Improving Medication Adherence: Understanding the Patient's Perspectives

An educational collaboration between Geisinger and Merck

Frederick J. Bloom, Jr. MD MMM
Chief, Care Continuum Geisinger Health System
Medical Director, Quality Geisinger Health Plan

Colleen McHorney PhD
Senior Director, Outcomes Research, Merck & Co., Inc.
Medication adherence becomes a recognized issue

- Research shows high rates of non-adherence
- Medication reconciliation highlights the many times that patients are not clear about what medications healthcare professionals think they are taking
- New data sources - such as fill rate information provided to physicians
- Physicians and staff are not knowledgeable about what patients have to say about why they do and don’t take some or all of their medications
- Geisinger and Merck began a collaboration around adherence – starting with educational sessions
<table>
<thead>
<tr>
<th>Components</th>
<th>Core Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Segmentation</td>
<td>Predictive modeling</td>
</tr>
<tr>
<td></td>
<td>Risk stratification</td>
</tr>
<tr>
<td>Health Promotion</td>
<td>Preventive care &amp; Screenings</td>
</tr>
<tr>
<td>Disease Management</td>
<td>Self management education</td>
</tr>
<tr>
<td></td>
<td>Medication management</td>
</tr>
<tr>
<td>Case Management</td>
<td>Care coordination</td>
</tr>
<tr>
<td></td>
<td>Exacerbation management</td>
</tr>
<tr>
<td></td>
<td>TOC</td>
</tr>
<tr>
<td></td>
<td>Tele-monitoring</td>
</tr>
<tr>
<td>Pharmacy Management</td>
<td>Brand vs. generic</td>
</tr>
</tbody>
</table>
Transitions of Care

- Patient contact within 24-28 hrs. post discharge
- Telephonic outreach
  - Medication reconciliation
  - Ensure safe transition post discharge
  - with appropriate services in place
    - Home Health
    - DME
  - Safe to be in their home?
- Facilitate post hospital PCP appt. within 3 - 5 days
Medication reconciliation is national priority, but is only part of the adherence issue

<table>
<thead>
<tr>
<th>PQRS Measure Number</th>
<th>Measure Title</th>
<th>Alternative Measure Numbers (PQRS, NQF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CARE-1</td>
<td>Medication Reconciliation</td>
<td>PQRS #46 NQF 0097</td>
</tr>
</tbody>
</table>
Medication Adherence Report

- August 2013 - January 2013
  - E207 - WYOMING BOROUGH

Each Medication Adherence Report is broken out by site report which is then divided into three sections. The first section shows an MPR (Medication Possession Ratio) summary for the previous quarters for the Regional Case Manager responsible for that site. The second section displays the MPR for each measure (Asthma, Hypertension, Cholesterol, Diabetes) and each measure’s therapy class. The third section displays the patients with an MPR less than or equal 80 percent. The MRN (Medical Record Number), Patient Name, Generic Name, MPR, and Measure are displayed.
### GHP Medication Adherence Site Report

**PCP Office Name:** WYOMING BOROUGH E207

#### Reporting Period: 8/1/2012 - 1/31/2013

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma</td>
<td>64.32%</td>
<td>68.19%</td>
<td>70.28%</td>
<td>72.26%</td>
</tr>
<tr>
<td>Hypertension</td>
<td>87.35%</td>
<td>84.35%</td>
<td>90.18%</td>
<td>91.93%</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>85.84%</td>
<td>87.33%</td>
<td>89.86%</td>
<td>87.55%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>80.83%</td>
<td>80.88%</td>
<td>83.71%</td>
<td>84.40%</td>
</tr>
<tr>
<td>Select Hematological Agents</td>
<td>88.41%</td>
<td>85.74%</td>
<td>88.05%</td>
<td>85.51%</td>
</tr>
</tbody>
</table>

