

Alexa Carlson, RPh, PharmD, BCPS

a.carlson@northeastern.edu

Margarita DiVall, RPh, PharmD, MEd, BCPS

m.divall@northeastern.edu

THE JCPP PHARMACISTS' PATIENT CARE PROCESS: TIME TO REINVENT THE WHEEL?

Objectives

- Compare and contrast new JCPP Pharmacists' Patient Care Process (PPCP) steps and competencies with older patient assessment models
- Identify pharmacy school curriculum changes as the results of the JCPP PPCP
- Develop strategies to reinforce and assess JCPP PPCP competencies with students and residents

Margarita DiVall

BACKGROUND AND CHANGES IN CURRICULUM

Poll question 1

- Which of the following describes your knowledge of JCPP Pharmacists' Patient Care Process best?
 - A. I have never heard of JCPP PPCP
 - B. I have heard about it, but I have not read it
 - C. I have some knowledge of it but I have not used it with my trainees

JCPP

- JCPP Vision:
 - Patients achieve optimal health and medication outcomes with pharmacists as essential and accountable providers within patient-centered, team-based healthcare.



Pharmacists' Patient Care Process (PPCP)

- JCPP Strategic Plan: Consistent patient care process identified as key driver for achieving the JCPP vision
 - Supports the profession's provider status activities
 - Needed to meet demands of evolving health care system
- Purpose of collaboration on the process
 - To stimulate consistency, predictability, and measurability in pharmacists' service delivery

PPCP Development

- Review of key resources
 - Pharmaceutical care – Strand & Cipolle
 - Profession's MTM definition and MTM Core Elements
 - PCPCC Medication Management Resource Guide
 - ACA language
 - Nurse Practitioner's Practice Standards

Applicability of PPCP

- Should apply to the wide variety of patient care service provided by pharmacists AND the pharmacist's medication expertise
- Level of intensity varies depending on the service
- One pharmacist might be responsible for all the steps in some settings where in others more than one pharmacist may be involved at different stages of the process.

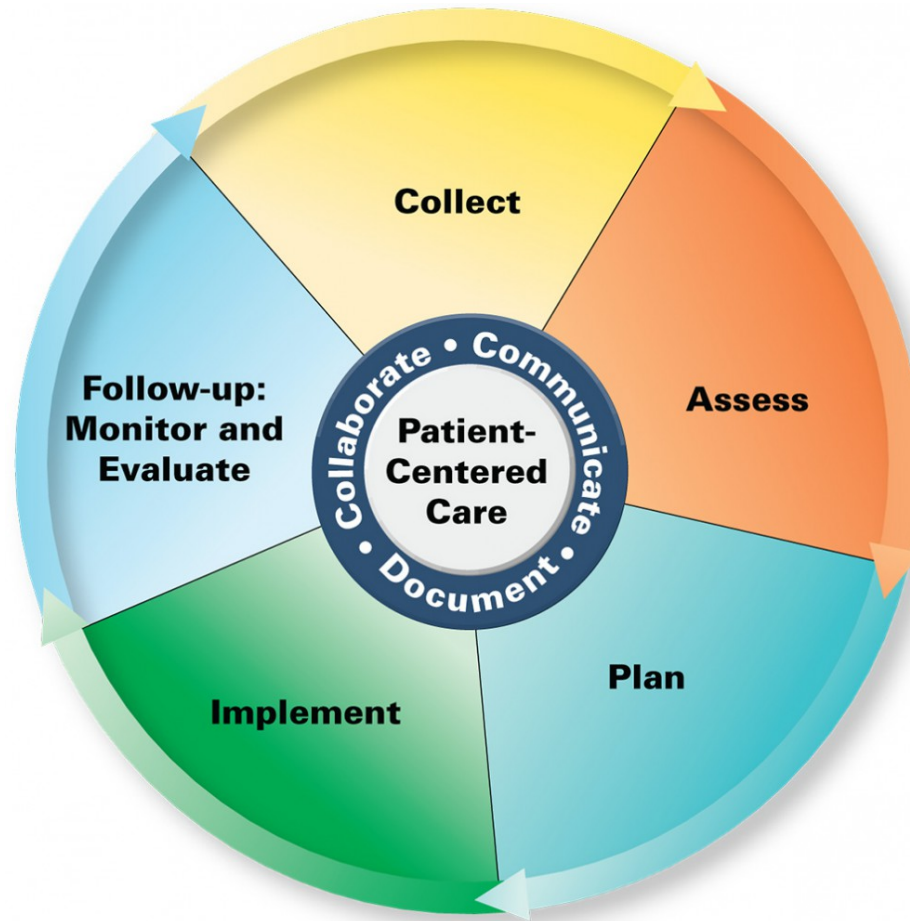
PPCP Goals

- Promote consistency across the profession.
- Provide a framework for delivering patient care in any practice setting.
- Be a contemporary and comprehensive approach to patient-centered care delivered in collaboration with other members of the health care team.
- Be applicable to a variety of patient care services delivered by pharmacists, including medication management

PPCP Foundational Components

- Establishment of patient-pharmacist relationship
- Engagement and effective communication with patient, family, caregivers
- Continually collaborate, document, and communicate with physicians and other health care providers
- Process enhanced by interoperable information technology systems that facilitate effective and efficient communication

PPCP



Poll Question 2

- What are your immediate impressions from the new PCPP?
 - A. It is essentially the same as what I learned in school and have been using in practice
 - B. It has some significant differences from what I have used
 - C. It is very different than what I have learned and used

PPCP - Collect

- The pharmacist assures the collection of necessary subjective and objective information about the patient in order to understand the relevant medical/medication history and clinical status of the patient. Information may be gathered and verified from multiple sources.
 - A current medication list and medication use history for prescription and nonprescription medications, herbal products, and other dietary supplements
 - Relevant health data that may include medical history, health and wellness information, biometric test results, and physical assessment findings
 - Patient lifestyle habits, preferences and beliefs, health and functional goals, and socioeconomic factors that impact access to medications and other aspects of care

PPCP - 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. This process includes assessing:
 - Each medication for appropriateness, effectiveness, safety, and patient adherence
 - Health and functional status, risk factors, health data, cultural factors, health literacy, and access to medications or other aspects of care
 - Immunization status and the need for preventive care and other health care services, where appropriate

