Introduction/Background/History: Please include any relevant information that may be helpful for others to understand this initiative.

This initiative titled, Improving the Recognition, Diagnosis, and Referral Patterns of Patients with Systemic Lupus Erythematosus (SLE) Through Enhanced Care Coordination and Practice Efficiencies, is intended to address clinical gaps at the Cedars-Sinai Medical Center associated with the optimal care for patients with SLE. This initiative will include internists, OB/GYNs, pediatricians, and muscular skeletal clinicians who practice within the Cedars-Sinai Medical Group through a systems-based quality improvement process and integrated educational interventions.

The Unmet Need
Systemic lupus erythematosus (SLE) is a serious inflammatory autoimmune disease that, over time, may cause damage to joints and multiple organ systems. SLE primarily affects women of childbearing age (15-44 years), with a mean age of onset of 36.5 years. SLE ranges in severity from mild to severe, and disproportionately affects minority women—the disease is three times more common in African American women than in white women, and also occurs more frequently in women of Hispanic, Asian, and Native American descent. However, SLE may be found in men and women of all ages, from children to the elderly, and across race and ethnic groups.

Called the disease with a thousand faces, SLE manifests itself differently in every individual case. Because of this, it is often difficult to diagnose and the time to diagnosis is variable. In approximately 50% of cases, SLE presents with end organ manifestations where a mean time to diagnosis is three months. The other half of patients present with more non-specific symptoms that usually result in a much longer mean time to diagnosis of two to three years. Many SLE patients have been misdiagnosed for years, as SLE symptoms can mimic other disease symptoms. A positive Antinuclear Antibody (ANA) test can be useful in making the diagnosis of SLE; however, ANA tests are often used inappropriately, particularly in the primary care setting. Guidelines are available to help define the optimal clinical use of ANA tests. These guidelines do emphasize that no tests for autoantibodies should be performed without a clinical evaluation that leads to a presumptive rheumatological diagnosis, including SLE. Another published guideline outlines when to refer a patient with presumed or confirmed SLE to a rheumatologist. Quality/Performance based education can help support adherence to these applicable guidelines and the pull through of best practices surrounding ANA testing and the accompanying clinical evaluation that can and should be done at the primary care level, ultimately leading to more efficient recognition and referral of patients with suspected SLE to a rheumatologist.

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**Initiative Goal:** Please describe the overall goal of this initiative, including the patient population or disease area that this initiative will address.

The goal of this initiative is to have the primary-care focused divisions (in particular, Internal Medicine, OB/GYN, Pediatrics, and muscular skeletal clinicians) improve their efforts to recognize, diagnose, and refer patients with SLE through the appropriate utilization of ANA tests, accompanied by an effective physical examination and a skilled history inventory. Through systems-based educational efforts, the Cedars-Sinai Medical Group can also seek to improve the ‘wait times’ for SLE patients to see a rheumatologist, by improving the overall care coordination for these patients.

Quality/performance based continuing medical education at the primary care level surrounding SLE recognition, diagnosis, and referral (including appropriate utilization of ANA tests) can support over-arching improvements in care coordination and medical group efficiencies at Cedars-Sinai by achieving the following:

- Improve the appropriate use of ANA tests for determining the presence of SLE
- Reduce the overall volume of ANA tests (creating group wide efficiencies)
- Improve primary care’s ability to obtain appropriate patient history and physical examination in relation to SLE diagnosis
- Improve the rate of appropriate referrals to rheumatologists
- Decrease the timing required for patients with SLE to receive appropriate care

**Target Learners:** Please describe the intended participants of this educational initiative, as well as the estimated number of learners.

**Target Learners**
Primary-care focused clinicians within the Cedars-Sinai Medical Group, including:
- Internal Medicine (40 physicians)
- OB/GYN (10 physicians)
- Pediatricians (8 physicians)
- Muscular Skeletal Clinicians (3 Orthopedics)

And other, integrated healthcare professionals who support and impact the process for SLE patient care within the Cedars-Sinai Medical Group including:
- Nurses
- Nurse Practitioners
- Physicians Assistants
- Pharmacists
- Laboratory Professionals
- Quality Assurance Personnel
- Information Technology Staff
Improving the Recognition, Diagnosis, and Referral Patterns of Patients with SLE Through Enhanced Care Coordination and Practice Efficiencies

Assess & document patient history & physical examination in accordance with the ACR criteria for SLE
Appropriately utilize and interpret ANA testing when SLE is suspected
Effectively refer patients to a rheumatologist for SLE confirmation & development of a treatment plan

Launch & Rollout for the Cedars-Sinai Medical Group

Collaborators: Please include a brief description of the role of each collaborator in the initiative.

