

# Advancing Pharmacy Health Literacy Practices Through Quality Improvement: Curricular Modules for Faculty

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# Overview

These curricular modules were created to help pharmacy faculty integrate health literacy and health literacy quality improvement into courses, experiential education and projects for PharmD students and pharmacy residents. The curricular modules can be used or adapted for lectures, seminars, laboratory classes and other courses deemed appropriate by faculty. The modules can also be used in pharmacy experiential education, including both Introductory Pharmacy Practice Experiences (IPPE) and Advanced Pharmacy Practice Experiences (APPE). Finally, the curricular modules offer valuable activities and content for PharmD students and pharmacy residents' projects. The following components can be used in courses, in experiential education, and for projects:

- Four PowerPoint® slide decks (each 50 minutes) covering:
  - Health Literacy in Pharmacy: Introduction
  - Health Literacy in Pharmacy: Communication Strategies
  - Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I
  - Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II
- **Seventeen Activity Guides** that address four main topic areas:
  - Increasing Awareness of Health Literacy in Pharmacy (seven Activity Guides)
  - Improving Communication in Pharmacy (four Activity Guides)
  - Assessing the Health Literacy Practices of Pharmacies (four Activity Guides)
  - Conducting Health Literacy Quality Improvement in Pharmacies (two Activity Guides)
- **Resources** to provide faculty and students with background information and references for the topics covered in the curricular modules.

## Using the Curricular Modules

### Are These Modules for You?

These modules are intended for use by pharmacy faculty, students, and residents interested in introducing or augmenting health literacy and quality improvement topics in the curriculum and in practice. The following types of faculty may find these helpful:

- Are you a pharmacy faculty member who:
  - wants to teach your students about health literacy?

- wants to engage your students in activities to help them apply health literacy concepts?
- wants to teach your students about quality improvement?
- currently teaches health literacy and/or quality improvement but wants supplemental active learning activities for your course?
- Are you a community pharmacy preceptor or experiential education faculty who:
  - needs learning activities to increase students' awareness of health literacy in pharmacy?
  - wants to teach students how to apply quality improvement (QI) techniques to improve health literacy practices in pharmacy?
- Are you an advisor on a student's PharmD project who:
  - needs to help a student identify and execute a project related to health literacy?
- Are you a community residency director/coordinator/preceptor who:
  - needs to help a resident identify and execute a project related to health literacy?

## **Adapting the Curricular Modules to Meet Your Needs**

The modules allow for ready adaptation by different faculty for different courses and/or in different aspects of the pharmacy curriculum (e.g., experiential education, laboratory courses, didactic courses, residency programs, etc.). Each component, whether the slide decks or Activity Guides, can be used alone or in combination with other components. For example, an Activity Guide could be paired with the PowerPoint® slides and presented in class, or used as an in-class activity. In the Activity Guides we indicate which PowerPoint® slide presentation(s) is relevant to the activity. Similarly, in Section 3, we specify which Activity Guides are related to the PowerPoint® slide decks. Of course, faculty members are strongly encouraged to adapt the modules based on their needs and existing resources, and select components that are most relevant to their students' educational needs.

## **Accreditation Council for Pharmacy Education (ACPE) Standards**

The ACPE Standards for Curriculum that the curricular modules components map to are specified in sections 3 and 4 below. The full list of relevant ACPE standards these curricular modules map to is provided in Appendix II.

## PowerPoint® Slide Decks

The four PowerPoint® slide decks have been created for use in pharmacy courses. Each of the slide decks includes sufficient content for a 50-minute class, and can be used independently or with the other slide decks. The slide decks include breakout class activities and may be further augmented by incorporating relevant activity guides, described further in section 4 below, into the class. Table 1 below lists the 4 slide decks, the related activity guides, and which ACPE standards they map to.

**Table 1: List of Activity Guides and their Application in the Curriculum**

#	PowerPoint® Slide Decks	Activity Guides	ACPE Standards
1	<a href="#">Health Literacy in Pharmacy: An Introduction</a>	Guides 1 – 7	12.1, 14.5, & 14.8
2	<a href="#">Health Literacy in Pharmacy: Communication Strategies</a>	Guides 7 - 11	12.1, 14.5, & 14.8
3	<a href="#">Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I</a>	Guides 12 - 17	14.5 & 14.8
4	<a href="#">Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II</a>	Guides 12 - 17	14.5 & 14.8

## Activity Guides

As part of the curricular modules, we developed several Activity Guides to encourage active learning, provide learning activities for use outside of a course, and facilitate student comprehension of the curricular content. The Activity Guides cover the four topic areas mentioned above and shown in Exhibit 1 below. Each Activity Guide includes a description of the following:

- **Topic:** Each Activity Guide addresses one of four topics.
- **Use in:** This section indicates in which components of a pharmacy curriculum the activity could be used.
- **Time Commitment Estimate:** These are only estimates; for activities that can be used in more than one component of the curriculum, more than one time estimate is provided.



- **Learning Objectives:** Learning objectives are provided for every Activity Guide using Bloom’s taxonomy of educational objectives.<sup>1</sup>
- **Description:** This section describes the activity with students or residents as the target audience. When the activity can be applied in different components of the pharmacy curriculum, specific detail is provided for use in each component of a pharmacy curriculum as needed.
- **Evaluation Criteria:** This section provides criteria to guide faculty’s evaluation of activities.
- **Faculty Notes:** additional information faculty may need is provided here.
- **Relevant PowerPoint® Slides:** PowerPoint® slide decks and slides relevant to each activity are indicated.
- **Resources:** A list of relevant resources is provided.

Activities can be used with slide decks, as independent assignments, or as in-class small-group discussions. Table 2, below, lists all activities, suggested placement in the curriculum, and relevant ACPE standards. To go directly to an activity guide, click on the activity title in the table. Please note that didactic is used broadly in this document to include lectures, seminars, laboratory classes (e.g., pharmacy practice lab) as well as other classes.

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<sup>1</sup> Huitt W. (2009). Bloom et al.’s taxonomy of the cognitive domain. *Educational Psychology Interactive*.

**Table 2: List of Activity Guides and Their Applications in the Curriculum**

#	Activities	Didactic		Experiential Education		Project	ACPE Standard
		In-Class	Assignment	IPPE	APPE		
<b>Topic 1: Increasing Awareness of Health Literacy in Pharmacy</b>							
1	<a href="#">Key Questions to Asses Patients' Health Literacy</a>		X	X	X		14.8
2	<a href="#">Instruments to Assess a Patient's Health Literacy Skills – Rationale and Critiques</a>	X	X	X	X		14.8
3	<a href="#">Understanding Steps Required to Take Medications</a>	X	X				12.1
4	<a href="#">Critique of Medication Labels</a>	X	X		X		14.8
5	<a href="#">Critique and/or Develop Patient Education Materials</a>	X	X	X	X		12.1; 14.8
6	<a href="#">Assess Medication Therapy Management Patient Materials</a>	X	X	X	X		Appendix B
7	<a href="#">What Types of Questions Do Patients Ask?</a>		X	X	X		12.1; 14.8 Appendix B
<b>Topic 2: Improving Communication in Pharmacy</b>							
8	<a href="#">Using and Teaching the Teach Back Method</a>	X			X	X	12.1; 14.5; 14.8; Appendix B
9	<a href="#">Identify Commonly Used Terms in Pharmacy</a>	X	X	X	X		12.1; 14.8 Appendix B
10	<a href="#">Communication Training for Pharmacy Staff</a>				X	X	14.8; Appendix B
11	<a href="#">Using a Pill Card or Medication List with Patients</a>		X	X	X	X	12.1; 14.5; 14.8; Appendix B
<b>Topic 3: Assessing the Health Literacy Practices of Pharmacies</b>							
12	<a href="#">Pharmacy Assessment Tour</a>				X	X	Appendix B
13	<a href="#">Surveying Pharmacy Staff to Assess a</a>				X	X	Appendix B

	Activities	Didactic		Experiential Education		Project	ACPE Standard
		In-Class	Assignment	IPPE	APPE		
	<a href="#">Pharmacy</a>						
14	<a href="#">Using Patient Feedback for Quality Improvement</a>				X	X	Appendix B
15	<a href="#">Reporting on Survey Assessment Results</a>		X	X			Appendix B
	<b>Topic 4: Conducting Health Literacy Quality Improvement</b>						
16	<a href="#">Designing a QI Project for Teach-Back</a>	X	X		X	X	Appendix B
17	<a href="#">Design a Quality Improvement Project</a>				X	X	Appendix B

# Increasing Awareness of Health Literacy in Pharmacy

## Activity 1: Key Questions to Assess Patients' Health Literacy

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (assignment)</li><li>• Experiential education (IPPE, APPE)</li></ul>

**Time Commitment Estimate:** 3–4 hours

### Learning Objectives:

- Describe barriers to using routine screenings for health literacy in a clinical setting.
- Employ the screening question with at least three non-patient acquaintances.
- Employ the screening question with patients at IPPE / APPE site.

