Integrating the LLM / JCPP-PPCP

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Why should we (preceptors) explore LLM / PPCP?

Aren’t we doing this already?

What more do we need to do?

Are we maximizing the role of students / residents / fellows to achieve dept / institutional goals?

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**Collect**
- Subjective and objective information
- Understand medication and medical history

**Assess**
- Analyze patient’s therapy in meeting goals
- Identify and prioritize problems

**Plan**
- Individualized, patient-centered plan
- Collaboration, evidence-based, cost-effective

**Implement**
- Initiate, modify, discontinue as needed
- Education and coordination of care

**Follow-Up**
- Clinical endpoints
- Safety, effectiveness, adherence

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**Collect**
**Assess**
**Plan**
**Implement**
**Follow-up: Monitor and Evaluate**

**Patient-Centered Care**
**Collaborate**
**Communicate**
**Document**
### Patient Care Provider Domain:

Collect information to identify a patient’s medication-related problems and health-related needs.

**Example Supporting Tasks:**
- Collect a medical history from a patient or caregiver.
- Collect a medication history from a patient or caregiver.
- Discuss a patient’s experience with medication.
- Determine a patient’s medication adherence.
- Use health records to determine a patient’s health-related needs relevant to setting of care and the purpose of the encounter.

Analyze information to determine the effects of medication therapy, identify medication-related problems, and prioritize health-related needs.

**Example Supporting Tasks:**
- Assess a patient’s signs and symptoms to determine whether the patient can be treated within the scope of practice or requires a referral.
- Measure an adult patient’s vital signs and interpret the results (e.g., body temperature, pulse rate, respiration rate, and blood pressure).
- Interpret laboratory test results.
- Identify drug interactions.
- Perform a comprehensive medication review (CMR) for a patient.
- Assess a patient’s health literacy using a validated screening tool.
- Compile a prioritized health-related problem list for a patient.
- Evaluate an existing drug therapy regimen.

Establish **patient-centered goals** and create a care plan for a patient in collaboration with the patient, caregiver(s), and other health professionals that is evidence-based and cost-effective.

**Example Supporting Tasks:**
- Follow an evidence-based disease management protocol.
- Develop a treatment plan with a patient.
- Manage drug interactions.
- Select monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
- Determine the appropriate time interval(s) to collect monitoring data.
- Create a patient-specific education plan.

Implement a care plan in collaboration with the patient, caregivers, and other health professionals.

**Example Supporting Tasks:**
- Write a note that documents the findings, recommendations, and plan from a patient encounter.
- Educate a patient regarding the appropriate use of a new medication, device to administer a medication, or self-monitoring test.
- Educate a patient on the use of medication adherence aids.
- Assist a patient with behavior change (e.g., use shared decision making and motivational strategies).

Follow-up and monitor a care plan.

**Example Supporting Tasks:**
- Collect monitoring data at the appropriate time interval(s).
- Evaluate the selected monitoring parameters to determine the therapeutic and adverse effects related to the treatment plan.
- Recommend modifications or adjustments to an existing medication therapy regimen based on patient response.
- Present a patient case to a colleague during a handoff or transition of care.

### Interprofessional Team Member Domain:

Collaborate as a member of an interprofessional team.

