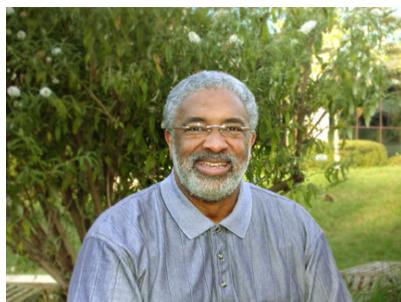


Taking Your Medicines Safely Evaluation Report



Sponsored by the American Association
of Poison Control Centers
and
Health Resources and Services Administration

Table of Contents

Background.....	1
Introduction.....	1
Pilot Study.....	2
Study Population.....	4
Evaluation Results	7
Participant Assessment	7
Pre- and Post-Tests	8
Four-Week Follow-up.....	11
Educator Interviews	15
Conclusions.....	16
Acknowledgements.....	19

Appendices:

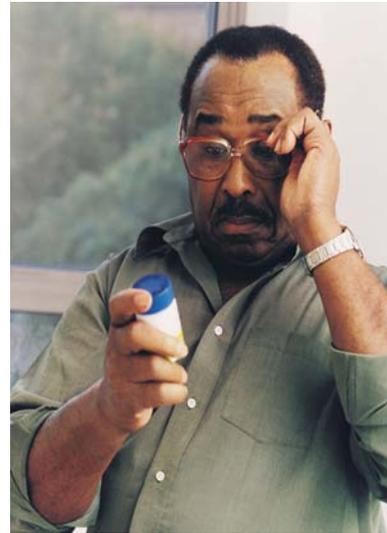
Appendix A. Senior Education Literature Review	
Appendix B. Health Education Theory: The Health Belief Model	
Appendix C. “Taking Your Medicines Safely” PowerPoint Presentation	
Appendix D. Educator Script	
Appendix E. Tic-Tac-Toe Game (Questions and Answers)	
Appendix F. Consent Form	
Appendix G. Pre-Test	
Appendix H. Post-Test	
Appendix I. Participant Assessment Form	
Appendix J. Incentives	
Appendix K. Passport	
Appendix L. “Medicines and You: A Guide for Older Adults”	
Appendix M. Herbal Products and Prescription Medicine: Potentially Dangerous Mixtures	
Appendix N. Instructions for Educators	
Appendix O. Follow-Up Telephone Instrument Questions	
Appendix P. Promotional Flyer	
Appendix Q. Qualitative Data Analysis	
Appendix R. Pilot Study Interviews with Educators	

Background

Introduction

In April of 2004, the Institute of Medicine (IOM) produced a report about Poison Control Centers, entitled *Forging a Poison Prevention and Control System*. Chapter 8 of this IOM report focuses on Public Education and makes recommendations for education programs. These include increasing the number of poison prevention programs to reach older adults (over age 65), studying the effectiveness of programs through evidence-based research, and increasing collaboration among poison center educators nationally. With regards to evidence based research, the IOM criticized poison control centers (PCCs) because (1) PCCs all deliver poison prevention education, but randomized trials or other sound evaluations testing the outcomes of this education are lacking and (2) existing evaluations are contaminated by secondary prevention messages focused on changing poison control call-in health services utilization when poisonings occur. Additionally, the IOM reported that with the exception of medication management, education efforts to date have largely overlooked older adults, even though they have a high incidence of serious effects related to poisonings.

Following the release of the IOM report, the Health Resources and Services Administration (HRSA) Poison Control Program (PCP) sponsored an approved American Association of Poison Control Centers' (AAPCC) meeting for the leadership of the Public Education Committee (PEC) entitled, "Poison Control Education Evaluation Workshop." The purpose of this meeting was to educate the PEC leaders regarding the proper evaluation techniques for injury prevention programs and develop an evaluation model that could be applied to poison centers in hopes of developing a multi-site evaluation project aimed at seniors.



Attendees from that initial meeting along with other volunteers from the PEC membership and researchers from the Pacific Institute for Research and Evaluation (PIRE) spent 18 months developing a theory-based poison education curriculum and intervention for older adults. This group then spent the subsequent 18 months implementing and evaluating the curriculum and intervention. It is hoped that this entire process, from needs assessment to evaluation and all the lessons learned along the way, will begin to address the IOM's concerns of developing poisoning prevention for older adults, laying the groundwork for evidenced-based research, and increasing poison center collaboration. *Taking Your Medicines Safely* is a case study of this process, and the subcommittee of the PEC that has worked through this process for the last three years, presents this document as the final step of the pilot. Although the findings herein may be used as a building block to a national randomized controlled trial about senior medication management, they stand alone as a comprehensive evaluation of the *Taking Your Medicines Safely* pilot intervention.

Pilot Study

Seniors are involved in a variety of poisonings; the pilot intervention focuses on medication mismanagement because medicine issues are by far the largest poisoning problem among seniors. Described in this report are the results of a pilot study focused on prevention and guided by research from over 20 peer-reviewed journal articles on poisoning (Appendix A). The themes and barriers found in poison health education through the peer-reviewed articles were analyzed according to the PRECEDE model (*Health Program Planning: An Educational and Ecological Approach*, New York: [McGraw-Hill](#), 2005), a framework for the process of systematic development and evaluation of health education programs. The resulting senior health education intervention was patterned after the Health Belief Model, a proven and widely applied conceptual framework of health behavior (Appendix B).



The PEC of the AAPCC in conjunction with HRSA PCP through its Poison Center Technical Assistance Resource Center (PC TARC) developed and evaluated a pilot study to raise awareness about medicine safety and poison prevention among older adults. Older adults suffer from a high incidence of serious effects related to poisonings; the majority of these poisonings involve prescription and over-the-counter medicines, herbals, and vitamins. The purpose of the study was to find out if an education program would facilitate safe medication practices; this in turn would lead to the prevention of medication mismanagement and unintentional poisonings. This study is important because it builds upon existing medication safety research to lay the groundwork for a proven educational intervention to prevent unintentional poisonings in seniors.

This small-group education intervention was designed for independently living older adults between the ages of 65 and 74 (although adults of any age who self identified as seniors were allowed to attend the program) and focused on the following topics: (1) dangers associated with combining health remedies, such as prescription medications, over-the-counter medications, herbals, vitamin and mineral supplements and other natural remedies; (2) patient-provider communications (e.g., points to tell the doctor, asking health professionals important questions); (3) information resources (e.g., identifying reputable sources of information); (4) finding and organizing relevant medication and supplement information, such as dosing procedures and potential side effects; and (5) medication management techniques.

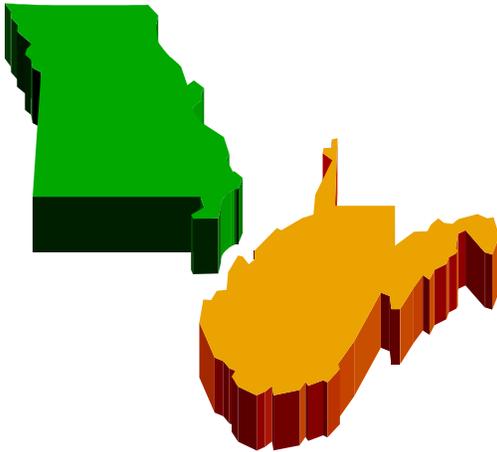
Elder groups of approximately twenty people viewed “Taking Your Medicines Safely” Power Point presentation (Appendix C) and listened to an interactive Educator Script (Appendix D), and played a Tic-Tac-Toe game (Appendix E) to reinforce concepts designed to decrease medication mismanagement. A consent form (Appendix F) and short questionnaires immediately before (Appendix G) and after (Appendix H) the education session were used to determine what the seniors already knew, as well as their attitudes about being able to prevent a poisoning. After the post-test, participants were asked to fill-out a participant assessment form (Appendix I) to help determine what changes would be necessary for the study. At the conclusion of the session, incentives (Appendix J) were distributed which were reminders or positive reinforcement to aide the seniors in adopting protective medication management behaviors. These incentives included a child-proof pill box, medication list passport (Appendix K), ‘Medicines and You’ handout (Appendix L), Herbal Handout (Appendix M), laminated wallet card with six important questions to ask about your medications (see box insert). The entire program took approximately one hour to complete. To minimize variations among sessions, Educators received the same training and conducted a similar program, see Appendix N - Educators’ Instructions. Follow-up phone calls one month post intervention were conducted to determine if any behavior had been modified (Appendix O).

Six questions to ask about any medication you are taking:

- What is the name of my medicine?
- What is the medicine for?
- How do I take the medicine?
- What side effects could I have?
- What should I do if I miss a dose of my medicine?
- While taking this medicine, should I avoid drinking alcohol, driving, eating certain foods or drinking certain juices, taking certain over-the-counter or prescription medications, vitamins, herbals, or minerals?

This pilot study was conducted by two poison center Educators. The same Educator that delivered the program to a group of participants also conducted the follow-up phone calls. Both Educators who delivered this program worked in a poison control center and had strong backgrounds in health care, education and training. Both Educators had some previous experience with seniors and their average length of employment at the poison center was 4 years.

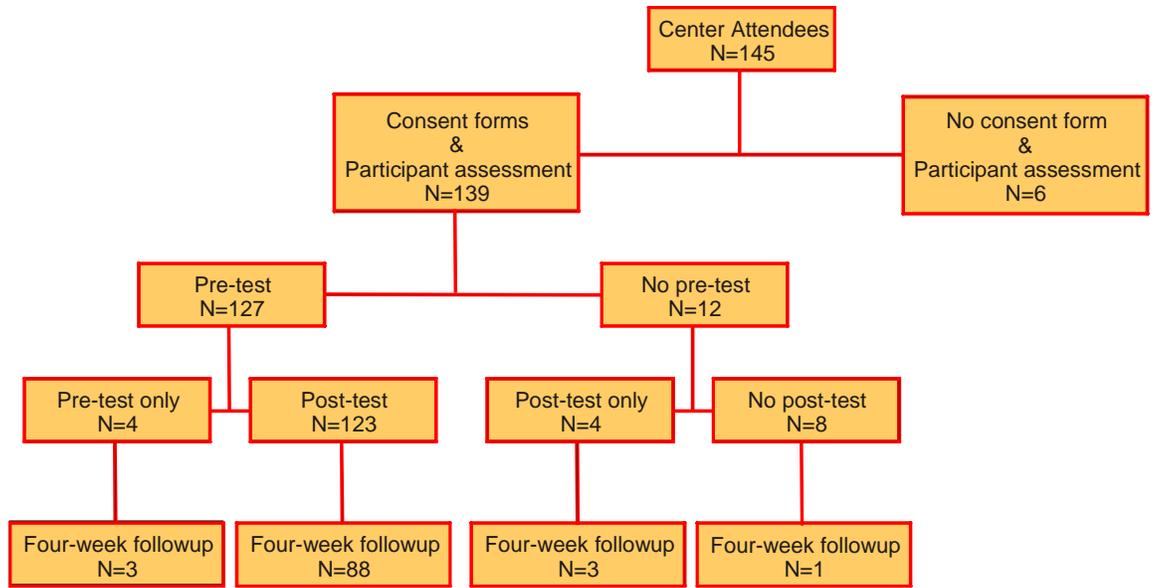
Study Population



The study was conducted in the states of Missouri and West Virginia, in the cities and surrounding areas of St. Louis and Charleston, respectively. The poison prevention education sessions took place at area Senior Centers and Catholic Churches. In both sites, the Educators worked closely with community agencies to arrange the sessions and to recruit seniors. Recruitment methods included scheduling the presentation before the lunch program (a big draw), advertising the giveaways, notices on web sites, and flyers at the Centers/Churches (Appendix P).

There were 145 seniors in attendance at eight different sessions, 93 from Missouri (5 sessions) and 52 from West Virginia (3 sessions). Of these participants, 139 (96%) completed at least one form (pre-test, post-test, and/or participant assessment) and 88 (63%) completed all forms including the four-week follow-up questionnaire. No demographic data were collected on the participants other than observations by the poison center Educators.

Of the 139 (100%) participants who completed the assessment, 127 (91%) participants completed the pre-test, 127 (91%) participants completed the post-test, and 95 (68%) participants completed the four-week follow-up. The number of participants responding to a given item on the pre- and post-tests varied from 120 to 127 seniors. The number of participants answering a given item on the four-week follow-up, among the persons eligible to answer the question, varied from 82 to 95 seniors.



7.

Figure 1. Distribution of the respondents who participated in *Taking Your Medicines Safely*

Evaluation Results

Participant Assessment

An overwhelming majority of the participants indicated that the curriculum was easy to understand (90%), informative (83%), and worth recommending to a friend or family member (93%). Similarly, the majority of participants found that the pre- and post-test items to be easy to read and fill out (93% and 89%, respectively), understandable (93%), and of minimal difficulty (80%). Most participants also believed that they had ample time to complete these items (91%).

Table 1: Frequencies and percentages among the Participant Assessment Form Items

Item	Yes	No	Missing
<i>Questions About the Process (Total N = 139)</i>			
1. Was the information easy to understand?	125 (90%)	4 (3%)	10 (7%)
2. Did you learn something new from the presentation?	115 (83%)	12 (8%)	12 (9%)
3. Would you recommend this program to friends and family members?	129 (93%)	1 (1%)	9 (6%)
<i>Questions About the Pre- and Post-test Items (Total N = 139)</i>			
4. Were the forms easy to read?	129 (93%)	0 (0%)	10 (7%)
5. Did you understand the questions?	128 (92%)	2 (1%)	9 (7%)
6. The questions were			
easy?	111 (80%)		
hard?	1 (1%)		
in-between?	16 (11%)		
missing	11 (8%)		
7. Did you have any trouble with filling in the circles?	3 (2%)	124 (89%)	12 (9%)
8. Did you have enough time to fill them out?	127 (91%)	1 (1%)	11 (8%)

Pre- and Post-Tests

To examine the effectiveness of the poison prevention education program, participants took a pre- and post-test on their general poison knowledge. Pre- and post- tests were compared using a paired-sample *t*-test analysis. The original pre-test instrument consisted of 11 items. However, two of these items (Table 2, items #5 and #6) were ambiguously worded and were excluded from analysis on both the pre- and post-tests. Of the remaining 9 items, 2 items focused on attitudes (Table 2, items #10 and #11), and the remaining 7 focused on knowledge. The original post-test consisted of 12 items, 9 knowledge questions (two were removed, items #5 and #6), 2 attitude questions (items #10 and #11), and one behavior question (item #12). The behavior question was placed between the two attitude questions in the original post-test (Appendix H), but is shown as the twelfth question in Table 2 for simplicity. As predicted, participants scored higher on the post-test knowledge items ($M = 6.71, SD = .76$), after receiving the educational intervention, than on the pre-test knowledge items ($M = 6.28, SD = .95$), $t(120) = 6.0, p < .01$. These data indicate that the curriculum in the poison prevention education program was effective in improving the knowledge of participants.



There was a significant gain in knowledge between the pre- and post-tests of participants. One of the largest percentage changes in knowledge was seen on item #1 “*You need to tell your doctor about vitamins you are taking;*” 87% of the respondents correctly answered **yes** on the pre-test, while 97% correctly answered on the post-test. One question that showed no gain in knowledge from the pre- to the post-test was item #4, “*You need to know the names of the medicines you take.*” Virtually all respondents knew that this was the correct course of action before the educational intervention. The first attitude question (Table 2, item #10) revealed that respondents were comfortable with asking questions about their medicines before the program, $t(119)=0, p=\text{non-significant}$. However, the second attitude question (Table 2, item #11) showed a change in attitude, $t(116)=2.24, p<.05$. At the conclusion of the program, 76% of respondents felt that they had the power to control their medicines and prevent unwanted combinations, whereas only 67% felt that way at the start of the program.

Table 2: Pre- and Post-Test Item Frequencies on the Poison Knowledge Measure

		N	Yes	(%)	No	(%)	Don't Know	(%)
1.	You need to tell your doctor about vitamins you are taking.							
	Pre-test	126	110	87%	6	5%	10	8%
	Post-test	127	123	97%	2	2%	2	2%
2.	Combining prescription medicines with over-the-counter products can cause serious health problems.							
	Pre-test	125	116	93%	0	0%	9	7%
	Post-test	125	119	95%	2	2%	4	3%
3.	“What side effects do I have” is one of the key questions to ask at your doctor’s office or pharmacy.							
	Pre-test	125	118	94%	4	3%	3	2%
	Post-test	123	119	97%	1	1%	3	2%
4.	You need to know the names of the medicines you take.							
	Pre-test	126	123	98%	2	2%	1	1%
	Post-test	125	123	98%	2	2%	0	0%
5pre.	It is best to ask your doctor, pharmacist or poison center, if you have questions about your medicines.							
	(pre-test version)	127	126	99%	1	1%	0	0%
5post.	It is best not to ask your doctor or pharmacist if you have questions about your medicines.							
	(post-test version)	124	31	25%	93	75%	0	0%
6.	There are two ways to keep track of your medicines.							
	Pre-test	124	71	57%	12	10%	41	33%
	Post-test	120	99	83%	14	12%	7	6%
7pre.	It is important to make sure that children can get into your medicines, vitamins, and, home remedies.							
	Pre-test	124	37	30%	86	69%	1	1%
7post.	It is important to make sure that children cannot get into your medicines, vitamins, and, home remedies.							
	Post-test	123	120	98%	3	2%	0	0%

		N	Yes	(%)	No	(%)	Don't Know	(%)
8. Having a way to keep track of your medicines and home remedies may help you avoid taking too much or too little.	Pre-test	127	124	98%	2	2%	1	1%
	Post-test	122	120	98%	1	1%	1	1%
9. Joe was taking a blood thinner and decided on his own to start taking aspirin with it. This was a good decision.	Pre-test	127	4	3%	118	93%	5	4%
	Post-test	125	4	3%	121	97%	0	0%
10. You are comfortable asking questions about your medicines.	Pre-test	126	123	98%	2	2%	1	1%
	Post-test	125	122	98%	2	2%	1	1%
11. You control your medicines and how they should be combined	Pre-test	125	84	67%	35	28%	6	5%
	Post-test	123	94	76%	26	21%	3	2%
12. Do you plan to change something about how you take your medicines?								
	Post-test only	123	38	31%	82	67%	3	2%

Note. Percentages may not add due to the presence of cases with missing data for a given item. If pre- and post-tests are used, it is recommended that questions 5 and 6 be dropped or reworded to prevent ambiguity.

