Improving team based care for patients with non-infectious inflammatory eye disease

Jennifer E. Brandt MD MPH, Diane T. Siegel BA, To Le BA, Ghazala O'Keefe MD
Non-author Contributors: Penny Z. Castellano MD, Raluca Cozmuta MD MHS

Aim Statement

We aim to improve team based care between the ophthalmology and rheumatology clinics at Grady Memorial Hospital as measured by a decrease in the "time to scheduled follow-up" with rheumatology or until "primary need" is met in patients with non-infectious uveitis seen in the ophthalmology clinic from July 1, 2016 through March 2, 2017. Secondary outcomes include an analysis of the types of needs among patients, number of prednisone eye drops, dose of oral prednisone, and percentage of patients on steroid sparing agent.

Background

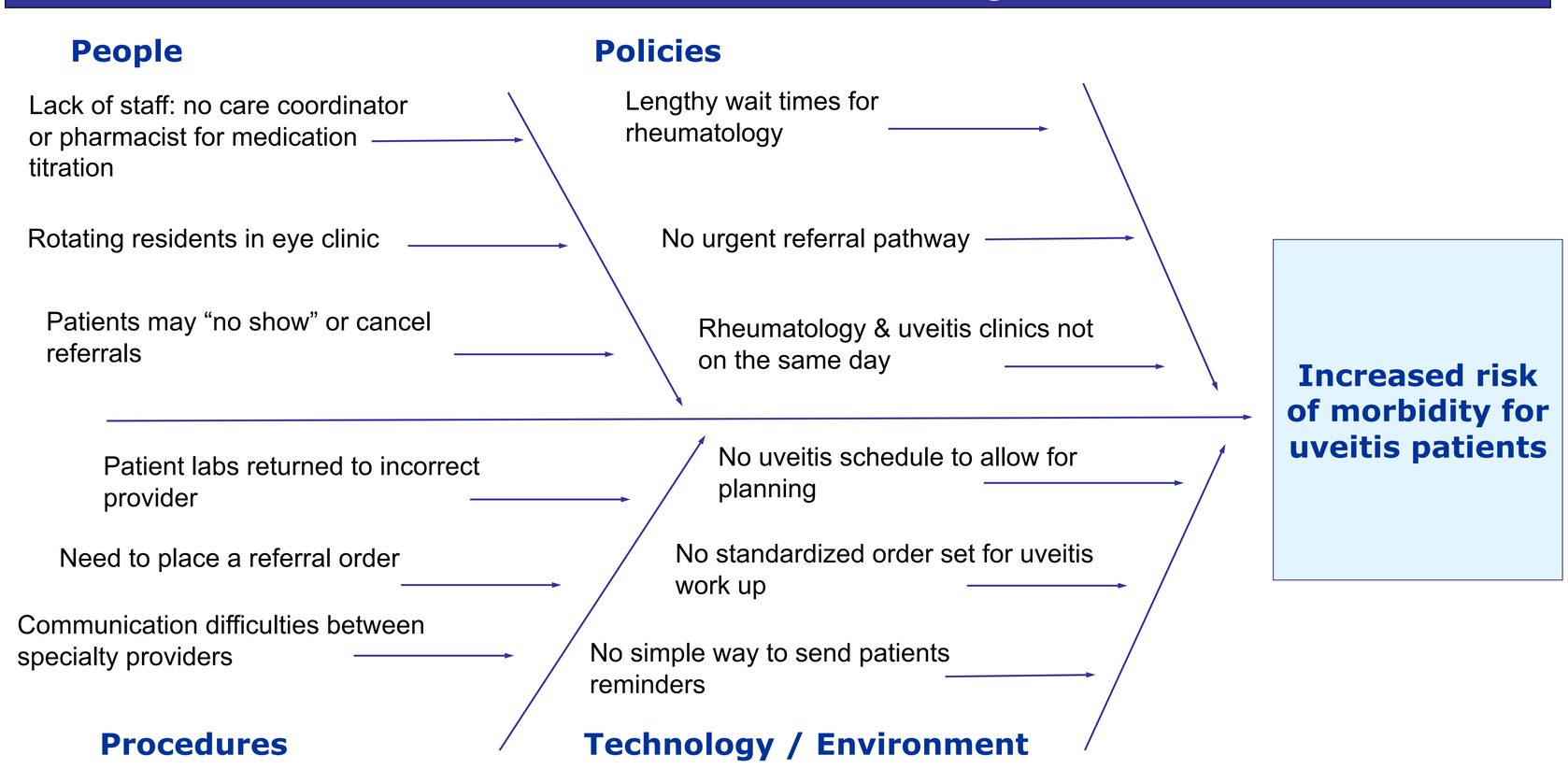
- Non-infectious inflammatory eye diseases affect working age adults and carry a significant risk of morbidity due to resultant vision loss. Patients with non-infectious uveitis have significantly increased healthcare resource utilization and costs compared to controls.[1]
- Care requires interdisciplinary teamwork and collaboration:

