Treatment & Adherence Barriers

• 12:20 pm
• Panel
• Mary Ann Bauman, MD
Statin Use in the U.S.
Gaps, Barriers and Opportunities

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Section Head
General Cardiology, Prevention and Imaging
University of Alabama at Birmingham
Utilization of High Intensity Statins After MI Is Improving

Utilization higher in
• Men: RR 1.16
• Age <65: RR ~1.3 (depending on age)
• Prior high intensity statin Rx: RR 1.52

Rosenson RS et al. Poster at ESC 2016 paper in press
Adoption of 2013 ACC/AHA Guidelines
Data from PINNACLE

Pokharel Y et al JAMA Cardiol 2017
Online 3/1/2017

161 Cardiology Practices
Time periods: 2012/2013 vs 2014/2015
<table>
<thead>
<tr>
<th>Discharge Dx Determines Statin Use</th>
<th>Medicare Data 2007-2009</th>
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<tr>
<th></th>
<th>No Prior Statin Use</th>
<th>Prior Statin Use</th>
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<tbody>
<tr>
<td>Primary D/C dx of MI</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Secondary D/C dx of MI</td>
<td>0.59 (0.54 to 0.65)</td>
<td>0.89 (0.82 to 0.97)</td>
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<tr>
<td>PCI</td>
<td>1.00 (0.91 to 1.09)</td>
<td>1.01 (0.93 to 1.10)</td>
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<tr>
<td>CABG</td>
<td>1.08 (0.95 to 1.23)</td>
<td>0.99 (0.88 to 1.11)</td>
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Absolute rates of statin use:
Incident users: 60% for 1° MI dx, 31.2% for 2° MI dx; 67.6% CABG, 63.9% PCI
Prevalent users: 84.1% for 1° MI dx, 71.8% for 2° MI dx; 83.8% CABG, 87.3% PCI

Yun H et al. JAHA 2015;4:e001208
Statin Adherence is Poor

Statin Discontinuation Over Time

Adherence Matters

• Aetna Claims Database 2010-2013
  A. Post MI Cohort
  B. Atherosclerotic Disease Cohort

• ACE-I and Statin

• PDC (proportion of days covered)
  • $\geq 80\%$ fully adherent
  • 40-79% partial adherent
  • <40% non-adherent

• MACE during F/U
  • All cause mortality
  • Hospitalization for nonfatal MI
  • Stroke
  • Coronary revascularization

Bansilal S et al. JACC 2016; 68:789-801
Statin Intolerance and Outcomes

- Medicare beneficiaries who started statin post MI
  - High Adherers: 52.8%
  - Intolerant: 1.65%
- Follow-up 1.9-2.3 years
- Outcomes:
  - Recurrent MI
  - CHD events
  - All cause mortality

Intolerance and Outcomes (High adherers are the referent group)

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<tr>
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<th>Fully adj. Hazard Ratio</th>
<th>95% CI</th>
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<tbody>
<tr>
<td>Recurrent MI</td>
<td>1.50</td>
<td>1.30, 1.73</td>
</tr>
<tr>
<td>CHD Events</td>
<td>1.51</td>
<td>1.34, 1.70</td>
</tr>
<tr>
<td>All Cause Mortality</td>
<td>0.96</td>
<td>0.87, 1.86</td>
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Colantonio et al. CV Drugs Ther 2016;30:525-33
Serban, M.-C. et al. JACC 2017;69:1386–95
• Guideline-appropriate statin therapy is increasing, but remains suboptimal
• Adoption is heterogeneous among patients and sites of care
• Adherence to statins is poor
• Poor adherence and statin intolerance among high risk patients are associated with higher risk of events
Thank You

UAB COMPREHENSIVE CARDIOVASCULAR CENTER
Knowledge that will change your world
Scope of the Problem

