"Programa Puerta Balón La necesidad de la pre-activación. Es posible abrir la arteria mas rápido?"

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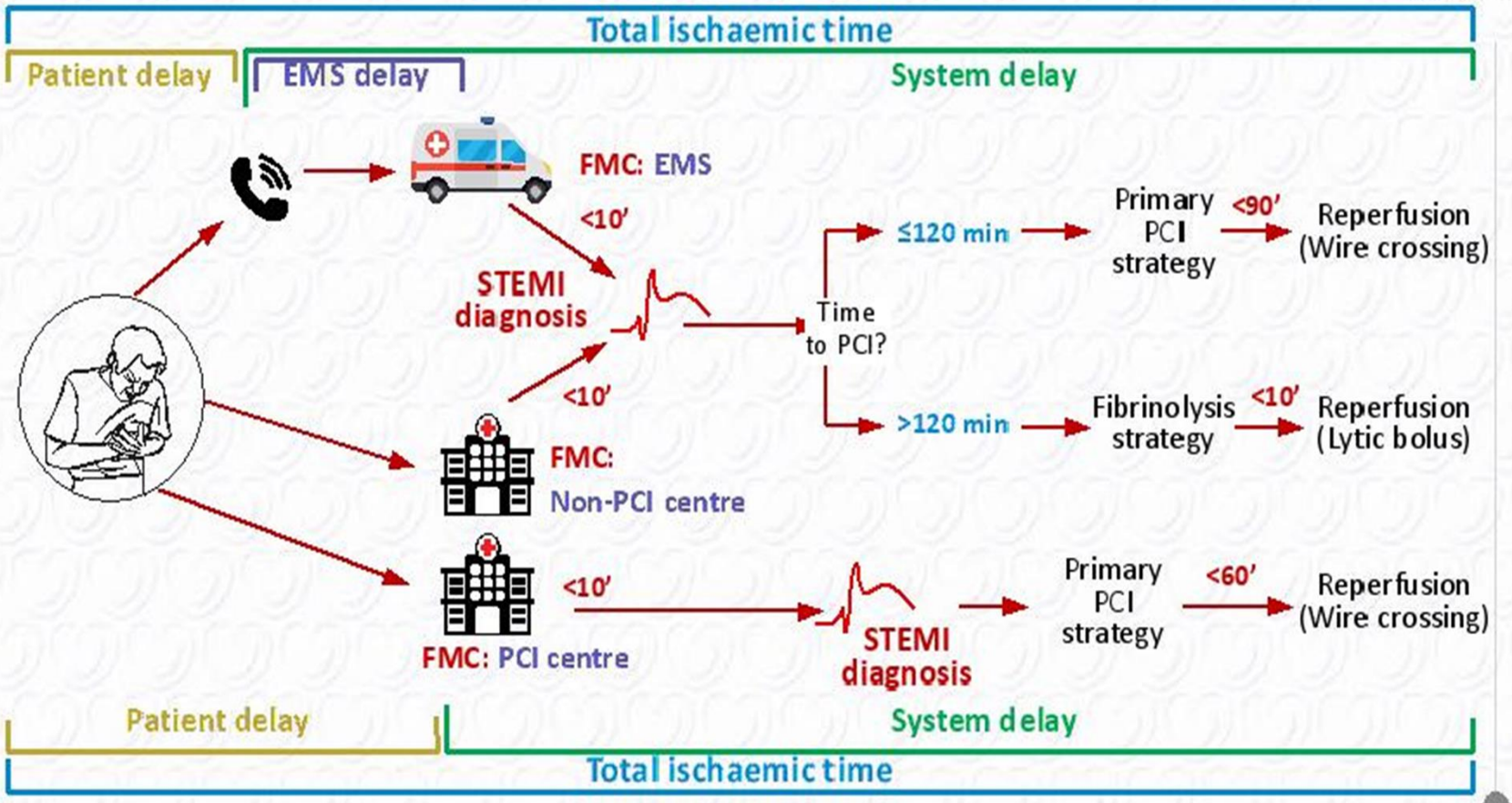
Datos conocidos y claves

- Tiempo es músculo.
- Cuanto más rápido se reperfunda el miocardio, mayor será el beneficio.
- El tiempo Puerta – Balón ideal fue establecido por debajo de los 60 minutos.
- El traslado directo a la sala de Hemodinamia, sin pasar por Sala de Urgencias. Cuánto beneficio extra podría adicionar?

2017 ESC Guidelines for the management of acute myocardial infarction in patients presenting with ST-segment elevation

ESC
European Society of Cardiology

Modes of patient presentation, components of ischaemic time and flowchart for reperfusion strategy selection



Maximum target times according to reperfusion strategy selection in patients presenting via EMS or in a non-PCI centre

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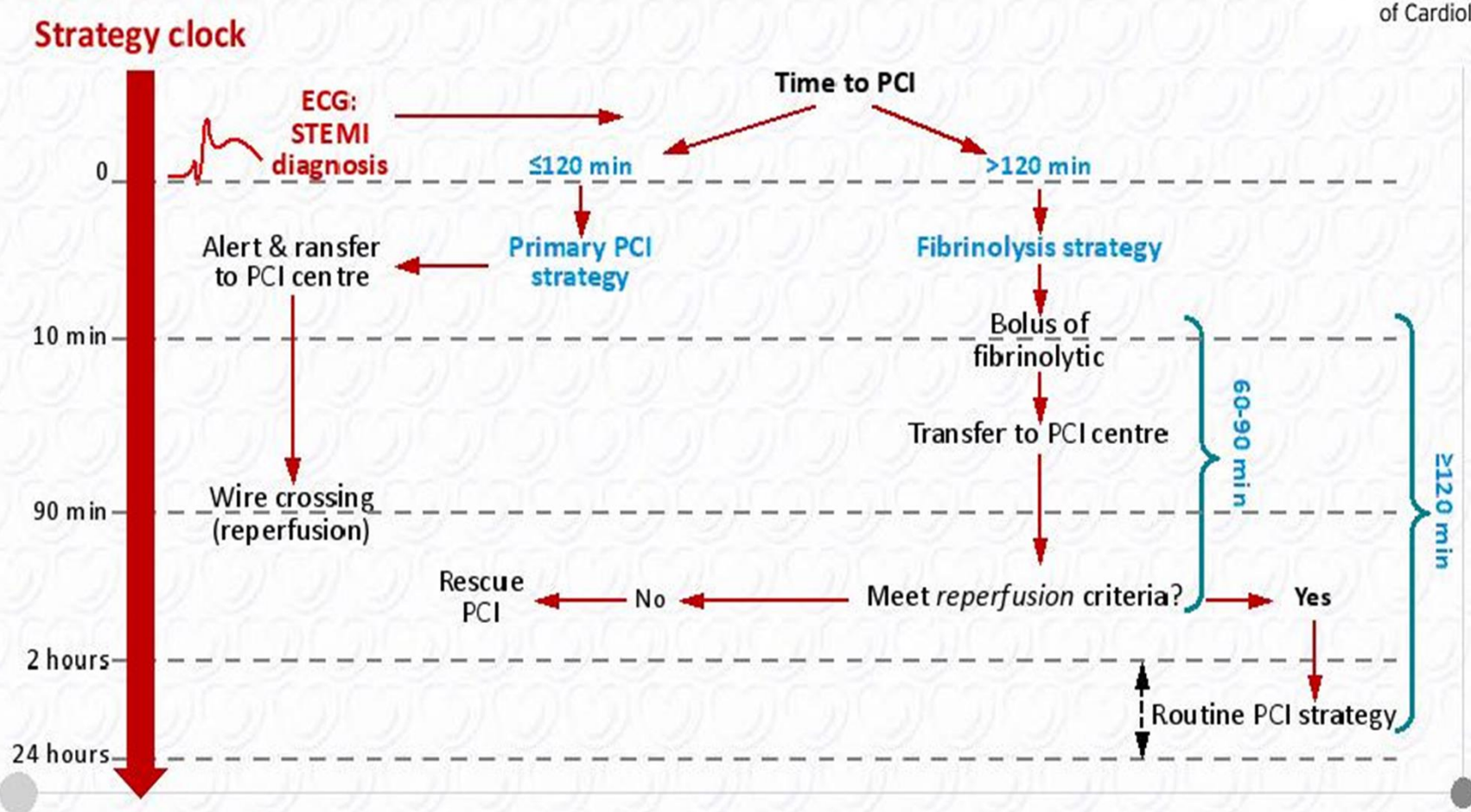

Logistics of prehospital care

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Recommendations	Class	Level
It is recommended that the prehospital management of STEMI patients is based on regional networks designed to deliver reperfusion therapy expeditiously and effectively, with efforts made to make primary PCI available to as many patients as possible.	I	B
It is recommended that primary PCI-capable centres deliver a 24/7 service and are able to perform primary PCI without delay.	I	B
It is recommended that patients transferred to a PCI-capable centre for primary PCI bypass the emergency department and CCU/ICCU and are transferred directly to the catheterization laboratory.	I	B
It is recommended that ambulance teams are trained and equipped to identify STEMI (with use of ECG recorders and telemetry as necessary) and administer initial therapy, including fibrinolysis when applicable.	I	C