Uveitis Patient Care Model

Ophthalmology:	*Rheumatology:*
Diagnosis of non-infectious uveitis; initiate work up	Assistance in work up of etiology
Assess disease activity and treat	Immunosuppression medication management; treat underlying etiology

- Need for communication between disciplines in a timely fashion is important to preserve sight and reduce comorbidities, such as diabetes, glaucoma, and cataracts, from chronic steroid use.

Current State Analysis



Baseline Conditions

Characteristic	N = 34
Cataract N (%)	21/34 (61.8%)
Glaucoma N (%)	17/34 (50%)
Average drop right eye/day	3.2
Average drop left eye/day	3.5
Average PO prednisone/day (mg)	11.8
Average age (years)	53.4
Insurance status	
Medicare N (%)	10/34 (29.4%)
Medicaid N (%)	4/34 (11.7%)
Private insurance	6/34 (17.6%)
Uninsured/Grady card	14/34 (41.1%)

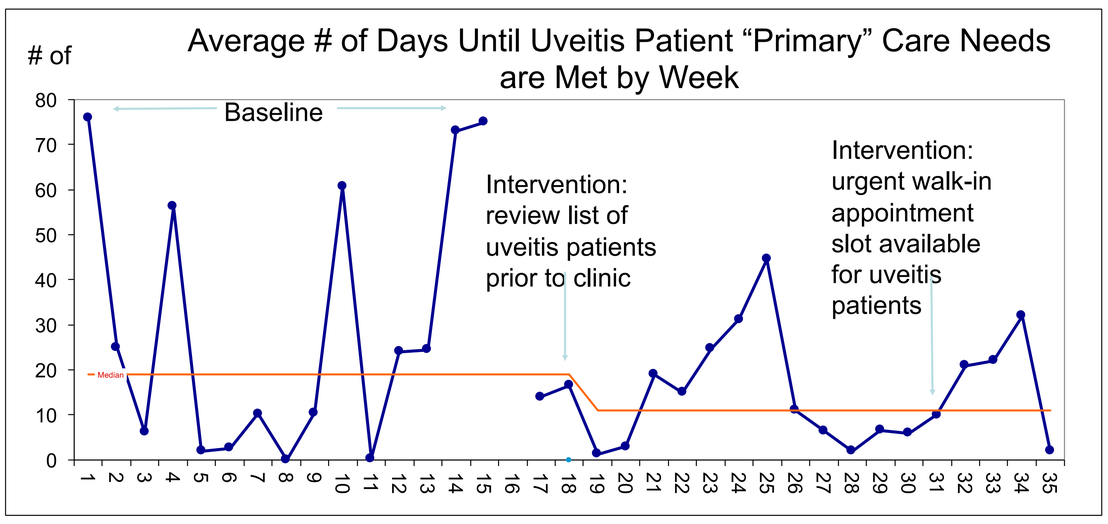
Tests of Change

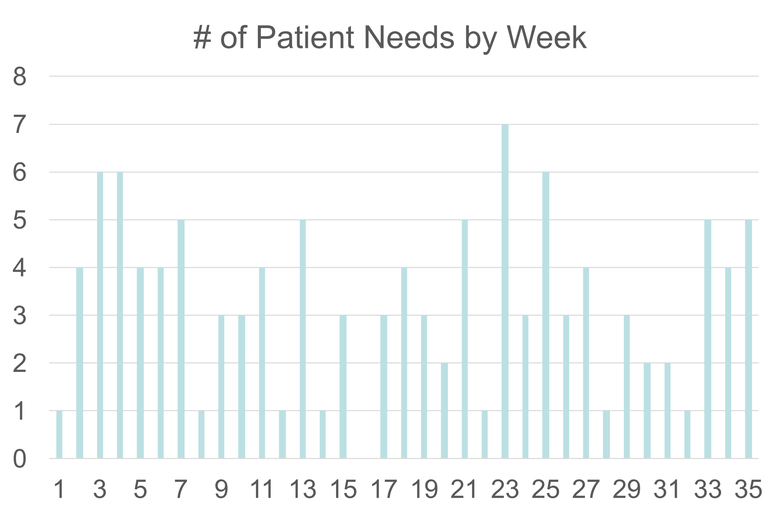
Test of change	Lesson learned
Preview uveitis appointments and develop plan (If/Then)	• Review labs prior to referrals (e.g. hepatitis B)
Standardized ophthalmology attending note (SBAR format)	• Highlighted patient status and diagnostic/treatment plan. Improved team communication.
Single weekly urgent appointment for Rheumatology made available to uveitis patients.	• Low number of "high risk" patients need urgent appointments.
EPIC messages used to communicate (SBAR) between the team.	• Better delineation of the plan and further needs clarified.