#### Adherence Measures:

- **Asthma:** 72% MPR
- **Inhaled Agents:** 74%
- **Oral Agents:** 66%

<table>
<thead>
<tr>
<th>Adherence Measures</th>
<th>92% MPR</th>
<th>Adherence Measures</th>
<th>88% MPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td></td>
<td>Cholesterol</td>
<td></td>
</tr>
<tr>
<td>ACE Inhibitors</td>
<td>93%</td>
<td>HMG CoA Red. Inhib.</td>
<td>88%</td>
</tr>
<tr>
<td>ARBs</td>
<td>0%</td>
<td>Other</td>
<td>0%</td>
</tr>
<tr>
<td>Alpha Blockers</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium Channel Blockers</td>
<td>89%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combo Products</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adherence Measures</th>
<th>84% MPR</th>
<th>Adherence Measures</th>
<th>86% MPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td></td>
<td>Select Hematological Agents</td>
<td></td>
</tr>
<tr>
<td>Biguanides</td>
<td>79%</td>
<td>Coumarin Anticoagulants</td>
<td>93%</td>
</tr>
<tr>
<td>Insulins</td>
<td>75%</td>
<td>Thrombin Inhibitors</td>
<td>73%</td>
</tr>
<tr>
<td>Sulfonylureas</td>
<td>89%</td>
<td>Antiplatelet Agents</td>
<td>87%</td>
</tr>
<tr>
<td>Combo Products</td>
<td>0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>97%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Patients with MPR < 80%**

- **MRN**
- **Patient Name**
- **Generic Name**
- **MPR**
- **Measure**

<table>
<thead>
<tr>
<th>MRN</th>
<th>Patient Name</th>
<th>Generic Name</th>
<th>MPR</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>METOPROLOL TARTRATE</td>
<td>60%</td>
<td>HYPERTENSION</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SALMETEROL XINAFOATE</td>
<td>66%</td>
<td>ASTHMA</td>
</tr>
</tbody>
</table>
Medication Adherence Profile

Measure: CHOLESTEROL
Drug Name: SIMVASTATIN

Measure: HYPERTENSION
Drug Name: ATENOLOL

Drug Name: BENAZEPRI/HYDROCHLOROTHIAZIDE
Medication Fill Rate Data Issues

• Not all medications adjudicated
  – Self Pay
  – $4 Generic Programs
  – VA Benefit

• Patients have appropriate gaps
  – Hospitalizations, illnesses
  – Regimen was changed

• Pill splitting
Structure of the Educational Initiative

- Senior Leadership at Geisinger familiar with Merck’s Adherence Acumen and the Merck-created Adherence Estimator

- Interest from Community Practice Service Line (CPSL) leadership to further educate the clinicians and their staffs. Drew from insights from Dr. McHorney’s published work in order to enable productive conversations within the primary care visits

- Goal: Help clinicians begin a conversation with patients around medication adherence in a constructive manner

- Format for the educational collaboration: series of live and online webinars across the Geisinger CPSL footprint, 39 sites; approximately 200 primary care clinicians and their nursing staff
  - Follow-up in-clinic educational session to brainstorm and support medication adherence discussions
“Resistance to taking medicine seems to be quite profound and pervades different cultures and categories of disease. It is instinctual and complex.”

Dr. Marshall Marinker

# Medication Adherence Issues

<table>
<thead>
<tr>
<th>Non-fulfillment</th>
<th>Patients who <em>never</em> fill a new prescription(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-persistence</td>
<td>Patients who <em>stop</em> taking a prescribed medication without the advice of their health care provider(^1)</td>
</tr>
</tbody>
</table>
| Poor Adherence  | Patients who take lower than prescribed doses\(^2\)  
|                 | Patients who take their prescription less frequently than prescribed\(^2\)  
|                 | Patients who do not follow the “usage instructions”\(^3\)  
|                 | Patients who take the drug with contraindicated or non-recommended substances\(^3\) |

Non-Adherence to Prescription Medications

The Non-Adherence Epidemic

- In the United States, ~ 15% of new prescriptions are never filled.\(^4\)
- Of prescriptions filled, ~ 50% of patients stop their therapy in the first six months.\(^5\)–\(^13\)

Non-adherence to prescription medications is “America’s Other Drug Problem”\(^14\)

Impact of Non-Adherence

**Public-Health Implications**

- Non-adherent patients with chronic disease have a significantly higher risk of mortality.\(^1,2\)
- Non-adherent patients with chronic disease have a significantly higher risk of hospitalization\(^3,4\) and emergency-department utilization.\(^5,6\)
- Regardless of disease, patients who are non-adherent to their medicines may not be able to reach their treatment goals.

