Abstract Title: Impact of COVID19 on Missed/Cancelled Rheumatology Office Visits and Parenteral Immunosuppressive Medications

ABSTRACT PREVIEW: IMPACT OF COVID19 ON MISSED/CANCELLED RHEUMATOLOGY OFFICE VISITS AND PARENTERAL IMMUNOSUPPRESSIVE MEDICATIONS

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Author(s)

DW

Daniel Watrous

Organization:
Sierra Pacific Arthritis

Role:

Presenting Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Daniel Watrous* (06/16/2020, 11:45 AM)

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GP

Glenn Parris

Organization:
PARRIS & ASSOCIATES

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Glenn Parris* (06/16/2020, 11:33 AM)

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I Agree

Expectations of Professional Conduct
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PR

Priya Reddy

Organization:
Southwest Florida Rheumatology

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Priya Reddy* (06/16/2020, 11:34 AM)

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I Agree

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JA

Jeffrey Alper

Organization:
Medallion Clinical Research Institute, LLC

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Jeffrey Alper* (06/16/2020, 11:34 AM)

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FX

Fenglong Xie, PhD

Organization:
University of Alabama at Birmingham

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Fenglong Xie* (06/08/2020, 12:23 PM)

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MD

Maria (Maio) I. Danila, MD, MSc, MPH

Organization:
University of Alabama at Birmingham (UAB)

Role:

Author

Disclosure Status: Complete
Disclosure: Does Disclose
Signed: *Maria I. Danila* (06/15/2020, 10:40 PM)

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MG

Michael George, MD, MSCE

Organization:
University of Pennsylvania

Role:

Author

Disclosure Status: Complete

Disclosure: Does Disclose
Signed: *Michael George* (06/15/2020, 10:18 PM)

Bristol-Myers Squibb

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WN

William B. Nowell, PhD, MSW

Position:
Director, Patient-Centered Research

Organization:
Global Healthy Living Foundation

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *William Benjamin Nowell* (06/16/2020, 9:34 AM)

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I Agree

Expectations of Professional Conduct
I agree

JK

Joel Kallich

Organization:
Massachusetts College of Pharmacy and Health Sciences University

Role:

Author

Disclosure Status: Complete
Disclosure: Nothing to Disclose
Signed: *Joel Kallich* (06/16/2020, 11:37 AM)

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Expectations of Professional Conduct
I agree

JC

Jeffrey R Curtis

Organization:
Division of Clinical Immunology and Rheumatology, University of Alabama at Birmingham

Role:

Author

Disclosure Status: Complete
Disclosure: Does Disclose
Signed: *Jeff Curtis* (06/16/2020, 7:57 AM)

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1. COVID-19
2. Rheumatoid Arthritis
3. Access to Care
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Abstract Body

Category

Clinical and Translational Research

Sub-Category:

Epidemiology and Public Health

Background/Purpose

The global COVID19 pandemic has had a major impact on healthcare. The effect on rheumatology patients and providers is unclear, as is the role of telemedicine service to meet unique challenges posed by the pandemic.

Methods

Using the Columbus data warehouse of the AARA rheumatologist network, we examined calendar trends in the frequency of kept vs. missed/cancelled office visits and intravenous (IV) infusions of immunomodulatory medications (e.g. abatacept, golimumab, infliximab, tocilizumab) from January to May, 2020. We compared results by primary diagnosis, driving distance from physician office, and socieoeconomic status(SES), proxied by the Area Deprivation Index (ADI). Descriptive statistics and multivariable logistic regression were used to identify factors associated with missed/cancelled visits, controlling for clustering (visits within patients), with results as odds ratios (OR) with 95% confidence intervals(95%CI).

Results

Before March 15th (i.e. Pre-COVID), mean weekly visit volume overall was 17,203 visits/week among 121,843 unique rheumatology patients, which decreased minimally (3.1%) Post-COVID. Among return patient visits (mean 10,678/week, dropping 9.1% Post-COVID), 100% pre-COVID were in-person visits, but dropped to 70.3%, and were supplemented by 29.7% telemedicine visits. In addition to the decline in office visit volume and the transition to telemedicine visits, the frequency of missed/cancelled in-person appointments Post-COVID also increased. It peaked during week 12 (March 23-28) in which 15.2% of all appointments were missed/cancelled overall, 17.9% for in-person visits vs. 5.1% for infusions ($p< 0.0001$).

Univariate characteristics of patients keeping vs. missing visits and infusions is shown (Table). After adjustment, and referent to week 1 (Jan 5-11), the OR (95% CI) for cancellations associated with the pandemic at its peak was 1.30 (1.27, 1.34). Compared to follow-up visits for rheumatoid arthritis, new patient visits and return patient visits for osteoarthritis and osteoporosis were associated with a greater likelihood of missed/cancelled office visits, with corresponding OR (95% CI) of 1.59 (1.51, 1.67), 1.34 (1.31, 1.37) and 1.75 (1.71, 1.80), respectively. Patients with lower SES had a 5-20% higher likelihood to miss/cancel office visits compared to those in the highest SES quintile. Multivariable-adjusted factors also associated with missing/cancelled office visits included greater driving distance to the rheumatologist office, female sex, smoking, comorbidities (e.g. anxiety, asthma, back pain, diabetes, fibromyalgia, GERD, sleep disorder); and region.

Conclusion

The impact of COVID19 on both rheumatology practice visit volume and immunomodulatory treatments has been substantial. Telemedicine and other technology-focused tools for remote digital patient data capture and monitoring are essential to optimize rheumatology care and outcomes.

Uploaded File(s)

Image or Table

	Office Visits			Infusions		
	Missed/Cancelled	**Kept**	**P value**	**Missed/Cancelled**	**Kept**	**P value**
Patients, n	23,420	88,337	-	429	4,652	-
Providers, n	94	92	-	47	63	-
Patient weeks, n	27,650	206,985		589	18,114	
Age, years	59.8 (16.9)	60.1 (15.4)	0.0005	62.0 (17.2)	63.1 (14.1)	0.07
Female Sex	78.0	77.1	<0.0001	73.7	77.9	0.05
U.S. Region			**<0.0001**			<0.0001
Central	9.2	6.3		10.4	13.6	
Northeastern	8.5	6.3		7.8	2.1	
Southern	70.2	72.4		73.2	65.4	
Western	12.1	15.1		8.7	18.9	
Driving Distance from Provider Office or Infusion Center, miles	19.8 (86.9)	17.5 (74.2)	**<0.0001**	37.9 (162)	22.1 (98.5)	0.0002
Area Deprivation Index group, quintile			**<0.0001**			<0.0001
1-20 (highest SES)	18.6	20.5		17.7	19.5	
21-40	24.6	24.6		31.1	27.7	
41-60	20.9	21.2		18.8	23.4	
61-80	17.6	17.4		18.8	15.9	
81-100 (lowest SES)	14.4	13.3		10.6	10.8	
Missing	3.9	3.0		3.1	2.8	

Data shown as n(%) or mean +- standard deviation (SD); SES = socioeconomic status

Table: Partial List of Factors Associated with Missed/Cancelled vs. Kept Office Visits and Infusions Associated with the Temporal Evolution of the COVID19 Outbreak

Table COVID.JPG

Additional Details

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2A) Clinical Trial
No

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4A) ACR Media Activities
Yes

5A) Study Sponsor Statement
No

5B) Study Sponsor Statement

6A) Research Involving Human Subjects

Yes, and I affirm that my research received approval from the IRB or comparable body depending on country.

6B) Research Involving Human Subjects

7) Research Involving Animals
No

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