Acute Coronary Syndrome: Transition from Hospital to Home

Kim Newlin, RN, CNS, ANP-C, FPCNA
March 20th, 2015
California Association of Nurse Practitioners
FACULTY DISCLOSURE

- AstraZeneca- mobile health project
LEARNING OBJECTIVES

1. Describe an effective Acute Coronary Syndrome (ACS) patient education strategy in the acute care setting to improve transition process and adherence

2. Review available oral antiplatelets and indications for selection

3. List strategies to improve adherence to oral antiplatelets and other secondary prevention strategies

4. Explain the importance of the early post discharge follow-up visit on improving transitions for the ACS patient while also reducing readmission rates
CARDIOVASCULAR DISEASE

• Cardiovascular disease (CVD) is leading cause of death in US: ~1 of every 3 deaths
• ACS includes myocardial infarctions (MI) and unstable angina (UA)
• ~635,000 new MIs every year
• ~280,000 recurrent MIs every year
CARDIOVASCULAR DISEASE

• ~ 610,000 ACS patients undergo percutaneous coronary intervention (PCI) every year

• Total cost of atherosclerotic CVD (ASCVD) in US in 2010 was estimated to be $315.4 billion
  • More than any other diagnostic group
  • All cancer costs = $201.5 billion in 2008
Incidence of MI: Age, Sex, and Race
IMPACT OF HOSPITALIZATIONS

- Hospitalizations account for nearly 1/3 of the total $2 trillion spent on health care in the US.
- Most are necessary and appropriate.
- About 20 percent of US hospitalizations are rehospitalizations within 30 days of discharge.
- Medicare Payment Advisory Committee (MedPAC), up to 76 percent of 30 day rehospitalizations within 30 days of discharge are avoidable.
CASE STUDY

• 71 year old male for Acute Non ST-Elevation Myocardial Infarction (NSTEMI) in February
  • Percutaneous coronary intervention (PCI) with drug-eluting stent (DES) to 99% occlusion of right coronary artery (RCA)
  • LCx = 55% narrowing, LAD = 60% narrowing, EF = 52%

• Medical History
  • High blood pressure
  • High cholesterol- “controlled with diet and activity”
  • Had a cold or the flu two weeks ago, starting to feel better
CASE STUDY

• **Medications on Admission (NKDA)**
  • Lisinopril 10 mg PO daily
  • Hydrochlorothiazide 12.5 mg PO daily
  • Ibuprofen for muscle aches/headaches

• **Social History**
  • Retired engineer, volunteers at the Red Cross
  • Married, two grown kids, has Medicare A/B
  • Denies illicit drug use or alcohol use
  • History of smoking ½ ppd for about 10 years, quit at age 30
CASE STUDY

• **Labs**
  • TC = 205, LDL = 131, TG = 135, HDL = 47
  • Fasting Plasma Glucose = 88; A1C = 5.8%
  • GFR 72 mL/min

• **Vital Signs**
  • BMI = 27
  • Blood Pressure = 146/84
  • Pulse = 76, regular, no ectopy

What are some things to consider for this patient?
ACS: SECONDARY PREVENTION

• AREAS OF PREVENTION:
  • TRANSITION PLANNING
  • LIPID MANAGEMENT
  • CARDIAC REHABILITATION/PHYSICAL ACTIVITY
  • SMOKING
  • BLOOD PRESSURE CONTROL
  • WEIGHT MANAGEMENT
  • TYPE 2 DIABETES MELLITUS MANAGEMENT
  • DEPRESSION
ACS: SECONDARY PREVENTION

AREAS OF PREVENTION: MEDICATIONS

• ORAL ANTIPLATELET AGENTS (OAPs)
• STATINS
• RAAS BLOCKERS (if indicated)
• BETA BLOCKERS
• INFLUENZA VACCINATION
ACS: SECONDARY PREVENTION

