Rotation Title: Ambulatory Care (ECH Anticoagulation Clinic) (PGY2 Pharmacotherapy Resident)
Rotation Length: 2-3 weeks then longitudinal

Primary Preceptors Names: Jan Anderson, PharmD (pager 127-12543) and Robert Hoel, PharmD (pager 127-02512)
Phone: (507) 538-8650
Hours: Mon-Fri 8am-5pm

General Description:
- Mayo Clinic Employee and Community Health (ECH) serves the community of Rochester, MN and immediately surrounding areas. There are 49 family practice staff physicians, 47 internal medicine staff physicians, 17 pediatricians and 29 mid-level practitioners. The ECH anticoagulation practice provides care for over 1800 patients who are on anticoagulation. There are over 90 patient visits made to the anticoagulation clinic on a daily basis, Monday through Friday and well as over 100 patient outcall reviews of anticoagulation labs. The student/resident will participate in anticoagulation management program with the pharmacist. They will evaluate/monitor drug therapy and recommend changes when necessary.

Disease States:
Anticoagulation for Cardiac risk factors or treatment of clotting disorders
Bridging
Reversal of anticoagulation

Goals Selected:
R1.1 Exhibit the ongoing development of essential personal skills of a pharmacotherapy practice leader.
OBJ R1.1.1 (Characterization) Practice self-managed continuing professional development with the goal of improving the quality of one’s own performance through self-assessment and change.
IO State criteria for judging one’s performance of tasks that are critical in one’s own practice.
IO Explain the role of participation in pharmacy professional organization meetings in the ongoing development of expertise in pharmacotherapy.
IO Explain the importance of staying current with pertinent pharmacotherapy literature.

R2.1 Develop collaborative professional relationships with members of the health care team.
OBJ R2.1.1 (Synthesis) Implement a strategy that effectively develops cooperative, collaborative, and communicative working relationships with members of the inpatient interdisciplinary health care team.
IO Explain the training and expected areas of expertise of the members of the interdisciplinary team with which one works.

IO For each of the professions with which one interacts on an interdisciplinary team, explain the profession’s view of its role and responsibilities in collaborations on patient-centered care and their expectations of the pharmacist’s role in collaborations on patient-centered care.

IO Explain the professional dynamics of the different services comprising the health care team.

IO Identify the interpersonal dynamics of each member of the interdisciplinary health care team.

OBJ R2.1.2 (Synthesis) Implement a strategy that effectively develops cooperative, collaborative, and communicative working relationships with members of the outpatient interdisciplinary health care team.

R2.2 For a caseload of patients, prioritize the delivery of pharmaceutical care.

OBJ R2.2.1 (Evaluation) Appropriately prioritize the care of patients if given limited time and multiple patient care responsibilities.

IO Explain factors to consider when determining priority for pharmaceutical care.

IO Explain how the complexity or severity of patient problems may mandate urgency of care and reordering of current priorities for care.

R2.3 Establish collaborative pharmacist-patient and pharmacist-caregiver relationships.

OBJ R2.3.1 (Synthesis) Implement a strategy that effectively establishes a patient-centered pharmacist-patient and pharmacist-caregiver relationship.

IO Explain the importance of describing to the patient the pharmacotherapy specialist’s role in his/her care.

IO Explain potential barriers to relationship development with individual patients (age, mental status, educational level, health literacy).

IO Explain the views of diverse cultures and religions on the conceptualization of illness, treatment, and of death and dying.

R2.4 Collect and analyze patient information.

OBJ R2.4.1 (Analysis) Collect and organize all patient-specific information needed by the pharmacotherapy specialist to anticipate, prevent, detect, and/or resolve medication-related problems and to make appropriate evidence-based, patient-centered medication therapy recommendations as part of the interdisciplinary team. (See appendix for required and elective content regarding disease states, medications, and non-medication treatments.)

IO For a given patient population, disease state, and degree of acuity, identify the additional depth and breadth of information the pharmacotherapy specialist requires in the patient information base versus the information base of a generalist.

IO When appropriate, measure patient vital signs and use appropriate physical assessment skills to build the patient information base.

OBJ R2.4.2 (Analysis) Determine the presence of or potential for all clinically significant problems in the patient’s current medication therapy.

OBJ R2.4.3 (Analysis) Using an organized collection of patient-specific information, summarize the patient’s health care needs.

