Pharmaceutical Care Lectures

Jay D. Currie, Pharm.D.
Fall 2006
**History of the development of the pharmaceutical care model**

- **Clinical pharmacy practice - 1960's**
  - **Move toward "patient-oriented practice"**
    - Away from chemistry and drug product orientation
  - **Responsibilities for drug use control**
    - Growth of unit dose systems in institutions
    - DUR drug use police functions
transitional stage (Hepler and Strand)
• definitions of practice differ
  – pre 1960’s to clinical practices
• commitments and responsibilities vary
  – still some commitment to the product
  – ultimate responsibility to patient not yet clear

• organizations are clear, but implementation in practice not
History of the development of the pharmaceutical care model

– not just a service provided for a patient
  • pharmacokinetic dosing
  • therapeutic monitoring
  • drug information
– Cipolle (1986)
– emphasis on patient
  • beyond that of serving the physician
  • beyond patient education
– patient advocacy
– mandate to protect patient from drug misadventuring
Health Care Directions

- prevention of drug-related morbidity and mortality
  - tens of thousands of deaths
  - 1.5 million preventable ADEs / year in US
  - Perhaps one administration error/day for hosp patients
  - $ Billions in annual expense
Basis for drug-related problems

- positive outcomes of drug therapy
  - cure of a disease
  - reduction or elimination of symptoms
  - arrest or slow disease process
  - prevent a disease or symptoms
Basis for drug-related problems

- negative outcomes when above not accomplished
  - diminished patient quality of life
    - well being
    - work
    - cost
  - five basic causes
Basis for drug-related problems

- inappropriate prescribing
  - inappropriate regimen
    - drug, dosage form, dose, route, dosage interval, duration
  - unnecessary regimen
Basis for drug-related problems

- inappropriate delivery
  - drug not available
    - pharmacy not provide
    - patient not afford
    - biopharmaceutical barriers
    - sociological barriers
  - dispensing error involved
    - incorrect or inappropriate labeling
    - incorrect or missing patient information or advice
Basis for drug-related problems

- inappropriate behavior by the patient
  - compliance with inappropriate regimen
  - noncompliance with appropriate regimen
Basis for drug-related problems

– patient idiosyncrasy
  • idiosyncratic response to the drug
  • mistake or accident
Basis for drug-related problems

– inappropriate monitoring
  • failure to detect and resolve an inappropriate therapeutic decision
  • failure to monitor the effects of the treatment regimen on the patient
Hepler and Strand defined pharmaceutical care as the responsible provision of drug therapy for the purpose of achieving specific outcomes that improve a patient's quality of life.
Pharmaceutical care involves the process through which a pharmacist cooperates with a patient and other professionals in designing, implementing, and monitoring a therapeutic plan that will produce specific therapeutic outcomes for the patient.
This in turn involves three major functions: (1) identifying potential and actual drug-related problems, (2) resolving actual drug-related problems, and (3) preventing potential drug-related problems.
Pharmaceutical care is a necessary element of health care, and should be integrated with other elements. Pharmaceutical care is, however, provided for the direct benefit of the patient, and the pharmacist is responsible directly to the patient for the quality of that care.
The fundamental relationship in pharmaceutical care is a mutually beneficial exchange in which the patient grants authority to the provider and the provider gives competence and commitment (accepts responsibility) to the patient.
Philosophy of Providing Pharmaceutical Care

- The fundamental goals, processes, and relationships of pharmaceutical care exist regardless of practice setting.
- Please note that nothing in the definition mandates that a pharmacist must provide this type of care.
  - *is pharmaceutical care a patient need or a pharmacist activity?*
Philosophy of providing pharmaceutical care

- **the pharmacist as a health care provider**
  - move beyond role of dispenser of medication
  - move beyond role of giving advice on medications
  - move beyond providing individual "services"
Philosophy of providing pharmaceutical care

