A Medication Adherence Strategy

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## Overview

### Game Changers

- **Making it easier to do the right thing:** The Infrastructure – Breaking Medication Adherence down
- **Better Health for the Population**
- **Better Care for the Individual**
- **Better Costs**
About Kaiser Permanente

- Nation’s largest nonprofit health plan
- Integrated health care delivery system
- 9 million members
- 16,000+ physicians
- 182,000+ employees
- Serving 9 states and the District of Columbia
  - 36 hospitals
  - 533 medical offices
- $44.2 billion operating revenue

Scope includes ambulatory, inpatient, ACS, behavioral health, SNF, home health, hospice, pharmacy, imaging, laboratory, optical, dental, and insurance
We’ve known for some time that improved adherence can make the Triple Aim a reality: **Better Quality & Health . Better Care . Better Health Care Costs**

What we haven’t always had is a national awareness & mandate, stakeholder alignment, processes & tools, and an infrastructure to systematically address medication adherence.

With new game changers in health care, stakeholders have come together to create infrastructures, processes, measures, and tools to take giant leaps in improving patient health outcomes through improved adherence.
Game Changers in the Medication Adherence Space Nationally

- **Healthcare Changes**
  - Healthcare Reform
  - CMS Medicare STARS & other National Quality Measures
  - The Voice of the Member

- **Healthcare Costs**
  - The $290 Billion healthcare price
  - Decreased Government Reimbursement

- **The Triple Aim Evidence**
  - Reduces progression of disease / hospitalizations
  - Improves quality of life
  - Reduces healthcare costs

- **Stakeholders alignment and collaborations**
Mr. MT

- 62 yr old man with a Hx of Diabetes, CAD, uncontrolled HTN, smokes up to 1 pack of cigarettes daily, 25 pounds overweight
  - Drove to ER with chest pains
  - Dx: Mild heart attack
  - Admitted to the hospital
  - Discharged 3 days later
  - Scheduled for a 5 day follow up with his PCP
  - Labs: HgA1c = 9.2, LDL = 162, BP = 146/92
Follow-up Visit with MD

At medication review

- Diabetes medication:
  - Metformin 1000mg twice daily
  - Problems:
    - **Morning dose:** stomach ache and diarrhea
      → reduced to half the dose
    - **Evening dose:** generally forgets to take
- HTN medications -- feels dizzy and nauseous
- Beta Blocker medication: Feels tired → stopped taking it
- MT felt he was on too many medications (11)
- Not unique
Making it easier for Providers and Patients to do the right thing
– Effectively addressing Medication Adherence to achieve...

• **Better Health for our Population**
  – Focus our efforts – Perato’s principle
  – Structure: Break down the problem into manageable components
  – General Solutions: what can we do proactively 100% of the time`

• **Better Care For Individuals**
  – Systems
  – Individualized Solutions: What can we do consistently to address suspected or identified medication non adherence –
    The BSMART Checklist
Better health for our population

Barriers. Where Medication Adherence breaks down. Proactive solutions
Barriers and Solutions...

- Because there are many reasons why patients are not taking their medications, the solutions have to be multi-faceted.

Single solutions for all members (one size fits all) rarely work.

Address every barrier possible in each member (over 260 barriers identified in the literature) – not realistic.

A SOLUTION

1. 20% of the barriers that affect 80% of the people (Pareto's principle)
2. Model to ID where the 20% barriers occur
STEP 1: Understand where Medication Adherence Breaks Down

Breaking Medication Adherence Down into Manageable Components
STEP 2: Pareto’s Principle - 80/20 Rule: Most Common Barriers at each Point

Breaking Medication Adherence Down into Manageable Components
Proactive: what can we do proactively 100% of the time to improve Medication Adherence for the population?
Reduce Primary Non Adherence at every point of clinical contact & improve population health

Value and Benefit of Therapy: Physician & provider emphasis and reinforcement – in provider office

Educate to focus on the markers of the disease (LDL, BP, etc) instead of symptoms of the disease as predictors for how well they are doing (many diseases have no symptoms) & set goals

Cost / Financial issues

Adherence Tools

Triage to other health care services
From the Provider’s office ➔ Pharmacy: 12 – 31% Drop ➔ Home: 47% Drop

How do we engage each member at each point of contact?

• Going from What is the matter to “What Matters to You?”

