An Evaluation of the 2006 Medication Review Programs

August 2007
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Data Collected by Readex Research
Report Prepared by Laura Skufca, M.A.

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Acknowledgements

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Executive Summary

In order to promote the wise use of prescription drugs among older adults, AARP launched a wise use campaign in January of 2006. One piece of this campaign was to conduct personal medication reviews in multiple states. During the reviews, participants bring all of their medications in a bag and volunteer pharmacists review the contents, answer questions, and make minor recommendations such as following up with their doctor.

To determine whether the medication reviews led participants to change medication-related behaviors, baseline and three-month follow-up surveys were completed. Volunteer pharmacists were also surveyed to determine whether significant problems related to medication use were noted among participants.

In general, the results suggest that participants are using prescription drugs wisely. Participants reported changing a variety of behaviors as a result of the medication reviews (e.g., talking with their doctor about medications they currently take, keeping a personal medication record).

It is also important to note that the percentage of respondents who used prescription drugs wisely was high even during the baseline period. For example, sixty-eight percent of respondents reported keeping a personal medication record during the baseline period. This number is much higher than the results we have seen with other national surveys. A 2006 national phone survey of 1,200 Americans age 45 and older found that only one-third (33%) of respondents report having a personal medication record1. These results may suggest that the AARP medication review events are attracting a group of individuals who are already conscientious with their medications.

Participants were also very pleased with the services they received from the volunteer pharmacists. Almost all of the participants felt their reviews were helpful and impressed with the knowledge the pharmacists have regarding prescription drugs. Previous AARP studies have found that many individuals do not talk to their pharmacist often about prescription drugs, preferring to discuss these issues with their doctor. This may be an opportunity to educate the public about the level of expertise pharmacists have and that their resources may effectively be tapped.

Key Findings

- The percentage of participants who talked to their doctor about various issues with their medications and kept a personal medication record increased from baseline to follow-up.

- About one-quarter of pharmacists said they noticed problems related to medication adherence (e.g., incorrect dosing, non-compliance, etc.)

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• Participants were very pleased with the medication reviews and would recommend them to friends.

This study consisted of a baseline and follow-up survey with 222 individuals who attended a medication review program in one of four states (California, Virginia, Oregon, & Colorado). The baseline survey was collected at each event and the follow-up survey was fielded by Readex Research between November 2006 and May 2007. A description of the complete methodology can be found in Appendix A.

**Participants are talking more with their doctor regarding prescription drugs**

The percentage of participants who say they *always* ask their doctor why they are being prescribed new medications increased from 74% to 81%. Eighty-five percent of participants now say they *always* take their medications exactly as prescribed by their doctor as opposed to 80% during the baseline period. Due to the low sample sizes, these differences are not strong enough to reach statistical significance.

Statistically significant differences emerged on the frequency in which participants tell their doctor about all medications they take and how often they report troublesome side effects. During the baseline period, 64% of participants said they *always* tell their doctor about all the medications they take where as 75% said they *always* do so during the follow-up period. In addition, sixty-nine percent of participants at baseline said they *always* tell their doctor about troublesome side effects compared to 79% at the follow-up period (Figure 1).
Participants are more likely to keep a personal medication record

Participants’ use of personal medication records increased with 68% reporting that they kept a personal medication record at baseline and 77% saying they keep a personal medication record at the follow-up period. However, this difference was not strong enough to reach statistical significance due to the small sample size. Participants who were 64 years of age or younger (61%) were slightly less likely than participants 65 years of age or older (71%) to say they keep a personal medication record (Table 1).
Table 1
Percentage who say they keep a personal medication record
By Gender, age, and marital status

<table>
<thead>
<tr>
<th>Current use</th>
<th>Wave Pre&lt;sup&gt;a&lt;/sup&gt; (n=222)</th>
<th>Wave Post&lt;sup&gt;b&lt;/sup&gt; (n=189)</th>
<th>Age 64 &amp; under&lt;sup&gt;c&lt;/sup&gt; (n=46)</th>
<th>Age 65+&lt;sup&gt;d&lt;/sup&gt; (n=170)</th>
<th>Gender Male&lt;sup&gt;e&lt;/sup&gt; (n=63)</th>
<th>Gender Female&lt;sup&gt;f&lt;/sup&gt; (n=154)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>68%</td>
<td>77 %</td>
<td>61%</td>
<td>71%</td>
<td>71%</td>
<td>68%</td>
</tr>
<tr>
<td>No</td>
<td>28%</td>
<td>22 %</td>
<td>37%</td>
<td>27%</td>
<td>25%</td>
<td>31 %</td>
</tr>
</tbody>
</table>

Pharmacists discovered problems related to medications during the participants’ reviews

Approximately one-third of pharmacists (30%) said they became aware of problems related to medication adherence (e.g., incorrect dosing, non-compliance, etc.) during their reviews. Half of the pharmacists (48%) recommended that the participant talk to his or her doctor concerning a problem with their medication. Twenty-six percent of pharmacists noticed adverse drug reactions that may have occurred as a result of taking multiple medications. Of those who noticed possible reactions, 11% could have resulted in a hospital admission or life-threatening emergency.