- Chronic cardiovascular disease is largely asymptomatic
- Preventative dyslipidemic pharmacotherapy does not result in symptomatic improvement
- Pharmacotherapy may result in adverse drug reactions
- A high-risk patient is prescribed a statin:
  - The short-term (6-month to 1-year) likelihood the patient will continue to take the drug is approximately 50-60%
  - The long-term likelihood ranges between 15-50%
    - Primary prevention << Secondary prevention

Adherence Strategy Examples

- Educational Tools
  - Videos, apps, handouts
- Involvement of the patient in decision making
  - Identifying medication benefits
  - Employing motivational interviewing
  - Empowering patients through discussion of risk
- Regular, frequent follow-up
  - Reinforce adherence, identify barriers
- Simplifying taking medications:
  - Long-acting injectables may offer an adherence advantage
  - Pill boxes, blister packing, combination pills
  - Transitional care from hospital to home: meds to bedside
- Reminder systems:
  - Simple to complex
Which Strategies Work Best?

• van Driel et al. Cochrane review (2016)
  • Evaluated 35 randomized, controlled studies of interventions designed to improve adherence to lipid-lowering therapy comprising over 925,000 patients
  • In a meta-analysis of 7 studies, patients receiving an intervention had greater adherence (OR 1.93, 95% CI 1.29-2.88) and improved lipid parameters over the short and long-term (> 6 mos)
  • Interventions that consistently showed improvement:
    • Reminder systems (telephone, calendar, technology)
    • Integrated multidisciplinary educational activities
    • Pharmacist-led interventions (counseling, follow-up, reinforcement, visits, etc.)
  • Interventions that were inconsistent:
    • Decision support systems
    • Drug-regimen simplification
    • Complex behavioral approaches
    • Administrative improvements
    • Large-scale pharmacy automated telephone intervention

Cochrane Database Syst Rev. 2016 Dec 21;12:CD004371
Which Strategies Work Best?

- Viswanathan et al. systematic review (2012)
  - Evaluated 62 trials of interventions designed to improve adherence to medications for chronic diseases
  - Identified general benefit across disease states for:
    - Reducing out-of-pocket expenses
    - Case management
    - Patient education with behavioral support

How Pharmacists Can Help

• Partner with community pharmacists for first-line detection and troubleshooting of adherence issues
  • Are patients refilling prescriptions on time?
  • Are patients unable to afford prescribed therapy?
  • Utilize community pharmacists for follow-up if no dedicated clinic infrastructure to address adherence
    • Automatic refills, reminder calls/texts, packaging, etc.
  • Synchronize and simplify medication refills

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<thead>
<tr>
<th>sitaGLIPTin (JANUVIA) 50 MG tablet</th>
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<tbody>
<tr>
<td><strong>Dose:</strong> 50 mg</td>
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<td><strong>Dispense Quantity:</strong> 30 tablet</td>
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<th>Dispense History</th>
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How Pharmacists Can Help

• Utilization of a pharmacist in-clinic
  • Detailed medication history
  • Dedicated follow-up/time to improving adherence on a patient-specific basis
  • Medication management through collaborative practice or state licensure

• Utilization of pharmacists in-hospital
  • Pharmacists are in one of the best positions to identify medication changes pre- and post- hospitalization and articulate these to the patient
  • Get an early start on medication education
  • If possible, partner with outpatient pharmacies to dispense and educate patients before they are discharged
How Can The System Be Better?

• There isn’t a “silver bullet” for adherence and each patient must be approached as an individual.

• Promote healthcare models that enable financial viability of true population health so that primary care offices can dedicate resources to adherence
  • “Adherence champion”
  • In-office tools

• Promote full integration of electronic health records that include bi-directional pharmacy records

• Development of toolkits that promote best practices, resources, and tools for patient-specific scenarios

• Continued funding of novel research ideas that specifically explore improvement in cholesterol adherence, utilizing a patient-specific approach
  • What specific elements in multi-pronged interventions are effective?

• Continue exploring the role of technology in improving adherence