**Societal-Economic Implications**

- Direct costs of non-adherence for the United States are up to $300 billion each year in unnecessary or excessive outpatient visits, hospitalizations, emergency-department use, nursing-home admissions, and diagnostic testing.\(^7,8\)

---

The Non-Fulfillment and Non-Adherence Epidemics

“A Worldwide Problem of Striking Magnitude”

- Transcend geographic and political boundaries\(^2\)
- Are observed across all demographic groups\(^2,3\)
- Are observed across all therapeutic areas and all medications\(^2,4\)
- These non-fulfillment and non-adherence rates have not changed appreciably over the last 25 years\(^5,6\)

Barriers to Medication Adherence

- Patient has a poor understanding of disease
- Patient has a poor understanding of benefits and risks of treatment
- Poor provider-patient communication
- Medication-affordability issues
- Copayments
- Frequent refill requirements
- Lack of extended teams
- Lack of infrastructure/tracking systems
- Lack of get-to-goal policies or incentives (P4P)
- Suboptimal patient-centered communication
- Poor instructions and counseling at the point of prescribing
- Poor therapeutic relationship with patients
- Overly complex regimen prescribed
- Lack of reimbursement for cognitive services
- Poor knowledge of different formularies and patients’ out-of-pocket costs

P4P=pay for performance.
The Ten Tenets of Medication Adherence

• The Ten Tenets:
  – Expose common misperceptions regarding medication adherence
  – Provide useful insights about patients’ medication decision making
  – Underscore the importance of patient beliefs in determining adherence behaviors
Tenet 1

Patients do not communicate their medication adherence intentions to their health care providers

Among 1,100 adult patients in six states

- 68% said they would never communicate to their provider that they did not want a drug
- 83% said they would never communicate to their provider that they did not plan on buying the drug

Tenet 2

Health care providers assume that their patients are adherent.\textsuperscript{1}

- In two studies, from 74\% to 89\% of surveyed physicians believed that the majority of their were adherent\textsuperscript{2,3}

- Physicians cannot predict adherence with any more efficiency than if they were guessing\textsuperscript{4}

Tenet 3

A non-adherent personality does not exist.¹

- Medication adherence has not been consistently linked to personality type, temperament, or other trait characteristics.²

- Hevey asserts that "there is little evidence of personality traits influencing adherence and the search for the 'non-adherent' personality type has provided limited insight."²

Concepts tested include neuroticism, impulsivity, hedonism, extraversion, assertiveness, openness, hostility, cooperativeness, novelty seeking, agreeableness, defensiveness, friendliness.

---

Tenet 4

Adherence to prescription medications is largely unrelated to adherence to self-care and lifestyle recommendations¹

Within given diseases, there is differential adherence for medication-taking vs. diet, exercise, weight control, fluid intake, glucose testing, home blood pressure monitoring, appointment keeping

Tenet 5

Medication adherence is largely unrelated to demographic characteristics\textsuperscript{1-2}
Tenet 6

Patients want information about their prescription medications and feel frustrated that not enough information is provided to them.  

Patients desire information on:

- How the medication works\(^2,3\)
- Medication benefits and efficacy\(^4\)
- Knowledge about the disease\(^5\)
- Other treatment options\(^6\)
- Duration of therapy\(^3,7-9\)
- Possible side effects\(^3-8,10-15\)
- What to do should a side effect occur\(^3,8,10\)