Logistics of prehospital care *(continued)*

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Recommendations	Class	Level
It is recommended that all hospitals and EMS participating in the care of patients with STEMI record and audit delay times and work to achieve and maintain quality targets.	I	C
It is recommended that EMS transfer STEMI patients to a PCI-capable centre, by-passing non-PCI centres.	I	C
It is recommended that EMS, emergency departments, and CCU/ ICCU have a written updated STEMI management protocol, preferably shared within geographic networks.	I	C
It is recommended that patients presenting to a non-PCI-capable hospital and awaiting transportation for primary or rescue PCI are attended in an appropriately monitored area (e.g. the emergency department, CCU/ICCU, intermediate care unit).	I	C

Summary of important time targets

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Intervals	Time targets
Maximum time from FMC to ECG and diagnosis.	≤10 min
Maximum expected delay from STEMI diagnosis to primary PCI (wire crossing) to choose primary PCI strategy over fibrinolysis (if this target time cannot be met, consider fibrinolysis).	≤120 min
Maximum time from STEMI diagnosis to wire crossing in patients presenting at primary PCI hospitals.	≤60 min
Maximum time from STEMI diagnosis to wire crossing in transferred patients.	≤90 min

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Citywide Protocol for Primary PCI in ST-Segment Elevation Myocardial Infarction

Michel R. Le May, M.D., Derek Y. So, M.D., Richard Dionne, M.D., Chris A. Glover, M.D., Michael P.V. Froeschl, M.D., George A. Wells, Ph.D., Richard F. Davies, M.D., Heather L. Sherrard, R.N., Justin Maloney, M.D., Jean-François Marquis, M.D., Edward R. O'Brien, M.D., John Trickett, R.N., Pierre Poirier, A.C.P., Sheila C. Ryan, B.Sc., Andrew Ha, M.D., Phil G. Joseph, M.D., and Marino Labinaz, M.D.

Le May et al, NEJM 2008;358:231-240

ORIGINAL ARTICLE

A Citywide Protocol for Primary PCI in ST-Segment Elevation Myocardial Infarction

- Ottawa, Canadá.
- Mayo 2005 a Abril 2006.
- Prospectivo, randomizado.
- 344 STEMI (135 directo CathLab vs 209 Guardia)
- La decisión de enviar el paciente directamente a sala de Hemodinamia ó Guardia Externa la tomaban paramédicos entrenados en la interpretación de ECG en la ambulancia

Le May et al, NEJM 2008;358:231-240

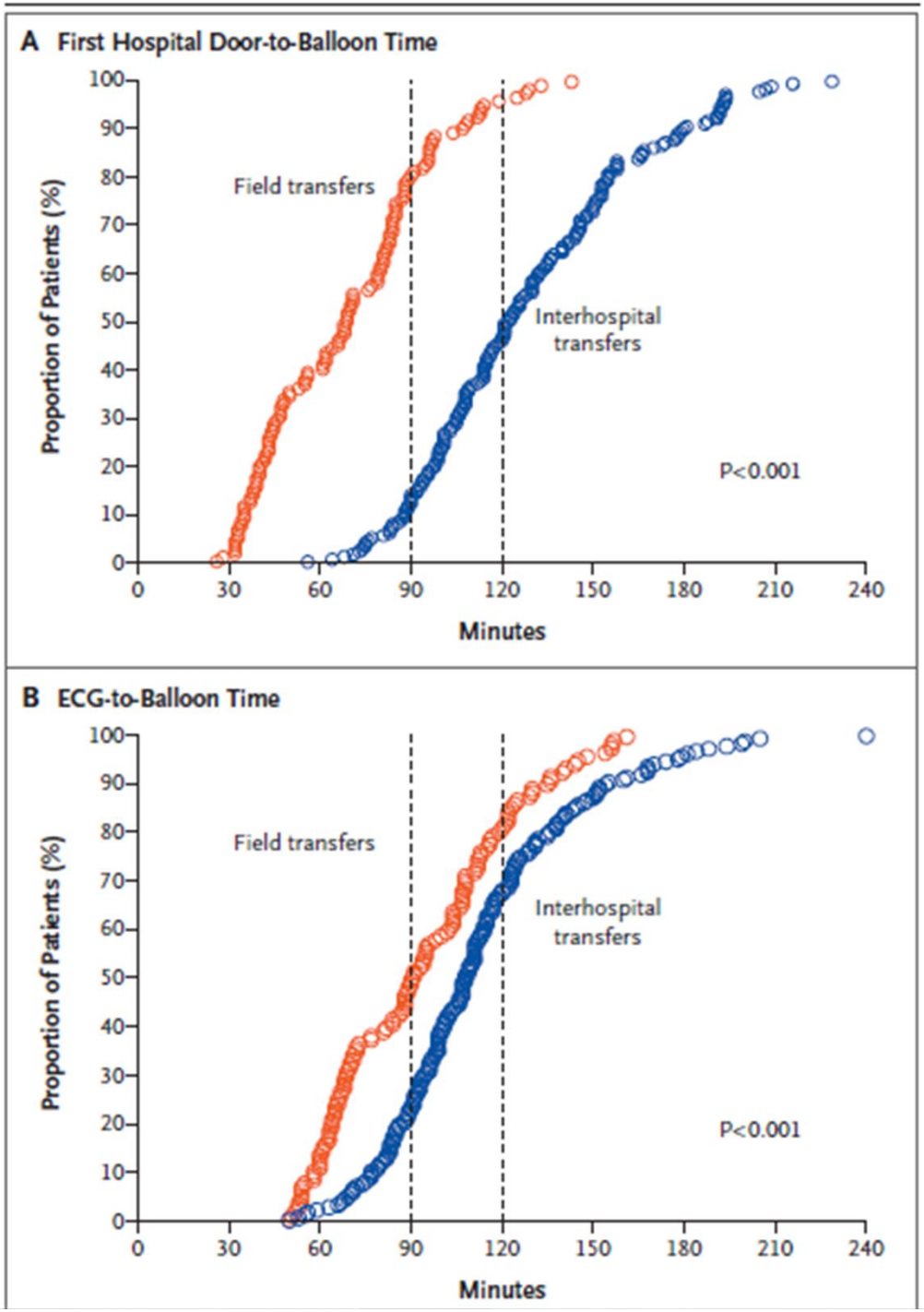

Figure 1. Cumulative Time-to-Balloon Intervals.

Among patients who were transferred to a specialized center for primary percutaneous coronary intervention, door-to-balloon times of less than 90 minutes were achieved in 79.7% of patients who were transferred directly from the field and in 11.9% of patients who were transferred from emergency departments; door-to-balloon times of less than 120 minutes were achieved in 95.9% of patients transferred from the field and in 44.9% of patients transferred from emergency departments (Panel A). The ECG-to-balloon time (Panel B) and symptom-onset-to-balloon time (Panel C) were also shorter in patients who were referred directly from the field.