• AREAS OF PREVENTION: MEDICATIONS
  ▫ • ORAL ANTIPLATELET AGENTS (OAPs)
  • STATINS
    ▫ • RAAS BLOCKERS (if indicated)
    ▫ • BETA BLOCKERS
    ▫ • INFLUENZA VACCINATION
### Classification of Recommendations and Levels of Evidence

<table>
<thead>
<tr>
<th>Level A</th>
<th>Multiple populations evaluated*</th>
<th>Data derived from multiple randomized clinical trials or meta-analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Recommendation that procedure or treatment is useful/effective</td>
<td>Sufficient evidence from multiple randomized trials or meta-analyses</td>
</tr>
<tr>
<td>Level B</td>
<td>Limited populations evaluated*</td>
<td>Data derived from a single randomized trial or nonrandomized studies</td>
</tr>
<tr>
<td></td>
<td>Recommendation that procedure or treatment is useful/effective</td>
<td>Evidence from single randomized trial or nonrandomized studies</td>
</tr>
<tr>
<td>Level C</td>
<td>Very limited populations evaluated*</td>
<td>Only consensus opinion of experts, case studies, or standard of care</td>
</tr>
<tr>
<td></td>
<td>Recommendation that procedure or treatment is useful/effective</td>
<td>Is reasonable can be useful/effective/beneficial</td>
</tr>
</tbody>
</table>

### Size of Treatment Effect

<table>
<thead>
<tr>
<th>CLASS I</th>
<th>Benefit &gt;&gt; Risk</th>
<th>Procedure/Treatment SHOULD be performed/administered</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS IIa</td>
<td>Benefit &gt;&gt; Risk</td>
<td>Additional studies with focused objectives needed IT IS REASONABLE to perform procedure/administer treatment</td>
</tr>
<tr>
<td>CLASS IIb</td>
<td>Benefit &gt;= Risk</td>
<td>Additional studies with broad objectives needed; additional registry data would be helpful Procedure/Treatment MAY BE CONSIDERED</td>
</tr>
<tr>
<td>CLASS III No Benefit or CLASS III Harm</td>
<td>Procedure/ Test</td>
<td>Treatment</td>
</tr>
<tr>
<td>COR III:</td>
<td>Not Helpful</td>
<td>No Proven Benefit</td>
</tr>
<tr>
<td>COR III:</td>
<td>Excess Cost w/o Benefit or Harmful</td>
<td>Harmful to Patients</td>
</tr>
</tbody>
</table>

### Comparative effectiveness phrases

- treatment/strategy A is recommended/indicated in preference to treatment B
- treatment A should be chosen over treatment B
- treatment/strategy A is probably recommended/indicated in preference to treatment B
- It is reasonable to choose treatment A over treatment B

### Suggested phrases for writing recommendations

- should be recommended
- is indicated
- is useful/effective/beneficial

### Estimates of certainty (precision) of treatment effect

- May/might be considered
- Is not recommended
- Is not indicated
- Should not be performed/administered/other
- Is not useful/beneficial/effective

DUAL ORAL ANTIPLATELET THERAPY (DAPT)

- DAPT: combination of ASA + oral antiplatelet
- Critical for reducing risk of in stent thrombosis
- Non-adherence to DAPT following PCI resulted in 10-fold greater chance of death within one year

Spertus et al; Circulation, 2006; 113(24); 2803-2809
ANTIPLATELET AGENTS

Start (and continue indefinitely) aspirin 75 to 162 mg/d in all patients unless contraindicated

For patients undergoing CABG, aspirin (100 to 325 mg/d) should be started within 6 hours after surgery to reduce saphenous vein graft closure

In post-PCI-stented patients, it is reasonable to use 81 mg of aspirin per day in preference to higher maintenance doses.

WHAT IS THE OPTIMAL ASPIRIN DOSE?