**Activity Description:** Read the article by Morris et al. (2006) about a single-item literacy screener. The screening question is: How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your doctor or pharmacy? As you read the article, consider barriers to assessing patients' health literacy levels in a clinical setting and how the approach suggested in the article might address some of these barriers.

*Assignment:* Practice using the Morris et al. (2006) question with at least three friends or family members. Record each individual's responses, and any other comments or reactions they have to being asked this question. Did any of their responses surprise you? How so? Record your experience asking the question(s) and your reactions. Write a two-three page paper presenting your findings and your reaction to them, and summarizing the pros and cons of health literacy screening in a clinical setting.

*IPPE or APPE:* Use the question(s) with at least five patients in your pharmacy. Record each patient's responses, and any other comments or reactions they have to being asked this question (s). Did any of their responses surprise you? How so? Record your experience asking the question(s) and your reactions. Write a two-three page paper presenting your findings and

your reaction to them and summarizing the pros and cons of health literacy screening in a clinical setting.

**Faculty Note:** Consult with your institution's Institutional Review Board (IRB) to determine whether or not you need approval for the IPPE/APPE activity. Regardless of the need for IRB approval, the students should obtain informed consent (see *AHRQ Informed Consent and Authorization Toolkit for Minimal Risk Research* link below).

**Evaluation Criteria:** The paper should:

- Describe pros and cons of using routine screening for health literacy in clinical settings
- Present the findings from using the question
- Describe the individual's reflections on the findings

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Introduction

**Resources:**

- Morris NS, MacLean CD, et al. [The Single Item Literacy Screener: Evaluation of a brief instrument to identify limited reading ability](#). *BMC Fam Pract* 2006;7:21.
- Wolf MS, Williams MV, Parker RM, Parikh NS, Nowlan AW, Baker DW. Patients' shame and attitudes toward discussing the results of literacy screening. *Journal of Health Communications*. 2007 Dec;12(8):721-732.
- Osborn CY, Weiss BD, Davis TC, Skripkauskas S, Rodrigue C, Bass PF, Wolf MS. Measuring adult literacy in health care: performance of the newest vital sign. *American Journal of Health Behavior*. 2007 Sep-Oct; 31 Suppl 1:S36-546.
- [AHRQ Informed Consent and Authorization Toolkit for Minimal Risk Research](#)

## Activity 2: Instruments to Assess a Patient's Health Literacy Skills – Rationale and Critiques

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 2–3 hours

### Learning Objectives:

- Describe and use a health literacy assessment tool, Newest Vital Sign (NVS).
- Recognize the demands placed on patients in a health care environment.
- List skills assessed by the NVS and identify limitations of NVS.
- Examine issues related to patient shame and health literacy skill assessment.

**Activity Description:** Use the Newest Vital Sign (NVS) assessment tool to assess your own, a friend's, or a family member's health literacy. As you complete the assessment, pay attention to and list the types of tasks the assessment asks patients to perform. Once you have listed at least five required skills, compare skills assessed by NVS to skills patients need to function in health care and identify potential areas for improvement in the NVS. Write a short summary of your findings and recommendations. After using NVS, read Wolf et al.'s article on patient shame. Create an argument about whether or not providers should use formal assessments such as NVS in a clinical setting. Write a two-page paper describing the above listed tasks.

**Evaluation Criteria:** As an assignment or as part of experiential education course, the student should have:

- Listed several skills required to complete the NVS.
- Listed skills required to function in health care and discussion of gaps left by NVS.
- Demonstrated familiarity with Wolf et al.'s arguments from the paper.
- Included thoughtful discussion of benefits and drawbacks of using health literacy assessment tools with patients.

### Relevant PowerPoint® Slides:

- Health Literacy in Pharmacy: Introduction

**Resources:**

- [The Newest Vital Sign Assessment](#)
- Wolf MS, Williams MV, Parker RM, et al. Patients' shame and attitudes toward discussing the results of literacy screening. *Journal of Health Communications*. 2007 Dec;12(8):721-732.
- Osborn CY, Weiss BD, Davis TC, et al., Measuring adult literacy in health care: performance of the newest vital sign. *American Journal of Health Behavior*. 2007 Sep-Oct; 31 Suppl 1:S36-46.

## Activity 3: Understanding Steps Required to Take Medications

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li></ul>

**Time Commitment Estimate:** 30 minutes

### Learning Objectives:

- List eight tasks required of patients in order to follow medication instructions.
- Describe literacy-related challenges for each task.
- Describe three strategies that pharmacists can use to minimize challenges for patients.

**Activity Description:** Form small groups of 6-10, and then divide into two teams – team 1 and team 2. Take 10 minutes in your teams to discuss your assigned topic.

1. *Team 1: Choose a common OTC medication and list the tasks patients must complete in order to properly take the medicine. Identify needed literacy skills.*
2. *Team 2: Choose a common prescription medication and list the tasks patients are asked to perform to properly take the medication. Identify needed literacy skills.*

After 10 minutes, each team should take 5-10 minutes to share key points discussed within each team. Then in the group, for 10–15 minutes, discuss strategies that pharmacists can use to minimize the challenges patients face when taking prescription or OTC medications.

### Evaluation Criteria:

- Participation by all team members
- Students could provide a written summary of the tasks required of patients; potential tasks:
- Read labels
  - Remember oral instructions.
  - Understand specific instructions (i.e., “take on an empty stomach”).
  - Remember to take pills.
  - Differentiate medications (if taking multiple medications).
  - Plan dosage around meals.



- Watch for side effects and respond appropriately.
- Take medications even if symptoms are not present.
- Track the number of pills left and refill medications when appropriate.
- Store medications appropriately.
- Discuss the steps needed for specialty medications (i.e., inhalers).

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Introduction

## Activity 4: Critique of Medication Labels

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 2–3 hours

### Learning Objectives:

- Describe the importance of written information, including medication labels, to patients' understanding of and potential adherence to medication instructions.
- Describe basic best practices for critiquing and revising medication labels.
- Recommend changes or improvements to existing medication labels or instructions.

**Activity Description:** Choose a prescription label or an OTC label for a common medication. Critique the label using guidelines for written information, listing its strengths and weaknesses and providing recommendations for how to improve it. Submit your critique with a copy of the label.

**Faculty Note:** For in-class use: faculty member will need to provide prescription or OTC labels, and students can break into groups of two or three.

**Evaluation Criteria:** Students will be evaluated based on their demonstrated application of principles for written communication presented in class and in the guides referenced below. Critiques of the labels should be thorough, highlighting strengths as well as weaknesses. Recommended revisions should reflect application of principles described in referenced materials.

### Relevant PowerPoint® Slides:

- Health Literacy in Pharmacy: Introduction

### Resources:

- [Pfizer Principles for Clear Communication](#), 2<sup>nd</sup> Edition (see Ch. 4). Doak LG, Doak CC.
- B Odegard PS, Gray SL. Barriers to medication adherence in poorly controlled diabetes mellitus. *Diabetes Education*. 2008 Jul-Aug;34(4):692-697.

- Effect of content and format of prescription drug labels on readability, understanding, and medication use: a systematic review. Shrank W, Avorn J, Rolon C, Shekelle P. *Annals of Pharmacotherapy*. 2007 May; 41(5):783-801. Epub 2007 Apr 10.
- [Principles of Designing a Medication Label for Community and Mail Order Pharmacy Prescription Packages](#). Institute for Safe Medication Practices.
- Davis TC, Wolf MS, et al. Literacy and misunderstanding prescription drug labels. *Ann Intern Med* 2006; 145(12):887-894.

## Activity 5: Critique and/or Develop Patient Education Materials

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 1–4 hours

### Learning Objectives:

- Explain the importance of written patient education materials, including medication information, to patients' understanding of their conditions and their ability to take medications.
- Summarize best practices for patient education and information material design.
- Recommend changes or improvements to existing patient education materials.

**Activity Description:** Choose patient education materials in a pharmacy or clinic in your community. If no patient education materials are available at your pharmacy, you may find one online. Critique the material using the guidelines for written information below, listing the strengths and weaknesses of the material and providing recommendations for how to improve it. Submit your critique with a copy of the materials.

*Optional (at faculty discretion):* Revise materials according to your critique and submit revised materials.

*Optional (at faculty discretion):* Create new patient education materials based on best practices.

**Evaluation Criteria:** Students will be evaluated based on their demonstrated application of principles for written communication presented in class and in the guides referenced below. Critiques of materials should be thorough, highlighting strengths as well as weaknesses (where applicable). Recommended revisions (or changes made, or material created, if applicable) should reflect careful application of principles described in referenced materials.

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Introduction

**Resources:**

- [Pfizer Principles for Clear Communication](#), 2<sup>nd</sup> Edition (see Ch. 4). Doak LG, Doak CC eds.
- National Cancer Institute [Clear & Simple: Developing Effective Print Materials for Low-Literate Readers](#)
- CMS's [Toolkit for Making Written Material Clear and Effective](#)
- CDC's [Simply Put: A Guide for Creating Easy-To-Understand Materials](#)

## Activity 6: Assess Medication Therapy Management (MTM) Patient Materials

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<b>Topic</b>	Conducting Health Literacy Quality Improvement
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 2–4 hours

### Learning Objectives:

- Summarize best practices for patient education or information material design, including basic readability and comprehension best practices.
- Critique or assess patient education materials for pharmacy services (e.g., MTM).