Participants were very satisfied with the services they received during their medication review

The personal medication review events were very well received by participants. Ninety-six percent of the participants were satisfied (very or somewhat) with the services they received during their review (Figure 2).

<sup>2</sup> Bold face percents in columns (which represent demographic subgroups) are significantly higher than percents in adjacent columns. Superscripts (<sup>a</sup>/<sup>b</sup>, <sup>c</sup>/<sup>d</sup>, <sup>e</sup>/<sup>f</sup>) indicate those columns in which there is a statistically significant difference.
Participants noted many reasons in which the medication reviews were helpful to them. Overall, participants were very pleased to obtain information regarding their prescription medications. Pharmacists answered a wide variety of questions and provided clarifications to the participants regarding issues such as side effects, scheduling, and the reasons in which participants have been prescribed certain medications.

Participants felt the reviews were informative and appreciated the time the pharmacists spent with each person. Also, participants felt that the reviews gave them a piece of mind knowing that they were taking their medications correctly. Almost all of the participants said they would be very likely (85%) or somewhat likely (12%) to recommend a medication review to a friend.

Participants were asked to list aspects of their review that they liked the least however most participants did not report a negative aspect and merely repeated their positive thoughts. Of the few who listed a negative aspect, time was the most frequently cited problem. A few participants felt they waited a while to see the pharmacist or their medication review did not last as long as they would have liked. However, participants understood that time needed to be limited so that pharmacists could meet with all participants.
Appendix A: Methodology

Data for this study was collected via baseline and follow-up mail surveys from May 2006 to March 2007. The surveys were developed by AARP in consultation with Readex Research. Readex Research handled the survey mailings and the data collection process.

The initial baseline survey was administered by AARP staff at the program sites. Various programs/medication reviews were held in the states ranging from May 2006 to December 2006. Two hundred and twenty two participants agreed to participate in the surveys. Participants were from California (n=133), Virginia (n=77), Oregon (n=11), and Colorado (n=3). One hundred and eighty nine participates responded to the follow-up survey producing an overall response rate of eighty-five percent.

Follow-up surveys were sent to participants three months after the brown bag medication review that they attended. A $1 incentive was included with the survey. A reminder postcard was also sent to all participants one week later and an additional follow-up survey was sent to non-respondents two weeks after the reminder letter. A final reminder was sent to non-respondents one week after the 2nd follow-up survey was sent. The margin of error for percentages based on 222 responses was +/− 6.6% and for 189 responses was +/− 7.1% at the 95% confidence level.
Appendix B: Annotated Questionnaire

Brown Bag Medication Review Baseline
And Follow-up

* denotes that question was not included on the survey
base: all respondents pre-walking program, n= 222, post-walking program, n=189

Pre | Post
Q1. | Q1. How many medications do you take on a daily basis? (please indicate a number for each; if none, fill in 0)
________ (number of prescription drugs)
________ (number of over-the-counter drugs, herbal supplements, vitamins)

<table>
<thead>
<tr>
<th>Number of prescription drugs taken daily:</th>
<th>Number of over-the-counter drugs, herbal supplements, vitamins taken daily:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>2%</td>
<td>1%</td>
</tr>
<tr>
<td>15 or more</td>
<td>10 - 14</td>
</tr>
<tr>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>8%</td>
<td>6%</td>
</tr>
<tr>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>12%</td>
<td>11%</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>9</td>
</tr>
<tr>
<td>4%</td>
<td>3</td>
</tr>
<tr>
<td>9%</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>8%</td>
<td>No answer</td>
</tr>
</tbody>
</table>