• Goal Setting

• Empathize when they fall off track

• Congratulate each improvement no matter how small

• Encourage EVERY TIME

• Empower with information

Remember, taking chronic medications requires:
• A commitment to taking it as prescribed
• The discipline to live up to that commitment
• Setting goals – each time
• Support during practice and during the marathon itself
• Encouragement along the way
• Does it get easier the next time – sometimes yes sometimes no
From the Provider’s office → Pharmacy: 12 – 31% Drop
From the Pharmacy → Home: 12% Drop

What adherent tools are most effective to keep members on track?
- MyMedSchedule.com / Myactionplan.com
- Pill box to be dispensed with new medications
- Adherence Apps and other tools for patients
- Interactive voice Response (IVR) system:
  - Primary (within 2 weeks if patient has not picked up new rx)
  - secondary (15 – 45 days late for filling refill) Calls
At Home – Over time: **29% Drop over 3-6 months**

Encouraging letter

Your cholesterol is much improved! Congratulations! Continue your cholesterol medicine to help keep your arteries open.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>CHOL &lt;200</td>
<td>338 (H)</td>
<td>179</td>
<td></td>
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<tr>
<td>TRIG &lt;150</td>
<td>268 (H)</td>
<td>184 (A)</td>
<td></td>
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<tr>
<td>HDL &gt;/=40</td>
<td>49</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>LDL CALC &lt;100</td>
<td>235 (H)</td>
<td><strong>94</strong></td>
<td></td>
</tr>
<tr>
<td>CHOL/HDL &lt;5.0</td>
<td>6.9 (H)</td>
<td>3.7</td>
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<tr>
<td>ALT 17 - 63 units/L</td>
<td>64 (H)</td>
<td>46</td>
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How do we engage each member at each point of contact?

- Going from What is the matter to “What Matters to You?”
- Goal Setting
- Empathize when they fall off track
- Congratulate each improvement no matter how small
- Encourage EVERY TIME
- Empower with information

It’s a marathon... not a sprint.

Remember, taking chronic medications requires:
- A commitment to taking it as prescribed
- The discipline to live up to that commitment
- Setting goals – each time
- Support during practice and during the marathon itself
- Encouragement along the way
- Does it get easier the next time – sometimes yes sometimes no
At Home – Over time: 29% Drop over 3-6 months

For Refill Nonadherence

Increased Refills with Automated Reminder Outreach

N = 15,254 in the control group and 15,356 in the outreach group
Better Care for Individuals

EMR . The BSMART Checklist . Care Delivery Support & Tools
### Identify Poor Adherence - Ask or Use EMR Indicators

<table>
<thead>
<tr>
<th>Date</th>
<th>Drug</th>
<th>Mrar %</th>
<th>Dsr</th>
<th>Qty</th>
<th>Rfd</th>
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<tbody>
<tr>
<td>08/17/09</td>
<td>KPHC SELF-REPORTED ASPIRIN</td>
<td></td>
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<tr>
<td>07/07/09</td>
<td>NIFEDIPINE ER 90MG TAB &quot;XL&quot;</td>
<td>65</td>
<td>38</td>
<td>100</td>
<td>2</td>
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<tr>
<td>07/07/09</td>
<td>ATENOLOL TAB 50MG</td>
<td>100</td>
<td>53</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>07/02/09</td>
<td>METFORMIN HCL TAB 500MG</td>
<td>100</td>
<td>33</td>
<td>300</td>
<td>1</td>
</tr>
<tr>
<td>07/02/09</td>
<td>SIMVASTATIN TAB 80MG</td>
<td>67</td>
<td>23</td>
<td>90</td>
<td>3</td>
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<tr>
<td>06/25/09</td>
<td>POTASSIUM CL ER TAB 10MEQ</td>
<td></td>
<td></td>
<td>200</td>
<td>3</td>
</tr>
<tr>
<td>06/24/09</td>
<td>AMLODIPINE 10MG TABS</td>
<td>100</td>
<td>25</td>
<td>100</td>
<td>1</td>
</tr>
<tr>
<td>06/24/09</td>
<td>ENALAPRIL MALEATE TAB 5MG</td>
<td>81</td>
<td>40</td>
<td>100</td>
<td>3</td>
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<tr>
<td>06/17/09</td>
<td>FEXOFENADINE HCL TAB 180MG</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>06/17/09</td>
<td>CLOBETASOL PROPIONATE CRE 0.05%</td>
<td></td>
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</tr>
<tr>
<td>06/16/09</td>
<td>HYDROXYZINE HCL TAB 25MG</td>
<td>100</td>
<td>31</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>05/29/09</td>
<td>HYDROCHLOROTHIAZIDE TAB 25MG</td>
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- **Medication Refill Adherence Ratio**
- **Days Supply Remaining**

#### Proactive Care

- Care Management Summary Sheet (CMSS)
The BSMART Checklist
Barriers * Solutions * Motivation * Adherence Tools * Relationships & Roles * Triage

- **Barriers**: Identify barriers and assess readiness to change
- **Solutions**: Provide targeted solutions to adherence challenges
- **Motivation**: Help patients to help themselves – goal setting and self management
- **Adherence Tools**: Provide tools, including pill boxes, reminder calls, IVR, kp.org refill reminders, alarm systems, etc
- **Relationships & Roles**: Establish / maintain positive patient-provider relationships and understand the roles of each team member, including the patient
- **Triage**: Direct patients to other resources in the broader health care system for support, education, and monitoring (health education, care management, etc)