---

## Prescription Medication Information Preferences (n=22,070)

<table>
<thead>
<tr>
<th>Information</th>
<th>Not at all important</th>
<th>A little important</th>
<th>Somewhat important</th>
<th>Very important</th>
<th>Extremely important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directions – how often, when, how many</td>
<td>1%</td>
<td>1%</td>
<td>7%</td>
<td>31%</td>
<td>60%</td>
</tr>
<tr>
<td>What the medication is for, its purpose, what it does</td>
<td>1%</td>
<td>1%</td>
<td>7%</td>
<td>36%</td>
<td>56%</td>
</tr>
<tr>
<td>Possible drug interactions with other medications</td>
<td>1%</td>
<td>2%</td>
<td>8%</td>
<td>29%</td>
<td>60%</td>
</tr>
<tr>
<td>The long-term benefits of the medication</td>
<td>1%</td>
<td>1%</td>
<td>8%</td>
<td>41%</td>
<td>50%</td>
</tr>
<tr>
<td>What you should do if you experience a side effect</td>
<td>1%</td>
<td>2%</td>
<td>10%</td>
<td>35%</td>
<td>52%</td>
</tr>
<tr>
<td>The importance of faithfully adhering to the regimen</td>
<td>1%</td>
<td>2%</td>
<td>13%</td>
<td>42%</td>
<td>43%</td>
</tr>
<tr>
<td>The common side effects of the medication</td>
<td>2%</td>
<td>3%</td>
<td>13%</td>
<td>36%</td>
<td>46%</td>
</tr>
<tr>
<td>How likely you might be to experience a side effect</td>
<td>2%</td>
<td>4%</td>
<td>15%</td>
<td>36%</td>
<td>43%</td>
</tr>
<tr>
<td>The effects of food, alcohol with the medication</td>
<td>2%</td>
<td>4%</td>
<td>14%</td>
<td>36%</td>
<td>43%</td>
</tr>
<tr>
<td>How long you need to take the medication</td>
<td>3%</td>
<td>3%</td>
<td>16%</td>
<td>39%</td>
<td>40%</td>
</tr>
<tr>
<td>The cost of the medication</td>
<td>6%</td>
<td>9%</td>
<td>22%</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>The number of refills prescribed</td>
<td>5%</td>
<td>7%</td>
<td>26%</td>
<td>35%</td>
<td>28%</td>
</tr>
<tr>
<td>The generic or brand name of the medication</td>
<td>9%</td>
<td>8%</td>
<td>22%</td>
<td>29%</td>
<td>32%</td>
</tr>
</tbody>
</table>

Tenet 7

Health care providers can be inconsistent communicators about prescription medications

- Prescribers frequently discuss the name of the medication, its purpose, and instructions for use\(^1\)-\(^4\)

- In only about one third of consultations involving a newly-prescribed medication do prescribers discuss duration of treatment or other treatment options\(^2,3\)

- Prescribers very infrequently (< 20% of consultations involving a newly-prescribed medication) discuss benefits, side effects, efficacy, medication costs, ability to adhere, and consequences of non-adherence\(^1\)-\(^9\)

- In one study, 42% of physicians said they discussed the potential risks of the prescribed medication but only 3% actually did so based on videotapes of the consultation\(^1\)

- On average, physicians spend 49 seconds discussing all aspects of newly-prescribed medications\(^9\)

Treatment Refusals are Usually Triggered by Too Little Rather than Too Much Information

What Patients Want
- Possible side effects
- What to do if a side effect occurs
- Medication benefits and efficacy
- How the medication works
- Duration of therapy
- Knowledge about the disease
- Other treatment options

What Prescribers Provide
- Name, purpose, dose, timing, instructions

Possible side effects
- What to do if a side effect occurs
- Medication benefits and efficacy
- How the medication works
- Duration of therapy
- Knowledge about the disease
- Other treatment options
Tenet 8

Medication-taking is a decision-making process, and patients actively make decisions about new and existing medications.¹

Qualitative research has elegantly demonstrated how patients weigh their reasons for taking a medication against their reservations – patients do their own subjective cost-benefit analysis¹-⁸

Patients attach differential value and worth to different medications\textsuperscript{1–3} and have diverse beliefs about different medications with respect to their perceived importance, effectiveness, safety, and expected benefits\textsuperscript{1,4,5}

Tenet 9

Non-adherence is rational behavior. It is driven by patients’ beliefs about their treatment, disease, and prognosis as well as their objective experiences with their treatment and disease\(^1\)

For each medication, patients conduct a value proposition between perceived medication concerns and perceived need for medications filtered through perceived medication affordability and other patient beliefs (e.g., knowledge, trust in physician, perceived disease severity)\(^2,3\)

Perceived Need, Benefits, and Pros of Treatment

Perceived Concerns, Costs, Cons, and Barriers
Tenet 10

Medication adherence involves “shades of gray.”

