Personalizing Patient Messaging to Induce Behavior Change

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Adjunct Professor of Medicine and of Health Policy & Management, Johns Hopkins University

Better Health Through Better Information
Health Care Today: A Snapshot

- We know a lot about what works and what doesn’t

- There’s a huge gap between the care doctors provide and the care they ought to provide

- We’ve spent 30 yrs trying to reduce variation in physician practice by disseminating evidence-based guidelines --- with little effect

- If a pharmaceutical firm gets a patient to ask their MD for a particular medication, there’s a 75% chance that patient will get that med.
Where the Marketplace is Going

■ Increased “consumerism”
  – Increased economic skin in the game
  – Increased individual control and incentives: CDHPs and HSAs
  – Vital need for personalized information and decision support:
    • What is appropriate care for me?
    • By how much could I reduce my out of pocket healthcare expenses?
    • How could I achieve those potential savings?

Incentives, empowerment and accountability based on better information
Consumers Need: Personalized Information about Health Maintenance and Care Options

• What could I do to reduce my risk of a heart attack? What things will increase my risk of a heart attack?

• Will use of Drug A vs Drug B, or going to Dr. Smith vs Dr. Jones have any impact on my health?

• How much will I spend out of pocket if I use Drug A vs Drug B or go to Dr. Smith vs Dr. Jones?
Consumers Need **Personalized Info. about Costs**

<table>
<thead>
<tr>
<th>Not Useful</th>
<th>Useful</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unit of service</strong></td>
<td><strong>Episode</strong></td>
</tr>
<tr>
<td><strong>Daily dose</strong></td>
<td><strong>“Treatment course”</strong></td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>Patient’s Share of Cost</strong></td>
</tr>
</tbody>
</table>
What’s Required to Change Behavior?

• Provide a **compelling reason** to change behavior
  - extend my life
  - save me money
  - save me time

• **Make it easy** to change behavior
  - information must be actionable
  - call 1-800 number
  - one click on a web site
  - bring in a coupon

• **Reinforce** the behavior change in multiple ways
  - economic incentives
  - social incentives
What Else is Important?

- **When** the message is delivered
  - age
  - timing relative to a person’s personal situation
  - “teachable moment”
  - frequency

- **Who** delivers the message
  - credibility
  - skill

- **How** the message is delivered
  - medium
  - packaging
  - simplicity
Potential **Personalized** Strategies

- Personal health statements
- Personalized consumer health education that is pushed to people or made readily available
- Personalized coupons that are provided on a highly targeted basis
- “Market segmentation” with interventions that are “best fit” for particular people
Information from your doctor bills suggests that you have recently been treated for an ulcer. Current medical evidence shows that most ulcers are caused by an infection named H. Pylori. It is treated with antibiotics and is sometimes difficult to cure. Curing the infection is important because without it, the chance of the ulcer coming back is high. We have not received any bills for a H. Pylori test to prove your infection is cured. We recommend that you speak with your doctor within the next 4-6 weeks to see if you need a H. Pylori test. [177]

Diagnosis codes from your doctor(s) show that you had a heart attack in the past. For most people, a type of medication called a beta blocker can lower your chances of having another heart attack. We encourage you to communicate with your doctor about this within the next 4 weeks to see if a beta blocker is right for you. [94]
Example – Pocketbook Issue Messages

Using generic drugs can reduce the amount you pay for your prescriptions. Recently, you filled a prescription for Proventil and paid a copay of $40.00. Albuterol is a generic form of Proventil. If you use Albuterol your co-pay would be only $7. By switching you could save $396 each year. Talk to your doctor about whether you can make this switch and start saving money. [760]

Using medications that are on our Preferred Drug List can reduce the amount you pay for your prescriptions. Recently, you filled a prescription for Nexium and paid a copay of $40. Listed below are similar medications that are on our Preferred Drug List and would cost you less.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Your Copay</th>
<th>Annual Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omeprazole</td>
<td>$7</td>
<td>$369</td>
</tr>
<tr>
<td>Prilosec</td>
<td>$20</td>
<td>$240</td>
</tr>
<tr>
<td>Prevacid</td>
<td>$20</td>
<td>$240</td>
</tr>
</tbody>
</table>

Talk to your doctor about making a switch and start saving money. [701]
Susan Rubello, 51, received a mailing from UniCare suggesting she ask her doctor about taking a drug called an ace inhibitor, based on her health history, which included heart failure and diabetes.

