It's Multi-factorial: Collaboration, Communication and Resources/Tools for Improving Patient Safety

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Learning Objectives

- Explain the importance of communication for patient's safety and pharmacist's life-long professional development
- Identify the barriers for communications and probes for questions in different situations to prevent errors
- Describe the strategies for collaboration to improve medication and patient safety
- Identify resources and tools in the context of interprofessional competencies to improve patient safety
Let’s Communicate: Attitude/Perception Exercise

- How Am I / Are We Being Perceived?

- 2 Personal Stories ➔ 1 for Each Partner
  - 1 Minute Each
  - 2 Times (-/+)
  - 2 Rounds
How Am I or Are You Being Perceived, Especially as a Healthcare Professional?

- It is your attitude, not aptitude, that determines your attitude.

- One little letter can make a big difference.

- One little letter or one decimal point place error (0.1 or 1.0 or 10 or 10.0 or 100) can lead to medication error and jeopardize patient safety.
Self-Aware – Watch…

- Watch your thoughts…
- Watch your words…
- Watch your actions…
- Watch your habits…

…it becomes your characters.

— Freeman A. Hrabowski, III, President, UMBC
Keynote Speaker at the American Association of Colleges of Pharmacy 2015 Annual Meeting
Which Direction(s)?
# ISMP's List of Error-Prone Abbreviations, Symbols, and Dose Designations

The abbreviations, symbols, and dose designations found in this table have been reported to ISMP through the ISMP National Medication Errors Reporting Program (ISMP MERP) as being frequently misinterpreted and involved in harmful medication errors. They should **NEVER** be used when communicating medical information. This includes internal communications, telephone/verbal prescriptions, computer-generated labels, labels for drug storage bins, medication administration records, as well as pharmacy and prescriber computer order entry screens.

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>Intended Meaning</th>
<th>Misinterpretation</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>pg</td>
<td>Microgram</td>
<td>Mistaken as “mg”</td>
<td>Use “mg”</td>
</tr>
<tr>
<td>AD, AS, AU</td>
<td>Right ear, left ear, each ear</td>
<td>Mistaken as OD, OS, OU (right eye, left eye, each ear)</td>
<td>Use “right ear,” “left ear,” or “each ear”</td>
</tr>
<tr>
<td>OD, OS, OU</td>
<td>Right eye, left eye, each eye</td>
<td>Mistaken as AD, AS, AU (right eye, left eye, each ear)</td>
<td>Use “right eye,” “left eye,” or “each eye”</td>
</tr>
<tr>
<td>BT</td>
<td>Bedtime</td>
<td>Mistaken as “BID” (twice daily)</td>
<td>Use “bedtime”</td>
</tr>
<tr>
<td>cc</td>
<td>Cubic centimeters</td>
<td>Mistaken as “u” (units)</td>
<td>Use “mL”</td>
</tr>
<tr>
<td>D/C</td>
<td>Discharge or discontinue</td>
<td>Premature discontinuation of medications if D/C (intended to mean “discharge”) has been misinterpreted as “discontinued” when followed by a list of discharge medications</td>
<td>Use “discharge” and “discontinue”</td>
</tr>
<tr>
<td>i.v.</td>
<td>Injection</td>
<td>Mistaken as “IV” or “intravenous”</td>
<td>Use “injection”</td>
</tr>
<tr>
<td>i.m.</td>
<td>Intramuscular</td>
<td>Mistaken as “IM” or “IV”</td>
<td>Use “intramuscular” or “IV”</td>
</tr>
<tr>
<td>HS</td>
<td>Half-strength</td>
<td>Mistaken as bedtime</td>
<td>Use “half-strength” or “bedtime”</td>
</tr>
<tr>
<td>hs</td>
<td>At bedtime, hours of sleep</td>
<td>Mistaken as half-strength</td>
<td>Use “half-strength” or “bedtime”</td>
</tr>
<tr>
<td>IU**</td>
<td>International unit</td>
<td>Mistaken as IV (intravenous) or 10 (ten)</td>
<td>Use “units”</td>
</tr>
<tr>
<td>q.d. or q.d.**</td>
<td>Once daily</td>
<td>Mistaken as “right eye” (OD-ocular dextro), leading to oral liquid medications administered in the eye</td>
<td>Use “daily”</td>
</tr>
<tr>
<td>q.j.</td>
<td>Orange juice</td>
<td>Mistaken as OD or OS (right or left eye); drugs meant to be diluted in orange juice may be given in the eye</td>
<td>Use “orange juice”</td>
</tr>
<tr>
<td>q.o. or q.o.**</td>
<td>By mouth, orally</td>
<td>The “o” can be mistaken as “left eye” (OD-ocular sinister)</td>
<td>Use “PO,” “by mouth,” or “orally”</td>
</tr>
<tr>
<td>q.d.</td>
<td>Every day</td>
<td>Mistaken as q.d.d., especially if the period after the “q” or the tail of the “q” is misunderstood as an “r”</td>
<td>Use “daily”</td>
</tr>
<tr>
<td>qhs</td>
<td>Nightly at bedtime</td>
<td>Mistaken as “qhs” or every hour</td>
<td>Use “nightly”</td>
</tr>
<tr>
<td>qn</td>
<td>Nightly or at bedtime</td>
<td>Mistaken as “qns” (every hour)</td>
<td>Use “nightly” or “at bedtime”</td>
</tr>
<tr>
<td>q.d. or q.o.**</td>
<td>Every other day</td>
<td>Mistaken as “q.d.” (daily) or q.d.d. (four times daily) if the “d” is poorly written</td>
<td>Use “every other day”</td>
</tr>
<tr>
<td>q.d.</td>
<td>Daily</td>
<td>Mistaken as q.d.d. (four times daily)</td>
<td>Use “daily”</td>
</tr>
<tr>
<td>q.6pm, etc.</td>
<td>Every evening at 6 PM</td>
<td>Mistaken as every 6 hours</td>
<td>Use “daily at 6 PM” or “6 PM daily”</td>
</tr>
<tr>
<td>SC, SQ, sub q</td>
<td>Subcutaneous</td>
<td>SC mistaken as SI (sublingual); SQ mistaken as “5 every 2 hours” the “q” in “sub q” has been mistaken as “every” (e.g., a heparin dose ordered “sub q 2 hours before surgery” misunderstood as every 2 hours before surgery)</td>
<td>Use “subcut” or “subcutaneously”</td>
</tr>
<tr>
<td>ss</td>
<td>Sliding scale (insulin) or ½ (apothecary)</td>
<td>Mistaken as “55”</td>
<td>Spell out “sliding scale”; use “one-half” or “½”</td>
</tr>
<tr>
<td>SSRI</td>
<td>Sliding scale regular insulin</td>
<td>Mistaken as selective-serotonin reuptake inhibitor</td>
<td>Spell out “sliding scale (insulin)”</td>
</tr>
<tr>
<td>SSI</td>
<td>Sliding scale insulin</td>
<td>Mistaken as Strong Solution of Insulin (Lugol’s)</td>
<td>Spell out “sliding scale (insulin)”</td>
</tr>
<tr>
<td>i.d.</td>
<td>One daily</td>
<td>Mistaken as “i.d.”</td>
<td>Use “i daily”</td>
</tr>
<tr>
<td>TIW or tiw</td>
<td>3 times a week</td>
<td>Mistaken as “3 times a day” or “twice in a week”</td>
<td>Use “3 times weekly”</td>
</tr>
<tr>
<td>U or u**</td>
<td>Unit</td>
<td>Mistaken as the number 0 or 4, causing a 10-fold overdose or greater (e.g., 40 u seen as “400” or 4u seen as “44”); mistaken as “cc” so dose given in volume instead of units (e.g., 4u seen as 4cc)</td>
<td>Use “unit”</td>
</tr>
<tr>
<td>UD</td>
<td>As directed (“ut dictum”)</td>
<td>Mistaken as unit dose (e.g., ditto 125 mg IV infusion “UD” misinterpreted as meaning to give the entire infusion as a unit [bolus] dose)</td>
<td>Use “as directed”</td>
</tr>
</tbody>
</table>
### Which Direction(s)?

