LONGITUDINAL AMBULATORY CARE EXPERIENCE (LACE)

Student Handbook
Longitudinal Ambulatory Care Experience - (LACE)
Student Handbook Acknowledgement and Consent

I, ________________________________, received my copy of the LACE Student Handbook. It is my responsibility to read and understand the policies and procedures set forth in this manual. It is a guide to policies and procedures for the Longitudinal Ambulatory Care Experience (LACE) as an integral part of my education at the UC Riverside School of Medicine.

I understand and acknowledge that the LACE Program has the right to modify or amend policies, practices, assignments, forms, and other institutional guidelines within the limits of the LACE Program. I acknowledge that changes will be communicated to me via UCR email. It is my responsibility to be aware of and review the changes.

Student Name (Print): ________________________________
Student Signature: ________________________________
Date of Signature: ________________________________
## II. LACE Program Staff

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III. LACE Overview

Mission Statement

The mission of the Longitudinal Ambulatory Care Experience (LACE) at UC Riverside School of Medicine is to develop innovative community-based physician leaders and advocates for the Inland Empire through applied clinical reasoning and professional identity formation. Our future physicians will have extensive knowledge of the provision of population health, preventive care, and chronic disease management in a team-based, primary care home model.

Structure & Function

The foundation of the Longitudinal Ambulatory Care Experience (LACE) program is a progressive three-year ambulatory clinical experience that emphasizes core clinical attributes with a focus on professional identity formation.
- LACE is a required and graded component of the UC Riverside School of Medicine curriculum.
- The primary care clerkship site provides hands-on clinical experience through the first three years, creating a link between classroom learning and the real-time application of that knowledge.
- The professional development is based on formative feedback through a sustained mentor-mentee relationship with community-based primary care physicians.
- The collective curriculum acts as a bridge between pre-clinical and clinical content with an emphasis on reflection on metacognition and clinical reasoning.
- The longitudinal clerkship activities are integrated with coursework in four threads: Public Health & Advocacy, Clinical Reasoning, Biostatistics/Epidemiology, and Practice Improvement.

Longitudinal Ambulatory Care Experience

- Primary Care Clerkship Site
- Public Health & Social Medicine
- Clinical Reasoning
- Practice Improvement
- Biostatistics & Epidemiology
IV. LACE Learning Objectives / Deliverables

To ensure our students receive a consistent and equivalent learning experience across clerkship sites, we provide specific learning objectives (Deliverables) to be reviewed at each LACE session (Appendix A).

Deliverables reflect the practical application of student coursework in Clinical Skills, Doctoring, and each of the LACE Threads (Clinical Reasoning, Public Health, Biostatistics/Epidemiology, Practice Improvement). These Deliverables will be performed at the primary care clerkship site under the LACE preceptor’s supervision.

- A guide for timeline of completion of Deliverables is included in Appendix A; each LACE Preceptor may use their discretion to alter the order of any Deliverable to better align with their specific clinic experience.
- Students are expected to review the Deliverables with their LACE Preceptor at the start of each LACE session
- Students will log Deliverables as “Required Clinical Encounters” via the MedHub Portal – see Section 6 for more details

The students will also complete clinical documentation as part of their Deliverables, in the form of Patient Care Notes: SOAP (Subjective, Objective, Assessment, and Plan) notes or H&Ps (History & Physical) notes.

- The history and physical exam documentations are based on the UCR Standard History and Physical template as instructed in Doctoring and Clinical Skills courses.
- The student should review the de-identified SOAP note for accuracy and content with their LACE preceptor, after which the student will submit a copy of the note (via Canvas) to the LACE Coordinator for review by faculty.

Expectations for the clinical content of the student Deliverables fall into three core categories:

1. Preventive health and wellness - includes screening for social determinants of health, identification of risk factors of disease, promotion of health and wellness practices, and implementation of screening evaluations (primary, secondary, and tertiary prevention).
2. Undifferentiated disease process - symptom-driven care (i.e., shortness of breath). Although the specific symptoms and/or differential diagnosis may vary by practice type, the fundamental clinical reasoning approach to assessment is shared.
3. Chronic disease management - diagnosis-driven care (i.e., diabetes or hypertension). Includes population health management of chronic diseases and coordination of care with community-based resources.
V. LACE Student Responsibilities & Requirements

(a) Lectures and Educational Responsibilities

Students are expected to attend all LACE Lectures (Public Health, Clinical Reasoning, Biostatistics & Epidemiology, and Practice Improvement workshops). These lectures are a fundamental part of the core medical school curriculum. Please refer to each individual LACE Thread syllabus to review learning objectives, required readings, and course schedules.

- The official schedule is available on the UCR SOM Intranet. It is the student’s responsibility to check their individual schedule and access e-mail daily for any changes.
- Student attendance at the annual Quality Improvement Conference (QIC) is mandatory. Please refer to the “LACE Practice Improvement” section of this handbook for further details on conference participation requirements.

(b) Primary Care Clerkship Site

General: Students will be assigned a LACE site and physician in primary care (Family Medicine, Internal Medicine, Pediatrics). This physician will serve as your assigned LACE preceptor and mentor for the entire three-year program. These mentors will provide:

1. Oversight of clinical development and application of clinical reasoning
2. Implementation of an individualized clinical education plan based on deliverables
3. Professional identity development and career guidance

- Due to limited availability of sites, requests to change LACE preceptors or sites will be considered based on multiple factors and granted only in extenuating circumstances.
- Additionally, a student’s personal primary care physician may never serve as their LACE preceptor.

Schedule:
- LACE 1: 16 total half-days - every other week (Tuesday PM, Wednesday PM, or Thursday PM)
- LACE 2: 16 total half-days - every other week (Tuesday PM, Wednesday PM, or Thursday PM)
- LACE 3: 42 total half-days – every week (Monday-Friday, AM or PM).

NOTE: The selected date is dependent on the availability of the LACE Preceptor.
- Wellness Days: Students that are scheduled for LACE on their Wellness Days are asked to re-schedule with their LACE Preceptors for an alternate half-day during that week.
- Clerkship Didactics: Students that are scheduled for LACE that conflicts with LACE 3 Clerkship Didactics are asked to re-schedule with their LACE Preceptors for an alternate half-day during that rotation.