**Activity Description:** Choose a patient-oriented item from the resources available from APhA at MTM Central within the Core Elements Toolkit, such as the personal medication record or medication action plan (use hyperlink below). Alternatively, select a patient education material from your experiential practice site’s MTM services or patient care services (e.g., immunization services, counseling materials). Assess the selected material using one of the assessment tools listed below. Write a summary of your findings and your recommendation for improving the material.

### Evaluation Criteria:

- Concise, complete assessment of the selected material using an appropriate tool
- Specific recommendations for revising the materials are appropriate given the findings from the assessment

### Relevant PowerPoint® Slides:

- Health Literacy in Pharmacy: Introduction

### Resources:

- [MTM Central’s MTM Core Elements Toolkit](#)
- [Pfizer Principles for Clear Communication](#), 2<sup>nd</sup> Edition (see chapter 4 for guidelines). Doak LG, Doak CC, eds.

- National Cancer Institute. [Clear & Simple: Developing Effective Print Materials for Low-Literate Readers](#)
- Davis TC, Wolf MS, et al. Literacy and misunderstanding prescription drug labels. *Ann Intern Med* 2006;145(12):887-894.

## Activity 7: What Types of Questions Do Patients Ask?

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<b>Topic</b>	Increasing Awareness of Health Literacy in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 2-3 hours

### Learning Objectives:

- List and categorize the types of questions patients commonly ask pharmacists.
- Summarize questions pharmacists think patients could benefit from asking.
- Identify approaches to encourage patients to ask questions.

**Activity Description:** Read or review the three resources listed below, including the video from AHRQ about patients' questions. Ask a pharmacist for a 5-minute informal interview. During the interview, ask the following types of questions:

- What proportion of patients or how many patients per day ask questions when picking up their medications?
- What are the most common questions patients ask you?
- Do you think that all patients who have questions about their medications ask? Why or why not?
- Of the patients who actually ask questions, do you think they are asking what they should? Why or why not?
- Of the patients who don't ask, do you think they understand how to take their medications appropriately?
- What barriers get in the way of patients asking questions or asking the right questions?
- How do you facilitate/encourage patients to ask questions?

Write a summary of the pharmacists' responses, adding your own perspective about whether or not patients could ask other specific questions to help them and how pharmacists could encourage patients to ask appropriate questions.



**Relevant PowerPoint® Slides:**

Health Literacy in Pharmacy: Introduction

Health Literacy in Pharmacy: Communication Strategies

**Faculty Note:** Consult with your institution's Institutional Review Board (IRB) to determine whether or not you need approval for this activity.

**Evaluation Criteria:** Students should provide a complete summary of what they learned from their interviews, describe what specific questions patients should ask of pharmacists, and how pharmacists can help address barriers and encourage patients to ask those questions. The write-up should be thoughtful and complete, incorporate the recommended resources, and include creative recommendations.

**Resources:**

- American Medical Association (AMA). Health Literacy and Patient Safety: Help Patients Understand: Manual for Clinicians at [www.ama-assn.org/ama1/pub/upload/mm/367/healthlitclinicians.pdf](http://www.ama-assn.org/ama1/pub/upload/mm/367/healthlitclinicians.pdf)
- AHRQ [Questions are the Answer Video](#)

# Improving Communication in Pharmacy

## Activity 8: Using and Teaching the Teach-Back Method

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<b>Topic</b>	Improving Communication in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class)</li><li>• Experiential education (APPE)</li><li>• Project (PharmD or residency)</li></ul>

**Time Commitment Estimate:** 25 minutes (in-class); 1–4 hours (experiential education); minimum of 20 hours (project)

### Learning Objectives:

- Describe the teach-back method.
- Use the teach-back techniques in the pharmacy setting.
- If applicable, teach the teach-back method to pharmacy staff.

### Activity Description:

*In-class:* Review what you learned in class about teach-back (use resources below if needed). Break into groups of three. Each person will take turns being the pharmacist, the patient, and an observer. Spend 5 minutes looking up counseling information for three different common medications provided by your professor (e.g., hydrochlorothiazide 25mg, simvastatin 40mg, hydrocodone/acetaminophen 5/500mg). Then, role play with the pharmacist counseling, the patient receiving the medication for the first time, and the third person serving as an observer. After each teach-back role play, first the pharmacist should reflect on what they did well and would have changed, then the observer should provide feedback on what the pharmacist did well and what she/he could have done better; finally, the patient should add their perspective and anything that wasn't addressed by the other two.

*APPE:* Use teach-back with patients on your rotation site as part of counseling on new prescriptions or your Medication Therapy Management (MTM) services. Have your preceptor observe you and provide you feedback on what you did well and what could be improved.

*APPE:* Using existing teach-back resources, develop a training program for pharmacy staff and/or medical students/residents at your IPPE/APPE or residency site. Consider including a didactic overview (e.g., presentation and/or articles to read) on teach-back and also consider how best to train the staff and allow them to practice (e.g., demonstrate it yourself, role play, etc.). Then consider how best to roll out use of teach-back by pharmacy staff with patients. You should work with your preceptor and/or pharmacy management to best incorporate teach-back into the workflow and ensure there is buy-in for teach-back to be implemented in the pharmacy.

*Project:* If this is for a project or your time at the site allows for it, you should develop a plan to assess the effect of your training; you could conduct a pre/post assessment (i.e., develop a plan to assess how much pharmacists used teach-back before and after your training, or how confident or knowledgeable staff were about teach-back before and after your training). Write-up your project with an introduction, including a description of the problem with communication in health care settings and pharmacy, the methods you used to train the staff and evaluate the effect of your training, the results section describing the effect, and finally, discussion of what you learned, reflections on the process (e.g., challenges) and recommendations for further improving teach-back in the pharmacy. The student should provide either a written report or presentation to the pharmacy preceptor, manager, and/or staff on the results.

**Faculty Note:** Consult with your institution's Institutional Review Board (IRB) to determine whether or not you need approval for this activity.

**Evaluation Criteria:**

*In-class:* Students will actively participate, each playing in each of the three roles.

*APPE:* The student should effectively use teach-back to educate patients on new medications and ensure the patient understands.

*Project:* Student or resident developed a high-quality training program with both didactic and practice content. If required, the student developed an effective approach for assessing the effect of her/his training on teach-back in the pharmacy. The student/resident's report is comprehensive (i.e., introduction, methods, results and discussion including reflections), and the student provided the results to the pharmacy staff, preceptor and/or management either in a report or as a presentation.

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Communication Strategies

**Resources:**

- [Teach-Back: A Health Literacy Tool to Ensure Patient Understanding](#). Created by the Iowa Health System
- Health Literacy Universal Precautions Toolkit–[Tool 5: The Teach Back Method](#)
- Health Literacy Universal Precautions Toolkit–[Teach-Back Self-Evaluation & Tracking Log](#)
- [Teach Back Method Videos](#) (NC Health Literacy)

## Activity 9: Identify Commonly Used Terms in Pharmacy

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<b>Topic</b>	Improving Communication in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (IPPE or APPE)</li></ul>

**Time Commitment Estimate:** 15–30 minutes (in-class); 1 hour (assignment); 3–6 hours (IPPE/APPE)

### Learning Objectives:

- List and describe the expectations and demands placed on patients taking medications.
- Describe commonly used terms and jargon in pharmacy and medication counseling.
- Recommend replacement words or preferred words and ways to explain concepts to patients.
- Summarize patients' input on commonly used terms and jargon.

### Activity Description:

*In-class:* Break into groups of three to five. Compile a list of at least 15 words or “terms of art” often used in a pharmacy in communicating with patients, including words related to actual medication administration (e.g., empty stomach) as well as disease state (e.g., hypertension), insurance (e.g., prior authorization), or administrative aspects (e.g., refill). For each word, try to find a replacement word or phrase that may be easier to understand or a brief phrase that helps better explain and clarify what is meant. Write up words and proposed replacement words and/or phrases. Share paired words with the rest of the class or turn in (faculty discretion).

*Assignment:* Work with one or two other students to complete the activities listed for the in-class, but then turn in the list.

*IPPE/APPE:* Complete the activities described above, then share the list of words and share with 10 family members, friends, or patients and see which words they think are an improvement. Also, ask what word they might suggest as a more understandable alternative. Write-up results in a two-three page report.

**Evaluation Criteria:** Students should come-up with at least 15 common terms and reasonable replacement words or phrases. The IPPE/APPE students should have obtained feedback from at

least 10 different non-health care professionals on the words and provide a well-written summary of what the patients said about the words.