A chi-square analysis revealed a statistically reliable difference on the post-test item (Table 2, item #12) about behavior change. Respondents expressed a preference to change something about how they take or store their medication in the future, $\chi^2(2, N = 123) = 76.4, p < .01$. Of the 123 participants who responded to this post-test item (Table 2, item #12), 67% of the participants ($n = 82$) indicated that they did not intend to change their current medicine dosage or storage behavior, whereas 31% ($n = 38$) of the participants expressed a willingness to change their behavior in the future, a significant difference. The remaining 2% ($n = 3$) of the participants indicated that they were unsure of whether or not they would modify their future behavior.

Four-Week Follow-up

All 95 four-week follow-up questionnaire participants remembered many commented that it was informative and interesting. The most important achievement of the program was the change in behavior in 22% of participants, while 4% indicated a possible medicine interaction. However, by the participants' answers, it seems clear that they did not understand the difference between a medical interaction and an adverse reaction to medications. Another achievement of the program was that 31% of participants had used the passport/pill minders handed to them and moreover, were planning to continue their use. Generally, the program was liked by the participants – only 7% did not find any part of it useful, only 6% considered the passport/pill minder too complicated, and only 11% did not find the Tic-Tac-Toe game interesting. For a full review of the qualitative analysis, please see Table 3 and Appendix Q.



Given the pilot nature of the program, we identified several possible improvements to future programs based on participants' comments. Examples of the proposed improvements include:

1. Provide more freebies (for a list of current incentives, see Appendix J). It should be noted that the current list of incentives is sufficient, it is believed this comment came from an overcrowded session which ran out of incentives;
2. Discuss more specific conditions and medicine interactions. For this recommendation, Educators who implemented the pilot actually called the poison center from their personal cell phone and placed the call on speaker. This was well received by the audience and shows that this recommendation is quite feasible as a permanent change to the program;
3. Design a less complicated pill minder;
4. Use a smaller group. We believe this recommendation came from one of the crowded sessions. The program developers feel that the recommended group size of 20 is adequate;
5. Have people make out their own medicine schedule, in order to provide a concrete example;
6. Advertise the program better;
7. Add a section to address specific medicine questions (see #2 above);
8. Make time for one-on-one questions (see #2 above);
9. Provide examples of bottles that can be opened by elderly;
10. Add discussion on participants' medicines practices;
11. Add more focus on basic poison prevention for grandparents;
12. Consider multi-session program to improve the relationship between the group and the speaker.

Table 3. Four-week Follow-up Item Frequencies on Poison Education Intervention

	N	Yes	(%)	No	(%)
1. Do you remember the program?	95	94	98.9%	1	1.1%
2. Did you change anything about your medicines or everyday routines based on the program? If so, what were they?	94	18	18.9%	76	80.0%
<i>Respondents who elaborated</i>	86				
already have system in place	42			42	55.3%
didn't need to change	11			11	14.5%
not on any medicine	5			5	6.6%
follow doctor's orders	4			4	5.3%
should change	3			3	3.9%
greater awareness	8	7	38.9%	1	1.3%
did change	13	11	61.1%	2	2.6%
3. Have you had any bad medicine interactions in the last month? If so, tell me about it.	94	4	4.2%	90	94.7%
<i>Respondents who elaborated</i>	8				
medicine interaction/adverse reaction	4	4	100.0%		
past medicine interaction/adverse reaction	4			4	4.4%
no new medicines recently	1			1	1.1%
not on any medicine	1			1	1.1%
aware of circumstances that cause interaction/adverse reaction	2			2	2.2%
4. Have you talked with your doctor or pharmacist about your medicines? If so, what questions did you ask?	94	28	29.5%	66	69.5%
<i>Respondents who elaborated</i>	83				
have not seen doctor since program	17			17	25.8%
no need to speak with doctor	31			31	47.0%
forgot to speak with doctor	1			1	1.5%
will confer with doctor if needed	6			6	9.1%
asked doctor questions	24	24	85.7%		0.0%
asked pharmacist questions	2	2	7.1%		
asked poison center questions	2	2	7.1%		
5. Are you tracking your medicines in any way? (e.g. remembering to take correct doses on time) If so, what works for you?	94	75	78.9%	19	20.0%
<i>Respondents who elaborated</i>	93				
not on any medicine	6			6	31.6%
should track	4			4	21.1%
by memory	26	20	26.7%	6	31.6%
wife tracks	3	1	1.3%	2	10.5%
pill box/minder	50	50	66.7%		
medicine list	2	2	2.7%		
materials received at program	2	2	2.7%		

	N	Yes	(%)	No	(%)
6. Have you used the passport/pill minder we gave you? If so, for how long?	95	29	30.5%	66	69.5%
<i>Respondents who elaborated</i>	18				
purchased own pill minder				1	
hard to use				1	
gave materials away				1	
use memory				4	
haven't tried				1	
not on any medicine				2	
7. Did it help you? If yes, how?	29	27	93.1%	2	6.9%
<i>Respondents who elaborated</i>	29				
it is inconvenient				2	100.0%
helps staying on schedule	16	16	59.3%		
clear window of the box helps seeing the pills	6	6	22.2%		
easier than other methods	3	3	11.1%		
used while on vacation	1	1	3.7%		
convenient for multi-medications	1	1	3.7%		
8. If used, did you have any trouble using the passport/pill minder? If so, what were they?	29	8	27.6%	21	72.4%
<i>Respondents who elaborated</i>	8				
difficult to open	6	6	75.0%		
it is too big	2	2	25.0%		
9. Do you plan to continue using the passport/pill minder/other method identified? If not, why not?	29	29	100.0%		
<i>Respondents who elaborated</i>	3				
it works for me	3	3	100.0%		
10. What was the most useful part of the program?					
<i>Respondents who elaborated</i>	90				
all aspects of it	9	9	10.0%		
liked the group discussion setting	7	7	7.8%		
provided feedback on my current method of taking medicines	4	4	4.4%		
liked incentives	5	5	5.6%		
learning about drug interactions and grapefruit	24	24	26.7%		
learning about PCCs	8	8	8.9%		
the PowerPoint presentation	7	7	7.8%		
Tic-Tac-Toe game	2	2	2.2%		
drawing attention to the dangers of medicines	18	18	20.0%		
none	6	6	6.7%		

	N	Yes	(%)	No	(%)
11. What was the least useful part of the program?					
<i>Respondents who elaborated</i>	90				
none	60	60	66.7%		
no new information	10	10	11.1%		
pill minder complicated	5	5	5.6%		
Tic-Tac-Toe game	10	10	11.1%		
medical discussion not in depth	1	1	1.1%		
interaction not at the desired level	1	1	1.1%		
discussion dominated by few people	1	1	1.1%		
the room was large	1	1	1.1%		
talking was too fast	1	1	1.1%		
12. Is there anything that would make this kind of program better for people your age? If so, describe.	94	15	16.0%	79	84.0%
<i>Respondents who elaborated</i>	15				
more freebies	1	1	6.7%		
discuss more specific conditions and medicine interactions	1	1	6.7%		
pill minder complicated	1	1	6.7%		
use a smaller group	1	1	6.7%		
have people make out their own medicine schedule	1	1	6.7%		
advertise better	2	2	13.3%		
add a section to address specific medicine questions	1	1	6.7%		
make time for one-on-one questions	1	1	6.7%		
more sessions improve the relationship					
group-speaker	2	2	13.3%		
provide examples of bottles that can be opened by older people	1	1	6.7%		
add discussion on each other medicines practices	1	1	6.7%		
more focus on basic poison prevention for grandparents	1	1	6.7%		
use locking pill minders	1	1	6.7%		
Q13A: Do you have any other comments?	none noteworthy				

Percentages may not add due to rounding and because missing cells are not shown in the table.

Educator Interviews

Both of the poison center Educators who implemented the program were debriefed when the in-person sessions were completed. At the time of the debriefing, the majority of the four-week follow-up data was also collected. The Educators were able to provide insights about the effectiveness of the program and how it was received, for details on the debriefings, please see Appendix R. According to the Educators, the pilot program was well received. Participant response to the content and process was extremely positive. As this was a pilot study, a major part of the process is learning what works and what does not. Recommendations for improvement were identified by the Educators and are presented below.



- Arrange for a second person to help with a larger group (more than 20 participants).
- Be clear about personnel, space, and equipment needs prior to the sessions.
- Arrive at least 30 minutes before the session, if assembling materials on site.
- Keep the stuffed gift bags out of sight until the end of the session.
- Enlarge the print on all written products.
- Add: “Best days and times to reach you” with the request for a follow-up telephone number.
- Reword the follow-up question about usage of passports and pill minders to be less intimidating.
- Review readability of forms, text size, and length of script and PowerPoint.
- Adapt program as needed for cultural, regional, socioeconomic, linguistic, and reading level differences.
- Provide comprehensive training to professionals implementing the program in community settings.

Conclusions

The study's purpose was to find out if an education program for seniors would facilitate safe medication practices. This is important because unintentional poisonings are rising in seniors. An effective education program can lead to the prevention of medication mismanagement and unintentional poisonings. It was hypothesized that if seniors were subjected to an education intervention that addressed relevant domains, we would be able to prevent future unintentional misuse and medication interactions.



It was also hypothesized that the poison prevention education program would improve the knowledge of seniors, and our analysis supports this hypothesis. It further suggests that using such interventions on seniors is an effective tool in reducing the number of unintentional drug poisonings among this cohort. Through the pre- and post-tests and the four-week follow-up questions, we can discern that seniors who participated did indeed learn something about the dangers of combining medicines, herbals and vitamins. Several participants even noted changes (i.e. take medicines with water instead of grapefruit juice) that they have or will be making in this regard. Virtually all participants seemed well-informed about the importance of communicating with ones' doctor, pharmacist or poison center, but each participant was still given concrete questions to ask during these encounters and a way to remember the questions. Participants were also given tips on identifying reputable sources of information, ways to organize medication information and medicine management techniques.

The pre-test unveiled a knowledge ceiling effect among participants, respondents answered 90% of the poison knowledge questions correctly before engaging in the educational intervention. However, a statistically significant difference in knowledge and behavior was detected after the intervention. This points to the need to interpret these statistical differences in terms of a 'meaningful' difference in improved knowledge and behavior (there was no benchmark or reference for behavior in the pre-test).

This study is not without limitations. For instance, one of the major limitations of this pilot is embedded in the psychometric properties of the pre- and post-test instruments. More specifically, both the pre- and post-test measures were in an identical format. It is recommended that future administrations of the pre- and post-test instruments do so in alternative forms that have been demonstrated to be highly correlated. This would help to reduce threats to establishing sufficient test-retest reliability (e.g., response acquiescence).

Second, given that many of our items were left unaltered on the pre- and post-tests, it is conceivable that participants were able to score well on these items due to familiarity as opposed to a true increase in knowledge. However, it should be noted that the lack of visual acuity within the senior population should also be taken into consideration by future research, particularly when constructing a survey instrument that is intended to probe seniors. Our study revealed that even subtle changes in item content may not be perceived by senior participants. In this sense, we recommend that future studies utilize items that are challenging and concise.

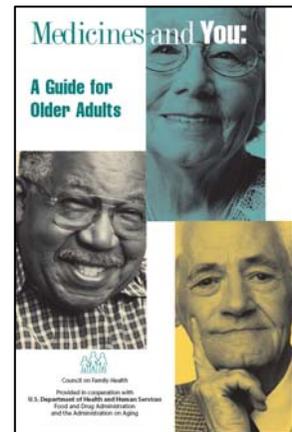


Third, no demographic data were collected on participants. Without demographic data it is difficult to generalize the results of the study. The non-collection of demographic data was known going into the pilot intervention, this decision was based on the fact that anecdotally seniors would be hesitant to give strangers their home telephone number (necessary for a successful follow-up study) and personal information. Since the purpose of the pilot was to find out if an education program would facilitate safe medication practices, only home phone numbers were collected to ease any potential angst of senior participants. Educators who delivered the program made notations about the general demographics of the groups whenever possible. From the pilot, we now know that seniors are willing to give out their home phone numbers so additional personal information can be asked in future iterations of this intervention. We also know that the anecdotally, seniors who participated in this study were all independently mobile, mostly white and female, and many were well-educated.

Despite these limitations, one-month post-intervention, the overwhelming majority of participants (99%) remembered and enjoyed the program. We learned that about 80% of these participants currently track their medicines. Approximately 30% of respondents who participated in the follow-up either have or plan to ask their doctor, pharmacists or local poison control center questions about their medicines. Thirty percent of the respondents are also using the pill box minder that was given to them at the intervention session, but a few participants did specifically mention that the pill box was sometimes hard to open. The

majority of participants who are using their program pill box plan to continue. About 20% of those interviewed at one-month post-intervention had changed something about their medicine taking habits, such as using some daily pill recorder to keep track of when and how much of their medicines they took and just being more conscientious about their medicine taking habits. Ideas for improving the program ranged from including more personal medicine discussion to using a stage, presenting only in small groups to focusing on what grandparents should be doing for poison prevention. The suggestions have all been considered and it is recommended that a live call to the local poison center become a permanent part of the program – with the poison center’s knowledge of course. Even without this new improvement, 93% of participants found some aspect of the program useful. Finally, the four-week evaluation measure is not able to discern if the respondent has had a bad medical interaction. Because this is important for the research study, a new measure to capture this information should be devised and tested.

We conclude that the *Taking Your Medicines Safely* is a worthwhile education intervention that should be adopted for widespread use among poison centers to help ameliorate the effects of unintentional poisonings in seniors. Other health educators and professionals could also implement this program in various community settings after training.



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- Hennepin Regional Poison Center (Minnesota)
- Iowa Statewide Poison Control Center
- Missouri Regional Poison Center
- Nebraska Regional Poison Center
- New York City Poison Control Center (New York)
- North Texas Poison Center (Texas)
- Oklahoma Poison Control Center
- Poison Prevention and Education Center (Wisconsin)
- Texas Panhandle Poison Center
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- Washington Poison Center
- West Virginia Poison Center

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This report is a draft document that will be presented to the Scientific Review Committee of the AAPCC for review and comment. All feedback is welcomed and should be sent to Monique Sheppard via e-mail at sheppard@pire.org or via fax at 301-755-2799. For verbal comments, please call 301-755-2728.

Appendix A

Senior Education Literature Review



Senior Education Literature Review

by
Marty Malheiro
8/10/05

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Appendix B

Health Education Theory: The Health Belief Model



Educator Health Education Theory: The Health Belief Model



The Health Belief Model (HBM) was created by Rosenstock in the 1950s to explain health behaviors and the lack of participation in health education programs sponsored by the US Public Health Service. The model asserts that one’s perceptions of a health problem will lead them to practicing healthy behaviors if they are able to overcome perceived barriers given tools to make a behavioral change and achieve self efficacy.

Constructs of the HBM Applied to the Program

Following are the various components of the HBM and suggestions for ways to incorporate it into the new older adults program

Model Concept	Definition	Applied Concept	Strategy
Perceived Susceptibility	A personal belief in your risk of being diagnosed with a condition	Older adults often do not feel poisonings can happen to them; however, according to statistics, older adults are not only susceptible but are also more inclined to experience severe health consequences as a result of a poisoning including: 1. Combining health remedies that include medications and alternative therapies Overdosing and possible interactions	Case study Pictures of various daily scenarios Scripted story Provide information about reputable health websites.