**Example Supporting Tasks:**
- Contribute medication-related expertise to the team’s work.
- Explain to a patient, caregiver, or professional colleague each team member’s role and responsibilities.
- Communicate a patient’s medication-related problem(s) to another health professional.
- Use setting appropriate communication skills when interacting with others.
- Use consensus building strategies to develop a shared plan of action.
<table>
<thead>
<tr>
<th>Population Health Promoter Domain</th>
<th>Example Supporting Tasks:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify patients at risk for prevalent diseases in a population.</td>
<td>• Perform a screening assessment to identify patients at risk for prevalent diseases in a population (e.g., hypertension, diabetes, depression).</td>
</tr>
<tr>
<td>Minimize adverse drug events and medication errors.</td>
<td>• Assist in the identification of underlying system-associated causes of errors. • Report adverse drug events and medication errors to stakeholders.</td>
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<tr>
<td>Maximize the appropriate use of medications in a population.</td>
<td>• Perform a medication use evaluation. • Apply cost-benefit, formulary, and/or epidemiology principles to medication-related decisions.</td>
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<tr>
<td>Ensure that patients have been immunized against vaccine-preventable diseases.</td>
<td>• Determine whether a patient is eligible for and has received CDC-recommended immunizations. • Administer and document CDC-recommended immunizations to an adult patient. • Perform basic life support.</td>
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<th>Information Master Domain</th>
<th>Example Supporting Tasks:</th>
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<td>Educate patients and professional colleagues regarding the appropriate use of medications.</td>
<td>• Lead a discussion regarding a recently published research manuscript and its application to patient care. • Develop and deliver a brief (less than 1 hour) educational program regarding medication therapy to health professional(s) or lay audience.</td>
</tr>
<tr>
<td>Use evidence-based information to advance patient care.</td>
<td>• Retrieve and analyze scientific literature to make a patient-specific recommendation. • Retrieve and analyze scientific literature to answer a drug information question.</td>
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<th>Practice Manager Domain</th>
<th>Example Supporting Tasks:</th>
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<td>Oversee the pharmacy operations for an assigned work shift.</td>
<td>• Implement pharmacy policies and procedures. • Supervise and coordinate the activities of pharmacy technicians and other support staff. • Assist in training pharmacy technicians and other support staff. • Assist in the evaluation of pharmacy technicians and other support staff. • Identify pharmacy service problems and/or medication safety issues. • Maintain the pharmacy inventory. • Assist in the management of a pharmacy budget. • Interpret pharmacy quality and productivity indicators using continuous improvement quality techniques. • Assist in the preparation for regulatory visits and inspections.</td>
</tr>
<tr>
<td>Fulfill a medication order.</td>
<td>• Enter patient-specific information into an electronic health or pharmacy record system. • Prepare commonly prescribed medications that require basic sterile compounding or basic non-sterile compounding prior to patient use. • Determine if a medication is contraindicated for a patient. • Identify and manage drug interactions. • Determine the patient co-pay or price for a prescription. • Ensure that formulary preferred medications are used when clinically appropriate. • Obtain authorization for a non-preferred medication when clinically appropriate. • Assist a patient to acquire medication(s) through support programs.</td>
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<th>Self-Developer Domain</th>
<th>Example Supporting Tasks:</th>
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<td>Create a written plan for continuous professional development.</td>
<td>• Create and update a curriculum vitae, resume, and/or professional portfolio. • Perform a self-evaluation to identify professional strengths and weaknesses.</td>
</tr>
</tbody>
</table>

* in compliance with federal, state and local laws and regulations
* all words or phrases in **bold** are defined in the glossary
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Pharmacists’ Clinical Documentation Data Flow
Ambulatory Clinic Setting

Data from External Sources
- Lab results
- Discharge summary
- Patient care summary
- Patient reported data
- Med dispensing history

Collect (before and during visit)

Assess

Plan

Implement
- Medication action plan
- Patient care summary
- Transition of care document with medication reconciliation

Follow-up (monitor and evaluate)

Data from Internal Sources
- Demographics
- History & physical
- Vital signs

Data to External Sources

Data to Internal Sources

- Progress note
- Med change
- Lab recommendation
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Pre-visit Collection: Content Module of the C33 (the C32, which is a subset of C33) Continuity of Care Document. For example, patient’s name, demographics, past medical history, current prescription and OTC medications. Review of symptoms, etc. If the pharmacist has the privilege and approval to update this information, he or she should do so.

Assess

The first part of assess is a prioritized problem list. Medical problem (disease based), drug-related problem, identify any gaps in care, patient health and safety; identify any additional issues such as admissions, coordinate any transition of care issues. Establish or review the patient’s goals(s). Taken from national guidelines and individualized for the patient.

Examples:
Problem #1: Diabetes goal A1C <7%
Problem #2: Hypertension goal 140/90

The plan is broken up into several sections.

Every problem will have a plan associated with it.

Plan

Implementation is the documentation, coordination, communication, education, training, and support for the plan that is being developed. This links the Develop Plan phase to the Evaluate phase.

