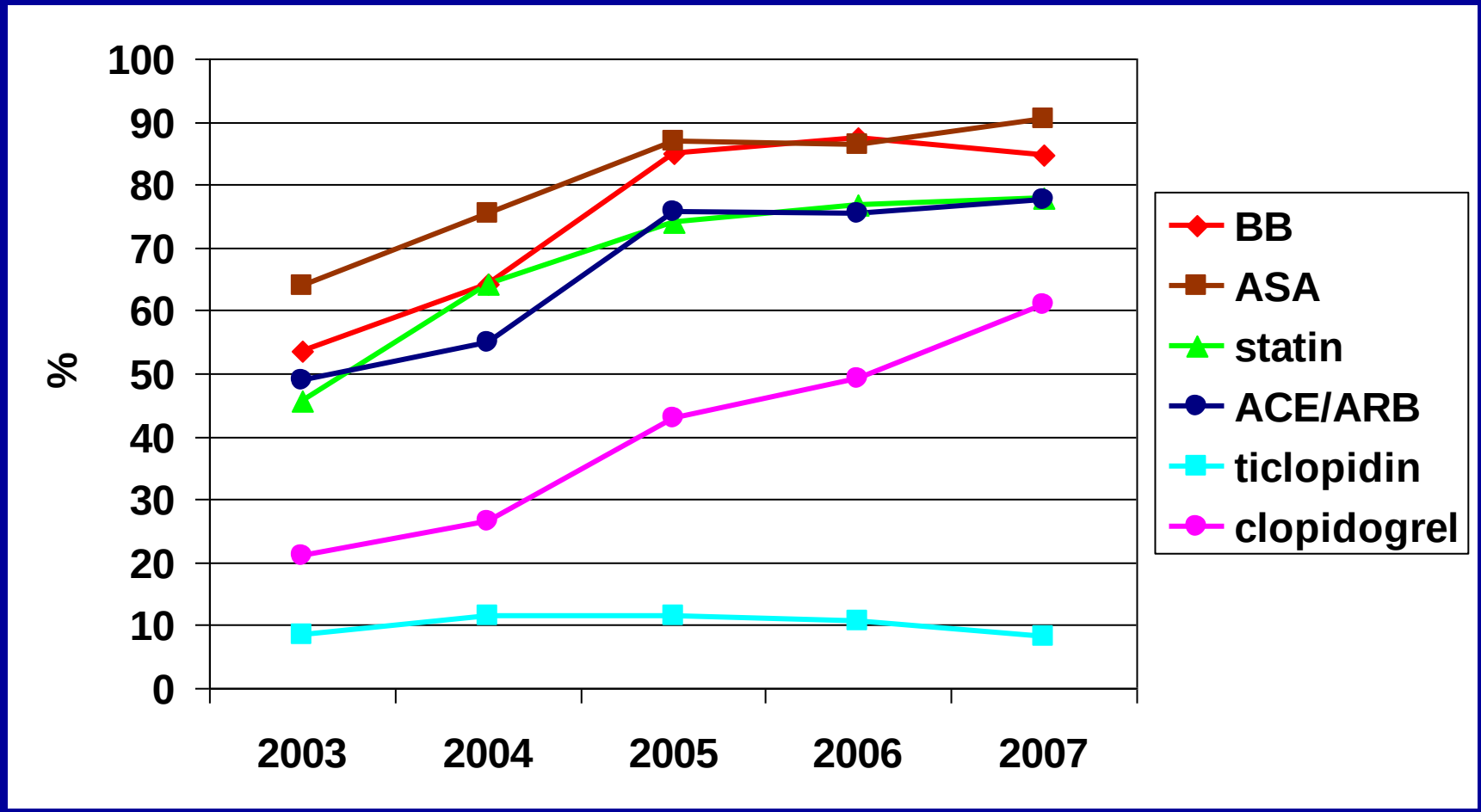
Pharmacotherapy in acute coronary syndromes

Perspective from first line and regional hospitals in Czech Republic

Petr Jansky

Cardionale, 26.11.2010

Pilot MI registry (n=3188)
6 non PCI hospitals
Discharge pharmacotherapy

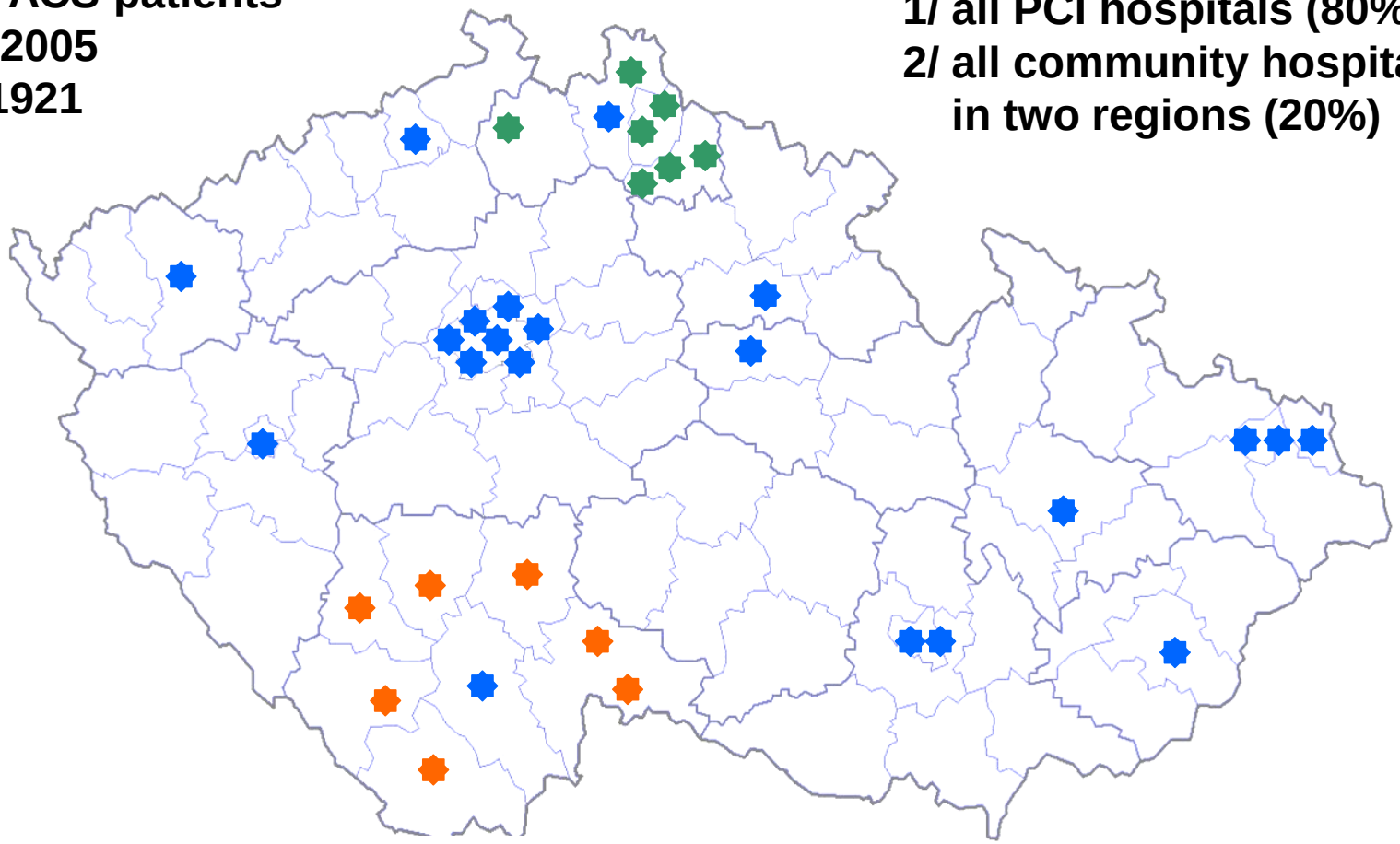


Svobodová, 2008

CZECH registry

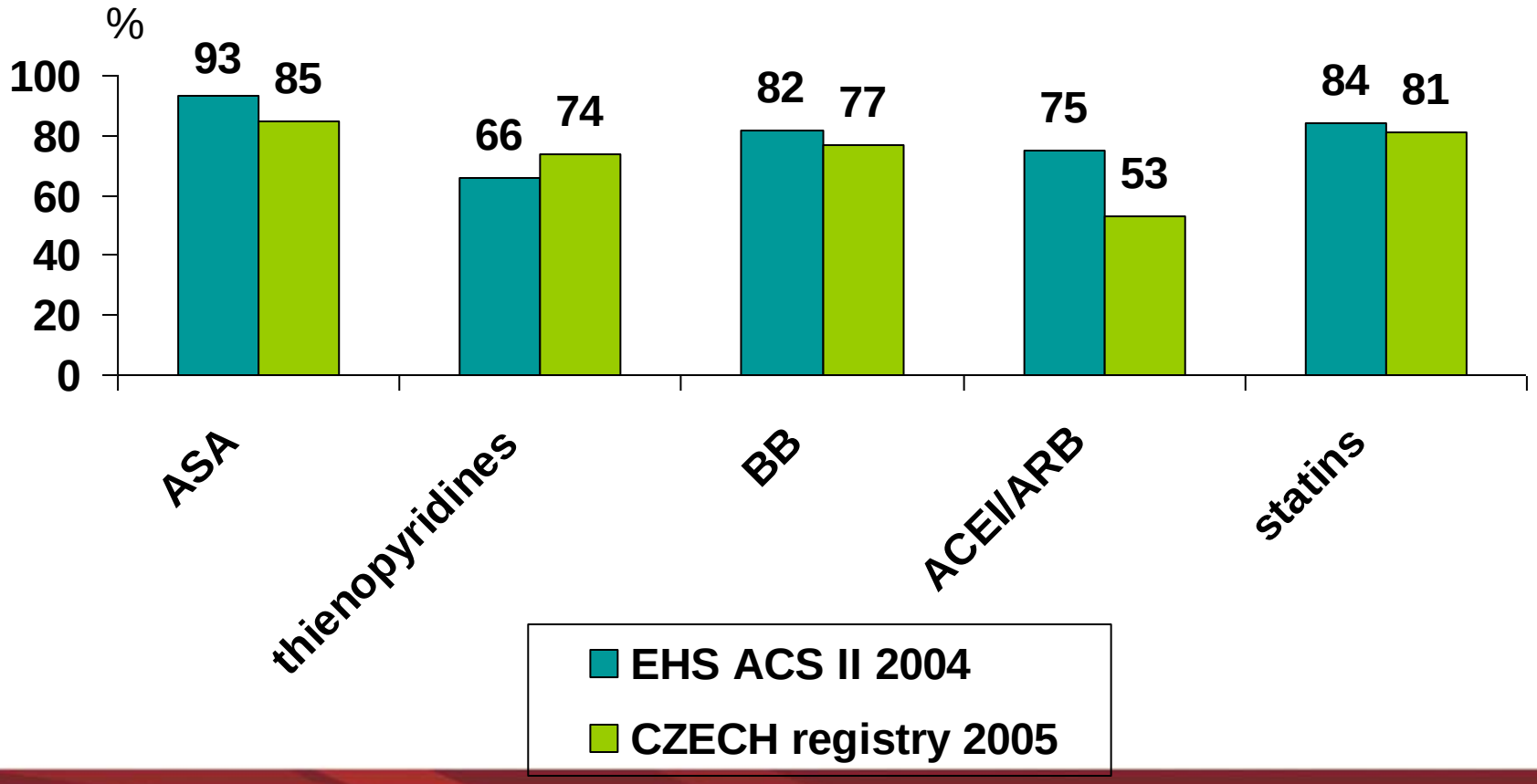
All ACS patients
11/2005
N 1921

1/ all PCI hospitals (80%)
2/ all community hospitals in two regions (20%)