Model Concept	Definition	Applied Concept	Strategy
		<p>2. Instructions and dosing schedules</p> <p>If I miss a dose –what should I do?</p> <p>May not be able to recall instructions by time get home – especially if complicated</p> <p>Can't remember if took meds on time – compliance issues</p> <p>Using a variety of sources for health information</p> <p>Offer tools for questions for doctors</p> <p>May share medications</p> <p>Get information on OTC/herbals from a variety of sources</p> <p>Not telling docs information about health</p> <p>May see various providers (specialists)</p> <p>Don't have a list to take to doc listing all meds and OTC/herbals/foods</p> <p>Not knowing about meds</p> <p>Don't know side effects</p> <p>Ability to understand label/insert</p> <p>Keep meds for later date until sick again</p> <p>Don't know if right med or dose by pharmacy/OTC/herbal</p> <p>May not feel that OTC, herbals, etc., are not dangerous.</p> <p>Population is not aware of physiologic changes in their body which slow down the bodies metabolism and potentially leave toxins in the body.</p>	

Model Concept	Definition	Applied Concept	Strategy
Perceived Severity	A personal belief in how severe a condition is	Complications related to: <ol style="list-style-type: none"> 1. Combined meds/Alternative (OD/interactions) 2. Not remembering instructions (missed dose, correct scheduling and methods) 3. Using un-reputable sources for information and health choices (trust doc/pharmacy, friends, herbal person) 4. Not telling doc about the use of other oral medications and therapies 5. Metabolism changes as age 6. Not knowing about meds (not right prescription/dose/side effects) Inability to read labels/inserts (too small or don't bother)	Case story
Perceived Benefits	An individual's belief that implementing a healthy behavior will reduce their risk of a health problem	Minimize risk of unintentional poisoning and increase healthy life Empowerment to take charge of own health Improve quality of life – less stress related to taking meds or accidentally	Provide information about steps for improving health
Perceived Barriers	A person's belief of problems/issues which prevent them from practicing a healthy behavior	Overwhelming: Too much information Don't know what to do with information. Don't know what to ask, Don't know who to ask Embarrassed Target population may believe that docs don't have time for questions Target Population may believe that OTC/herbals are not dangerous	Provide group with questions and topics to discuss with doctor. Discussion about why its important for persons to take responsibility and get over embarrassment, fear and inhibitions.

Model Concept	Definition	Applied Concept	Strategy
Cues to Action	Preparation to implement healthy behavior	<p>List of Stuff to tell</p> <ul style="list-style-type: none"> Allergies Med complications Herbals Vitamins Minerals Nutritional Supplements Food items <p>List of questions – on bookmark</p> <ul style="list-style-type: none"> Name of meds How to take Miss a dose Side effects <p>What shouldn't I take with this?</p> <ul style="list-style-type: none"> Ask for meds insert <p>Ways to keep track of medication compliance</p> <ul style="list-style-type: none"> Journal Chart Pill minder Color lids <p>Ways to keep log of what taking</p> <ul style="list-style-type: none"> Journal Binder Passport 	<p>Health contract</p> <p>Game at end.</p> <p>Provide medication compliance incentives</p> <p>Ex. (Journal, Chart Pill reminder, Color lids)</p> <p>Provide Incentives to log medication, herbals, etc.</p> <p>Ex. (Journal, Binder, Passport)</p> <p>Provide bookmark with questions and topics</p>
Self-Efficacy	A person's confidence in their ability to practice and maintain a good health habit	<p>Learning what to ask</p> <p>Learning who to ask. Your best resources are....</p> <p>Learning what to do with answers</p> <ul style="list-style-type: none"> Share and learn how To keep track of your medicine schedule, what you are taking daily, and instructions 	<p>Jeopardy Game</p> <p>Reviewing logging and compliance strategies.</p>

Appendix C

**“Taking Your Medicines
Safely”**

PowerPoint Presentation



Taking Your Medicines Safely



Sponsored by the American Association of
Poison Control Centers and Health
Resources and Services Administration

Why Are We Here?



- With older adults and medicines —
 - 83% take at least 1 prescription drug
 - 50% take 3 or more medications
- To combat potential poisoning from prescriptions and other remedies
- With tips for managing your health remedies

2

Definition

Health Remedies

- Prescriptions
- Over-the-Counter
- Herbals
- Vitamins
- Supplements
- Certain foods and juices



3

Sources of Information

- Doctor
- Nurse
- Pharmacist
- Poison Control Center
- Ads (TV and magazines)
- Friends and family
- Internet



4

Finding Good Sources on the Internet

- Government, educational, or non-profit websites
- Up-to-date information



5

Poisoning Exposures

- Not just a problem in children



6

Example Interactions

- Interaction
 - Combined action of 2 or more things
 - Could create an unwanted effect or poisoning



7

Story #1

- Joe has been taking a blood thinner for the past year
- He's concerned about his family history of heart disease
- Adds a daily aspirin



8

Story #2

- Ellen regularly rides her bike
- Drinks grapefruit juice every morning for Vitamin C
- Doctor prescribes cholesterol-lowering medicine



9

Story #3

- Sara has a very full, active retirement
- Takes an OTC pain reliever daily for minor aches and pains
- Develops a miserable cold, so she takes a multi-symptom cold medicine



10

6 Questions ?

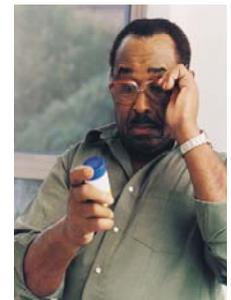
- What is the name of my medicine?
- What is the medicine for?
- What side effects could I have?
- How much and how often do I take this?
- What should I do if I miss a dose or double the dose?
- While taking this medicine, what should I avoid?



11

Patient Information Sheet

- Most new prescriptions come with this sheet
- Some pharmacies provide large print and other languages
- Ask for an explanation!



12

Medicine Management Tools

- Medicine tracking tools
 - Journal
 - Pill reminder box
 - Passport
 - Medicine brochure



13

Pill Reminders Can They Help?

- Easy to open
 - Load, lock, use
- Locking system
 - Prevents spills
 - Difficult for youngsters to open
- Convenient for home or travel
 - Good reminder at home or away



14

Medicine Journal or Diary

- Keep track of...
 - Questions or problems related to your medicine
 - Blood pressure
 - Blood sugar
- Take with you
 - Doctor's visit
 - Pharmacy trips



15

Health Passport

Name of Medicine or Health Remedy	Directions for Taking Medicine	Prescribing Doctor's Name and Date	Not To Be Taken with the Following	List of Possible Side Effects/Warning Signs
Lipitor	1 a day at bedtime	Dr. Smith 12/15/2005	Grapefruit juice	Muscles ache, weak
Ambien	1 at night if needed	Dr. Smith 12/15/2005		Daytime sleepiness

16

Health Passport

Name of Medicine/Health Remedy	Monday 01/01/06	Tuesday --/	Wednesday --/
Lipitor	Dose 1 <input checked="" type="checkbox"/>	Dose 1 <input type="checkbox"/>	Dose 1 <input type="checkbox"/>
	Dose 2 <input type="checkbox"/>	Dose 2 <input type="checkbox"/>	Dose 2 <input type="checkbox"/>
	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>
	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>
Ambien	Dose 1 <input checked="" type="checkbox"/>	Dose 1 <input type="checkbox"/>	Dose 1 <input type="checkbox"/>
	Dose 2 <input type="checkbox"/>	Dose 2 <input type="checkbox"/>	Dose 2 <input type="checkbox"/>
	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>
	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>
Tylenol	Dose 1 <input checked="" type="checkbox"/>	Dose 1 <input type="checkbox"/>	Dose 1 <input type="checkbox"/>
	Dose 2 <input checked="" type="checkbox"/>	Dose 2 <input type="checkbox"/>	Dose 2 <input type="checkbox"/>
	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>	Dose 3 <input type="checkbox"/>
	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>	Dose 4 <input type="checkbox"/>

17

Take Home Reminders

- Passport
- Wallet card
- Handouts
 - List of websites
 - Herbal interactions
 - Medicines and You Guide



18

Take Your Medicines Safely



Thank You

19

Appendix D

Educator Script



Educator Script

Hi, my name is _____. I am an educator with the ____ (name) poison control center. Thank you for coming today to the “Taking Your Medicines Safely” workshop. Today’s program is part of a research project to gather information about health education and unintentional poisonings in adults over age 65. Your participation today is voluntary and you may leave at any time. As part of the project, I will ask that you sign a consent form, a document that ensures you were informed about the purpose of the project and how your confidential input will be used. I will read this out loud to make sure that you understand what today’s program is about. (Read Consent)

If you would like to volunteer to give your input and feedback, please sign and date the consent form. We are also asking for a telephone number because we would like to contact you in about a month to get your feedback about the workshop, ask questions about the information we are presenting and answer any questions you may have. Again, you may choose not to sign the consent and still stay for the program.

In order for us to know what you learned from attending the program, we will be distributing brief questionnaires before and after the program to evaluate the program content and get your feedback. As I mentioned, this is a new program that we are looking to replicate across the country. Your suggestions are important to our success and we encourage you to give your opinions.

We should agree to keep the contents of our discussion today within this room so everyone feels comfortable talking freely during the workshop.

(Distribute Pretest. Read questions and collect once everyone has completed them.)

Part 1. The Workshop

[Slide 1]

Let's begin with the program. We are going to have a short presentation with a few slides. After that, we're going to play a game where we will ask you to give the answers from today's discussion.

[Slide 2]

Why are we here today? Over the last few years, national poison center data shows that calls involving adults over 65 are often related to medicine problems such as taking too much of a medicine or combining medicines. Let's talk about what is considered a medicine? (Let group answer)

Five out of six people 65 and older take at least one prescription drug and almost half take three or more medicines. Since medicine safety is such a big issue, we wanted to develop an education program to conduct at community sites. The goal is to teach ways to prevent medicine problems from happening to people like you.

[Slide 3]

For today's program, the use of prescription and over-the-counter medicines, herbals, vitamins, dietary supplements and some foods and fruit juices will be referred to as health remedies. An example of an herbal is St. John's Wort. An example of a dietary supplement is Calcium.

When it comes to medicines, we are in charge of our own health. We shop at the pharmacy, the supermarket, and health food store. By choosing one product or another, and combining products, we may affect how we respond to our medicine.

[Slide 4]

The best way to take charge of our health is to gather the information we need. We gather health information from a variety of sources—the doctor, nurse, pharmacist, the Poison Control Center, ads and stories on television, in magazines, from friends and family, books and the Internet.

Ask group how many people use the Internet? If none, skip Slide 5.

If some participants answer yes, move to Slide 5:

[Slide 5]

Not all information is reliable. Here are some tips to review the websites you check for health information. First, check the source of the site. Government, educational and non-profit sites have web addresses ending with gov, edu, or org). Also, check that the information is current and the date the site was last updated.

[Slide 6]

What about poisonings? When we hear about poisonings, we often think about children. But what about adults—many calls to poison centers across the country involve adults over 60 years old and medicine problems. Unintentional poisonings may be caused by health remedy interactions. Let's discuss what we mean by an interaction? What do you think this refers to? (Ask for answers from the group)

[Slide 7]

A general definition would be, "a combined action of 2 or more things." In the case of medicines, this could be something good or it could mean an unwanted effect or an unintentional poisoning.

Certain combinations of medicines with other medicines, juice, herbals, or vitamins may change the way the medicine works. This can result in the medicines not working at all or an unintentional poisoning. Can anyone think of a possible interaction you know about or have experienced yourself? (Allow the group to give examples)

I want to take you through three different stories. Then we can discuss them and what the potential problems are, if any. These are only examples. Every person and situation is different.

[Slide 8]

Story 1: Joe has been taking warfarin (Coumadin), a blood thinner, once a day for the past year. One day while watching television, Joe sees a commercial promoting a children's aspirin for heart conditions. Joe's father died of a heart attack at a young age, so he figures it would be a good idea to start taking aspirin himself. What do you think about Joe's situation? Why or why not? (Let the group give answers)

OK let's talk about the problem. The medicine he is already taking, warfarin, is a blood thinner. Taking aspirin with it might be a problem, because aspirin can also thin the blood causing symptoms such as easy bruising to abnormal bleeding.

Here's another to think about:

[Slide 9]

Story 2: Ellen bike rides daily and drinks grapefruit juice every day at breakfast. She feels healthy with tons of energy. After her annual checkup, Ellen's doctor said her cholesterol was too high and prescribed a cholesterol-lowering medicine. To keep healthy, Ellen decides to keep drinking the grapefruit juice every morning and added a glass at lunch. Is this a good idea or not? (Let the group answer)

Let's discuss the potential problem. Grapefruit juice competes with the way some medicines are handled by the body resulting in a build up of medicine in the body. This could lead to significant muscle problems in the case of the cholesterol medicine.

[Slide 10]

Story 3: Sara recently retired from her job with the city government after 30 years. She is enjoying her free time, going on hikes, boating, and visiting her grandchildren. Sara takes a common pain reliever, acetaminophen often for her aches and pains in the cold weather. When Sara develops a cold, she begins taking a multi-symptom medicine. Is this a problem? (Let the group answer)

The problem in this story is that Sara was already taking acetaminophen for her aches and pains and added the cold medicine, which may also contain acetaminophen. Even a few days of too much acetaminophen could potentially cause liver damage.

These stories demonstrate examples of potential problems from medicine interactions. There are many common medicines that can interact and result in serious health issues. Always speak with the doctor, pharmacist or poison control center when making changes with what medicine you are taking. As we saw, something as innocent as grapefruit juice can affect our medicines.

[Slide 11]

To help you remember some of the questions to ask your health care provider, I want to discuss six important questions to keep in mind:

1. What is the name of my medicine?
2. Why am I taking this medicine?
3. What side effects could I have?
4. How much and how often do I take this?
5. What should I do if I miss a dose or double the dose of my medicine?
6. While taking this medicine, should I avoid alcohol, driving, certain foods, drinks, medicines, vitamins, or herbals?

You should get the answers to these questions when you're at the doctor's office, pharmacy or any time you begin to take something new for your health, including over-the-counter medicine, vitamins, supplements or even new "miracle" foods that you read about. Keep in mind that there is a possibility of interactions with herbals, vitamins and other over-the-counter products.

[Slide 12]

If you do not remember to ask your doctor, pharmacist or poison control center these questions, most prescription medicine comes with patient/product information inserts. Your patient information sheets contain many of the answers to these questions. You may also ask for this information in large print or another language if needed. If you do not understand what this insert is saying, do not hesitate to contact your pharmacist or the poison control center.

I also want to point out here that if you think you are having any side effects or a bad reaction to the medicine, speak to your doctor right away about your concerns.

Today we wanted to raise awareness about the potential for interactions and now let's discuss some tips for managing your medicines.

Can any of you give an example of ways you keep track of what you're taking? (Let the group answer)

[Slide 13]

You can also keep track of your medicines and other health remedies using a medicine reminder box or keeping a list. It's important to pick a system that works for your individual lifestyle. Also, I'd like to mention that if you live with, care for or are visited by children, make sure that children can't get into your medicines, vitamins, or herbals by using a child-resistant container or box for storing your medicines and keeping them out of reach.

[Slide 14]

There are many ways to help a person remember to take their medicines at the correct time. Calendars work for some, and talking medicine bottles or caps may be an option, although they are often expensive. Putting medicines into a pill reminder is another good way to tell if each dose has been taken. With this container a full week's supply of pills can be separated out according to time of day. Ask your doctor to schedule your medicines so they are as simple as possible. Check with your pharmacist to be sure your medicines are OK out of their original container – some like nitroglycerin or Imitrex (for migraines) must stay in their own bottle. Your pharmacist can also help with the initial organization of your medicines. These containers also work well if you travel. Having one that is child-resistant means that youngsters may be less likely to get into your medicines, which is a good thing!

[Slide 15]

The doctor needs to know if you are feeling any bad effects from your medicine. Keep a note pad or diary to record problems or questions about your medicines. Also take notes during or right after a doctor visit to make sure the information is remembered later. If you need refills include this information in your notes. You can also include blood sugar readings or blood pressures in this same record.

[Slide 16]

To make sure that medicine is taken on schedule, some people like to check off medicine doses as they take them. One way to do that is to use a calendar to write down the times you medicine is due each day (for instance 8 a.m., noon, 4 p.m., etc). After you take each dose, make check mark by the time. The blue folder we've provided is called Health Passport and has a calendar for 2006. You can also write medication instructions and out other health information in the side pocket.

Inside the folder is the Passport to Health, which is another way to mark doses you've taken.

[Slide 17]

The Passport to Health has spaces for each day where you can record the names of up to 6 different medicines and check off each dose you've taken. This differs from the Health Passport in that you are recording the name of the medicine instead of the time of day. It's a little more to write, but it more accurately shows that you took each medicine.

Slide 18

We also prepared a bookmark with the six questions to ask about new medicines, along with telephone stickers and magnets from the poison control center, and other pamphlets.

[Slide 19]

In order to be the best wife, husband, mother, father, friend, or grandparent it's really up to you to take care of yourself and that includes taking your medicines safely. That's the most you can give to your family and the community you love.

Thanks for your interest. Please let me know if you have any further questions.

Part 2. The Game

We are now going to play a Tic-Tac-Toe game and review the information we have just learned.

We will break the group into 2 sections—one will be Xs and one Os. Each team will have a chance to answer the question. When the team gets the right answer, they get to pick the spot for the X or O. (Everyone wins a prize)

Questions should be written on individual pieces of paper with the answer and explanation for the answer on the opposite side.