N=25,086; 2-by-2 factorial design; 30 day follow-up

<table>
<thead>
<tr>
<th></th>
<th>Aspirin 325mg</th>
<th>Aspirin 81mg</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>MACE</td>
<td>4.2</td>
<td>4.4</td>
<td>0.61</td>
</tr>
<tr>
<td>CV death</td>
<td>2.1</td>
<td>2.3</td>
<td>0.22</td>
</tr>
<tr>
<td>Major Bleeding</td>
<td>2.3</td>
<td>2.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Minor Bleeding</td>
<td>5.0</td>
<td>4.4</td>
<td>0.04</td>
</tr>
</tbody>
</table>

In the PCI cohort, the endpoint of definite or probable stent thrombosis did not differ between aspirin groups (1.9% vs 2.0%, P=0.36)
**P2Y$_{12}$ RECEPTOR INHIBITOR RECOMMENDATIONS**

Clopidogrel 75 mg/d for patients allergic or intolerant to aspirin.

A P2Y12 inhibitor (plus aspirin) for patients post ACS or post PCI with stent placement.

For patients receiving a bare metal or drug eluting stent during PCI for ACS, a P2Y12 inhibitor should be given for at least 12 months:

- Clopidogrel 75 mg daily
- Prasugrel 10 mg daily
- Ticagrelor 90 mg twice daily

Ticagrelor and Prasugrel have Rapid Consistent /Greater IPA
PCI-CURE TRAIL: CLOPIDOGREL AFTER NSTE-ACS WITH PCI

ANTIPLATELET AGENTS: CLOPIDOGREL KEY POINTS

• Generic version available
• Delayed onset of action for loading dose
• Daily dose 75 mg/day + ASA 81 mg/day
• Age and cerebrovascular disease not problem
• Take into consideration:
  • Heterogenous antiplatelet response
  • Genetic polymorphisms associated with poor response
  • Drug-drug interaction (e.g. PPI omeprazole)
  • Smoking interaction

Bonello L, JACC 2010;56:919-33
Ho PM, JAMA 2009;301:937-44
Berger JS, Circulation 2009;120:2337-44
CARVEDILOL CHALLENGES

Patient Factors
- Age
- GI abnormalities, prior surgery
- Underdosing
- Noncompliance
- Smoking
- Alcohol ingestion
- Meal timing

Drug Interactions
- Metabolic inhibitors
  - Proton pump inhibitor
  - Statins
  - Nonsteroidal anti-inflammatory agents
  - Antifungal agents (fluconazole, voriconazole)
  - Macrolide antibiotics
  - Calcium channel blockers
- Metabolic inducers
  - Carbamazepine
  - Glucocorticoids
  - Rifampin

Genetic Factors
- P2Y12 polymorphisms
- P2Y1 polymorphisms
- Transmembrane transporter MDR1/P-glycoprotein (also called ABCB1)
- Cytochrome P450 enzymes

Platelet Factors
- Platelet turnover
- Receptor sensitivity to collagen and ADP
- Alterations in internal cell signaling

Comorbidities
- Diabetes
- Congestive heart failure
- Chronic kidney disease
- Hepatic disease
- Hypertension
- Hypercholesterolemia
- Inflammatory conditions

Platelet Function Testing
- Increase clopidogrel dosing
- Novel agents
- Cilostazol, dipyridamole

TRITON-TIMI 38: PRASUGREL STUDY DESIGN

ACS (STEMI or UA/NSTEMI) & Planned PCI

ASA

n=13,600

Double-blind

CLOPIDOGREL
300 mg LD/ 75 mg MD

PRASUGREL
60 mg LD/ 10 mg MD

Median duration of therapy - 12 months

1° endpoint: CV death, MI, stroke
2° endpoints: CV death, MI, stroke, rehosp-rec
isch CV death, MI, UTVR

UTVR = urgent target vessel revascularization; NSTEMI = non-ST segment elevation MI
Wiviott SD et al. Am Heart J. 2006;152:627-635.
TRITON-TIMI 38: SUMMARY OF RESULTS