<table>
<thead>
<tr>
<th>Dose Designations and Other Information</th>
<th>Intended Meaning</th>
<th>Misinterpretation</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trailing zero after decimal point (e.g., 1.0 mg)**</td>
<td>1 mg</td>
<td>Mistaken as 10 mg if the decimal point is not seen</td>
<td>Do not use trailing zeros for doses expressed in whole numbers</td>
</tr>
<tr>
<td>“Naked” decimal point (e.g., .5 mg)**</td>
<td>0.5 mg</td>
<td>Mistaken as 5 mg if the decimal point is not seen</td>
<td>Use zero before a decimal point when the dose is less than a whole unit</td>
</tr>
<tr>
<td>Abbreviations such as mg. or mL with a period following the abbreviation</td>
<td>mg</td>
<td>The period is unnecessary and could be mistaken as the number 1 if written poorly</td>
<td>Use mg, mL, etc. without a terminal period</td>
</tr>
</tbody>
</table>

### ISMP’s List of Error-Prone Abbreviations, Symbols, and Dose Designations (continued)

<table>
<thead>
<tr>
<th>Dose Designations and Other Information</th>
<th>Intended Meaning</th>
<th>Misinterpretation</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug name and dose run together (especially problematic for drug names that end in “-t” such as Inderal 40 mg; Tegretol 300 mg)</td>
<td>Inderal 40 mg; Tegretol 300 mg</td>
<td>Mistaken as Inderal 140 mg; Tegretol 1300 mg</td>
<td>Place adequate space between the drug name, dose, and unit of measure</td>
</tr>
<tr>
<td>Numerical dose and unit of measure run together (e.g., 10 mg, 100 mL)</td>
<td>10 mg; 100 mL</td>
<td>The “m” is sometimes mistaken as a zero or two zeros, risking a 10- to 100-fold overdose</td>
<td>Place adequate space between the dose and unit of measure</td>
</tr>
<tr>
<td>Large doses without properly placed commas (e.g., 100,000 units; 1,000,000 units)</td>
<td>100,000 units; 1,000,000 units</td>
<td>100000 has been mistaken as 10,000 or 1,000,000; 1000000 has been mistaken as 100,000</td>
<td>Use commas for doses units of or above 1,000, or use words such as “hundred” or “thousand” to improve readability</td>
</tr>
</tbody>
</table>