1. Give an example of an interaction we discussed today? (The participants should mention one of the stories presented)
2. True or false? Unintentional poisonings only happen to children? (False)
3. True or false? Your medicines can be affected by grapefruit juice? (True)
4. State one of the six questions we discussed when starting a new medicine. (Any of the six questions is fine—see above list on slide 11)
5. True or false? It is important to discuss over-the-counter medicines you take with the pharmacist or doctor if you start taking a new prescription medicine. (True)
6. True or false? All information on the Internet is reliable? (False. Refer to the handout with the list of sites for health information)
7. True or false? Herbals and other supplements can interact with medicines. (True. Some herbals and supplements can interact with medicines and affect the way the medicine works in your body)
8. Name one way to keep track of medicine. (Can answer list, box, keep bottles in one place or another way they manage their medicines)
9. Name a resource for asking questions about your medicines (doctor, nurse, pharmacist, or poison control center)

These are suggested questions.

Appendix E

Tic-Tac-Toe Game (Questions and Answers)



Tic-Tac-Toe Questions

Give an example of an interaction we discussed today?

True or false?

Unintentional poisonings only happen to children?

True or false?

Your medicines can be affected by grapefruit juice?

State one of the six questions we discussed when starting a new medicine

True or false?

It is important to discuss over-the-counter medicines you take with the pharmacist or doctor if you start taking a new prescription medicine.

True or false?

All information on the Internet is reliable?

True or false?

Herbals and other supplements can interact with medicines.

Name one way to keep track of medicine.

Name a resource for asking questions about your medicines

Tic-Tac-Toe Answers

True	False	Participants should mention one of the stories presented.
False Refer to the handout with the list of sites for health information.	True	<p>What is the name of my medicine?</p> <p>Why am I taking this medicine?</p> <p>What side effects could I have?</p> <p>How much and how often do I take this?</p> <p>What should I do if I miss a dose or double the dose of my medicine?</p> <p>While taking this medicine, should I avoid alcohol, driving, certain foods, drinks, medicines, vitamins, or herbals?</p>
Possible answers: <ul style="list-style-type: none"> • doctor • nurse • pharmacist • poison control center 	Possible answers: <ul style="list-style-type: none"> • list • box • keep bottles in one place • or another way they manage their medicines 	True

Appendix F

Consent Form



**TAKING YOUR MEDICINES SAFELY
INFORMED CONSENT FORM**

INTRODUCTION:

The Public Education Committee of the American Association of Poison Control Centers (AAPCC) and the Pacific Institute for Research and Evaluation (PIRE) are conducting a pilot study to gather information about health education and unintentional poisonings in adults over age 65. The Department of Health and Human Services, Health Resources and Services Administration, has funded this pilot study. The purpose of this consent form is to provide information about the study and invite you to take part in it. You should review this form completely and ask any questions you have before you decide if you wish to voluntarily participate.

STUDY DETAILS:

This study should take about an hour today. During this time, you will hear a presentation and engage in learning activities about how medication mismanagement occurs and some steps to prevent it. You will also be asked to complete a short survey before and immediately after the program today. In addition, in about 4 weeks, the speaker will call you for a phone interview that will last about 15 minutes. The survey and interview topics include:

- Potential problems with taking prescription medicines and over-the-counter medications
- Ways to keep track of your medicines
- Questions to ask about your medicines

Specific questions about your medication practices can not be answered during this presentation. However, please contact your pharmacist or doctor, or your local Poison Control Center at 1-800-222-1222 for clarification on your medications. For life-threatening situations please call 911. There is no cost to you to participate in this study.

BENEFITS/RISKS TO BEING IN THE STUDY:

The likely benefits of this study include:

1. Increased awareness of unintended poisonings in older adults.
2. Increased awareness of possible medicine and health remedy interactions.
3. Ways to prevent a poisoning due to medicine mismanagement.
4. Receipt of a \$10 gift card.

The risks associated with study participation are quite minimal. One possible risk is that you may volunteer sensitive medical information about yourself during the session or in your answers to the survey or interview questions. The steps being taken to protect the confidentiality of your personal information are discussed in the section below. Second, although the times for participation (1 hour for the session today and 15 minutes for the phone interview) are based on previous experience, it is possible that the study make take a little more of your time.

**TAKING YOUR MEDICINES SAFELY
INFORMED CONSENT FORM**

CONFIDENTIALITY AND VOLUNTARY PARTICIPATION:

Being a participant in this study is your decision. Even if you agree to take part initially, you may end your participation at any time, with no penalty. Your answers and results will be kept private. To protect your confidentiality, the surveys that you fill out today will have a random number used for tracking purposes rather than your name. Your name will only appear on this consent form and the speaker in charge of this session will keep your name and phone number in a locked location after today. Your name and phone number will only be unlocked and used in the study for a follow up phone call. You can refuse to answer any questions during the follow-up phone call. If you do not want to participate in the follow-up telephone survey, you don't need to provide your phone number or you can ask that your phone number be removed for future contact by calling the project help line at 1-866-747-3674, extension 2728.

CONTACT PERSONS:

If you have questions about the study, you can call the project help line at 1-866-747-3674, extension 2728. If you have questions about your rights as a participant in this study, you can contact Ms. Elysia Oudemans, Manager of Research Integrity and Compliance, Pacific Institute for Research and Evaluation, 11710 Beltsville Dr., Suite 125, Calverton, MD 20705 at 1-866-PIRE-ORG, extension 2757.

You have read the above information or it was read to you. Your printed name and signature show that you agree to be in this study.

Print Name

Date

Signature

Telephone Number (for the follow up phone interview)

**It is recommended that the consent form
be revised to add "best days and times
to reach you".**

Appendix G

Pre-Test

PRE-TEST

Master List of names and pictures Dr will be kept in a locked file or other secure location.

Medication list No Yes No Yes

1. You need to tell your doctor about vitamins you are taking.
 Yes No Do not know
2. Combining prescription medicines with over-the-counter products can cause serious health problems.
 Yes No Do not know
3. "What side effects could I have" is one of the key questions to ask at your doctor's office or pharmacy.
 Yes No Do not know
4. You need to know the names of the medicines you take.
 Yes No Do not know
5. It is better to ask your doctor, pharmacist or patient center if you have questions about your medicines.
 Yes No Do not know
6. There are many ways to keep track of your medicines.
 Yes No Do not know
7. It is important to make sure that children can get into your medicines, vitamins, and home remedies.
 Yes No Do not know
8. Having a way to keep track of your medicines and home remedies may help you avoid taking too much at one time.
 Yes No Do not know
9. Are you taking a blood thinner and decided on his own to start taking aspirin with it. This was a good decision.
 Yes No Do not know
10. You are comfortable asking questions about your medicines.
 Yes No Do not know
11. You control your medicines and how they should be continued.
 Yes No Do not know

Participant ID:

08/2016/68

PRE-TEST

Master List of names and participant IDs will be kept in a locked file or other secure location.

Mark responses like this

Not like this

Not like this

1. You need to tell your doctor about vitamins you are taking.
 Yes No Do not know
2. Combining prescription medicines with over-the-counter products can cause serious health problems.
 Yes No Do not know
3. "What side effects could I have" is one of the key questions to ask at your doctor's office or pharmacy.
 Yes No Do not know
4. You need to know the names of the medicines you take.
 Yes No Do not know
5. It is best to ask your doctor, pharmacist or poison center, if you have questions about your medicines.
 Yes No Do not know
6. There are many ways to keep track of your medicines.
 Yes No Do not know
7. It is important to make sure that children can get into your medicines, vitamins, and home remedies.
 Yes No Do not know
8. Having a way to keep track of your medicines and home remedies may help you avoid taking too much or too little.
 Yes No Do not know
9. Joe was taking a blood thinner and decided on his own to start taking aspirin with it. This was a good decision.
 Yes No Do not know
10. You are comfortable asking questions about your medicines.
 Yes No Do not know
11. You control your medicines and how they should be combined.
 Yes No Do not know

Q. 5 & 6 deleted from analysis

Appendix H

Post-Test

POST-TEST

Master List of names and participant IDs will be kept in a locked file or other secure location.

Has response to be Yes No Do not know

1. You need to tell your doctor about vitamins you are taking
 Yes No Do not know

2. Combining prescription medicines with over-the-counter products can cause serious health problems.
 Yes No Do not know

3. "What side effects could I have?" is one of the key questions to ask at your doctor's office or pharmacy.
 Yes No Do not know

4. You need to know the name of the pharmacist you take
 Yes No Do not know

5. It is best not to ask your doctor or pharmacist if you have
 Yes No Do not know

6. There are **CONGRATULATIONS**
 Yes No Do not know

7. It is important to make sure that children cannot get into your medicines, vitamins, and home remedies.
 Yes No Do not know

8. Having a way to keep track of your medicines and home remedies may help you avoid taking too
 Yes No Do not know

9. Joe was taking a blood thinner and decided on his own to start taking aspirin with it. This was a good
 Yes No Do not know

10. You are comfortable asking questions about your medicines
 Yes No Do not know

11. Do you plan to change something about how you take or store your medicines
 Yes No Do not know

12. You control your medicines and how they should be used.
 Yes No Do not know

Participant ID:

0961321657

POST-TEST

Master List of names and participant IDs will be kept in a locked file or other secure location.

Mark responses like this

Not like this

Not like this

1. You need to tell your doctor about vitamins you are taking.
 Yes No Do not know
2. Combining prescription medicines with over-the-counter products can cause serious health problems.
 Yes No Do not know
3. "What side effects could I have" is one of the key questions to ask at your doctor's office or pharmacy.
 Yes No Do not know
4. You need to know the names of the medicines you take.
 Yes No Do not know
5. It is best not to ask your doctor or pharmacist if you have questions about your medicines.
 Yes No Do not know
6. There are too many medicines.
 Yes No Do not know
7. It is important to make sure that children cannot get into your medicines, vitamins, and home remedies.
 Yes No Do not know
8. Having a way to keep track of your medicines and home remedies may help you avoid taking too much or too little.
 Yes No Do not know
9. Joe was taking a blood thinner and decided on his own to start taking aspirin with it. This was a good decision.
 Yes No Do not know
10. You are comfortable asking questions about your medicines.
 Yes No Do not know
11. Do you plan to change something about how you take or store your medicines.
 Yes No Do not know
12. You control your medicines and how they should be combined.
 Yes No Do not know

Q. 5 & 6 deleted from analysis

Appendix I

Participant Assessment Form

PARTICIPANT ASSESSMENT FORM

How many do you... None One or two Three or four

About the Process:

1. Was the information easy to understand?
 Yes No

2. Did you learn something new from the presentation?
 Yes No

3. Would you recommend the program to friends & family members?
 Yes No

About the Pre-Test and Post-Test

4. Were the forms easy to read?
 Yes No

5. Did you understand the questions?
 Yes No

6. Were the questions (week notes)
 Hard? Easy? In-between?

7. Did you have any trouble with filling in the circles?
 Yes No

8. Did you have enough time to fill them out?
 Yes No

Participant ID:

604031603

PARTICIPANT ASSESSMENT FORM

Mark responses like this

Not like this

Not like this

About the Process:

1. Was the information easy to understand?

Yes No

2. Did you learn something new from the presentation?

Yes No

3. Would you recommend this program to friends & family members?

Yes No

About the Pre-Test and Post-Test:

4. Were the forms easy to read?

Yes No

5. Did you understand the questions?

Yes No

6. Were the questions: (mark one)

Hard? Easy? In-between?

7. Did you have any trouble with filling in the circles?

Yes No

8. Did you have enough time to fill them out?

Yes No

Appendix J

Incentives



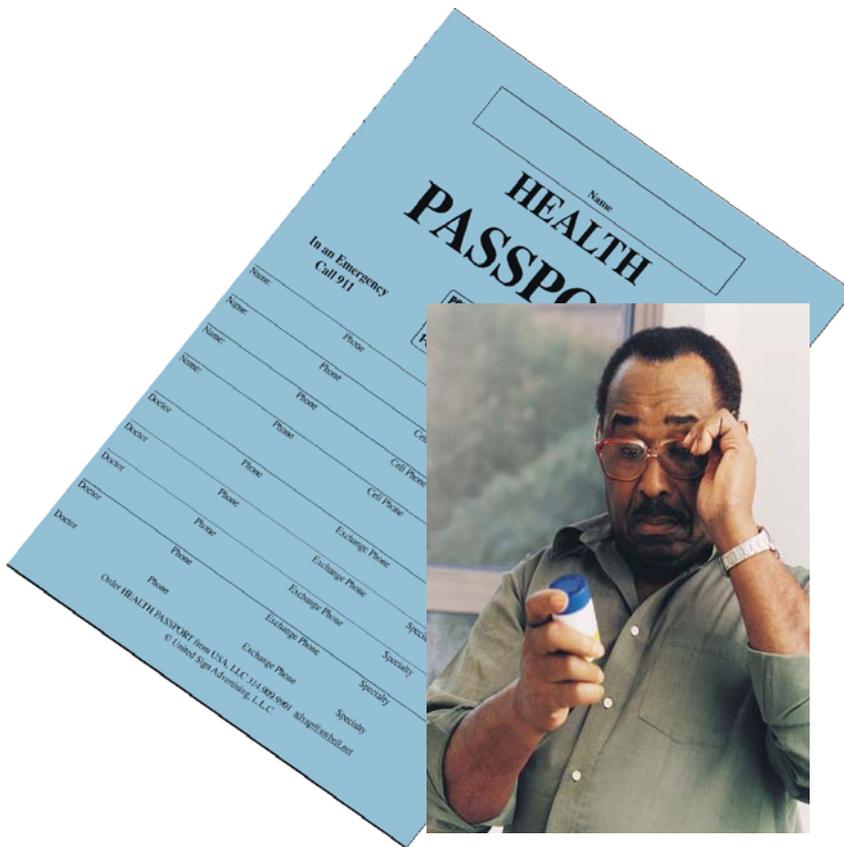
Incentives

Once all of the forms have been collected, the health intervention (formal program) is completed. You will hand out one incentive bag to each person. Incentives will include a gift bag decorated with the six questions you should always ask when receiving a new medicine, a pen, a blank booklet to list all medications and herbal supplements for easy reference, an herbal handout, poison center magnet, laminated wallet card containing the six questions, a childproof pill box, and a copy of the power point presentation. The incentives will serve as reminders or positive reinforcement to aide the participants in adopting protective medication management behaviors. If possible, purchase or bring extra incentives in case of extra attendees.

1. Gift bags
2. Pens
3. Blank booklets
4. Herbal handouts
5. Poison center magnets
6. Laminated wallet cards containing the six questions
7. Childproof pill minder
8. Copies of the PowerPoint presentation
9. Health Passport
10. Medicines & You Guide
11. \$10 gift cards

Appendix K

Passport



Name

HEALTH PASSPORT

**In an Emergency
Call 911**



LIVING WILL ENCLOSED
in front inside pocket

Name:	Phone	Cell Phone	Relationship
Name:	Phone	Cell Phone	Relationship
Name:	Phone	Cell Phone	Relationship
Name:	Phone	Cell Phone	Relationship
Doctor	Phone	Exchange Phone	Specialty
Doctor	Phone	Exchange Phone	Specialty
Doctor	Phone	Exchange Phone	Specialty
Doctor	Phone	Exchange Phone	Specialty
Doctor	Phone	Exchange Phone	Specialty

Include in this pocket:

_____ Copy of LIVING WILL

_____ Copy of DRIVERS LICENSE

_____ Copy of INSURANCE CARDS

_____ Copy of MEDICARE CARD

_____ Copy of SOCIAL SECURITY CARD

Name

HEALTH PASSPORT

address

Next of Kin _____

city, state, zip

Marital Status _____

phone

ALLERGIES: _____

Family Medical History

Name:

Last modified:

Family Member	Health Status	Arthritis	Cancer	Diabetes	Heart Condition	Lung Disease	Mental Illness	Stroke	Other	Cause of Death	Age at Death
Father											
Mother											
Siblings											
Grandparents											
Children											
Spouse											

Family Medical History

Hospitalization & Serious Illness Record

Name:

Last modified:

Date(s) of Treatment	Medical Condition	Outcome	Hospital Name & Address	Primary Doctor	Notes

Hospitalization & Serious Illness Record

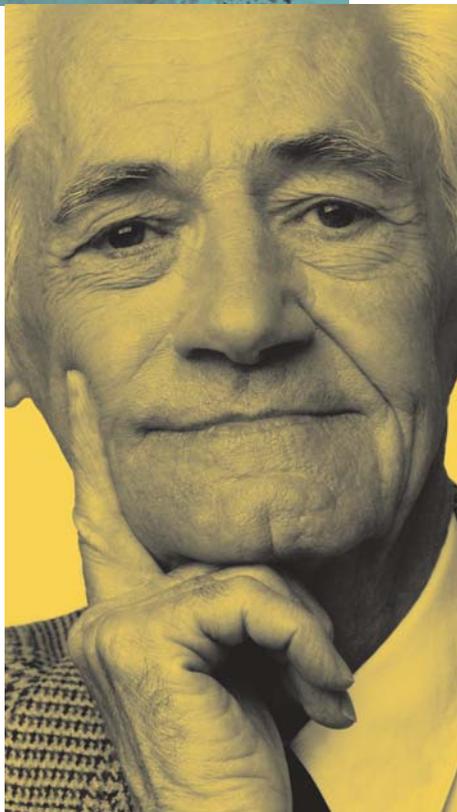
Appendix L

“Medicines and You: A Guide for Older Adults”



Medicines and You:

A Guide for Older Adults



Council on Family Health

Provided in cooperation with
U.S. Department of Health and Human Services
Food and Drug Administration
and the Administration on Aging

Table of Contents

Aging and Health: You and Your Medicines	1
Talk to Your Health Care Professionals	3
What You Need to Know About Your Prescription Medicines	7
Taking Prescription Medicines	10
Taking Over-the-Counter Medicines	12
Cutting Medicine Costs	13
Tips for Seniors on Safe Medicine Use	14
My Medicine Record	16

Use the medicine chart on pages 16-17 to keep a written list of your medicines and other important health information.