PPCP - 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. This process includes establishing a care plan that:
 - Addresses medication-related problems and optimizes medication therapy
 - Sets goals of therapy for achieving clinical outcomes in the context of the patient's overall health care goals and access to care
 - Engages the patient through education, empowerment, and self-management
 - Supports care continuity, including follow-up and transitions of care as appropriate

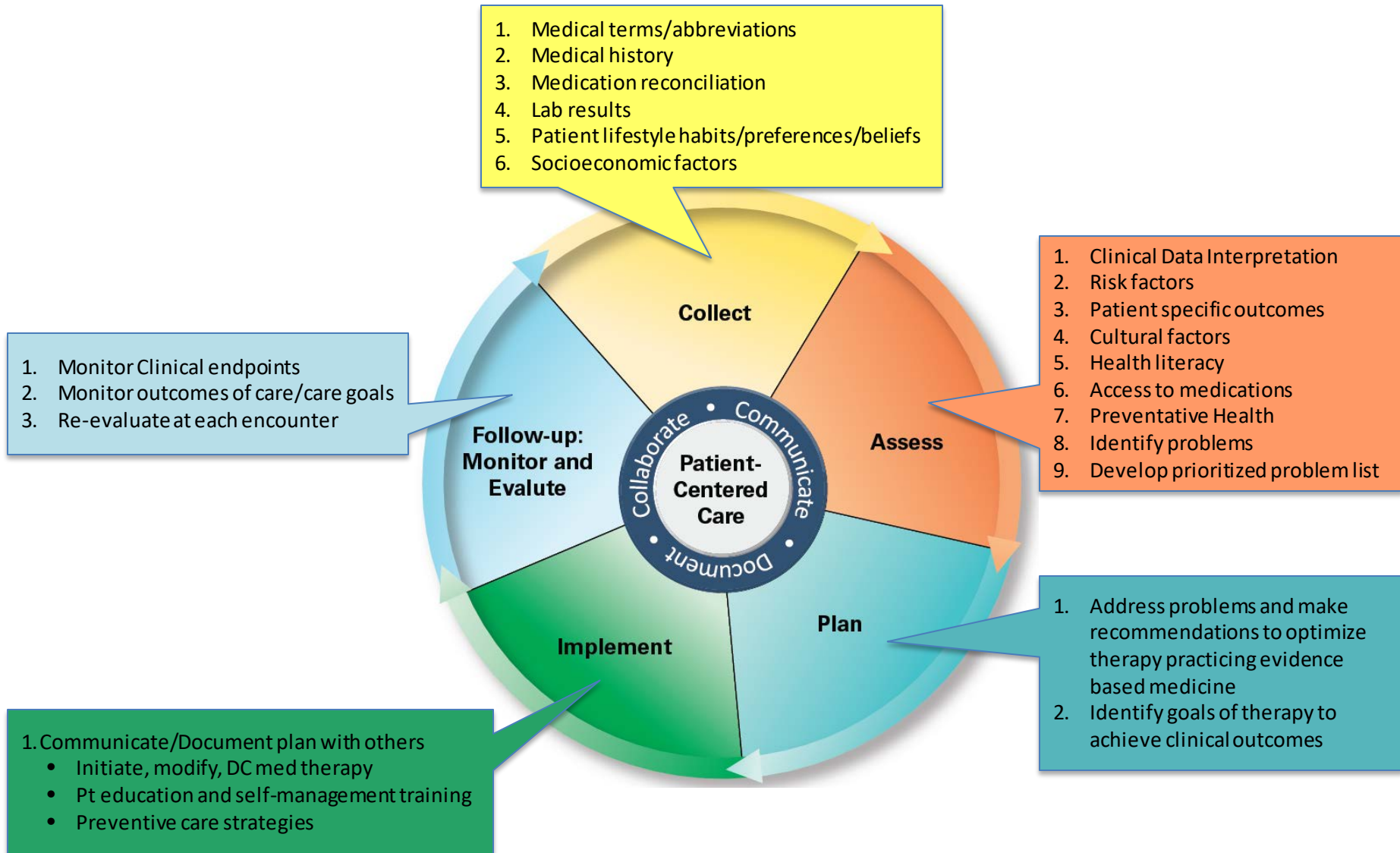
PPCP - Implement

- The pharmacist implements the care plan in collaboration with other health care professionals and the patient or caregiver. During the process of implementing the care plan, the pharmacist:
 - Addresses medication- and health-related problems and engages in preventive care strategies, including vaccine administration
 - Initiates, modifies, discontinues, or administers medication therapy as authorized
 - Provides education and self-management training to the patient or caregiver
 - Contributes to coordination of care, including the referral or transition of the patient to another health care professional
 - Schedules follow-up care as needed to achieve goals of therapy

