Improving Documentation for Childhood-Onset Systemic Lupus Erythematosus Using a Standardized Health Surveillance Bundle: An EHR-Based Ambulatory Intervention

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BACKGROUND

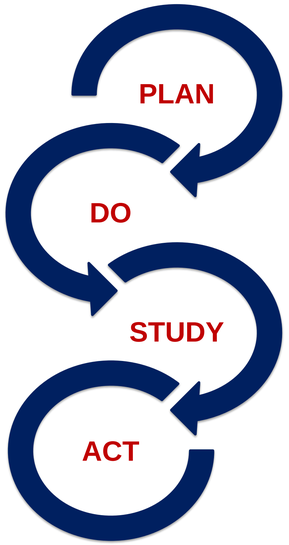
Childhood-onset systemic lupus erythematosus (cSLE) is a chronic, autoimmune disease with multiorgan involvement that is associated with sizeable morbidity and mortality. Thorough documentation of clinical manifestations and laboratory values including autoantibody burden is crucial in these patients, particularly for monitoring response to treatments as well as to facilitate clinically meaningful research. Recommendations for comprehensive cSLE care were published in 2011 but a standardized workflow for documentation of quality metrics at our institution is limited.

PURPOSE

Through this quality improvement initiative, we aim to standardize and improve documentation practices by implementing a health surveillance bundle which is an EHR smart phrase and includes all recommendations for cSLE disease management. We anticipate greater ease in quality metric documentation with the health surveillance bundle and enhanced provider adherence to national benchmarks. **Within a 12-month period, we plan to attain 75% utilization rate of the EHR smart phrase (surveillance bundle).**

METHODS

- Inclusion criteria:
  - Established patients ≥ 2 to < 25 years old
  - Diagnosis of childhood-onset systemic lupus erythematosus
  - Evaluated at the main campus rheumatology clinic at TCH
- Two plan-do-study-act (PDSA) cycles were performed over a 15-month period.
- Chart review was repeated over a 1-month period following PDSA cycle 1 and a 4- month period following PDSA cycle 2 for each provider in our main clinic.
- All providers were asked to complete a survey regarding documentation barriers at the close of PDSA cycle 2.
- A focus group discussion was led to identify barriers to successful utilization of smart phrase in documentation.



PLAN

- Initial provider surveys were completed to review:
  - Existing documentation practices
  - Adherence to current quality metrics
  - Willingness to adopt a health surveillance bundle for documentation

DO

- Baseline documentation data were assessed through retrospective chart review of all eligible patients
- Using the initial provider survey results, an EHR smart phrase was designed (bundle)
- The smart phrase included consensus driven quality metrics

STUDY

- Analysis of pre- and post- smart phrase results was completed
- Barriers to use smart phrase were assessed

ACT

- Implemented effective and sustainable measures to ensure utilization of the smart phrase
  - Quarterly verbal reminders and education to all providers.

TCH Rheumatology SLE Health Surveillance Bundle

Routine Laboratory Surveillance (every 3-4 months)

Labs	Obtained today or in the last 3-4 months?
CBC	{YES/NO:304050349}
CMP	{YES/NO:304050349}
UA/Urine protein/creatinine	{YES/NO:304050349}
Urine HCG (females only)	{YES/NO:304050349}
Optional Labs	
C3/C4	{YES/NO:304050349}
Immunoglobulins	{YES/NO:304050349}
ESR/CRP/DDimer	{YES/NO:304050349}
Anti-NDNA (ds DNA)	{YES/NO:304050349}

Routine Laboratory Surveillance (at least once yearly)

Labs	Last Date Obtained
APLs	***
ANA profile	***
Vitamin D	***
Lipid Panel	***
TSH/FT4	***

Overall Health Surveillance Items

Item	Has this been addressed within the last 12 months?
Weight Management	{YES/NO:304050349}
Exercise Regimen	{YES/NO:304050349}
Contraception/teratogen risk (females only)	{YES/NO:304050349}
Sunscreen use	{YES/NO:304050349}
Vitamin D and calcium supplementation	{YES/NO:304050349}
Flu vaccine	{YES/NO:304050349}
PCV13 and PPSV 23 status	{YES/NO:304050349}
School modification form	{YES/NO:304050349}
Mental Health/Stress Management/Sleep Hygiene	{YES/NO:304050349}
Ophthalmology Visit	{YES/NO:304050349}
Pulmonary Function Test	{YES/NO:304050349}
ECHO	{YES/NO:304050349}

RESULTS

- Pre-intervention, review of 20 cSLE charts showed no standardized method for documentation of quality metrics. The baseline rate of quality metric documentation was 10%.
- Initial provider surveys demonstrated a need for standardized documentation practices as the main barrier for documentation included lack of time.
- Following the introduction of the smart phrase (Intervention 1), utilization increased to 40% (PDSA cycle 1).
- Following implementation of reminders and provider education (Intervention 2), utilization subsequently decreased to 26% (n=220 charts reviewed; PDSA cycle 2).
- Fellows had higher documentation rates compared to attending physicians during PDSA cycle 2 (96% vs. 11%; p<0.0001).
- Post-intervention survey results revealed a need for standardized documentation practices but major barriers to documentation included lack of time and forgetfulness, ultimately leading to decreased utilization of the smart phrase in PDSA cycle 2.

CONCLUSION

- This quality improvement initiative demonstrated that there is a need for standardized documentation practices for cSLE patients in our institution.
- The major barriers are lack of time and forgetfulness.
- We plan to address these barriers in PDSA cycles 3-5 with monthly focus groups, quarterly education, and weekly reminders.

REFERENCES

Available upon request