• Primary end point (CV death, nonfatal MI, nonfatal stroke)
  – 9.9% prasugrel vs 12.1% clopidogrel (HR: 0.81; p<0.001)
• Prasugrel significant ↓ MI (7.4% vs. 9.7%; p<0.001) and stent thrombosis (1.1% vs. 2.4%)
• Prasugrel significantly increased risk of major bleeding, including fatal bleeding
• Cardiovascular mortality and overall mortality did not differ significantly between groups

ANTIPLATELET AGENTS: PRASUGREL KEY POINTS

- 10 mg once a day dosing - no generic available
- Rapid onset of action (60 mg loading dose)
- No interaction with proton pump inhibitors
- Do not use in patients with active pathological bleeding or a history of TIA/stroke
- Not indicated for medically managed patients
- Not recommended for patients 75 and older
  - Possibly in high-risk situations (patients with DM or history of prior MI)
- Additional risk factors for bleeding include:
  - body weight < 60 kg; propensity to bleed; concomitant use of medications increase risk of bleeding

http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/022307s003lbl.pdf
PLATO: TICAGRELOR STUDY DESIGN

- **Primary endpoint**: CV death + MI + Stroke
- **Primary safety endpoint**: Total major bleeding

**NSTE-ACS (moderate-to-high risk) or STEMI (if primary PCI)**
- Clopidogrel-treated or -naive;
- Randomized within 24 hours of index event
  (N=18,624)

**6–12-month exposure (median 9 mos)**

**Clopidogrel**
- If pre-treated, no additional loading dose;
- If naive, standard 300 mg loading dose, then 75 mg qd maintenance;
  (additional 300 mg allowed pre PCI)

**Ticagrelor**
- 180 mg loading dose, then 90 mg bid maintenance;
  (additional 90 mg pre-PCI)

PLATO: SUMMARY OF RESULTS

- Primary end point (CV death, nonfatal MI, nonfatal stroke)
  - 9.8% ticagrelor vs 11.7% clopidogrel (HR: 0.84; p<0.001)
- Ticagrelor significant ↓ MI (7.4% vs. 9.7%; p<0.001), CV death (4% vs. 5.1%) and stent thrombosis (1.1% vs. 2.4%)
- Ticagrelor significantly increased risk of non-CABG major bleeding
- Fatal bleeding was not significantly different between groups
- Overall mortality was significantly decreased with ticagrelor (4.5% vs. 5.9%; p<0.001)

ANTIPLATELET AGENTS:
TICAGRELOR KEY POINTS

- 90 mg TWICE a day dosing
- No generic available
- Rapid onset of action (180 mg loading dose)
- Must use ASA 81 mg daily
- No interaction with proton pump inhibitors
- No issues with genetic variants
- Increased risk for bleeding

http://www.accessdata.fda.gov/drugsatfda_docs/label/2011/022307s003lbl.pdf
### COMPARING OAPs

<table>
<thead>
<tr>
<th>Event</th>
<th>CURE</th>
<th>TRITON – TIMI 38</th>
<th>PLATO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Clopidogrel (vs Placebo)</td>
<td>Prasugrel (vs Clopid)</td>
<td>Ticagrelor (vs Clopid)</td>
</tr>
<tr>
<td></td>
<td>RR (95% CI)</td>
<td>RR (95% CI)</td>
<td>RR (95% CI)</td>
</tr>
<tr>
<td>MACE</td>
<td>9.3 vs 11.4</td>
<td>9.9 vs 12.1</td>
<td>9.8 vs 11.7</td>
</tr>
<tr>
<td></td>
<td>0.80 (0.72-0.90)</td>
<td>0.81 (0.73-0.90)</td>
<td></td>
</tr>
<tr>
<td>MI</td>
<td>5.2 vs 6.7</td>
<td>7.3 vs 9.5</td>
<td>5.8 vs 6.9</td>
</tr>
<tr>
<td></td>
<td>0.77 (0.67-0.89)</td>
<td>0.76 (0.67-0.85)</td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>1.2 vs 1.4</td>
<td>1.0 vs 1.0</td>
<td>1.5 vs 1.3</td>
</tr>
<tr>
<td></td>
<td>0.86 (0.63-1.18)</td>
<td>1.02 (0.71-1.45)</td>
<td></td>
</tr>
<tr>
<td>Any Death</td>
<td>5.7 vs 6.2</td>
<td>3.0 vs 3.2</td>
<td>4.5 vs 5.9</td>
</tr>
<tr>
<td></td>
<td>0.93 (0.81-1.07)</td>
<td>0.95 (0.78-1.16)</td>
<td></td>
</tr>
<tr>
<td>CV Death</td>
<td>5.1 vs 5.5</td>
<td>2.1 vs 2.4</td>
<td>4.0 vs 5.1</td>
</tr>
<tr>
<td></td>
<td>0.93 (0.79-1.08)</td>
<td>0.89 (0.70-1.12)</td>
<td></td>
</tr>
<tr>
<td>Major Bleeding</td>
<td>3.7 vs 2.7</td>
<td>2.5 vs 1.7</td>
<td>11.6 vs 11.2</td>
</tr>
<tr>
<td></td>
<td>1.38 (1.13-1.67)</td>
<td>1.45 (1.15-1.83)</td>
<td></td>
</tr>
</tbody>
</table>
VORAPAXAR (ZONTIVITY)