### Drug Name Abbreviations

To avoid confusion, do not abbreviate drug names when communicating medical information. Examples of drug name abbreviations involved in medication errors include:

- **APAP**: acetaminophen
- **AHA**: nadolol
- **AZT**: zidovudine (Retrovir)
- **CPZ**: chlorpromazine (prochlorperazine)
- **DPT**: demerol-phenergen-thorazine
- **DTO**: dilute tincture of opium, or deodorized tincture of opium (Pharsaco)
- **HCl**: hydrochloric acid or hydrochloride (The “H” is misinterpreted as “K”)
- **HCT**: hydrocortisone
- **HCTZ**: hydrochlorothiazide
- **MgSO4**: magnesium sulfate
- **MS, MSO4**: morphine sulfate
- **MTX**: methotrexate
- **PCA**: procainamide
- **PTU**: propylthiouracil
- **T3**: thyroxin with codeine No. 3
- **TAC**: triamcinolone
- **TNK**: TNKase
- **ZnSO4**: zinc sulfate
## Which Direction(s)?

<table>
<thead>
<tr>
<th>Stemmed Drug Names</th>
<th>Intended Meaning</th>
<th>Misinterpretation</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Nitro” drip</td>
<td>nitroglycerin infusion</td>
<td>Mistaken as sodium nitroprusside infusion</td>
<td>Use complete drug name</td>
</tr>
<tr>
<td>“Norflox”</td>
<td>norfloxacin</td>
<td>Mistaken as Norflox</td>
<td>Use complete drug name</td>
</tr>
<tr>
<td>“IV Vanc”</td>
<td>Intravenous vancomycin</td>
<td>Mistaken as Invanz</td>
<td>Use complete drug name</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Intended Meaning</th>
<th>Misinterpretation</th>
<th>Correction</th>
</tr>
</thead>
<tbody>
<tr>
<td>dram</td>
<td>Symbol for dram</td>
<td>Symbol for dram mistaken as “3”</td>
<td>Use the metric system</td>
</tr>
<tr>
<td>minim</td>
<td>Symbol for minim</td>
<td>Symbol for minim mistaken as “mL”</td>
<td></td>
</tr>
<tr>
<td>x3d</td>
<td>For three days</td>
<td>Mistaken as “3 doses”</td>
<td>Use “for three days”</td>
</tr>
<tr>
<td>&gt; and &lt;</td>
<td>Greater than and less than</td>
<td>Mistaken as opposite of intended; mistakenly use incorrect symbol; “&lt; 10” mistaken as “40”</td>
<td>Use “greater than” or “less than”</td>
</tr>
<tr>
<td>/ (slash mark)</td>
<td>Separates two doses or indicates “per”</td>
<td>Mistaken as the number 1 (e.g., “25 units/10 units” misread as “25 units and 110 units”)</td>
<td>Use “per” rather than a slash mark to separate doses</td>
</tr>
<tr>
<td>@</td>
<td>At</td>
<td>Mistaken as “2”</td>
<td>Use “at”</td>
</tr>
<tr>
<td>&amp;</td>
<td>And</td>
<td>Mistaken as “2”</td>
<td>Use “and”</td>
</tr>
<tr>
<td>+</td>
<td>Plus or and</td>
<td>Mistaken as “4”</td>
<td>Use “and”</td>
</tr>
<tr>
<td>*</td>
<td>Hour</td>
<td>Mistaken as a zero (e.g., q2* seen as q 20)</td>
<td>Use “hr,” “h,” or “hour”</td>
</tr>
<tr>
<td>Φ</td>
<td>Zero, null sign</td>
<td>Mistaken as numerals 4, 6, 8, and 9</td>
<td>Use 0 or zero, or describe intent using whole words</td>
</tr>
</tbody>
</table>

**These abbreviations are included on The Joint Commission’s “minimum list” of dangerous abbreviations, acronyms, and symbols that must be included on an organization’s “Do Not Use” list, effective January 1, 2004. Visit [www.jointcommission.org](http://www.jointcommission.org) for more information about this Joint Commission requirement.**

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To Err is Human:
Building a Safer Health System

“1.5 million preventable adverse drug events annually”

“The pharmacist has become an essential resource… and thus access to his or her expertise must be possible at all times….”

– Institute of Medicine
Standard 3: Approach to Practice and Care

The program imparts to the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary to solve problems; educate, advocate, and collaborate, working with a broad range of people; recognize social determinants of health; and effectively communicate verbally and nonverbally.

Key Elements:

3.1. Problem solving – The graduate is able to identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

3.2. Education – The graduate is able to educate all audiences by determining the most effective and enduring ways to impart information and assess learning.

3.3. Patient advocacy – The graduate is able to represent the patient’s best interests.

3.4. Interprofessional collaboration – The graduate is able to actively participate and engage as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs.