“It turned out the doctor thought she was already on an ace inhibitor, and he apologized and prescribed the drug, she says.”

“The letter and others like it were developed by Resolution Health, Inc.”

Columbia, Md., company that provides the letters to clients, including UniCare, Blue Shield of California and Horizon Blue Cross Blue Shield of New Jersey. This month, Resolution Health added PacifiCare, recently acquired by UnitedHealth Group Inc., to its client base.
Member Conversion to Best Clinical Practice: DTM Compared with Control Group

<table>
<thead>
<tr>
<th>Time After Initial DTM Mailing</th>
<th>DTM Group (N=963)</th>
<th>Control Group (N=1058)</th>
<th>Absolute Difference</th>
<th>Adjusted Odds Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td>12.69%</td>
<td>13.50%</td>
<td>-0.81%</td>
<td>0.94 (0.72 – 1.23)</td>
</tr>
<tr>
<td>6 months</td>
<td>21.76%</td>
<td>17.00%</td>
<td>4.76%</td>
<td>1.28 (1.02 – 1.61)</td>
</tr>
<tr>
<td>9 months</td>
<td>27.42%</td>
<td>18.40%</td>
<td>9.02%</td>
<td>1.49 (1.20 – 1.86)</td>
</tr>
<tr>
<td>12 months</td>
<td>31.84%</td>
<td>19.90%</td>
<td>11.94%</td>
<td>1.6 (1.29 – 1.98)</td>
</tr>
</tbody>
</table>

* Using multivariate logistic regression analysis to control for factors associated with member propensity to change behavior
Projected Annual Savings: 100K Lives

<table>
<thead>
<tr>
<th>Through Improved Compliance at 1 Year With:</th>
<th>Annual Expected Gross Savings (Plan)</th>
<th>Annual Expected Gross Savings (Members)</th>
<th>Total Annual Expected Gross Savings</th>
<th>Total Annual Net Savings*</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Practice Guidelines</td>
<td>$460,566</td>
<td>$6,986</td>
<td>$467,552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formulary Preference Rules</td>
<td>$565,535</td>
<td>$636,840</td>
<td>$1,202,375</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both</td>
<td>$1,026,101</td>
<td>$643,826</td>
<td>$1,669,927</td>
<td>$1,273,927</td>
<td>3.2**</td>
</tr>
</tbody>
</table>

*Program cost = $0.33 pmm ($396,000/yr for 100K members.
**ROI reflects impact of DTM Program AFTER TAKING ACCOUNT OF UNICARE PREMIER NURSE PROGRAM VIA LOGISTIC REGRESSION ANALYSIS. ROI is 1.6 to 1 if consider only Plan savings.

Better Health Through Better Information
DTM Participants: Overview of comments...

- **100%** found the information easy to understand.
- **91%** considered the program to be very or somewhat useful.
- **76%** said they would be very or somewhat likely to choose a plan that offers the DTM Program.
- **100%** wanted to continue receiving the information.

"I can’t remember when the last time was a health plan sent me anything as useful as this."

"This is a great idea and I want to keep getting it."

"I keep really good records, but this report will serve as a nice supplement."

"My doctor liked the report and said the recommendations were really helpful."

