these patients with poor long-term outcome may represent a significantly opportunity to improve their prognosis.
Table.

	Diabetic Patients	Non-Diabetic Patients	Adjusted Odds Ratio Diabetic/ Non-Diabetic (95% CI)*
Medications at within 6 hrs of Admission, (%)			
Aspirin	69	78	0.71 (0.61, 0.84)
Beta Blockers	25	33	0.77 (0.64, 0.92)
Medications at Discharge , (%)			
Aspirin	80	86	0.67 (0.57, 0.79)
Beta Blockers	75	80	0.79 (0.66, 0.94)
ACE inhibitors	75	69	1.34 (1.05, 1.71)
Statins	56	63	0.86 (0.63, 1.18)

*Adjusted for age, sex, hospital characteristics.

1077-70 Implementation of Acute Myocardial Infarction Guidelines in Community Hospitals Without Cardiac Catheterization Labs: Are We There Yet?

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Background
In order to reduce delays to treatment for ST Elevation Myocardial Infarction (STEMI), the National Heart Attack Alert Program, in 1993, recommended that emergency departments (ED) develop protocols for STEMI and monitor quality measures including time to treatment intervals. The ACC/AHA guidelines on STEMI recommend specific protocols to rapidly assess and treat STEMI patients. The goal of this study was to obtain information regarding the current use of STEMI protocols, adherence to guidelines and quality assessment practices in hospitals without catheterization labs in Minnesota.
Methods
In March 2003, we mailed surveys to ED medical directors or nurse managers in 111 Minnesota hospitals that did not have cardiac catheterization labs. In addition to hospital size and distance to nearest cath lab, the survey asked the questions regarding protocols, standing orders, quality assurance, decision making and indications for transfer of pts with STEMI.
Results
103 (93%) of hospitals surveyed responded (10 to 173 beds; mean 42) located from 12 to 300 miles (mean 74) from the nearest cardiac cath lab. Only 64% of hospitals had STEMI protocol/guidelines and 45% had standing orders in the ED; 32% had neither. Of those hospitals that had specific guidelines, only 6% addressed criteria for transfer to a tertiary hospital. Decisions addressed in guidelines: indications and dose of thrombolytics (58%), indications and dose of beta blockers (48%), use of aspirin (62%), indications and dose of heparin (54%), and low molecular weight heparin (23%). Only 50% of hospitals have a formal Quality assessment process for STEMI. Door to drug intervals are monitored in 53% of hospitals; use of aspirin in 46% and beta blockers in 35%.
Conclusion
Despite recommendations from the NHAAP and ACC/AHA to develop hospital specific guidelines and protocols for STEMI, only two thirds of community hospitals in Minnesota have these in place. These guidelines are incomplete and rarely address transfer criteria to hospitals with PCI capability. Quality performance measurement was lacking in one half of hospitals surveyed. Programs to help community hospitals develop and implement guidelines should be encouraged.

1077-71 The Association Between Care and Outcomes in Patients With Acute Coronary Syndrome: National Results From CRUSADE

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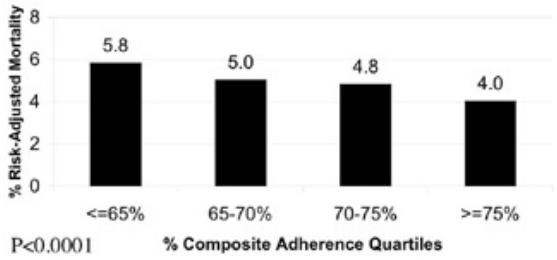
Background: Demonstrating the association between adherence to ACC/AHA guidelines and better outcomes is an important step in motivating their adoption in clinical practice. **Methods:** Using data from the CRUSADE Initiative, we studied 45,987 high-risk ACS patients (ischemic ST changes and/or positive cardiac markers) treated at 403 US hospitals between 4/00-4/03. We evaluated hospitals' use of 9 ACC/AHA Class I care indicators among eligible patients without contraindications. Hospitals were divided into quartiles based on overall guidelines adherence, calculated as % of guidelines consistent care out of total care opportunities. **Results:** There were significant performance gaps for each of the 9 indicators between the leading and lagging hospital quartiles: from narrow (97 vs 88% for aspirin <24 hrs, p<0.0001) to wide (60 vs 28%, p<0.0001 for GP IIb-IIIa inhibitors <24 hrs). Compared with lagging, leading centers tended to be larger (mean bedsize 388 vs 321), more likely academic (34 vs 21%), and to have CABG/PCI facilities (81 vs 59%, all p<0.001). The Figure displays average in-hospital mortality for each hospital performance quartile after adjusting for patient and hospital features. **Conclusion:** Adherence to ACC/AHA Guidelines varies markedly among US hospitals. Hospitals with the highest adherence have significantly better patient outcomes than those less adherent. These data support the need for national ACS quality improvement efforts designed to promote local change.