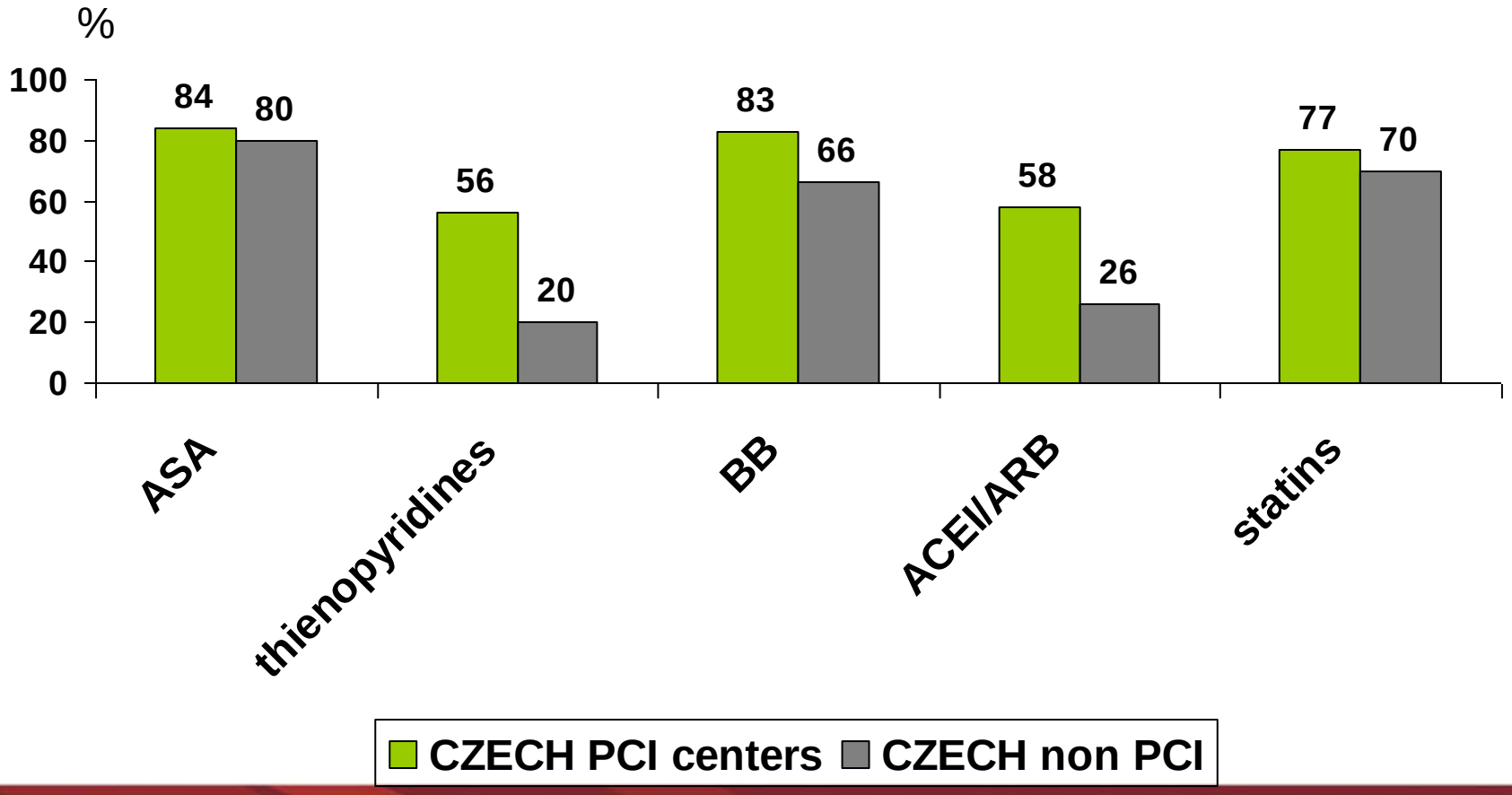
Widimský P. et al., Int J Cardiol, 2007

Discharge pharmacotherapy STEMI



Mandelzweig, EHJ, 2006
Widimský, Int J Cardiol, 2007

Discharge pharmacotherapy nonSTE ACS

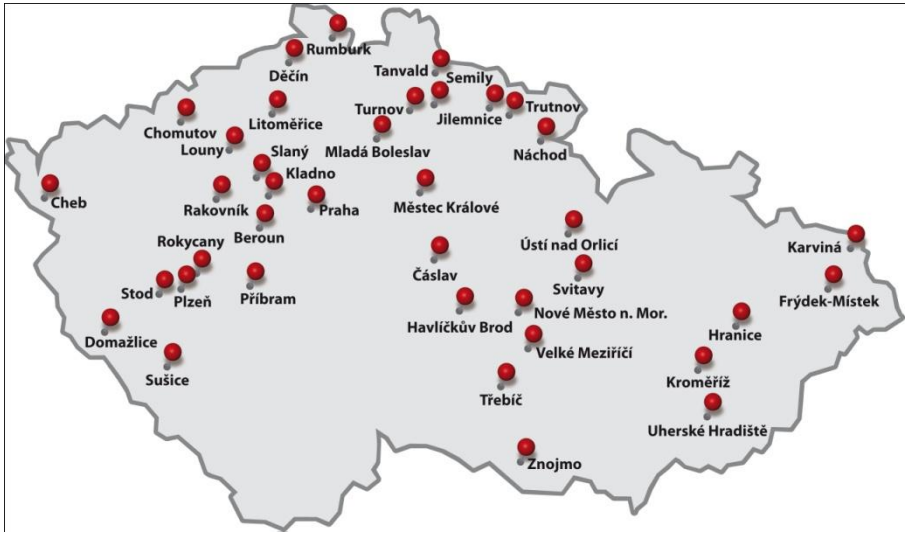


Widimský, Int J Cardiol, 2007

Recommendations for performance measures

- Development of regional and/or national programmes to systematically measure performance indicators and provide feedback to individual hospitals is strongly encouraged (I-C).

European Heart Journal, July 2007



- Confirmed acute coronary syndromes (STEMI, NONSTEMI, unstable AP)
- Continually since 1.7.2008
- 32 non cath hospitals