3.5. Cultural sensitivity – The graduate is able to recognize social determinants of health to diminish disparities and inequities in access to quality care.

3.6. Communication – The graduate is able to effectively communicate verbally and nonverbally when interacting with individuals, groups, and organizations.
3.6. Communication (Communicator) – Effectively communicate verbally and nonverbally when interacting with an individual, group, or organization.

Examples of Learning Objectives*

3.6.1. Interview patients using an organized structure, specific questioning techniques (e.g., motivational interviewing), and medical terminology adapted for the audience.
3.6.2. Actively listen and ask appropriate open and closed-ended questions to gather information.
3.6.3. Use available technology and other media to assist with communication as appropriate.
3.6.4. Use effective interpersonal skills to establish rapport and build trusting relationships.
3.6.5. Communicate assertively, persuasively, confidently, and clearly.
3.6.6. Demonstrate empathy when interacting with others.
3.6.7. Deliver and obtain feedback to assess learning and promote goal setting and goal attainment.
3.6.8. Develop professional documents pertinent to organizational needs (e.g., monographs, policy documents).
Pharmacist’s Patient Care Process from the Joint Commission of Pharmacy Practitioners

Pharmacist’s Patient Care Process
Pharmacists use a patient-centered approach in collaboration with other providers on the health care team to optimize patient health and medication outcomes.

Using principles of evidence-based practice, pharmacists:

Collect
The pharmacist assures the collection of the necessary subjective and objective information about the patient in order to understand the relevant medical/medication history and clinical status of the patient.

Assess
The pharmacist assesses the information collected and analyzes the clinical effects of the patient’s therapy in the context of the patient’s overall health goals in order to identify and prioritize problems and achieve optimal care.

Plan
The pharmacist develops an individualized patient-centered care plan, in collaboration with other health care professionals and the patient or caregiver that is evidence-based and cost-effective.

Implement
The pharmacist implements the care plan in collaboration with other health care professionals and the patient or caregiver.

Follow-up: Monitor and Evaluate
The pharmacist monitors and evaluates the effectiveness of the care plan and modifies the plan in collaboration with other health care professionals and the patient or caregiver as needed.

Figure 1: Pharmacists’ patient care process
Interpersonal Communication Model

S = Sender; R = Receiver

Message Loop

Feedback Loop

Barriers

Context
Difference in Communication Models

- **Linear Model**: Communication as a sequence of actions
  - Receivers only passively absorb the message that senders are transmitting

- **Interactive Model**: Communication process as a loop
  - Receivers provide feedback to senders in response to the message that was being received

- **Transactional Model**: Communication process as a channel
  - Each communicator is sending and receiving messages simultaneously
  - Communication affects all party involved
Self-Assessment Question

In the communication model, which of the following refers to the process whereby receivers communicate back to senders their understanding of the sender’s message?

A. Barrier
B. Context
C. Message loop
D. Feedback loop
Factors Affecting Communication

S = Sender; R = Receiver
Context

- Environment where communication takes place
- Practice settings
  - Community pharmacy
  - Institutional pharmacy
- Timing of communication
  - Individual consultation
  - Meetings
  - Rounds
  - Telephone
  - E-mail
  - Text Message
Sender & Receiver

- **Sender**
  - Transmit information accurately
  - Ask for feedback

- **Receiver**
  - Indicate information received correctly
Message Loop

- Transmitting the message from sender to receiver
  - Verbal
  - Nonverbal
- Assigning meaning to message
  - Perceptions on contents
  - Perceptions toward others
Feedback Loop

- Receivers communicating back to senders to indicate their understanding of the message
  - Roles of senders and receivers are switched

- Breakdowns in feedback loop could result in misunderstanding
  - Senders fail to verify receivers’ interpretation
  - Receivers forgot to provide feedback
Barriers to Communication

- Interrupt communication or decrease its effectiveness
- Barriers can be subtle or obvious, easy or hard to remove
- Barriers could be overlooked
- To minimize barriers requires a two-stage process
  - Aware their existence
  - Take appropriate actions
Environment Barriers

- Distractions in the physical environment
  - Glass partitions
  - Noises
  - Crowded area (no privacy)

- Removal strategy: views things from the other person's perspective
Personal Barriers

- Personal characteristics or perceptions

- Pharmacist-related:
  - Personality, level of confidence, culture background, perception of patients, past experience, level of shyness, emotional objectivity, perceived value of patient communication

- Patient-related:
  - Perception of pharmacists, personal beliefs regarding health care system, perception of medical conditions, culture background

- Removal strategy: to recognize how some of the characteristics or perceptions influence the communication process
Administrative Barriers

- Policies or administrative aspects of pharmacy
  - Reimbursement
  - Staffing
  - Pharmacist's responsibilities
  - Workflow issues

- Timing to engage in communication

- Removal strategies:
  - Recognize each other's need to communicate
  - Be empathic
  - Be assertive
Active Learning:
Case Scenarios and Discussion

- Share a case scenario and identify barriers
- Discuss strategies to reduce barriers
Probing

- Asking question in a way that elicits the most accurate information
- Use of questions to elicit needed information from patients or to help clarify their problems or concerns
- Questioning should NOT be sensed by patient as “interrogating”
Close-ended Questions – Pharmacist-centered