1077-72 Assessment of Glycemic Control in Patients With Diabetes Mellitus Admitted With an Acute Coronary Syndrome

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BACKGROUND:No diabetic patient should be treated for an acute coronary syndrome (ACS) without also directing attention to their diabetes and its associated metabolic abnormalities. To understand whether physicians are also attending to patients diabetes at the time of their ACS, we describe the proportion of diabetic patients who have their glycemic control assessed during an ACS hospitalization .
METHODS: 968 consecutive patients were prospectively determined to have an ACS. Prospective chart review and retrospective analyses of laboratory data were performed to determine whether ACS patients with known diabetes had a glycosylated hemoglobin (HbA1c) assessed 90 days prior to or during their hospitalization. We also examined whether patient characteristics or processes of care were associated with HbA1c assessments.
RESULTS: Among diabetic ACS patients (n=235, 24%), HbA1c values were obtained in 163 (69%). Older patients were less likely than younger patients to have had an HbA1c checked (60% of patients >/=70 vs. 67% for ages 60-69 vs. 79% for ages <60, p=0.02). Of the 235 diabetic patients, 89 had an endocrinology consultation. Of the 59 patients who received an endocrine consult without a prior HbA1c, 54 (92%) had one checked after the consult. Of the 146 patients not receiving an endocrine consult, HbA1c values were checked in 79 (54%, p<0.001 compared to those who had a consult). The admitting blood sugars of patients without a consult or HgA1c were elevated (161±60 mg/dL; >200 mg/dL in 25% of patients).
CONCLUSIONS: Almost a third of known diabetics have no recent evaluation of their glycemic control prior to or during an ACS admission. Older age and no endocrinology consultation are associated with less frequent assessments of HbA1c. These data suggest an important opportunity to improve diabetes care at the time of an ACS.

1077-73 Enhancing Quality of Heart Failure Care in Managed Medicare and Medicaid in North Carolina: Results of the North Carolina Achieving Cardiac Excellence (NC ACE) Project

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Background: Utilization of angiotensin converting enzyme inhibitors (ACE-I) and beta-adrenergic receptor blockers (BB) in heart failure (HF) patients remain suboptimal despite the results of clinical trials and evidence-based guidelines supporting their use.This report provides the results of a collaborative quality improvement program for HF care implemented in managed Medicare and Medicaid programs in North Carolina.
Methods: Managed care plans identified adult patients with HF during 2000 (pre-intervention) and from November 1, 2001 through October 31, 2002 (post-intervention). A stratified random sample of patients' outpatient medical records were reviewed by trained nurse abstractors to obtain data regarding type of heart failure, demographics, comorbidities, and therapies. The intervention consisted of guideline summary dissemination, performance audit with feedback, patient-specific chart reminders and patient activation mailings.
Results: We sampled 1613 patients from 5 plans during the pre-intervention period and 1528 patients during the post-intervention period. Assessment of left ventricular function increased from 81.7% to 85.3% of patients (p < 0.0001). Among patients with moderate to severe left ventricular systolic dysfunction, there was no substantive change in treatment with ACE inhibitors or vasodilators; whereas, appropriate treatment with beta blockers increased from 48.3% (with another 11.9% with documented contraindications) to 67.9% (with another 7.5% with documented contraindications). The quality gap decreased from 39.8% to 24.6% (p < 0.0001).
Conclusion: Left ventricular function assessment improved despite high pre-intervention rates. Treatment rates with ACE-I and vasodilators remained high, but did not improve. Treatment rates with BB improved substantially translating into a significant public health benefit. Given published data regarding benefits of BB, one might expect 50 fewer deaths

in this population over 5 years as a result of this intervention. Health care payors should consider development of financial incentives to encourage collaborative quality improvement programs.