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Better Health Through Better Information
DTM Options: Messages that matter

- Prescription drug benefit design
  - e.g. co-pays associated with multi-tier and mail order; savings that can be achieved through specific drug switches

- Preferred providers (labs, radiology, MDs, hospitals) and amounts member could save by using them

- Specific quality problems / priorities

- Disease Mgmnt and Health Promotion programs

- Discount programs
  - devices; OTC meds; alternative medicine options

- Education re: costs of, and coverage for, particular services
Potential Personalized Strategies

- Personal health statements
- Personalized consumer health education that is pushed to people or made readily available
- Personalized coupons that are provided on a highly targeted basis
- “Market segmentation” with interventions that are “best fit” for particular people
Linked Personalized Educational Content

Information from your doctor bills suggests that you have recently been treated for an ulcer. Current medical evidence shows that most ulcers are caused by an infection named H. Pylori. It is treated with antibiotics and is sometimes difficult to cure. Curing the infection is important because without it, the chance of the ulcer coming back is high. We have not received any bills for a H. Pylori test to prove your infection is cured. We recommend that you speak with your doctor within the next 4-6 weeks to see if you need a H. Pylori test. [177]

Number in brackets after each message links to web-based consumer health education content from HMS.

Web-based additional info for each message, from Harvard Medical School, via 3-digit shortcut.
Learn more about each of the suggestions you received in your Personal Care Note by entering the shortcut # shown at the end of each message in the [ ].

**Shortcut #:**

[Search]

Source: Harvard Medical School, Copyright © 2005 by President and Fellows of Harvard College. All rights reserved.

This information from Harvard Medical School (HMS) is intended to help protect and improve your health. The information is applicable to people like you, but it may or may not be appropriate for you, personally. To determine if it is, you should discuss this information with your doctor.

Persistent asthma not on a controller medication [232]

Many people with asthma have what's known as persistent asthma. Persistent asthma means that you wheeze and have trouble breathing (an asthma attack) at least two times a week during the day or at least two times a month during the night. Although quick-relief medicines taken with an inhaler can help relieve symptoms right away, people with persistent asthma should also take a controller medication for long-term relief. Used regularly, asthma controller medications help people have fewer and less severe asthma attacks. They also lower the risk of dying from an asthma attack. If you have persistent asthma and are not already on a controller medication, we suggest that you talk with your doctor within the next 4 weeks about whether you could benefit from using a controller medication. For additional information about asthma and the drugs used to treat asthma, the following questions as answered below:

- What is asthma?
- What causes asthma?
- What medications are used to treat asthma?
- What is a peak flow meter?
- What can I do to avoid asthma attacks?

Potential Personalized Strategies

- Personal health statements
- Personalized consumer health education that is pushed to people or made readily available
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- “Market segmentation” with interventions that are “best fit” for particular people
Use of **Coupons** to Change Behavior

- Annual spending on prescribed Proton Pump Inhibitors (PPIs) and Non-Sedating Antihistamines (NSAs) is approximately $4,000,000 per 100,000 patients.

- The annual cost of using OTC alternatives in these two product categories is approximately $800,000 – a potential savings of more than $3,000,000 per 100,000 patients.

- There is no credible evidence that high cost prescription PPIs or NSAs are more effective or safer than OTC alternatives.
SMART-Switch: New DTM Program

Inside:
An important new program that will save you money on specific medications.

John M. Doe
0000 Some Street
Suite 112
Some City, State, 00000

Why pay a co-pay when you don’t have to?

ABC Health Plan is working hard to help lower your medical costs. That’s why we’re bringing you SMART-Switch™. It’s a unique, new program that provides you with savings and convenience. Just take the enclosed coupon with your medication to the check-out counter along with your other store purchases. No co-pay, no prescription and no hassle. By using SMART-Switch™ ABC Health Plan is picking up the tab for you!

For more information, please call us at 1-800-555-1234.