- Closed-ended Questions
  - Can be answered with a “yes” or “no” response or with few words at most
  - Reduce the patient’s degree of openness and cause the patient to become more passive
  - Enable patients to avoid specific subjects and emotional expression
  - Connote an air of interrogation and impersonality
  - Interviewer/pharmacist does most of the talking
Open-ended Questions – Patient-centered

Open-ended Questions

- Neither limits the patients’ response nor induces defensiveness
- Allows patient to state exactly how they perceive and use their own words in his/her frame of reference
- Permit open expression and promote rapport
- Harder to formulate but more crucial in obtaining complete information and in decreasing the patient’s defensiveness by conveying your willingness to listen
- More effective in assessing patient’s understanding
Phrasing of Questions

- Patients often put on defensive by questions
  - “Why” type of questions – patients have to justify reason for doing certain thing
- Patients should be encouraged by questions
  - “What” type of questions – patients likely to share
  - “How” type of questions – patients likely to share
Importance

Probing questions can serve the following purposes:

- Clarification
- Confirmation (double check)
- Evaluation
- Elaboration
- Reflection
Probes

- Verbal or nonverbal responses for clarifying or elaborating a response that was unclear, incomplete, superficial, inconsistent, or possibly inaccurate
- Follow-up to the primary questions
- The content of the probe must be improvised to fit the content of the previous response received
Types of Probing Questions

- Silent Probe
- Verbal encouragement probe
- Elaboration probe
- Clarification probe
- Reflective probe
- Paraphrase probe
Verbal Encouragement Probe

- Using simple verbal cues to encourage respondents continue talking
- Sending a quick message to respondents that you are following what they are saying
- Example: “uh-huh” or “I see”
Elaboration Probe

- Asking respondents to provide more information about:
  - Previous topic
  - Topics discussed earlier

- Respondents have the freedom in how they respond

- Example: “What else did doctor/physician say about the medication?”
Clarification Probe

- Requesting clarification of a specific response, phrase, or word used by respondents
- Use respondent’s own words when possible
- Example: You said this one helps your ‘pressure’. What did you mean by that?
Reflective Probe

- Restating or reflecting back the patient’s feeling in words
Paraphrase Probe

- Rewording what the respondent said
- Providing a chance for him/her to verify your understanding
Eliciting Feedback

- Statements or Questions that Elicit Feedback
  - “I want to be sure that I have explained things clearly. Please summarize the most important things to remember about this medicine.”
  - “How do you intend to take the medication?”
  - “Please show me how you are going to use this nasal inhaler.”
  - “Please describe in your own words how you are going to take this medication.”
Nonverbal vs Verbal Communication

- Differ in medium of exchange
- Verbal: spoken language or written words
- Nonverbal: behaviors, facial expression, body movement etc.
Non-verbal Characteristics

- Continuous
- Multi-channeled
- Intentional and unintentional
- Powerful
- Ambiguous
- Primary conveyor of emotions
Importance

- Reflecting innermost thoughts and feelings
  - Constantly at work and hard to fake

- Provide clues for us to understand others
  - Experience
  - Comfort level (especially for sensitive issues)

- Enable further adjustment of our own communication
Elements

- Kinesics (use of body)
- Vocalics (use of voice)
- Proxemics (use of space)
- Environment
Levels of Personal Space in Dominant U.S. Culture

- Social distance
- Personal distance
- Intimate space
- Public distance

Distances:
- Intimate space: 1.5 ft
- Personal distance: 4 ft
- Social distance: 12 ft
Question

Which element of nonverbal communication refers to the use of space?

A. Kinesics
B. Vocalics
C. Proxemics
D. Environment
Interpreting Nonverbal Communication

- Consider influences from surroundings and personal background
- Pay attention to multiple nonverbal cues
- When in doubt, always check
  - DON’T jump to conclusion when interpreting nonverbal cues from others

Do not assume
Antidote to Assumption

Active Listening

- How do you define it?
- What are the characteristics?
- What are some roadblocks to it?

- Answer the above questions independently
- Select a partner to compare / contrast your answers
- Share your findings with all
Empathy

- Empathy is the ability to:
  - To demonstrate an understanding of others’ feelings and viewpoints
  - To listen effectively to the emotional meaning in a patient’s message

- Empathy is NOT actually having the same feeling
Empathy

Understanding & Conveying

- Trying to understand
  - Trying to accurately understand what a patient is going through
- Verbalizing such understanding
  - Effectively and briefly convey in your own words what and how you understand patient’s experience and situation
Empathy Videos from Cleveland Clinic

Empathy: The Human Connection to Patient Care

- [http://youtu.be/cDDWvj_q-o8](http://youtu.be/cDDWvj_q-o8)

Patients: Afraid and Vulnerable

- [http://www.youtube.com/watch?v=1e1JxPCDme4](http://www.youtube.com/watch?v=1e1JxPCDme4)
Let’s Communicate: Communication Exercise

- How Am I / Are We Relaying Information?