1077-74 Marked Underutilization and Geographic Variation in Secondary Prevention Pharmacologic Therapy in Patients With Chronic Angina Undergoing Treatment With Enhanced External Counterpulsation

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Introduction: Despite the importance of antiplatelet agents, beta-blockers, angiotensin-converting enzyme inhibitors (ACEIs), and hypolipidemic agents in patients with chronic coronary artery disease (CAD), several studies have suggested that these agents are substantially underutilized. Hypothesis: We sought to describe the contemporary use of these pharmacologic agents among patients with chronic angina who were referred for treatment with enhanced external counterpulsation (EECP). EECP is reserved for patients with angina despite maximal medical therapy and revascularization. We sought to test the hypothesis that there is geographic variation in the use of these therapies in CAD patients. Methods: The International EECP Patient Registry (IEPR) enrolls consecutive patients undergoing EECP for chronic angina. We analyzed data on 4388 US patients who underwent EECP for angina and were enrolled in the IEPR beginning in January 1998. US Census definitions were used to categorize patients into 4 geographic regions: Northeast (NE), West, South, and Midwest (MW). Results: This study included 1350 NE patients, 463 West patients, 1232 South patients, and 1343 MW patients. Demographic and clinical characteristics, including age, sex, Caucasian race, prior MI, diabetes, and hyperlipidemia, were similar among the 4 regions. Patients in the South had the lowest incidence of prior coronary revascularization, multivessel disease, and quality of life, while having the highest incidence of current smoking (9.5% in South vs 7.6% non-South). Patients in the MW had the highest mean angina class. South patients had the lowest use of cardiac medication, including beta-blockers (55% in South vs 70% non-South; p<.001) and aspirin (65% vs 74%; p<.001). There was no geographic variation in the use of calcium blockers (45% overall), ACEIs (38%), or lipid-lowering agents (70%). Conclusions: There is substantial underutilization of antiplatelet agents, beta-blockers, ACEIs, and hypolipidemic agents in US patients with chronic stable angina. Variation across the country is striking, but all areas can improve the care of such patients by increasing the appropriate use of these agents.

1077-75 Coronary Artery Bypass Grafting: Are We Getting With the Program?

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Background: To minimize future cardiac events, American Heart Association guidelines (1995, 2001) for treatment of patients with coronary artery disease recommended that patients should be discharged on appropriate medications- beta-blocker, ACE inhibitor, aspirin or other anti-platelet medication and cholesterol lowering medication when appropriate. This study examines discharge medicines prescribed patients after coronary artery bypass grafting (CABG).
Methods: Data was exported from our STS certified database on 6914 patients undergoing CABG between Jan 2000 and July 2003, and analyzed for the use of beta-blockers, ACE inhibitors, aspirin (or other anti-platelet drug) and cholesterol lowering agent at discharge.
Results: At discharge 10.3% of patients were prescribed all four classes of drugs, a further 34.2% received 3 of the drugs, and 4.3% had no drugs prescribed (Table 1)
Of patients receiving only 1 drug at discharge, 86% were given aspirin or other antiplatelet medication. When prescribed 2 drugs, 96.0% received aspirin, while beta-blockers were prescribed to 56.9% and cholesterol lowering agents to 32.3% of the patients. In 3 drug regimens, aspirin was used in 99.1%, cholesterol lowering agents in 87.1% and beta-blockers in 84.4% of the patients. Only 29.4% received a prescription for an ACE-inhibitor.
Conclusions: Despite published medication guidelines, only 44.5% of patients being discharged after CABG received prescriptions following the recommended drug regimen.