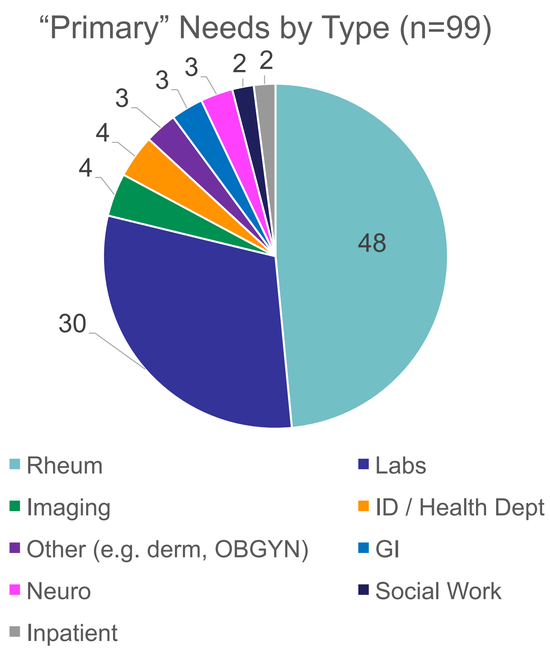
Measures

- Average length of time until next rheumatology appointment
- Needs assessment as determined by attending physician for each patient encounter in eye clinic including "primary" need and secondary needs.
- Average number of days until primary need for a patient encounter met calculated for each week
- Change in clinical metrics, including dose of steroids and use of steroid-sparing agent for 34 patients seen prior to and during our invention

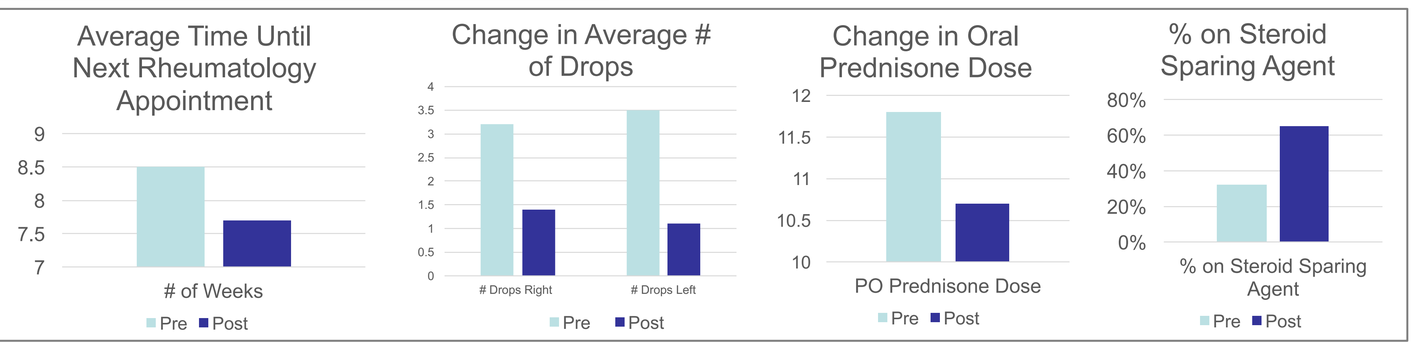
Results







- Data in these charts compares 34 patients from their first visit in our baseline data collection period (July – October) and their last ophthalmology visit in our intervention period (November – March).



- Of 52 patients, 50% had 2 or more needs and 27% had 0 needs over the eight month period.

Reflection & Follow-up

- Patients with non-infectious uveitis included in our study have complex care needs and benefit from team-based care from multiple disciplines.
- Sustainability: Focus on implementing pathways to standardize patient referrals for 'high risk' populations; this could be expanded to other subspecialties as well.
- Next steps:
  - Develop smart phrases and order sets in Epic
  - Implement text messaging reminder system to help improve patient compliance with visits
  - Possible redesign of patient scheduling process
  - Evaluate financial case for clinical care coordinator and/or pharmacist to handle medication and lab needs on a real time basis.

1. Thorne JE, Skup M, Tundia N, et al. Direct and indirect resource use, healthcare costs and work force absence in patients with non-infectious intermediate, posterior or panuveitis. *Acta Ophthalmol*. 2016;94(5):e331-e339.