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# Avoiding Unnecessary Transfers & Expensive Hospitalization for AMI Patients with Application of Telemedicine Protocols

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# Conflicts of Interest

Speaker's name : Sameer Mehta

**No Conflict of Interest with Industry**

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# Fiscal Impact of Population-Based AMI System

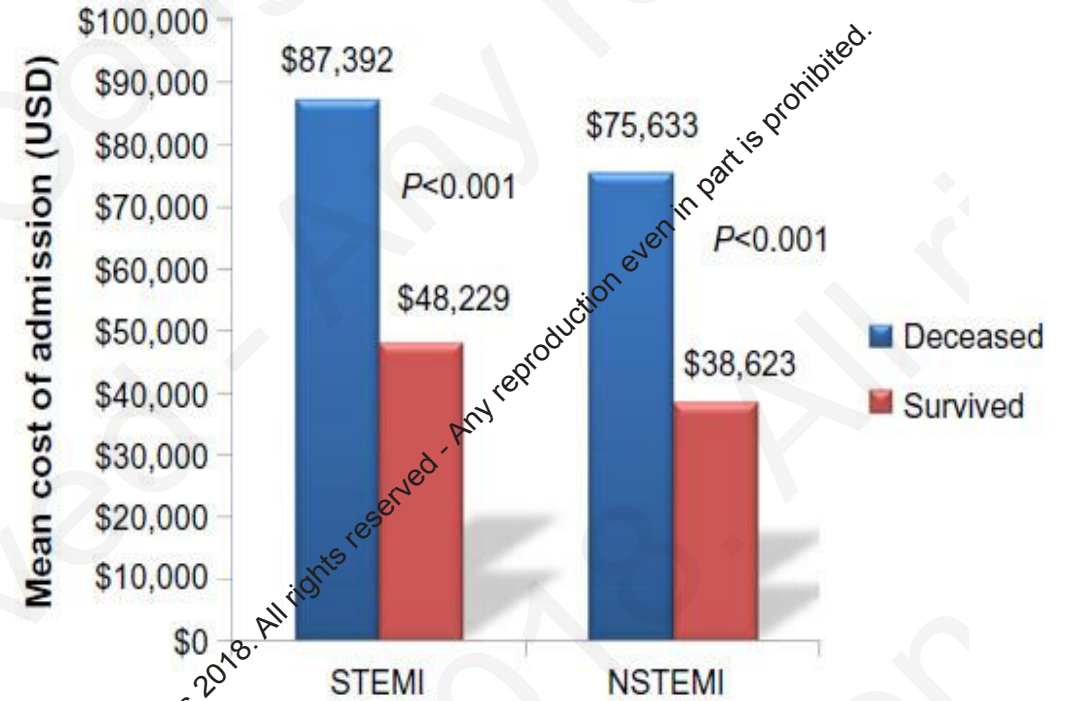
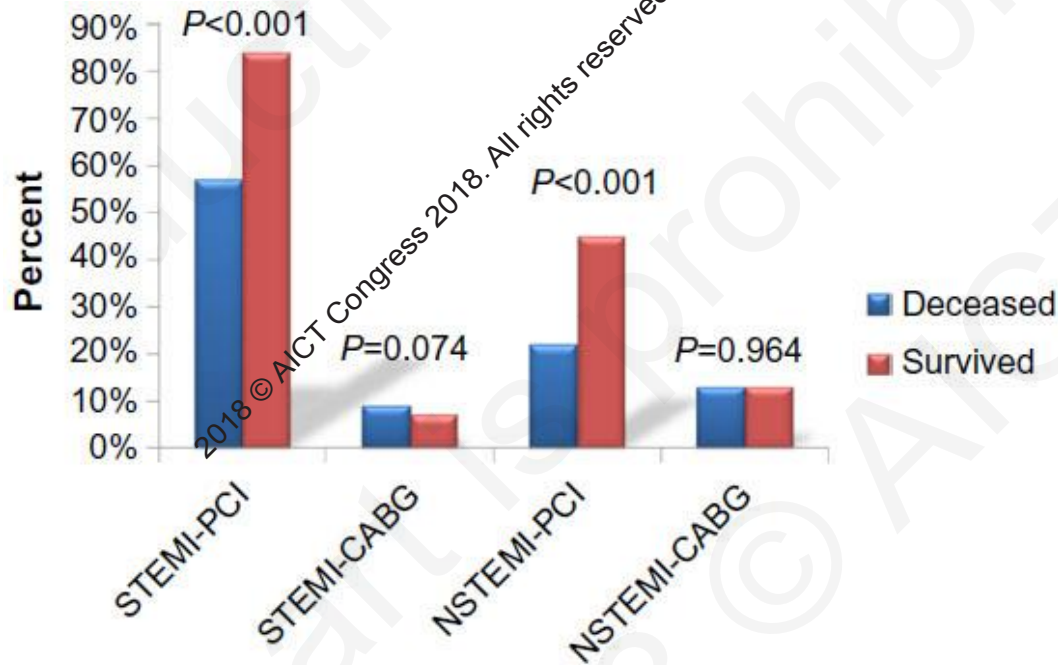
- LATIN umbrella of STEMI care extends to 95 million patients in 4 countries
- It provides cost-effective and urgent triage to poor patients in remote regions that lack AMI treatment
- So far, 685,000 telemedicine encounters have yielded 7,944 STEMI patients
- In addition to saving lives from AMI, LATIN is saving precious millions of dollars in healthcare costs
- Fiscal savings occur in two parts: a) From telemedicine guided triage; b) Savings from urgent revascularization (decreased length of stay, drugs, devices, disability)
- The massive savings that will be reviewed are only a percentage that accrue from effect from telemedicine guided triage of 685,000 patients.