D2B inferior a 90 minutos: 79.7% vs 11.9%

D2B inferior a 120 minutos: 95.9% vs 44.9%

ECG – balón inferior a 120 minutos: 85% vs 69%

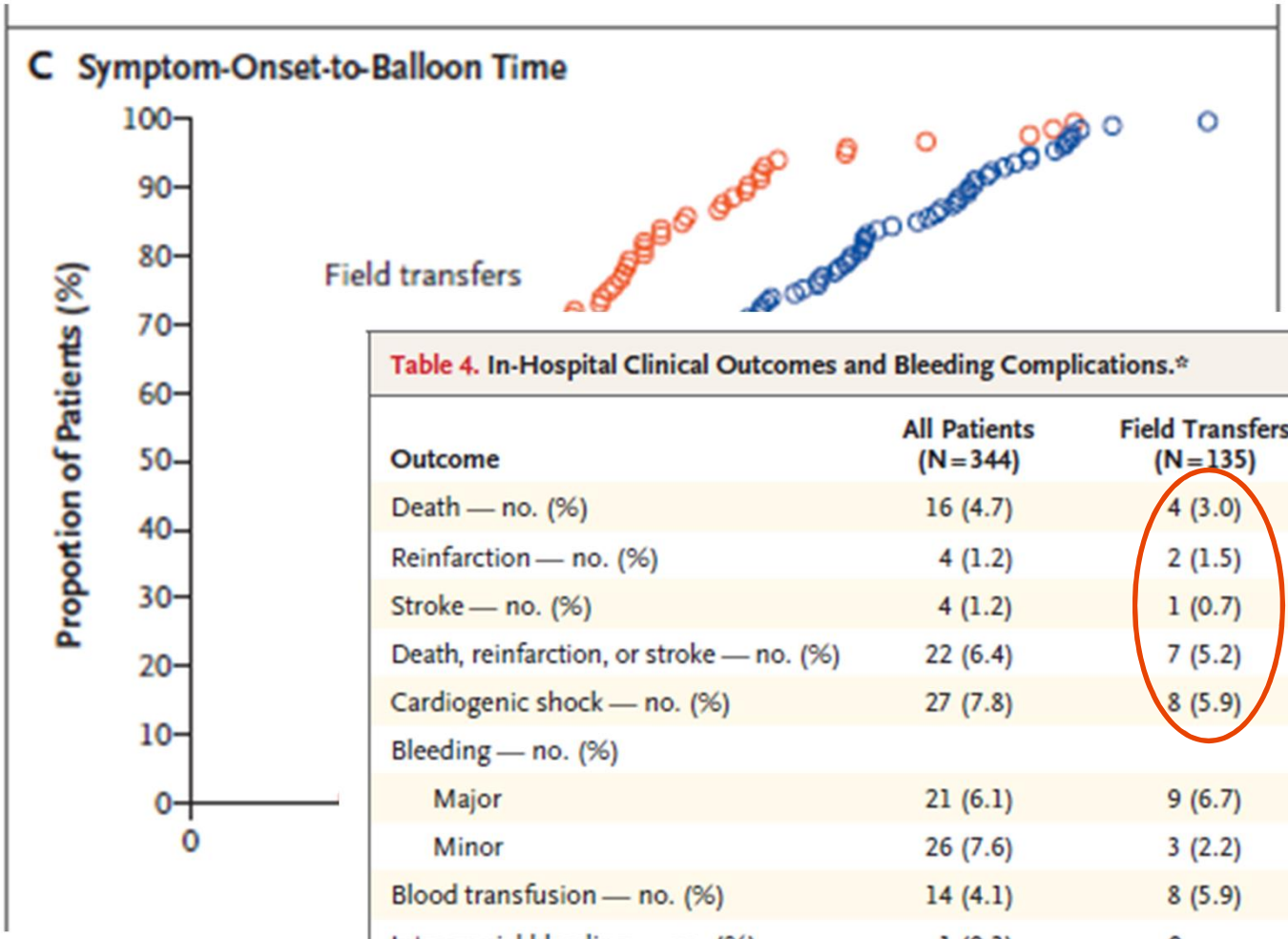

Table 4. In-Hospital Clinical Outcomes and Bleeding Complications.*

Outcome	All Patients (N=344)	Field Transfers (N=135)	Interhospital Transfers (N=209)	P Value
Death — no. (%)	16 (4.7)	4 (3.0)	12 (5.7)	0.30
Reinfarction — no. (%)	4 (1.2)	2 (1.5)	2 (1.0)	0.65
Stroke — no. (%)	4 (1.2)	1 (0.7)	3 (1.4)	1.00
Death, reinfarction, or stroke — no. (%)	22 (6.4)	7 (5.2)	15 (7.2)	0.51
Cardiogenic shock — no. (%)	27 (7.8)	8 (5.9)	19 (9.1)	0.32
Bleeding — no. (%)				
Major	21 (6.1)	9 (6.7)	12 (5.7)	0.82
Minor	26 (7.6)	3 (2.2)	23 (11.0)	0.003
Blood transfusion — no. (%)	14 (4.1)	8 (5.9)	6 (2.9)	0.17
Intracranial bleeding — no. (%)	1 (0.3)	0	1 (0.5)	1.00
Peak activated clotting time — sec	197±46	199±45	185±51	0.21
Revascularization procedure — no. (%)				
Repeat PCI	3 (0.9)	2 (1.5)	1 (0.5)	0.56
PCI on non–infarct-related artery	46 (13.4)	22 (16.3)	24 (11.5)	0.26
Bypass surgery	13 (3.8)	4 (3.0)	9 (4.3)	0.58
Length of hospital stay — days				
Median	4	5	4	0.007
Interquartile range	3–6	3–6	3–6	

Stent for Life is a joint initiative betwe

Emergency Department Bypass for ST-Segment–Elevation Myocardial Infarction Patients Identified With a Prehospital Electrocardiogram

A Report From the American Heart Association Mission: Lifeline Program

- Análisis retrospectivo de datos de 12.581 STEMI en 371 centros en USA entre 2008 y 2011
- By pass de GE solo en 10.5% de los casos (1.316 p)
- By pass mucho mas frecuente en horas laborales que en fines de semana (18.3% vs 4.3%)
- PMC – balón: 68 vs 88 min, p<0.0001.
- Mortalidad intrahospitalaria: no ajustada 2.7 vs 4.1, p=0.01, ajustada OR 0.69 (0.45-1.03), p=0.07

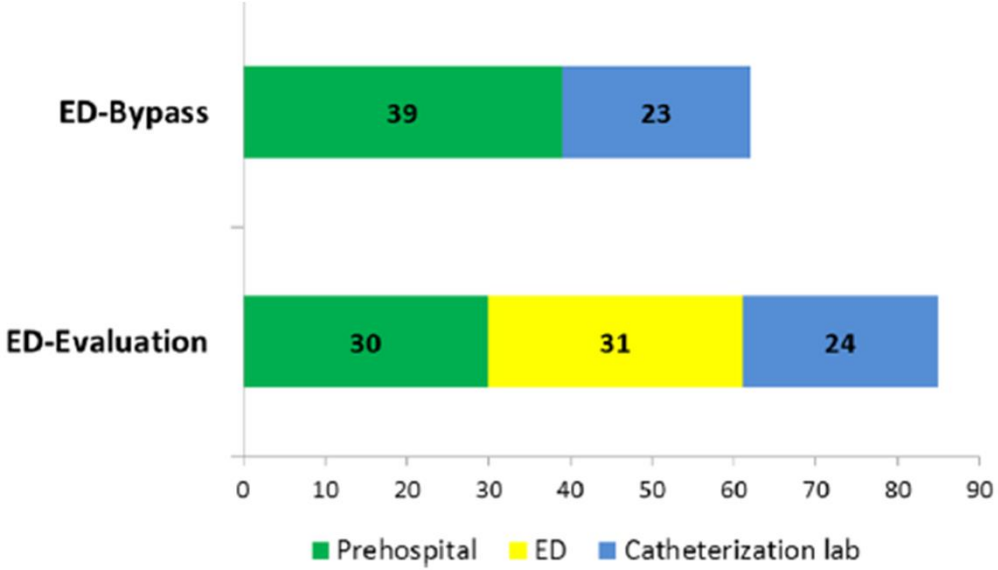

Figure 3. Time components of first medical contact to device activation (FMC-device). Median times are listed; the sum of components may not equal median FMC-to-device time. ED indicates emergency department.

Bagai et al. Circulation 2013, 128:352-359

Protocolo "CathLab Directo" NY

Criterios de Inclusión:

1. Dolor precordial con alta sospecha clínica de origen coronario.
2. Inicio del dolor inferior a 12 horas.
3. Ascenso del segmento ST ≥2 mm en derivaciones contiguas.
4. Ausencia de criterios de exclusión

Criterios de Exclusión:

1. BCRIHH
2. Intubación orotraqueal
3. Insuficiencia respiratorio severa o paro cardiorespiratorio
4. Paciente con "Decisión de No Reanimar" previa
5. Sangrado Activo
6. Trauma severo o traumatismo craneal

Año 2013

Protocolo "CathLab Directo" NY

- SEM transmite ECG al "Centro de Control Médico" (CCM) para evaluación del mismo.
- CCM confirma el diagnóstico de STEMI y verifica con paramédicos del SEM que cumple criterios inclusión/exclusión
- CCM transmite ECG y datos demográficos a Guardia Externa (GE) del Hospital correspondiente
- GE activa el casillero STEMI, agrega "paciente derivado directo a cathlab" e informa tiempo aproximado de llegada del paciente
- CathLab llama por teléfono a GE para confirmar el STEMI
- Integrante médico del CathLab se dirige a GE, recibe al paciente y lo acompaña desde GE a cathlab

Protocolo "CathLab Directo" NY

- El SEM no puede trasladar al paciente directo al cathlab sin pasar por GE ó sin ser escoltado por alguien del hospital.
- El miembro del hospital que escolta al paciente al cath lab no puede demorar mas de 10 minutos en estar disponible. De no cumplirse, el paciente queda en GE hasta que se resuelva el problema.
- No realizar ECG en GE
- Si CathLab está cerrado al momento de llegada del paciente, el paciente esperará en GE
- "Llegada al hospital" será considerada cuando SEM llega a GE

Hagiwara et al. Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine 2014, 22:67
http://www.sjtrem.com/content/22/1/67

SCANDINAVIAN JOURNAL OF
trauma, resuscitation
& emergency medicine

REVIEW Open Access

The impact of direct admission to a catheterisation lab/CCU in patients with ST-elevation myocardial infarction on the delay to reperfusion and early risk of death: results of a systematic review including meta-analysis

Magnus Andersson Hagiwara[1], Anders Bremer[1], Andreas Claesson[1], Christer Axelsson[1], Gabriella Norberg[1] and Johan Herlitz[1,2*]

Tiempo Puerta - Balón

Table 3 Direct admission to catheter laboratory vs ED admission

Study ID	Number of participants	Time; pathway group (minutes)	Time; control group (minutes)	P value
Carstensen et al. 2007 [21]	P N=108, C N=193	MD=34 (IQR 27-48)	MD=50 (IQR 34-85)	P<0.001
Bång et al. 2008 [23]	P N=115, C N=66	MD=72 (IQR NR)	MD=97 (IQR NR)	P<0.001
Dorsch et al. 2008 [22]	P N=172 C N=215	MD=58 (IQR NR)	MD=105 (IQR NR)	P<0.001
Grosgurin et al. 2010 [24]	P N=119 C N=77	MD=71 (IQR 46-103)	MD=109 (IQR 74,5-149,5)	P<0.001
Majumder et al. 2011 [25]	P N=200 C N=161	MD=39 (IQR 26-53)	MD=82 (IQR 49-120)	P<0.001