PPCP - Follow-up: Monitor and Evaluate

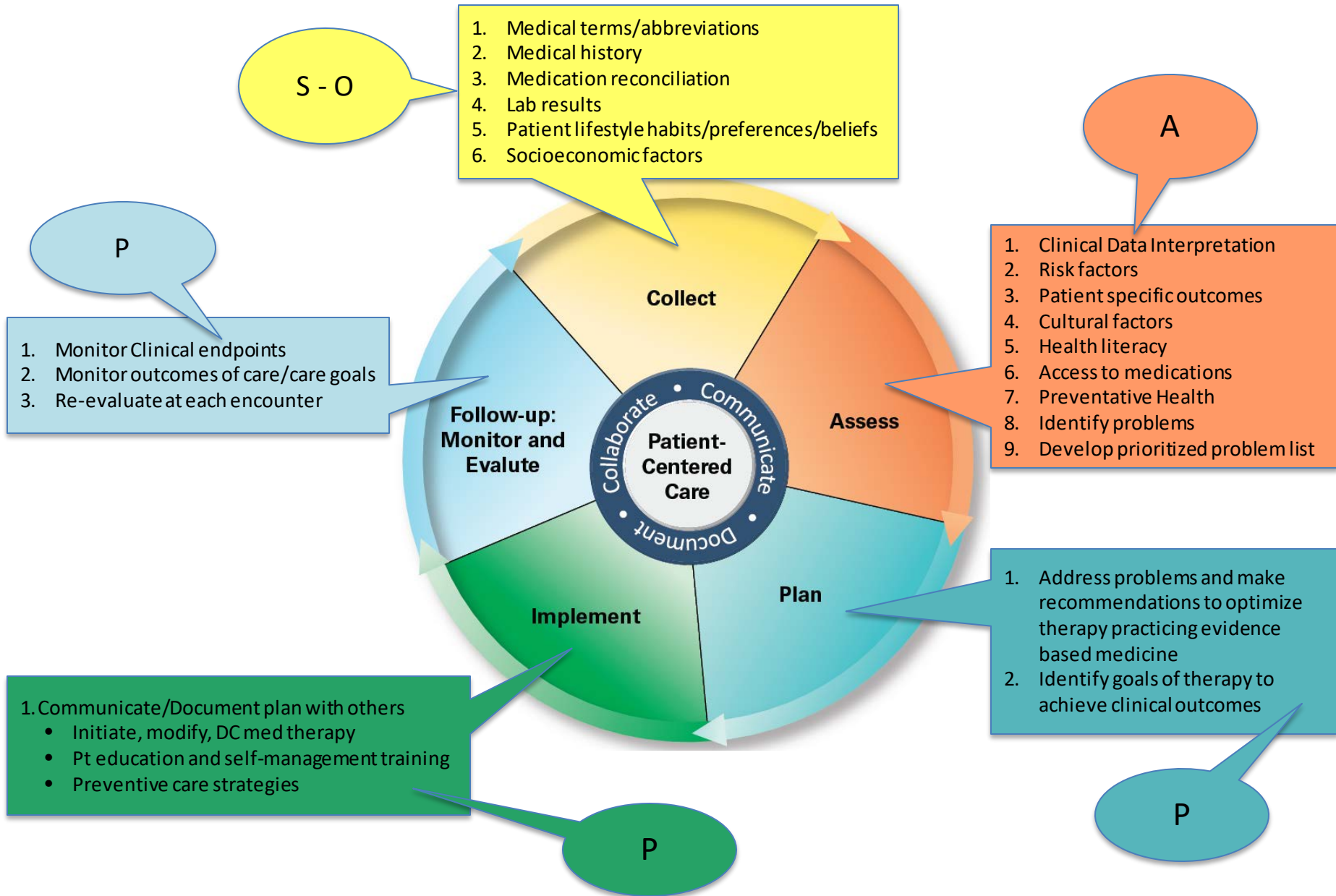
- The pharmacist monitors and evaluates the effectiveness of the care plan and modifies the plan in collaboration with other health care professionals and the patient or caregiver as needed. This process includes the continuous monitoring and evaluation of:
 - Medication appropriateness, effectiveness, and safety and patient adherence through available health data, biometric test results, and patient feedback
 - Clinical endpoints that contribute to the patient's overall health
 - Outcomes of care, including progress toward or the achievement of goals of therapy