Attendance: Our students are required to attend all assigned LACE sessions with an expectation of at least 3.5 hours per session.
- **Absence:** In the event a student is unable to attend their assigned LACE half-day due to illness/emergency, the student must contact their LACE Preceptor and our LACE coordinator to inform the cause for the absence. Students will be required to attend clinic another make-up day (pending availability of their LACE Preceptor).
- Similarly, if a LACE Preceptor is unavailable for a scheduled LACE session for any reason, the students must notify our LACE Coordinator and complete a supplemental assignment for that week. We ask students to contact their LACE Preceptor prior to their assigned half-day, to verify that their LACE Preceptor is available that week.
- For students who are unable to attend their LACE site due to clinic closure/delay, **weekly supplemental assignments** are to be completed and submitted before the end of their LACE week. The main reasons for delays at the site may include: the preceptor being out of office (vacation/sick), delays due to office availability (COVID pandemic), onboarding/registration issues.

(c) **Helpful Tips for LACE Clerkship Half-Days**

While each LACE Preceptor undergoes standardized orientation on expectations and educational objectives, there are strategies that the student can employ during their LACE session to optimize their experience:

**Review Deliverables:** Meet with your LACE Preceptor at the start of each session to review Deliverables and determine the best patients to be seen for deliberate practice.

**Selective Patients:** For LACE 1 and LACE 2, dedicate a select number of patients per half-day for deliberate practice; an active student does not need to observe every patient encounter to have a meaningful learning experience.

**Direct Observation:** Ask to practice clinical skills (history, physical) under direct of your LACE Preceptor observation for immediate feedback.

**Repetition is Key:** The timeline of the Deliverables is merely a guide; feel comfortable repeating skills across multiple sessions.

**Regular Feedback:** Meet regularly with your LACE Preceptor to identify areas for reflection and improvement on a consistent basis.

**Ask For Rationale:** Talk through clinical decision-making points with your LACE Preceptor to gain valuable insight into their thought process.

**Admit What You Don’t Know:** Recognize your limits and engage in self-directed learning using various medical reference resources.

**Promote a “Growth” Mindset:** Discuss your own journey as a medical student and reflect on the struggles and triumphs of your LACE Preceptor on their journey.
The success of the student in achieving the educational objectives during their longitudinal clerkship experience depends on several factors, including:

- **DO**: Show up on time, ask for opportunities to participate, practice writing notes (on paper or in EHR), engage all clinic staff members in professional manner.
- **DO**: Read pertinent clinical topics between patients, brainstorm for Practice Improvement Project (PIP) between patients, identify community resources for patients.
- **DO NOT**: Provide direct unsupervised care to the patient; all patients are the full responsibility of the LACE preceptor and must be seen and examined by the physician.
- **DO NOT**: Perform or assist in invasive procedures beyond your level of training (venipuncture, biopsies, intra-articular injections/aspirations).

**(d) Sample LACE Clerkship Half-Day**

1:30 – 1:40pm: Student meets with LACE Preceptor to review Deliverables for session and identify patients for deliberate practice

1:40 – 4:30pm: Student participates in deliberate practice with selected patients with direct feedback from LACE Preceptor. Between patient visits, students may practice documentation (SOAP, H&Ps), self-directed reading on pertinent case topics, perform chart review, work on Practice Improvement Project (PIP)

4:30-5:00pm: Student participates in conscious reflection on learning points from the session, while exploring the thought-process and clinical reasoning and judgment of the LACE Preceptor. LACE Preceptor provides feedback and guidance on further readings.
V. LACE Threads - Curriculum

LACE Clinical Reasoning

LACE Clinical Reasoning is a three-year interactive workshop series focused on (1) integrated clinical decision-making and (2) professional identity formation through reflective writing. Students will use an informal and brief writing protocol to externalize thoughts and analyze their own thinking though a process known as “metacognition.” This conscious reflection is a critical step as students participate in socialization and enter the community of practice.

The LACE Clinical Reasoning thread will explore factors that influence clinical decision-making: evidence-based medicine, population health, applied biostatistics, shared decision-making, patient perspectives, and heuristics and cognitive errors. Students will apply these learned methodologies with their LACE Preceptors during their longitudinal clerkship.

Please refer to the LACE Clinical Reasoning Course Syllabus for further details.

LACE Public Health & Social Medicine

The LACE Public Health core curriculum titled ‘Public Health and Social Medicine: A Focus on Disparities’ is vital to exposing students to a variety of foundational health care topics with an integrated focus on community engagement. Topics include health policy, social determinants of health, ethics, structural competency, medical humanities, and preventive medicine. When linked to the LACE Practice Improvement course, this core component of the medical school curriculum equips our future physicians to better understand public health and improve the health of the community.

Please refer to the LACE Public Health Course Syllabus for further details.

LACE Practice Improvement

Practice Improvement is an integral component of the LACE program. During the three-year course, students are expected to complete a Practice Improvement Project (PIP) that serves to help their LACE clerkship site improve the quality of patient care. PIPs may cover a variety of topics, including preventive care, chronic disease management, and complex case systems. The most valuable experience for the student is the natural progression from identifying an area for improvement, to testing potential solutions, to communicating the results and unexpected challenges throughout the project.
- All projects must be approved by the LACE preceptor and the LACE PIP Faculty (UCR SOM Director of Scholarly Activities).
- All research and assignments are the responsibility of the student; the LACE Preceptor is not required to assist the student in research but is expected to support efforts of implementing a study design within their clinic.
- Students can choose to work in groups or alone, but any LACE project must have a related LACE clerkship site that it serves in patient care.

The educational requirements related to the Practice Improvement Project build over the course of three years:

- **LACE 1:** Determine a topic and problem statement (Preceptor Sign-Off Approval)
  - Research and write a Literature Review / Study Design Proposal
  - Attend annual UCR SOM Quality Improvement Education Conference (QIC)
- **LACE 2:** Submit project for IRB review + implement the project (including data collection)
  - Create a poster presentation to present work-in-progress at QIC
- **LACE 3:** Completion of project (including data analysis)
  - Publication level/style write up (Data Analysis & Study Wrap-Up Paper)
  - Create a multi-media oral presentation to present work-in-progress at QIC
- **M4 Year:** Present final multi-media oral presentation at annual QIC

Students will be expected to present the progression or outcome of their work at the annual conference (Quality Improvement Conference) at UC Riverside School of Medicine. This event serves to disseminate innovative practices and efficient processes in healthcare throughout the Inland Empire. The intention is that LACE will accelerate the healthcare improvement process within the greater community to provide higher-quality, more responsive, and more efficient healthcare.

Please refer to the LACE Practice Improvement Course Syllabus for further details.