# The cost of inpatient ACS

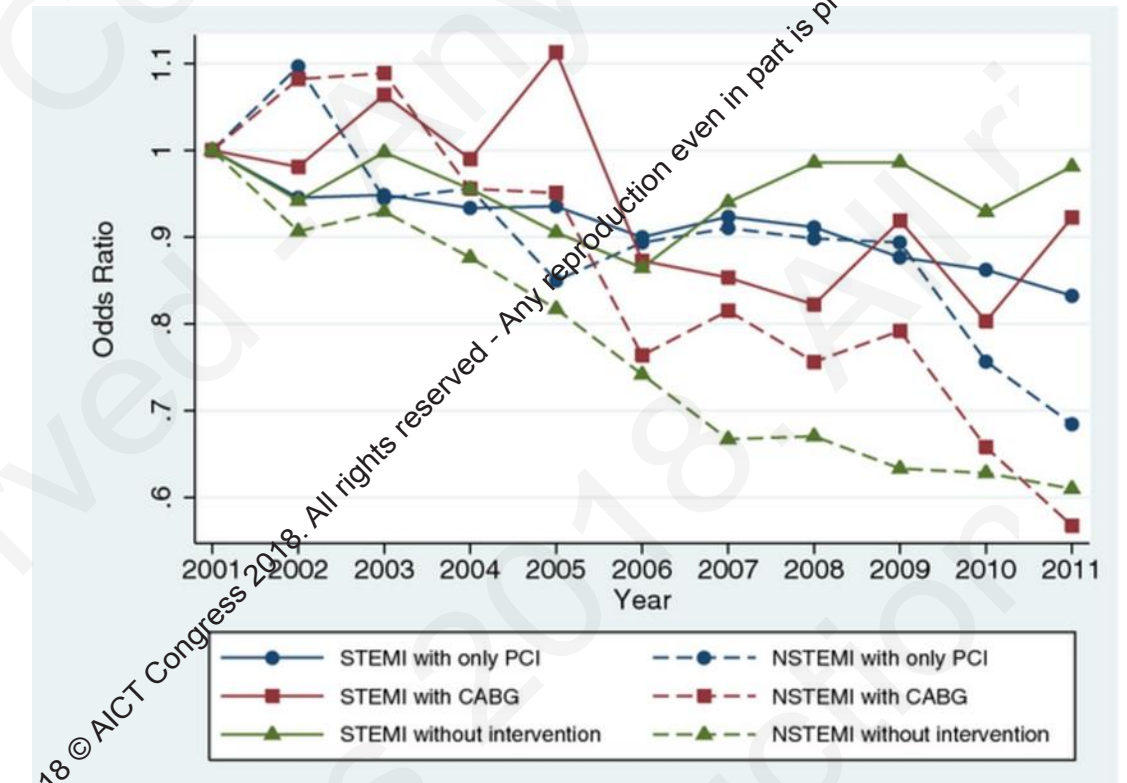
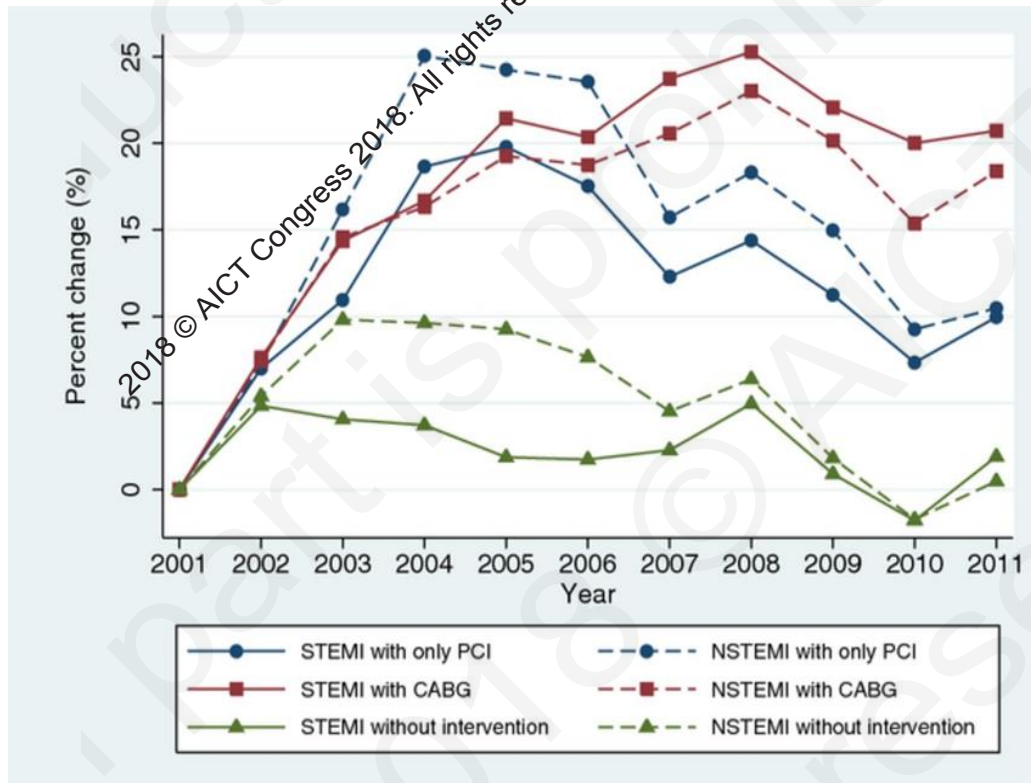
## Management