Hagiwara et al, Scandinavian Journal of Trauma, Resucitation and Emergency Medicine 2014, 22:67

Inicio de Síntomas - Balón

Table 4 Direct admission to catheter laboratory vs ED admission

Study ID	Number of participants	Time; pathway group (minutes)	Time; control group (minutes)	P value
Carstensen et al. 2007 [21]	P N=108,	MD=154 (IQR 120-233)	MD= 249 (IQR 184-405)	P<0.001
	C N=193			
Bång et al. 2008 [23]	P N=115,	MD=184	MD=238	P<0.02
	C N=66	(IQR NR)	(IQR NR)	
Dorsch et al. 2008 [22]	P N=172	MD=105	MD=143	P<0.001
	C N=215	(IQR NR)	(IQR NR)	
Majumder et al. 2011 [25]	P N=200	MD=106 (IQR 91-132)	MD=130 (IQR 103-164)	p<0.005
	C N=161			
Cheskes et al. 2011 [26]	P N=80	MD=70 (IQR 24)	MD=107 (IQR 30)	P<0.001
	C N=95			
Bagai et al. 2013a [27]	P N=1316	MD=68 (IQR 54-85)	MD=88 (IQR 73-106)	P<0.001
	C N=11265			
Bagai et al. 2013b [28]	P N=28	MD=75 (IQR 59-93)	MD=90 (IQR 76-109)	P<0.001
	C N=1401			

Hagiwara et al, Scandinavian Journal of Trauma, Resucitation and Emergency Medicine 2014, 22:67

Systematic Review and Meta-analysis of the Benefits of Out-of-Hospital 12-Lead ECG and Advance Notification in ST-Segment Elevation Myocardial Infarction Patients

Julian Nam, MSc; Kyla Caners, MD; James M. Bowen, BScPhm, MSc; Michelle Welsford, MD, ABEM, FRCP; Daria O'Reilly, PhD, MSc

	Intervention			Control				Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year
Terkelsen	90	12	21	168	37	55	13.9%	-78.00 [-89.04, -66.96]	2005
van de Loo	95	26	74	131	59	63	12.8%	-36.00 [-51.73, -20.27]	2005
Caudle	94	29	39	115	31	42	13.5%	-21.00 [-34.07, -7.93]	2009
Martinoni	50	14	475	75	21	1054	15.1%	-25.00 [-26.79, -23.21]	2011
Sorensen	90	10	460	144	25	216	15.0%	-54.00 [-57.46, -50.54]	2011
Nestler	58	18	38	90	17	50	14.6%	-32.00 [-39.41, -24.59]	2011
Chan	103	11	167	157	21	427	15.1%	-54.00 [-56.60, -51.40]	2012
Total (95% CI)			**1274**			**1907**	**100.0%**	**-43.00 [-57.24, -28.75]**	

Heterogeneity: Tau² = 348.32; Chi² = 490.38, df = 6 (P < 0.00001); I² = 99%
Test for overall effect: Z = 5.91 (P < 0.00001)

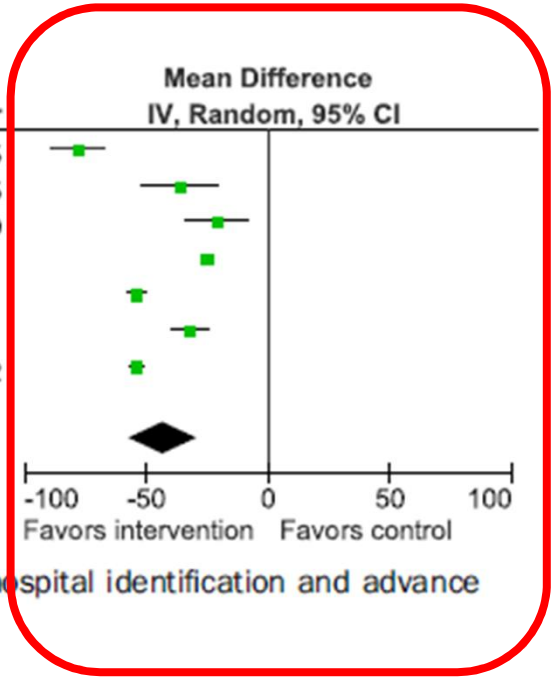

Figure E1. Mean difference in first medical contact–to-balloon time (minutes) for out-of-hospital identification and advance notification (intervention) versus standard or no cardiac monitoring (control).

Nam et al, Ann Emerg Med. 2014 Aug;64(2):176-86

Systematic Review and Meta-analysis of the Benefits of Out-of-Hospital 12-Lead ECG and Advance Notification in ST-Segment Elevation Myocardial Infarction Patients

Julian Nam, MSc; Kyla Caners, MD; James M. Bowen, BScPhm, MSc; Michelle Welsford, MD, ABEM, FRCP; Daria O'Reilly, PhD, MSc

	Intervention			Control				Mean Difference	
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Random, 95% CI	Year
Canto	92	23	400	115	26	4531	7.6%	-23.00 [-25.38, -20.62]	1997
Wall	80	18	50	109	19	27	7.4%	-29.00 [-37.73, -20.27]	2000
Terkelsen	31	7	21	104	30	55	7.4%	-73.00 [-81.47, -64.53]	2005
van de Loo	62	27	74	96	55	63	6.9%	-34.00 [-48.91, -19.09]	2005
Swor	70.4	34.5	31	101.6	34.5	69	6.9%	-31.20 [-45.82, -16.58]	2006
Carstensen	39	13	193	116	25	108	7.5%	-77.00 [-82.06, -71.94]	2007
Dhruva	80	35	20	146	77	29	5.0%	-66.00 [-97.95, -34.05]	2007
Brown	73	19	30	141	49	20	6.0%	-68.00 [-90.53, -45.47]	2008
Caudle	62	20	39	87	21	42	7.3%	-25.00 [-33.93, -16.07]	2009
Diercks	61	11	1501	75	12	3563	7.6%	-14.00 [-14.68, -13.32]	2009
Nestler	32	14	38	59	15	50	7.5%	-27.00 [-33.09, -20.91]	2011
Sorensen	34	7	460	30	7	216	7.6%	4.00 [2.87, 5.13]	2011
Chan	63	12	167	132	20	427	7.6%	-69.00 [-71.63, -66.37]	2012
Ong	51	19	148	75	18	111	7.6%	-24.00 [-28.54, -19.46]	2013
Total (95% CI)			**3172**			**9311**	**100.0%**	**-38.66 [-50.75, -26.57]**	

Heterogeneity: Tau² = 497.22; Chi² = 3587.98, df = 13 (P < 0.00001); I² = 100%

Test for overall effect: Z = 6.27 (P < 0.00001)

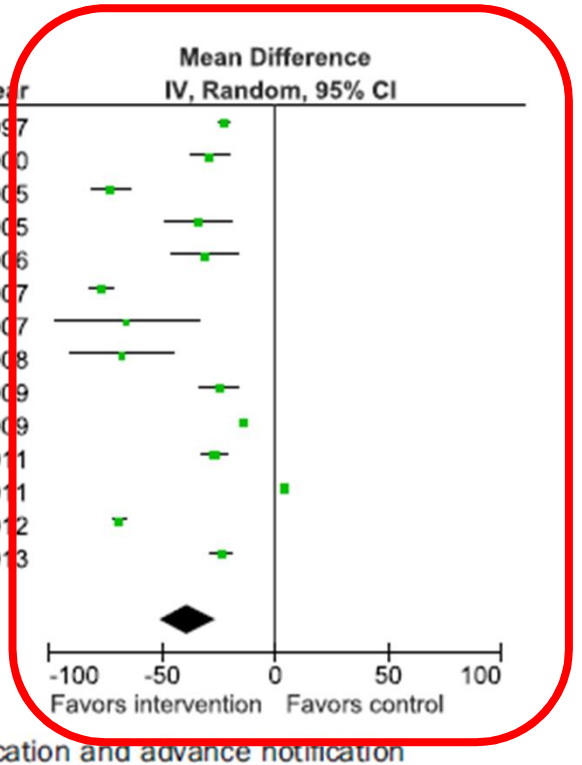

Figure E2. Mean difference in door-to-balloon time (minutes) for out-of-hospital identification and advance notification (intervention) versus standard or no cardiac monitoring (control).