**LACE Biostatistics & Epidemiology**

The LACE Biostatistics & Epidemiology curriculum introduces basic concepts in biostatistics as they are applied to clinical decision-making and research. The two-year course thread also incorporates population health analysis through an understanding of basic epidemiology. Each topic covered with have overlap with other LACE threads and curriculum.

Please refer to the LACE Biostatistics & Epidemiology Course Syllabus for further details.
VI. Policies & Procedures

(a) Grading Policy for LACE

LACE 1 & 2: The grading scale for LACE 1 and 2 is PASS or FAIL.
Students must complete the assigned number of clinical sessions and required Deliverables within each LACE Thread. Each of the following are required for a passing LACE grade:
- Attendance to all LACE Clerkship half-days (100%)
- Completion of 70% of LACE Deliverables (including Patient Care Notes and Powerwrites)
- Attendance to required LACE activities (including lectures and conferences)
- Completion of Public Health Thread Assignments – see course Syllabus/Rubric
- Completion of Clinical Reasoning Thread Assignments – see course Syllabus/Rubric
- Completion of Practice Improvement Project Assignments – see course Syllabus/Rubric
- Completion of Biostatistics/Epidemiology Assignments – see course Syllabus/Rubric

LACE 3: The grading scale for LACE 3 is HONORS, HIGH PASS, PASS, or FAIL.
Students must complete the assigned number of clinical sessions and required Deliverables within each LACE Thread:
- **LACE Primary Care Site**: attendance for 100% of sessions is required to PASS the thread
- The required Deliverables for LACE 3 include:
  a. **LACE Clinical Reasoning**: submission of monthly reflective writings (Powerwrites) – minimum passing is 70%, with submission of 100% earning HONORS for the thread.
  b. **LACE Practice Improvement**: submission of final paper (graded) and presentation of project at annual “Quality Improvement Conference (QIC).” The minimum passing score for the PIP is 70%; a score of 90% or higher earns HONORS for the thread.

- To achieve **PASS** for LACE 3, students must achieve minimum passing score in each of the LACE Threads (Primary Care Site, Clinical Reasoning, Practice Improvement).
- To achieve **HONORS** for LACE 3, students must achieve HONORS grade in both LACE Clinical Reasoning and LACE Practice Improvement Threads and PASS in LACE Primary Care Site.
- To achieve **HIGH PASS** for LACE 3, students must achieve HONORS grade in one of either LACE Clinical Reasoning and LACE Practice Improvement Threads and PASS in LACE Primary Care Site.
- Failure of any one component of LACE will result in failure of the LACE 3 Course.
(b) LACE Feedback & Evaluations

1. Required Clinical Encounters (LACE 1, 2, 3): To help identify areas for continuous quality improvement of the LACE Clerkship, students are required to log (via MedHub) each Learning Objective / Deliverable as “Required Clinical Encounters” (RCEs – Appendix E).
   - Students are expected to share the list of Deliverables/RCEs with their LACE Preceptor (also in LACE Preceptor Handbook) and ask for their guidance in completing each one.
   - At the annual LACE Mid-Clerkship Assessment (see below), students will identify with their LACE Preceptor the specific RCEs on which to focus before the end of that LACE Clerkship year. An alternate experience is listed for each encounter that is not completed at the LACE site (Appendix E).
   - Students should only list LACE RCEs completed at their LACE Clerkship site, not those completed at other clerkships/rotations.

2. Formative Assessment: Each student will receive formative assessments from their LACE Preceptors, in the form of:
   - **Observed Clinical Encounters** (OCE) – *once in LACE 3 only* – direct observation of part of the student’s clinical performance per year. A specific OCE form will be shared by the student for completion by their LACE Preceptor.

   - **Mid-Clerkship Assessment** – *once per LACE year (December/January)* – a scheduled session between LACE Preceptor and student to include the following:
     a. Review of progress of learning objectives (Deliverables)
     b. Review of Required Clinical Encounter (RCE) patient logs
     c. Discuss the completion or plan for completion of the Observed Clinical Encounter (OCE)
     d. Review of student work hours
     e. Perform meaningful review of clinical performance; students should complete a self-assessment of their performance for review prior to the scheduled meeting
     f. Identify areas of improvement and goals for the remainder of the clerkship year

Two specific forms (**UCR SOM Mid-Clerkship Formative Assessment of Medical Student by Faculty and UCR SOM Student Evaluation of Teaching – Appendix C**) require signatures from both the student and the LACE Preceptor.
(c) Professionalism

The LACE program strives to create an inclusive and supportive environment for all students. The students are encouraged to reach out to the LACE Director and LACE Coordinator regularly with feedback and areas of improvement.

At quarterly intervals during the academic year, the LACE Director will meet with respective Class Representatives to address any concerns. This information will be distributed via scheduled “LACE Check-In” e-mails to each student, including upcoming deadlines for assignments.

It is understood that all students abide by the expectations and guidelines outlined in the LACE Student Handbook. If a student is identified as needing additional assistance in meeting these outlined expectations for any reason (unexcused absences, delayed assignments or evaluations, other concerns related to any component of the LACE program), a meeting will be arranged with the LACE Director prior to referral to the UCR SOM Professionalism Development Committee. Please refer to the UCR SOM Handbook for more information on this process.
Appendix A-1: Learning Objectives for LACE 1

LACE 1 Deliverables

BLOCK ONE

Week 5:
- Observe the process of a medical assistant/nurse in preparing two patients for a visit
- Obtain vital signs on at least two patients during a visit
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable: Onset, Location, Duration, Character, Alleviating/Aggravating factors, Radiation, Timing, Severity)
- With your LACE Preceptor, perform a partial or complete skin exam on at least one patient
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 7:
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable)
- With your LACE Preceptor, perform a partial or complete ENT examination on at least one patient
- With your LACE Preceptor, perform a partial or complete Head, Neck, Lymph Node on at least one patient
- With your LACE Preceptor, obtain a social history using the HEADSSSS method: home status, education, activities/employment, diet, substance use, suicidality/self-image, sexuality, safety.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

BLOCK TWO

Week 1:
- Obtain vital signs on at least one patient during a visit
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable)
- With your LACE Preceptor, obtain a history of cardiac risk factors for at least one patient
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 3:
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable)
- With your LACE Preceptor, obtain a history of cardiac risk factors for at least one patient
- Review an electrocardiogram with your LACE Preceptor – see example (Figure 1)
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning
Week 5:
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable)
- With your LACE Preceptor, perform a partial or complete cardiovascular exam on at least one patient.
- Review an electrocardiogram with your LACE Preceptor – see example (Figure 2)
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 7:
- With your LACE Preceptor, obtain a History of Present Illness for at least one patient (using the OLDCART(S) method as applicable)
- With your LACE Preceptor, obtain a history of tobacco use for at least one patient
- With your LACE Preceptor, perform a partial or complete respiratory exam on at least one patient.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