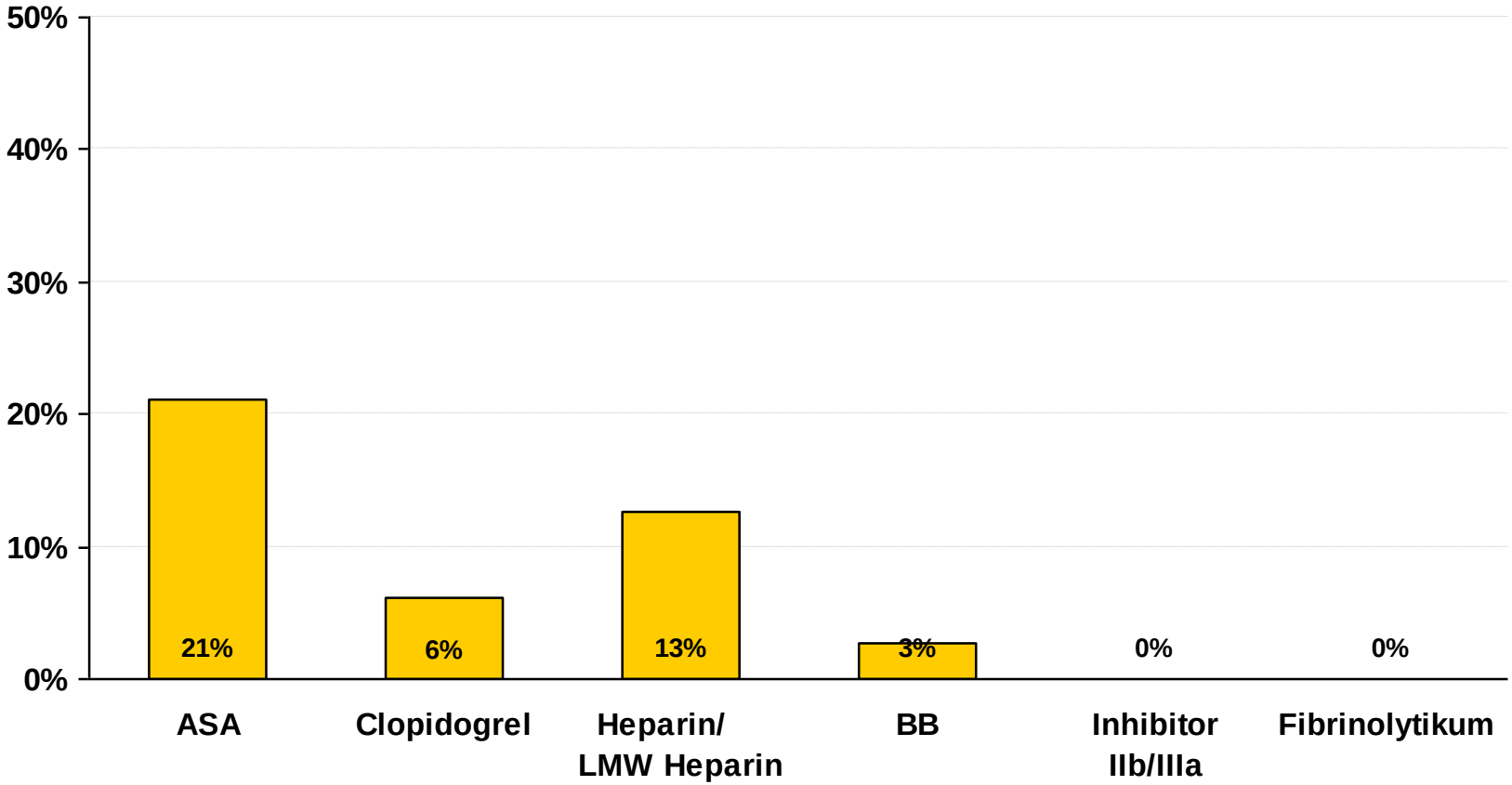
Quality of pharmacotherapy

- Prehospital phase
- Early hospital phase
- On discharge

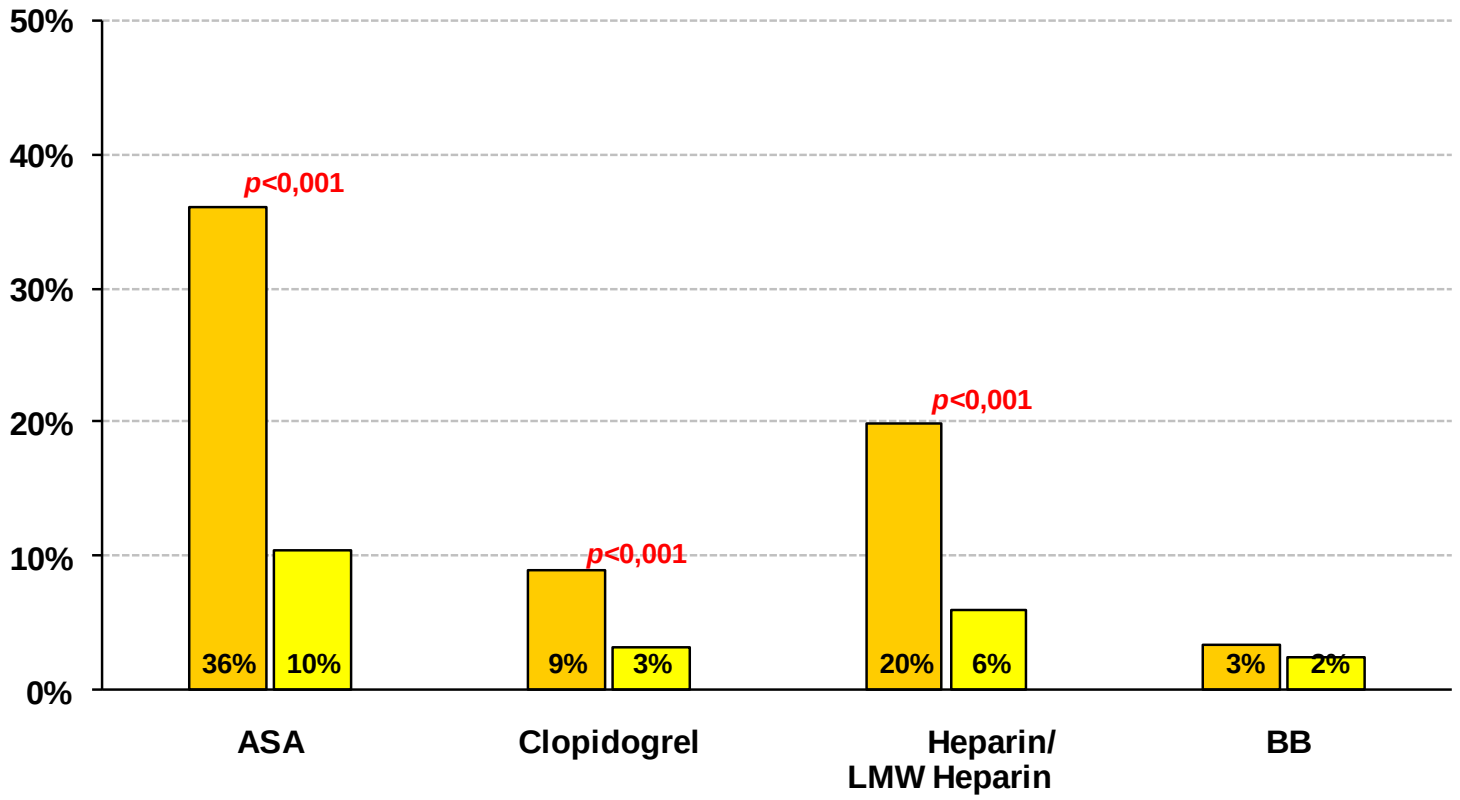
Patient characteristics 7/2008-3/2010

			Mean age ± SD	
n	% STEMI	% males	males	females
3995	27,5	60,6	66,8 ± 12,4	74,2 ± 11,0

Prehospital pharmacotherapy



Prehospital pharmacotherapy
EMS vs physician



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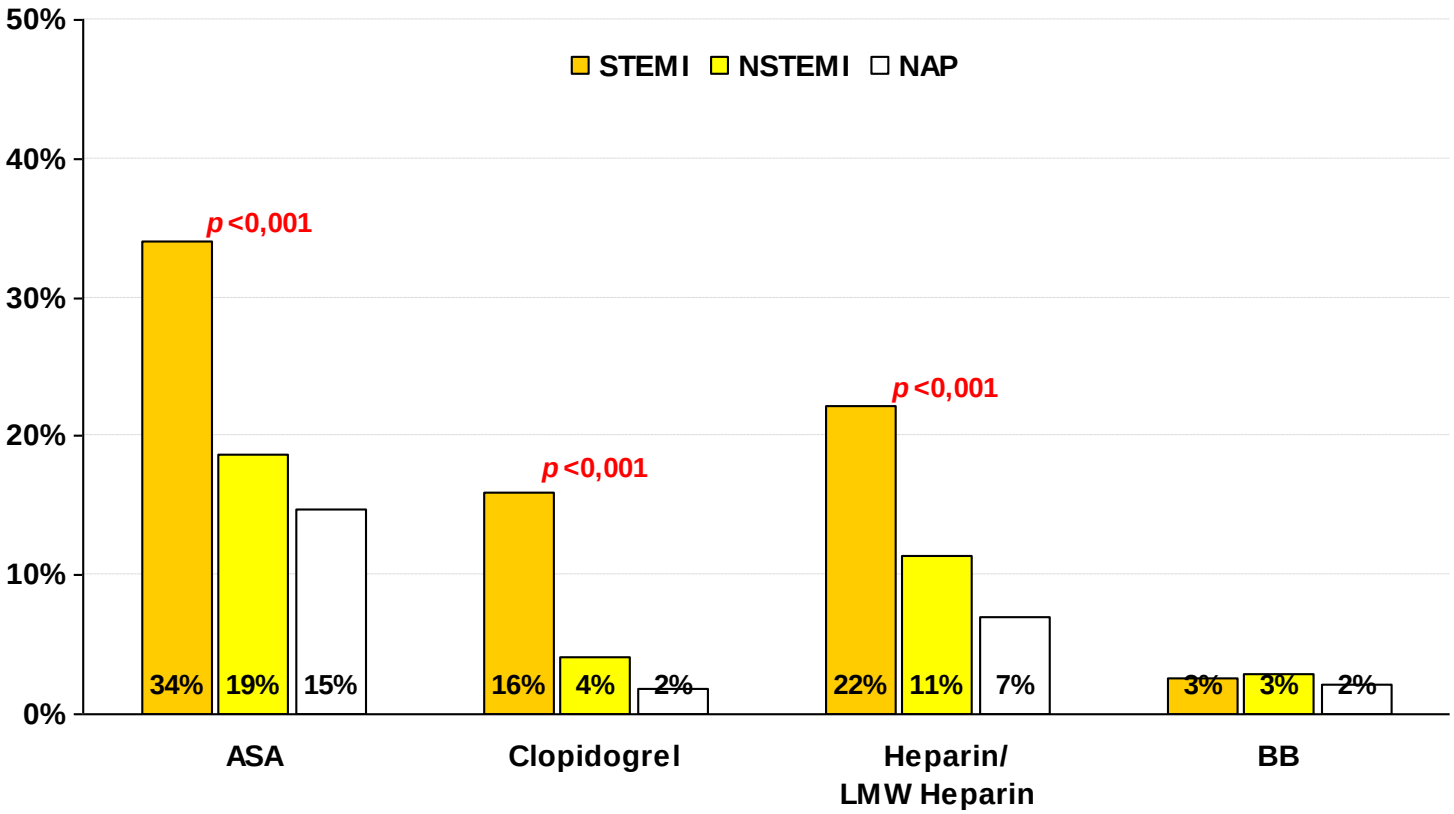
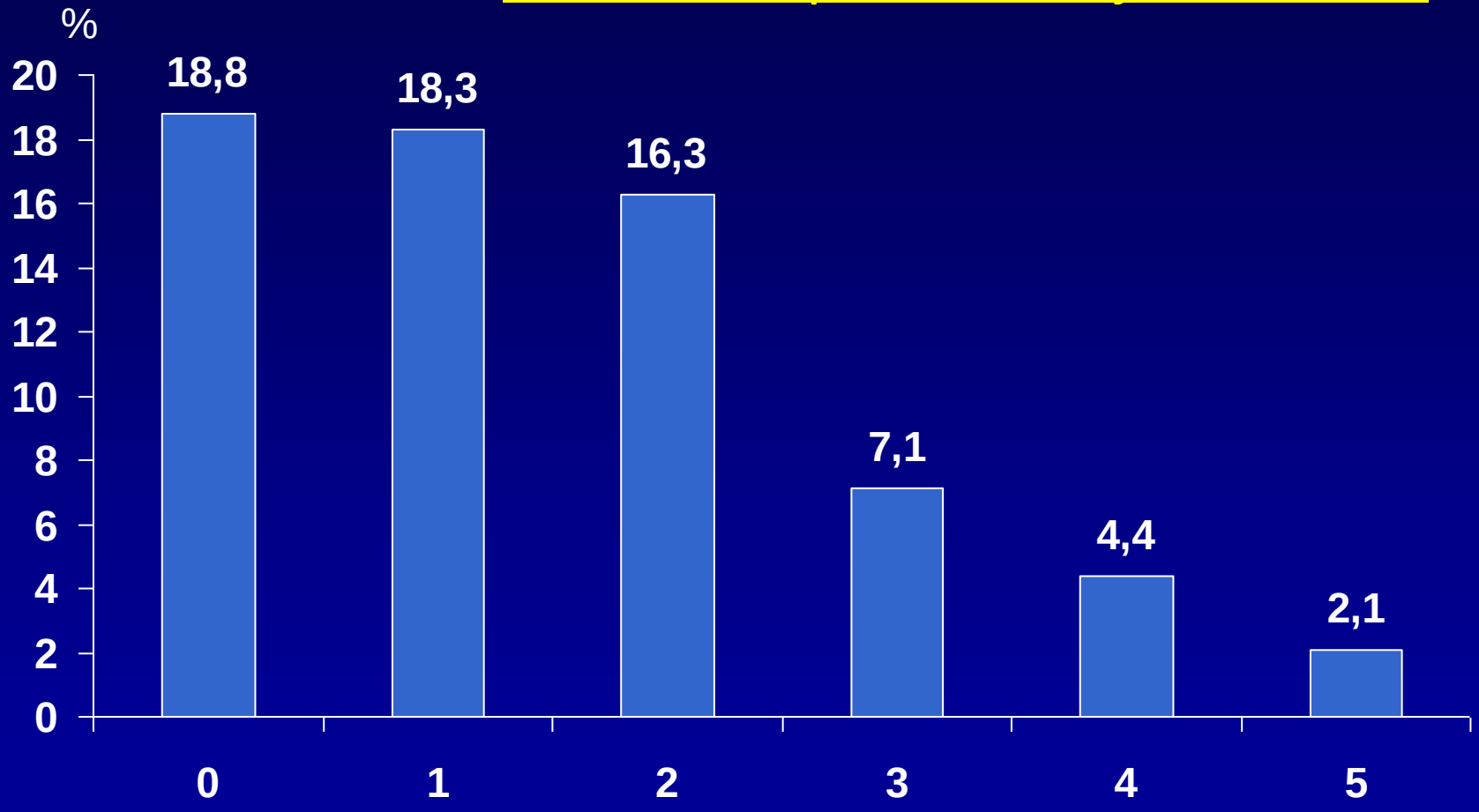
Prehospital pharmacotherapy