The JCPP Pharmacist Patient Care Process



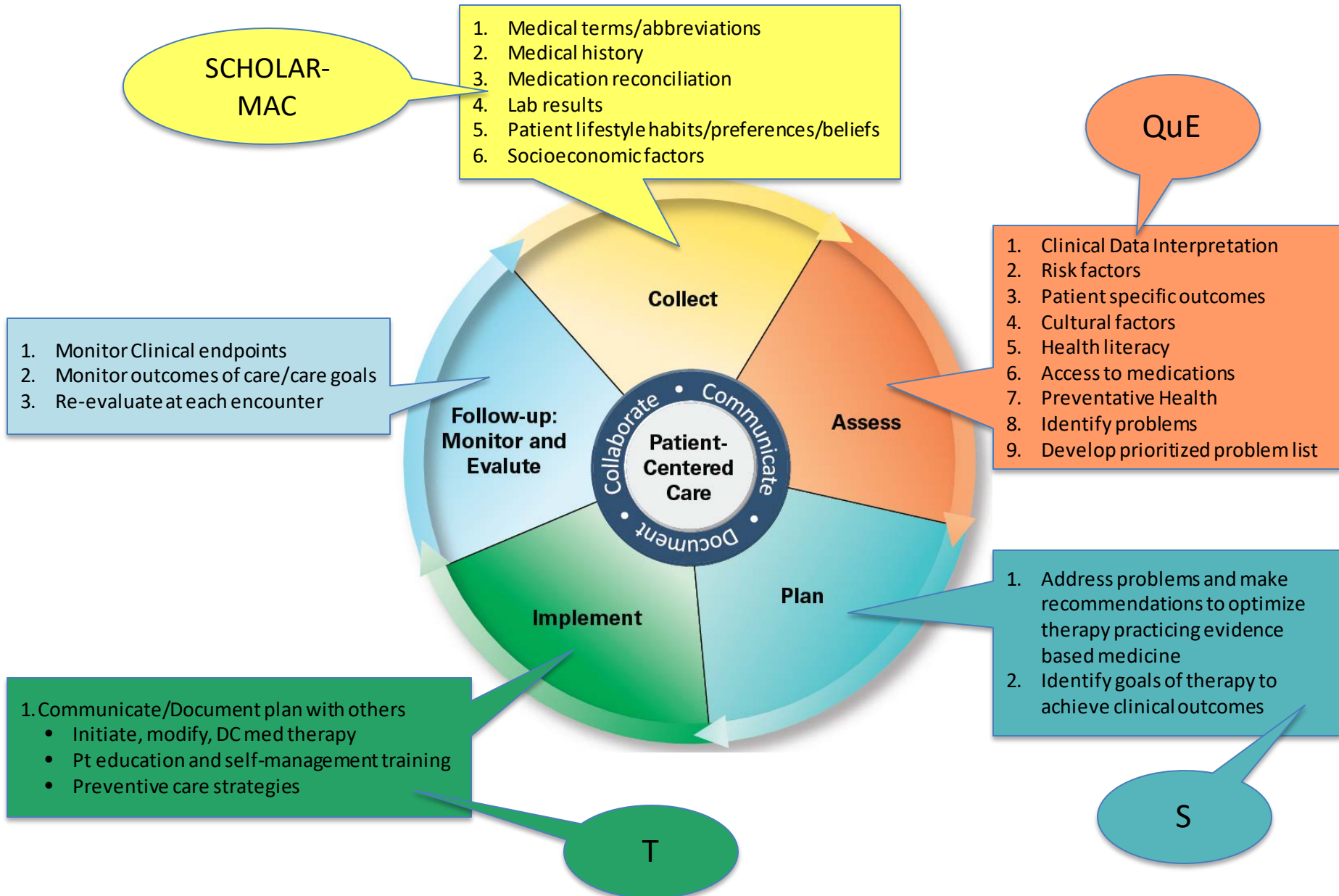
Northeastern University

The Patient Care Process and SOAP



Northeastern University

The Patient Care Process and QuEST SCHOLAR-MAC



Accreditation Standards

ACPE Mandate

- Standards 2016
 - **10.8. Pharmacists' Patient Care Process** –
The curriculum prepares students to provide patient-centered collaborative care as described in the *Pharmacists' Patient Care Process* model endorsed by the Joint Commission of Pharmacy Practitioners.

<https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf>

ASHP

- Pharmacists providing professional services at the practice will:
 - 6.4.g follow the Joint Commission of Pharmacy Practitioners (JCPP) Pharmacists' Patient Care Process using the principles of evidence-based practice

<https://www.ashp.org/-/media/assets/professional-development/residencies/docs/pgy1-community-based-pharmacy-2017.ashx?la=en>

Examples of what we have done in the didactic/ lab/ seminar curriculum

- Multiple faculty development sessions
- PPT templates developed for faculty lectures
- Patient care concept map for seminar cases
- Seminar case work up must follow PCPP steps
- Rubrics updated and mapped to PPCP competencies

Therapeutic/Critical Thinking Process Patient Care Concept Map

- Purpose: demonstrates thinking process to help you assess the patient
- Aid you in identifying/addressing all medical conditions and problems
 - Template to capture all the information needed to make appropriate therapeutic recommendations
 - Helps you to organize information to document recommendations
- This is the process that you go through in your head for every patient encounter and should become second nature to you
 - (i.e. eventually you will not need the concept map anymore)

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:

Step 4: Medication History/Med Rec

Step 5: Set Patient-Specific Goals:

S:
 O:
 PMH:
 SH:
 FH:
 Non-drug allergies:

Current RX Medications:
 OTC/Herbals/Vitamins:
 Alternative Medications (CAM):
 Drug Allergies:

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 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

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)

Reformatting from SOAP to PPCP

HTN:

S/O: BP=135-140/85-90; HR=55; BUN/SrCr=25/1.7; K=4.6; metoprolol 25 mg PO BID

A: BP is controlled with JNC 8 goal of <140/90; however, patient is not on an ACE I or ARB, which are preferred in patients with CKD and DM due to their beneficial affects on slowing the progression of kidney disease. Metoprolol has no clear indication but we may not need to discontinue it because patient has been on it chronically. *(They can also say that metoprolol can be contributing to generalized weakness, fatigue; but this is more common at the start of therapy; they can definitely argue for discontinuing a beta-blocker which is fine).*

P: D/C Metoprolol OR Titrate dose off (with specific schedule) OR continue Metoprolol. Initiate Lisinopril 10 mg PO daily. Check BP, HR, K, and BUN/SrCr 1 week from lisinopril initiation. If BP not at goal consider increasing Lisinopril to 20mg daily

<u>Problem:</u>	HTN:
Collect	BP=135-140/85-90; HR=55; BUN/SrCr=25/2.4; K=4.6; <u>metoprolol</u> 25 mg PO BID
Assess	BP is controlled with JNC 8 goal of <140/90; however, patient is not on an ACE I or ARB, which are preferred in patients with CKD and DM due to their beneficial affects on slowing the progression of kidney disease. <u>Metoprolol</u> has no clear indication but we may not need to discontinue it because patient has been on it chronically. <i>(They can also say that <u>metoprolol</u> can be contributing to generalized weakness, fatigue; but this is more common at the start of therapy; they can definitely argue for discontinuing a beta-blocker which is fine).</i> Providers may be hesitant to initiate an ACE I in a patient with <u>SrCr</u> of 2.4; however, benefits may outweigh the risk and with careful monitoring ACE I should be tried with low dose initiation and titration.
Plan	D/C <u>Metoprolol</u> OR Titrate dose off (with specific schedule) OR continue <u>Metoprolol</u> . Initiate Lisinopril 2.5 or 5 mg PO daily. If BP not at goal consider titrating up to Lisinopril to 20mg daily.
Implement	Provide patient education regarding changes in HTN therapy. For ACE I – specifically patients should report cough, swelling around neck or face, dizziness, changes in urine output
Follow-up, Monitor, Evaluate	Check BP, HR, K, and BUN/SrCr 3-7 days from <u>lisinopril</u> initiation.