Council on Family Health
www.cfhinfo.org

Provided in cooperation with

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Food and Drug Administration
www.fda.gov

and

Administration on Aging
www.aoa.gov

As you age, it is important to know about your medicines to avoid possible problems.



Aging and Health: You and Your Medicines

As you get older you may be faced with more health conditions that you need to treat on a regular basis. It is important to be aware that more use of medicines and normal body changes caused by aging can increase the chance of unwanted or maybe even harmful drug interactions.

The more you know about your medicines and the more you talk with your health care professionals, the easier it is to avoid problems with medicines.

As you age, body changes can affect the way medicines are absorbed and used. For example, changes in the digestive system can affect how fast medicines enter the bloodstream. Changes in body weight can influence the amount of medicine you need to take and how long it stays in your body. The circulation system may slow down, which can affect how fast drugs get to the liver and kidneys. The liver and kidneys also may work more slowly, affecting the way a drug breaks down and is removed from the body.

Because of these body changes, there is also a bigger risk of **drug interactions** for older adults.

Drug-drug interactions happen when two or more medicines react with each other to cause unwanted effects. This kind of interaction can also cause one medicine to not work as well or even make one medicine stronger than it should be. For example, you should not take aspirin if you are taking a prescription blood thinner, such as warfarin, unless your health care professional tells you to.

Drug-condition interactions happen when a medical condition you already have makes certain drugs potentially harmful. For example, if you have high blood pressure or asthma, you could have an unwanted reaction if you take a nasal decongestant.

Drug-food interactions result from drugs reacting with foods or drinks. In some cases, food in the digestive track can affect how a drug is absorbed. Some medicines also may affect the way nutrients are absorbed or used in the body.

Drug-alcohol interactions can happen when the medicine you take reacts with an alcoholic drink. For instance, mixing alcohol with some medicines may cause you to feel tired and slow your reactions.

It is important to know that many medicines do not mix well with alcohol. As you grow older, your body may react differently to alcohol, as well as to the mix of alcohol and medicines. Keep in mind that some problems you might think are medicine-related, such as loss of coordination, memory loss, or irritability, could be the result of a mix between your medicine and alcohol.

For more information about alcohol and medicines, visit the U.S. Substance Abuse and Mental Health Services Administration at <http://www.samhsa.gov>

Some medicines can interact with other medicines, foods, drinks or health conditions.



What Are Side Effects?

Side effects are unplanned symptoms or feelings you have when taking a medicine. Most side effects are not serious and go away on their own; others can be more bothersome and even serious. To help prevent possible problems with medicines, seniors must know about the medicine they take and how it makes them feel.

Keep track of side effects to help your doctor know how your body is responding to a medicine. New symptoms or mood changes may not be a result of getting older but could be from the medicine you're taking or another factor, such as a change in diet or routine. If you have an unwanted side effect, call your doctor right away.

Talk to Your Health Care Professionals

It is important to go to all of your medical appointments and to talk to your team of health care professionals (doctors, pharmacists, nurses, or physician assistants) about your medical conditions, the medicines you take, and any health concerns you have.

It may help to make a list of comments, questions, or concerns before your visit or call to a health care professional. Also, think about having a close friend or relative come to your appointment with you if you are unsure about talking to your health care professional or would like someone to help you understand and/or remember answers to your questions.



Tell your health professionals about your medical history and about all medicines or supplements you take.

Here are some other things to keep in mind:

All Medicines Count: Tell your team of health care professionals about all the medicines you take, including prescription and over-the-counter medicines, such as pain relievers, antacids, cold medicines, and laxatives. Don't forget to include eye drops, dietary supplements, vitamins, herbals, and topical medicines, such as creams and ointments.

Keep in Touch with Your Doctors: If you regularly take a prescription medicine, ask your doctor to check how well it is working, whether you still need to take it, and, if so, whether there is anything you can do (like lowering fats in your diet or exercising more) to cut back or, in time, stop needing the medicine. Don't stop taking the medicine on your own without first talking with your doctor.

Medical History: Tell your health care professional about your medical history. The doctor will want to know if you have any food, medicine, or other allergies. He or she also will want to know about other conditions you have or had and how you are being treated or were treated for them by other doctors. It is helpful to keep a written list of your health conditions that you can easily share with your doctors. Your primary care doctor should also know about any specialist doctors you may see on a regular basis.

Eating Habits: Mention your eating habits. If you follow or have recently changed to a special diet (a very low-fat diet, for instance, or a high-calcium diet), talk to your doctor about this. Tell your doctor how much coffee, tea, or alcohol you drink each day and whether you smoke. These things may make a difference in the way your medicine works.

A pill box can help you remember when to take your medicines.



Recognizing and Remembering to

Take Your Medicines: Let your health care professional know if you have trouble telling your medicines apart. The doctor can help you find better ways to recognize your medicines. Also tell your doctor if you have problems remembering when to take your medicines or how much to take. Your doctor may have some ideas to help, such as a calendar or pill box.

Swallowing Tablets: If you have trouble swallowing tablets, ask your doctor, nurse, or pharmacist for ideas. Maybe there is a liquid medicine you could use or maybe you can crush your tablets. Do not break, crush, or chew tablets without first asking your health professional.

Your Lifestyle: If you want to make your medicine schedule more simple, talk about it with your doctor. He or she may have another medicine or ideas that better fits your lifestyle. For example, if taking medicine four times a day is a problem for you, maybe the doctor can give you a medicine you only need to take once or twice a day.

Put It in Writing: Ask your health care professional to write out a complete medicine schedule, with directions on exactly when and how to take your medicines. Find out from your primary care doctor how your medicine schedule should be changed if you see more than one doctor.



Your pharmacist can help keep track of your medicines.

Your Pharmacist Can Help Too

One of the most important services a pharmacist can offer is to talk to you about your medicines. A pharmacist can help you understand how and when to take your medicines, what side effects you might expect, or what interactions may occur. A pharmacist can answer your questions privately in the pharmacy or over the telephone.

Here are some other ways your pharmacist can help:

- **Many pharmacists keep track of medicines on their computer.** If you buy your medicines at one store and tell your pharmacist all the over-the-counter and prescription medicines or dietary supplements you take, your pharmacist can help make sure your medicines don't interact harmfully with one another.
- **Ask your pharmacist to place your prescription medicines in easy-to-open containers** if you have a hard time taking off child-proof caps and do not have young children living in or visiting your home. (Remember to keep all medicines out of the sight and reach of children.)
- **Your pharmacist may be able to print labels on prescription medicine containers in larger type**, if reading the medicine label is hard for you.
- **Your pharmacist may be able to give you written information** to help you learn more about your medicines. This information may be available in large type or in a language other than English.

What You Need to Know About Your Prescription Medicines

The following questions will help you get the information you need when you visit your doctor and pharmacist.*

Before you leave the doctor's office with a new prescription, ask:

- What is the name of the medicine and what is it supposed to do? Is there a less expensive alternative?
- How and when do I take the medicine and for how long?
- Whether to take it with water, food, or with a special medicine, or at the same time as other medicines.
- Can it be taken with over-the-counter medicines? If so, when?
- What to do if you miss or forget a dose.
- Whether you take it before, during, or after meals.
- The timing between each dose. For example, does "four times a day" mean you have to take it in the middle of the night?
- What your doctor means by "as needed."
- Are there any other special instructions to follow?
- What foods, drinks, other medicines, dietary supplements, or activities should I avoid while taking this medicine?
- Will any tests or monitoring be required while I am taking this medicine? Do I need to report back to the doctor?
- What are the possible side effects and what do I do if they occur?
- When should I expect the medicine to start working, and how will I know if it is working?
- Will this new prescription work safely with the other prescription and over-the-counter medicines or dietary supplements I am taking?



Keep an up-to-date list of all your medicines, prescription and over-the-counter.

At the pharmacy, or wherever you get your medicines, ask:

- Do you have a patient profile form for me to fill out? Does it include space for my over-the-counter drugs and my dietary supplements?
- Is there written information about my medicine? Ask the pharmacist if it's available in large print or in a language other than English if you need it.
- What is the most important thing I should know about this medicine? Ask the pharmacist any questions that may not have been answered by your doctor.
- Can I get a refill? If so, when?
- How and where should I store this medicine?

* These questions are based on information found on the National Council on Patient Information and Education's web site at **www.talkaboutrx.org**.



*Before you travel,
discuss your medicine
schedule with your
doctor or pharmacist.*

Taking Prescription Medicines

Follow your doctor's instructions and read (and keep) the package insert information, if available. Have your doctor write down instructions if you don't understand or are worried about forgetting them.

Take your medicines for the whole time they are prescribed, even if you feel better.

Take only your own medicines. Taking someone else's medicine may hide your symptoms and make diagnosing your illness more difficult for your doctor.

Know about your medicines. If you take more than one medicine, be able to tell them apart by size, shape, color, number or name imprint, form (tablet or capsule), or container.

Plan for medicines you need to take during the night.

If you need to take more than one medicine, try not to keep them by your bedside. If you must, and there are no small children or pets in your home, place the pills you will need during the night on your bedside table. Turn on the light and make sure you're taking the right medicine at the right time.

Organize your medicines at home. Many people use a chart or written schedule to keep track of their medicines. Some find containers with different colored caps, different sections or with alarms that go off at set times helpful.

Keep medicines in a cool, dry place, away from bright light.

A kitchen cabinet or bedroom shelf may be good storage places. Medicines should not be kept in places where heat and moisture can alter their effectiveness. Do not keep medicines in the refrigerator, unless your doctor or pharmacist, or the label, tells you.

Before you travel, ask your doctor or pharmacist how to adjust your medicine schedule to account for changes in time, routine, and diet. Bring the phone numbers of your doctors and pharmacists with you. When flying, carry your medicines with you; do not pack them in your checked luggage. When traveling, always keep medicines out of heat and direct sunlight.

If there are children in your home, remember to put medicines out of their sight and reach, and don't take medicines in front of them.

Get prescriptions refilled early enough to avoid running out of medicine, which may cause problems with your medicine schedule.

If you to buy medicines on the Internet, check the web site for the Verified Internet Pharmacy Practice Sites (VIPPS) program and seal of approval to make sure the site is properly licensed and has been successfully reviewed and inspected by the National Association of Boards of Pharmacy (www.nabp.net).

Always keeps medicines in their original containers, and never put more than one kind of medication in the same container.

Taking Over-the-Counter Medicines

Today's medicine cabinets contain a growing choice of over-the-counter, OTC, medicines to treat a growing number of health problems. Common OTC medicines include pain relievers, laxatives, cough and cold products, and antacids. Some OTC medicines, however, can affect the way prescription medicines work or are used by the body. Always talk with your doctor about all OTC medicines you take. Here are some important tips to remember:

Always read and follow the directions on the medicine label.

OTC medicine labels give you all the information you need to take the medicine the right way and tell you:

- Active and inactive ingredients,
- What the medicine is used for,
- Interactions or side effects that could happen,
- How and when (or when not) to take the medicine,
- Other warnings.

Choose OTC medicines that have only the ingredients you need. It is a good idea to only use medicines that treat the problems or symptoms you have. Ask your pharmacist for help. If you are taking more than one medicine, pay attention to the "active ingredients" to avoid taking too much of the same ingredient.

Check for package tampering and the expiration date.

Don't buy medicines if the packaging has been broken or if the expiration date has passed. The expiration date tells you the date after which the product may not be as effective.

Talk to your doctor if taking an OTC medicine becomes a regular habit. Most OTC medicines are only to be used for a short time.

If you have questions about specific medicines, visit the National Library of Medicine's web site at www.medlineplus.gov and click on "Drug Information."

Cutting Medicine Costs

Medicines are an important part of treating an illness because they often allow people to remain active and independent. But medicine can be expensive. Here are some ideas to help lower costs:

Tell your doctor if you are worried about the cost of your medicine. Your doctor may not know how much your prescription costs, but may be able to tell you about another less expensive alternative.

Ask for a senior citizen's discount.

Shop around. Look at prices at different stores or pharmacies. Lower medicine prices may not be a bargain if you need other services, such as home delivery, patient medicine profiles, or pharmacist consultation, or if you cannot get a senior citizen discount.

Ask for medicine samples. If your doctor gives you a prescription for a new medicine, ask your doctor for samples you can try before filling the prescription. (Make sure you know the right way to use the sample medicine and ask for any other important product information.)

Buy bulk. If you need to take medicine for a long period of time and your medicine does not expire quickly, you may be able to buy a larger amount of the medicine for less money.

Try mail order. Mail-order pharmacies can provide medications at lower prices. However, it is a good idea to talk with your doctor before using such a service since there may not be a health care professional there to talk to and it may take a few weeks for medicine to get to you. Make sure to find a back-up pharmacy in case there is a problem with the mail service.

Buy OTC medicines when they are on sale. Check the expiration dates and use them before they expire. If you need help choosing an OTC medicine, ask the pharmacist.

Tips for Seniors on Safe Medicine Use

- ✓ **Learn about your medicines.** Read medicine labels and package inserts and follow the directions. If you have questions, ask your doctor or other health care professionals.
- ✓ **Talk to your team of health care professionals** about your medical conditions, health concerns, and all the medicines you take (prescription and OTC medicines), as well as dietary supplements, vitamins, and herbals. The more they know, the more they can help. Don't be afraid to ask questions.
- ✓ **Keep track of side effects or possible drug interactions** and let your doctor know right away about any unexpected symptoms or changes in the way you feel.
- ✓ **Make sure to go to all doctor appointments** and to any appointments for monitoring tests done by your doctor or at a laboratory.
- ✓ **Use a calendar, pill box or other things,** to help you remember what you need to take and when. Write down information your doctor gives you about your medicines or your health condition.
- ✓ **Take along a friend or relative to your doctor's appointments** if you think you might need help to understand or to remember what the doctor tells you.
- ✓ **Have a "Medicine Check-Up" at least once a year.** Go through your medicine cabinet to get rid of old or expired medicines and also ask your doctor or pharmacist to go over all of the medicines you now take. Don't forget to tell them about all the OTC medicines or any vitamins, dietary supplements, and herbals you take.
- ✓ **Keep all medicines out of the sight and reach of children.**

For more information contact:

U.S. Department of Health and Human Services

www.dhhs.gov

Administration on Aging

www.aoa.gov

202-619-0724

AoAInfo@aoa.gov

Agency for Healthcare Research and Quality

www.ahrq.gov

Food and Drug Administration

www.fda.gov

1-888-INFO-FDA

Substance Abuse and Mental Health Services Administration

www.samhsa.gov

www.findtreatment.samhsa.gov

1-800-662-HELP

National Institutes of Health

www.nihseniorhealth.gov

National Institute on Aging Information Center

www.niapublications.org

1-800-222-2225

1-800-222-4225 TTY

National Library of Medicine

www.medlineplus.gov



Council on Family Health

www.cfinfo.org

Provided in cooperation with
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

www.fda.gov

and

Administration on Aging

www.aoa.gov

Appendix M

Herbal Products and Prescription Medicine: Potentially Dangerous Mixtures



Herbal Products & Prescription Medicine:

Potentially dangerous mixtures



Tips from your Poison Control Center

This is a list of only a few medication interactions.

Consult your pharmacist before taking over-the-counter products.

If you take these:

Aloe + digoxin heart medicine
Aloe + steroids or blood pressure meds
Beta-Carotene + cigarette smoking
Beta-Carotene + cigarette smoking
Capsicum + blood-thinners
Cat's Claw + blood pressure meds
Cat's Claw + immunosuppressants
Chondroitin + blood-thinners
Echinacea + immunosuppressants
Ephedra + digoxin heart medicine
Ephedra + Diabetes meds
Fish oils + blood thinners
Garlic pills + blood-thinners, aspirin
Garlic pills + Diabetes medicines
Garlic pills + cyclosporine
Ginkgo Biloba + blood-thinners
Ginkgo + diuretic blood pressure pills
Ginkgo + anticonvulsants
Ginseng + blood-thinners
Glucosamine + Diabetes medicines
Glucosamine + cancer meds
Glucosamine + shellfish allergy

This could happen:

Lower potassium
Lower potassium
Higher cancer risk
High heart attack risk
Risk of bleeding
Low blood pressure
Reduced effectiveness
Risk of bleeding
Reduced effectiveness
Irregular heartbeat
Higher blood sugar
Risk of bleeding
Risk of bleeding
Very low blood sugar
Organ rejection
Risk of bleeding
Higher blood pressure
Risk of seizures
Risk of bleeding
May raise blood sugar
Cancer med won't work
Allergic reaction

If you take these:

Hawthorn + digoxin heart medicine
Kava-kava if you have liver problems
St. John's Wort + digoxin
St. John's Wort + psychiatric meds
St. John's Wort + Cyclosporine
St. John's Wort + blood thinners

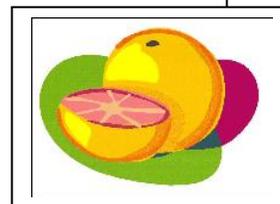
This could happen:

Irregular heartbeat
Severe liver damage
Digoxin won't work well
Toxic side effects
Organ rejection
Reduced effectiveness

For questions about medications,
call your pharmacist or physician.
Poison Centers can provide advice about
medication problems and are
open 24 hours. Call 1-800-222-1222.