Patients can be faithfully adherent to one medication, non-fulfill another, and be non-persistent to another because they hold distinct beliefs about different medications and diseases\(^1\)

Adherence as Dynamic Behavior

• Past research has tended to characterize adherence as “one-and-done” behavior- patients either adhere or not

• Adherence is best contextualized as a marathon rather than a sprint

• Some patients decide right away not to fill a new prescription, others fill the prescription yet fail to take it, while still others take it for variable lengths of time post index fill

• Are there reliable stages to non-adherence?
New Diagnoses and New Medications Represent Uncertainty, Ambiguity, and Ambivalence

Interviewees' accounts of medicine use revealed an act characterized by ambivalence, a mix of desire and antipathy, and faith and suspicion

Doran et al. 2005
New Diagnoses and New Medications Represent Uncertainty, Ambiguity, and Ambivalence

• For many patients, a new diagnosis and the attendant prescribed therapy represents uncertainty – it is a threat to the status quo.

• Most patients demonstrate a “status quo” bias, attaching great importance to their “current health” bundle – what is familiar to them.

• In situations involving uncertainty, most people value what they currently have more than what they might probabilistically achieve.

• In situations involving uncertainty, most people seek to avoid or limit loss.

• Uncertainty adaptively causes people to be risk adverse, leading them to make "safer bets".

• With prescription medications, the "safer bet" from the patient perspective may be to avoid risk through intentional non-fulfillment or non-persistence.
New Diagnoses and New Medications Represent Uncertainty, Ambiguity, and Ambivalence

- The short-term benefits of prescription-medication therapy can seem intangible to patients, especially to patients with asymptomatic chronic disease.

- For patients, the long-term benefits of prescription medications are probabilistic and can be so far off in the future that they may be heavily discounted.

- Intentional non-adherence makes sense from the patient's perspective because taking prescription medications represents a risky prospect in the short term (short-term financial and psychological costs, risk of side effects, opportunity costs) with uncertain long-term benefits (probabilistic reductions in mortality, morbidity, and complications) compared to the status quo (health as it is).

- Although the status quo without prescription medications may be second best from biomedical perspective, to many patients it represents a surer bet – health as is as the present time.

- Many patients migrate toward nutraceuticals and alternative medicine for the self-management of chronic disease – they are viewed as doing something good for oneself ("natural" remedies) and as actions involving little risk and little threat to the status quo.
Conclusions

- Non-adherence undermines the best clinical intentions of evidence-based care.¹
- Preventing non-adherence is easier, more effective, and less costly than “treating” it.²
- View discussing medication adherence as an opportunity for an exchange of information – your clinical expertise and the patients’ perspective on the diagnosis and prescribed therapy.³
- Adherence is a marathon, not a sprint. Patients can become non-adherent at any point.
  - ~ 15% of patients do not fill a new prescription⁴
  - ~ 20% of patients do not obtain the first refill⁵
  - ~ 15% of patients will stop therapy before the end of 6 months⁶

Conclusions

- There is no such thing as an “adherent patient.”
  - Every patient should be considered as potentially non-adherent.¹
  - Rule out non-adherence routinely.²
  - Patients can be adherent to one medication, not fill a different medication, and be non-persistent to yet another medication. Adherence is **medication specific**, not patient specific.³

- Adherence is largely a function of patients’ beliefs about the condition and the prescribed medication, and these beliefs can be elicited and addressed with empathy⁴

- Physicians’ assumption of their patients’ adherence is one of the most common errors in clinical practice.

---

Adherence Interventions at Geisinger

- Improving Communication
  - Provider – Patient Communication Course
  - Shared Decision Making
- Better Information
  - Patient entered data
  - Display of fill rate information
- Team based approach
  - Clinical pharmacists
  - Case managers
Assessing Medication Adherence Prior to the Office Visit using MyGeisinger
Project Overview

• Patient is delivered a medication questionnaire 10-16 days in advance of their office visit

• How is the patient identified?
  • MyGeisinger active
  • Have at least one of the following chronic conditions
    • Asthma
    • Hypertension
    • Diabetes
    • Heart Failure
  • Select upwards of 20 patients per week with the most medications
Project Workflow

- MyGeisinger message is sent to identified patients every Tuesday
  - If a patient does not complete the questionnaire after the first message, a follow-up message is sent one week later
    - Questionnaire is built using DatStat Illume
- What happens when the patients submits?
  - eHealth sends the results to the appropriate pharmacist for review
    - Pharmacist MTM encounter is created and put on the pharmacy schedule
    - Pharmacist will call patient, discuss medications and update medication list
    - Saves time with office medication reconciliation - nurse and physician can just ask if anything has changed since med rec was done through MyGeisinger
Please update the information as accurately and completely as possible for each medication by clicking the **Update** button.