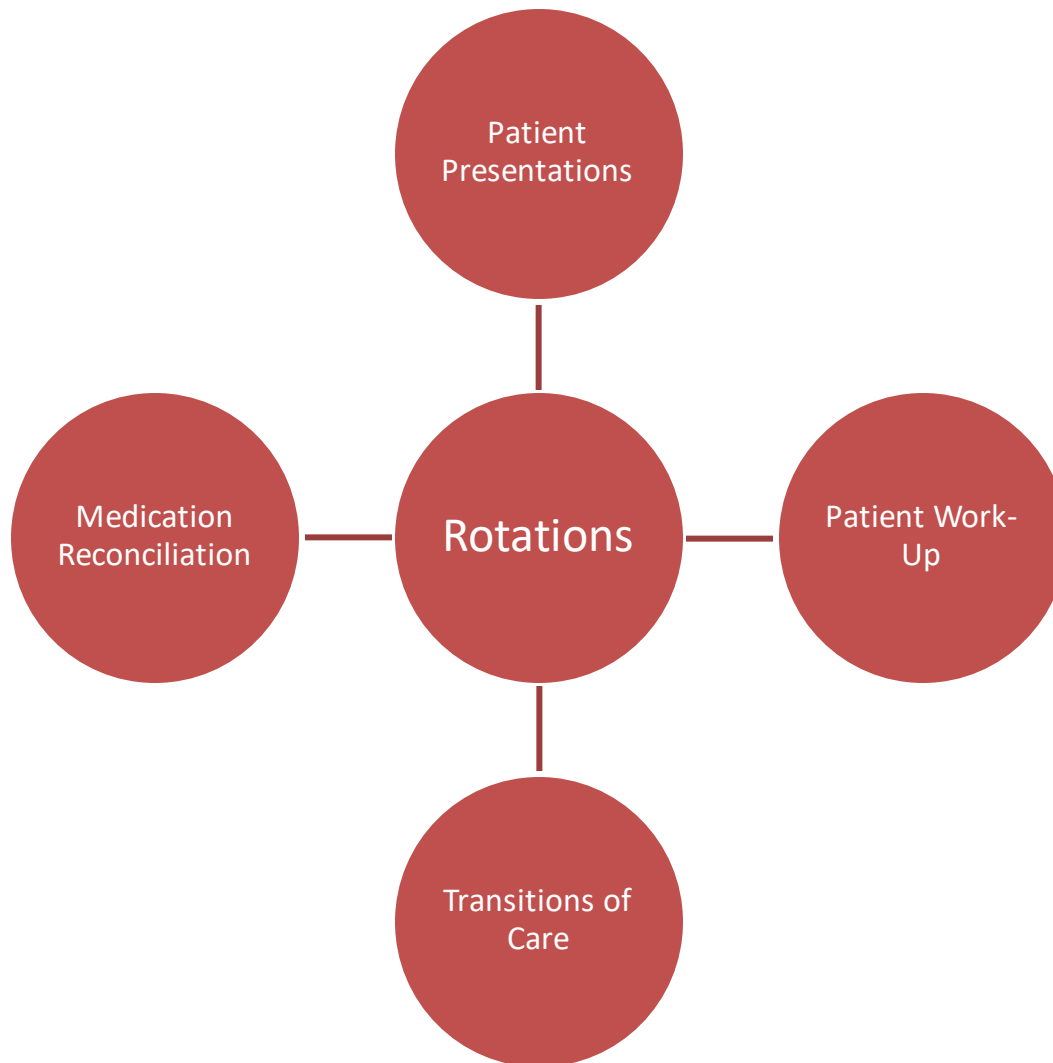
Alexa Carlson

PRACTICAL TIPS FOR IMPLEMENTING PPCP WITH RESIDENTS AND STUDENTS

Visions for pharmacists' practice

Pharmacists will provide services within community-based practices, institutions, clinics, patients' homes or other settings, and will coordinate, collaborate and communicate among themselves and with other members of the health care team.

Applications to experiential setting



Patient work-up

- Consistent and comprehensive approach to a patient
- Use standardized data collection forms/progress notes

<p>JCPP by Problem</p> <ul style="list-style-type: none"> • COLLECT • ASSESS • PLAN • IMPLEMENT • FOLLOW-UP/ MONITORING 	Problem 1:	
	Collect	
	Assess	
	Plan	
	Implement	
	Monitor	
	Problem 2:	
	Collect	
	Assess	
	Plan	
	Implement	
	Monitor	
	Problem 3:	
	Collect	
	Assess	
	Plan	
	Implement	
Monitor		

Patient presentation

- Guidelines on how to apply PPCP to patient presentation

Monitoring form and plan

When verbally presenting the patient, for each problem, present in the JCPP format. Present your problems (both active and chronic problems) in order of priority. Please note you are presenting by problem in internal medicine (i.e. CAP, AKI, COPD, Hypothyroidism) and not by body system. Other areas of practice, such as the ICUs, do present patients in a different manner.

- **Collect:** Organize in trends where relevant. For example, if your problem is infection, include fever curve from admission to last day of your follow up or discharge, WBC trend, cultures, etc. If many days of admission, it may be useful to organize in a table form. Limit to pertinent to the problem. Because you have specifics at the table above, it is not necessary to restate each value; however you can comment i.e. WBC is elevated on admission and continues to decline since admission. It is appropriate to include any Meds PTA into the S/O when pertinent
- **Assess:** Include etiology or pathophysiology as pertinent; include any assessment of chronic or acute presentation for a given problem. State the standard of care for this problem and compare your current therapy for the problem with standard of care commenting on whether you think any interventions are needed. Use guidelines and primary literature to justify your answer as appropriate.
- **Plan:** Clearly state what your plan is with the current medications used to manage the problem (continue, discontinue, change medications or doses, add medications, etc). Clearly state goals of therapy (i.e. BP goal is <140/90 as patient has DM, A1c goal is <7, Vanco trough goal of 15-20, VPA goal of 50-100, etc.)
- **Implement:** Consider including any education that you would want to emphasize to the patient to prevent re-admission. Consider any vaccines the patient may need. Consider any transitions of care the patient may need.
- **Follow-Up:** Clearly state monitoring parameters (measurable) that you will use to monitor therapeutic efficacy.