BLOCK THREE

Week 1:
- Obtain a History of Present Illness for a consenting patient of your LACE Preceptor’s discretion.
- The related medical history may include: past medical history, past surgical history, reproductive/sexual history, medications, allergies, or a pertinent review of systems
- With your LACE Preceptor, perform a complete respiratory exam on at least one patient.
- With your LACE Preceptor, perform a complete cardiovascular exam on at least one patient.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning
- Schedule time to meet with your LACE Preceptor for Mid-Clerkship Year Assessment

Week 3:
- With your LACE Preceptor, obtain a social history for an adolescent patient using the HEADSSS method: home status, education, activities/employment, diet, substance use, suicidality/self-image, sexuality, safety.
- With your LACE Preceptor, perform a partial or complete abdominal exam on at least one patient.
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 3)
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning
Week 5:
- With your LACE Preceptor, observe and assist with a **genitourinary exam** with a consenting patient. If possible, participate in the genitourinary exam with both a male and female patient.
- Obtain a **complete dietary history** (including access/affordability) on a patient, preferably one with a history of pre-diabetes, diabetes, or dyslipidemia.
- Write and submit a **Patient Care Note** (SOAP or Complete H&P note) during a patient encounter (one per Block 3)
- Complete and submit two 10-minute **Powerwrites** for LACE Clinical Reasoning

Week 7:
- With your LACE Preceptor, observe and assist with a **genitourinary exam** with a consenting patient. If possible, participate in the genitourinary exam with both a male and female patient.
- Write and submit a **Patient Care Note** (SOAP or Complete H&P note) during a patient encounter (one per Block 3)
- Complete and submit two 10-minute **Powerwrites** for LACE Clinical Reasoning

**BLOCK FOUR**

Week 1:
- Obtain a **reproductive history** for a consenting patient of your LACE Preceptor’s discretion.
- With your LACE Preceptor, perform a partial or complete **breast examination** on at least one patient.
- Review recommended **screening guidelines** for at least one patient using the [US Preventive Services Task Force (USPSTF) Guidelines](#) 
  - ePSS - Online Tool for USPTSF: read the “Rationale” and “Clinical Considerations” sections for at least two screening recommendations
- Write and submit a **Patient Care Note** (SOAP or Complete H&P note) during a patient encounter (one per Block 4)
- Complete and submit two 10-minute **Powerwrites** for LACE Clinical Reasoning

Week 3:
- With your LACE Preceptor, perform a partial or complete **musculoskeletal exam of the upper extremity** on at least one patient.
- With your LACE Preceptor, review any **radiograph** (chest, abdomen, extremities) – see attached example (Figure 3)
- Write and submit a **Patient Care Note** (SOAP or Complete H&P note) during a patient encounter (one per Block 4)
Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 5:
- With your LACE Preceptor, perform a partial or complete musculoskeletal exam of the lower extremity on at least one patient.
- Screen a patient for intimate partner violence and share your findings with your LACE Preceptor
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 4)
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

BLOCK FIVE

Week 1:
- Obtain a History of Present Illness for a consenting patient of your LACE Preceptor’s discretion.
- With your LACE Preceptor, perform a partial or complete neurologic exam on at least one patient.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 3:
- Obtain a History of Present Illness for a consenting patient of your LACE Preceptor’s discretion.
- With your LACE Preceptor, perform a partial or complete neurologic exam on at least one patient.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning

Week 5:
- Obtain a History of Present Illness for a consenting patient of your LACE Preceptor’s discretion.
- Identify a patient presenting with headache / stress management (Doctoring)
- With your LACE Preceptor, perform a partial or complete ophthalmologic exam on at least one patient.
- With your LACE Preceptor, perform a partial or complete neurologic exam on at least one patient.
- Complete and submit two 10-minute Powerwrites for LACE Clinical Reasoning
Appendix A-2: Learning Objectives for LACE 2

LACE 2 Deliverables

BLOCK SIX

Week 2:
- With your LACE Preceptor, obtain a History of Present Illness using the OLDCART(S) method as applicable: Onset, Location, Duration, Character, Alleviating/Aggravating factors, Radiation, Timing, Severity
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 4:
- Obtain a focused HPI, directed physical exam and provide a differential diagnosis for at least two patient encounters with the supervision and aid of your LACE Preceptor
- With your LACE Preceptor, perform a partial or complete musculoskeletal exam of the upper extremity or lower extremity on at least one patient
- Analyze the results of one hematologic laboratory result obtained from a patient with your LACE Preceptor.
  - Examples to review may be a complete blood count, peripheral smear, electrophoresis, etc.
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 6:
- With your LACE Preceptor, perform a partial or complete musculoskeletal exam of the upper extremity or lower extremity on at least one patient.
- Review age-appropriate preventive screening guidelines (cancer) specific to at least one clinic patient with your LACE Preceptor
- Analyze and interpret the results of one infectious-culture laboratory result obtained to evaluate a patient with your LACE Preceptor.
  - Examples to review: urine dipstick, urine culture, wound culture, sputum culture, etc.
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 8:
- Obtain a focused HPI and directed physical exam for a patient with a potential infectious chief complaint. Review your differential diagnosis with your LACE preceptor.
- With your LACE Preceptor, perform a partial or complete respiratory exam on at least one patient
- With your LACE Preceptor, perform a partial or complete skin exam on at least one patient
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning
BLOCK SEVEN

Week 1:
- With your LACE Preceptor, perform a partial or complete ENT examination and lymph node exam (head, neck) on at least one patient
- With your LACE Preceptor, perform a partial or complete skin exam on at least one patient
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 7)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 3:
- Obtain a complete sexual and reproductive history from either a male or a female patient.
- Review a patient medication list with your LACE preceptor and identify any potential nephrotoxic agents.
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 7)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 5:
- With your LACE Preceptor, perform a partial or complete cardiovascular and respiratory exam.
- Obtain a history of cardiac risk factors for at least one patient
- Review an electrocardiogram with your LACE Preceptor - see attached example (Figure 4)
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 7)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 7:
- With your LACE Preceptor, perform a partial or complete cardiovascular and Respiratory exam.
- Review a chest radiograph with your LACE Preceptor - see attached example (Figure 5)
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 7)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning
BLOCK EIGHT