- role of the pharmacist
  - ?, still evolving
  - determined by practice
- responsibilities of the pharmacist
  - what do you owe the patient?
Problem-solving process

1. Data Collection
2. Evaluation/Identification of DTP
3. Set Goal
4. List Treatment Alternatives
5. Design and Implement Plan
6. Design and Implement Monitoring Plan
Identification of Drug-Related Problems

- the first component in providing pharmaceutical care to a patient
- Definition - an event or circumstance involving drug treatment that actually or potentially interferes with the patient's experiencing an optimum outcome of medical care.
Drug-Related Problems

- data collection (what is the information we have to interpret)
  - classroom versus clerkship
  - the patient as an information source
  - gaining information from other sources
    - caregiver
    - physician
    - other provider
    - chart
Drug-Related Problems

categorization of drug-related problems
(evaluating the data and labeling the problem)

- different than medical problems or medical diagnoses
- problems that we can identify and work to resolve
Drug-Related Problems

- Not however uniquely in our domain
- Problems may be actual (present) or potential (occur in the future if no intervention)
Drug-Related Problems

- drug needed for untreated indication
- wrong drug being taken
- too little of the correct drug
- too much of the correct drug
- adverse drug reaction present
- drug-drug/food/lab interaction
- not receiving the prescribed drug
- drug use without valid indication
Drug-Related Problems

- evaluation of the patient data
  - Must evaluate data to determine if problem exists
  - evaluation questions relate to the drug therapy problems

Do any of the problems exist?
Evaluation of the Patient Data - Problem ID

- Does the patient have a condition or symptoms that need to be treated?
  - What are the patient’s symptoms, or diagnosed conditions?
  - Can you treat the patient or does he or she need to be referred to another health professional?
If the patient has a legitimate need to be treated for conditions or symptoms, is the treatment he or she is getting the most effective and safe?

What are the appropriate treatments for this condition?

- What patient factors (dx, allergy, prev. patient responses, pharmacokinetic variables, social conditions, etc.) are present that may affect agent choice?
Evaluation of the Patient Data – Problem ID

- What other medication is the patient taking and how might this affect agent choice?
- What has the patient response been to the current therapy?
- What has the patient response been to previous therapies?
Evaluation of the Patient Data – Problem ID

If the patient is on the correct drug is he or she receiving too little of this drug?
  • What dose of the drug is the patient really getting?
  • What are the acceptable doses of this drug?
  • How do we titrate this drug for this condition?
Evaluation of the Patient Data – Problem ID

• What are the appropriate monitoring parameters for this condition and have they been used to justify a higher dose?
• Is the patient likely to tolerate a higher dose?
Evaluation of the Patient Data – Problem ID

- What patient factors (diagnoses, allergies, previous patient responses, pharmacokinetic variables, social conditions, etc.) are present that may justify an increased dose?
- What other medication is the patient taking and how might this cause a need for an increased dose?
What information do you need to evaluate the patient’s drug therapy?

- Need for and sources of additional patient information
- Need to think on your feet and pursue lines of questioning
- Need to consult information sources to answer questions posed
- Need to ask questions even though you know you don’t know the answers
Evaluation of the Patient Data –
Problem ID

- Need to not assume *anything*
- Need to be inquisitive
- Need to critically evaluate every clinical situation as an individual event
- Collection and evaluation of information allows for the identification of drug therapy problems
Correction or Prevention of Drug-Related Problems

Resolution of actual or prevention of potential drug therapy problems is the second component in providing pharmaceutical care to a patient.
Correction of Drug-Related Problems - Goal

- determining desired therapeutic outcomes (what is the goal)
  - need to know where we are going therapeutically
  - commonly not well defined by physician
    - use of your professional skills
    - use knowledge gained in pharmacotherapy series
determining desired therapeutic outcomes (what is the goal)

• should have as part of the goal, one of the four positive outcomes of drug therapy

• set definitive, measurable end-point if possible
Correction of Drug-Related Problems - Alternatives