Q2. | Q2. How often do you:

a. Tell your doctor about all the medications you take (including prescription drugs, over-the-counter drugs, herbal supplements, or vitamins)?
64% | 75% always
24% | 20% sometimes
5% | 3% rarely
3% | 2% never
5% | 1% No answer

b. Ask your doctor why you are being prescribed any new medications?
74% | 81% always
13% | 13% sometimes
4% | 3% rarely
3% | 2% never
7% | 1% No answer

c. Take each of your medications exactly as your doctor prescribed?
80% | 85% always
14% | 14 sometimes
2% | 1% rarely
0% | 0% never
4% | 1% No answer

d. Talk with your doctor before you stop taking any medication he or she has prescribed for you?
73% | 71% always
20% | 23% sometimes
1% | 1% rarely
1% | 3% never
5% | 2% No answer

e. Report any troublesome side effects to your doctor or pharmacist?
69% | 79% always
17% | 13% sometimes
3% | 6% rarely
4% | 1% never
8% | 2% No answer

f. Get lab tests to monitor medicines when ordered by doctor?
73% | 80% always
9% | 8% sometimes
3% | 2% rarely
6% | 7% never
10% | 2% No answer
Q3. | Q3. Do you currently keep a personal medication record (a list of all your medications) and carry it with you?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>yes</td>
<td>68%</td>
<td>77%</td>
</tr>
<tr>
<td>no</td>
<td>28%</td>
<td>22%</td>
</tr>
<tr>
<td>No answer</td>
<td>4%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Pre | Post

Q4. | Q*. How old were you on your last birthday? _______ (in years)

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>under 55 years old</td>
<td>2%</td>
<td>*</td>
</tr>
<tr>
<td>55 - 64 years old</td>
<td>19%</td>
<td>*</td>
</tr>
<tr>
<td>65 - 69 years old</td>
<td>13%</td>
<td>*</td>
</tr>
<tr>
<td>85 years or older</td>
<td>7%</td>
<td>*</td>
</tr>
</tbody>
</table>

Q*. | Q4. About six months ago, you participated in Meet the Pharmacist Day sponsored by AARP. How satisfied were you with the services you received during your review?

base: all respondents post-walking program (excluding VA version), n=120

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>very satisfied</td>
<td>*</td>
<td>83%</td>
</tr>
<tr>
<td>somewhat satisfied</td>
<td>*</td>
<td>12%</td>
</tr>
<tr>
<td>neither satisfied nor dissatisfied</td>
<td>*</td>
<td>3%</td>
</tr>
</tbody>
</table>

base: all respondents post-walking program (VA version only), n=69

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>very satisfied</td>
<td>*</td>
<td>91%</td>
</tr>
<tr>
<td>somewhat satisfied</td>
<td>*</td>
<td>6%</td>
</tr>
<tr>
<td>neither satisfied nor dissatisfied</td>
<td>*</td>
<td>1%</td>
</tr>
</tbody>
</table>

Q5. | Q*. Are you male or female?

<p>| | | |</p>
<table>
<thead>
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<th></th>
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</thead>
<tbody>
<tr>
<td>male</td>
<td>28%</td>
<td>*</td>
</tr>
<tr>
<td>No answer</td>
<td>2%</td>
<td>*</td>
</tr>
</tbody>
</table>

Q*. | Q5. How likely would you be to recommend a review, like the one you participated in, to a friend?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>very likely</td>
<td>*</td>
<td>85%</td>
</tr>
<tr>
<td>somewhat likely</td>
<td>*</td>
<td>12%</td>
</tr>
<tr>
<td>neither likely nor unlikely</td>
<td>*</td>
<td>2%</td>
</tr>
<tr>
<td>No answer</td>
<td>*</td>
<td>1%</td>
</tr>
</tbody>
</table>

6a. What was the most helpful aspect of your review?
_________________________________________________________________________
_________________________________________________________________________

6b. What was the least helpful aspect of your review?
_________________________________________________________________________
_________________________________________________________________________

About you

Pre | Post
Q*. | Q7. Are you a member of AARP?

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>*</td>
<td>76%</td>
</tr>
</tbody>
</table>
Q*. | Q8. What is your marital status?  
(please check only one)  
* | 49% married  
* | 33% widowed  
* | 10% divorced  
* | 5% single, never married  
* | 2% separated  
* | 1% No answer

Pre | Post  
Q*. | Q9. Which one of the following best describes your employment status?  
(please check only one)  
* | 4% employed or self-employed, full-time  
* | 6% employed or self-employed, part-time  
* | 6% homemaker  
* | 79% retired and not working  
* | 1% unemployed and looking for work  
* | 3% No answer

Q*. | Q10. Are you Hispanic, or Spanish descent, or Latino?  
* | 5% yes  
* | 87% no  
* | 8% No answer

Q*. | Q11. Which one of the following best describes your race?  
* | 67% White/Caucasian  
* | 14% Black/African American  
* | 9% Asian American  
* | 1% Native American  
* | 2% other: ________________________  
* | 3% Answered multiple  
* | 4% No answer

THANKS FOR YOUR PARTICIPATION!  
(Please check that you’ve answered all questions on both sides,  
then return your survey using the stamped reply envelope provided.)