R2.6 Design evidence-based therapeutic regimens.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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</table>
| R2.6.1    | (Synthesis) Specify therapeutic goals for a patient incorporating the principles of evidence-based medicine that integrate patient-specific data, disease and medication-specific information, ethics, and quality-of-life considerations.  
  - Identify the sources of disease management and drug-use guidelines.  
  - Explain the pharmacotherapy specialist’s focus on the optimization of the patient’s therapeutic outcomes by the selection of ambitious therapeutic goals and optimal regimen design. |
| R2.6.2    | (Synthesis) Design a patient-centered regimen that meets the evidence-based therapeutic goals established for the patient; integrates patient-specific information, disease and drug information, ethical issues and quality-of-life issues; and considers pharmacogenomic and pharmacoeconomic principles. |
| R2.7      | Design evidence-based monitoring plans.  
  - (Synthesis) Design a patient-centered, evidenced-based monitoring plan for a therapeutic regimen that effectively evaluates achievement of the specified therapeutic goals.  
  - State customary screening tools and monitoring parameters for diseases and conditions listed in the appendix.  
  - State customary monitoring parameters for medications commonly prescribed for diseases and conditions listed in the appendix. |
| R2.8      | Recommend regimens and monitoring plans.  
  - (Application) Recommend a patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan to other members of the interdisciplinary team in a way that is systematic, logical, accurate, timely, and secures consensus from the team.  
  - (Application) Discuss the proposed patient-centered, evidence-based therapeutic regimen and corresponding monitoring plan with the patient and/or caregiver in a way that is systematic, logical, accurate, timely, sensitive, and secures consensus from the patient and/or caregiver. |
| R2.9      | Design education for a patient’s regimen and monitoring plan.  
  - (Analysis) Accurately identify what education will be essential to the patient’s or caregiver’s understanding of the therapeutic regimen and monitoring plan; how to adhere to it; and the importance of adherence.  
  - (Synthesis) Design an effective and efficient plan for meeting the educational needs of the patient, including information on medication therapy, adverse effects, adherence, appropriate use, handling, and medication administration. |
| R2.10     | Implement regimens and monitoring plans.  
  - (Application) When appropriate, initiate the patient-centered, evidence-based therapeutic regimen and monitoring plan for the patient according to the organization’s policies and procedures.  
  - Explain the organization’s policies and procedures for ordering inpatient and outpatient medications.  
  - Explain the organization’s policies and procedures for ordering tests.  
  - (Complex Overt Response) When appropriate, exercise skill in the administration or supervision of the administration of a patient’s therapeutic regimen.  
  - (Application) When necessary, contribute to the work of the team that secures access for drugs used in a patient’s regimen. |
Explain patient assistance programs available for medications.

Explain the pharmacotherapy specialist’s role (versus other interdisciplinary team members) in securing payer coverage or patient assistance.

Explain circumstances in which it may be appropriate to redesign a patient’s medication regimen in order to ensure that a patient will have financially viable access to the prescribed medications.

Explain various approaches used to adjust medication regimens in order to facilitate patient access to medications.

Explain organizational policies and procedures for securing compassionate use medications needed for an individual patient.

OBJ R2.10.4 (Application) Use effective patient education techniques to provide counseling to patients and caregivers, including information on the disease state, medication therapy, adverse effects, compliance, appropriate use, handling, storage, medication administration, and any other therapeutic interventions.

OBJ R2.10.5 (Application) Use a working knowledge of the organization’s referral process to make any necessary patient referrals.

OBJ R2.10.6 (Application) Make follow-up appointments as specified in the monitoring plan.

R2.11 Evaluate patient progress and redesign regimens and monitoring plans.

OBJ R2.11.1 (Evaluation) Accurately assess the patient’s progress toward the therapeutic goal(s).

OBJ R2.11.2 (Synthesis) Redesign the patient’s regimen and monitoring plan as necessary, based on evaluation of monitoring data and therapeutic outcomes.

R2.12 Communicate pertinent patient information to facilitate continuity of care.

OBJ R2.12.1 (Application) Ensure that accurate and timely patient-specific information reaches those who need it at the appropriate time.

OBJ R2.12.2 (Synthesis) Formulate a strategy for continuity of pharmaceutical care across all applicable treatment settings.

OBJ R2.12.3 (Application) When given a patient who is transitioning from one health care setting to another, communicate pertinent pharmacotherapeutic information to the receiving health care professionals.

R2.13 Document direct patient-care activities appropriately.

OBJ R2.13.1 (Analysis) Appropriately select direct patient-care activities for documentation.