Nam et al, Ann Emerg Med. 2014 Aug;64(2):176-86

Systematic Review and Meta-analysis of the Benefits of Out-of-Hospital 12-Lead ECG and Advance Notification in ST-Segment Elevation Myocardial Infarction Patients

Julian Nam, MSc; Kyla Caners, MD; James M. Bowen, BScPhm, MSc; Michelle Welsford, MD, ABEM, FRCP; Daria O'Reilly, PhD, MSc

Study or Subgroup	Intervention Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI	Yea
2.1.1 Regional									
Terkelsen	90	12	21	168	37	55	13.9%	-78.00 [-89.04, -66.96]	200
Caudle	94	29	39	115	31	42	13.5%	-21.00 [-34.07, -7.93]	200
Sorensen	90	10	460	144	25	216	15.0%	-54.00 [-57.46, -50.54]	201
Martinoni	50	14	475	75	21	1054	15.1%	-25.00 [-26.79, -23.21]	201
Chan	103	11	167	157	21	427	15.1%	-54.00 [-56.60, -51.40]	201
Subtotal (95% CI)			**1162**			**1794**	**72.6%**	**-46.44 [-63.87, -29.00]**	
Heterogeneity: Tau² = 379.96; Chi² = 488.10, df = 4 (P < 0.00001); I² = 99%									
Test for overall effect: Z = 5.22 (P < 0.00001)									
2.1.2 Local									
van de Loo	95	26	74	131	59	63	12.8%	-36.00 [-51.73, -20.27]	200
Nestler	58	18	38	90	17	50	14.6%	-32.00 [-39.41, -24.59]	201
Subtotal (95% CI)			**112**			**113**	**27.4%**	**-32.73 [-39.43, -26.02]**	
Heterogeneity: Tau² = 0.00; Chi² = 0.20, df = 1 (P = 0.65); I² = 0%									
Test for overall effect: Z = 9.57 (P < 0.00001)									
Total (95% CI)			**1274**			**1907**	**100.0%**	**-43.00 [-57.24, -28.75]**	
Heterogeneity: Tau² = 348.32; Chi² = 490.38, df = 6 (P < 0.00001); I² = 99%									
Test for overall effect: Z = 5.91 (P < 0.00001)									
Test for subgroup differences: Chi² = 2.07, df = 1 (P = 0.15), I² = 51.7%									

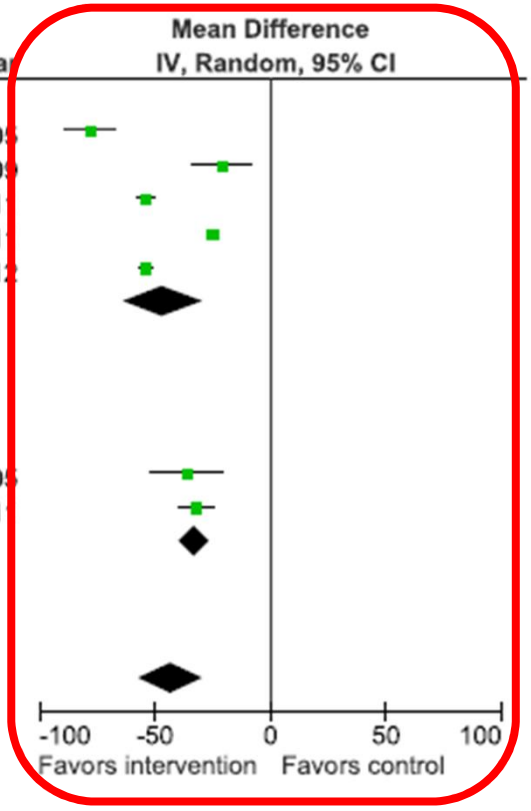

Figure E4. Mean difference in time (minutes) in first medical contact–to-balloon time by regional or local jurisdiction type.

Nam et al, Ann Emerg Med. 2014 Aug;64(2):176-86

Systematic Review and Meta-analysis of the Benefits of Out-of-Hospital 12-Lead ECG and Advance Notification in ST-Segment Elevation Myocardial Infarction Patients

Julian Nam, MSc; Kyla Caners, MD; James M. Bowen, BScPhm, MSc; Michelle Welsford, MD, ABEM, FRCP; Daria O'Reilly, PhD, MSc

Study or Subgroup	Intervention Mean	SD	Total	Control Mean	SD	Total	Weight	Mean Difference IV, Random, 95% CI	Year
3.1.1 Cath lab activation by cardiologist									
Sorensen	90	10	460	144	25	216	15.0%	-54.00 [-57.46, -50.54]	201
Martinoni	50	14	475	75	21	1054	15.1%	-25.00 [-26.79, -23.21]	201
Subtotal (95% CI)			**935**			**1270**	**30.2%**	**-39.46 [-67.88, -11.04]**	
Heterogeneity: Tau² = 418.53; Chi² = 213.35, df = 1 (P < 0.00001); I² = 100%									
Test for overall effect: Z = 2.72 (P = 0.006)									
3.1.2 Cath lab activation by EMS									
Terkelsen	90	12	21	168	37	55	13.9%	-78.00 [-89.04, -66.96]	2005
van de Loo	95	26	74	131	59	63	12.8%	-36.00 [-51.73, -20.27]	2005
Caudle	94	29	39	115	31	42	13.5%	-21.00 [-34.07, -7.93]	2009
Nestler	58	18	38	90	17	50	14.6%	-32.00 [-39.41, -24.59]	201
Subtotal (95% CI)			**172**			**210**	**54.7%**	**-41.85 [-66.62, -17.09]**	
Heterogeneity: Tau² = 600.27; Chi² = 58.17, df = 3 (P < 0.00001); I² = 95%									
Test for overall effect: Z = 3.31 (P = 0.0009)									
3.1.3 Cath lab activation by emergency physician									
Chan	103	11	167	157	21	427	15.1%	-54.00 [-56.60, -51.40]	2012
Subtotal (95% CI)			**167**			**427**	**15.1%**	**-54.00 [-56.60, -51.40]**	
Heterogeneity: Not applicable									
Test for overall effect: Z = 40.73 (P < 0.00001)									
Total (95% CI)			**1274**			**1907**	**100.0%**	**-43.00 [-57.24, -28.75]**	
Heterogeneity: Tau² = 348.32; Chi² = 490.38, df = 6 (P < 0.00001); I² = 99%									
Test for overall effect: Z = 5.91 (P < 0.00001)									
Test for subgroup differences: Chi² = 1.89, df = 2 (P = 0.39), I² = 0%									

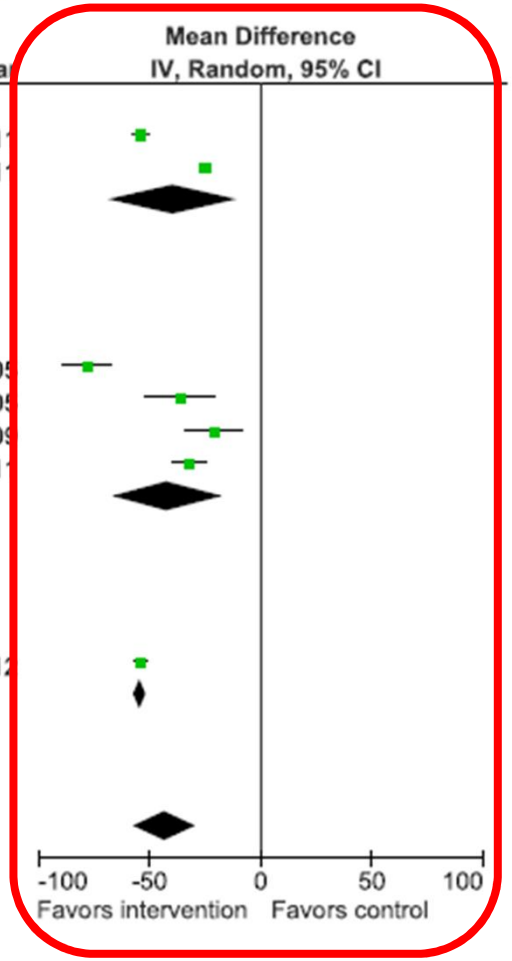

Figure E6. Mean difference in time (minutes) in first medical contact–to-balloon time by catheterization laboratory activation protocol (by cardiologist, EMS, or emergency physician).

Nam et al. Ann Emerg Med. 2014 Aug;64(2):176-86

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Julian Nam, MSc; Kyla Caners, MD; James M. Bowen, BScPhm, MSc; Michelle Welsford, MD, ABEM, FRCP; Daria O'Reilly, PhD, MSc