These are some of the types of drugs that have interactions with whole grapefruit or grapefruit juice: drugs used to treat high blood pressure, "statin" drugs used to lower cholesterol, some anti-anxiety and antihistamine medications, protease inhibitors used to treat HIV/AIDS and immunosuppressant drugs used after transplant surgery. If you are on medications, ask a pharmacist for the latest information before taking grapefruit or grapefruit juice.



**Grapefruit &
Medication
Interactions**

Websites to search for medication interactions:

www.druginteractioncenter.org (grapefruit interactions)

<http://www.mskcc.org/aboutherbs>

<http://my.webmd.com/medical-information/drug-and-herb>

<http://nccam.nih.gov/health/>

Reference List for interaction information:

Thomson Micromedex Alternative Medicine Database:9/2005 edition

Lexi-Interact:2004 , <http://edis.ifas.ufl.edu/FS088>

Natural Medicines Comprehensive Database 2003, Edited by *Pharmacist's Letter*

Appendix N

Instructions for Educators



“Taking Your Medicines Safely” Pilot Study Refresher Course for Health Educators

Overview of the Pilot Study

PIRE is the coordinating center for this pilot study which will take place at two poison control centers in Missouri and West Virginia. The pilot study will consist of six convenience samples of older adults who already participate in activities at the local senior centers in St. Louis, Missouri and Morgantown, West Virginia.

The study’s purpose is to determine how to prevent older adults from being poisoned due to accidental misuse and interactions with their medicines. Older adults suffer from a high incidence of serious effects related to poisonings; the majority of these poisonings involve prescription and over-the-counter medicines, herbals, and vitamins. This study is important because proven educational interventions to prevent unintentional poisonings in seniors are virtually non-existent.

Recruitment of Seniors (Use Promotional Flyers)

Recruitment will consist of posting and distributing ***Promotional Flyers*** in the senior centers two weeks in advance of the health intervention. The ***Promotional Flyer*** has been e-mailed to you so that you can tailor the information to meet your specific needs. You will insert your Poison Center’s logo on the lower, right hand corner of the flyer and type in the date, time, and place of your health intervention. You can make color copies or black and white copies for distribution.

Characteristics of the seniors:

- approximately 65 -74 years (although age will not be verified and adults of any age who self identify as seniors may attend the program)
- speak English
- healthy or live independently, as demonstrated by the fact that they can read or listen to the consent form being read to them, understand the study, and volunteer to participate of their own free will.

Approximately 25 seniors will be recruited for each session.

Before Conducting the Health Intervention

Here's a checklist of things to bring with you:

1. LCD projector and screen for PowerPoint Presentation. If you do not have a screen, please make sure that you come to the facility early and find good wall space for the presentation.
2. Survey packets
3. Pencils
4. Envelopes (labeled with survey form names)
5. Supplies for the Tic-Tac-Toe game
 - a. Game pieces (questions and answers on the front and back)
 - b. Little basket, container, or bag to put the game pieces in
 - c. Big sheet of paper where the "X's" and "O's" will be displayed in front of the group (if there is no black board at your facility)
 - d. Prizes (pens with hotline number: 1-800-222-1222)
6. Incentives
 - a. Gift bags
 - b. Pens
 - c. Blank booklets
 - d. Herbal handouts
 - e. Poison center magnets
 - f. Laminated wallet cards containing the six questions
 - g. Copies of the Power Point presentation
 - h. \$10 gift cards

Data Collection During the Health Intervention

The survey forms have been stapled together for your convenience. Each packet has a unique participant ID number on the lower, right hand corner of each form. This way, each person will have their own participant ID number. The forms have been stapled in the order that you will be delivering the information to the participants:

1. Consent Form
2. Pre-test
3. Post-test
4. Participant Assessment Form

Even though the forms have been stapled together, please ask the participants not to flip the pages. Let them know that you would like to go over each form with them so that the information is clear to them. (You will not go over all of the forms at once, but you will go over each form as outlined in the *Educator Script*.) Once you go over the information on each form and the participants have finished filling them out, you will ask each participant to tear the form from his/her packet and hand it to you. For instance, once the participants signed the consent form, you will collect it from them and put them all in one envelope or folder. Then,

once the participants complete the pre-test, collect it from them and put it in a second envelope or folder. Please remember to repeat this step after the participants complete each form. At the end of the session, you should have collected four sets of forms.

Conducting the Health Intervention (Read Educator Script – page 1 only)

Once everyone is seated, please give each person a packet of forms.

Consent Forms

The first two pages in the packet is the ***Consent Form***. Read the form out loud to the group. Please let them know that a lot of their questions will be answered, so it would be great if they can allow you to read the entire form before they ask questions. However, if they cannot save their questions until the end, then answer their questions as it comes up. Be sure to keep track of your time, since you have only five minutes to complete this portion of the program. Individuals who agree to participate in the study will be asked to write their name and telephone number on the ***Consent Form***. You will ask the participants to tear the ***Consent Form*** from their packets and hand it to you.

Pre-Test

After you collect the ***Consent Forms***, ask the participants to look at the second form, which is the ***Pre-Test***. Read page 1 of the ***Instructions for Educators*** so that you can give them instructions on how to fill out the form correctly. If it is requested, please read each question out loud to the group so that they can answer the questions. Once the group is done answering the ***Pre-Test*** questions, please collect it from them. You can tell the group to put the packet aside because they will not need it again until 30 minutes later.

PowerPoint Presentation

Begin the ***Taking Your Medicines Safely Power Point presentation*** and go over each slide of the presentation by following the ***Educator Script***. You will read pages 2-6 of the ***Educator Script***.

Tic-Tac-Toe Game

When you are done with the Power Point presentation, you will begin the ***Tic Tac Toe*** game with the group. There are two ways that you can play this game with the group. You can read page 7 of the ***Educator Script***. Or, if you do not wish to read from page 7 of the ***Educator Script***, PIRE provided the game pieces (nine square pieces of paper with the question on one side and the answer on the opposite side). This way, you can pick the questions from a basket, container, or bag. Each person who answers the question correctly will receive a pen with the hotline number 1-800-222-1222. You will write the “X’s” and “O’s” on a big sheet of paper or black board in front of the group.

Post-Test

After the ***Tic-Tac-Toe*** game, please tell the group to refer back to their packet of forms and look at the ***Post-Test***. Once again, please read page 1 of the ***Instructions for Educators*** so that you can remind them how to fill out the forms correctly. If it is requested, please read each question out loud to the group so that they can answer the questions. Once the group is done answering the ***Post-Test*** questions, please collect them from the group.

Participant Assessment Form

After the participants turn in the ***Post-Test***, they should only have one form remaining and that is the ***Participant Assessment Form***. Please read page 2 of the ***Instructions for Educators*** so that you can go over how to fill out the form correctly. Let the participants know that we welcome all of their feedback because that will help us to improve the research study. Once the group completes the ***Participant Assessment Form***, collect all of the forms from the group.

Incentives

Once all of the forms have been collected, the health intervention (formal program) is completed. You will hand out one incentive bag to each person. Incentives will include a gift bag decorated with the six questions you should always ask when receiving a new medicine, a pen, a blank booklet to list all medications and herbal supplements for easy reference, an herbal handout, poison center magnet, laminated wallet card containing the six questions, and a copy of the power point presentation. The incentives will serve as reminders or positive reinforcement to aide the participants in adopting protective medication management behaviors.

After the Health Intervention

Once you presented the information to the participants, collected the forms, and gave out the incentives, please complete the ***Cover Page for Pilot Forms***. This form will help all of us keep track of important information such as the pilot site, your name, date and location of the health intervention, number of attendees, and number of forms collected that day.

Also, take a look at the ***Consent Form*** again. In four weeks, you will make follow-up telephone calls to all of the participants. Use the blank ***Contact Sheet*** that has been provided to you to write down the participant IDs, names, and telephone numbers of each attendee. You should not mail a copy of the ***Contact Sheet*** to PIRE. The information on this ***Contact Sheet*** will prevent a lot of confusion when you need to make the follow-up calls in four weeks, since you will need to match the Participant ID with the same attendee at the health intervention workshop. Please keep this ***Contact Sheet*** in a locked file cabinet to protect the privacy of the participants.

Mail to PIRE

Please FedEx the following forms back to PIRE within 2 days after the health intervention workshop was conducted:

- Consent forms
- Pre-tests
- Post-tests
- Participant assessment forms
- Cover page for pilot forms

Here's the information to put on the FedEx Airbill (the numbers correspond to the line item on the FedEx Airbill) :

1. FROM: Your information
Date and your name, address, telephone number
On the line "Sender's FedEx Account #"
(on the right of the date line),
write: **1811-3624-3**
2. Your Internal Billing Reference,
write: **0269.01.05**
3. TO: PIRE's information
Recipient's name: **Monique Sheppard**
Telephone: **301-755-2728**
Company: **Pacific Institute for Research & Evaluation**
Address: **11720 Beltsville Drive, Suite 900**
Calverton, MD 20705
- 4a. Check box: **"FedEx Standard Overnight"**
5. Check box: **"FedEx Box"**
6. Check box: **"No"**
(shipment doesn't contain dangerous goods).
You can ignore the rest of the other questions
in this section.
7. Check box: **"Recipient"**

The Next Steps...

Data Collection After the Health Intervention

Four weeks after the date of the workshop, you will conduct follow-up telephone calls to help determine if any behavior has been modified. Refer to your ***Contact Sheet***. You will call each participant and ask them the ***Follow-Up Telephone Instrument Questions***. You will attempt to reach each participant three times via telephone. If you are unable to reach a participant after 3 telephone attempts, you will note the reason on the ***Unable to Contact for Follow-Up Form***.

Please conduct the follow-up telephone calls and make all attempts to reach the participants within two weeks. Do not destroy the ***Contact Sheet*** until you receive a call from PIRE to let you know that it's ok to shred it. Please FedEx the ***Follow-Up Telephone Instrument Questions*** and ***Unable to Contact for Follow-Up Form*** to PIRE for analysis.

In closing, PIRE appreciates the time and effort that you have contributed to this pilot study and we look forward to sharing the results with you!

Appendix O

Follow-Up Telephone Instrument Questions



FOLLOW-UP TELEPHONE INSTRUMENT QUESTIONS

INTRODUCTION:

Educator: Hi, I'm _____ from _____. Is _____ available?
(verify this is _____)

I'd like to ask you a few questions about your medications and the program you attended at _____.
Is this a good time to talk? We probably need 10 to 15 minutes. (If not convenient, arrange a callback)

What you tell me today will be kept private, so please be open with your answers. (This is not a test;
there are no right or wrong answers)

Open-ended Questions

1. Do you remember the program? If not, provide a brief description of program/setting.

2. Did you change anything about your medicines or everyday routines based on the program? If yes, what did you change? If no, why not? Yes No

Explanation:

3. Have you had any bad medicine interactions in the last month? If so, tell me about it. Yes No

Explanation:

4. Since the program, have you spoken with your doctor, pharmacist or poison center about your medicines? If yes, what questions did you ask? If no, why not? Yes No

Explanation:

5. Are you keeping track of your medicines in a particular way? (e.g., remembering to take correct doses on time) If yes, what works for you? If no, how do you keep track of your medicine dosing schedule? Yes No

Explanation:

FOLLOW-UP TELEPHONE INSTRUMENT QUESTIONS

Open-ended Questions (cont'd)

6. Have you used the Passport/Pill minder we gave to you? If yes, for how long? Yes No

Length of Time:

It is recommended that this question be revised to say "Have you had any opportunity to use the passport/pill minder . . ."

7. Did it help you? If yes, how? (Probe for remembering to take medications, preventing missed doses)
 Yes No (If no, skip to question #10)

Explanation:

8. If used, did you have any problems using the Passport/Pill minder? If so, what were they? Yes No

Problems with Passport/Pill minder:

9. Do you plan to continue using the Passport/Pill minder/other method identified?
If no, why not? Yes No

Reason(s) not to continue:

Re: The Program that the respondent attended 4 weeks ago:

10. What was the most useful part of the program? (Probe for specific activity or learning component that led to behavior change, if any)

11. What was the least useful part of the program? (Probe for specific activity or learning component that led to behavior change, if any)

12. Is there anything that would make this kind of program better for people your age?
If so, describe. Yes No

Improvement ideas:

It is recommended that this question be revised to say "Is there anything that would make this kind of program better for you?"

13. Do you have any other comments? Yes No

Thanks so much for your time and feedback!!!

Appendix P

**Promotional
Flyer**



Taking Your Medicines Safely



Do you take medicines regularly?
Participate in a brief research study and learn about:

- Potential problems of taking prescription medicines with over-the-counter products
- Ways to keep track of your medicines
- Questions to ask about your medicines



Date _____

Time _____

Place _____

Sponsoring Logo

Appendix Q

Qualitative Data Analysis



Qualitative Evaluation Study Results: Analysis for Four-Week Follow-up

The *Taking Your Medicines Safely* Program was a one-hour intervention on medication safety delivered to older adults in two American cities. This small-group education intervention was designed for healthy adults between the ages of 65 and 74 (although adults of any age who self-identified as seniors attended the program) and focused on the following topics: (1) dangers associated with combining health remedies, such as prescription medications, over-the-counter medications, herbals, vitamin and mineral supplements and other natural remedies; (2) patient-provider communications (e.g., points to tell the doctor, asking health professionals important questions); (3) information resources (e.g., identifying reputable sources of information); (4) finding and organizing relevant medication and supplement information, such as dosing procedures and potential side effects; and (5) medication management techniques.

Eight groups of seniors of approximately 18 people each viewed the “Taking Your Medicines Safely” PowerPoint presentation (Appendix A) and listened to an interactive Educator Script (Appendix D), and played a Tic-Tac-Toe game (Appendix E) to reinforce concepts designed to decrease medication mismanagement. Short questionnaires immediately before and after the education session were used to determine what the seniors already knew and their attitudes about being able to prevent a poisoning. After the post-test, participants were asked to fill-out a participant assessment form to help identify changes that may be necessary for a larger future research study. At the conclusion of the in-person session, incentives were distributed which were reminders or positive reinforcements to aide the seniors in adopting protective medication management behaviors.

The following analysis details the results of the follow-up phone calls made to each consenting participant one month after the intervention. The purpose of these follow-up phone calls was to determine if any behavior had been modified.

A total of 95 (68%) of the 139 original participants to the in-person intervention responded to the four-week follow-up phone calls. Among them, 69 out of 89 (77.5%) were Missouri participants and 26 out of 50 (52%) were West Virginia participants. A total of 88 (92.6%) of the 95 participants are currently taking some form of medication ranging from a daily low dose aspirin to multiple medications with potential interactions. Six (6.3%) of the 95 participants are not on medication at this time, although 2 (33%) of these 6 participants admit to taking daily vitamins, and it is unknown if one is currently taking medications. Each

question asked during the 15-minute follow-up phone call is analyzed separately, and conclusions about the overall results from the phone calls are presented at the end of this appendix. Please see Appendix G for the actual instrument used by Educators.

Q1: Do you remember the program?

- 94 (99%) of 95 participants said yes. The 1 (1%) participant, who said no, remarked “NO, IT WAS A PROGRAM ABOUT DRUGS.” This participant did answer all remaining questions, so it is clear that his memory of the program did come back to him (while this participant’s answers identified his sex, it is impossible to determine sex of the majority of the participants).
- All 26 participants from the West Virginia sites elaborated. Only 3 (4.3%) of the 69 participants from the Missouri sites elaborated on what they remembered about the program. Only 3 (4.3%) of the 69 participants from the Missouri sites elaborated, including the one participant who said he didn’t remember the program. The 29 participants who elaborated stated something along the lines that the program was good, interesting, informative, and provided important information on medications (26 of the 29 participants, 89.7%), an example of what participants said was “YES, I HAVE BEGINNING ALZHEIMERS, BUT I DID LEARN A LOT AND [the program was] STIMULATING.” The remaining 2 (6.9%) of the 29 participants who commented are not currently taking medications and noted that they did remember the program was about medicines and that “I AM VERY FORTUNATE NOT TO BE ON MED[ICATIONS]. FEW PEOPLE KNOW ABOUT MED[ICATION] INTERACTIONS [AND] MED[ICINE] MANAGEMENT. [I] FELT COMFORTABLE ASKING QUESTIONS.”

Q2: Did you change anything about your medicines or everyday routines based on the program? If so, what were they?

- 94 (99%) of the 95 participants answered this question.
- 76 (81%) of the 94 participants said no, but many explained their answers. 42 (55%) of the 76 participants said that they already had a system in place that was working for them, 11 (14%) of the 76 participants said that they didn’t need to change, 5 (6.6%) of the 76 said that they were not on any medicines, 4 (5%) of the 76 said that they go according to their doctor’s orders, and 3 (4%) of the 76 participants said that they *should* change what they are doing based on what they learned (but have not). The comments from the last group of 3 participants were: “IT JUST MADE ME MORE AWARE OF WHAT I WAS TAKING.” “I TAKE MY MEDS WITH WATER NOW. I DON’T USE GRAPEFRUIT JUICE ANYMORE.” and “[WE’RE] ONLY ON 3 MEDS, USE THE NEW PILL [BOX] YOU GAVE US, THREW THE OLD ONE AWAY.” These last two comments could very well be viewed as change statements,

which would bring the number of participants who did change something about their medicines or everyday routines based on this program from 19 (20.2%) of 94 to 21 (22%) of 94 participants.