Implement

Evaluate the patient:
- Adherence to therapy
- Appropriateness of therapy (e.g., side effects, drug interactions)
- Outcomes (e.g., A1C)

Monitor and/or transition is the process of functionally sending the reconciled record off to be consumed by other partners on the care team and other authorized entities. It would include but not be limited to uploading data to the health information exchange (HIE) or making the record available for query from the common repository. It is the final documentation step that will move into the next iteration of care and may occur at the same time of pre-collection of data in the next iteration.

Follow up (monitor and evaluate)
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Best Practices

- Auburn University

  - Counseling cases structured around QuEST
    - Qu = quickly and accurately assess the patient
      - Ask about current complaint (SCHOLAR)
      - Ask about medications and other products
      - Ask about current medical problems
      - Ask about drug allergies
    - E = establish that the patient is an appropriate self-care candidate
    - S = suggest appropriate self-care strategies
      - Medications
      - Alternative treatments
      - General care measures
    - T = talk with the patient
      - About reasons for self-treatment and what to expect
      - About medications recommended
      - About appropriate follow-up
### JCPP Therapeutic/Critical Thinking
Patient Care Concept Map

#### Disease State/Medical condition:

**Step 1: Knowledge of disease state/medical condition:**
- Epidemiology
- Pathophysiology
- Signs and symptoms
- Diagnostic features
- Treatment options (pharmacologic and non-pharmacologic)

**Step 2: Review of Evidence based guidelines or landmark clinical trials:**

#### Step 3: Patient-Specific Factors:

<table>
<thead>
<tr>
<th>S:</th>
<th>Current RX Medications:</th>
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<tr>
<td>O:</td>
<td>OTC/Herbals/Vitamins:</td>
</tr>
<tr>
<td>PMH:</td>
<td>Alternative Medications (CAM):</td>
</tr>
<tr>
<td>SH:</td>
<td>Drug Allergies:</td>
</tr>
<tr>
<td>FH:</td>
<td>Non-drug allergies:</td>
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#### Step 4: Medication History/Med Rec

- Does the patient need therapy to reach goals and why?
  - Acute or chronic or both?
  - What is the urgency of beginning therapy?
  - What will treatment solve/prevent?
  - Is non-drug therapy available and appropriate?

#### Step 5: Set Patient-Specific Goals:

**Step 6: Identify Problems**
- Refer to DRP slides for specific examples (indication, effectiveness, safety, adherence/patient education)

#### Step 7A: Medication Assessment

- Evaluate need for therapy
- Evaluate current therapy
  - Utilize info from MedRec process
  - Is pt responding to therapy, having side effects, adherent?
  - Is pt using anything (Rx/OTC) to treat condition?
  - Current meds best suited for this pt?
  - Correct dose? (age, wt, renal/hepatic function)?
  - Appropriate dosage form, route, frequency?
  - Appropriate duration of therapy?
- Evaluate all other therapy options
  - What other medications could be used to treat the problem?
  - How do they compare to the current therapy?
  - How do they compare to one another?
  - Which is best suited for the patient and why?
  - Why are the other therapies less suited or not recommended?
  - When comparing ALL options – compare and contrast: SEEC
    - Safety, Efficacy, Ease of use, Cost (coverage by insurance)
  - Pros/cons of each option

#### Step 7B: Overall Patient Assessment

- What recommendations are you considering? Why are you considering this? Why are you not considering something else?
- Cite evidence based arguments
- Incorporate patient specific goals
- How is your assessment impacted by other factors?
  - Other disease states
  - Other current medications
  - Patient and/or provider preferences
  - Insurance coverage

#### Step 8: Plan (Problem List with Plan for each problem)

- Develop treatment plan for all problems
- Drugs to be avoided

Collect
Assess
Plan
Implement
Follow up
## Step 9: Implement

- Patient and provider education/communication/documentation
- Anticipate any transitions of care issues
- Consider & recommend any health preventative issues (i.e. vaccines)
- Consider with whom patient should follow up (ex. MD, RPh, others) and frequency of follow up

## Step 10: Outcome Assessment and Monitoring Plan:

- Monitoring Parameters (toxic and therapeutic)
What Do We Know
(patient information)

What Do We Need To Know
(elements of thought)

COLLECT (QuEST/SCHOLAR-MAC):
<table>
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<th>What Do We Need To Know (elements of thought)</th>
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**ASSESS:**

**PLAN:**

**IMPLEMENT:**

**FOLLOW UP:**