Evidence-based medical therapy (heparin, ASA, BB, statin, thienopyridin) within the first 24 hours after admission is associated with lower in-hospital mortality in NSTEMI



N 1889, p < 0,001

Monhart et al., ESC 2008

Pharmacotherapy within 24 hours after admission

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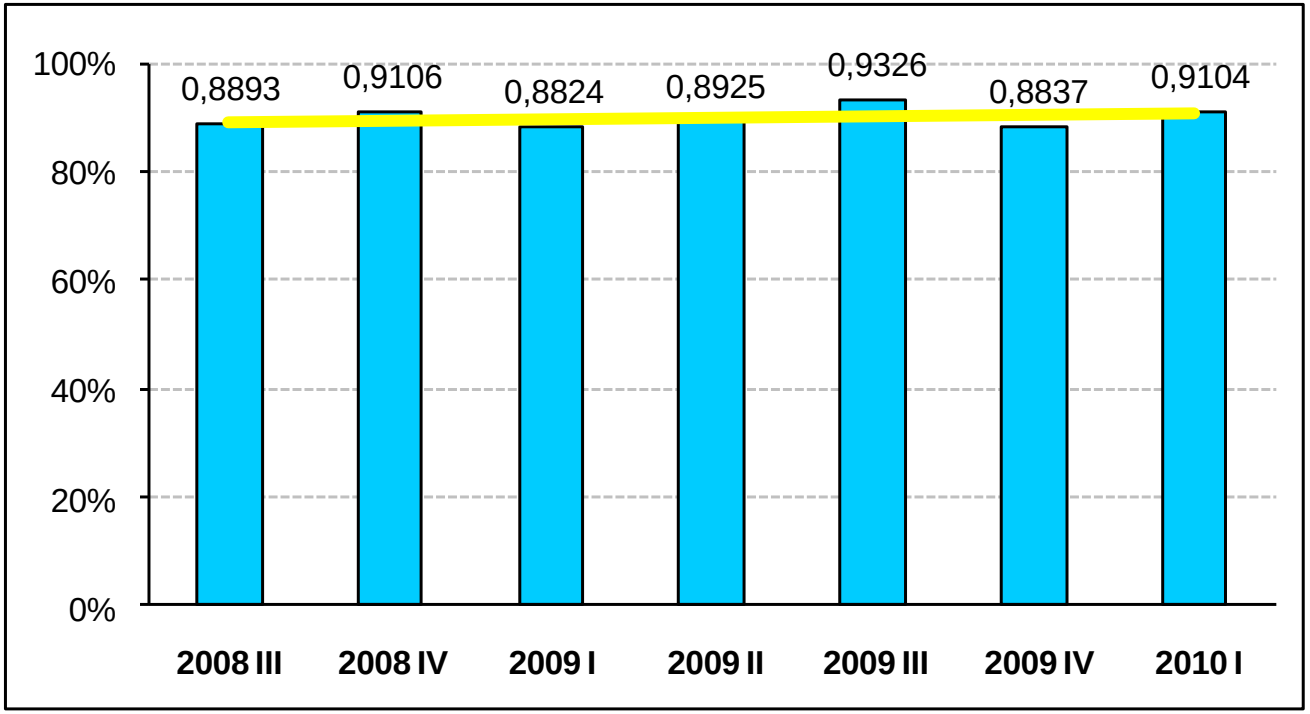
Aspirin



Linear trend: n.s.

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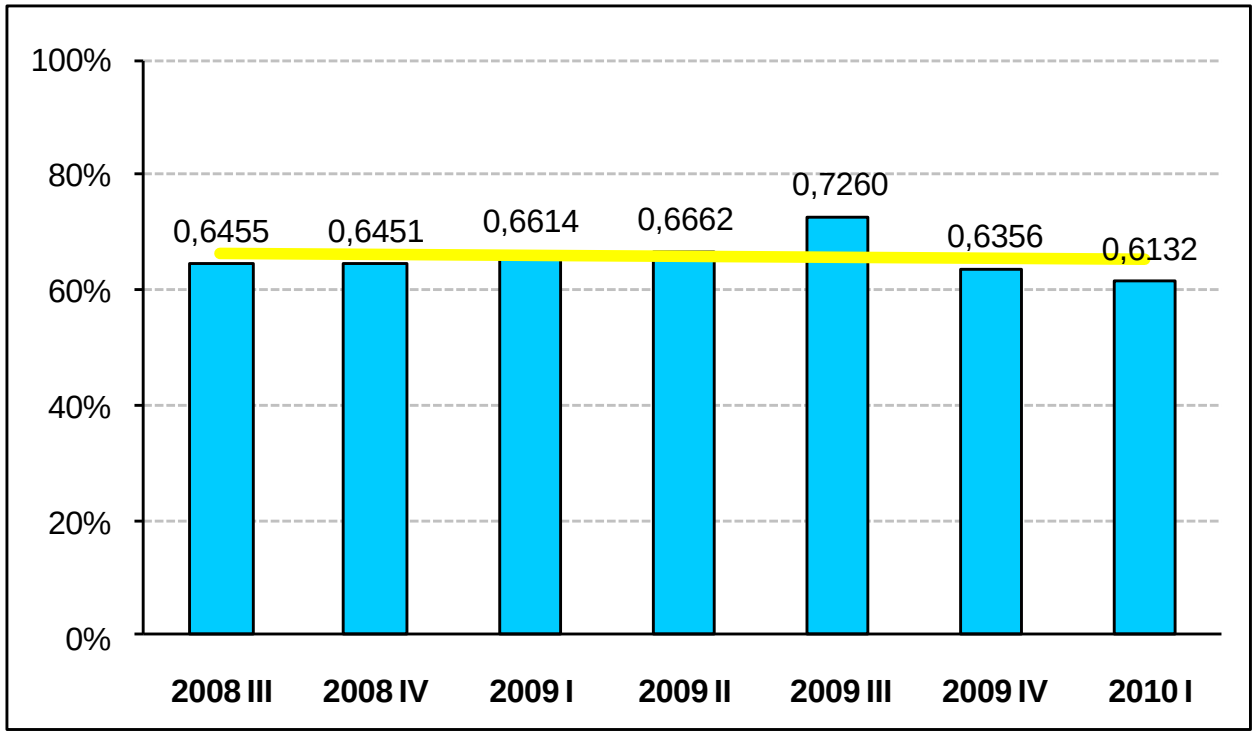
Betablockers



Linear trend: n.s.

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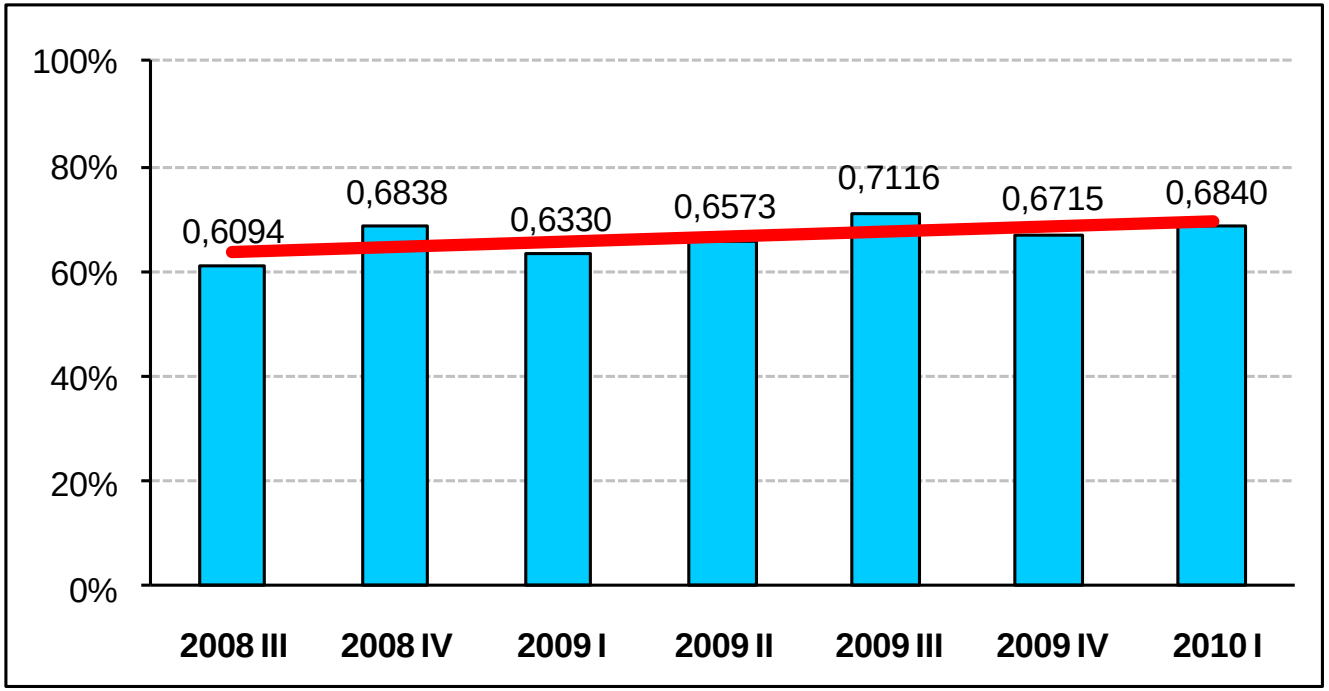
Clopidogrel