When you are finished updating each medication, scroll to the bottom of the screen and click 'Next' to continue.

<table>
<thead>
<tr>
<th>Medication Name (Generic Name)</th>
<th>Are you still taking this medication as prescribed?</th>
<th>Problem(s) with this medication</th>
<th>Who was contacted about this medication?</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPIRIN 81 MG PO CHEW (Aspirin Chew Tab 81 MG) One pill by mouth once a day with food</td>
<td>Yes</td>
<td></td>
<td>Pharmacist</td>
</tr>
<tr>
<td>METFORMIN HCL 500 MG PO TABS (Metformin HCl Tab 500 MG) One pill by mouth twice a day with meals</td>
<td>Yes</td>
<td></td>
<td>No, I have not contacted anyone</td>
</tr>
<tr>
<td>PROAIR HFA 108 (90 BASE) MCC/ACT IN AERS (Albuterol Sulfate Inhal Aer 108 MCC/ACT (90MCG Base Equiv)) Use 2 puffs every 4 hours as needed for wheezing</td>
<td>Yes</td>
<td></td>
<td>No, I have not contacted anyone</td>
</tr>
<tr>
<td>ALBUTEROL SULFATE (2.5 MG/3ML) 0.083% IN NEBU (Albuterol Sulfate Soln Nebu 0.083% (2.5 MG/3ML)) One vial in nebulizer every 4 hours as needed for wheezing</td>
<td>Yes</td>
<td></td>
<td>No, I have not contacted anyone</td>
</tr>
<tr>
<td>SIMVASTATIN 20 MG PO TABS (Simvastatin Tab 20 MG) One pill by mouth once a day at bedtime</td>
<td>Yes</td>
<td></td>
<td>Nurse</td>
</tr>
<tr>
<td>OMEPRAZOLE 20 MG PO CPDR (Omeprazole Cap Delayed Release 20 MG) One pill by mouth twice a day 30 minutes before a meal</td>
<td>No</td>
<td></td>
<td>No, I have not contacted anyone</td>
</tr>
<tr>
<td>HYDROCHLOROTHIAZIDE 25 MG PO TABS (Hydrochlorothiazide Tab 25 MG) One pill by mouth daily</td>
<td>No</td>
<td></td>
<td>Case Manager</td>
</tr>
<tr>
<td>TRAMADOL HCL 50 MG PO TABS (Tramadol HCl Tab 50 MG) One pill by mouth every 6 hours as needed for pain</td>
<td>Yes</td>
<td></td>
<td>Not Sure</td>
</tr>
</tbody>
</table>

Please click the 'Next' button below to continue
Are you still taking ASPIRIN 81 MG PO CHEW (Aspirin Chew Tab 81 MG) One pill by mouth once a day with food as prescribed?
- Yes
- No
- Not Sure

Please enter any problems you may have with ASPIRIN 81 MG PO CHEW (Aspirin Chew Tab 81 MG) One pill by mouth once a day with food

Have you ever contacted any of the below to ask a question about ASPIRIN 81 MG PO CHEW (Aspirin Chew Tab 81 MG) One pill by mouth once a day with food?
- Doctor
- Pharmacist
- Nurse
- Case Manager
- Family/Friend
- Other
- No, I have not contacted anyone
- Not Sure

If you contacted someone, which method did you use?
- MyGeisinger message
- Phone call
- Other

Next >>
Please indicate the reason you are not taking your medication(s) as prescribed by clicking the **Update** button.

When you are finished updating each medication, scroll to the bottom of the screen and click 'Next' to continue.

