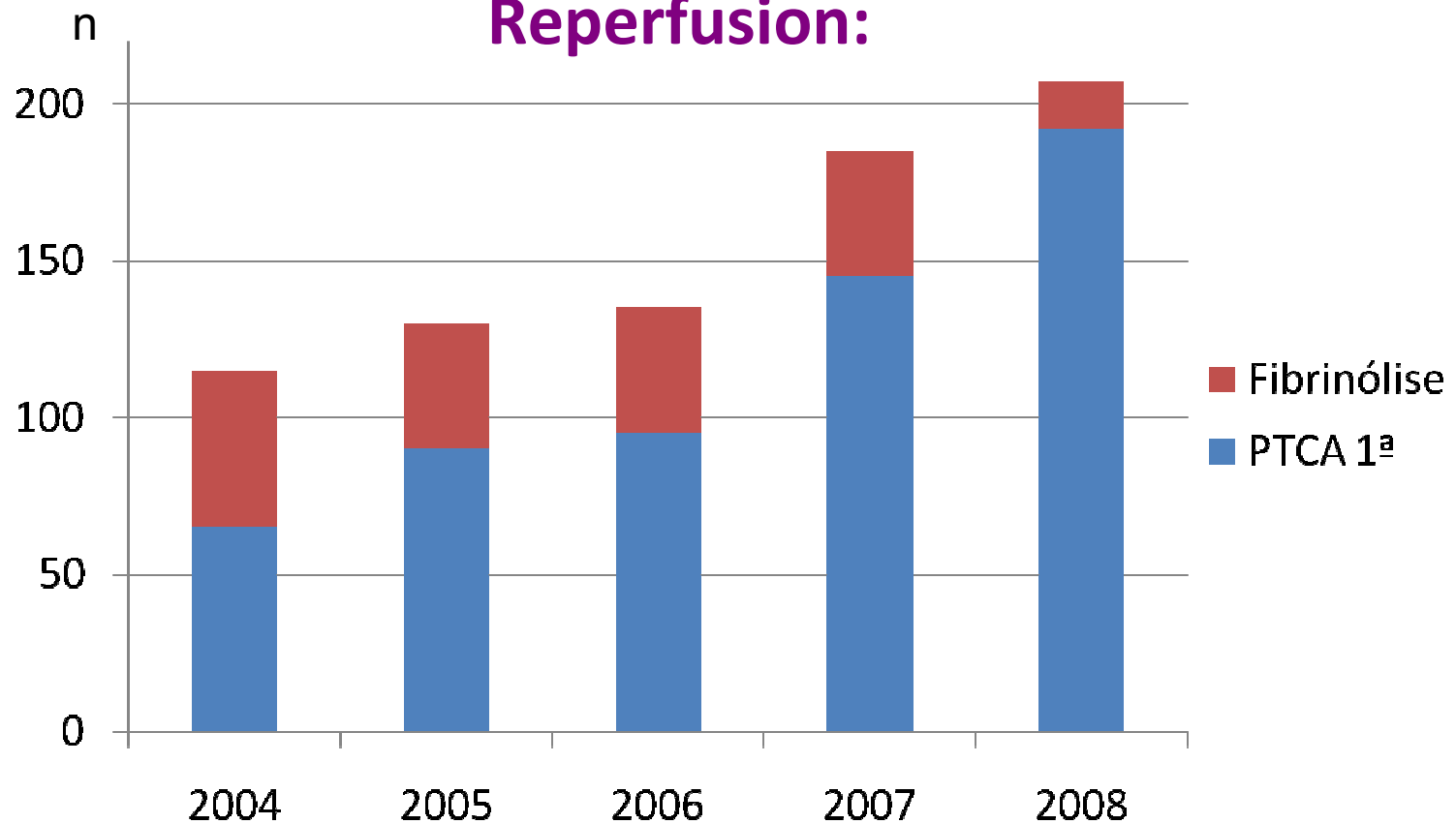




# Analyze current STEMI network situation

## ALGARVE

### Reperfusion:



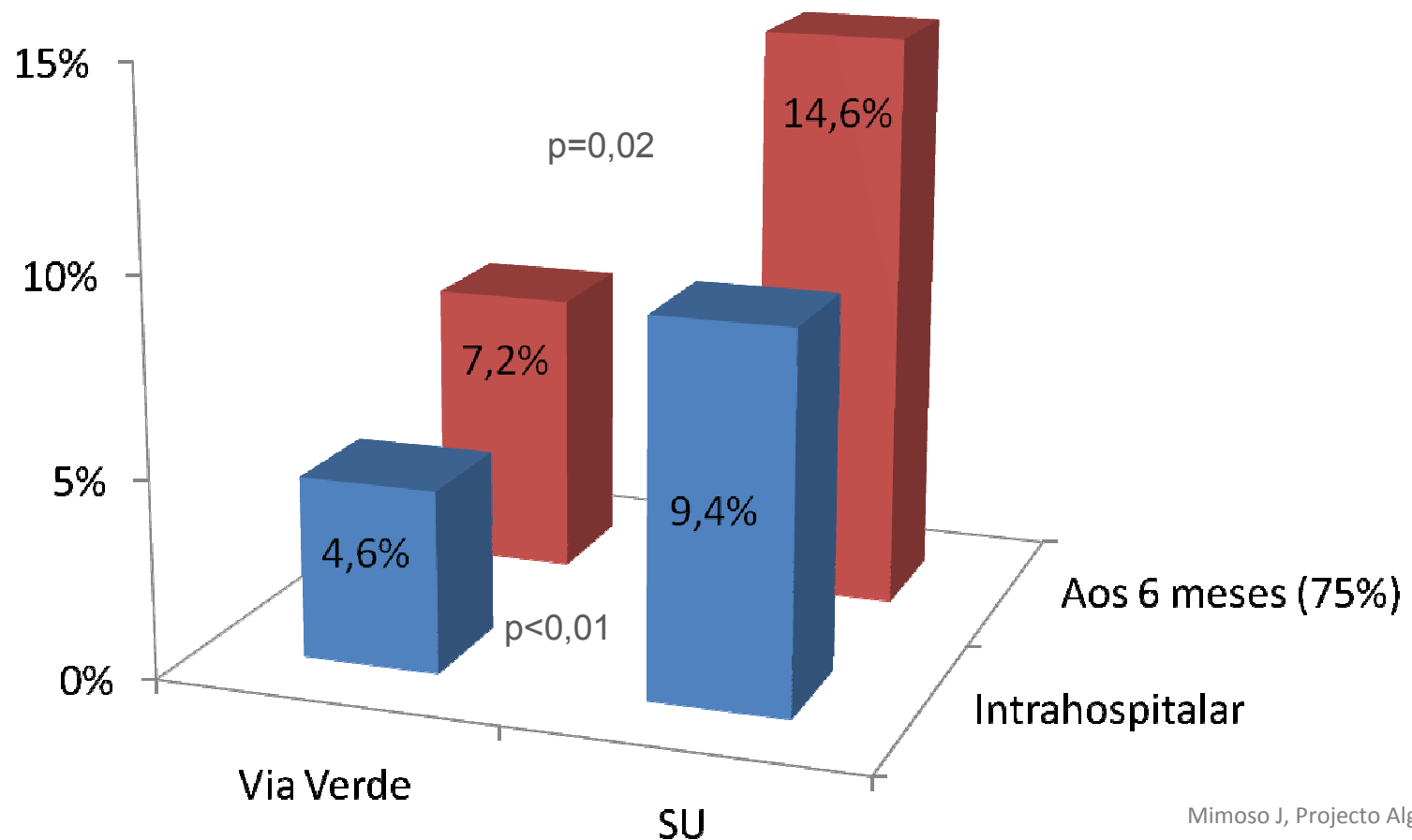
**2009: 405 P-PCI/Million**



# Analyze current STEMI network situation

## ALGARVE

### Mortality:







**VI - Establish AMI/STEMI registry  
if not in place**



## Establish AMI/STEMI registry if not in place

### Registries and quality control:



### Interventional Cardiology: Activity Indicators;

*Alto Comissariado da Saúde*



### National Registry of ACS;

*Portuguese Society of Cardiology*



### National Registry of Interventional Cardiology

*Portuguese Society of Cardiology*



## Establish AMI/STEMI registry if not in place

Registries and quality control:

### REGISTOS

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## **Registo nacional de síndromes coronárias agudas: sete anos de actividade em Portugal [114]**

JOSÉ FERREIRA SANTOS, CARLOS AGUIAR, CRISTINA GAVINA, PEDRO AZEVEDO, JOÃO MORAIS,  
EM NOME DOS INVESTIGADORES DO REGISTO NACIONAL DE SÍNDROMES CORONÁRIAS AGUDAS  
DA SOCIEDADE PORTUGUESA DE CARDIOLOGIA, LISBOA, PORTUGAL





**Establish AMI/STEMI registry if not in place**

**Registries and quality control:**

**ARTIGO ESPECIAL**

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# **Registo Português de Cardiologia de Intervenção em 2002 [1]**

**HÉLDER PEREIRA**

em nome dos investigadores do Registo Nacional de Cardiologia de Intervenção

**Rev Port Cardiol 2004;23 (1): 7-14**

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# Establish AMI/STEMI registry if not in place

National Registry of Interventional Cardiology

*Portuguese Society of Cardiology*



- CardioBase
- Other

**Thank you**