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Communication Strategies

**Resources:**

- CDC's [Plain Language Thesaurus for Health Communications](#)

## Activity 10: Communication Training for Pharmacy Staff

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<b>Topic</b>	Improving Communication in Pharmacy
<b>Use in</b>	<ul style="list-style-type: none"><li>• Experiential education (APPE)</li><li>• Project (PharmD or Residency)</li></ul>

**Time Commitment Estimate:** 5 hours (experiential education); minimum of 15 hours (project)

### Learning Objectives:

- List a minimum of four barriers to effective communication in a pharmacy setting.
- Define three reasons to train staff in communication skills.
- Apply lessons regarding pharmacist-patient communication and health literacy in previous courses (or through review of literature) to staff training.

**Activity Description:** Adapt and teach AHRQ’s *Strategies to Improve Communication Between Pharmacy Staff and Patients* to staff members in your pharmacy. Use the slides available online at <http://www.ahrq.gov/qual/pharmlit/pharmtrain.htm>. You may need to think creatively about how to adapt the training program to your pharmacy, including considerations of space, time, etc. For example:

- If all staff cannot be brought together for one meeting, can the training be completed in small groups?
- If a full training is not feasible, how else could key information be conveyed to pharmacy staff or other health professional staff? For example, can the training content be adapted to weekly postings or announcements with key points from the training over the course of several weeks, mini trainings during staff meetings.
- Is there a specific section of the training that the staff could benefit from?
- *Project:* Evaluate the effect of your presentation on pharmacy staff attitudes, knowledge and practices related to health literacy and communication with patients by surveying them before and after the training is completed to assess changes. Questions for this assessment may be taken from the AHRQ [Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide](#), or from other sources. Sample questions include: “I am confident I can effectively educate all patients about medicines and diseases when the patient has limited literacy skills” or “I am confident I can effectively educate all patients about medicines and diseases when the patient has

many medications.” Write-up your project with an introduction, including describing the state of the problem with communication in health care settings and pharmacy, the methods you used to train the staff and evaluate the effect of your training, the results section describing the effect, and finally discussion of what you learned, reflections on the process (e.g., challenges) and recommendations for further improving teach-back in the pharmacy. The student should provide either a written report or a presentation to the pharmacy preceptor, management, and/or staff on the results.

**Faculty Note:** Consult with your institution’s Institutional Review Board (IRB) to determine whether or not you need approval for this activity.

**Evaluation Criteria:** The student or resident effectively adapted the communication strategies training to the pharmacy. If the student or resident did this activity as a PharmD or Residency project, they should have developed an effective approach for assessing the effect of her/his training on communication strategies in the pharmacy. The student/resident’s report should be comprehensive (i.e., introduction, methods, results and discussion including reflections), and the student provided the results to the pharmacy staff, preceptor and/or management either in a report or as a presentation.

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Communication Strategies

**Resources:**

- Kripalani S, Jacobson K. [Strategies to Improve Communication Between Pharmacy Staff and Patients: A Training Program for Pharmacy Staff.](#) (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07(08)-0051-1-EF. Rockville, MD: Agency for Healthcare Research and Quality. October 2007.
- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. [Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide.](#) (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051. Rockville, MD: Agency for Healthcare Research and Quality. October 2007.
- Gazmararian J, Jacobson KL, Pan Y, Schmotzer B, Kripalani S. Effect of a pharmacy-based health literacy intervention and patient characteristics on medication refill adherence in an urban health system. *Annals of Pharmacotherapy*. 2010 Feb;44(2):395.
- Devraj R, Gupchup GV. Identifying Aspects of Pharmacists’ Attitudes and Barriers toward Health Literacy: A Factor Analytic Study. *Annals of Pharmacotherapy*. 2011;45:771-779. DOI 10.1345/aph.1P686.



## Activity 11: Using a Pill Card or Medication List with Patients

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### Topic

Improving Communication in Pharmacy

### Use in

- Didactic (assignment)
- Experiential education (IPPE or APPE)
- Project (PharmD or residency project)

**Time Commitment Estimate:** 1 hour (didactic); 3-4 hours (experiential education); minimum of 8 hours (project)

### Learning Objectives:

- Construct a pill card or medication list for a patient.
- Explain how a pill card can assist patients with low health literacy skills and/or with multiple medications.
- Critically assess the benefits and any drawbacks to pill cards (or a specific pill card).
- Demonstrate how to teach a patient to effectively use a pill card/medication list within the health care system.

### Activity Description:

*For assignment:* Given the hypothetical patient below, create a pill card or a medication list that this patient could use to help remember how and when to take her medications.

Indication	Medication	Dose	Sig
Hypertension	hydrochlorothiazide and triamterene	25mg /37.5mg	1 po qam
Hypertension	lisinopril	5mg	1 po qd
Diabetes mellitus	Glucotrol XL	5mg	1 po qam
Diabetes mellitus	metformin	500mg	1 po bid
Hypercholesterolemia	simvastatin	40mg	1 po qpm
Osteoporosis prevention	calcium carbonate with vitamin D	500mg	1 po bid
General health	multivitamin with minerals	–	1 po qd

*IPPE/ APPE:* Create a pill card for a Medication Therapy Management (MTM) patient or other patient of the pharmacy, and educate the patient on his/her regimen, how to use the pill card, and what to do if his/her regimen changes.

*Project:* Apply or adapt the pill card format on the AHRQ site (or other site) to your pharmacy. Alternatively, use the MTM Core Elements toolkit to create a medication record for patients (see link below). Work with pharmacy leadership and staff to consider how use of the pill card might be integrated into pharmacy workflow. Write up your project plan and results and include your reflections on the process.

**Faculty Note:** Depending on the requirements of a pharmacy or residency project and the anticipated scope of the student/resident's project, this activity may need to be augmented.

**Evaluation Criteria:** For the assignment or experiential education, the student should have accurately transcribed the hypothetical patient's or the real patient's regimen into one of the pill card or medication record tools. Also the student should have used appropriate terminology (e.g., lay terms, no jargon) to help the patient understand his/her regimen and how to use the pill card. For the project, the student/resident should effectively adapt a pill card/medication record format into the pharmacy workflow, having worked closely with pharmacy leadership. The student/resident's report should summarize the plan, results and experience with the process.

**Relevant PowerPoint® Slides:**

- Health Literacy in Pharmacy: Communication Strategies

**Resources:**

- AHRQ's [How To Create a Pill Card](#)
- NC Health Literacy [My Daily Medications](#)
- AHRQ's [Your Medicine: Be Smart. Be Safe. \(with wallet card\)](#)
- Iowa Health Collaborative [Medcard](#)
- [My Medication List – Keep it Handy](#)
- Kripalani S, Robertson R, et al. Development of an illustrated medication schedule as a low-literacy patient education tool. *Patient Educ Couns* 2007;66(3):368-377.

# Assessing the Health Literacy Practices of Pharmacies

## Activity 12: Pharmacy Assessment Tour

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<b>Topic</b>	Assessing the Health Literacy Practices of Pharmacies
<b>Use in</b>	<ul style="list-style-type: none"><li>• Experiential education (APPE)</li><li>• Project (PharmD or residency project)</li></ul>

**Time Commitment Estimate:** 4 hours (experiential education); minimum of 8 hours (project)

### Learning Objectives:

- Describe the ways in which the layout and interactions between staff and patients at a pharmacy can affect a patient's experience.
- Demonstrate how to assess the layout and staff-patient interactions at a pharmacy and identify areas for improvement.
- Demonstrate synthesizing and presenting assessment findings to pharmacy management.
- **Activity Description:** Ideally with a colleague or another student, use AHRQ's *Pharmacy Health Literacy Assessment Tool User's Guide*, [Part I: Assessment Tour of the Pharmacy](#), to assess the physical environment and staff interactions with patients at a pharmacy (e.g., your rotation sites). Thoroughly read the assessment tour instructions (Part I) and discuss any questions with your colleague. Revise the assessment tools as necessary for the environment in which it is being used. Then, each team member should conduct the assessment of the pharmacy independently to minimize bias. As you complete the assessment, do not be afraid to be critical. The purpose of the assessment is to increase awareness and spur discussion and change among pharmacy leadership. Once each team member has completed the assessment, follow the instructions in the *User's Guide* to analyze your results. Discuss each team member's results. Write a report that describes how you assessed the pharmacy, your findings (quantitative and qualitative), and recommendations for how to change the pharmacy set-up or expectations of staff to better serve patients of all health literacy levels. Include a summary of your findings that could be presented to pharmacy management. If you

assessed your APPE site or residency site, present the results and full report to your preceptor, pharmacy staff, and management.

**Evaluation Criteria:** Students/residents should demonstrate that they completed the assessment following the *Guide*. Reports should present a holistic picture of assessment results and include quantitative (i.e., assessment scores) and qualitative (i.e., reasons for low or high scores) information, as well as thoughtful recommendations. The executive summary should be succinct and relevant to management.