Better Health Through Better Information
SMART-Switch: Proton Pump Inhibitors

<table>
<thead>
<tr>
<th>Drug</th>
<th>30-day Supply $$(*)</th>
<th>Cost to Member</th>
<th>Cost to Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevacid</td>
<td>$ 139.99</td>
<td>$ 20.00</td>
<td>$ 110.99</td>
</tr>
<tr>
<td>Nexium</td>
<td>$ 150.99</td>
<td>$ 40.00</td>
<td>$ 110.99</td>
</tr>
<tr>
<td>Protonix</td>
<td>$ 114.99</td>
<td>$ 20.00</td>
<td>$ 94.99</td>
</tr>
<tr>
<td>Prilosec OTC</td>
<td>$ 21.99</td>
<td>$ 21.99 + tax</td>
<td>Not Covered</td>
</tr>
</tbody>
</table>

* Prices shown are Walgreen’s Online Pricing
## SMART-Switch: NSAs

<table>
<thead>
<tr>
<th>Drug</th>
<th>Cost to Plan</th>
<th>Copay</th>
<th>30-day Supply $$$$ (*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegra</td>
<td>$73.99</td>
<td>$20.00</td>
<td>$93.99</td>
</tr>
<tr>
<td>Clarinex</td>
<td>$65.99</td>
<td>$20.00</td>
<td>$85.99</td>
</tr>
<tr>
<td>Zyrtec</td>
<td>$53.99</td>
<td>$20.00</td>
<td>$73.99</td>
</tr>
<tr>
<td>Singulair</td>
<td>$85.99</td>
<td>$20.00</td>
<td>$105.99</td>
</tr>
<tr>
<td>Claritin OTC</td>
<td>Not Covered</td>
<td>$28.48 + tax</td>
<td>$28.48</td>
</tr>
<tr>
<td>Alavert</td>
<td>Not Covered</td>
<td>$20.99 + tax</td>
<td>$20.99</td>
</tr>
<tr>
<td>Loratadine</td>
<td>Not Covered</td>
<td>$12.00 + tax</td>
<td>$12.00</td>
</tr>
</tbody>
</table>

1) In 2000, Claritin held > 90% market share of Non-sedating Antihistamines
2) Claritin OTC and Alavert are the same drug: E Loratadine, 10 mg
SMART-Switch™: Mail Order Option

Offer ID: 17000069
This Offer Expires: December 31, 2006

Special offer for:
James W. Public
Some Apt. #
1234 Some Street
Some Town, State 99999

Receive two free boxes of Prilosec OTC® sent directly to you. Just mail back this form. It’s as easy as 1,2,3:

1. Please sign your name: ________________________________

2. Is the address above correct?
☐ Yes ☐ No, my changes are shown below:
______________________________________________
______________________________________________

3. Fold over this flyer, tape it shut and drop it into the mail - no stamp is required.
   - OR - use “INSTANT REDEEM” by calling Wellpartner Pharmacy, toll free at 1-877-935-5797 ext. 670. Operators are ready to assist you.

Have this form handy when you call - you will need to provide the 8-digit Offer ID located in the yellow box above your address. Your medication will then be mailed directly to you.
Limit: One redemption per Offer. Refills are available only to individuals who redeem this offer, and who receive a new Offer mailed to them from the SMART-Switch™ program.

Why pay a co-pay when you don’t have to?
With the SMART-Switch™ program, you can get selected non-prescription drugs at absolutely no cost to you. Simply follow steps 1-2-3 on the facing page - or use the “instant redeem” toll-free number. Either way, you don’t pay a thing. Your Health Plan is picking up the tab for you!

Save time and money!
You don’t need a prescription to use this offer. Your pharmacy records show that you have been taking prescription medication for ulcers or stomach problems. Now you can get this type of medicine without a prescription, delivered to your door, and at absolutely no cost to you. Once you redeem this offer, additional offers for this medicine will be promptly sent to you, for the duration of this program. These refills will always be at absolutely no cost and delivered directly to you.