- Standardized rubric/feedback for patient presentations using PPCP

PPCP Rubric Example

<p>COLLECT- 10% weight</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete and concise summary of Subjective and Objective Information (S/O) <input type="checkbox"/> Accurate summary of all S/O 	<p>3 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete and concise summary of pertinent information for all 3 problems <input type="checkbox"/> All information is accurate with no incorrect information <input type="checkbox"/> Only "S/O" information given 	<p>2 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete and concise summary of pertinent information for 2 problems <input type="checkbox"/> Accurate summary of pertinent information for all 3 problems <input type="checkbox"/> Only "S/O" information given 	<p>1 Point</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete and concise information for 1 problem. <input type="checkbox"/> Some inaccurate information presented for 1 or more problems <input type="checkbox"/> Information other than "S/O" provided 	<p>0 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete and concise summary of pertinent information for 0 problems <input type="checkbox"/> Grossly incomplete and/or inaccurate information for 1 or more problems. <input type="checkbox"/> Information other than "S/O" provided
<p>ASSESS - 20 % weight</p> <ul style="list-style-type: none"> <input type="checkbox"/> Problem Identification <input type="checkbox"/> Current therapy Evidence/ Best Practices <input type="checkbox"/> Intervention Needed 	<p>3 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Complete problem list generated; no extraneous information or issues listed <input type="checkbox"/> Assessment of current therapy based on rational interpretation and integration of available information for all 3 problems <input type="checkbox"/> References appropriate guidelines for best practices and/or clinical trials for all 3 problems <input type="checkbox"/> Assessment of intervention needed based on rational interpretation and integration of available information for all 3 problems 	<p>2 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Most problems are identified including the "main" problem for the case (>80%) <input type="checkbox"/> Assessment of current therapy based on rational interpretation and integration of available information for 2 of top 3 problems <input type="checkbox"/> References appropriate guidelines and/or clinical trials for best practices for 2 problems <input type="checkbox"/> Assessment of intervention needed based on rational interpretation and integration of available information for 2 problems 	<p>1 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Some problems are identified (50%-80%) <OR> includes nonexistent problems or extraneous information <input type="checkbox"/> Assessment of current therapy based on rational interpretation and integration of available information for 1 of top 3 problems <input type="checkbox"/> References appropriate guidelines and/or clinical trials for best practices for 1 problems <input type="checkbox"/> Assessment of intervention needed based on rational interpretation and integration of available information for 1 problem 	<p>0 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Less than 50% of problems are listed <OR> main problem missed <OR> identified nonexistent problems <input type="checkbox"/> Assessment of current therapy based on rational interpretation and integration of available information for 0 of top 3 problems <input type="checkbox"/> References appropriate guidelines and/or clinical trials for best practices for 0 problems <input type="checkbox"/> Assessment of intervention needed based on rational interpretation and integration of available information for 0 problems
<p>PLAN - 20 % weight</p> <ul style="list-style-type: none"> <input type="checkbox"/> Treatment Goals <input type="checkbox"/> Specific Plan 	<p>3 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriate and relevant therapeutic goal for 3 of top 3 problems <input type="checkbox"/> Specific, appropriate and justified recommendations (including drug name, strength, route, frequency, and duration of therapy) for all 3 problems 	<p>2 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriate and relevant therapeutic goal for 2 of top 3 problems <input type="checkbox"/> Specific, appropriate and justified recommendations (including drug name, strength, route, frequency, and duration of therapy) for 2 of 3 problems 	<p>1 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriate and relevant therapeutic goal for 1 of top 3 problems <input type="checkbox"/> Specific, appropriate and justified recommendations (including drug name, strength, route, frequency, and duration of therapy) for 1 of 3 problems 	<p>0 Points</p> <ul style="list-style-type: none"> <input type="checkbox"/> Appropriate and relevant therapeutic goal for 0 of top 3 problems <input type="checkbox"/> Specific, appropriate and justified recommendations (including drug name, strength, route, frequency, and duration of therapy) for 0 of 3 problems

Medication reconciliation

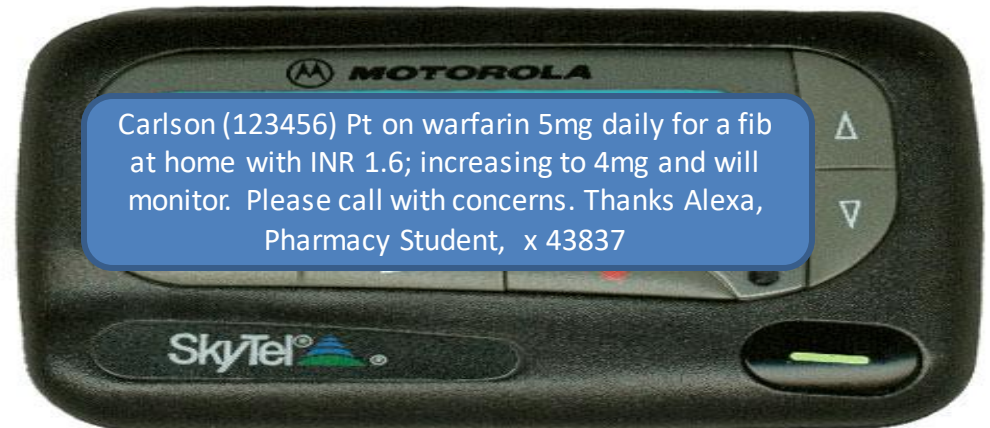
- **Collect:**
 - Current medication list and medication use history for prescription and nonprescription medications, herbal products, and other dietary supplements
 - Patient lifestyle habits, preferences and beliefs, health and functional goals, and socioeconomic factors that impact access to medications and other aspects of care
- **Assess:**
 - Each medication for appropriateness, effectiveness, safety, and patient adherence
- **Plan:**
 - Addresses medication-related problems and optimized medication therapy
- **Implement:**
 - Provides education and self-management training to the patient or caregiver

Transitions of care

- Implement:
 - The pharmacist implements the care plan in collaboration with other health care professionals and the patient or caregiver
 - Contributes to the coordination of care, including the referral or transition of the patient to another healthcare professional
- Use all the steps (collect, assess, plan, implement, follow-up/monitoring) as a process to guide communication

Example situation: warfarin patient

PPCP Process Step	Example
Collect	Student/resident discusses warfarin history with patient, call pharmacy and anticoagulation clinic for additional information
Assess	Assess warfarin history to determine the best dose of warfarin
Plan	Finalize warfarin dose recommendation
Implement	Student/resident pages the floor pharmacist about the warfarin dose recommendation and/or complete warfarin monitoring forms for the hospital
Follow-up	Determine warfarin monitoring plan and restart the cycle