- Vorapaxar:
  - First-in-class
  - Oral PAR-1 inhibitor
  - Use in secondary prevention, prior MI on DAPT already

- Metabolism:
  - Primarily hepatic via CYP 3A4
  - Terminal half-life: ~126–269 hrs

Chackalamannil S, J Med Chem, 2006
### P2Y₁₂ Antagonist

**Summary of Results**

<table>
<thead>
<tr>
<th>ACS with Planned Intervention</th>
<th>Medically Managed ACS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspirin PLUS</strong></td>
<td><strong>Aspirin PLUS</strong></td>
</tr>
<tr>
<td>• Clopidogrel, or</td>
<td>• Clopidogrel, or</td>
</tr>
<tr>
<td>• Prasugrel, or</td>
<td>• Ticagrelor</td>
</tr>
<tr>
<td>• Ticagrelor</td>
<td>• 12 months duration</td>
</tr>
<tr>
<td>• 12 months duration</td>
<td></td>
</tr>
</tbody>
</table>

- Prasugrel is absolutely contraindicated in pts with prior stroke or TIA, and its benefits in pts <60 kg or ≥75 years are uncertain

- Maintenance doses of aspirin above 100 mg reduce the effectiveness of ticagrelor and should be avoided
CASE STUDY - UPDATE

PATIENT STARTED ON THE FOLLOWING MEDICATIONS AND EDUCATION STARTED

- ASPIRIN 81 MG
- TICAGRELOL 180 MG LOADING DOSE, 90 MG BID DAILY
- CARVEDILOL 6.25 MG BID
- CONTINUE LISINOPRIL 10 MG DAILY
- STOP HYDROCHLOROTHIAZIDE
- MINIMIZE NSAIDS- TYLENOL INSTEAD IF POSSIBLE (NTE 3 G/DAY)

*WHAT ABOUT HIS CHOLESTEROL?*
ACS: SECONDARY PREVENTION

AREAS OF PREVENTION: MEDICATIONS

- ORAL ANTIPLATELET AGENTS (OAPs)
- STATINS
- RAAS BLOCKERS (if indicated)
- BETA BLOCKERS
- INFLUENZA VACCINATION
SECONDARY PREVENTION: STATINS


The panel makes no recommendations for or against specific LDL-C or non–HDL-C targets for the primary or secondary prevention of ASCVD.

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults.
SECONDARY PREVENTION: STATINS

High-intensity statin therapy should be initiated or continued as first-line therapy in women and men ≤75 years of age who have *clinical ASCVD*¹, unless contraindicated.

¹Clinical ASCVD includes acute coronary syndromes, history of MI, stable or unstable angina, coronary or other arterial revascularization, stroke, TIA, or peripheral arterial disease presumed to be of atherosclerotic origin.