OBJ R2.13.2 (Application) Write timely and authoritative consults and notes according to the organization’s policies and procedures.

Explain the organization’s policies and procedures for identifying activities that must be documented.

Explain the organization’s policies and procedures for documenting direct patient-care activities.

Explain the content and format of progress notes.
R3.1 Employ advanced literature analysis skills in preparing drug information.

OBJ R3.1.1 (Synthesis) Create an efficient and effective advanced search strategy to prepare a drug information response.

IO Explain the full range of drug information resources that are currently available.

IO Explain content and applicability of specialized sources of drug information.

IO Explain the principles for use of search engines when the search needs to be at an advanced level.

OBJ R3.1.2 (Analysis) Accurately identify the study design employed for a piece of biomedical literature.

IO Explain the key features of epidemiologic and experimental designs and the strengths and weaknesses of each.

OBJ R3.1.3 (Evaluation) Determine if the study design and methodology are appropriate to accomplish the objectives of a piece of biomedical literature.

OBJ R3.1.4 (Evaluation) Accurately interpret statistical information presented in a piece of biomedical literature.

IO Explain the application and interpretation of advanced statistical methods.

IO Determine instances in which a study conclusion is erroneously supported by data display.

OBJ R3.1.5 (Analysis) Identify potential sources of bias in a piece of biomedical literature.

OBJ R3.1.6 (Evaluation) Determine the internal and external validity of a piece of biomedical literature.

OBJ R3.1.7 (Evaluation) Determine if a study’s results have applicability for hypothesizing future research or for directing patient care decisions.

OBJ R3.1.8 (Evaluation) When presented with conflicting biomedical literature, determine the validity and applicability for a specific drug information need.

IO Compare and contrast the reputations and peer-review procedures of biomedical journals.

IO Explain how to appraise drug information for the expertise and reputation of the author(s).

OBJ R3.1.9 (Evaluation) When presented with limited evidence-based biomedical literature, synthesize a reasonable response for the specific drug information need.

OBJ R3.1.10 (Evaluation) Appraise information provided by a pharmaceutical manufacturer.

OBJ R3.1.11 (Synthesis) Prepare an expert response to a complex drug information need.

IO Explain standards of care applicable to a specific drug information need.

IO Explain a standardized process for documenting, storing, and retrieving drug information responses.

R4.1 Provide effective education and training to health care professionals and health care professionals in training.

OBJ R4.1.1 (Synthesis) Use effective educational techniques in the design of an educational/training activity.

IO Identify emerging issues in pharmacotherapy suitable for interdisciplinary educational sessions.

IO Explain the differences in effective educational strategies and appropriate content when teaching colleagues, residents, students, and health professionals in other disciplines.

IO Explain the concept of learning styles and its influence on the design of
IO Write appropriately worded educational objectives.

IO Explain how different instructional delivery systems (e.g., demonstration, written materials, video) foster different types of learning.

IO Explain effective teaching approaches for the various types of learning (e.g., imparting information, teaching psychomotor skills, inculcation of new attitudes).

OBJ R4.1.2 (Synthesis) Design an assessment strategy that appropriately measures the specified objectives for education or training and fits the learning situation.

IO Explain appropriate assessment techniques for assessing the learning outcomes of educational or training programs.

OBJ R4.1.3 (Application) Use skill in the four preceptor roles employed in practice-based teaching (direct instruction, modeling, coaching, and facilitation).¹

IO Explain the stages of learning that are associated with each of the preceptor roles.

OBJ R4.1.4 (Application) Use skill in case-based teaching.

IO Explain how to select or create a case that is suitable for teaching the goal concepts and decision-making skills.

IO Explain the importance of identifying the key teaching points for a case before attempting to construct it.

IO Explain factors to consider when deciding the patient data to present in a case.

OBJ R4.1.5 (Application) Use public speaking skills to speak effectively to a large group.

IO Explain techniques that can be used to enhance audience interest.

IO Explain techniques that can be used to enhance audience understanding of one’s topic.

IO Explain speaker habits that distract the audience.

OBJ R4.1.6 (Application) Use public speaking skills to speak effectively in a small group.

E2.1 Identify opportunities for improvement of the safety of aspects of the organization’s medication-use system.

OBJ E2.1.1 (Evaluation) Contribute to the organization’s evaluation of and response to a medication-related event.