Applications in the experiential setting

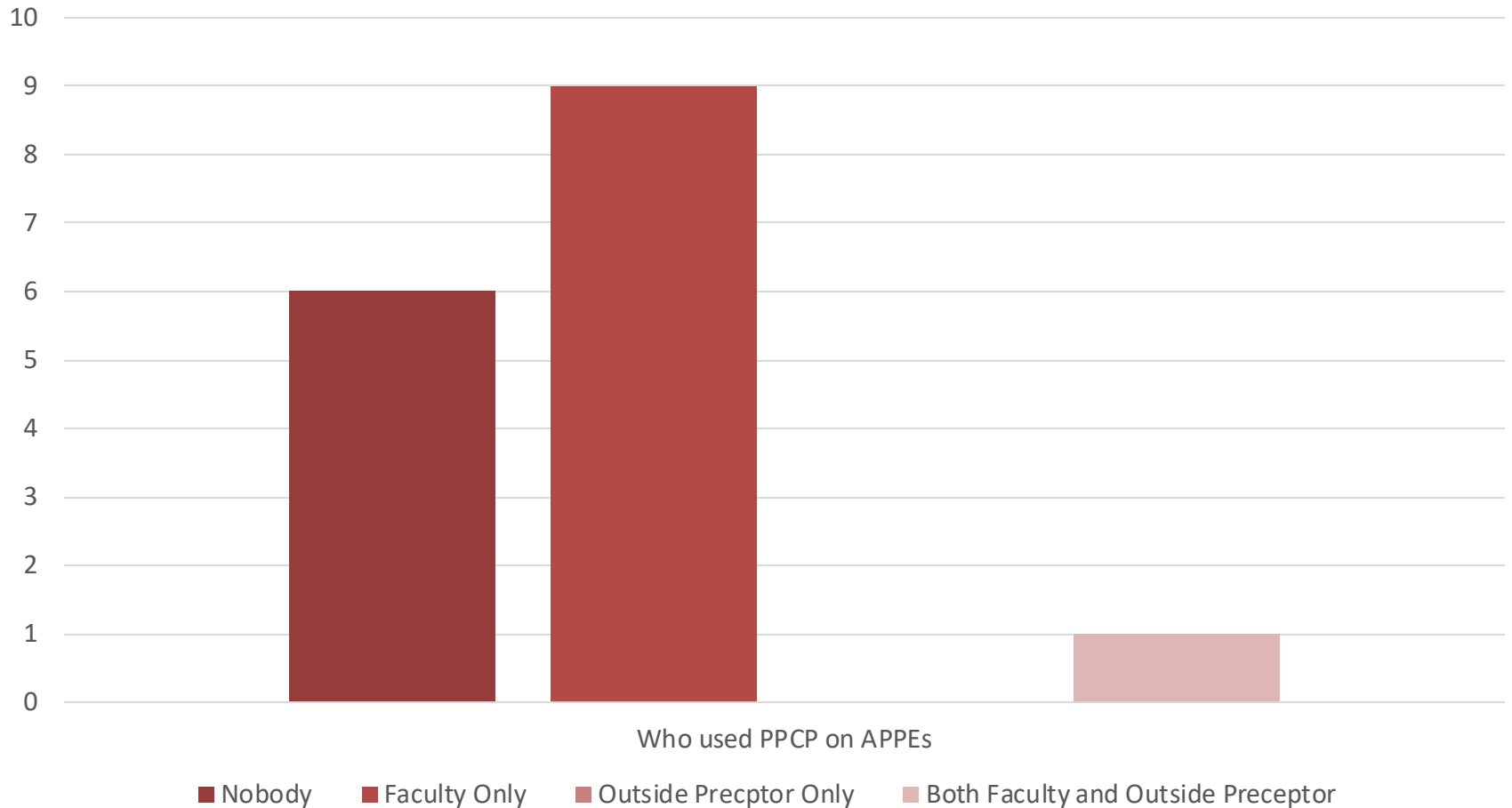
- Survey to current P4 students (on APPE 2) and most recent graduates (completed 6 APPEs) of Northeastern University on how PPCP is being applied on APPEs
- 17 respondents
 - 15 (88%) students have read PPCP, 2 (12%) have not
 - 9 (53%) students completed 6 rotations, 4 (23.5%) completed 2 rotations, and 4 (23.5%) completed 1 rotation

Comparison of SOAP and PPCP

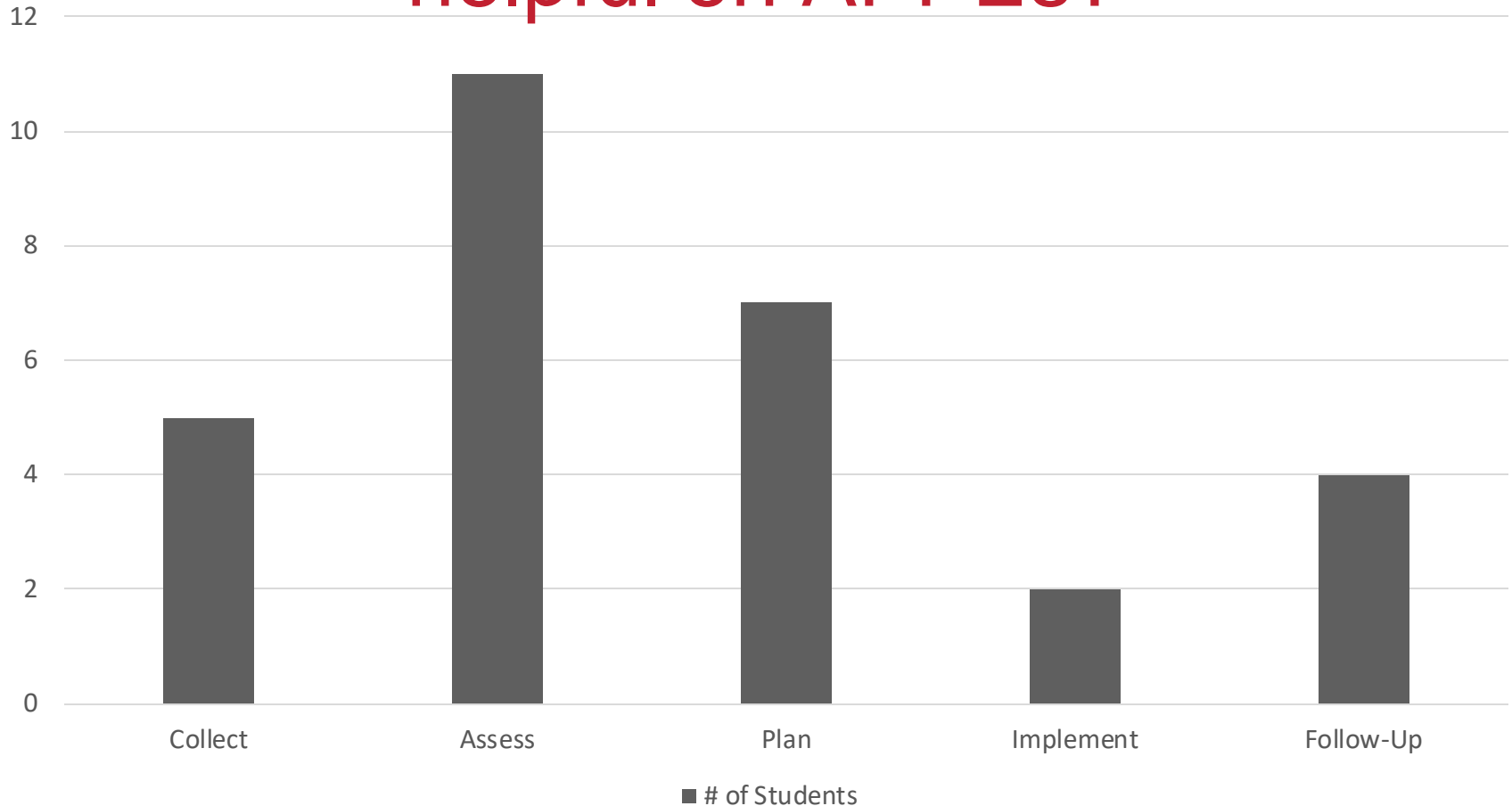
For each of the following please say which one you prefer, SOAP (at 0 points) or PPCP (at 100 points)