**Relevant PowerPoint® Slides:**

- Advancing Health Literacy Practices in Pharmacy Through Quality Improvement – Part I
- Advancing Health Literacy Practices in Pharmacy Through Quality Improvement – Part II

**Resources:**

- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. *Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide*. (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051. Rockville, MD: Agency for Healthcare Research and Quality. October 2007. [Part I: Assessment Tour of the Pharmacy](#)

## Activity 13: Surveying Pharmacy Staff to Assess a Pharmacy

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<b>Topic</b>	Assessing the Health Literacy Practices of Pharmacies
<b>Use in</b>	<ul style="list-style-type: none"><li>• Experiential education (APPE)</li><li>• Project (PharmD or Residency)</li></ul>

**Time Commitment Estimate:** 4-8 hours (experiential education); minimum of 12 hours (project)

### Learning Objectives:

- Explain the importance of staff perspective and experiences in assessing a pharmacy's practices.
- Conduct a survey of pharmacy staff to assess a pharmacy.
- Interpret survey results and recommend changes to pharmacy management.

**Description:** Use AHRQ's *Pharmacy Health Literacy Assessment Tool User's Guide* to complete a *Survey of Pharmacy Staff*. Revise the instrument as necessary to meet the needs of the environment being assessed. Follow the instructions in the *User's Guide* to administer the survey; you might consider creating an electronic version of the survey using a commercial survey program. After the staff have completed the survey, code and analyze your results per the *User's Guide* instructions. Write a report of your findings, including recommendations for how to change the pharmacy set-up or expectations of staff to better serve patients of all health literacy levels. The report should include an introduction that discusses the problem of health literacy and why you conducted the survey; a methods section that describes the survey, how you administered and analyzed it and how many staff participated; a summary of the results; results providing a summary of the results; and a discussion of what the findings mean, what solutions or changes you would recommend, etc.

**Project:** In addition to the activity above, also include a summary of your findings to present to pharmacy staff and management. Then present the study results to pharmacy staff. Following the presentation, ask pharmacy staff and/or management what was surprising about your results. Write a short reflection on your experiences with this project to include at the end of your paper a write-up answering questions such as:

- What did you learn about the pharmacy?

- What was surprising about the results (for you and for pharmacy staff/management)?
- How can the results be used to improve patient care?

Some helpful tips you may want to consider before distributing the survey:

- Staff are more likely to complete the survey if you provide incentives – paid staff time (with management approval), food, or monetary incentives may help.
- Providing staff context for the survey (i.e., explaining why it’s important for them to complete it) and firm deadlines may also help increase response rates. Guarantee anonymity to promote candor.
- Depending on your university, you may need Institutional Review Board (IRB) approval to conduct this survey. Always check with your IRB before conducting research with any human subjects.

**Evaluation Criteria:** Successful assessments will closely follow instructions described in the *AHRQ User’s Guide*. Reports will present a holistic picture of assessment results and will include quantitative (i.e., assessment scores) and qualitative (i.e., reasons for low or high scores) information in addition to a thoughtful discussion with recommendations for improvement. The summary should be succinct and relevant to pharmacy management. Students/residents’ reflection should demonstrate thoughtful engagement with the topic and consideration of the reflection questions posed above.

**Relevant PowerPoint® Slides:**

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I
- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II

**Resources:**

- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. *Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide*. (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051. Rockville, MD: Agency for Healthcare Research and Quality. October 2007. [Part II: Pharmacy Staff Survey](#).

## Activity 14: Using Patient Feedback for Quality Improvement

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<b>Topic</b>	Assessing the Health Literacy Practices of Pharmacies
<b>Use in</b>	<ul style="list-style-type: none"><li>• Experiential education (APPE)</li><li>• Project (PharmD or residency project)</li></ul>

**Time Commitment Estimate:** minimum of 20 hours (APPE or project)

### Learning Objectives:

- Explain the importance of patient perspectives and experiences in assessing a pharmacy's health literacy practices.
- Design and execute a focus group, survey, or interviews of patients to assess a pharmacy.
- Interpret focus group, survey, or interview results and recommend changes to pharmacy leadership.
- Recommend areas to improve health literacy practices of a pharmacy.

**Activity Description:** Use AHRQ's *Pharmacy Health Literacy Assessment Tool User's Guide* to complete a *Pharmacy Patient Focus Group* or patient surveys or interviews. You may want to consider conducting interviews instead of a focus group if logistical factors would make a focus group difficult at your pharmacy (e.g., space). Use the questions provided in the User's Guide for the patient focus group, and adapt if needed to an interview or survey format. Once you have completed the focus group, surveys, or interviews, follow the instructions in the *User's Guide* to analyze your results.

Write a complete report. The report should include an introduction that discusses the problem of health literacy and why you did the survey; a methods section that describes the survey, how you administered and analyzed it, and how many staff participated; a summary of the results; and a discussion of what the findings mean, what solutions or changes you would recommend, etc. Also include a summary of your findings to present to pharmacy staff and management. Then present the study results to pharmacy staff. Once you have presented your findings to the pharmacy staff, write a short reflection on your experiences with this project to include at the end of your report, answering questions such as:

- What did you learn about the pharmacy?

- What was surprising about the results?
- How can the results be used to improve patient care?

*Helpful Tips:* Some helpful tips you may want to consider before conducting patient focus groups, surveys, or interviews (see *Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide* – [Part III: Patient Focus Groups](#) for additional tips):

- Consult with your university's IRB to determine whether or not you need approval for your research. (You should *always* do this before conducting research with patients).
- Even if IRB approval is not required, you should obtain consent from all participants.
- If you conduct a focus group, expect people not to show and provide incentives (such as snacks and/or gift certificates) to encourage patients to attend.
- If you conduct a focus group, make sure you have a separate moderator and note-taker. If possible, audiotape focus groups so you can refer back to recordings if necessary.
- If you conduct a focus group, recruit 1.5 times as many patients as you would like to participate for the focus group; you can generally assume that several participants will not show up.
- Consider a variety of recruitment strategies (flyers, phone invitations, etc.).
- Prior to recruitment, you may want to identify eligibility criteria for participants. For example, should all participants have low health literacy? Do you want participants with or without chronic diseases? Do you want a certain age range? Track information like this so that you can report it in your results.

**Faculty Note:** This activity may be broken into two phases with faculty feedback provided at the end of each phase: (1) development of data collection plan, including modification of focus group moderator's guide (if applicable), and (2) analysis of results and summary of findings.

**Evaluation Criteria:** Students should demonstrate they used the User's Guide, and thoughtfully adapted it to their pharmacy's context and needs. Reports should include reflection on the data collection process as well as analysis and synthesis of results and recommendations for improvement. The summary should be succinct and relevant to pharmacy management. Students' reflection should demonstrate thoughtful engagement with the topic and consideration of the reflection questions posed above.

**Relevant PowerPoint® Slides:**

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I
- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II



## Resources:

- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. *Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide*. (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051. Rockville, MD: Agency for Healthcare Research and Quality. October 2007. [Part III: Patient Focus Groups](#).
- AHRQ Focus Group Guide (Available in English and Spanish) Jacobson K, Gazmararian J, Kripalani S, McMorris K, Blake S, Brach C. Agency for Healthcare Research and Quality. Available at: <http://www.ahrq.gov/qual/pharmlit/pharmlitap5.htm> (English); <http://www.ahrq.gov/pharmhealthlit/documents/spfacilguide.htm> (Spanish)
- Krueger RA, Casey MA. (2000). *Focus Groups: A Practical Guide for Applied Research*. Thousand Oaks, CA: SAGE Publications.

## Activity 15: Reporting on Survey Assessment Results

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<b>Topic</b>	Assessing the Health Literacy Practices of Pharmacies
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (assignment)</li><li>• Experiential education (IPPE)</li></ul>

**Time Commitment Estimate:** 2–4 hours

### Learning Objectives:

- Demonstrate how to analyze and interpret assessment results for meaningful conclusions, including recommendations for how to change future practice

**Activity Description:** Acadia Pharmacy, a large retail pharmacy assessed their pharmacy’s health literacy practices using the pharmacy staff survey from the *“Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide.”* Exhibit 1 below presents the results for the pharmacy staff survey of 16 staff members. Using the Assessment Tool guidance on how to analyze the survey data and write-up results, develop a report on the main findings from the survey results (e.g., what is the pharmacy doing well, what is it not doing well, etc.) below, and provide recommendations to potentially improve Acadia Pharmacy’s health literacy practices. Provide a summary of findings, several main takeaways and recommendations for each of the areas covered: 1) print materials 2) verbal communication and 3) sensitivity to literacy. In Exhibit 1 the numbers correspond to the following on the survey:

1. This is something the pharmacy is not doing.
2. Our pharmacy is doing this but could make some improvements.
3. Our pharmacy is doing this well.

**Evaluation Criteria:** Students will demonstrate in their reports that they thoroughly and accurately summarized the findings of the pharmacy staff survey, and provided appropriate recommendations.