- evaluation of therapeutic alternatives (what are the options)
  - A purpose of the pharmacotherapy course series is to inform you of the options and teach you how to differentiate between them to optimize patient care
  - list all possible alternatives
    - do not dismiss any on first thought
    - include more than you can initially remember
Correction of Drug-Related Problems - Alternatives

- evaluation of therapeutic alternatives (what are the options)
  - not necessarily written down
  - be sure to include no therapy or non-pharmacologic therapy as alternatives
  - include “do nothing” as an alternative
Correction of Drug-Related Problems – Best Alternative

- drug regimen recommendation and individualization (what is the best option, and how to implement)
  - no knee-jerk therapeutics
  - no drugs of choice
  - what is best for this patient at this time
  - no cookbook
  - critical thinking separates you from a machine
Correction of Drug-Related Problems – Best Alternative

- determination of most appropriate regimen
  - drug, dose, route and dosage form, regimen, duration of therapy
  - develop action plan to implement recommendations
  - agree with patient/other provider on plan
  - implement that plan
    - what will be done, how will it be done
Correction of Drug-Related Problems - Monitoring

- design and implement monitoring plan (what is done to see if the option worked)

  • what needs to be followed up
    – did the recommendation work?
    – were there adverse consequences to the recommendation
    – what is the additional need for follow-up after this monitoring
Correction of Drug-Related Problems - Monitoring

- **when** does it need to be followed up
  - schedule a time for follow-up
    - when is likely therapeutic effect
    - when would adverse effects be likely
  - determine a method of follow-up
  - agree with patient on time and method
Correction of Drug-Related Problems - Monitoring

- develop action plan to implement monitoring plan
- implement the monitoring plan
- every patient should be followed up until he or she is no longer a responsibility of your practice
- should be referred to another practitioner if applicable
Development of a Efficient Patient Record

- concepts of a problem-oriented medical record
- the problem-oriented pharmacy record
  - patient name
  - medical problem list
  - medication list
  - allergies
  - drug-related problem list
  - problem-oriented notes
Efficient Patient Record

- components of a S.O.A.P. note
  - Problem-specific
  - note on each problem or closely related problems
  - standard format
    - date
    - note label
    - note
    - signature
Note on Labeled/Numbered Problem

- **S**: subjective information - (what the patient tells me or what is known from history)
- **O**: objective information - (what can be measured by the care provider, or objective information available to the care provider)
Efficient Patient Record

- Subjective and Objective
  - Does it only include pertinent information about this problem?
  - What were the significant answers to the questions I asked?
  - What significant positives and negatives do I know from the history?
  - What information do I have that justifies my assessment?
  - Did I include everything I took into consideration?
Efficient Patient Record

Subjective
- data from patient or caregiver
- historical information
- information not known objectively
- HPI
- PMH
- SH or FH
- allergies
- ADR Hx
- ROS
- medication Hx
Efficient Patient Record

- Objective
  - data that can be measured objectively
  - vital signs
  - laboratory results if have original results
  - physical exam results if completed by trained examiner
Efficient Patient Record

A: assessment of the problem - (what the care provider thinks is the current status of that problem)

• not just restatement of DTP
• new problem identification vs. follow-up of established problem
• any additional information to justify your approach in plan
Efficient Patient Record

- P: plan - (planned diagnostic, therapeutic, monitoring or other interventions to address the above problem)
  - intervention
    • what you did or plan to do
    • make it clear
    • patient education
    • recommendations to patient
    • recommendations to physician
    • etc.
  - monitoring/follow-up
    • separate from rest of plan
    • date of follow-up
    • what to do at that follow-up
Assessment and Plan

- Does the plan make sense given the assessment and the information included in S: and O:? 
- Have I justified my plan? 
- Have I included when and what to follow up?
efficient patient record

- accurate
- concise
- status of patient and your thoughts and actions summarized
SOAP versus FARM

S → F
O → A
A → A
P → R
M
Review of Documentation
# Quality Assurance Tool for the Documentation of Pharmaceutical Care

Please check whether or not each element is present.