Help us to help you manage your health care costs.
To make this program successful, we track whether our members take advantage of this offer. Each offer you redeem will be recorded as a pharmacy claim, just like all of your other medical expenses. We only ask that you do not share the medication you receive with anyone else - this offer is specifically for your use. You will receive additional offer coupons as long as this program is in place unless we see that you needed to return to your prescription medication.

Not sure about switching drugs?
If you have additional questions about switching medications, then call your doctor to discuss the matter. The decision is yours. We hope you try this great new cost-saving program.

© Prilosec OTC is a registered trademark of Procter and Gamble

A SMART-Switch™ Mail Service Partner
Potential Personalized Strategies

- Personal health statements
- Personalized consumer health education that is pushed to people or made readily available
- Personalized coupons that are provided on a highly targeted basis
- “Market segmentation” with interventions that are “best fit” for particular people
DTM: Market Segmentation

- By selected patient demographics (e.g., age, gender)
- By patient clinical characteristics
- By patient historical behavior
- By employer plan or by geographic area
- By plan benefit design
- By provider (steer patients to preferred providers)
Better health care is in your hands.

Judy E. Doe

It is currently recommended that people obtain a blood test 3 months after starting Lipitor. This test will re-check your cholesterol and liver function. We have recently received a bill from a laboratory that shows you have had this test. We recommend that you communicate with your doctor about this suggestion.

Studies have shown that 33 to 60% of people over the age of 75 fall each year. Two out of every 10 people 75 years of age or older who fall fracture a bone, dislocate a joint or injure their head.

Medical experts recommend that people over the age of 75 participate in an exercise and balance-training program to reduce the risk of falling and suffering an injury.

In our effort to provide the highest quality service to Medicare members, Secure Horizons has teamed with Avis Inc. to make a special exercise and physical fitness program, called Silver Sneakers, available at no charge to people enrolled in Secure Horizons. More than 2.5 million seniors nationwide are already enrolled in the program.

If you would like to learn more about the Silver Sneakers Program, including information about authorized Silver Sneakers Fitness Centers near your home and how to enroll in the program, call 1-800-000-0000.

Using generic drugs reduces the amount you pay for your prescriptions. Recently, you filled a prescription for Pravastatin and paid a copay of $40.00. Abbreviated is a generic form of Pravastatin. If you use Abbreviated your copay would be only $7. By switching, you could save $338 each year. Talk to your doctor about whether you can make this switch and start saving money.

Better Health Through Better Information
It is currently recommended that people obtain a blood test 3 months after starting Lipitor. This test will re-check your cholesterol and liver function. We have not received a bill from a laboratory that shows you have had this test. We recommend that you communicate with your doctor about this suggestion. [55]

Studies have shown that 30 to 60% of people over the age of 65 fall each year. Your prescription claims show that you are taking at least four medications, which together can increase the chance that you will fall and hurt yourself.

One out of every 10 people 65 years of age or older who fall fracture a bone, dislocate a joint or injure their head. Exercise and balance training would greatly decrease your risk of falling.

In our effort to provide the highest quality service to Medicare members, Secure Horizons has teamed with Aetna Inc. to make a special exercise and physical fitness program, named Silver Sneakers, available at no charge to people enrolled in Secure Horizons. More than 2.5 million seniors nationwide are already enrolled in the program.

If you would like to learn more about the Silver Sneakers Program, including information about authorized Silver Sneakers Fitness Centers near your home and how to enroll in the program, call 1-800-800-0000. [200]

Using generic drugs reduces the amount you pay for your prescriptions. Recently, you filled a prescription for Proventil and paid a copay of $40.00. Abucromel is a generic form of Proventil. If you use Abucromel your copay would be only $7. By switching, you could save $396 each year. Talk to your doctor about whether you can make this switch and start saving money. [760]
Summary

- People don’t understand what health care options they have
- People need guidance about their health care options and the financial and health consequences associated with their (and their MDs’) decisions
- Personalized messaging, combined with appropriate incentives, can provide much needed guidance and induce desired behavior change