### Relevant PowerPoint® Slides:

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II

**Resources:**

- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. *Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide*. (Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051. Rockville, MD: Agency for Healthcare Research and Quality. October 2007. [Part II: Pharmacy Staff Survey](#)

### Exhibit 1. Pharmacy Staff Survey Results for Acadia Pharmacy

	1	2	3	Blank	N/A	Total
<b>I. PRINT MATERIALS</b>						
1. We use printed materials to advise patients about services in rest of clinic.	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
2. Print materials are written in simple and clear language, avoiding use of technical jargon and medical terms:						
a) bottle labels	0.0%	12.5%	87.5%	0.0%	0.0%	100.0%
b) warning labels	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
3. Print materials are designed with lots of white space:						
a) bottle labels	0.0%	62.5%	37.5%	0.0%	0.0%	100.0%
b) warning labels	12.5%	50.0%	25.0%	0.0%	12.5%	100.0%
4. Graphics are used to decrease dependence on text:						
a) bottle labels	75.0%	12.5%	0.0%	0.0%	12.5%	100.0%
b) warning labels	25.0%	50.0%	25.0%	0.0%	0.0%	100.0%
5. Graphics are used to decrease dependence on text--non-English materials:						
a) bottle labels	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
b) warning labels	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
c) monographs	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
d) patient education materials	25.0%	12.5%	50.0%	0.0%	12.5%	100.0%
e) informational posters	50.0%	12.5%	37.5%	0.0%	0.0%	100.0%
6. Font is more than 12pt:						
a) bottle labels	12.5%	0.0%	62.5%	25.0%	0.0%	100.0%
b) warning labels	37.5%	25.0%	12.5%	25.0%	0.0%	100.0%
7. Print materials are easy for adults with limited health literacy:						
a) bottle labels	0.0%	37.5%	62.5%	0.0%	0.0%	100.0%
b) warning labels	25.0%	50.0%	25.0%	0.0%	0.0%	100.0%
c) monographs	37.5%	37.5%	25.0%	0.0%	0.0%	100.0%
d) patient education materials	12.5%	37.5%	25.0%	0.0%	25.0%	100.0%
e) informational posters	37.5%	12.5%	25.0%	0.0%	25.0%	100.0%
8. We regularly review printed material to check how easy it is to read	62.5%	25.0%	0.0%	0.0%	12.5%	100.0%
9. We modify materials that are difficult to understand/read.	25.0%	50.0%	0.0%	0.0%	25.0%	100.0%
10. We consult with non-pharmacy staff/committee on written materials.	62.5%	12.5%	0.0%	0.0%	25.0%	100.0%
12. Our staff receives training on how to identify, prepare, simplify materials.	62.5%	25.0%	12.5%	0.0%	0.0%	100.0%

	1	2	3	Blank	N/A	Total
<b>II. CLEAR VERBAL COMMUNICATION</b>						
13. We distribute education materials to help patients understand and remember.	25.0%	50.0%	25.0%	0.0%	0.0%	100.0%
14. Staff has had training to explain medical jargon to patients.	25.0%	37.5%	37.5%	0.0%	0.0%	100.0%
15. We use "teach back" method.	25.0%	75.0%	0.0%	0.0%	0.0%	100.0%
16. We are trained to recognize that patients don't understand.	62.5%	12.5%	12.5%	0.0%	12.5%	100.0%
17. We offer and provide interpreters.	0.0%	12.5%	87.5%	0.0%	0.0%	100.0%
18. Pharmacy's leadership is committed to health literacy.	25.0%	12.5%	50.0%	0.0%	12.5%	100.0%
19. We have a space that provides privacy.	0.0%	25.0%	75.0%	0.0%	0.0%	100.0%
20. If a patient asks to speak with the pharmacist, we offer counseling on the following topics:						
a) name of medication	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
b) purpose of medication	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
c) dose form, route of administration, duration of therapy	0.0%	12.5%	87.5%	0.0%	0.0%	100.0%
d) special directions/precautions for preparation, administration	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
e) common side effects, interactions, contraindications and what patient should do	0.0%	12.5%	87.5%	0.0%	0.0%	100.0%
f) techniques for self-monitoring	12.5%	50.0%	25.0%	0.0%	12.5%	100.0%
g) proper storage	25.0%	37.5%	37.5%	0.0%	0.0%	100.0%
h) refill information	12.5%	50.0%	37.5%	0.0%	0.0%	100.0%
i) action to be taken in case of missed dose	0.0%	75.0%	12.5%	0.0%	12.5%	100.0%
21. I have received training on the following clear verbal communication techniques:						
a) how to effectively organize the info given to patients	25.0%	37.5%	25.0%	0.0%	12.5%	100.0%
b) how to communicate using simple language	25.0%	25.0%	37.5%	0.0%	12.5%	100.0%
c) how to check for understanding	12.5%	37.5%	37.5%	0.0%	12.5%	100.0%
22. I am confident that I can effectively educate patients about medicines and diseases when:						
a) time is limited	0.0%	25.0%	50.0%	0.0%	25.0%	100.0%
b) patient has many medications	0.0%	12.5%	62.5%	0.0%	25.0%	100.0%
c) patient has many new prescriptions	0.0%	12.5%	62.5%	0.0%	25.0%	100.0%
d) many changes in dosage	0.0%	0.0%	75.0%	0.0%	25.0%	100.0%
e) patient has limited literacy skills	0.0%	50.0%	25.0%	0.0%	25.0%	100.0%
f) patient is in a rush	12.5%	50.0%	12.5%	0.0%	25.0%	100.0%
g) patient asks a lot of questions	0.0%	25.0%	50.0%	0.0%	25.0%	100.0%

	1	2	3	Blank	N/A	Total
h) patient is angry at pharmacy staff	12.5%	75.0%	0.0%	0.0%	12.5%	100.0%
i) patient is new to the pharmacy	0.0%	12.5%	62.5%	0.0%	25.0%	100.0%
j) patient does not understand how to pay for their medication	0.0%	37.5%	37.5%	12.5%	12.5%	100.0%
k) patient can't afford their medication	12.5%	25.0%	37.5%	0.0%	25.0%	100.0%
l) patient appears noncompliant	0.0%	25.0%	50.0%	0.0%	25.0%	100.0%
m) patient does not speak English proficiently	0.0%	25.0%	50.0%	0.0%	25.0%	100.0%

	1	2	3	Blank	N/A	Total
<b>III. SENSITIVITY TO LITERACY</b>						
23. Staff/volunteers are available to help pts fill out forms.	0.0%	37.5%	50.0%	0.0%	12.5%	100.0%
24. We identify and understand the literacy skills a patient must have to use our services.	50.0%	12.5%	25.0%	0.0%	12.5%	100.0%
25. We regularly obtain verbal or written feedback about the quality/effectiveness of services.	25.0%	62.5%	12.5%	0.0%	0.0%	100.0%
26. Pharmacy policies support activities/resources accessibility to low literacy patients.	25.0%	37.5%	12.5%	12.5%	12.5%	100.0%
27. We are confident that we effectively promote our pharmacy services to patients of all levels.	37.5%	37.5%	12.5%	0.0%	12.5%	100.0%
28. All staff members are aware of certain behaviors that may indicate literacy problems.	25.0%	50.0%	12.5%	0.0%	12.5%	100.0%
29. Our staff/leadership has received awareness and sensitivity training about literacy issues.	50.0%	37.5%	0.0%	0.0%	12.5%	100.0%
30. Our staff knows about the literary resources in our community.	87.5%	0.0%	0.0%	0.0%	12.5%	100.0%

1 = This is something the pharmacy is not doing; 2 = Our pharmacy is doing this but could make some improvements; 3 = Our pharmacy is doing this well.

# Conducting Health Literacy Quality Improvement

## Activity 16: Designing a QI Project for Teach-Back

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<b>Topic</b>	Conducting Health Literacy Quality Improvement
<b>Use in</b>	<ul style="list-style-type: none"><li>• Didactic (in class or assignment)</li><li>• Experiential education (APPE)</li><li>• Project (residency project)</li></ul>

**Time:** 30 minutes (in-class); 1 hour (assignment); 8–12 hours (APPE); 40 hours (residency project)

### Learning Objectives:

- Demonstrate how to develop a quality improvement (QI) project using the Plan-Do-Study-Act (PDSA) model to implement teach-back in a pharmacy or pharmacy practice.

### Activity Description:

*In-class:* Break into groups of three to five. You have 30-45 minutes to develop a PDSA cycle for a busy retail pharmacy that wants to incorporate teach-back into counseling on prescriptions, using one of the following PDSA worksheets from the Institute for Healthcare Improvement (IHI) or from the AHRQ Health Literacy Universal Precautions Toolkit (see resources below). Pick a person to present to the class.

*Assignment:* Develop a PDSA cycle for a busy retail pharmacy that wants to incorporate teach-back into counseling on new prescriptions, using one of the PDSA worksheets (see below).

*APPE:* Develop a PDSA cycle for your rotation site pharmacy to incorporate teach-back into their counseling or pharmacy practice. Use one of the PDSA worksheets (see below). Then execute the plan and study the results. Based on the PDSA, develop a report summarizing what you intended to do and why, how you did it, how you studied the results, what were the results, and what next steps you would recommend to move teach-back forward in the pharmacy. To obtain further guidance look to Chapter 5, Figure 5-3: Quality Improvement Planning Worksheet in Warholak and Nau (2010).