- Is a Systematic Mental Adherence Checklist for providers to improve concordance at the beginning of therapy, compliance to the regimen, and persistence over time

- Consistent (standardized way) to address medication non adherence at every point of patient contact – Secondary Non Adherence
**How to identify barriers:**

Good communication is important, so providers must first understand why a patient is not taking his or her medications properly. Some questions a provider may ask to help better understand the patient include:

- During the last week, how many days have you missed taking any of your medications?
- Have you stopped or started taking any of your medication on your own?
- Have you ever had difficulty taking your medication as prescribed, and if so, why?
- What did your doctor tell you this medication is for? (to identify patient’s knowledge and purpose of medication)
- Have you experienced any problems or had any side effects while taking your medication?

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Pt. comments</th>
<th>Some Solutions to Offer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Related</td>
<td></td>
<td><strong>Forgetfulness</strong> “I forget to take my medication”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Educate patient on importance of taking the medication as prescribed</td>
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<td></td>
<td></td>
<td>- Provide memory tools, such as pill box organizers and reminders, med calendars, electronic devices, watch with time alarms, etc.</td>
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<tr>
<td></td>
<td></td>
<td>- Link medication regimen to daily habits</td>
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<tr>
<td></td>
<td></td>
<td>- Provide written information</td>
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<tr>
<td></td>
<td></td>
<td>- Use visual aids</td>
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The IHI-KP Collaboration: Identify a Bundle of Effective Interventions to improve medication adherence in our African American HTN Population.

- Explore the most effective means for improving adherence by looking outside the organization to examine methods used in other industries
- Choose a starter set of interventions for implementation
The First FIVE (5) BUNDLE for SPREAD:
The Components

TRUST
Building Trust at every point of contact

BARRIERS & SOLUTIONS
Identifying their barriers to medication adherence and providing targeted solutions

TOOLS
ADHERENCE & REMINDER Tools: IVR Calls / Pill Boxes / others

SELF CARE
Self-Monitoring, Management, & Self Care Strategies including story telling to optimize outcomes

PATIENT ENGAGEMENT
Understanding the patient’s motivation and motivating patients at each point of contact
**What is the evidence?**

TAIYE ODEDOSU, ANTOINETTE SCHOENTHALER, DORICE L. VIEIRA, CHARLES AGYEMANG, and GBENGA OGEDEGBE: Overcoming barriers to hypertension control in African Americans

Cleveland Clinic Journal of Medicine 2012; 79(1):46-56; doi:10.3949/ccjm.79a.11068

Addressing Disparities in Health Care: DAVID MARTINS, LAWRENCE AGODOA, and KEITH C. NORRIS: Hypertensive chronic kidney disease in African Americans: Strategies for improving care

Cleveland Clinic Journal of Medicine 2012; 79(1):726-734; doi:10.3949/ccjm.79a.11109

David Martins and Keith Norris: Hypertension treatment in African Americans: physiology is less important than sociology.

Cleveland Clinic Journal of Medicine 2004; 71(9):735-743; doi:10.3949/ccjm.71.9.735

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### BARRIERS & SOLUTIONS

**IDENTIFY BARRIERS BY ASKING PATIENTS THE FOLLOWING QUESTIONS:**

- Based on your prescription refill patterns, it appears that you are not taking your medications as prescribed—what gets in the way of you taking your medications?
- During the last week, how many days have you missed taking any of your medications?
- Have you stopped or started taking any of your medication on your own?
- Have you ever had difficulty taking your medications as prescribed? (If so), why?
- Have you experienced any problems or side effects while taking your medications?