Week 1:
- With your LACE Preceptor, perform a partial or complete abdominal exam on at least one patient
- Analyze the results of one abdominal and/or pelvic imaging study with your LACE Preceptor.
  - Examples to review: abdominal X-ray (KUB), CT abdomen/pelvis, renal ultrasound, pelvic ultrasound etc. - see attached example (Figure 6)
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 8)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning
- Schedule time to meet with your LACE Preceptor for Mid-Clerkship Year Assessment

Week 3:
- With your LACE Preceptor, perform a partial or complete abdominal exam on at least one patient
- Analyze and interpret the results of one gastrointestinal/hepatology laboratory result or imaging result with your LACE Preceptor.
  - Examples to review: liver function tests, lipase, bilirubin levels, abdominal ultrasound or tomography, etc.
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 8)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 5:
- With your LACE Preceptor, observe and assist with a genitourinary exam with a consenting patient. If possible, participate in the genitourinary exam with both a male and female patient.
- With your LACE Preceptor, discuss advanced care planning with a patient. If applicable, you may assist the patient in completing an Advance Directive:
  - The Conversation Project: https://theconversationproject.org/
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 8)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 7:
- With your LACE Preceptor, observe and assist with a genitourinary exam with a consenting patient. If possible, participate in the Genitourinary exam with both a male and female patient.
- Write and submit a Patient Care Note (SOAP or Complete H&P note) during a patient encounter (one per Block 8)
BLOCK NINE

Week 1:
- With your LACE Preceptor, perform a partial or complete neurologic and ophthalmologic exam on at least one patient.
- Obtain a screening psychiatric history for a patient (including a PHQ-9 score) - see attached example (Figure 7)
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 3:
- With your LACE Preceptor, perform a partial or complete neurologic and ophthalmologic exam on at least one patient.
- Complete a Montreal Cognitive Assessment for a patient with possible cognitive impairment - see attached example (Figure 8)
  - Instructions and patient education: http://www.mocatest.org/
- Practice at least one formal patient presentation with your LACE Preceptor including an expanded differential diagnosis with supporting evidence.
- Complete and submit one 10-minute Powerwrites for LACE Clinical Reasoning

Week 5:
- Practice at least one formal patient presentation with your LACE Preceptor including an expanded differential diagnosis with supporting evidence.
**Figure 1: Electrocardiogram**

![Electrocardiogram Image]


**Figure 2: Electrocardiogram**

![Electrocardiogram Image]

Figure 3: Chest Radiograph


Figure 4: Electrocardiogram

Source: ecg.utah.edu/lesson/3
**Figure 5:** Chest Radiograph

*Source: [www.med-ed.virginia.edu](http://www.med-ed.virginia.edu)*

**Figure 6:** Abdominal radiograph (kidney, ureter, bladder)

Figure 7: Patient Health Questionnaire (PHQ9)

Over the past two weeks, how often have you been bothered by any of the following problems? (For each question, circle the number that represents the best answer.)

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Several days</th>
<th>More than one half of the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Trouble falling asleep or staying asleep, or sleeping too much</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Feeling tired or having little energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Poor appetite or overeating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Trouble concentrating on things such as reading the newspaper or watching television</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Moving or speaking so slowly that other people have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Thoughts that you would be better off dead or of hurting yourself in some way</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

If you have had any of these problems, how difficult have they made it for you to do your work, take care of things at home, or get along with other people?

<table>
<thead>
<tr>
<th></th>
<th>Not difficult at all</th>
<th>Somewhat difficult</th>
<th>Very difficult</th>
<th>Extremely difficult</th>
</tr>
</thead>
</table>

Scoring instructions: The total PHQ-9 score is the sum of the scores for the responses to questions 1 through 9.

Interpreting the score to determine severity of depression:
0 to 4 = no symptoms or minimal symptoms  
5 to 9 = minor symptoms  
10 to 14 = moderate symptoms  
15 to 19 = moderate to severe symptoms  
20 or more = severe symptoms

Previously used criteria for diagnosing depression:
1. Depression diagnosis = symptoms frequency of “more than one half of the days” or “nearly every day” for Question 1 or 2 and
   Five or more of questions 3 through 9 (question 9 counts if answer is “several days” or more often).  
   These criteria have a sensitivity of 73 percent and a specificity of 96 percent for depression.

2. PHQ-9 score ≥ 10. This score has a sensitivity of 88 percent and a specificity of 88 percent for depression.

Source: US Prevent Services Task Force
Figure 8: Montreal Cognitive Assessment
Appendix A-3: Learning Objectives for LACE 3

LACE 3 Deliverables

After completing LACE 3, participating medical students will be able to:

1. Perform and document an appropriate **history and physical examination** on the patient.
2. Interpret **laboratory and imaging studies** with other pertinent data.
3. Provide a comprehensive **assessment and treatment plan** for a patient.
4. Perform **preventive health screening** per recommended specialty guidelines.
5. Outline the basic principles in management of **common outpatient conditions**.
6. Identify the basic management principles of **chronic disease management**.
7. Discuss complete **medication reconciliation** in a patient-centered fashion.
8. Identify and discuss **social determinants of health** that affect patient health outcomes.
9. Recognize and discuss **heuristic error and bias** that influence clinical reasoning.
10. Discuss **advanced care planning** with a patient and/or family.
11. Participate in **informed consent** with patient/family for common outpatient procedures.
12. Discuss **community values** that influence a patient's health and communication style.
13. Analyze and publish results of **quality improvement process**.
14. Communicate effectively with patients and families across diverse socioeconomic and cultural backgrounds.
15. Model and foster the development of desirable **personal and professional attributes**
   (establish rapport and exhibit sensitivity in patient interactions, maintaining professional boundaries with patients and family members, respect diversity, dress and act in a professional manner, and resolve conflict professionally).
16. Accept and incorporate **constructive feedback** to improve clinical reasoning and professionalism.
17. Teach clinical and interpersonal skills to junior peers during and after clinical encounters.
18. Participate in **reflective writing** as part of Professional Identity Formation.
**Thank you for providing a timely and constructive evaluation of your teacher!**