Field	Minimum	Maximum	Mean	Std Deviation
Ease of patient work-up (n=11)	0	75	33.64	21.44
Completeness of patient work-up (n=14)	0	100	61.79	35.47
Continuity of patient care (n=14)	27	100	73.86	18.81
Organization of thoughts (n=10)	25	100	65.10	24.19

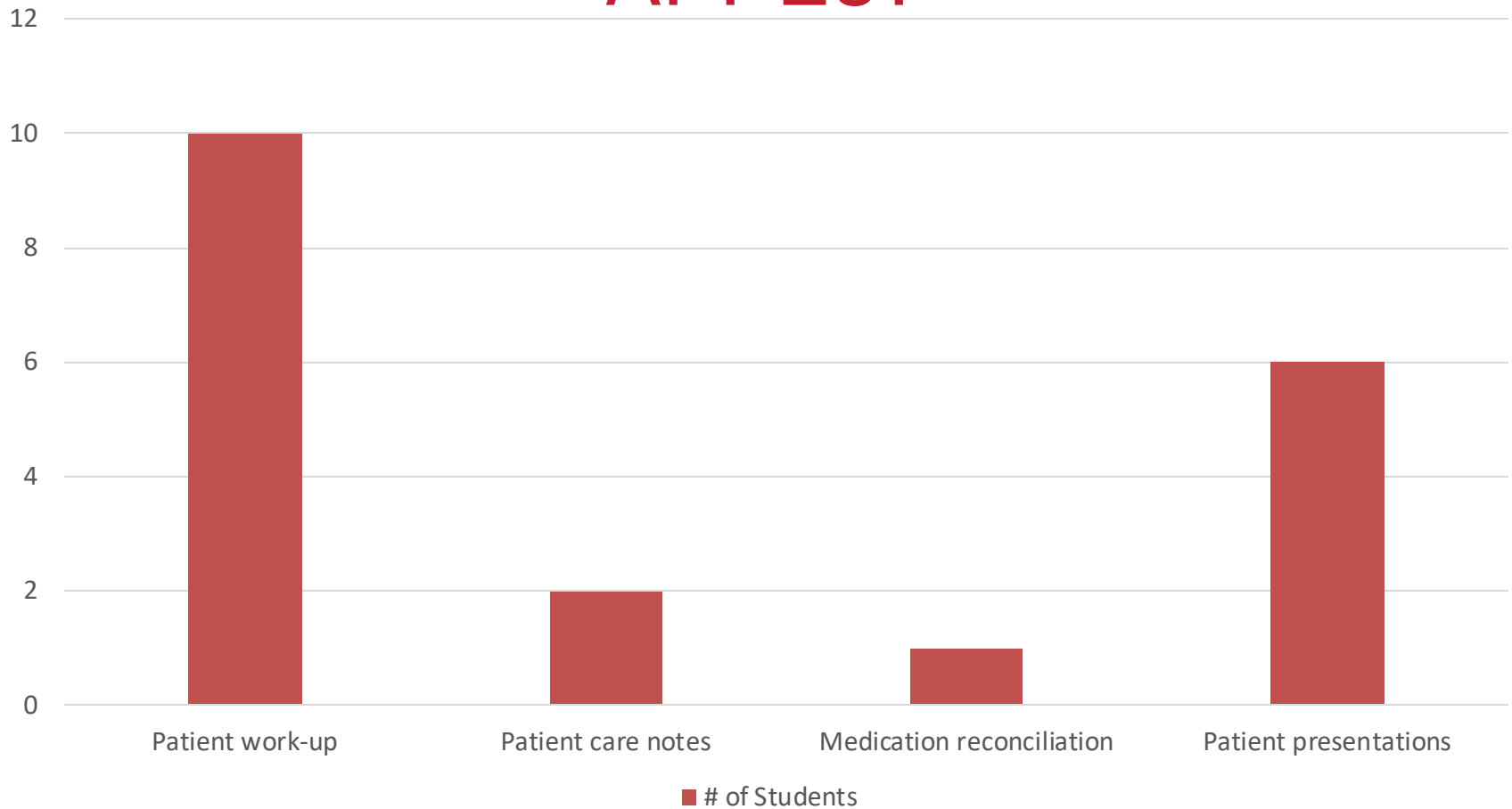
Application of PPCP on APPEs



How has application of PPCP been helpful on APPEs?



How are you applying PPCP on APPEs?



Summary of experiential application

- Have students/residents read the PPCP
- Explain the utility of it in practice
- Provide standardized ways of applying it in practice (data collection forms, etc.)
- Regularly reinforce that the learner is applying it

Poll question 3

- Do you plan to introduce/ reinforce PPCP with your students and residents?
 - A. Yes
 - B. No
 - C. I am open to it, but need more development

Poll question 4

- What is the biggest barrier to implementing PPCP in training your students/ residents?
 - A. It will take too much time to revise my rotation materials and tools
 - B. I am still unsure that JCPP PPCP is any different than what I already teach
 - C. This is just a new fancy terms to what pharmacists already do, no change is needed

Questions