<table>
<thead>
<tr>
<th>Medication Name (Generic Name)</th>
<th>Reason not taking as prescribed</th>
<th>Additional comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMEPRAZOLE 20 MG PO CPDR (Omeprazole Cap Delayed Release 20 MG) One pill by mouth twice a day 30 minutes before a meal</td>
<td>My doctor instructed me to take at a different frequency/dosage</td>
<td></td>
</tr>
<tr>
<td>HYDROCHLOROTHIAZIDE 25 MG PO TABS (Hydrochlorothiazide Tab 25 MG) One pill by mouth daily</td>
<td>My pharmacist instructed me to take a different frequency/dosage</td>
<td></td>
</tr>
</tbody>
</table>
You have indicated that you are not taking OMEPRAZOLE 20 MG PO CPDR (Omeprazole Cap Delayed Release 20 MG) One pill by mouth twice a day 30 minutes before a meal as prescribed. Please indicate the reason.

- My doctor instructed me to take at a different frequency/dosage
- My pharmacist instructed me to take at a different frequency/dosage
- My prescription shows I should take it at a different frequency/dosage
- I was instructed to stop taking this medication
- I am not taking medication
- I do not want to take it as prescribed. Why not? [text field]
- I was trying to make medication last longer
- I did not understand how I was supposed to take it
- Other reason [text field]

If applicable, please enter any additional comments about OMEPRAZOLE 20 MG PO CPDR (Omeprazole Cap Delayed Release 20 MG) One pill by mouth twice a day 30 minutes before a meal
Please enter any other prescribed medications you are currently taking by clicking the [Update] button. If you do not remember the exact date, dosage or frequency, make your best guess.

When you are finished adding other prescribed medications, please click 'Next' to continue.

<table>
<thead>
<tr>
<th>Medication Name</th>
<th>Dosage</th>
<th>How Often</th>
<th>Date Started</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chantix</td>
<td>20 mg</td>
<td>Daily</td>
<td>Between 2 weeks and one month ago</td>
</tr>
</tbody>
</table>

[Update]
Sometimes people do not always include certain things as part of their medication list. Do you take any of the following that are not on your medication list?

- [ ] Inhalers/breathing medications (Albuterol, nasal sprays, Fluticasone, Nebulizer treatments and inhaler steroids)
- [ ] Vitamins or Supplements (Fish oil, multi-vitamins, glucosamine/chondroitin, niacin and iron tablets)
- [ ] Other over-the-counter medications (aspirin, acetaminophen, antacids, naproxen, allergy and cough medications)
- [x] Medications you put on your skin such as creams, lotions or ointments (eye drops, ear drops, hydrocortisone cream, and antibiotic ointments)
- [ ] I do not take any of these medications
Pilot Sites/Results

• Pilot Go Lives
  • Berwick and Pottsville – Nov 2011
  • GIM – May 2012
• Results – As of June 30, 2012
  • 1,418 questionnaires sent to patients via MyGeisinger
    • 518 completions (36.5% completion rate), recent rates ~40%
  • 6,094 medication reconciled
    • 987 meds not taken as prescribed (16%)
    • 166 prescribed meds, 29 inhalers, and 390 OTCs (i.e., aspirin, vitamins) added per the patient
Top reasons for not taking medications

<table>
<thead>
<tr>
<th>Reason Selected</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not taking / do not want to take</td>
<td>186</td>
</tr>
<tr>
<td>No longer needed / only occasionally needed</td>
<td>77</td>
</tr>
<tr>
<td>Instructed to take a different dosage/frequency</td>
<td>77</td>
</tr>
<tr>
<td>Instructed to stop the medication</td>
<td>86</td>
</tr>
<tr>
<td>Replaced with a different medication</td>
<td>35</td>
</tr>
<tr>
<td>Side effects / does not work</td>
<td>19</td>
</tr>
<tr>
<td>Prescription ran out</td>
<td>14</td>
</tr>
<tr>
<td>Too expensive</td>
<td>12</td>
</tr>
</tbody>
</table>
Geisinger - Merck Adherence Collaboration

- Adherence Collaborative Announced June 18, 2102
- Multi-year Collaborative – not research funding
- Allow both organizations to leverage individual expertise and joint resources
- Designed to improve patient health outcomes by focusing on innovative solutions that:
  - facilitate shared decision making between patients and physicians
  - improve adherence to treatment plans and clinical care processes
Questions?

fbloom@geisinger.edu