<table>
<thead>
<tr>
<th>Please provide constructive comments about how this teacher can improve:</th>
<th></th>
</tr>
</thead>
</table>
| **1. The amount of contact I had with this teacher was:** | No contact  
Brief, informal contact or discussions, or contact with this teacher as a presenter at one or more group teaching sessions  
Contact through consultations or discussions, or presenter at one or more group teaching sessions  
Classroom/ward/consult/clinic teacher for less than two weeks, and/or frequent group teaching presenter  
Two or more weeks as classroom/ward/consult/clinic teacher  
Two or more weeks as classroom/ward/consult/clinic teacher and/or presenter for students |  |
| **2. On a scale of 1-5, I would rate my experience with this teacher as:** |  |
| Top 20% of teachers  
20th – 40th percentile of teachers  
40th – 60th percentile of teachers  
60th – 80th percentile of teachers  
Top 20% of teachers |  |
| **3. Conveyed expectations to students.** |  |
| **4. Demonstrated interest in teaching and allotted time for it.** |  |
| **5. Encouraged students to formulate and pursue learning goals.** |  |
| **6. Consistently demonstrated how to perform clinical skills.** |  |
| **7. Actively engaged students in discussion.** |  |
| **8. Asked students questions aimed at increasing their understanding.** |  |
| **9. Gave frequent constructive feedback.** |  |
| **10. Showed respect for students.** |  |
| **11. Created a safe learning environment.** |  |
| **12. Served as a role model of a health professional students would like to become.** |  |
| **13. Has this teacher provided health and/or psychiatric/psychological services for you?** | □ Yes, this teacher has provided health and/or psychiatric/psychological services for me. □ No, this teacher has not provided health or psychiatric/psychological services for me. |  |
| **Thank you for providing a timely and constructive evaluation of your teacher!** |  |
| **Please provide constructive narrative comments about how this teacher can improve:** |  |
| **Please provide constructive narrative comments about this teacher’s strengths:** |  |

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**Appendix B: Student Evaluations of Teaching Form**

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Medical students eligible for graduation from the University of California, Riverside School of Medicine will have demonstrated to the faculty their competence in each of the following competency objectives. Thirteen of the competency objectives are derived from the Association of American Medical Colleges’ entrustable professional activities. A novel fourteenth competency objective addresses the UCR School of Medicine’s distinctive mission:

1. Gather a history and perform a physical examination: Obtain a complete and accurate history in an organized fashion that includes seeking secondary sources of information, demonstrates patient-centered interview skills adapted to the individual patient’s needs, demonstrates clinical reasoning and gathering focused information relevant to a patient’s care, and performs a clinically relevant and appropriately thorough physical examination pertinent to the setting and purpose of the patient visit.

2. Prioritize a differential diagnosis following a clinical encounter: Synthesize essential information from previous records, history and physical, and diagnostic evaluations to propose a scientifically supported differential diagnosis that prioritizes and integrates emerging information, then engage and communicate with team members to endorse and verify the working diagnosis that will inform management plans.

3. Recommend and interpret common diagnostic and screening tests: Use patient-specific guidelines to recommend reliable and cost-effective first-line screening and diagnostic tests for health maintenance and common disorders, providing an individual rationale that includes pre-and post-test probability as well as information about the patient (patient’s preferences, demographics and risk factors), discern urgent from non-urgent findings in order to interpret results of basic studies and understand their implications and urgency, and seek help when needed.

4. Enter and discuss orders and prescriptions: Compose organized, efficient and accurate orders that demonstrate an understanding of the patient’s condition and an ability to tailor standard order sets correctly when needed, while recognizing and avoiding errors by attending to patient-specific factors, making effective use of electronic and other resources to ensure safe prescribing and ordering habits, responding appropriately to safety alerts, recognizing own limitations, and seeking help when needed.

5. Document a clinical encounter in the patient record: Prioritize and synthesize information to complete an accurate, timely and cogent narrative (including a problem list, differential diagnosis, plan and other key elements based on the context and purpose of the note) that relies on clinical reasoning, reflects patients’ preferences and identifies key problems, while following documentation requirements that meet regulations and professional expectations.

6. Provide an oral presentation of a clinical encounter: Present personally gathered and verified information in the form of an accurate, concise and well-organized oral presentation that adjusts to the needs of the receiver, synthesizes and prioritizes key information, integrates pertinent positives and negatives to support a hypothesis, acknowledges gaps in knowledge and seeks information to clarify or refine the presentation, and demonstrates respect for the patient’s privacy and autonomy.

7. Form clinical questions and retrieve evidence to advance patient care: Develop a well-formed, focused and pertinent clinical question (“Ask”) that demonstrates skillful use of information technology (“Acquire”); use levels of evidence to thoroughly appraise appropriate sources, content and applicability of the evidence (“Appraise”); apply nuanced findings to individuals and/or patient panels, reflect on process and outcomes; and communicate the findings to the patient and team in a cohesive and organized manner with appropriate checks for audience understanding (“Advise”).
8. **Give or receive a patient handover to transition care responsibility:** Document, update and use an effective handover tool then apply the tool to deliver a structured verbal handover that uses communication strategies to minimize threats to care transitions (transmitter), provides succinct verbal communication that conveys illness severity, situational awareness, action planning and contingency planning (transmitter); and give or elicit feedback about the handover so as to ensure closed-loop communication (transmitter and receiver).

9. **Collaborate as a member of an interprofessional team:** Articulate other team members’ roles and contributions, seek help from other team members to optimize health care delivery, include team members while listening attentively and adjusting communication content and style to align with team member needs; communicate bidirectionally to establish and maintain a climate of mutual respect and integrity; balance personal and professional responsibilities in order to optimize patient care through prioritizing patient’s and team’s needs over personal needs; support and help team members in need; and act in a consultative role to other health professionals.

10. **Recognize a patient requiring urgent or emergent care and initiate evaluation and management:** Describe normal and abnormal vital signs and how they relate to the patient’s decompensation, explain the severity of the patient’s illness and indications for escalating care, initiate interventions and management, initiate and participate in a code response by applying skills in basic and advanced life support, and – upon recognition of a patient’s deterioration, as junior team leader – communicate the situation, clarify patient’s goals of care, and update family members, eliciting feedback from team and family to plan next steps.

11. **Obtain informed consent for tests and/or procedures:** Describe the key elements of informed consent (indications, contraindications, risks, benefits, alternatives, and potential complications of the intervention), communicate bidirectionally and sensitively with the patient and family to ensure that they understand the intervention (while avoiding medical jargon), and display an appropriate balance of confidence and skill to put the patient and family at ease, while practicing shared decision-making, respecting patient autonomy, and seeking timely help when needed.

12. **Perform general procedures of a physician:** Prepare appropriately to perform a procedure, demonstrate technical skills required for the procedure, accurately explain the key aspects of the procedure (anatomy, physiology, indications, contraindications, risks, benefits, alternatives, and potential complications of the procedure), take steps to mitigate complications, communicate skillfully with the patient and family and verify that they understand pre- and post-procedural activities, demonstrate confidence that puts patients and families at ease, and seek timely help as needed.