## Essential Patient Encounter Elements

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
| ☐   | ☑  | 1. Date of encounter
| ☐   | ☑  | 2. Pharmacist identifier
| ☐   | ☑  | 3. Patient identifier
| ☐   | ☑  | 4. Reason for the encounter
| ☐   | ☑  | 5. History of present illness
| ☐   | ☑  | 6. Relevant Rx/OTC/alternative medication history/compliance
| ☐   | ☑  | 7. Assessment
| ☐   | ☑  | 8. Plan(s)/Action(s) to correct problem(s)
| ☐   | ☑  | ☐ No drug therapy problems identified
| ☐   | ☑  | 9. Monitoring plan/follow-up

## Essential Patient Record Elements

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☑</td>
</tr>
</tbody>
</table>
| ☐   | ☑  | 1. Patient identifier
| ☐   | ☑  | 2. Patient date of birth
| ☐   | ☑  | 3. Patient sex
| ☐   | ☑  | 4. Contact information
| ☐   | ☑  | 5. Allergies/ADRs
| ☐   | ☑  | 6. Medical problem(s) current and past
| ☐   | ☑  | 7. Rx/OTC/Alternative medication history
| ☐   | ☑  | 8. Payment method/economic situation

## Record Elements to be Included if Relevant

<table>
<thead>
<tr>
<th>Relevant</th>
<th>Present</th>
</tr>
</thead>
</table>
| Yes      | Yes     | 9. Family history
| No       | Yes     | 10. Social history
| Yes      | Yes     | 11. Patient race
| Yes      | Yes     | 12. Objective information
| Yes      | Yes     | 13. Special needs of patient
| Yes      | Yes     | 14. Non-medication therapy

<table>
<thead>
<tr>
<th>Relevant</th>
<th>Present</th>
</tr>
</thead>
</table>
| Yes      | Yes     | 10. Past medical history
| No       | Yes     | 11. Family history
| Yes      | Yes     | 12. Social history
| Yes      | Yes     | 13. Objective information
| Yes      | Yes     | 14. Special needs of patient
| Yes      | Yes     | 15. Non-medication therapy

Quality Assurance Tool for the Documentation of Pharmaceutical Care

Quality Assurance Tool for the Documentation of Pharmaceutical Care

**Brief Component Descriptions**

**Essential patient encounter elements**

The essential elements may be present in the chart and reference in the note, and not repeated in the encounter note itself.

1. **Date of encounter** - Date of the pharmacist encounter with the patient.
2. **Patient Identity** - Clear identification of the pharmacist providing care to the patient.
3. **Patient Identifiers** - The patient can be identified by name, unique code or code number.
4. **Reason for the Encounter** - The reason for the encounter, including the patient's goals.
5. **History of Present Illness** - An adequate description of the relevant events leading up to the encounter.
6. **Relevant Meds** - Meds or other substances the patient is on, with allergies or significant medication history.
7. **Plan of Care** - Planning for the patient's health status and upcoming encounters.
8. **Follow-up** - Planning for future encounters and goals.
9. **Monitoring Plan** - Steps to monitor the patient's progress and outcomes.

**Essential patient record elements**

1. **Patient Identifiers** - Patient can be identified by name, unique code or code number.
2. **Patient Data** - Date of birth, gender, race, and current address.
3. **Contact Information** - Phone number(s) and other contact information.
4. **Medication History** - A comprehensive list of all medications the patient is currently taking.
5. **Allergies/ADRs** - Patient medication allergies and adverse drug reaction history.
7. **Past History** - Any past medical history important to the current situation.
8. **Social History** - Lifestyle and social history, including smoking and alcohol use.
9. **Objective Information** - Objective information considered in the evaluation should be included. This may include vital signs, laboratory results, diagnostic test, or physical examination results.