	% with 4 drugs	% with 3 drugs
2000	5.9	29.3
2001	10.9	34.1
2002	15.0	37.7
2003	11.4	42.4
Females/Males	9.0/10.8	31.9/35.0
Caucasian	9.6	34.2
African-American	18.6	31.8
Hispanic	15.1	32.0
Other	17.3	38.9
On Pump/Off Pump	10.2/10.6	32.7/36.3

1077-76 Holiday Heart: Decreased Use of Evidence-Based Therapies in Patients With Acute Myocardial Infarction Admitted During Holiday Weeks

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Background: Previous studies have found an increased mortality from myocardial infarction in December. We investigated the relationship between the use of evidence-based therapies and admission during holiday weeks.
Methods: 134,609 patients in an observational Medicare database admitted with myocardial infarction from 1994-1996 were studied. Patients admitted during the last 2 weeks of December and the first week of January were compared with patients admitted all other weeks. A model adjusting for patient, physician, hospital, and geographic characteristics was used to determine a relationship between week of admission and the use of proven therapies.
Results: Patients admitted during the holidays were less likely to receive aspirin, beta blockers or reperfusion therapy, specifically primary coronary intervention (PCI) (Table 1). Mortality in patients admitted during the holidays was also significantly higher at 30 days and 1 year. After adjustment, patients admitted during the holidays remained less likely to receive PCI (RR 0.9, p <0.01).
Conclusion: Patients admitted during holiday weeks are less likely to receive evidence-based therapies, specifically primary coronary intervention.

Table 1: Use of Evidence-Based Therapies and Outcomes in Patients with Acute Myocardial Infarction

	Holiday Weeks	Rest of Year	p
Aspirin Use (during admission)	77.2%	78.2%	0.02
Aspirin Use (at discharge)	69.0%	69.5%	0.4
Beta Blocker Use (during admission)	43.3%	44.8%	0.002
Beta Blocker Use (at discharge)	28.7%	30.6%	<0.0001
Reperfusion Therapy	16.3%	17.4%	0.004
Primary Coronary Intervention	12.5%	15.3%	<0.0001
30-Day Mortality	22.5%	20.5%	<0.0001
1-Year Mortality	37.2%	34.9%	<0.0001

POSTER SESSION

1096 Novel Approaches to Cardiovascular Care

Monday, March 08, 2004, Noon-2:00 p.m.
Morial Convention Center, Hall G
Presentation Hour: 1:00 p.m.-2:00 p.m.

1096-67 Balloon Mitral Valvuloplasty Performed in Mobile Catheterization Laboratory as Part of Community Outreach Program at Primary Care Hospitals

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Several patients of pure severe mitral stenosis suffer due to lack of definitive treatment options like balloon mitral valvuloplasty (BMV) in developing countries, due to prevailing socioeconomic conditions. We present a new strategy of taking tertiary level care to people's doorsteps by performing BMV in Mobile Cardiac Catheterization Laboratory near a peripheral primary care hospital as part of a Community Outreach Program. Method: This multicentric study performed at 6 centres in India and Nepal was divided into 2 phases. Phase I included 150 patients and all procedures were done with a surgical standby. After the success of Phase I, 210 patients were treated in phase II, without surgical standby. Patients were assessed for suitability for BMV by transthoracic echocardiogram (TTE) & transesophageal echocardiogram (TEE) in phase I and only TTE in phase II. Exclusion criteria were moderate to severe mitral regurgitation (MR), presence of left atrial or appendage clots and a Wilkins' echocardiographic score of > 8. Procedure was done using Inoue Balloon technique with TTE guidance. Results are summarized in the table 1. Age range was 8-80 yrs and 53% were females . Conclusion: BMV is feasible and safe even if done in a mobile catheterization laboratory in a primary care hospital setting and can be undertaken without any surgical standby. These results are of immense significance especially in developing countries where lack of facilities preclude treatment of many deserving patients of severe mitral stenosis.