13. **Identify system failures and contribute to a culture of safety and improvement:** Use a system reporting structure to expediently identify and report both actual and “near miss” errors in care, actively participate in system improvement activities, engage in daily safety habits (e.g., accurate and complete documentation including allergies/adverse reactions, medication reconciliation, patient education, universal precautions, handwashing, isolation protocols, assessment for falls and other risks, standard prophylaxis, and time-outs), admit one’s own errors while reflecting on one’s contribution and setting one’s own goals for learning by developing an individual improvement plan, perform administrative responsibilities commensurate with one’s role and qualifications, and complete a practice improvement project that contributes to the creation, dissemination, application, and translation of new health care knowledge and practices.

14. **Conduct empathic and effective conversations with patients, families and colleagues of diverse backgrounds to promote health equity, social justice and anti-racism:** Communicate bidirectionally with members of all constituent societal groups so as to prioritize fair opportunities for every patient and family member to attain their full health potential (health equity), serve and advocate for patients from all backgrounds by recognizing their common humanity as well as the unique intersectional differences that reflect the various societal groups to which they belong (social justice), and actively identify instances of racial factors affecting treatment of patients within the greater health care system that must be actively addressed for equitable health care outcomes (anti-racism).
Appendix D: Statement on Supporting Abuse-Free Academic Community & Student Conduct Policy

The UCR School of Medicine is committed to establishing and maintaining an environment in which every community member is enabled and encouraged to excel. This will happen only if all of us work in harmony, free of intimidation, exploitation, ridicule, and harassment. We must maintain a productive environment in which no individual is subject to discrimination or abuse. As faculty we must be careful not to abuse our power in dealing with students. As faculty we must be careful to avoid comments that would be viewed as demeaning.

Sexual harassment is a sensitive issue and is illegal within the university setting. The sexual harassment policy of UCR is summarized in the examples below. The complete UCR policy on Sexual Harassment Complaint Resolution is available at http://titleix.ucr.edu/documents/sexualharassmentpolicy.pdf (campus policy number 650-73). It is incumbent upon the faculty not only to rigorously adhere to the UCR policy, but also to be vigilant to the possibility that actions or expressions can be misinterpreted.

Specific behaviors that are not acceptable include:

- Sexual harassment, including unwelcome sexual advances or demands, either verbal or physical.
- Using rejection to such advances as a basis for making academic or personnel decisions affecting an individual.
- Discriminating on the basis of gender, race, ethnicity, religion, sexual orientation, national origin, disability, or any other group characteristic.
- Using power to interfere with the activities of another in a manner that is unrelated or counterproductive to the expectations and requirements of his or her position.
- Creating an environment, through abusive behavior, in which the abilities of individuals to function professionally are negatively affected.

No person shall be subject to reprisal for using or participating either in an informal or formal complaint resolution process. It is incumbent on each and every one of us to support the maintenance of an abuse-free environment.

The UCR School of Medicine is committed to establishing and maintaining an environment in which every community member is enabled and encouraged to excel. This will happen only if all of us work in harmony, free of intimidation, exploitation, ridicule, and harassment. We must maintain a productive environment in which no individual is subject to discrimination or abuse. This statement should be read as consistent and in conjunction with policies relating to harassment and discrimination.
## Appendix E-1: Required Clinical Encounters for LACE 1

<table>
<thead>
<tr>
<th>Encounter Name</th>
<th>Diagnosis/Procedure</th>
<th>Level of Student Responsibility</th>
<th>Clinical Setting</th>
<th>Alternate Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Exam - Vital signs</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 4 (p111-146)</td>
</tr>
<tr>
<td>Physical Exam - Skin</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 6 (p173-214)</td>
</tr>
<tr>
<td>Physical Exam - Head, neck, lymph node</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 7 (p215-302)</td>
</tr>
<tr>
<td>Physical Exam - Ear, nose, throat</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 7 (p215-302)</td>
</tr>
<tr>
<td>Physical Exam - Cardiovascular</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 9 (p343-418)</td>
</tr>
<tr>
<td>Physical Exam - Respiratory</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 8 (p303-342)</td>
</tr>
<tr>
<td>Physical Exam - Abdominal</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 11 (p449-508)</td>
</tr>
<tr>
<td>Physical Exam - Genitourinary (male)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 13 &amp; 14 (p541-606)</td>
</tr>
<tr>
<td>Physical Exam - Genitourinary (female)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 13 &amp; 14 (p541-606)</td>
</tr>
<tr>
<td>Physical Exam - Breast / axillae</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 10 (p419-448)</td>
</tr>
<tr>
<td>Physical Exam - Musculoskeletal (upper extremity)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 16 (p625-710)</td>
</tr>
<tr>
<td>Physical Exam - Musculoskeletal (lower extremity)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 16 (p625-710)</td>
</tr>
<tr>
<td>Physical Exam - Neurological</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 4 (p111-146)</td>
</tr>
<tr>
<td>Physical Exam - Ophthalmologic</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 17 (p711-796)</td>
</tr>
<tr>
<td>History - present illness (OLDCARTS method)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 3 (p65-108)</td>
</tr>
<tr>
<td>History - social assessment (HEADSSS method)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 18 (p799-926)</td>
</tr>
<tr>
<td>History - assessment of cardiac risk factors</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 3 (p65-108)</td>
</tr>
<tr>
<td>History - assessment of tobacco use history</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 3 (p65-108)</td>
</tr>
<tr>
<td>History - screen for social determinants of health (i.e., food security)</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 3 (p65-108)</td>
</tr>
<tr>
<td>Skills - counsel on preventive care for chronic disease</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>Bates' Guide (12e) - Chapter 3 (p65-108)</td>
</tr>
<tr>
<td>Skills - read an electrocardiogram</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>ECG Learning Center - University of Utah: <a href="https://ecg.utah.edu/outline">https://ecg.utah.edu/outline</a></td>
</tr>
<tr>
<td>Skills - read a chest radiograph</td>
<td>Procedure</td>
<td>Observed</td>
<td>Outpatient</td>
<td>MedEd - University of Virginia: <a href="https://www.med-ed.virginia.edu/courses/rad/cxr/objectives.html">https://www.med-ed.virginia.edu/courses/rad/cxr/objectives.html</a></td>
</tr>
</tbody>
</table>
## Appendix E-2: Required Clinical Encounters for LACE 2