# Enormous Cost of AMI Care

## Differential Time Trends of Outcomes and Costs of Care for Acute Myocardial Infarction Hospitalizations by ST Elevation and Type of Intervention in the United States, 2001–2011

Takehiro Sugiyama, MD, MSHS, PhD; Kohei Hasegawa, MD, MPH; Yasuki Kobayashi, MD, PhD; Osamu Takahashi, MD, MPH, PhD; Tsuguya Fukui, MD, MPH; Yusuke Tsugawa, MD, MPH



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# Fiscal Impacts

\*Comparator – Avery Healthcare, Iowa, 92 hospitals.

	COMPARATOR	LATIN
<i>Tele-emergency encounters</i>	9,048	676,797
<i>Avoided transfers</i>	1,175	200,601/66,865
<i>Telemedicine cost</i>	\$ 1,739	\$ 172
<i>Cost of transportation and indirect patient cost</i>	\$ 2,563	\$ 688
<i>Net savings for patients</i>	\$ 3,823	\$ 516
<i>Total savings</i>	\$ 4.5 million	\$ 103.4 mil/\$34

**Mehta et al, EHJ, August 2018**

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# Economic Forecasting

Year	Telemedicine Encounters	# STEMI Diagnosed	#STEMI Reperfused	Transfers Avoided (30%)	Financial Saving (30%)	Transfers Avoided (10%)	Financial Saving (10%)
2014	50,011	551	193 (38%)	14,945	\$ 7.7 mil	4,981	\$ 2.6 mil
2015	120,000	1,440	576 (41%)	35,827	\$ 18.4 mil	11,942	\$6.16 mil
2016	370,000	4,810	1,972 (42%)	110,408	\$ 56.9 mil	36,802	\$ 18.9 mil
2018	676,707	7,397	3,346 (44%)	200,601	\$ 103.4 mil	66,855	\$ 34 mil
2020	1,561,930	20,305	8,731 (43%)	465,959	\$ 240 mil	155,319	\$ 80.14 mi
2026	5,495,503	71,441	30,719 (43%)	1,639,435	\$ 845.9 mil	546,478	\$ 281.9 mil
2026	5,495,503	71,441	35,720 (50%)	1,637,934	\$845.1 mil	545,978	\$ 281.7 mil
2026	5,495,503	71,441	42,864 (60%)	1,635,791	\$844.0 mil	545,263	\$281.3 mil



# Conclusions

- LATIN is a scalable model to provide access to AMI care for millions of patients in developing countries
- Telemedicine provides a most powerful triage strategy that is extremely cost-effective
- Linear and very large cost savings can result for implementation of a telemedicine-based strategy

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