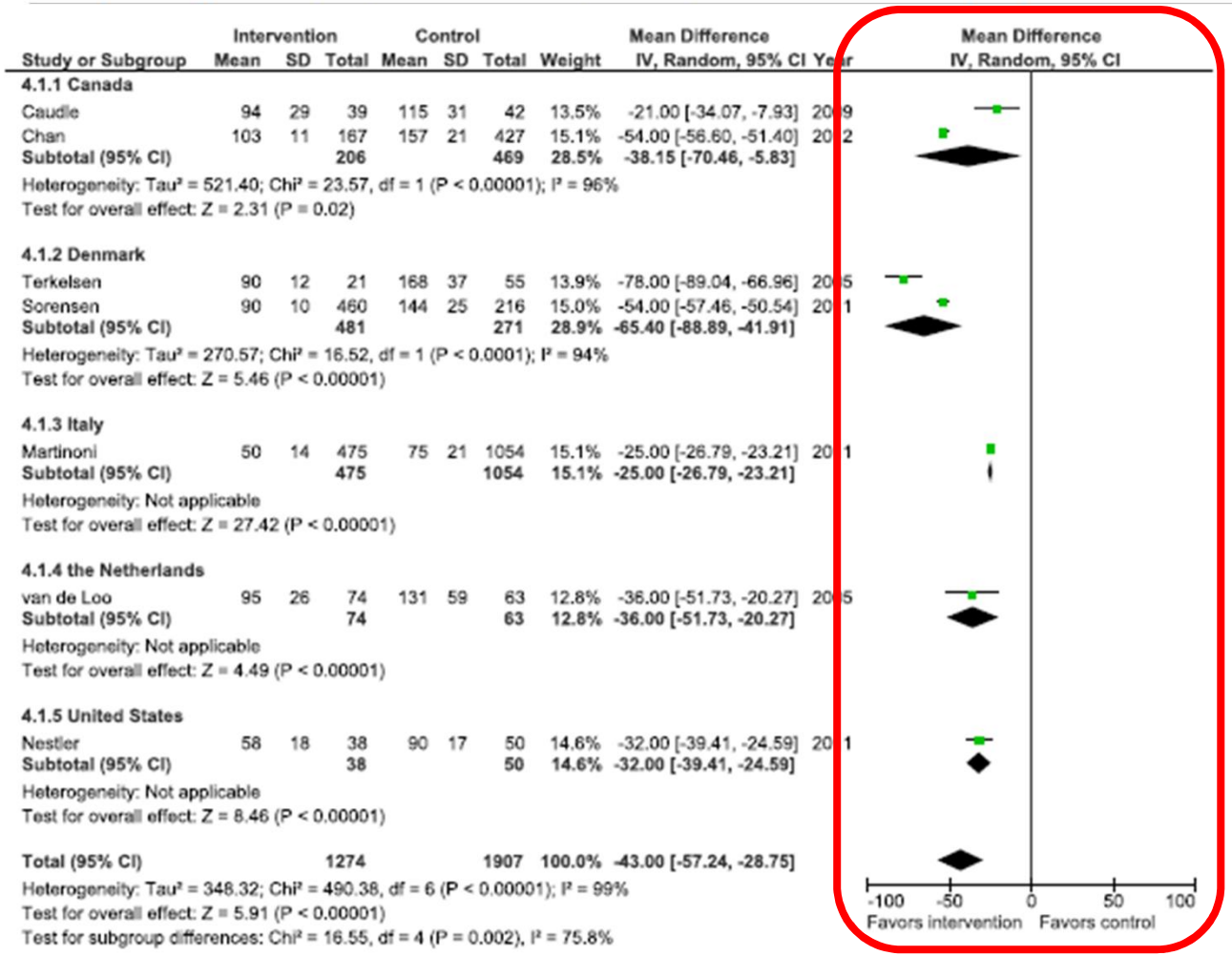


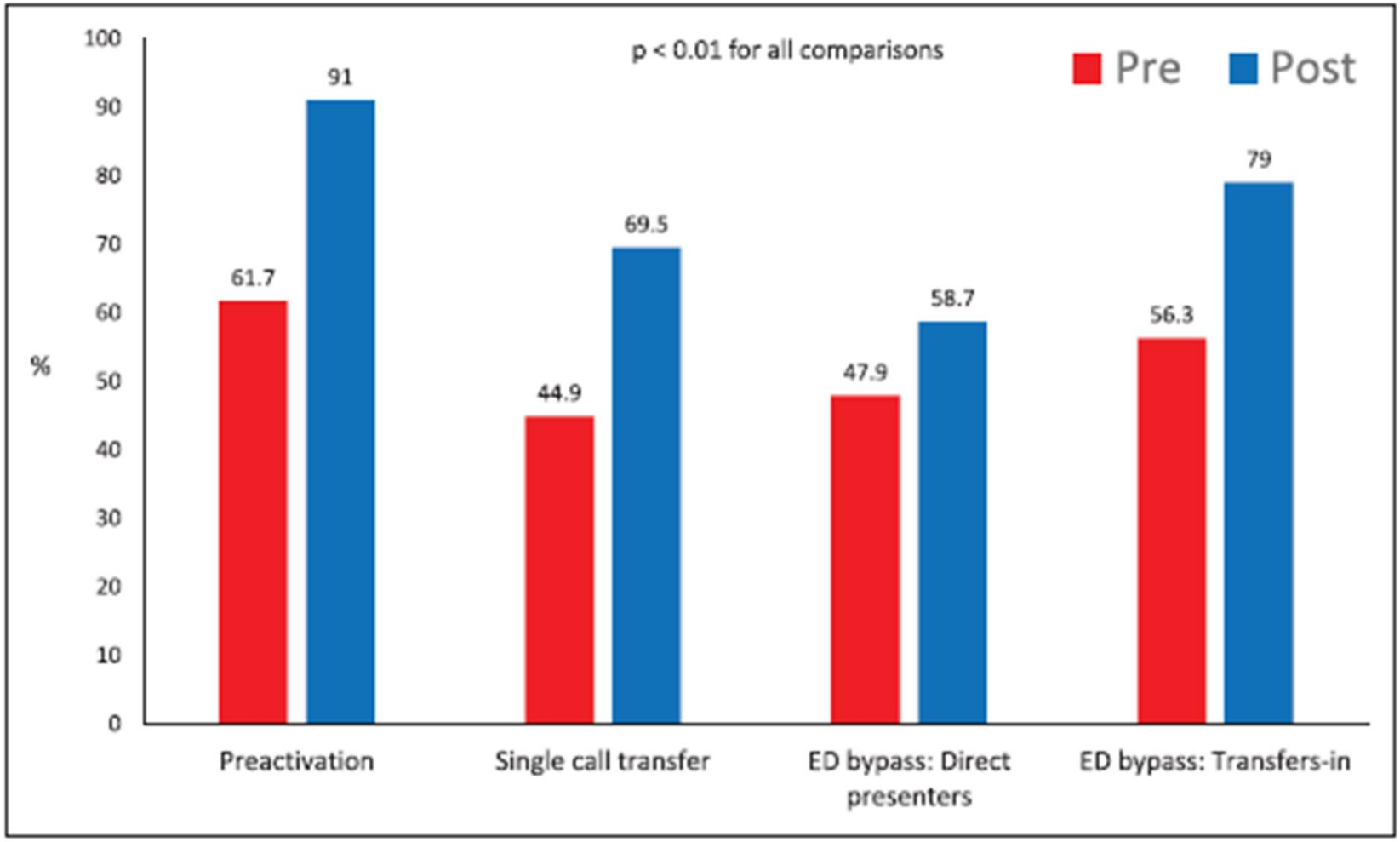
Figure E8. Mean difference in time (minutes) in first medical contact–to-balloon time by country (Canada, Denmark, Italy, the Netherlands, or the United States).

Association of Rapid Care Process Implementation on Reperfusion Times Across Multiple ST-Segment–Elevation Myocardial Infarction Networks

- "The Mission: Lifeline STEMI System Accelerator Program" (ACC)
- USA, 16 regiones, 167 hospitales
- 23.498 STEMI entre 2012 y 2014
- Encuesta analizando implementación de protocolos específicos para STEMI de cada hospital
- Análisis de resultados (tiempos y mortalidad)

Fordyce et al, CCI 2017 January;10(1)

Association of Rapid Care Process Implementation on Reperfusion Times Across Multiple ST-Segment–Elevation Myocardial Infarction Networks



Fordyce et al, *CCI* 2017 January;10(1)