<table>
<thead>
<tr>
<th>Encounter Name</th>
<th>Diagnosis/Procedure</th>
<th>Level of Student Responsibility</th>
<th>Clinical Setting</th>
<th>Alternate Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Exam - Head, neck, lymph node</td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - UCSD: <a href="https://meded.ucsd.edu/clinicalmed/head.html">https://meded.ucsd.edu/clinicalmed/head.html</a></td>
</tr>
<tr>
<td>Physical Exam - Ear, nose, throat</td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - UCSD: <a href="https://meded.ucsd.edu/clinicalmed/head.html#Ear">https://meded.ucsd.edu/clinicalmed/head.html#Ear</a></td>
</tr>
<tr>
<td>Physical Exam - Cardiovascular</td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - UCSD: <a href="https://meded.ucsd.edu/clinicalmed/heart.html">https://meded.ucsd.edu/clinicalmed/heart.html</a></td>
</tr>
<tr>
<td>Physical Exam - Skin</td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>Bates’ Guide (12e) - Chapter 6 (p173-214)</td>
</tr>
<tr>
<td><strong>Skills - counseling on smoking cessation</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>AAFP Smoking Cessation: <a href="https://www.aafp.org/afp/2012/0315/p591.html">https://www.aafp.org/afp/2012/0315/p591.html</a></td>
</tr>
<tr>
<td><strong>Skills - screening for cognitive delay (MOCA, MMSE, Mini-Cog)</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MOCA (Veterans Affairs) - <a href="https://www.parkinsons.va.gov/resources/MOCA-Test-English.pdf">https://www.parkinsons.va.gov/resources/MOCA-Test-English.pdf</a></td>
</tr>
<tr>
<td><strong>Skills - counseling on advance care planning</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>NHPCO Tools - <a href="https://www.nhpc.org/patients-and-caregivers/advance-care-planning/">https://www.nhpc.org/patients-and-caregivers/advance-care-planning/</a></td>
</tr>
<tr>
<td><strong>Skills - read and interpret an electrocardiogram</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>ECG Wave Maven - Harvard: <a href="https://ecg.bidmc.harvard.edu/maven/mavenmain.asp">https://ecg.bidmc.harvard.edu/maven/mavenmain.asp</a></td>
</tr>
<tr>
<td><strong>Skills - read and interpret a chest radiograph</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - University of Virginia: <a href="https://www.med-ed.virginia.edu/courses/rad/cr/objectives.html">https://www.med-ed.virginia.edu/courses/rad/cr/objectives.html</a></td>
</tr>
<tr>
<td><strong>Skills - read and interpret abdominal/pelvic imaging study</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - University of Virginia: <a href="https://www.med-ed.virginia.edu/courses/rad/PlainAbdomen/index.htm">https://www.med-ed.virginia.edu/courses/rad/PlainAbdomen/index.htm</a></td>
</tr>
<tr>
<td><strong>Skills - interpret hematologic laboratory values</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>MedEd - Tulane University: <a href="https://acid-base.com/">https://acid-base.com/</a></td>
</tr>
<tr>
<td><strong>Skills - interpret microbiology culture or analysis</strong></td>
<td>Procedure</td>
<td>Performed</td>
<td>Outpatient</td>
<td>NCBI Urine Culture: <a href="https://www.ncbi.nlm.nih.gov/books/NBK557569/">https://www.ncbi.nlm.nih.gov/books/NBK557569/</a></td>
</tr>
</tbody>
</table>
### Appendix E-3: Required Clinical Encounters for LACE 3

<table>
<thead>
<tr>
<th>Encounter Name</th>
<th>Diagnosis/Procedure</th>
<th>Level of Student Responsibility</th>
<th>Clinical Setting</th>
<th>Alternate Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Musculoskeletal issue</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/rheumatology-1">https://onlinemeded.org/spa/cases/rheumatology-1</a></td>
</tr>
<tr>
<td>Congestive heart failure</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/cardiology-2">https://onlinemeded.org/spa/cases/cardiology-2</a></td>
</tr>
<tr>
<td>Coronary artery disease</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cardiology/coronary-artery-disease/acquire">https://onlinemeded.org/spa/cardiology/coronary-artery-disease/acquire</a></td>
</tr>
<tr>
<td>Upper respiratory infection, acute</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/infectious-disease-4">https://onlinemeded.org/spa/cases/infectious-disease-4</a></td>
</tr>
<tr>
<td>Cough / asthma, chronic obstructive</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/pulmonology-6">https://onlinemeded.org/spa/cases/pulmonology-6</a></td>
</tr>
<tr>
<td>Diabetes / insulin resistance</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/endocrine-3">https://onlinemeded.org/spa/cases/endocrine-3</a></td>
</tr>
<tr>
<td>Headache</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Aquifer - Family Medicine 18 - Headache: <a href="https://aquifer.org/courses/aquifer-family-medicine/#case-list">https://aquifer.org/courses/aquifer-family-medicine/#case-list</a></td>
</tr>
<tr>
<td>Hyperlipidemia</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cardiology/cholesterol/acquire">https://onlinemeded.org/spa/cardiology/cholesterol/acquire</a></td>
</tr>
<tr>
<td>Hypertension</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cardiology/hypertension/acquire">https://onlinemeded.org/spa/cardiology/hypertension/acquire</a></td>
</tr>
<tr>
<td>Abdominal Discomfort</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/infectious-disease-7">https://onlinemeded.org/spa/cases/infectious-disease-7</a> or <a href="https://onlinemeded.org/spa/cases/pediatrics-10">https://onlinemeded.org/spa/cases/pediatrics-10</a></td>
</tr>
<tr>
<td>Rash or skin issue</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/rheumatology-2">https://onlinemeded.org/spa/cases/rheumatology-2</a></td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Online MedEd: <a href="https://onlinemeded.org/spa/cases/endocrine-2">https://onlinemeded.org/spa/cases/endocrine-2</a></td>
</tr>
<tr>
<td>Mental health visit (depression, anxiety)</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Aquifer - Family Medicine 05 - Palpitations &amp; 26 - Fatigue - <a href="https://aquifer.org/courses/aquifer-family-medicine/#case-list">https://aquifer.org/courses/aquifer-family-medicine/#case-list</a></td>
</tr>
<tr>
<td>Wellness visit</td>
<td>Diagnosis</td>
<td>Participated</td>
<td>Outpatient</td>
<td>Aquifer - Family Medicine 02 - Wellness Visit: <a href="https://aquifer.org/courses/aquifer-family-medicine/#case-list">https://aquifer.org/courses/aquifer-family-medicine/#case-list</a></td>
</tr>
</tbody>
</table>