Linear trend: *p*=0,023

Pharmacotherapy within 24 hours after admission

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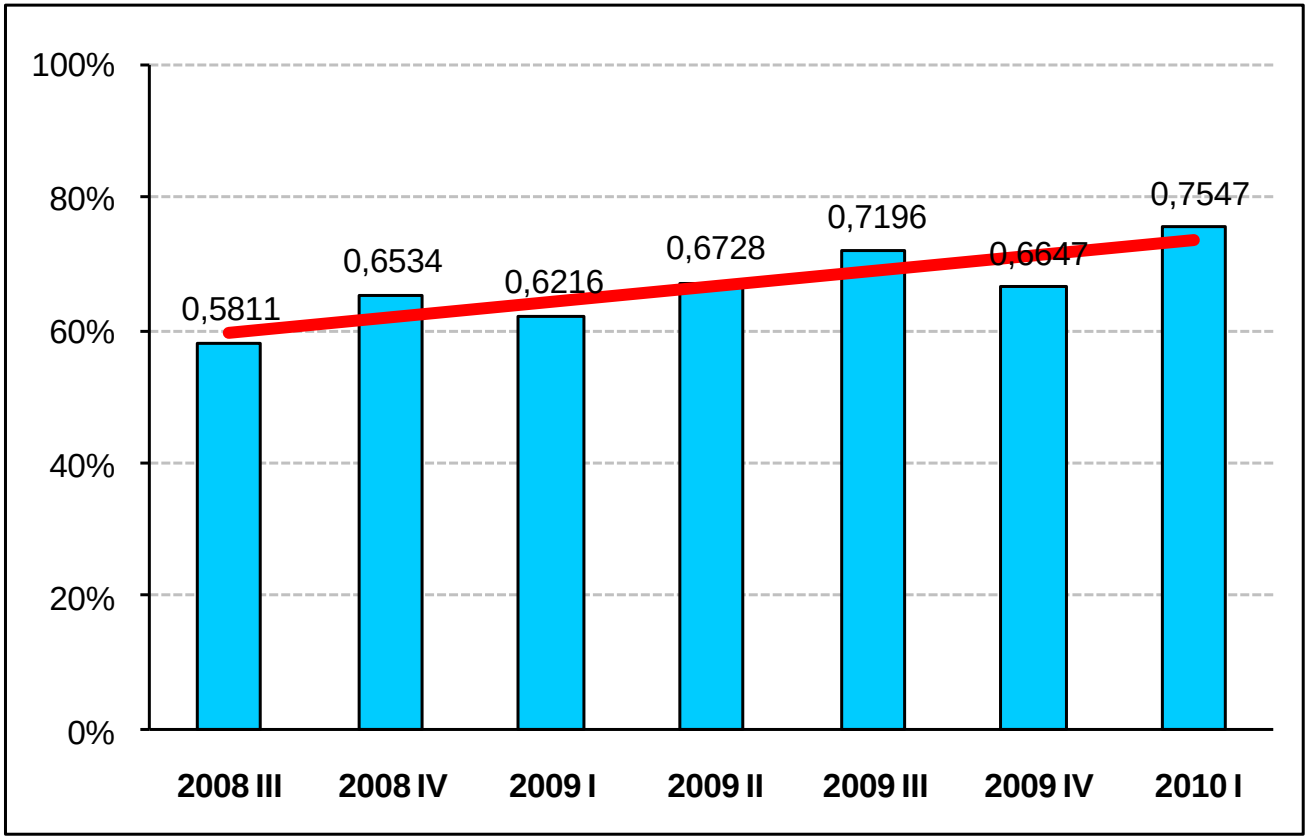
Statin



Linear trend: *p*<0,001

Pharmacotherapy within 24 hours after admission

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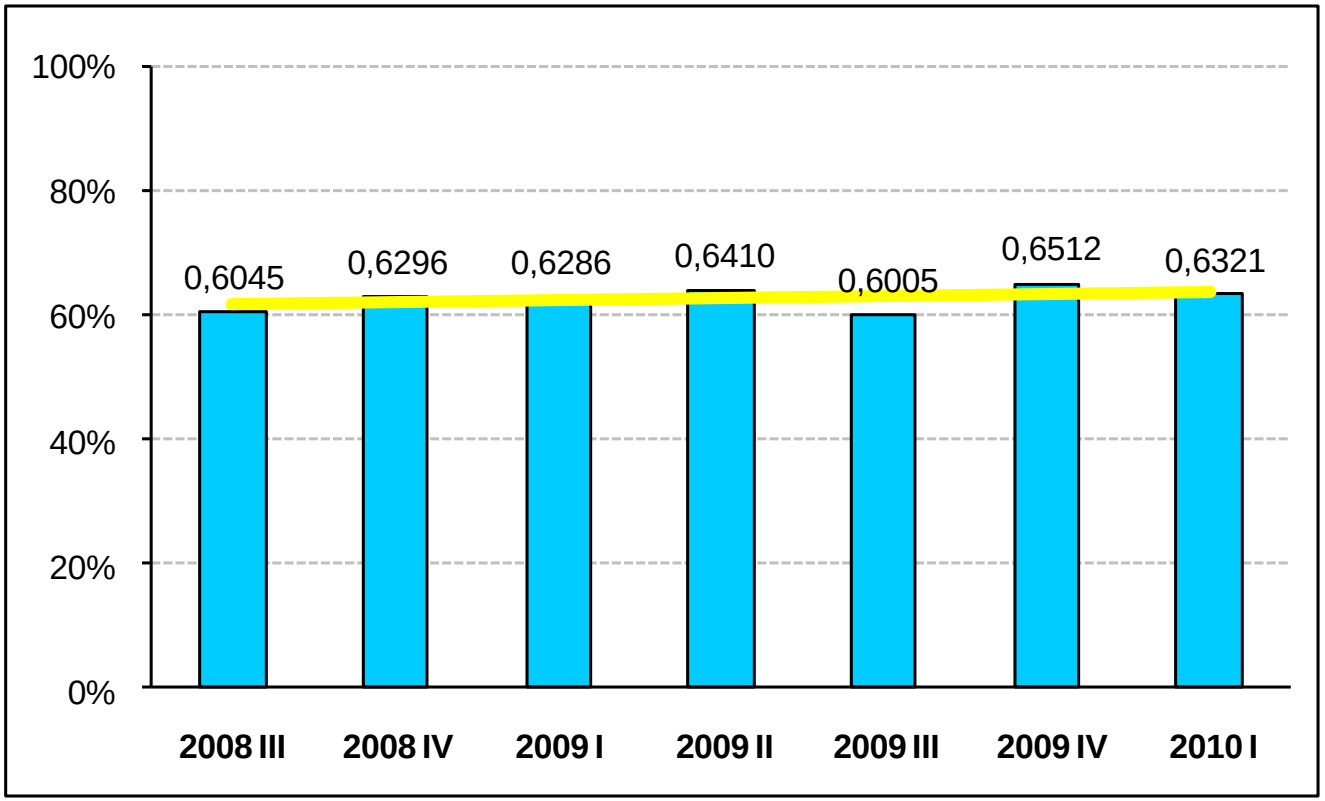
LMWH



Linear trend: n.s.

Pharmacotherapy within 24 hours after admission

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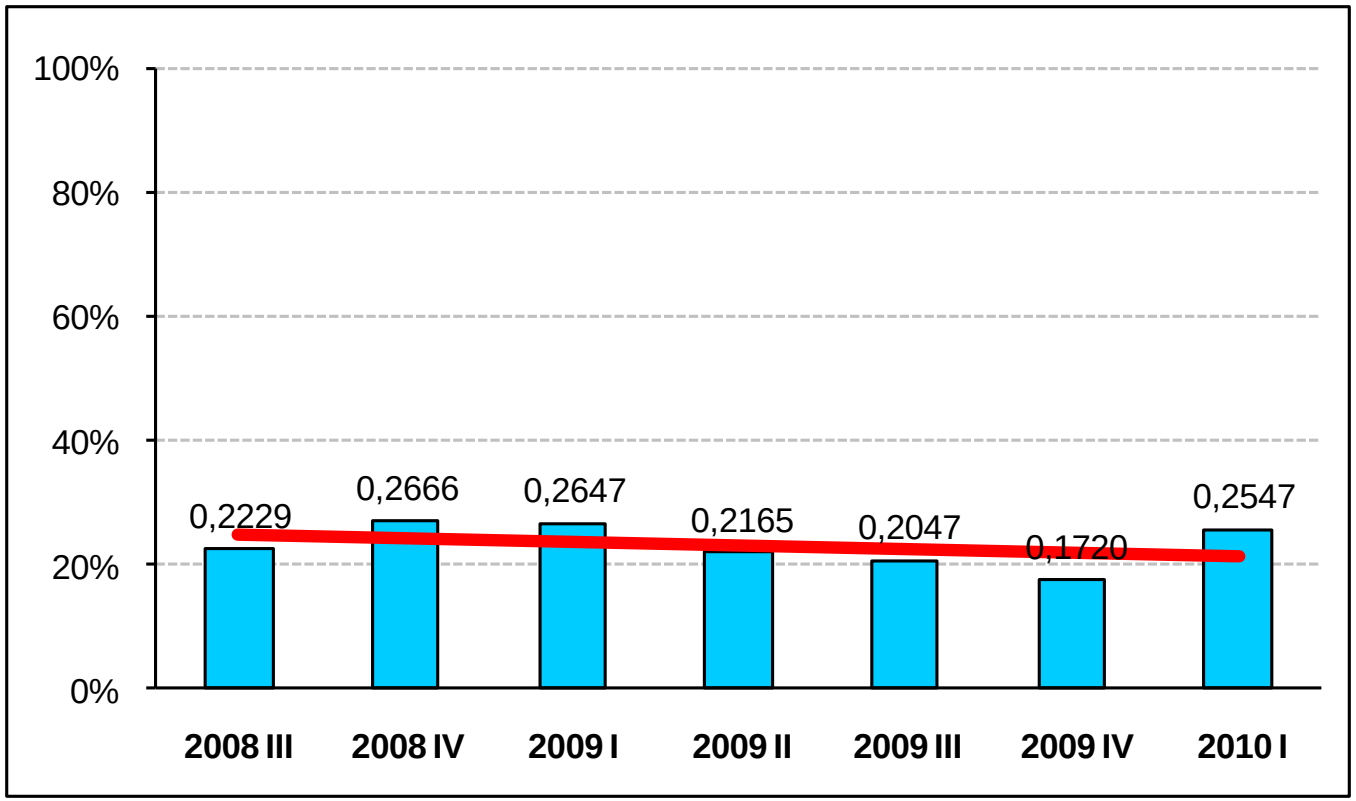
Heparin