- Think of the factors causing potential lost of information during translation and/or miscommunication
Reflection on Communication

- Each person is sending and receiving messages in the communication process

- Ways to ensure effective communication
  - Think about the context where communication occurs
  - Feedback is essential for ensuring accuracy
  - Barriers should be recognized and addressed
Factors Contributing to Medication-Related Problems

• Complex nature of the health care system
  - Uncoordinated care, Transitions of care, Fragmented care
  - Communication problems

• Adherence & persistence issues

• Number of medications available and used by each patient (Rx and OTC)

• Polypharmacy
  - Multiple medications, multiple prescribers, self-medicating

• Use of alternative medications

• Aging of the population

• Cultural competence and health literacy issues

• Limited use of electronic technology

Sources: ASHP Guidelines on a Standardized Method for Pharmaceutical Care.; 1996
Impact of Medication-Related Problems in the U.S.

- Inappropriate use of medications costs an estimated $177 billion annually

- More than 1.5 million preventable medication related adverse events occur each year


Accessed September 1, 2007
Medication-Related Problems

1. Medications with no medical indication
2. Medical conditions for which no medication is prescribed
3. Medication prescribed inappropriately for a particular medication condition
4. Inappropriate medication dose, dosage form, schedule, route of administration, or method of administration.
5. Therapeutic duplication
6. Prescribing of medications to which patient is allergic.
7. Actual and potential adverse events.

Sources: ASHP Guidelines on a Standardized Method for Pharmaceutical Care.; 1996
Medication-Related Problems

8. Actual and potential clinically significant drug-drug, drug-disease, drug-nutrient and drug-lab interactions

9. Interference with medical therapy by social or recreational drug use.

10. Failure to receive full benefit of prescribed medication therapy.

11. Problems arising from the financial impact of medication therapy.

12. Lack of understanding of medication therapy by the patient.

13. Failure of the patient to adhere to the medication regimen.

Sources: ASHP Guidelines on a Standardized Method for Pharmaceutical Care.; 1996
Medication-Related Problems

- Untreated Indication
- Drug Use Without Indication
- Ineffective Treatment Regimen
- Subtherapeutic
- Overdosage
- Adverse Drug Reaction
- Drug Interaction
- Non-Adherence
HRSA Patient Safety and Clinical Pharmacy Services Collaborative (PSPC)

- Aim to save and enhance thousands of lives a year by:
  - Achieving optimal health care outcomes
  - Eliminating adverse drug events
  - Increasing clinical pharmacy services

Primary Care Coalition and Patient Population

- **Primary Care Coalition**
  - HRSA Patient Safety Initiative
  - Partners with the network of 11 Montgomery Cares Clinics representing 26 sites throughout the county
  - Providing Primary Care for Adults 19-64 plus
  - Over 25,000 unduplicated patients in Fiscal Year 2017
  - Very low income population
    - Multiple chronic diseases
    - Predominately Spanish-speaking
Interprofessional Collaborative Model for Medication Therapy Management (MTM) Services to Improve Health Care Access and Quality for Underserved Populations

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Diem-Thanh (Tanya) Dang
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Faramarz Zarfeshan, RPh

Summary: As part of the Health Resources and Services Administration Patient Safety and Clinical Pharmacy Services Collaborative (PSPC), an interprofessional model with medication therapy management documentation and outcomes tracking tools (MTM DOTT) is established to improve health care access and quality for underserved populations. Despite limitations, there have been positive outcomes and national recognitions.

Key words: Health Resources and Services Administration (HRSA), Patient Safety and Clinical Pharmacy Services Collaborative (PSPC), safety-net clinic, underserved populations, interprofessional collaboration, medication management, health outcomes.

### MTM Documentation and Outcomes Tracking Tools (MTM-DOTT)

<table>
<thead>
<tr>
<th>Medication Therapy Management (MTM)</th>
<th>SUMMARY OF PATIENT OUTCOMES AND PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth (DOB)</td>
<td>Mercy Health Clinic - Gaithersburg, Maryland</td>
</tr>
<tr>
<td>Baseline Age</td>
<td>Dates/Time Period: ##/##/## to ##/##/## (## months)</td>
</tr>
<tr>
<td>Recent Age</td>
<td># patient</td>
</tr>
<tr>
<td>Baseline Visit Date</td>
<td></td>
</tr>
<tr>
<td>Recent Visit Date</td>
<td></td>
</tr>
<tr>
<td>Medication-Related Problems</td>
<td></td>
</tr>
<tr>
<td>Untreated indication</td>
<td></td>
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<tr>
<td>Untreated indication</td>
<td></td>
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<tr>
<td>Drug use without indication</td>
<td></td>
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<tr>
<td>Drug use without indication</td>
<td></td>
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<tr>
<td>Ineffective tx regimen</td>
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<tr>
<td>Ineffective tx regimen</td>
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<tr>
<td>Subtherapeutic</td>
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<tr>
<td>Subtherapeutic</td>
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<tr>
<td>Overdose</td>
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<tr>
<td>Overdose</td>
<td></td>
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<tr>
<td>Adverse drug reaction</td>
<td></td>
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<tr>
<td>Adverse drug reaction</td>
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<tr>
<td>Drug interaction</td>
<td></td>
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<tr>
<td>Drug interaction</td>
<td></td>
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<tr>
<td>Non-adherence</td>
<td></td>
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<tr>
<td>Non-adherence</td>
<td></td>
</tr>
<tr>
<td># of Medications at Visit</td>
<td></td>
</tr>
<tr>
<td># of Medications at Visit</td>
<td></td>
</tr>
<tr>
<td># of Chronic Conditions</td>
<td></td>
</tr>
<tr>
<td># of Chronic Conditions</td>
<td></td>
</tr>
</tbody>
</table>