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults.
SECONDARY PREVENTION: STATINS

In individuals with clinical ASCVD in whom high-intensity statin therapy would otherwise be used, when high-intensity statin therapy is contraindicated† or when characteristics predisposing to statin-associated adverse effects are present, moderate-intensity statin should be used as the second option if tolerated.

†Contraindications, warnings, and precautions are defined for each statin according to the manufacturer’s prescribing information.
## INTENSITY OF STATINS

Table 5. High- Moderate- and Low-Intensity Statin Therapy (Used in the RCTs reviewed by the Expert Panel)*

<table>
<thead>
<tr>
<th>High-Intensity Statin Therapy</th>
<th>Moderate-Intensity Statin Therapy</th>
<th>Low-Intensity Statin Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily dose lowers LDL–C on average, by approximately ≥50%</td>
<td>Daily dose lowers LDL–C on average, by approximately 30% to &lt;50%</td>
<td>Daily dose lowers LDL–C on average, by &lt;30%</td>
</tr>
<tr>
<td><strong>Atorvastatin (40†)–80 mg</strong> <strong>Rosuvastatin 20 (40) mg</strong></td>
<td><strong>Atorvastatin 10 (20) mg</strong> <strong>Rosuvastatin (5) 10 mg</strong> <strong>Simvastatin 20–40 mg‡</strong> <strong>Pravastatin 40 (80) mg</strong> <strong>Lovastatin 40 mg</strong> <strong>Fluvastatin XL 80 mg</strong> <strong>Fluvastatin 40 mg bid</strong> <strong>Pitavastatin 2–4 mg</strong></td>
<td><strong>Simvastatin 10 mg</strong> <strong>Pravastatin 10–20 mg</strong> <strong>Lovastatin 20 mg</strong> <strong>Fluvastatin 20–40 mg</strong> <strong>Pitavastatin 1 mg</strong></td>
</tr>
</tbody>
</table>

2013 ACC/AHA Guideline on the Treatment of Blood Cholesterol to Reduce Atherosclerotic Cardiovascular Risk in Adults.
WHY NOT TREAT TO TARGET?

- Current RCT data do not indicate what the target should be
- Unknown magnitude of additional ASCVD risk reduction with one target compared to another
- Unknown rate of additional adverse effects from multidrug therapy used to achieve a specific goal
- Therefore, unknown net benefit from treat-to-target approach
INFLUENZA VACCINATION

Patients with cardiovascular disease should have an annual influenza vaccination

INFLUENZA VACCINATION

Administering Flu Vaccine led to:
- 36% lower risk of cardiovascular events
- 55% lower risk of major adverse cardiovascular events in patients with a recent ACS
- Treat eight ACS patients with vaccine to prevent one major cardiovascular event

Another study with 550 patients showed:
- Patients with MI were 2X as likely have had flu
  - 12% MI group vs 7% non MI group
  - MI group was half as likely to have been vaccinated
- Flu vaccination is protective against MI and had cut MI risk by 45%

Udell et al. JAMA 2013; 310:1711-1720
BUT HOW DO WE HELP ENSURE OUR PATIENTS WILL TAKE THESE MEDICATIONS????

So these are the guidelines...
IMPROVING ADHERENCE

1. Identify and leverage patient points of care
2. Target patient specific barriers
3. Effectively communicate with patient and caregivers
4. Deliver comprehensive health literacy level appropriate patient education
PATIENT POINTS OF CARE

- At Diagnosis: may be first time they hear of ACS!
- In the cardiac cath lab: stent just first step!
- During transitions of care: solid med rec!
- After discharge: don’t assume they got it!
- During follow up appointments and cardiac rehabilitation: bring in medications and write down questions!
PATIENT SPECIFIC BARRIERS

- **Ask Questions:** “Do you miss medications?
- **Administer Assessment:** Morisky Medication Assessment Scale (MMAS)
- **Pharmacy Database Technology:** an option!
- **What are the other possible barriers.......**
PATIENT SPECIFIC BARRIERS