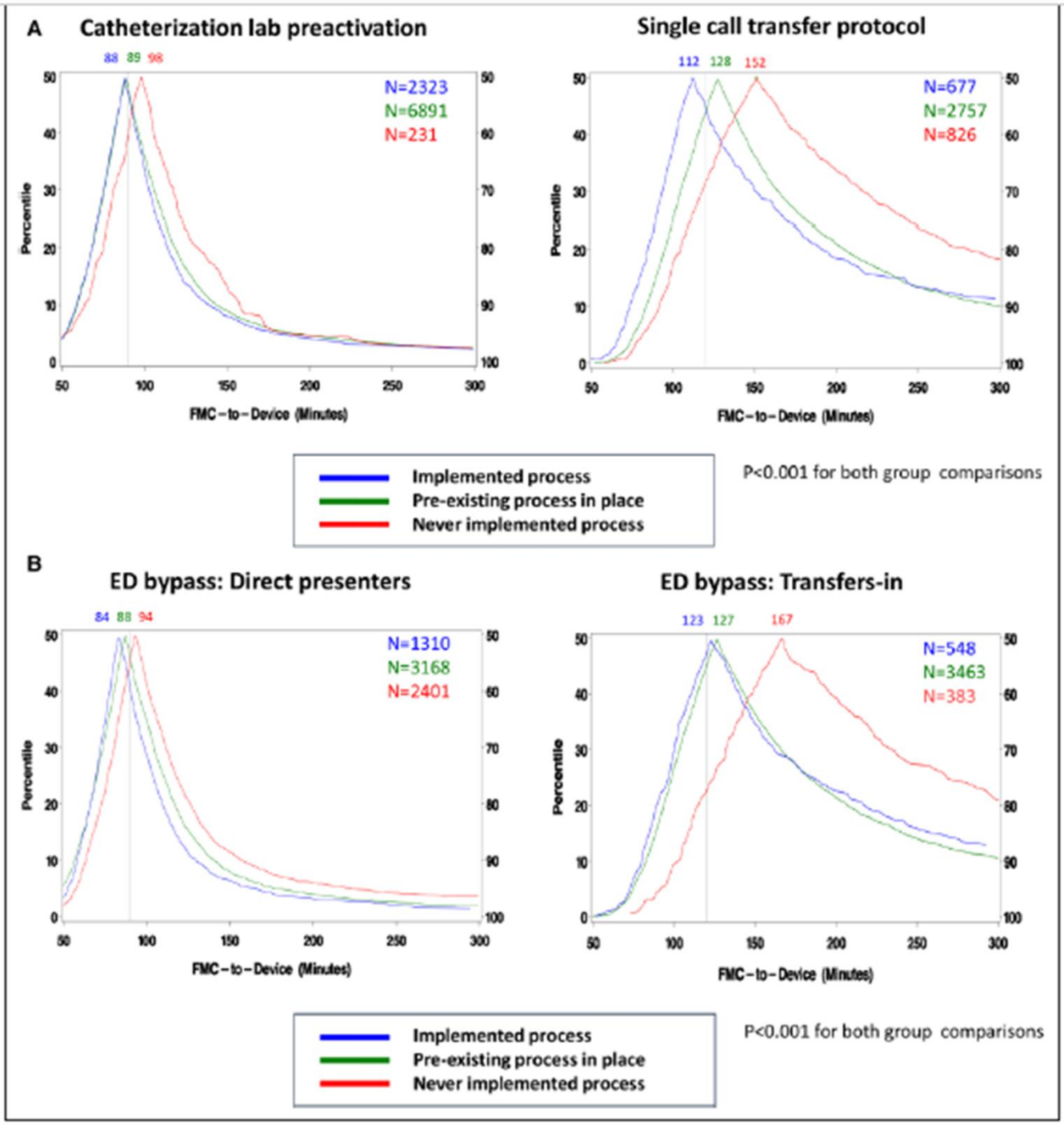


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Table 2. Comparison of Adjusted In-Hospital Mortality for Key Care Processes

	OR (95% CI)	*P* Value
Preactivation		
Preexisting vs implemented	0.90 (0.71–1.13)	0.37
Preexisting vs did not implement	1.26 (0.54–2.92)	0.60
Implemented vs did not implement	1.40 (0.59–3.29)	0.45
Single call transfer		
Preexisting vs implemented	0.76 (0.47–1.21)	0.25
Preexisting vs did not implement	1.26 (0.91–1.76)	0.17
Implemented vs did not implement	1.67 (0.99–1.81)	0.053
ED bypass: directs		
Preexisting vs implemented	0.87 (0.66–1.14)	0.31
Preexisting vs did not implement	0.93 (0.73–1.19)	0.52
Implemented vs did not implement	1.07 (0.83–1.38)	0.59
ED bypass: transfers		
Preexisting vs implemented	0.85 (0.55–1.3)	0.46
Preexisting vs did not implement	1.09 (0.59–2.00)	0.78
Implemented vs did not implement	1.28 (0.63–2.60)	0.45

Sin diferencias significativas en mortalidad

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Direct Admission Versus Interhospital Transfer for Primary Percutaneous Coronary Intervention in ST-Segment Elevation Myocardial Infarction

Damian Kawecki, MD, PhD,[a] Marek Gierlotka, MD, PhD,[b,c] Beata Morawiec, MD, PhD,[a] Michał Hawranek, MD, PhD,[b,c] Mateusz Tajstra, MD, PhD,[b,c] Michał Skrzypek, PhD,[c,d] Wojciech Wojakowski, MD, PhD,[e] Lech Poloński, MD, PhD,[b,c] Ewa Nowalany-Kozielska, MD, PhD,[a] Mariusz Gąsior, MD, PhD[b,c]

- Registro prospectivo, multicéntrico, con extensión nacional, que analizó todos los STEMI tratados con PCI entre los años 2006 y 2013 en Polonia.
- Dos grupos: admisión directa a CathLAb vs transferencia a hospital regional y posterior derivación a CathLab
- End Points: evaluación del tiempo a PCI, mortalidad y función ventricular a 12 meses.
- 70.093 pacientes: 39.144 (56%) transferencia directa, 30.947 (44%) transferencia a hospital regional.

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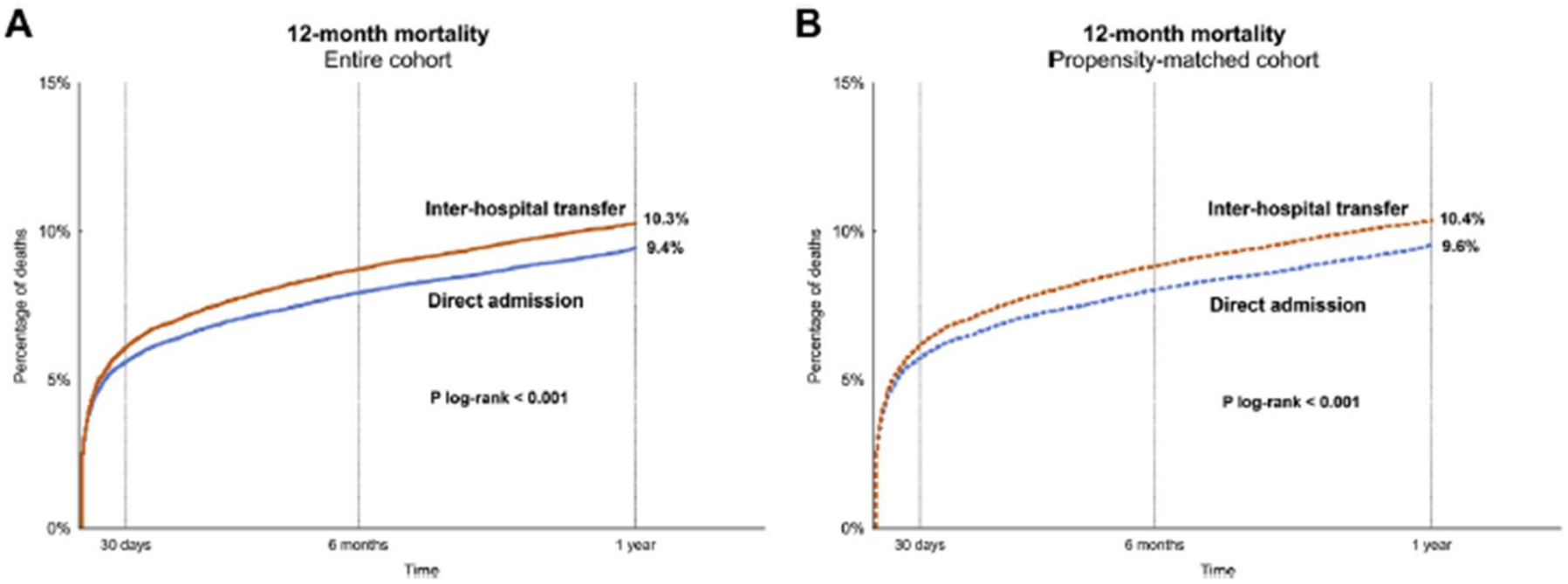
TABLE 3 In-Hospital Outcomes and 1-Year Mortality for Patients Admitted Directly or Transferred

	Entire Cohort			Matched Cohort		
	Direct Admission (n = 39,144)	Interhospital Transfer (n = 30,947)	p Value	Direct Admission (n = 29,624)	Interhospital Transfer (n = 29,624)	p Value
In-hospital outcomes						
LVEF (%)	47.5 ± 10.2	46.3 ± 10.4	<0.001	47.4 ± 10.2	46.2 ± 10.4	<0.001
Resuscitated cardiac arrest	1,519 (3.9)	1,154 (3.7)	0.30	1,221 (4.1)	1,115 (3.8)	0.025
Target vessel revascularization	293 (0.75)	286 (0.92)	0.011	223 (0.75)	271 (0.91)	0.030
Stroke	117 (0.30)	87 (0.28)	0.66	88 (0.30)	85 (0.29)	0.82
Bleeding	544 (1.4)	432 (1.4)	0.94	416 (1.4)	404 (1.4)	0.67

FIGURE 4 12-Month Mortality



Kaplan-Meier analysis of 12-month mortality in the entire cohort **(A)** and the propensity-matched cohort **(B)**.