*Project:* Develop two to three PDSA cycles for your residency site pharmacy or pharmacy practice to incorporate teach-back into their counseling or pharmacy practice (e.g., MTM practice). See examples of the three PDSA cycles used to implement teach-back into a medical practice (see Universal Precautions Toolkit, page 91). Use one of the PDSA worksheets (see below) to develop the first cycle – to test a small change in teach-back in the pharmacy. Execute the plan and study the results. Based on the first cycle results, determine what should be done in the second cycle to make further progress in incorporating teach-back into the pharmacy. Again, execute the plan and study the results, and based on the results develop a third cycle to make even broader changes. Execute the third cycle plan and study the results. Based on the three PDSA cycles, develop a report summarizing what you intended to do and why, how you did it, how you studied the results (i.e., methods), what was involved in each cycle, what were the results, and what next steps you would recommend to move teach-back forward in the pharmacy. Also describe the types of challenges you encountered in doing the quality improvement project. Include a reflection on your experience conducting the PDSA cycles, and what you learned.

**Relevant PowerPoint® Slides:**

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I
- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II

**Evaluation Criteria:** Students will be engaged as part of an in-class activity. Each student will have participated in completing a PDSA cycle for teach-back. For the assignment, the student will have developed a PDSA using one of the two worksheets, and provided a reasonable and complete PDSA cycle. For the APPE, the student will successfully develop and execute a PDSA cycle to implement teach-back in the pharmacy. For the residency project the resident should successfully develop and execute three PDSA cycles (if three were needed) to implement teach-back into the pharmacy or pharmacy practice. The report should provide a thorough overview of the PDSA cycles and results, and include a reflection on the student’s experience and what he/she learned.

**Resources:**

- [Health Literacy Universal Precautions Toolkit – PDSA explanation and examples](#)
- [Health Literacy Universal Precautions Toolkit – PDSA Worksheet](#)
- Institute for Healthcare Improvement (IHI) - [IHI PDSA Worksheet](#)
- Warholak TL, Nau DP. (2010). Quality and safety in pharmacy practice. McGraw-Hill; New York, NY. See: *Chapter 5, Figure 5-3 Quality Improvement Planning Worksheet.*

## Activity 17: Designing a Quality Improvement (QI) Project

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<b>Topic</b>	Conducting Health Literacy Quality Improvement
<b>Use in</b>	<ul style="list-style-type: none"><li>• Experiential education (APPE)</li><li>• Project (PharmD or residency project)</li></ul>

**Time Commitment Estimate:** 8–12 hours (APPE);

### Learning Objectives:

- Name a potential problem or area for improvement in a pharmacy’s health literacy practices.
- Explain how QI projects can be used to improve pharmacy services or practice.
- Use a QI PDSA process to implement in a pharmacy or pharmacy practice.

**Activity Description:** First identify potential problems or opportunities for improvement in a pharmacy’s health literacy practices (see Activities under Section 4.3 Assessing the Health Literacy Practices of Pharmacies). Consider whether the pharmacy’s written materials are appropriate for individuals with limited health literacy or whether the pharmacy’s verbal communication strategies follow best practices or whether the pharmacy staff are aware and knowledgeable about health literacy issues and their importance for pharmacists. Also consider doing an assessment of the pharmacy using AHRQ’s assessment tool, *Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide* (see resources below), or Activities 12 - 15. Once you select or identify an important problem or area for improvement, follow the steps outlined below.

**Assignment:** Develop a quality improvement (QI) project PDSA cycle for a pharmacy that would make the changes to potentially address the health literacy practice issue. Use one of the PDSA worksheets (see below).

**APPE:** Develop a quality improvement (QI) project PDSA cycle for your rotation site pharmacy to implement and test a change to improve the identified issue in the pharmacy. Use one of the PDSA worksheets (see below). Execute the plan and study the results. Based on the PDSA, develop a report summarizing what you intended to do and why, how you did it, how you study the results, what were the results, and what next steps you would recommend to further

improve upon the select health literacy practice issue or what other potential solutions should be explored.

*Project:* Develop a quality improvement (QI) project using two-three PDSA cycles for your residency site pharmacy or pharmacy practice to implement and test a change to improve upon the identified issue in the pharmacy. See examples of the three PDSA cycles used to implement teach-back into a medical practice (see Universal Precautions Toolkit, page 91). Use one of the PDSA worksheets (see below) to develop the first cycle – to test a small change in practices in the pharmacy. Execute the plan and study the results. Based on the first cycle results, determine what should be done in the second cycle to make further progress in incorporating the change into the pharmacy. Again, execute the plan and study the results. Based on the results, develop a third cycle to make even broader changes. Execute the third cycle plan and study the results. Based on the three PDSA cycles, develop a report summarizing what you intended to do and why, how you did it, how you studied the results (i.e., methods), what was involved in each cycle, what were the results, and what next steps you would recommend to further improve the select health literacy practice issue or what other potential solutions should be explored. Also describe the types of challenges you encountered in doing the quality improvement project. Include a reflection on your experience conducting the PDSA cycles and what you learned.

**Evaluation Criteria:** Students will be engaged as part of an in-class activity. Each student will have participated in completing a quality improvement (QI) project PDSA cycle for their selected issue. For the assignment, the student will have developed a PDSA using one of the two worksheets, and provided a reasonable and complete PDSA cycle. For the APPE, the student will successfully develop and execute a PDSA cycle to implement the change into the pharmacy. For the residency project the resident should successfully develop and execute three PDSA cycles (if three were needed) to implement the change into the pharmacy or pharmacy practice. The report should provide a thorough overview of the PDSA cycles and results and include a reflection on the student’s experience and what he/she learned.

**Relevant PowerPoint® Slides:**

- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part I
- Advancing Health Literacy Practices in Pharmacy through Quality Improvement – Part II

**Resources:**

- Jacobson K, Gazmararian J, Kripalani S, McMorris KJ, Blake SC, Brach C. [\*Is Our Pharmacy Meeting Patients’ Needs? A Pharmacy Health Literacy Assessment Tool User’s Guide.\*](#)

(Prepared under contract No. 290-00-0011 TO7.) AHRQ Publication No. 07-0051.  
Rockville, MD: Agency for Healthcare Research and Quality. October 2007.

- Institute for Healthcare Improvement (IHI) - [IHI PDSA Worksheet](#)
- [Health Literacy Universal Precautions Toolkit – PDSA explanation and examples](#)
- [Health Literacy Universal Precautions Toolkit – PDSA Worksheet](#)

## Resources

The following resources can be used as background reading for faculty or as reading assignments for students/residents. This section may be used as a reference point and resource for further exploration of health literacy quality improvement in pharmacy.

### Agency for Healthcare Research and Quality (AHRQ) Health Literacy Tools

- AHRQ's health literacy tools for pharmacy
  - [Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide](#)
  - [Strategies to Improve Communication Between Pharmacy Staff and Patients: A Training Program for Pharmacy Staff](#)
  - [How To Create a Pill Card](#)
  - [Automated Telephone Reminders: A Tool to Help Refill Medicines On Time](#)
- AHRQ's [Health Literacy Universal Precautions Toolkit for Primary Care Settings](#)
- [AHRQ Informed Consent and Authorization Toolkit for Minimal Risk Research](#)
- AHRQ's [Questions are the Answer](#)

### Communication Tools

- AHRQ's [Training Program for Pharmacy Staff on Communication](#)
- [Hablamos Juntos](#) – improving patient-provider communication for Latinos
- [North Carolina Program on Health Literacy](#)
- [Key Communication Strategies](#)

### Tools for Developing or Assessing Materials

- Centers for Disease Control and Prevention's [Simply Put: A Guide for Creating Easy-To-Understand Materials](#)
- CDC's [Plain Language Thesaurus for Health Communications](#)
- Centers for Medicare and Medicaid Services' (CMS) [Toolkit for Making Written Material Clear and Effective](#)
- National Cancer Institute [Clear & Simple: Developing Effective Print Materials for Low-Literate Readers](#)

- [Pfizer Principles for Clear Communication](#), 2<sup>nd</sup> Edition (see chapter 4 for guidelines). Doak, LG and Doak, CC.
- [Principles of Designing a Medication Label for Community and Mail Order Pharmacy Prescription Packages](#). Institute for Safe Medication Practices.