<table>
<thead>
<tr>
<th>BARRIER</th>
<th>PATIENT BEHAVIOR CLUES</th>
<th>SOLUTIONS</th>
</tr>
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<tbody>
<tr>
<td>Lack of Trust</td>
<td>• Subtle or indirect dismissal of medical advice&lt;br&gt;• Poor attention or focus during encounter&lt;br&gt;• Defensiveness&lt;br&gt;• Closed off body language&lt;br&gt;• Avoiding eye contact</td>
<td>• Use the AIDET framework to establish and maintain trust:&lt;br&gt;  A – Acknowledge: Greet patient and family members warmly&lt;br&gt;  I – Introduce: Introduce yourself, feel free to mention your background, specialty, experience and intentions&lt;br&gt;  D – Duration: Be sure to relay to the patient the expected duration of any procedures, symptoms, or lab tests&lt;br&gt;  E – Explanation: Narrate the care you are providing it, and highlight the value for the patient. Avoid medical jargon&lt;br&gt;  T – Thank: Thank the member and provide positive reinforcement</td>
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<tr>
<td>Denial of Conditions</td>
<td>• Comments such as &quot;I'm not really sick&quot; or &quot;I do not need this medication&quot;, or &quot;my blood tests are good now and don't need meds anymore&quot;</td>
<td>• Refer patient to health education, social medicine, etc. for reinforcement and support&lt;br&gt;  • Explore readiness to change&lt;br&gt;  • Discuss the life-long nature of the condition or illness and need for life-long therapy to slow progression or prevent further complications&lt;br&gt;  • Follow-up management in 1–2 weeks</td>
</tr>
<tr>
<td>Persistent Refusal of Medical Advice</td>
<td>• Frequent missed appointments&lt;br&gt;• Late medication refills&lt;br&gt;• Vehement refusal of medical advice</td>
<td>• Use the brief negotiation roadmap:&lt;br&gt;  • Open the Encounter (Ask, Listen, Summarize)&lt;br&gt;  • Negotiate the Agenda (offer options, elicit patient choice)&lt;br&gt;  • Explore Ambivalence&lt;br&gt;  • Assess Readiness&lt;br&gt;  • Tailor the Transition</td>
</tr>
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Better Costs per Capita
Medication Adherence: The Benefit-Cost Ratios

There’s evidence that by spending a bit more on medication and bolstering prescription drug adherence among patients, total health spending can be lowered for vascular medical conditions. The study and data which leads to this conclusion is published in Medication Adherence Leads to Lower Health Care Use And Costs Despite Increased Drug Spending appears in the January 2011 issue of Health Affairs

- The average benefit-cost ratios from adherence for the four conditions were:
  - 8.4:1 for CHF,
  - 10.1:1 for hypertension,
  - 6.7:1 for diabetes,
  - 3.1:1 for dyslipidemia

- Furthermore, improving medication adherence as described in this study would avert hospital admissions for patients with vascular conditions, which would enhance millions of Americans’ quality of life and productivity

- Higher adherence = lower Medicare spending: A 10% point increase in statin MPR = $832 lower Medicare spending per capita. A 10% point increase in MPR = $285 lower Medicare costs (HSR: Health Services Research 46:4 August 2011)
Medication Adherence: The Benefit-Cost Ratios

Impact of Medication Adherence In Chronic Vascular Disease On Health Services Spending, 2005-2008
Targeted, Higher Pharmacy Spending Can Bend the Health Cost Curve

Health Affairs Journal: Jan 2011

Source: Medication Adherence Leads To Lower Health Care Use And Costs Despite Increased Drug Spending, Health Affairs, January 2011.

New literature definitively shows that additional drug spend will result in lower health care costs.
Summary

In the Office
& Pharmacy

• Value & Benefit of Therapy
• Timely information - right conversation
• E3: Education . Encouragement . Empowerment
• Cost
• B.S.M.A.R.T Tools

In the Home

• Reminder Tools
• Support Tools
• Ongoing Encouragement & Support – Marathon
• Motivation
• Self Management Skills

In Collaboration with other Teams

• Educational Tools
• Assessment Tools
• Longitudinal Tools
• Apps
• Research
The essence of why we do what we do:
A real patient letter...

08-29-10

Explain Limitation to Coreg to Dr. ExplainCoreg

In the past the list of prescription drugs I was taking got so long that I got confused and didn’t know whether I had taken one or not. There was also a problem of constipation, whether from a particular drug or the combination.

I am trying radical solutions. One is to try Coreg in different strengths, either once or twice a day. I am doing this in combination with exercising for two 30-minute periods, for a total of 60 minutes per day.

I also tried Diovan, since it is supposed to need taking only once a day, and without food. It resulted in a severe nosebleed. When I read that it relaxes blood vessels and they enlarge, I immediately turned away, since I have had bad nosebleeds and necessary cautерizations all my life.

In recent times I have taken 6.25 mg Coreg pills, but in the beginning eight years ago I took only 3.125 mg, and I find that that is adequate now to bring blood pressure down to about 144/92. That permits me to lead an active life. A lower blood pressure might prolong my life longer, but it would be a life without meaningful activities.

For cholesterol, I am using Canola margarine. I use it on bread, and potatoes, and in soups.

Until traces of the nosebleed have disappeared, I am skipping the 81 mg enteric-coated aspirin. I do always have children’s chewable 81 mg aspirin in my pocket, for if I should ever feel faint.

Could he have been switched to another med to help further reduce his BP AND still allow him an active lifestyle?

What about a statin to improve his choles. Levels AND reduce plaque buildup?
Increasing the effectiveness of interventions to improve adherence could have a far greater impact on population health than any other advancement in medical treatment.

World Health Organization

Our Challenge & Our Opportunity:
Improve Medication Adherence to ensure Better Health for our Population. Better Care for each member we touch. Better Cost Per Capita