Linear trend: ***p*=0,036**

Pharmacotherapy within 24 hours after admission

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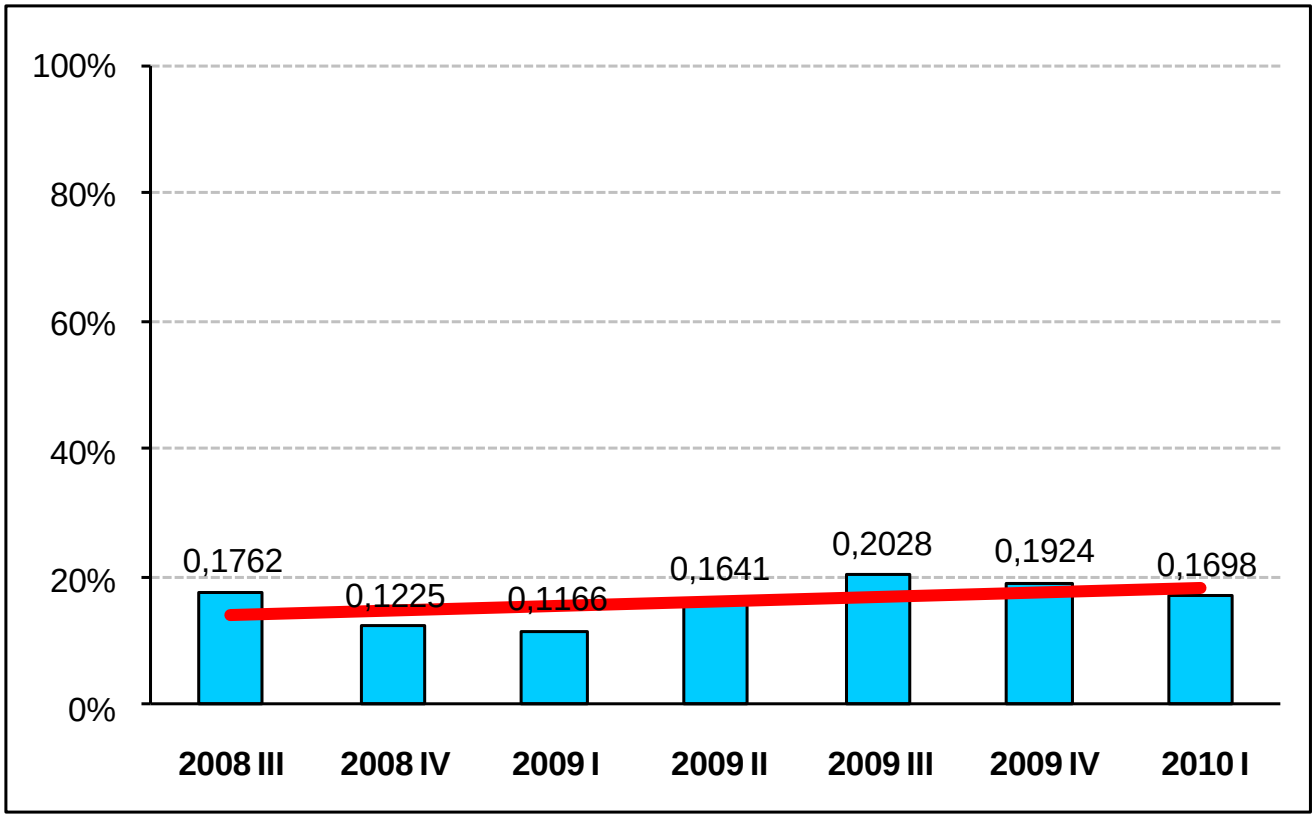
Fondaparinux



Linear trend: *p*=0,011

Pharmacotherapy within 24 hours after admission

%	Males	Females	<=70 y	>70 y	STEMI	NSTEMI
Aspirin	90,8	88,4	92,7	87,4***	92,9	89,7*
Clopidogrel	69,6	60,8**	74,2	58,9***	77,4	65,4***
Heparin	25,8	19,6*	28,2	19,1***	53,5	16,0***
LMWH	60,7	65,5	59,8	65,2	42,3	66,2***
BB	66,6	65,1	67,6	64,6*	52,1	67,7***
Fondaparinux	16,0	15,2	16,3	15,0	9,3	19,5***
ACEI	59,6	60,2	60,1	59,5	47,3	60,3***
Statin	66,6	64,1	70,2	61,6***	53,8	65,6***

* $p<0,05$; ** $p<0,01$; *** $p<0,001$

Discharge pharmacotherapy

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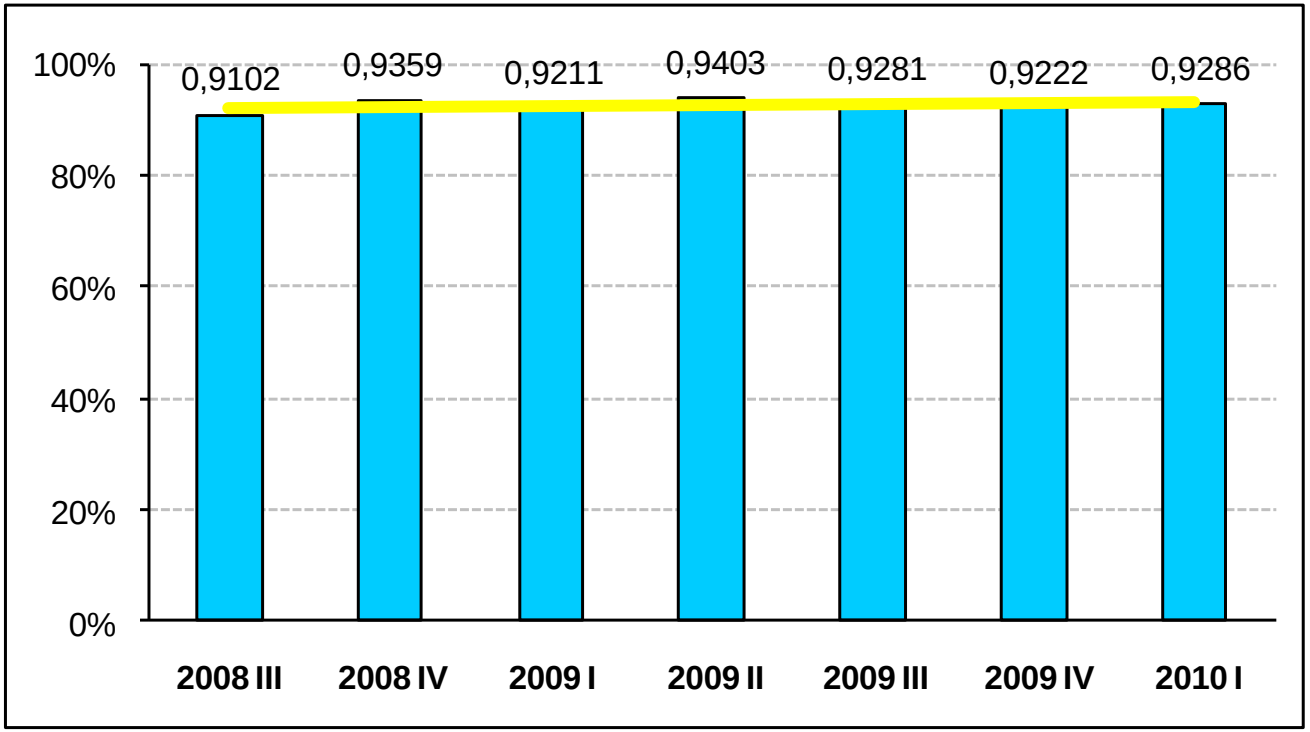
Aspirin



Linear trend: n.s.