- Unclear Instructions
- No Cardiac Rehab
- Education Level
- Side Effects
- Age
- Cost/Availability
- Family Situation
- Socio-Cultural Factors
- Marital Status/Cohabitate
- Psychological Issues
- Never Taken Meds
- Belief Fixed
CASE STUDY - UPDATE

• PROVIDE EDUCATION
• PROVIDE INFLUENZA VACCINE
• ADDRESS HIS CHOLESTEROL
  • START ATORVASTATIN 80 MG DAILY
  • CONTINUE TO WORK ON DIET, WEIGHT LOSS AND PHYSICAL ACTIVITY.
• TRANSITION PLANNING........
SECONDARY PREVENTION

AREAS OF PREVENTION:

- TRANSITION PLANNING
- LIPID MANAGEMENT
- CARDIAC REHABILITATION/PHYSICAL ACTIVITY
- SMOKING
- BLOOD PRESSURE CONTROL
- WEIGHT MANAGEMENT
- TYPE 2 DIABETES MELLITUS MANAGEMENT
- DEPRESSION
A clear, detailed, and evidence-based plan of care that promotes medication adherence, timely follow-up with the healthcare team, appropriate dietary and physical activities, and compliance with interventions for secondary prevention should be provided to patients with STEMI.

Post-hospital systems of care designed to prevent hospital readmissions should be used to facilitate the transition to effective, coordinated outpatient care for all patients with STEMI.
CREATE IDEAL TRANSITION

• Involve patient and caregivers in shared decision making
• Empower patient to individualize and enhance self care
• Use Motivational Interviewing (the other MI!)
• Follow-up appointment should be made before discharge
• Communicate with other HCPs
• Use “Teach Back” and provide health literate education materials
CARDIAC REHABILITATION: REFERRAL RECOMMENDATIONS

ACC/IHI HOSPITAL-2-HOME (H2H)

• Address the challenge of creating a coordinated health care team across different settings of care
• Provide reliable, safe and health-enhancing transition for patients

“SEE YOU IN 7”

• All patients discharged with HF/AMI to have follow-up appointment scheduled/cardiac rehab referral made within 7 days of hospital discharge

http://cvquality.acc.org/Initiatives/H2H.aspx
Patients with ACS, post CABG, or post PCI should be referred to a comprehensive outpatient CR program either prior to hospital discharge or during the first follow-up outpatient visit.

*CMS covers patients with EF < 35%, Class II-IV, with 6 weeks optimal medication therapy.

*Centers for Medicare and MediCaid Services National Coverage Determination, February 27th 2014.*
Outpatients with diagnosis of ACS, CABG, PCI, or PAD within the past year should be referred to a comprehensive outpatient CR program.

A home-based CR program can be substituted for a supervised, center-based program for low-risk patients.

EVIDENCE FOR CARDIAC REHABILITATION

• Participation in CR after PCI was associated with a significant decrease in all-cause mortality
  – Hazard ratio 0.53 to 0.55; P<0.001

• Patients (>65 years) who attended 36 sessions had 47% lower risk of death and a 31% lower risk of MI than those who attended 1 session

• Only 14-35% of MI survivors and ~ 31% of patients after CABG participate in cardiac rehabilitation

Hammill BG et al. Circulation. 121(2010); pp 63-70.
Suaya J et al. Circulation 2007;116;1653-1662
BARRIERS TO CARDIAC REHABILITATION

- Cost
- Location
- Lack of Referrals
- Delay to start
- Length of program

There are creative models providing secondary prevention - most of them nurse run!
CASE STUDY - UPDATE

• REFERRED FOR CARDIAC REHAB
• APPOINTMENT WITH PCP WITHIN 7 DAYS
• PATIENT EDUCATION HANDOUTS PROVIDED ALONG WITH WEBSITES
• PHONE CALL FOLLOW UP IN 2 DAYS
THANK YOU!!!!

QUESTIONS??

newlink@sutterhealth.org