- Based on the 18 (19.1%) of 94 participants who said yes to the question initially, several changes were noted. 11 (61.1%) of the 18 participants actually changed something about their medicine routine. Three of the participants have given up grapefruit/grapefruit juice because of the potential problems; 4 are using the pillbox that they got at the presentation, and 2 are using a new pillbox; 1 is using the wallet card; and 1 respondent indicated that they had a new medicine added to their routine. Seven (38.9%) of the 18 participants said that they were more aware and conscientious since the program with their medicines; 1 of these 7 said that they were more aware because “I AM A DIABETIC AND I HAD OPEN HEART SURGERY SO I TAKE A LOT OF MEDS.”

Q3: Have you had any bad medicine interactions in the last month? If so, tell me about it.

- 94 (99%) of the 95 participants answered this question.
- 90 (95.7%) of the 94 participants answered no, they did not have any bad interactions in the last month. Participants who elaborated on their no answer (8, 8.9%, of 90) indicated some past medicine interaction (4, 50%, of 8) “I WAS LIGHT HEADED, AND I THOUGHT IT COULD’VE BEEN CAUSED BY THE MEDICINES I WAS TAKING.” “NOT RECENTLY, BUT LIPITOR HAS CAUSED ME CHRONIC KIDNEY FAILURE??? AND [I HAVE A] LOW HEART RATE [BECAUSE MY] DOSAGE [WAS TOO HIGH] AND HAD TO [BE] ADJUST[ED].” “WELL, YEARS AGO (FEROCIN MED PATCH),” and “NO-YEARS AGO ONLY. I AM ALLERGIC TO PENICILLIN SO I AVOID THAT.” One (12.5%) of 8 participants indicated that they had not introduced any new medicines into their routine, and 1 of 8 stated that they were not currently taking any medication (this respondent’s answer agreed with the previous question). The final 2 (25%) of 8 participants who responded no to bad medicine interactions and elaborated said, “NO, [I] CAN’T TAKE STRONG MEDS THOUGH. NO ALEVE OR ANY MEDS LIKE THAT. NO PAIN KILLERS” and “NO-ONLY THING IS SUGAR RUNS HIGH AND MEDICINE IS ADJUSTED AS A RESULT.”
- 4 (4.2%) of the 94 participants answered yes, they said the following:
 - ✓ “I’M NOT SURE. I’M NOW TAKING 3 DIFFERENT BLOOD PRESSURE MEDICINES. I ALSO HAVE DIABETES. I GET A TINGLING HANDS. A

NURSE PRACTITIONER GAVE ME A SLEEPING/ANXIETY PILL, WHICH MADE ME TINGLY ALL OVER.”

- ✓ “NOT THAT I KNOW OF OTHER THAN MUSCLE [PAIN], HAVE PAIN THAT I THINK IS [BECAUSE] OF MED[ICINE] ALSO BP [BLOOD PRESSURE] MED[ICINE] MAKES ME TIRED.”
- ✓ “[MY] PROBLEM’S [BEEN] LOW BP [BLOOD PRESSURE]. MAYBE [I’M] NOT EATING RIGHT. [I’M] TRYING TO EAT REGULARLY [AND I HAVE BEEN].”
- ✓ “YES, . . . [MY] DOCTOR [IS] TRYING TO GET [MY BLOOD PRESSURE] DOWN [BECAUSE I HAD] RETAINED FLUID AND HAD TO BE HOSPITAL[IZED] FOR 3 DAYS.”

- Based on the elaborated responses, it seems that people are reporting adverse reactions to medication.

Q4: Have you talked with your doctor or pharmacist about your medicines? If so, what questions did you ask?

- 94 (99%) of the 95 participants responded.
- 66 (70.2%) of 94 participants said no, the reasons they gave were as follows: 17 (25.8%) of 66 said that they had not seen their doctor since the educational intervention; 31 (47%) of 66 participants said that they did not need to talk with their doctors or they haven’t had any questions, Examples of responses were “HAVE BEEN TO DR. BUT NO QUESTIONS TO ASK HIM. I HAVE BEEN ON THE MEDS I TAKE FOR YEARS”; 1 (1.5%) of 66 said “FORGOT BUT THINKING ABOUT IT FOR MY NEXT APPOINTMENT”; and 6 (9.1%) of 66 said something similar to “HAVE REGULAR CHECK UPS AND IF I HAVE CHANGES TO MY MEDS I KNOW NOW TO GO OVER THEM WITH MY DR.” The remaining participants who said no did not elaborate.
- 28 (29.8%) of 94 participants said yes and they all elaborated on questions for their doctors, pharmacists or poison control centers, the questions they mentioned were:
 - ✓ Doctor (24, 85.7%, of 28)
 - All questions on wallet card
 - “DO ALL MY MEDICINES INTERACT? CAN I TAKE MY MEDICINES AT ONCE?”

- SPOKE TO SUGAR DOCTOR ABOUT GETTING ON A SCHEDULE. I AM ASLO DEPRESSED AND WANT TO DO BETTER. I TAKE SO MANY MEDS IT IS SO HARD.”
 - “WHY AM I FEELING LIGHT-HEADED? IS MY MEDICINE MAKING ME FEEL THIS WAY? I FOUND OUT I HAD A SALT IMBALANCE.”
 - “WHY ARE YOU MAKING CHANGES IN MY MEDICINES?”
 - “IF I COULD TAKE A DRUG FOR THE RASH WITHOUT ANY INTERACTIONS WITH THE MEDICINES I’M CURRENTLY TAKING.”
 - “I ASKED IF I HAD TO BE PUT ON INSULIN.” “I ASKED IF MY MEDICINE WAS CAUSING INDIGESTION.” “HOW THE NEW MEDICINE WILL INTERACT WITH CURRENT MEDICINES.” “NEURONTIN AND LORATEPAM.” “GRAPEFRUIT INTERACTION.” “IF I WAS TAKING MY MEDICINES CORRECTLY.” IF THERE WAS A [GENERIC] VERSION OF MY CURRENT MEDICINE.”
 - 10 of 28 said something similar to “DR.HELPING TO MANAGE MEDS. GOES OVER LIST AT EACH VISIT...”
- Pharmacists (2, 7.1%, of 28)
 - ✓ “I ASKED THE PHARMACIST ABOUT LIPITOR. I TOOK MY LIST OF MEDICINES TO HIM TO SEE IF THERE WOULD BE ANY DRUG INTERACTIONS,”
 - Poison Control Center(2, 7.1%, of 28)
 - ✓ “I CALLED THE POISON CENTER AND I TOOK THE “SIX QUESTIONS” CARD TO THE DOCTOR,”& “I CALLED THE POISON CENTER TO FIND [OUT] THAT MY MEDICINE I WAS TAKING AT NIGHT WAS KEEPING ME AWAKE. THEY SAID I COULD TAKE THE PILLS IN THE AM.”
 - Seven of the participants who answered no had not talked with their doctors or pharmacists actually would ask questions based on their elaborated responses. This brings the total number of respondents who would ask questions from 28 to 35 people or 7%

Q5: Are you tracking your medicines in any way? (e.g., remembering to take correct doses on time) If so, what works for you?

- 94 (99%) of 95 participants responded to this question.

- 19 (20.2%) of 94 participants said that they were not tracking their medicines. The reasons were as follows:
 - ✓ 6 (31.6%) of the 19 participants who responded no, said that they rely on their memory to keep track of their medicines, “I KNOW EVERY MORNING AFTER BREAKFAST I TAKE 2 PILLS, EVERY NIGHT I TAKE 1 PILL, EVERY SATURDAY I TAKE PHOSPHOMAX.”
 - ✓ 6 (31.6%) of the 19 participants who responded no said that they do not take any medicines at all.
 - ✓ 4 (21%) of the 19 participants said that although they do not currently track their medicines, they are thinking about it, “NO, BUT I SHOULD ESPECIALLY SINCE I SAW THE PROGRAM. I FORGET SOMETIMES WHEN (IF) I HAVE TAKEN SOMETHING AND I WILL JUST SKIP IT UNTIL NEXT TIME SO I DON’T TAKE A DOUBLE DOSE.”
 - ✓ 2 (10.5%) of 19 no respondents who gave a reason for their answer said that their wife keeps their medicines in check, “MY WIFE MAKES SURE I GET MY MEDICINE ON TIME,” and the final respondent (5.3%) did not elaborate.
- 75 (79.8%) of 94 participants said yes, they were tracking their medicines. The methods that they are using are as follows:
 - ✓ 2 (2.7%) of the 75 yes respondents indicated that they use a medicine list to track their medicines: “I HAVE MY MEDICINES WRITTEN DOWN ON MY FRIDGE. I HAVE MORE COPIES OF MY MEDICINE LIST THAN I DID BEFORE.”
 - ✓ 20 (26.7%) of 75 of the yes respondents rely on their memory for tracking their medicines: “OF COURSE, BEEN ON EM SO LONG THAT I KNOW WHAT TO DO. LIKE MY SYNTHROID HAVE TAKEN SINCE 1977 AND I JUST KNOW TO TAKE IT BEFORE BREAKFAST.”
 - ✓ 2 (2.7%) of the 75 yes respondents said that they now use the materials that they received at the educational intervention to help keep track of their medicines: “DIARY AND PILL MINDER THAT I RECEIVED AT THE SEMINAR,” and “I HAVE A CONTAINER THAT I KEEP MY MEDS IN THAT HAS DAILY DOSAGES. DIDN’T I GET THAT AT THIS PROGRAM? YES, THAT IS THE ONE I USE.”

- ✓ 50 (66.7%) of the 75 respondents use a pill box to track their medicines: “I LAY OUT ALL MY PILLS IN A 28 DAY PILL MINDER (IT’S BIGGER THAN THE ONE YOU GAVE ME),” and “I USE A DAILY PILL MINDER FOR DAYTIME PILLS AND ONE FOR NIGHT TIME PILLS.”
- ✓ The final respondent (1.3%) said, “MY WIFE PUTS MY MEDS ON THE TABLE AND I TAKE THEM.” This last response most likely does not qualify for are **you** tracking your medicines; if this response is removed the percentages do not noticeably change.
- Based on the respondents who elaborated, actually only 54 (57 %) of the 94 participants have their own method for tracking their medications, and two of these respondents adopted their method after the program.

Q6: Have you used the passport/pill minder we gave you? If so, for how long?

- All 95 (100%) participants answered this question.
- 66 (69.5%) of the 95 participants said no, those that elaborated (N=18) said:
 - ✓ that they had been using the pill minder or passport for “4 weeks” (this respondent indicated in the previous question that they had gotten their own pill box);
 - ✓ that they “FOUND IT HARD TO USE”;
 - ✓ that they “GAVE TO THE MOTHER-IN-LAW WHO TAKES A LOT OF MEDS”;
 - ✓ that they (4 respondents) relied on their memory: “I DON’T NEED EITHER. WOULD BE USEFUL TO PEOPLE WHO CAN’T REMEMBER”;
 - ✓ that they “haven’t tried to use it”;
 - ✓ that they did not take medicines (2 participants);
 - ✓ that they didn’t feel the pill minder was for them: “NOT FOR ME, ONLY TAKE 1 MED OCCASSIONALLY”;
 - ✓ that they hadn’t started using it yet (1 respondent) or were saving it (2 respondents): “I’LL USE THE PILL MINDER WHEN I GO OUT OF TOWN”;
 - and

- ✓ that they are considering using it in the future (2 respondents): “DON’T NEED PILL MINDER OR PASSPORT [BECAUSE] I ONLY TAKE 3 OR 4 MEDICATIONS. BUT MAYBE I SHOULD START USING IT SO I KNOW WHAT I HAVE TAKEN.”
- 29 (30.5%) of the 95 participants said yes, the length of time given ranged from 1 to 5 weeks, with the average time of use being 3.6 weeks among the 21 (72.4%) of 29 respondents. 1 (3.4%) of 29 respondents said that “I TRIED IT FOR 2 WEEKS, BUT I LIKE MY SMALLER PILL MINDER BETTER,” (this respondent’s time was not computed in the average of 3.6 weeks). Another (3.4%) respondent who elaborated stated that they “WILL USE IT,” or indicated whether they used the pill minder (3 participants, 10.3%) or passport (1 participant, 3.4%).

Q7: Did it [passport/pill minder] help you? If yes, how?

- 82 (86.3%) of the 95 participants answered this question. 13 (13.9%) of the 95 participants did not answer; 12 of these participants also answered no to the previous question of having used the passport or pill minder that they received in the educational session; and the remaining person who did not answer this question said yes to the previous question, stating that they *will* use the passport or pill minder.
- 55 (67.1%) of the 82 participants who responded to this question, said no. Only 3 (5.4%) of the 55 participants answered yes to the previous question that they had used the passport/pill minder that was given to them, 2 of those 3 gave a time frame in their previous response, and 1 indicated that they liked what they had before they started using the *Taking Your Medicines Safely* pill minder. All of the people who elaborated on their response, answered no to the previous question. Their reasons ranged from the pill minder was difficult to use (1 respondent), they forgot about it (1 respondent), they are not taking any medicines (1 respondent), and it was too big (4 respondents).
- 27 (32.9%) of the 82 participants responded positively to this question. Following is a list of reasons that they gave of how the passport or pill minder helped them.
 - ✓ One (3.7%) of 27 respondents referred to the card that came with the pill minder: “I WRITE DOWN INSTRUCTIONS FOR MY MEDICINES ON THAT PAPER THAT CAME FROM THE PILL BOX.” Another respondent commented that the “PILL MINDER [IS] EASIER TO USE THAN THE ONE WE HAD.”
 - ✓ 14 (51.8%) of 27 respondents indicated that materials from the program “HELPS ME REMEMBER TO TAKE THE DOSE AND RECORD THEM” and that the materials “KEEPS BETTER TRACK OF THE MEDS I GOT AND WHEN TO TAKE THEM.” Another respondent (3.7%) specifically commented on the

passport: “THE PASSPORT IS BETTER THAN A PLAIN PIECE OF PAPER FOR CHECKING OFF DOSES. IT HELPS ME TO REMEMBER TO TAKE ALL DOSES AND KEEPS ME FROM MIXING THE PILLS.”

- ✓ 6 (22.2%) of 27 respondents specifically commented about the windows of the pill minder: “I LIKE THE SEE THROUGH WINDOWS. I SEE THE EMPTY SPACE AND THAT’S HOW I KNOW I TOOK THE PILL.”
- ✓ The final respondent (3.7%) who elaborated on how the materials from the workshop helped them indicated that “I’VE USED THE PILL BOX FOR GOING ON VACATION.”

Q8: If used, did you have any trouble using the passport/pill minder? If so, what were they?

- 44 (46.3%) of 95 participants responded to this question. Of the 51 (53.7%) persons who did not answer this question, only 1 (1%) answered yes to the previous question and when they elaborated on the previous question they said, “PUTTING ALL THE PILLS INTO THE BOX MAKES IT EASIER TO SEE AND REMEMBER THE MEDICINES.” 13 (25.5%) of the 51 non-responders also did not respond to question #7. The remaining 37 (72.6%) of 51 non-responders answered no to the previous question.
- 36 (81.8%) of 44 participants said no to having trouble with the passport/pill minder. Of the 36 (100%) who responded no, 23 (63.9%) had responded that the pill minder/passport did help them in the previous question. Those who elaborated on their no response said the following: “HARD TO GET THE MEDICINES OUT OF THE LITTLE COMPARTMENTS,” or “VERY USEFUL-W/THE DAYS OF THE WEEK ON IT. . . .,” or “OLD HAT!” The 1st comment could be viewed as ‘trouble’ with using the pill minder, but since the respondent said “no” to the question, this comment is viewed as an irritation rather than a problem.
- 8 (18.2%) of 44 participants said yes they had trouble with the passport or pill minder. 3 (37.5%) of these 8 responders answered yes on the previous question that the passport/pill minder helped them. Details on the problems encountered are as follows:
 - ✓ 1 (12.5%) respondent said that they “CAN’T GET IT OPEN”;
 - ✓ another (12.5%) indicated that they forget “I STILL FIND MYSELF FORGETTING TO TAKE MY MED[ICINE], BUT THEY’RE MOSTLY VITAMINS”;

- ✓ another (12.5%) said that it was too big: “THE PILL MINDER WAS TOO BIG. I’LL USE IT WHEN I TRAVEL”; and
- ✓ the final 5 (62.5%) respondents said that the passport/pill minder was difficult, “IT’S HARD TO USE. YOU END UP DUMPING AN ENTIRE ROW OF PILLS.”

Q9: Do you plan to continue using the passport/pill minder/other method identified? If not, why not?

