A Multifaceted Approach to Test Overutilization in Rheumatology

Saloni Goyal DO, Yasin Kanakrieh DO, Marie O'Brien DO, Amy Slenker MD, Kathryn Zaffiri MPH, James Ross MD
Lehigh Valley Health Network, Allentown, PA

Introduction

- LHVN offers three ANA lab panels including: ANA Alone, ANA with Reflex with ANA ≥ 1:80 reflexed by adding serologic testing, and Comprehensive ANA which includes ANA and at the same time serologic testing. The additional serologic test panel includes Sjogren's antibodies, dsDNA, RNP, Smith, and SCL 70.

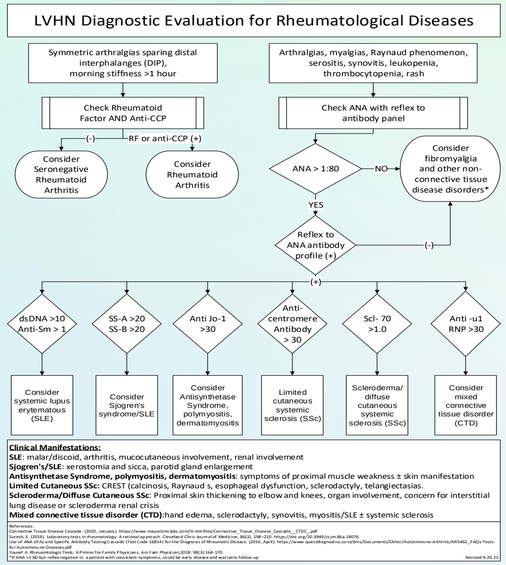

Figure 1: This pathway delineates the step-wise approach of tests to order when suspecting a rheumatological disorder. This chart was incorporated into the EMR to provide guidance.

Methods

- Review of inpatient EMR records found a high frequency of Comprehensive ANA test results with a negative ANA. An education pathway was created that delineated an approach of tests to order starting with ANA with Reflex when suspecting a rheumatological disorder (Figure 1). Education was directed towards departments inappropriately ordering more Comprehensive ANA's: neurology, orthopedics, family medicine and internal medicine. Subsequent data review demonstrated no change in the percentage each of the ANA panel orders. This led to LVHN Test Utilization Committee's approval for removal of the Comprehensive ANA order from the inpatient EMR for all specialties except rheumatology.

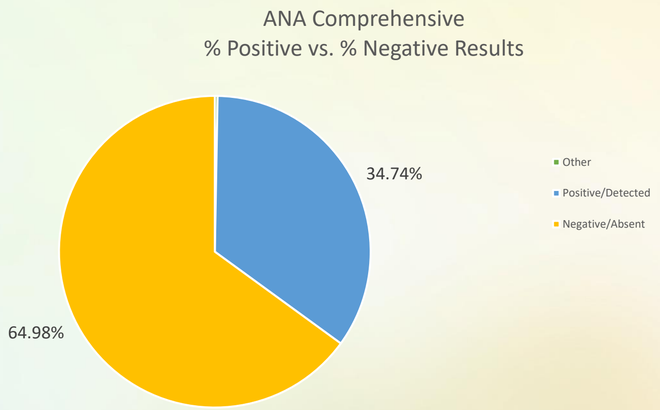

Figure 2: Upon review of the total comprehensive ANA ordered the in 2020 and 2021 fiscal year, 64.98% of these tests were negative. These unnecessary tests were the target of this project.

Results

- The EMR intervention of removing the inpatient Comprehensive ANA resulted in a decrease in the Comprehensive ANA testing with an associated increase in ANA with Reflex. The ANA with reflex became the predominant test consisting of 96 % of all ANA tests ordered (Figure 3). A small number of Comprehensive ANA panels were ordered by rheumatology.

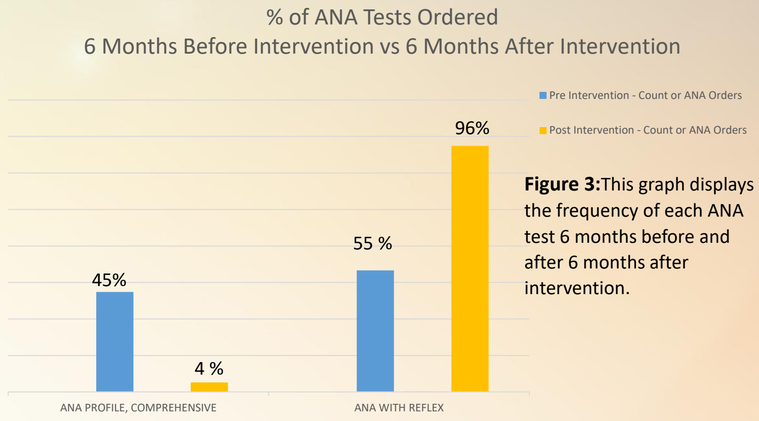

Figure 3: This graph displays the frequency of each ANA test 6 months before and after 6 months after intervention.

Discussion

- This project targeted test overutilization with provider education and removal of comprehensive ANA from the EMR. We estimated this inpatient intervention has saved the healthcare system $18,804 over 6 months. This multidisciplinary approach can be replicated in healthcare systems across the country to reduce cost burden as well as anxiety amongst providers and patients.

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