The Cedars-Sinai Division of Rheumatology and the Office of Continuing Medical Education will engage numerous internal departments, processes, systems, and organizational leaders throughout the implementation of this curriculum, including Cedars-Sinai Medical Group, Cedars-Sinai Laboratory Services, Cedars-Sinai Information Technology System, and Cedars-Sinai Quality Assurance Department. Cedars-Sinai will also engage The France Foundation, an accredited medical education group, to support overall implementation, including the development of a performance improvement CME (PI-CME) online platform.

Educational Design: Please describe how this initiative will be designed, as well as the approximate time span of this initiative.
**Publication Strategy:** Please describe how educational outcomes results from this initiative will be disseminated.

**Dissemination of Results**

Cedars-Sinai acknowledges the value of reporting educational outcomes to the broader community of continuing education and beyond. To this end, we will formulate a plan to disseminate and publish our outcomes reporting through various, established channels. These include:

- Live presentations at relevant meetings
- Formal publications of final outcomes analysis in relevant primary care and rheumatology journals and among the continuing medical education community, the collaborative will seek publication within *JCEHP* (*The Journal of Continuing Education in the Health Professions*).
<table>
<thead>
<tr>
<th>Educational/Quality/Professional Practice Gaps</th>
<th>Strategies Used to Identify Gaps (eg, peer-reviewed published data, national consensus sources for clinical performance/quality measures, chart audit/EHR data, medical claims data, etc)</th>
<th>Learning Objectives</th>
<th>ABMS MOC Process (Part I-IV) and/or Core Competencies Addressed (eg, IOM, ACGME, ABMS)</th>
<th>Educational Outcomes/Measures (Please include Moore Level¹ when appropriate)</th>
<th>Strategies Used to Measure Outcomes (eg, direct and objective performance assessments, chart audits, medical claims data, EHR data, disease screening audits, patient surveys, etc)</th>
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<tbody>
<tr>
<td>Referring physicians often do not recognize the signs and symptoms of SLE, causing delays in diagnosis that may result in irreversible end-organ damage</td>
<td>Peer reviewed published data and guidelines</td>
<td>Assess and document an appropriate patient history and physical examination in accordance with the ACR criteria for classification of SLE</td>
<td>• Patient Care (ACGME) • Medical Knowledge (ACGME) • Practice-Based Learning and Improvement (ACGME) • Interpersonal and Communication Skills (ACGME)</td>
<td>Assessment and documentation of history and clinical findings for the 10 ACR criteria for SLE (excludes ANA results criteria – as handled below)*</td>
<td>Establish knowledge, competence, and performance questionnaires for clinicians • Patient Chart Reviews</td>
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<tr>
<td>Referring physicians often order or interpret ANA testing inappropriately, contributing to false diagnosis or delayed confirmation of SLE</td>
<td>Peer reviewed published data and guidelines Focus group &amp; direct observation</td>
<td>Utilize ANA testing appropriately for suspected SLE, based upon relevant clinical criteria Demonstrate how to effectively interpret ANA test results in relation to SLE</td>
<td>• Systems-Based Practice (ACGME) • Provide Patient-Centered Care (IOM) • Work In Interdisciplinary Teams (IOM) • Employ Evidence Based Practice (IOM)</td>
<td>Number of ANA tests performed* Clinical criteria met for ordering ANA tests* Appropriate interpretation of ANA test results by ordering clinician*</td>
<td>ANA Laboratory Data Garnered through Cedars-Sinai Laboratory • Patient Chart Reviews</td>
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<tr>
<td>Primary care and other physicians often inappropriately or unnecessarily refer patients with suspected SLE to a rheumatologist, contributing to the suboptimal care for those patients with confirmed SLE</td>
<td>Peer reviewed published data and guidelines Focus group &amp; direct observation</td>
<td>Appropriately refer patients with a presumptive diagnosis of SLE to a rheumatologist for confirmation and development of a treatment plan</td>
<td>• Apply Quality Improvement (IOM) • Utilize Informatics (IOM)</td>
<td>Number of referrals to a rheumatologist (overall)* Number of appropriate referrals to a rheumatologist, based upon established criteria* Number of patients diagnosed with SLE* Wait times for new rheumatology consult (routine non-urgent)*</td>
<td>Engagement of Cedars-Sinai Information Systems to Garner Benchmark Data and Track Performance Improvements for Rheumatology Referrals, Wait Times, etc. • Patient Surveys</td>
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*All educational outcome measures relate to levels 5 and 6 of Moore’s framework for CME outcome evaluation.