- 45 (47.4%) of the 95 participants responded to this question.
- Of the 50 (52.6%) participants who did not answer this question, 11 (22%) of the 50 also did not answer if the passport/pill minder was helpful, and 39 (78%) of 50 answered that the passport/pill minder was not helpful to them.
- 16 (35.6%) of 45 respondents said no, they did not plan to continue using the passport/pill minder. 11 (68.7%) of the 16 the respondents who answered no said that this was not applicable to them, all of these respondents also answered no to having used the passport/pill minder. Four of the remaining 5 (31.2%) respondents who gave a no answer, also gave a reason as follows: “DAILY PILL REMINDER WORKS BEST FOR ME.” “HARD TO OPEN.” “MY HUSBAND CAN GET THE PILL MINDER OPEN, BUT I CAN’T. I AM TIRED AND ANEMIC.” “WILL TRY TO USE IT IN THE FUTURE.”
- 29 (64.4%) of 45 respondents said that yes, they would continue to use the passport/pill minder. The reasons that they gave were: “I THINK SO,” “WHY NOT,” and “[IT] WORKS FOR ME.”

Q10: What was the most useful part of the program?

- All 95 (100%) participants responded to this question.
- 9 (9.5%) responded that all aspects of the program were useful, “ALL OF IT-EVERY PIECE OF THE INFO IS VERY IMPORTANT.”
- 7 (7.4%) responded that they enjoyed the discussion, and of these 7, 4 responded that in addition to the discussion they also enjoyed some other aspect of the program (i.e. slide presentation, learning of poison center). Comments were similar to “HEARING OTHERS SENIORS TALK ABOUT HOW THEY HANDLE THEIR MEDICINES. LEARNING ABOUT THE POISON CENTER BEING A RESOURCE FOR INFORMATION ABOUT MEDICINES.”

- 4 (4.2%) respondents commented that they found various aspects of the program useful, such as getting feedback from the presenter (2, 2.1%, respondents). “JUST KNOWING THAT SOMEONE IS INTERESTED IN HELPING US DEVELOP A METHOD FOR TAKING MEDS”; talking with their doctor (1%, one respondent) “DR HAS ME ON LOW DOSE ASPIRIN AND BLOOD THINNER AND I WAS WORRIED ABOUT THIS BECAUSE OF WHAT I HEARD IN THE PROGRAM. I CALLED HIM AND HE SAID FOR ME TO CONTINUE TAKING BOTH, BUT I DON’T LIKE IT”; or getting people to listen.
- 5 (5.3%) participants felt that the incentives were the most useful part of the program. “THE GIVE-AWAYS WERE GREAT!”
- 23 (24.2%) respondents commented that learning about medicine and food interactions was the most useful part of the program. “FINDING OUT THAT SOME MEDICINES CAN INTERACT WITH A VARIETY OF THINGS,” and “LEARNING ABOUT THE VARIOUS INTERACTIONS: GRAPEFRUIT AND LIPTOR, ETC.”
- 1 (1%) participant commented that “DON’T TAKE MEDS BUT THERE MAY BE A TIME. WHEN I NEED HELP W/MEDS, I HAVE PUT IT IN A SAFE PLACE.”
- 5 (5.3%) participants commented that they did not find anything useful, 4 of these 5 participants did not point out any deficiencies in the program when asked for the least useful part; 1 (1%) said “DON’T LET ONE PERSON DOMINATE QUESTION AND ANSWER SESSION. SOME PEOPLE LOVE TO TALK ABOUT THEMSELVES.” 1 (1%) participant commented specifically on the passport “PASSPORT REALLY NEAT. MAYBE USE IN FUTURE,” and another specifically on the pill minder.
- 7 (7.4%) participants commented about the poison control center, stating that the most useful part of the program was “WHEN I LEARNED THAT YOU COULD CALL THE POISON CENTER WITH QUESTIONS ABOUT YOUR MEDICINE.”
- 6 (6.3%) participants commented specifically on the PowerPoint presentation being the most useful part of the program. “THE WAY THE MATERIAL WAS PRESENTED. THE USE OF PLAIN ENGLISH WAS HELPFUL—THE POWERPOINT PRESENTATION.” Another respondent commented that the most useful part was “EASY TO UNDERSTAND SCENARIOS. HELPS FOLKS WHEN YOU HAVE EXAMPLES.”
- 2 (2.1%) respondents enjoyed Tic-Tac-Toe the most. “I LIKE THE TIC-TAC-TOE GAME.THEY HELPED ME REMEMBER WHAT WAS IMPORTANT ABOUT THE TALK.”

- 18 (18.9%) participants felt the topic was the most useful part of the program. “BEING REMINDED HOW TO TAKE MEDICINES AND TO CONTACT DOCTOR IF YOU HAVE SIDE EFFECTS.”
- 5 (5.3%) respondents did not know what aspect of the program was the most useful to them.

Q11: Least useful part?

- 91 (95.8%) of the 95 participants responded to this questions.
- 60 (65.9%) of 91 participants responded that they could not think of anything or that it was all useful information, “WE FOUND NOTHING WRONG [with] THE PROGRAM,” or “I DON’T KNOW- DIDN’T HAVE A LEAST FAVORITE PART.”
- 1 (1%) participant indicated that “I DIDN’T REALLY NEED THE INFORMATION,” while 9 (9.9%) participants indicated that they already knew the information: “EVERYTHING YOU SPOKE ABOUT, I ALREADY KNEW.”
- 6 (6.3%) participants commented on other aspects of the program that they did not like such as dominated discussion, difficulty hearing, speed of presentation, wanting more medical detail, wanting more group discussion, and people were focused on lunch.
- 1 (1%) participant did not like the passport: “THE CALENDAR ON THE PASSPORT WAS FOR 2006”; and 4 (4.4%) others did not like the pill minder: “MATERIALS PASSED OUT EARLIER IN PROGRAM-LOST ATTENTION AND PILL MINDER WAS TOO DIFFICULT, HARD TO UNDERSTAND AND OPEN.”
- 10 (11%) respondents commented that the least useful part of the program was the Tic-Tac-Toe game. “TIC-TAC-TOE GAME WAS NOT MY FAVORITE, BUT IT WAS A USEFUL REINFORCING TOOL.”

Q12: Is there anything that would make this kind of program better for people your age? If so, describe.

- 94 (98.9%) of 95 participants responded.
- 79 (84%) of 94 participants said no. Even though so many said no, a few did elaborate: 20 (21.3%) participants did not suggest improvements “ITS GOOD FOR SENIORS TO BE AWARE OF THEIR MEDICINES.” The remaining 3 (3.2%) no respondents who elaborated commented that the program will need a vibrant speaker: “YOU ARE AN ENTHUSIASTIC SPEAKER. BE SURE THAT THE SPEAKER CAN HOLD THE ATTENTION OF THE AUDIANCE LIKE YOU CAN!” “OFFER THIS PROGRAM TO YOUNGER PEOPLE AND UNDEREDUCATED PEOPLE.

PERHAPS A BLUE COLLAR AUDIENCE MAY BENEFIT.” “I HAVEN’T HAD TIME TO THINK ABOUT IT.”

- 15 (16%) of 94 participants said yes. Their ideas varied and ranged from including more personal medicine discussion to using a stage, presenting only in small group, having follow-up sessions, focusing on what grandparents should be doing for poison prevention, using better pre-program advertising, more incentives, more details on interactions, and keeping the program short, “MAKE THE PROGRAM MEDICALLY ORIENTED OR ADD A SECTION TO ADDRESS SPECIFIC MEDICINE QUESTIONS.”

Q13: Do you have any other comments?

- 89 (94.7%) of 95 participants responded to this question.
- 38 (42.7%) of 89 said that they had no further comments or similar comments such as “CAN’T THINK OF ANYTHING.”
- 51 (57.3%) of 89 said yes. Their comments generally focused on high praise of the program and the speakers. “THIS WAS A VERY IMPORTANT TALK. I HOPE YOU CAN CONTINUE TO GIVE IT!” “I HOPE PEOPLE LEARN SOMETHING AND CHANGE THEIR WAYS.” “I LIKE THE PILL BOX. I FEEL SAFE WHEN MY GRANDCHILDREN ARE AROUND.” And a final comment of “PRINT LARGE ENOUGH TO READ. THANKS!”

Discussion/Conclusion

All 95 four-week follow-up questionnaire participants remembered the program and many commented that it was informative and interesting. Almost 80% of the participants had a method for tracking their medicines before the program. The most important achievement of the program was the change in behavior in 22% of participants as a result of it, while 4% indicated a possible medicine interaction. However, by the participants' answers, it seems clear that they did not understand the difference between a medical interaction and an adverse reaction to medications. Another achievement of the program was that 31% of participants had used the passport/pill minders handed to them and moreover, were planning to continue their use. Generally, the program was liked by the participants – only 7% did not find any part of it useful, only 6% considered the passport/pill minder too complicated, and only 11% did not find the tic-tac-toe game interesting. Although not all 95 participants answered every question, the questions skipped seemed random or followed the skip pattern written into the instrument.

Given the pilot nature of the program, we identified several possible improvements to future programs based on participants' comments. Examples of the proposed improvements include:

1. Provide more freebies;
2. Discuss more specific conditions and medicine interactions;
3. Design a less complicated pill minder
4. Use a smaller group;
5. Have people make out their own medicine schedule, in order to provide a concrete example;
6. Advertise the program better;
7. Add a section to address specific medicine questions;
8. Make time for one-on-one questions;
9. Provide examples of bottles that can be opened by elderly;
10. Add discussion on medicines practices;
11. Add more focus on basic poison prevention for grandparents
12. Consider multi-session program to improve the relationship between the group and the speaker.

The most popular comment or suggestion was to take individual questions about medications. To accommodate this suggestion, Educators actually called the poison center from a speaker phone during the session. This was well reviewed by the audience, and the poison center was informed in advance.

Appendix R

Pilot Study Interviews with Educators



Taking Your Medicines Safely: Pilot Study Summary and Analysis of Interviews with Health Educators

PIRE conducted detailed interviews with the Poison Control Centers (PCC) health educators who delivered the medication safety pilot program to older adults. Two sites, Missouri and West Virginia, were selected for conducting and assessing educational sessions. The process included recruiting and preparation, a PowerPoint presentation, questions and answers, provision of gift items, and evaluation forms (consent form and information for follow-up; pretest and posttest; and session assessment form). All educational sessions were completed, and about half of the follow-up interviews with participants were completed, at interview time.

Educator Background

Both presenters who conducted the pilot have strong backgrounds in health care, education and training. The average length of employment at the poison center was 4 years. Both educators had some previous experience with seniors.

Need for Training

Both presenters felt that minimal training would be needed for other PCC health educators to implement the program. This would include a brief review of the process and educational package. For community workers, however, more comprehensive training would be required to conduct the sessions.

Recruitment and Preparation

In both sites, the educators worked closely with community agencies to arrange the sessions and recruit participants. One presented the study to the Parish Nurse Association, which runs monthly social groups for seniors. She also brought a copy of the PowerPoint presentation. The nurses helped arrange for the educational sessions. The other educator had a previous working relationship with Senior Services, which ran community Senior Centers. She submitted the presentation to agency staff for review. She worked closely with the activities

coordinator who helped arrange specific rooms, working within the study timelines. Sessions were held in Senior Center rooms, classrooms, church halls and theaters. Both educators said the collaborations worked well.

Recruitment methods included scheduling the presentation before the lunch program (a big draw), advertising the giveaways, notices on web sites, and flyers at the Centers.

Preparation was minimal for these educators, who had already been involved in developing the program. PIRE's package facilitated the process, according to an educator. However, there were many materials to assemble and transport (e.g., laptop, LTD projector, "goodie" bags, forms).

LESSON LEARNED: It was often unclear how many people would show up at the sessions. Collaborators only provided estimates. Smaller groups went more smoothly. A second person or assistant will be needed for a larger group (more than 20 participants). Both educators said the ideal session would have 15-20 participants. An agency coordinator, who had received an advance package, provided assistance during sessions at one site. At times, there was inadequate space or equipment. The educator should be clear about personnel, space, and equipment needs prior to the sessions.

LESSON LEARNED: Coordinating and assembling the goodie bags proved to be difficult at times. It was recommended that if the group is larger than 20 people, educators should take the materials to the site and assemble. If assembling on site, educators should plan to arrive 30 to 40 minutes before the session.

Also, one educator laid out the bags at the beginning of the first session, and people just took them, whether or not they were participating. Some people who took the bags signed consent forms, but gave no numbers for follow-ups. The presenter, therefore, should keep the stuffed bags out of sight until the end of the session, and not distribute them until receiving all necessary forms and information for the study. Some people stuck the forms in their purses or threw them away. The educator, therefore, needs to ensure that people who do not want to participate in the study return all paperwork, even blank forms.

PARTICIPANTS: At one site, most participants were in their 60s and 70s; at the other, most were in their 70s and some in their 80s. Participants at one site were mostly middle class, well-educated professionals. Most of the attendees at the other site were lower middle class, with lower than average education. Interestingly, few people at the first site were using the Internet. In contrast, half of one group at the other site used the Internet, and about 10-20 percent of other groups at the site accessed the Internet. Some participants were hesitant about signing the consent forms and giving out their telephone numbers, but most did sign.

Script

Overall, there was positive response, and major substantive changes are not needed. Some culturally specific or other wording changes may be needed to adapt the program to various populations. Some parts of the script worked better than others, depending on the population. The Tic-Tac-Toe game did not work well at one site, especially in larger groups. At one site, the seniors enjoyed the case studies. They loved the anecdotes and related well to personal stories, which opened up discussions. At another site, the script proved to be somewhat dense, and could be shortened some. It mostly depends on how savvy the participants are, but this can be hard to know ahead of time.

Lessons Learned: Script

Most seniors understood the presentation. Evaluation forms, read aloud, seemed somewhat complicated. Notably, in both sites the seniors said the text was too small, and asked for larger print on forms. Poor eyesight and sometimes lower educational level affected full participation. Hearing did not seem to be an issue.

Suggestion: Include a sample call to the poison center for specific medical information. Warn the SPI ahead of time. Call the 1-800 number as part of the session.

Followup Interviews

Reaching Participants and Response

At interview time, all follow-up telephone interviews had been completed at one site (90 percent response rate), and were in process at the other. Reaching seniors was not always easy. More active seniors were often away from home. Saturdays were especially hard to reach anyone. Morning calls during the week worked well. At one site, some seniors resented calls during a holiday time (Easter). Educators often went beyond the “try three times, then give up” guidance to reach people. One suggested trying for a week before giving up.

Educators received varied and candid responses when conducting the follow-ups. While some people said, “Oh, I was waiting for your call,” others replied, “Who is this? Why are you calling?” At least one respondent said she did not remember the educator or anything else about the program. In one site, reading level of questions often was lowered during the calls to meet the needs of the population.

Wording of Questions

Some participants felt guilty if they did not use the passport or the pill minder, and were reluctant to admit this. It put them on the defensive. This situation could be improved by changing the wording. For example, we could say “Have you had an opportunity to use the (passport, etc.)?” or “Did you need to use the (pill minder, etc.)?” We need to emphasize that there are no right or wrong answers; it is not a test.

Some respondents did not like the focus on age. For example, one question asked “what could we do to make the program better for people your age?” This could be changed to better “for you”?

RECOMMENDATION: Add: “Best days and times to reach you” where we ask for a telephone number for follow-up.

Overall Assessment

Educators at both sites thought the program was quite successful, and would present it again to other audiences. Participants said they had a good time. Some participants offered immediate feedback before they left, thanking the educator for an interesting presentation, and for the gift card. Others said they “learned a lot” and appreciated the valuable information.

To improve the program, we need to review readability of forms, text size, and length of script and PowerPoint. In one setting, delivery took over an hour. A more acceptable time, given attention span, would be about 45 minutes. However, even though the program was most difficult with larger groups, most participants were engaged until the end.

Controlling the size of the group would be extremely helpful, but may be difficult to accomplish. In one session, there were more people than incentives. One participant was very angry that she did not get a gift card. The educator’s assistant from the community agency felt so badly for her that she gave the participant some money from her own purse. It is unclear how this can be resolved, as educators generally only get an estimate of attendance, and do not have endless resources.

Program Replication in Other Settings

Both educators felt that this program would work with other populations, but would need to be adapted some for cultural, regional, socioeconomic, linguistic, and reading level differences. With some training, this program also could be implemented in community settings by other professionals.

Fidelity to Original Program

Both presenters followed the protocol and script closely. The only changes made were to make participants feel more comfortable (e.g., slight rewording to lower reading level).

Summary of Recommendations

In virtually all cases, the pilot program was well received. Participant response to the content and process was extremely positive. As this was a pilot test, a major part of the

process is learning what works and what does not. Recommendations for improvement were identified and are presented below.

- Arrange for a second person to help with a larger group (more than 20 participants).
- Be clear about personnel, space, and equipment needs prior to the sessions.
- Arrive at least 30 minutes before the session, if assembling materials on site.
- Keep the stuffed gift bags out of sight until the end of the session.
- Enlarge the print on all written products.
- Add: “Best days and times to reach you” with the request for a follow-up telephone number.
- Reword the follow-up question about usage of passports and pill minders to be less intimidating.
- Review readability of forms, text size, and length of script and PowerPoint.
- Adapt program as needed for cultural, regional, socioeconomic, linguistic, and reading level differences.
- Provide comprehensive training to professionals implementing the program in community settings.