Discharge pharmacotherapy

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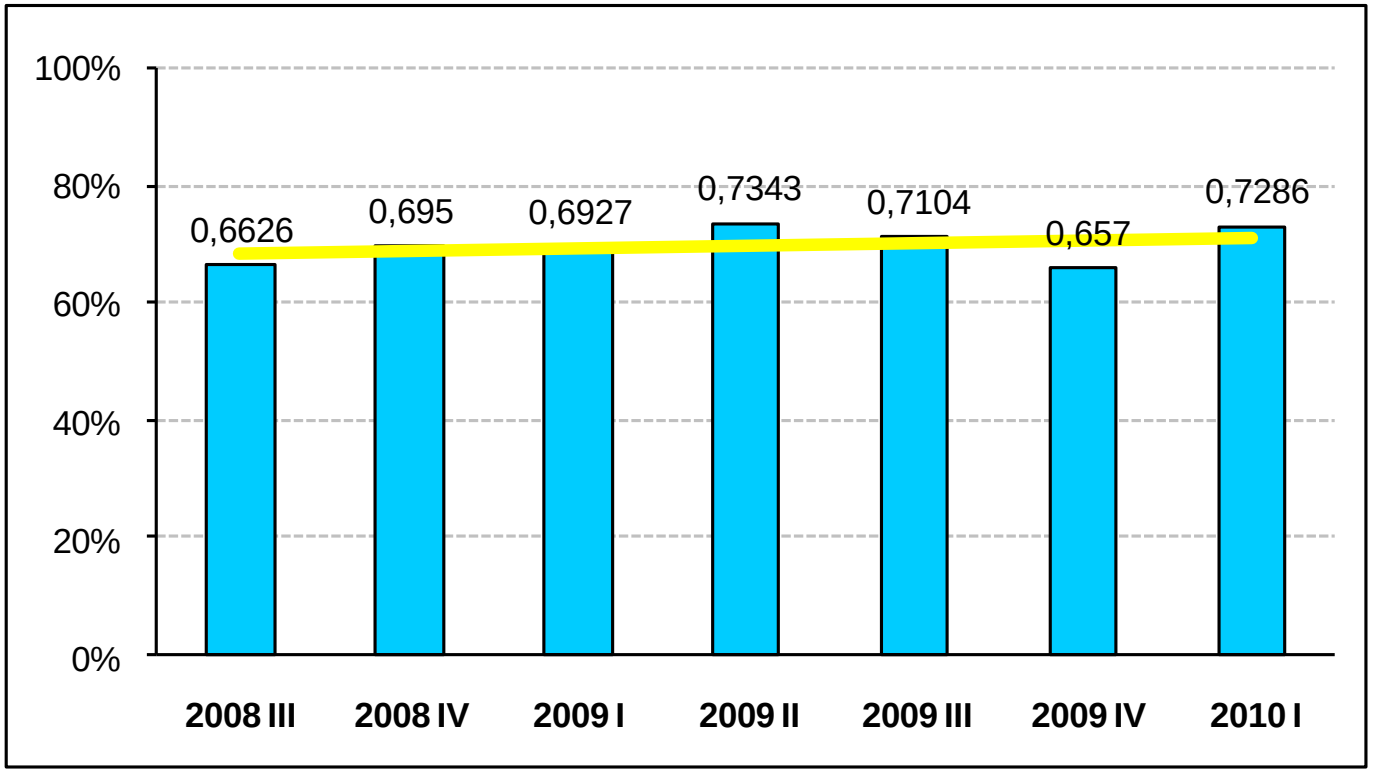
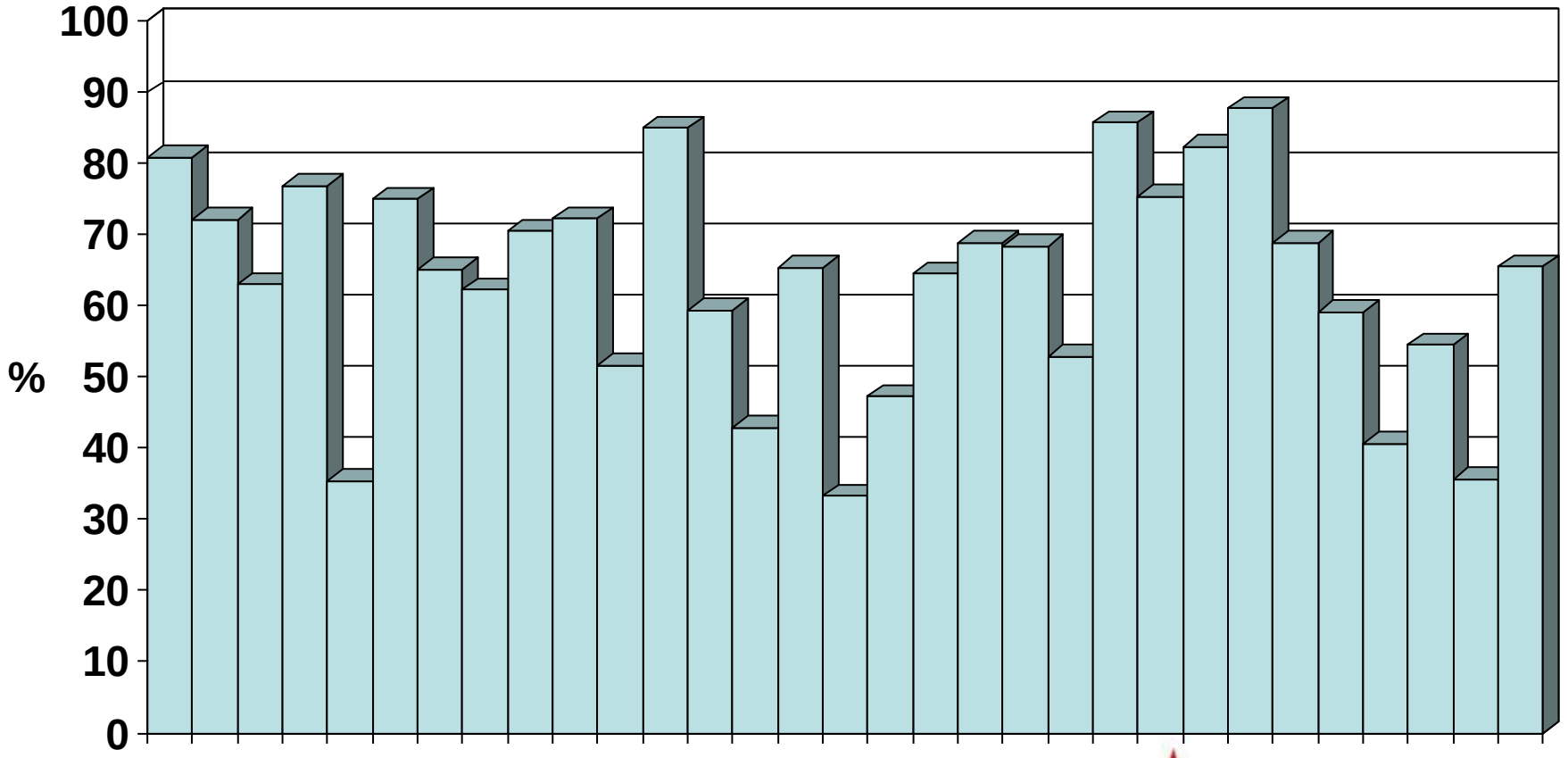
Clopidogrel



Linear trend: n.s.

Clopidogrel on discharge – individual hospitals



Discharge pharmacotherapy

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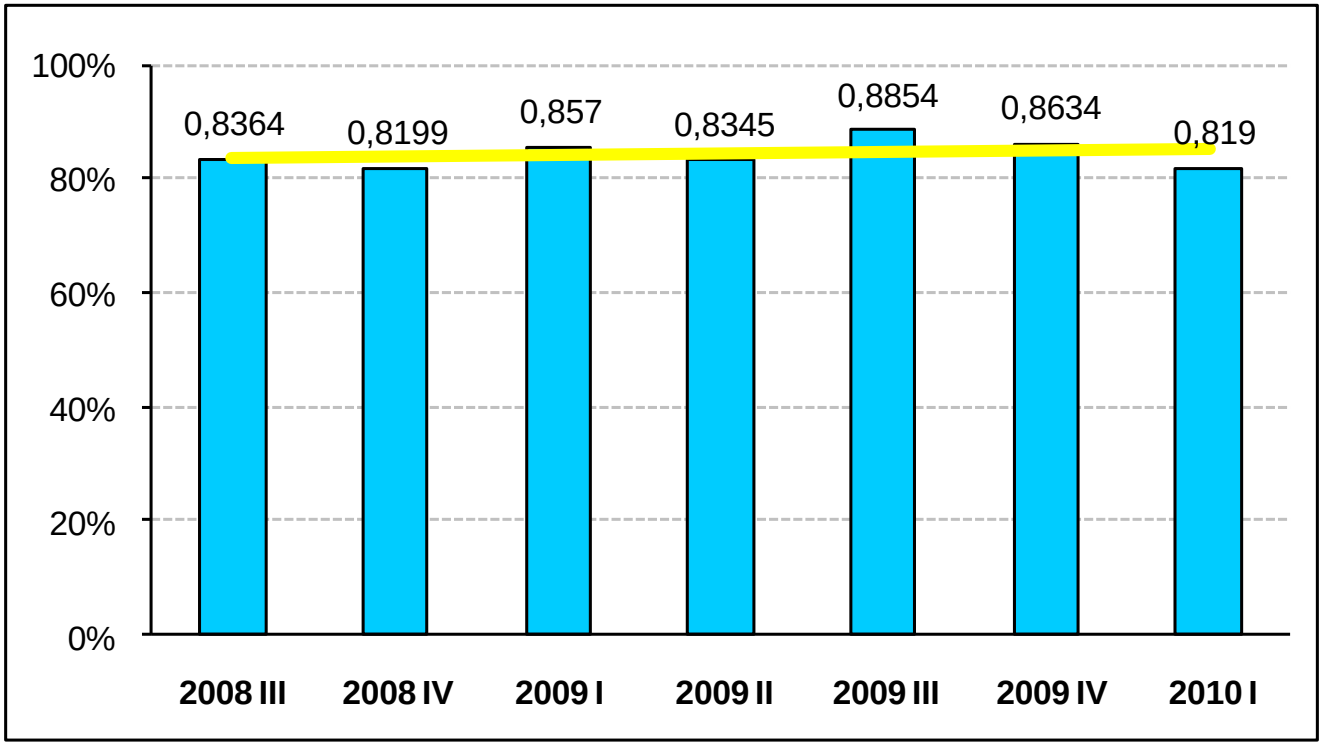
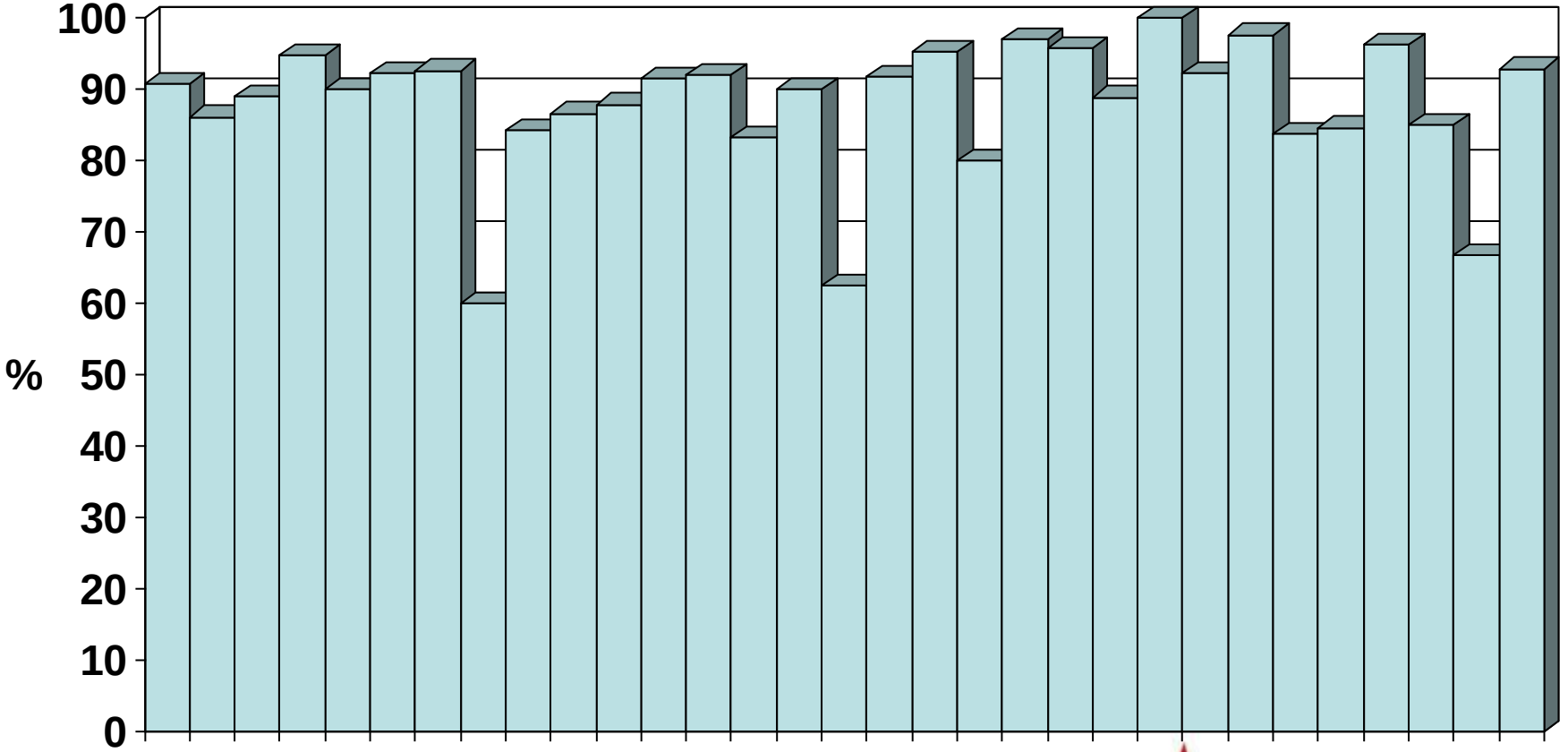
Betablockers



Linear trend: n.s.

