Tracking and identifying barriers to Hydroxychloroquine use in Pediatric Patients with Systemic Lupus Erythematosus (SLE).

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Introduction

- Hydroxychloroquine (HCQ) has many benefits for patients with Systemic Lupus Erythematosus (SLE), including treating symptoms such as arthralgias, fever, fatigue, and rash as well as preventing flares of disease.
- HCQ has also been shown to improve long term survival rates and prevent organ damage.
- All patients with SLE should ideally be treated with HCQ.
- HCQ is well tolerated with few side effects, however the most concerning adverse event being retinopathy.
- The purpose of this study is to identify all SLE patients at Children's of Alabama, track the use of HCQ, and classify the barriers for patients not prescribed HCQ.

Smart Aim

Identify and document Hydroxychloroquine prescriptions on all identified SLE patients, to a goal of 80% reliability by August, 2021.

Methods

- Intervention occurred from January 2020 to August 2021 in the pediatric rheumatology department at Children's of Alabama.
- Eligible patients with SLE were identified using diagnostic billing codes or structured data fields within the electronic health record (i.e. disease specific checkbox in rheumatology visit note). (Figure 1)
- Among these patients, data was collected assessing active HCQ prescription status within the electronic medical record.
- Performance was then measured quarterly though computerized data report and a pareto analysis was used to identify barriers to HCQ use.
- The primary outcome measure included identifying all SLE patients by billing code or structured data field and then tracking active HCQ prescriptions on each of these patients.

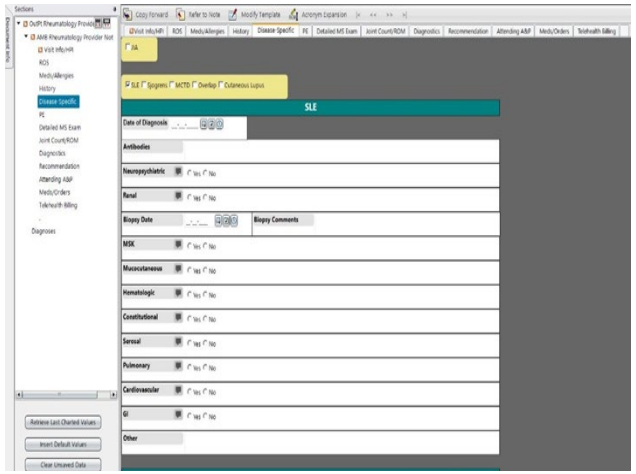

Figure 1: Snapshot of disease specific checkbox in rheumatology visit note

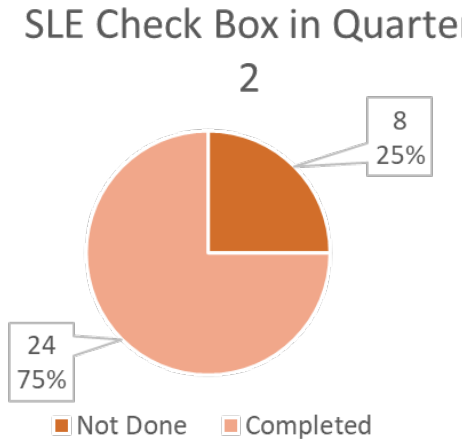

Figure 2. SLE check box completion rate for Quarter 2

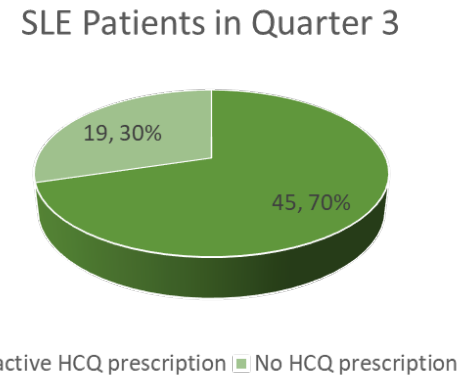

Figure 3: Active vs Inactive HCQ prescription in identified SLE patients for Quarter 3

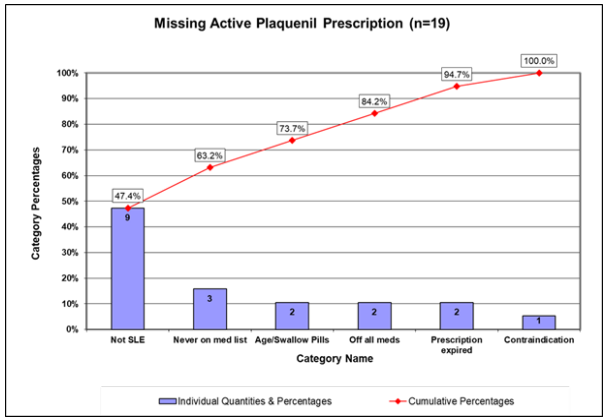

Figure 4: Pareto analysis illustrating barriers to active HCQ prescription in SLE patients for Quarter 3

Results

- January 2020, started tracking HCQ use in SLE patients using our rheumatology division dashboard.
- January 2021, we began analyzing HCQ prescriptions in the SLE population.
- March 2021, data was auto-populated into a rheumatology dashboard from the electronic medical record, using diagnosis codes and disease specific check box.
- For quarter 2 (April 2021 to June 2021), 75% of SLE patients were correctly identified in the office visit note (Figure 2).
- Out of the 64 SLE patients seen in quarter 3 (June 2021-August 2021), 19 (30%) were missing active HCQ prescriptions (Figure 3).
- Of the 19 SLE patients, six barriers to active HCQ prescription were identified (Figure 4).
  - Nine patients had alternative or unknown diagnoses, such as sicca symptoms, systemic involvement of connective tissues, and juvenile idiopathic arthritis (JIA); two of these patients were new non-SLE patients.
  - Three patients never had HCQ on the medication list, except one had documentation that HCQ was stopped.
  - Two patients were unable to swallow pills.
  - Two patients were off all medications
  - Two patients had an expired prescription.
  - One patient had a known contraindication (i.e. retinal toxicity).
- The treating provider was notified in order to review HCQ prescription.

Conclusion

- The ultimate goal is for 90-95% of SLE patients to be easily identified and have an active HCQ prescription. Contraindications for an active HCQ prescription include: known medical contraindication such as allergy or retinal toxicity.
- Utilizing the disease specific check box in the visit note will ensure all SLE patients are being included and monitored accurately.

Next Steps

We are currently pursuing additional interventions for population management such as documenting and monitoring disease activity in SLE patients.