## Medication List Tools

- AHRQ's [How To Create a Pill Card](#)
- NC Health Literacy [My Daily Medications](#)
- AHRQ's [Your Medicine: Be Smart. Be Safe. \(with wallet card\)](#)
- Iowa Health Collaborative [Medcard](#)
- [My Medication List – Keep it Handy](#)

## Health Literacy Skill Assessment Tools

- Chew LD, Bradley KA, et al. [Brief Questions to Identify Patients with Inadequate Health Literacy](#). *Family Medicine* 2004;36(8):588-594.
- Morris NS, MacLean CD, et al. [The Single Item Literacy Screener: Evaluation of a brief instrument to identify limited reading ability](#). *BMC Fam Pract* 2006;7:21.
- [Newest Vital Sign](#)
- [Rapid Estimate of Adult Literacy in Medicine—Short Form \(REALM-SF\)](#)
- [Rapid Estimate of Adult Literacy in Medicine \(REALM-R\)](#)
- [Short Assessment of Health Literacy for Spanish Adults \(SAHLSA-50\)](#)
- [TOFHLA](#) (not free)

## Assessment Tools for Pharmacies

- AHRQ's [Is Our Pharmacy Meeting Patients' Needs? A Pharmacy Health Literacy Assessment Tool User's Guide](#)

## Other Tools

- [Ask Me 3 Campaign](#)
- [Medication labeling initiatives](#) American College of Physicians (ACP) Foundation
- ACP's [Medication Labeling Project](#)
- Institute of Medicine (IOM) "[Standardizing medication labels: confusing patients less](#)"

## Health Literacy Resource Web Sites

- [AHRQ Pharmacy Health Literacy Center](#)
- [North Carolina Program on Health Literacy](#)
- [Office of Disease Prevention and Health Promotion's Health Literacy Improvement Web site](#)
- [Health Literacy Missouri](#)
- [Health Literacy Kentucky](#)

## Videos

- [Health literacy videos](#) on the American Medical Association (AMA) website
- [Health literacy video from ACP](#) (6-minute video)
- [Teach Back Video – a technique for teaching patients](#)
- [Provider Communication Skill: Ask for teach-back](#)

## Quality Improvement Resources and Tools

- [Health Literacy Universal Precautions Toolkit – PDSA explanation and examples](#)
- [Health Literacy Universal Precautions Toolkit – PDSA Worksheet](#)
- Institute for Healthcare Improvement (IHI) - [IHI PDSA Worksheet](#)
- American Society of Health-Systems Pharmacists (ASHP). [The Pharmacist's Role in Quality Improvement.](#)
- Krueger RA, Casey MA. (2000). Focus Groups: A Practical Guide for Applied Research. Thousand Oaks, CA: SAGE Publications.

## Reports

- Reports and Initiatives found at [Health Literacy Studies](#), Harvard School of Public Health.
- Centers for Disease Control and Prevention (CDC): [Improving Health Literacy for Older Adults - Expert Panel Report 2009.](#)
- National Library of Medicine's bibliography of [health literacy literature.](#)
- [The Health Literacy of America's Adults: Results from the 2003 National Assessment of Adult Literacy.](#)

## Literature

- [Health Literacy Interventions and Outcomes: An Updated Systematic Review](#), March 2011. Agency for Healthcare Research and Quality, Rockville, MD.
- Andrus MR, Roth MT. Health literacy: A review. *Pharmacotherapy* 2002;22(3):282-302.
- Barnett CW. Patient health literacy in the community pharmacy setting. *America's Pharmacist* 2006; December:63-71.
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- Hardin LR. Counseling patients with low health literacy. Frontline pharmacist. *Am J Health-Sys Pharm* 2005;62(4):364-365.
- Kirk JK, Krick S, Futrell D, et al. Connecting pharmacy and literacy: the North Carolina Medication Information Literacy Project. *Am J Pharm Educ* 2000;64:277-83.
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- Kripalani S, Robertson R, et al. Development of an illustrated medication schedule as a low-literacy patient education tool. *Patient Educ Couns* 2007;66(3):368-377.
- Ngoh LN. Health literacy: A barrier to pharmacist-patient communication and medication adherence. *J Am Pharm Assoc* 2009;15(8):45-57.
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- Warholak TL, Nau DP. (2010). *Quality and safety in pharmacy practice*. McGraw-Hill; New York, NY.



- Warholak TL, Scott V. What is quality improvement? In: Warholak TL, Nau D (Eds). *Pharmacy Quality: Improving the Safety and Effectiveness of Pharmacy Services*. McGraw Hill Companies, Inc.
- Wolf MS, Davis TC, Tilson H, et al. Misunderstanding of prescription drug warning labels among patients with low literacy. *Am J Health Syst Pharm* 2006;63(11):1048-1055.
- Wolf MS, Williams MV, Parker RM, Parikh NS, Nowlan AW, Baker DW. Patients' shame and attitudes toward discussing the results of literacy screening. *Journal of Health Communications*. 2007 Dec;12(8):721-732.
- Youmans SL, Schillinger D. Functional health literacy and medication use: the pharmacist's role. *Ann Pharmacother* 2003;37:1726-1729.

## Appendix I: Health Literacy QI Case Studies – Abstract

Pharmacies are key sources of medication information for patients, yet few pharmacies have implemented appropriate practices to serve patients who have low health literacy. To better understand facilitators and barriers to pharmacies' adoption and implementation of health literacy tools, we conducted a comparative case study of eight heterogeneous pharmacies, guided by Rogers's *Diffusion of Innovations* model. Data was collected through interviews, site visits, and review of documents and analyzed using cross-case analysis. Several factors related to the characteristics of the pharmacy and the tools affected decisions to use the tools or not. Facilitators to implementation included staff resources, leadership support, technical assistance (e.g., guidance on how to do focus groups, access to an electronic version of the pharmacy staff survey), and the ability to implement discrete sections of the tool. Barriers to implementation included the overwhelming length of tools, lack of leadership support, and pharmacies' unpredictable, fluctuating workload. The results from the case studies provided several key lessons learned and insights that helped shape the final phase of the project. Specifically, during our recruitment efforts we found that individuals connected to a college or school of pharmacy expressed the greatest interest in using the health literacy tools. Moreover, during our case studies the majority of pharmacies actually willing and able to implement one or more of the health literacy tools –and especially the Assessment Tool – had a pharmacy practice faculty, resident, or student spear-heading the efforts. These findings led the project team and AHRQ to explore the value of further supporting faculty, residents, and students in future health literacy/quality improvement initiatives by providing curricular modules to ultimately improve the health literacy practices of pharmacists and pharmacies.

# Appendix II: Relevant Accreditation Council for Pharmacy Education Standards

## Standard 12: Professional Competencies and Outcome Expectations

**Guideline 12.1:** Graduates must possess the basic knowledge, skills, attitudes, and values to practice pharmacy independently at the time of graduation. In this regard, the college or school must ensure that graduates are competent, at a minimum, to:

- Provide patient-centered care, through the ability to:
  - Design, implement, monitor, evaluate, and adjust pharmacy care plans that are patient-specific; address health literacy, cultural diversity, and behavioral psychosocial issues; and are evidence-based.

## Standard 14: Curricular Core – Pharmacy Practice Experiences

**Guideline 14.5:** Colleges and schools may choose to include structured simulation as part of their overall introductory pharmacy practice experiences to meet their introductory pharmacy practice experiences program goals and objectives...For the purpose of satisfying introductory pharmacy practice experience expectations, simulation may include use of...standardized patients, standardized colleagues, role play, and computer-based simulations.

**Guideline 14.8:** Goals and outcomes for each pharmacy practice experience must be mapped to activities listed in Appendix C to ensure that students' experience will cover, at a minimum, all the listed activities. [see Appendix C for details]

## Appendix B – Additional Information on the Science Foundation for the Curriculum

### *Social/Behavioral/Administrative Pharmacy Sciences*

#### Health Care Delivery Systems

- Incidence of and problems associated with drug overuse, underuse, and misuse in the U.S. health care system.

#### Practice Management

- Management of transformational change
- Creating/implementing shared mission and vision

- Management principles (planning, organizing, directing, and controlling resources) applied to various pharmacy practice settings and patient outcomes
- Principles of planning, organizing, directing, and controlling pharmacy resources
- Pharmacy Law and Regulatory Affairs
  - Pharmacist’s role in reducing liability by reducing drug-related misadventure

### Professional Communication

- Effective verbal and written interpersonal communication
- Health literacy
- Communicating with diverse patients, families, pharmacists, and other health professionals in a variety of settings, both individually and as a member of a team
- Interviewing techniques
- Active listening and empathy
- Assertiveness and problem-solving techniques
- Cultural influences on communication of health information
- Group presentation skills
- Strategies for handling difficult situations
- Principles of behavior modification
- Communicating research and clinical findings to interprofessional and interdisciplinary audiences

### Medication Safety

- Causes of medication errors/systems approaches
- Strategies for reducing errors
- Pharmacy leadership in medication safety
- Current national patient safety goals as they relate to medication use
- Organizations devoted to assurance and advancement of quality health care (e.g., Joint Commission)
- Quality and improvement strategies, such as failure mode and effects analysis, root cause analysis, and lean principles
- Use of data in continuous quality improvement initiatives

## **Appendix C – Additional Guidance on Pharmacy Practice Experiences**

### ***Introductory Pharmacy Practice Experiences (IPPE)***

...colleges and schools are encouraged to identify or develop introductory pharmacy practice experiences that consistently expose students to and allow participation in activities such as:

- Assessing patient health literacy and compliance
- Communicating with patients

***Advanced Pharmacy Practice Experiences (APPE)***

Most of the time assigned for students in advanced pharmacy practice experiences should involve direct patient care:

- Providing pharmacist-delivered patient care to a diverse patient population
- Providing patient education to a diverse patient population
- Identifying and reporting medication errors and adverse reactions
- Educating the public (and health care professionals) regarding medical conditions, wellness, dietary supplements, durable medical equipment, and medical and drug devices
- Participating in discussions and assignments regarding compliance with accreditation, legal, regulatory/legislative, and safety requirements