Betablockers on discharge – individual hospitals



Discharge pharmacotherapy

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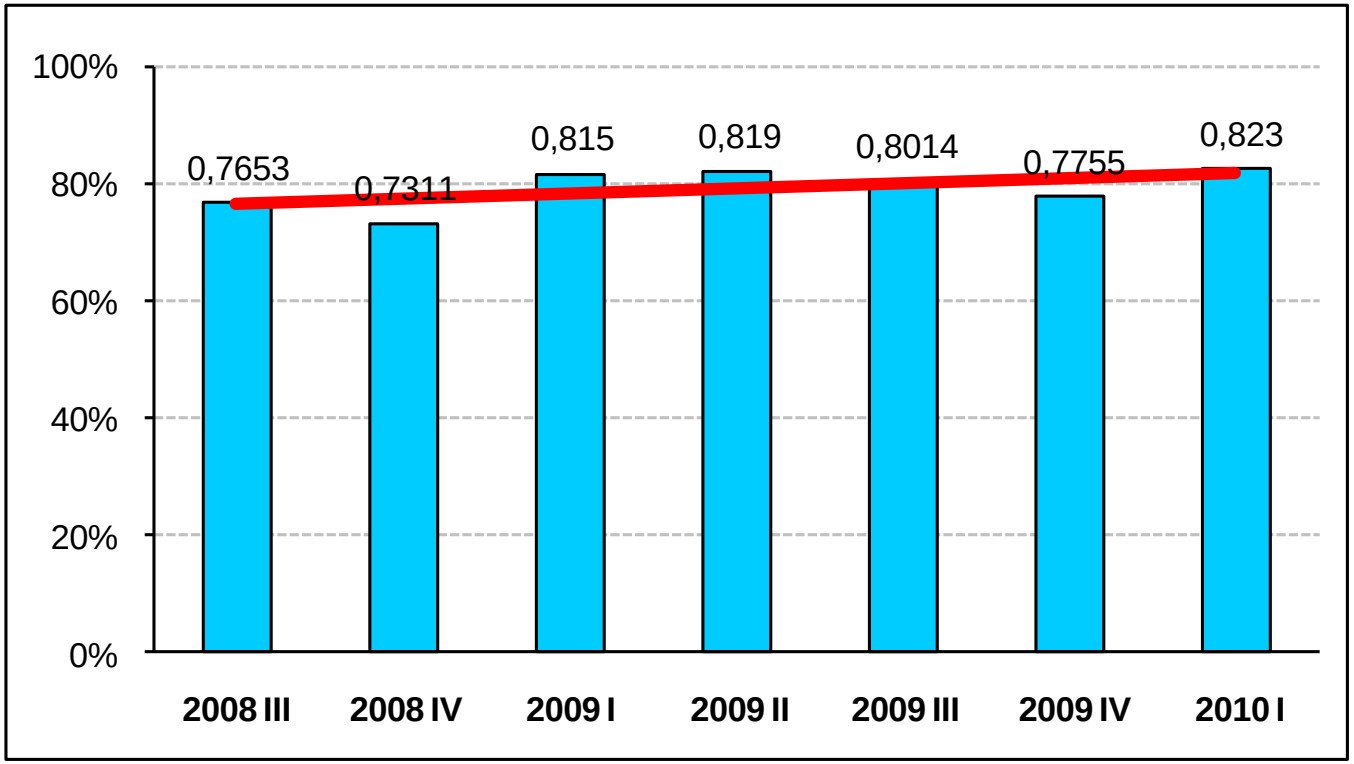
ACEI

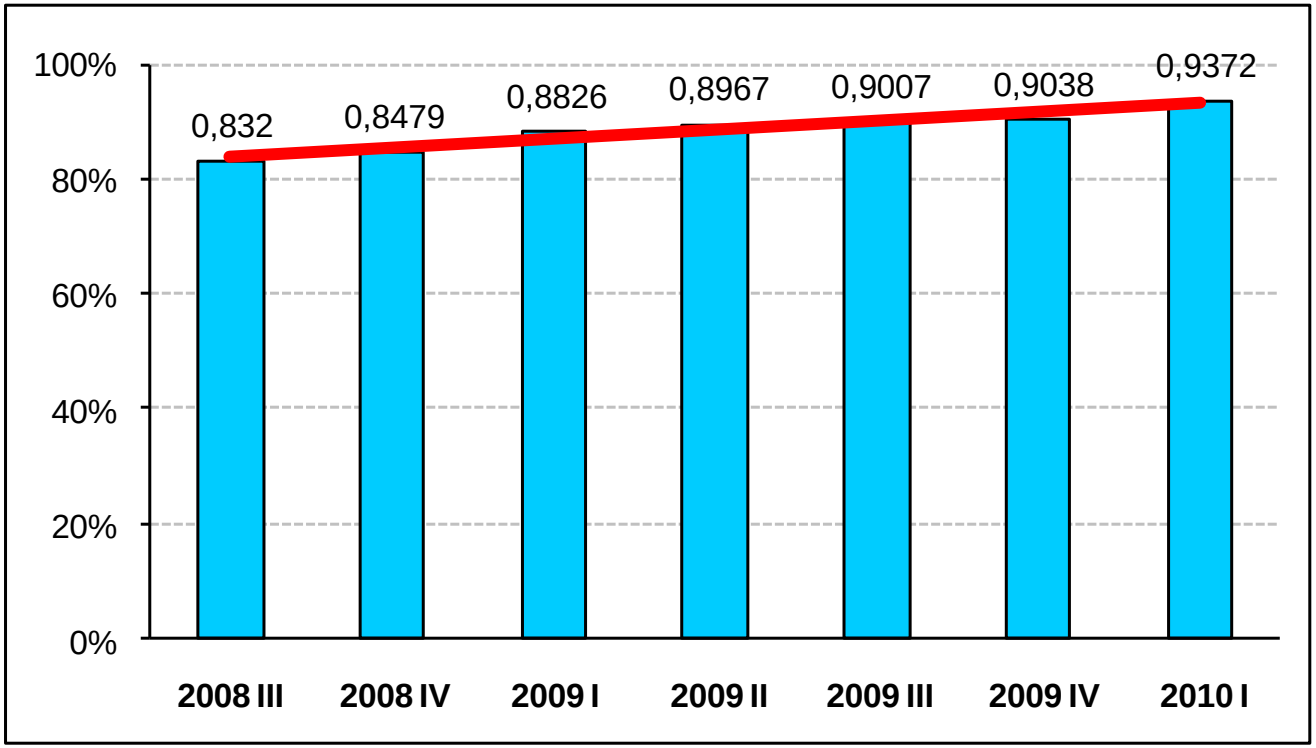


Linear trend: *p*=0,012

Discharge pharmacotherapy

ALERT-CZ

Statin



Linear trend: *p*<0,001

Discharge pharmacotherapy

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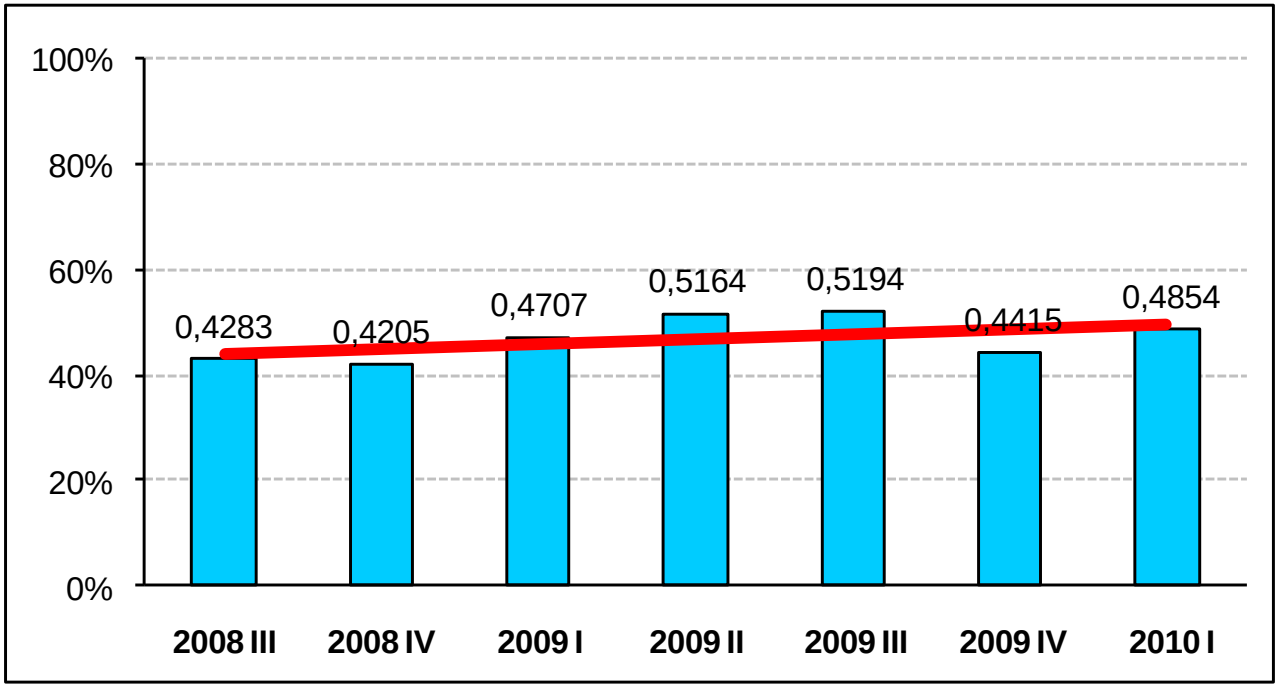
Combination

(aspirin, clopidogrel, BB, ACEI, statin)



Linear trend: *p*=0,010

ALERT-CZ

Discharge pharmacotherapy

%	Males	Females	<=70 y	>70 y	STEMI	NSTEMI
Aspirin	93,5	91,6	95,6	89,9***	96,6	92,5***
Clopidogrel	74,2	62,9***	78,5	60,9***	87,3	71,6***
BB	85,2	83,4	86,0	83,0*	86,1	84,0
ACEI	79,8	77,6	79,9	78,1	82,3	77,0**
Statin	89,7	85,4	92,3	83,6***	91,4	85,7**

* $p<0,05$; ** $p<0,01$; *** $p<0,001$

Conclusion

- Unsatisfactory prehospital pharmacotherapy
- In-hospital pharmacotherapy is relatively good (exc. elderly, females, NONSTEMI)
- Interhospital variability in the quality of care
- Improvement in some recommended therapies (statins, clopidogrel in the acute phase) over short time period

Thank you for your attention !