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IMPROVING THE QUALITY OF CARE IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) THROUGH TIME-STRUCTURED, INFORMATION TECHNOLOGY-ENHANCED, QUALITY IMPROVEMENT INDICATOR-DRIVEN PATIENT MANAGEMENT.

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Background and Aims:
Gaps exist in SLE patient care at Ochsner Health System (Ochsner) related to both A) monitoring and management of comorbidities and treatment-related toxicities and, B) monitoring and management of disease activity. The uncovered gaps suggested a lack of well-defined systems of care in SLE within Ochsner that lead to a "looser" overall management of SLE patients than is optimal. Our hypothesis was that a more time-structured, IT-enhanced, and QI indicator-driven approach to SLE patient management would translate into a more frequent, more comprehensive, and guideline-adherent interaction with the patient (i.e. "tighter" management). This "tighter" management, we hypothesized, would manifest as improved patient outcomes.

Methods:
In order to prompt "tighter" management, we implemented the following interventional modalities:
1. Lupus Management Module: An SLE-specific management dashboard programmatically embedded into the Epic EHR system in use at Ochsner. The dashboard incorporates SLE-management-specific reminders, alerts, historical test result tracking, and customized assessment (SLEDAI, SLICC) programming.

2. Patient Campaigning: Identification of patients who are due for various SLE-specific testing or management activities and proactive contact in order to prompt an office visit.

Results:
We demonstrated a "tighter" management of SLE patients through statistically significant improvement in the rate of key SLE management behaviors (95% CI).

Physician-Behavioral Metrics		1/1/2015 to 6/31/2015	1/1/2016 to 6/31/2016	Z-Test for Proportions (Independent Groups)
Metric 1	Rate of SLE patients having office visits at least 1x/6 months.	42.0%	48.7%	Statistically Significant Difference 95% confidence (p = .0318)
Metric 2	Rate of SLEDAI application at least 1x/6 months.	13.8%	18.7%	Statistically Significant Difference 95% confidence (p = .0341)
Metric 3	Rate of administration of influenza vaccination in the last 12 months.	13.9%	18.0%	Statistically Significant Difference 90% confidence (p = .0740)
Metric 4	Rate of administration of pneumococcal vaccination (ever)	30.4%	31.5%	Not Statistically Significant
Metric 5	Rate of patients with prednisone dose > 7.5 mg/day.	11.5%	7.4%	Statistically Significant Difference 95% confidence (p = .0254)

"Tighter" management, in turn, prompted statistically significant improvement in hospitalization (85% CI).

Patient Outcomes Metrics		1/1/2015 to 6/31/2015	1/1/2016 to 6/31/2016	Z-Test for Proportions (Independent Groups)
Metric 6	Rate of hospitalization among all lupus patients	5.9%	3.7%	Statistically Significant Difference 85% confidence (p = .1006)

Conclusions:
Time-structured, IT-enhanced, and QI indicator-driven interventional modalities prompted a more frequent, more comprehensive, and guideline-adherent point of care interaction with SLE patients (i.e. "tighter" management). "Tighter" management manifested as improved patient outcomes in the form of a diminished rate of hospitalization among SLE patients.