Prevalence of Medication-Related Problems

- Interventions: 5-Year Results (10/1/2009 to 9/30/2014)
  - # of patients: 282
  - # medications at visits: 2539 [average 9 meds/pt. visit]
  - # chronic conditions: 1400 [average 5 conditions/pt.]
  - Medication-related problems: 1077 [average 3.8 MRPs/pt.]
  - MRPs identified, prevented, or resolved by 42 students: [average 25 MRPs/student]
Potential Economic Outcomes

Objective: To evaluate potential cost savings based on estimated cost avoidance of medication therapy management services delivered in safety-net clinic over four years.

Table 1. Categorization of Medication-Related Problems Associated with Potential Medical Service and Cost Avoidance

<table>
<thead>
<tr>
<th>Category</th>
<th>Medication-Related Problems</th>
<th>Medical Services Avoided</th>
<th>Cost Avoided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication</td>
<td>Untreated indication; Drug use without indication</td>
<td>Clinic outpatient visit; Emergency room visit</td>
<td>$162 – 755</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>Sub-therapeutic dose; Ineffective treatment regimen</td>
<td>Clinic outpatient visit; Urgent care visit; Emergency room visit</td>
<td>$121 – 755</td>
</tr>
<tr>
<td>Safety</td>
<td>Adverse drug reaction, Drug interactions, Overdose</td>
<td>Clinic outpatient visit; Emergency room visit</td>
<td>$162 – 755</td>
</tr>
<tr>
<td>Adherence</td>
<td>Non-adherence</td>
<td>Clinic outpatient visit; Emergency room visit</td>
<td>$162 – 755</td>
</tr>
</tbody>
</table>

### Potential Economic Outcomes

#### Table 2. Prevalence and Cost Avoidance of Medication-Related Problems Identified

<table>
<thead>
<tr>
<th>Medication-Related Problem</th>
<th>Prevalence</th>
<th>Percent</th>
<th>Cost Range</th>
<th>Total Cost Avoidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-therapeutic dose</td>
<td>310</td>
<td>38%</td>
<td>$121 – 755</td>
<td>$37,510 – 234,050</td>
</tr>
<tr>
<td>Non-adherence</td>
<td>157</td>
<td>19%</td>
<td>$162 – 755</td>
<td>$25,434 – 118,535</td>
</tr>
<tr>
<td>Untreated indication</td>
<td>131</td>
<td>16%</td>
<td>$162 – 755</td>
<td>$21,222 – 98,905</td>
</tr>
<tr>
<td>Ineffective treatment</td>
<td>96</td>
<td>12%</td>
<td>$121 – 755</td>
<td>$11,616 – 72,480</td>
</tr>
<tr>
<td>Adverse drug reaction</td>
<td>82</td>
<td>10%</td>
<td>$162 – 755</td>
<td>$13,284 – 61,910</td>
</tr>
<tr>
<td>Drug interactions</td>
<td>22</td>
<td>3%</td>
<td>$162 – 755</td>
<td>$3,564 – 16,610</td>
</tr>
<tr>
<td>Drug use without indication</td>
<td>8</td>
<td>1%</td>
<td>$162 – 755</td>
<td>$1,296 – 6,040</td>
</tr>
<tr>
<td>Overdose</td>
<td>8</td>
<td>1%</td>
<td>$162 – 755</td>
<td>$1,296 – 6,040</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>814</strong></td>
<td><strong>100%</strong></td>
<td><strong>$115,220 – 614,570</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td></td>
<td></td>
<td><strong>$141.55 – 755</strong></td>
<td></td>
</tr>
</tbody>
</table>

Institute of Medicine Report (2003): Health Professions Education – A Bridge to Quality

- 5 Competencies
  - Delivering patient-centered care
  - Working as part of interdisciplinary team
  - Practicing evidence-based medicine
  - Focusing on quality improvement
  - Using informational technology IOM

- **Statement of the Problem**
  - Product-oriented functions evolved to patient-oriented, administrative and public health functions
  - Pharmacist’s unique expertise including pharmacotherapy, access to care, and prevention services
  - Pharmacist’s accessibility as resource for health and medication information

- **Desired Actions**
  - Encourages the trans-disciplinary collaborations [and research] of health planning agencies…policy-makers and pharmacy and public health professionals to develop legislation and advocate for plans that address health care needs…
  - Urges Congress to charge CMS to recognize pharmacists as health care providers within its programs (e.g., under Medicare) to function in public health capacities and to be eligible for proper reimbursement.
IPEC Core Competencies (4)  
Focus on Communication and Collaboration