OBJ E2.1.2 (Comprehension) Explain the pharmacotherapy specialist’s role in the development of emergency protocols for public health disasters (e.g., natural disaster, bioterrorism, epidemic).

## Activities:

<table>
<thead>
<tr>
<th>Activities</th>
<th>Goals:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Attend daily 8AM meeting w/nurses</td>
<td>R1.1</td>
</tr>
<tr>
<td>• Participate in patient care active at the Northeast Clinic from 8 a.m. to 5 p.m. daily, Monday through Friday.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>• PGY2- will have a preceptor / mentor in the room with them for at least the first week of the rotation to allow for role modeling and timely feedback</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>Week 1 – Observation and training in anticoagulation clinic with pharmacist preceptor and shadowing at least 2 half days with anticoagulation nurse.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>- Training with lab supervisor POC testing technique.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>- Interviewing and counseling and documentation of visit on at least 4 patients per day by end of week.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>- Performing point-of-care (POC) testing on at least 4 patients by end of week</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>Week 2 - Interviewing and counseling and documentation of visit on all patients per day on anticoagulation.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
</tr>
<tr>
<td>- Performing point-of-care (POC) testing on all patients per day by end of week</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>- Completion of at least 15 pharmacist consultations per day.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>- Depending on the residents’ skill level and duration in the residency program, they may transition to seeing patients independently when the preceptor and resident are comfortable with this decision.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>Week 3 and on - Independently interviewing and counseling and documentation of visit on all anticoagulation patients as well as doing POC testing on all patients.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>- Completion of all daily pharmacist consultations per day, independently, but with preceptor available upon request.</td>
<td>R1.1, R2.1, R2.2, R2.3, R2.4, R2.6, R2.7, R2.8, R2.9, R2.10, R2.11</td>
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<tr>
<td>• Review electronic medical record for identified patients prior to patient appointments, reviewing prior medical history, anticoagulant doses, prior notes regarding anticoagulation, and INR (or other pertinent lab values relating to anticoagulation)</td>
<td>R2.2, R2.4</td>
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<tr>
<td>• Conduct patient medication histories and counsel patients about their medications as appropriate</td>
<td>R2.4, R2.9, R2.12</td>
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<tr>
<td>• Answer drug information requests from physicians and allied health professionals</td>
<td>R2.1, R3.1</td>
</tr>
<tr>
<td>• Evaluate/monitor drug therapy and recommend changes when necessary</td>
<td>R2.8, R2.10</td>
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<tr>
<td>• Report and document adverse drug reactions</td>
<td>R2.1</td>
</tr>
<tr>
<td>• Meet with the rotation preceptor 3-4 times/wk to discuss patients and to review weekly drug therapy topics</td>
<td>R2.6, R2.7, R2.8, R2.10</td>
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<tr>
<td>• Complete all readings assigned by the preceptor</td>
<td>R1.1</td>
</tr>
<tr>
<td>• Document activities in MICS Last Word &amp; Synthesis.</td>
<td>R2.13</td>
</tr>
<tr>
<td>• Present at least one 30–minutes inservice to the physicians and allied health professionals and/or pharmacists will be in final week of rotation</td>
<td>R4.1</td>
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</tbody>
</table>

## Preceptor Interaction:

- **Student-** Follow with the rotation preceptor daily to discuss patients.
- **PGY1-** Meet with rotation preceptor daily through first two weeks to discuss patients and then at least once weekly in person and verbally daily.
- **PGY2-** Meet with rotation preceptor daily during first week and then at least once weekly in person and verbally daily to review patients.

## Evaluation Strategy

ResiTrak will be used for documentation of formal evaluations. For evaluations, resident and preceptor will complete the evaluations separately. Prior to signing the evaluation, the preceptor and the resident will compare...
and discuss the evaluations. This discussion will provide feedback for both the resident and preceptor on their performance.

<table>
<thead>
<tr>
<th>What type of evaluation</th>
<th>Who</th>
<th>When</th>
</tr>
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<tbody>
<tr>
<td>Mid-point Evaluation</td>
<td>Preceptor, Resident</td>
<td>Middle of learning experience</td>
</tr>
<tr>
<td>Summative</td>
<td>Preceptor, Resident</td>
<td>End of learning experience</td>
</tr>
<tr>
<td>Summative Self-evaluation</td>
<td>Resident</td>
<td>End of learning experience</td>
</tr>
<tr>
<td>Preceptor, Learning Experience Evaluation</td>
<td>Resident</td>
<td>End of learning experience</td>
</tr>
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</table>