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TABLE 4 Multivariate Analyses of In-Hospital and 12-Month Mortality

	Entire Cohort		Matched Cohort	
	Odds Ratio (95% CI)	p Value	Odds Ratio (95% CI)	p Value
In-hospital mortality				
Adjusted in baseline model*				
Interhospital transfer (vs. direct admission)	0.85 (0.78-0.92)	<0.001	0.84 (0.77-0.92)	<0.001
Baseline model + onset of symptoms to admission time				
Interhospital transfer (vs. direct admission)	0.83 (0.76-0.91)	<0.001	0.82 (0.75-0.90)	<0.001
Onset of symptoms to admission time (per every 3 h)	1.10 (1.05-1.15)	<0.001	1.08 (1.03-1.14)	<0.001
12-month mortality				
Adjusted in baseline model				
Interhospital transfer (vs. direct admission)	1.08 (1.03-1.13)	0.002	1.06 (1.01-1.12)	0.016
Baseline model + onset of symptoms to admission time				
Interhospital transfer (vs. direct admission)	1.07 (1.02-1.12)	0.006	1.06 (1.01-1.11)	0.031
Onset of symptoms to admission time (per every 3 h)	1.04 (1.01-1.06)	0.007	1.03 (1.01-1.06)	0.039

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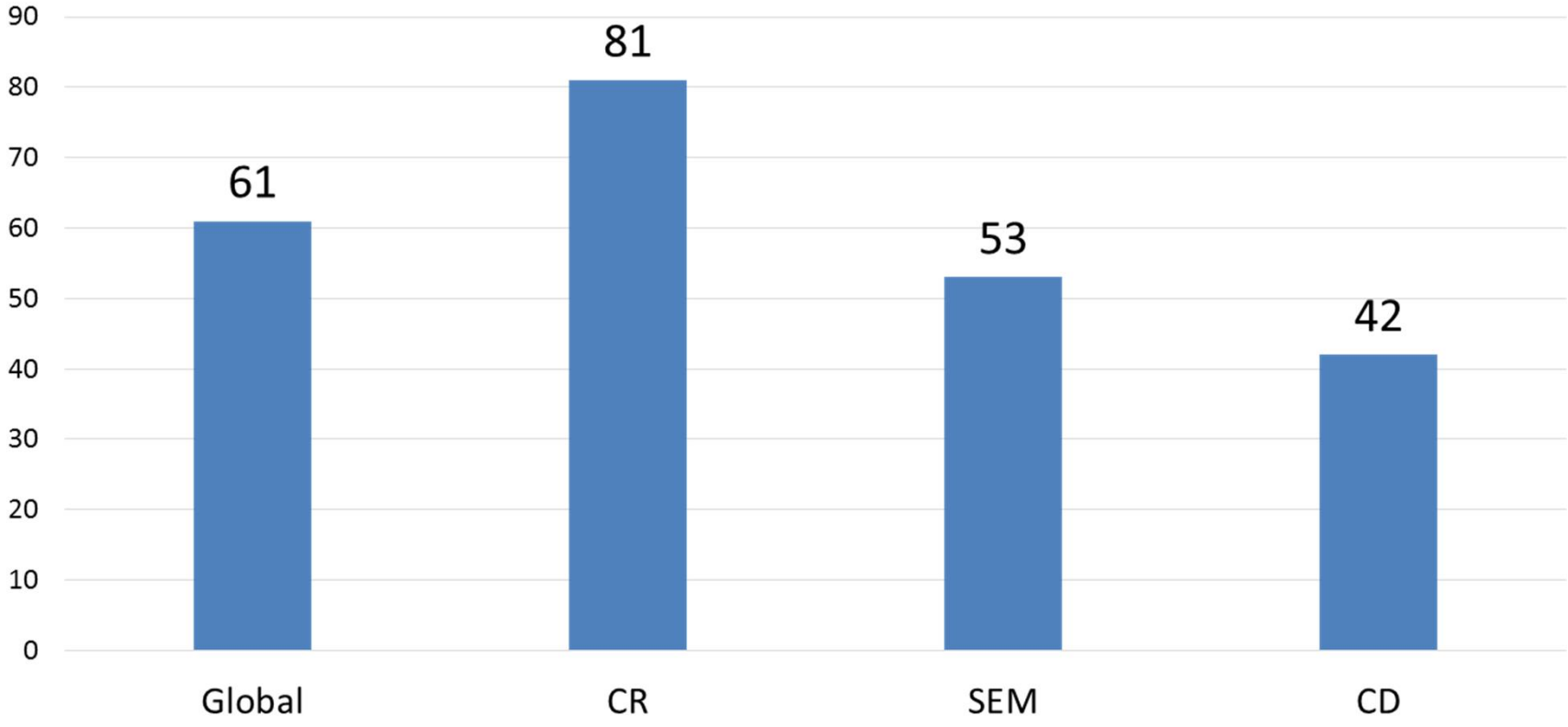
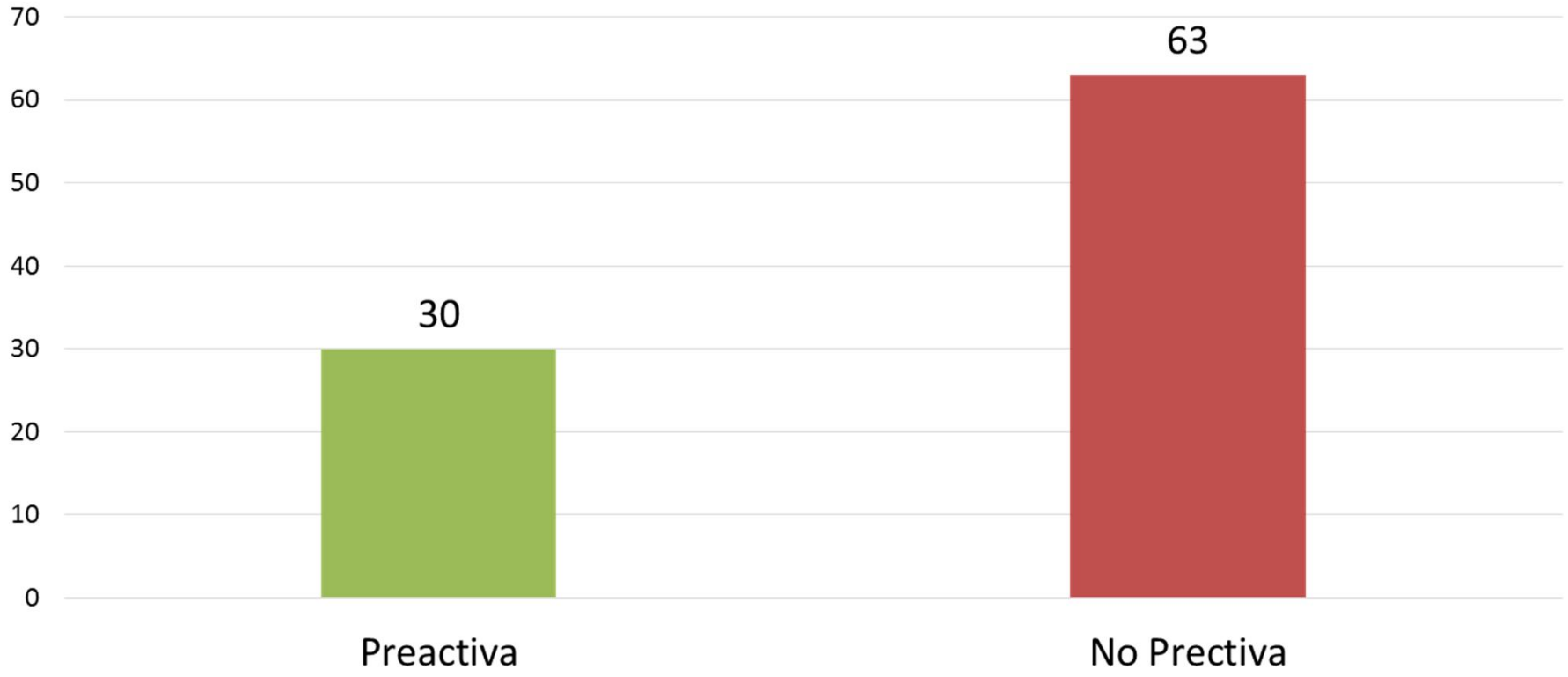
Mediana Tiempo Puerta-Balón según PCM n=2357



La importancia de la Preactivación



Mis Datos

- 127 IAMCEST cargados en SSL
- Ciudad relativamente pequeña, menos problemas de distancia - tráfico.
- Código IAM implementado, con funcionamiento parcial.
- Nula activación desde SEM (0%).
- Pre-activados a través de CódigoIAM ó médicos de guardia de centros sin Hemodinamia (42%).
- Alta incidencia de consulta directa a centro con Hemodinamia (58%).

Mis Datos

- Mediana tiempo puerta - balón: 47 minutos (79% por debajo de los 60 minutos).
- Con PRE - ACTIVACION (by pass guardia-UCO): puerta balón 31 minutos
- Sin PRE - ACTIVACION: puerta balón 57 minutos
- Persistencia de muy malos tiempos globales de tratamiento de IAMCEST en la provincia, especialmente relacionado con:

a) demora en la consulta (falta de educación en la población)
b) demora en el diagnóstico (faltas de recursos humanos y técnicos en centros en el interior de la provincia)

Conclusiones

- La mejor estrategia para el tratamiento del IAMCEST es la reperfusión temprana, y la misma se consigue con organización en redes.
- Cuanto más rápida sea la reperfusión, mayor será el beneficio clínico de la angioplastia primaria.
- La pre-activación mejora los tiempos a la reperfusión (dato que se sostiene en todos los estudios).
- Hasta el momento, son pocos los estudios que pudieron demostrar mejoría estadísticamente significativa en end points duros (mortalidad) solamente con pre-activación / reducción de tiempo a la angioplastia primaria.

Muchas gracias.....