* IPEC Core Competencies for IP Collaborative Practice (2011)
Healthy People 2020

- **Overarching Goals**
  - Eliminate preventable disease, disability, injury, and premature death
  - Achieve health equity and eliminate health disparities
  - Create social and physical environments that promote good health for all
  - Promote healthy development and healthy behaviors at every state of life

Healthy People 2020

• Set of goals and objectives with 10-year targets to guide national health promotion and disease prevention efforts

• Provide science-based benchmarks to track and monitor progress to motivate and focus action

• A tool for strategic management by partners
Healthy People 2020: 42 Topic Areas on Interactive Site

- Topic areas of Healthy People 2020 identify and group objectives of related content, highlighting specific issues and populations.
- Increased to 42 topic areas (HP2020) from 28 topic areas (HP2010).

Download all Healthy People 2020 objectives [PDF - 2 MB].
Download all Healthy People 2020 objectives in spreadsheet format [XLSX - 159 KB].
If you experience problems viewing documents, please download the latest version of the Viewer or Player.
Medical Product Safety

Goal
Ensure the safe use of medical products.

Overview
The Medical Product Safety objectives for 2020 focus on overall improvement of patient treatment and appropriate use of medical products. Medical products include drugs, biological products, and medical devices. These objectives reflect strong scientific support for safe use of medical products, which promotes better health among Americans.

Why Is Medical Product Safety Important?
Increasing appropriate use and monitoring adverse effects of medical products will:

- Decrease adverse events and harmful reactions by focusing safety efforts.
- Improve the overall effectiveness of treatment by reducing harm from medical products.
- Further personalize medical treatment.

Understanding Medical Product Safety
Many factors influence the safety of medical products and their effects on patients. These factors include:

- A patient's genetic make-up and physiological condition
- Drug composition (ingredients), manufacturing, and labeling
- Appropriate use
- Monitoring for adverse effects
Adverse Event

“An adverse event is any undesirable experience associated with the use of a medical product in a patient.”

U.S. Food and Drug Administration

www.fda.gov/Safety/MedWatch/HowToReport/ucm053087.htm
Examples of Adverse Effects or Drug Interactions

- Statins
- Warfarin
- Oxycodone w/ APAP
- Tylenol

- Grapefruit Juice
- Green Tea or Spinach
- Acetaminophen
- Alcohol
Reporting Unexpected Adverse Events

- MedWatch: The FDA Safety Information and Adverse Event Reporting Program
- Voluntary
- Medication problems to report:
  - Serious adverse event
  - Problem with product quality
  - Product use error
  - Problem with a medication made by different manufacturers

www.fda.gov/Safety/MedWatch/default.htm
Your Guide to Reporting Problems to FDA

On this page:

- Tips for Reporting
- Quick-Reference Chart for Reporting Problems to FDA
- Types of Problems FDA Doesn’t Handle

Consumers play an important public health role by reporting to the Food and Drug Administration (FDA) any adverse events (unexpected side effects) after using a medical product, or other problems with any products that the agency regulates. Timely reporting allows the agency to take prompt action. There are a number of ways you can report problems to the agency, depending on the type of problem and product. The following tips and chart will help you make your report.

Tips for Reporting

1. Follow the instructions on the product label. Sometimes a product's instructions for use or side effects are not clear. If you have questions, call the manufacturer for help.
2. Call 1-800-FDA-1088. FDA's phone line is open 24 hours a day, 7 days a week, except holidays.
3. Fill out a form online. You can get a report form by going to the FDA's website or calling 1-800-FDA-1088.
4. Report problems to the manufacturer. If you have questions about a product's effects, contact the manufacturer.
5. Report problems that occur immediately. If you see a problem happen, report it right away.
6. Report problems that occur over time. If you see a problem develop, report it as soon as you can.

If you follow these tips, your report will help the FDA protect public health.
Tips for Reporting

1. Report what happened as soon as possible after you discover a problem. Be prepared with the following information:
   - names, addresses, and phone numbers of people affected
   - your name, postal and e-mail address, and phone number
   - name, address, and phone number of doctor or hospital if emergency treatment was provided
   - product codes or identifying marks on the label or container
   - name and address of store where product was bought and date of purchase
   - name and address of company on the product label

2. Do not discard the product packaging and labeling. They provide codes, numbers, and dates that will help FDA trace the product back to the plant.

3. In addition to reporting to FDA, the agency recommends reporting the problem to the manufacturer and to the store where the product was purchased.

4. When in doubt about how to report a problem, call your local FDA Consumer Complaint Coordinator.

Quick-Reference Chart for Reporting Problems to FDA

<table>
<thead>
<tr>
<th>Type of Problem</th>
<th>Type of Product</th>
<th>Report to</th>
</tr>
</thead>
<tbody>
<tr>
<td>emergency (serious, life-threatening event)</td>
<td>FDA-regulated products (human drugs, animal drugs, medical devices, biological products, foods, dietary supplements, cosmetics, radiation-)</td>
<td>FDA's 24-hour emergency line at 301-443-1240 or FDA Consumer Complaint Coordinator in your geographic area.</td>
</tr>
</tbody>
</table>