Protection Agency (EPA) to represent environmental quality to better understand the association between environmental factors and lupus deaths. Five domains including air, water, land, built and sociodemographic comprised the EQI.

**Methods:** To evaluate the influence of environmental factors on lupus death and compare them to accidental deaths, heart disease and malignant neoplasm.

**Results:** The study population comprises all individuals of U.S. deaths from 2006 to 2011. We describe mean/median EQI in a population of lupus deaths and those who died of other leading causes of death, namely stroke, heart disease, and malignant neoplasm. Cause-specific death counts were obtained using ICD codes for lupus (M31.2, M32.8, M32.9), accidental death (V, W, X, Y, Z), heart disease (I00, I11, I13, I14, I50-51), and malignant neoplasm (C05-9, C90-C97).

**Conclusion:** Total environmental quality as well as its air and built domains were worse in lupus decedents than in accidental deaths, suggesting a possible role of environmental exposure in contributing to lupus outcome. Further analysis is needed to identify the specific environmental determinants, which are potentially modifiable to improve lupus outcome.

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**Disclosure of Interests:** None Declared.

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**THE EPIDEMIOLOGY OF PRIMARY SJÖGREN’S SYNDROME: IS IT A RARE DISEASE?**

**Keywords:** Sjögren syndrome, Real-world evidence, Epidemiology

**Background:** Sjögren’s syndrome (SSj) is a systemic disease with autoimmune pathogenesis, with prevalent involvement of the lacrimal and salivary exocrine glands, classified as primary or secondary on the basis of the association with other rheumatic diseases. The epidemiology of SSj in the literature are variable due to the heterogeneity of the populations examined and the different classification criteria used.

In a recent systematic review by Baodon Qin et al. In a recent systematic review by Baodon Qin et al. the average incidence rate was 7 cases every 100,000 people/year (range 5-9) with higher values in the Caucasian and Asian populations, with a women/men ratio of 9.3 (95% CI 3.35 to 13.18), while the prevalence rate was 61 cases per 100,000 inhabitants (range 10-90) with a female/male ratio of 10.7 (95% CI 7.35-15.82).

**Objectives:** The aim of the study was to estimate the prevalence rate of primary SSj in real-life, through analysis of administrative data.

**Methods:** An epidemiological research was carried out as at 31 December 2020, through the analysis of all adult patients residing in Piedmont (northwest of Italy) with exemption code (EC) for SSj (code 030) and any association with other rheumatic diseases.

**Results:** There were 5,430 lupus deaths and 398,382 accidental deaths in the US from 2006 to 2011. The total EQI was significantly worse in lupus decedents than in accidental deaths (p<0.001), but not when compared to deaths attributed to heart disease and malignant neoplasm. Of the five EQI domains, air and built, but not the other three domains, were higher in lupus decedents than in accidental deaths (p<0.001), heart disease (p<0.05), and malignant neoplasm (p=0.05) decedents.

**Conclusion:** This research has some limitations, including the retrospective design and the use of administrative data which may be affected by the aforementioned difficulty of classification as well as incorrect attributions of exemption, both for SSj and for associated pathologies. Our research highlights a number of patients with primary SSj lower than the prevalence figure that defines a rare disease, i.e. a prevalence of less than 5 cases per 10,000 inhabitants. Further studies are needed to confirm these preliminary data.

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**Disclosure of Interests:** None Declared.

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**THE IMPACT OF THE COVID-19 PANDEMIC ON REFERRALS TO MUSCULOSKELETAL SERVICES FROM PRIMARY CARE AND SUBSEQUENT INCIDENCE OF INFLAMMATORY RHEUMATIC MUSCULOSKELETAL DISEASE: AN OBSERVATIONAL STUDY**

**Keywords:** Rheumatoid arthritis, Epidemiology, COVID

**Background:** Inflammatory and musculoskeletal diseases (iRMDs), including rheumatoid arthritis (RA) and juvenile inflammatory arthritis (JIA), are common and cause a high disease burden globally. Early diagnosis of iRMDs and subsequent timely access to disease modifying therapies is associated with improved health and socioeconomic outcomes. However, the COVID-19 pandemic meant that the way healthcare was delivered changed abruptly as all consultations were ‘remote by default’ was widely implemented, replacing traditional ‘face-to-face’ healthcare.

**Objectives:** To describe the impact of the COVID-19 pandemic upon referral patterns and incident diagnosis of iRMDs.

**Disclosure of Interests:** None Declared.

**Acknowledgements:** NIL.

**REFERENCES:** NIL.
Methods: Data from the Clinical Practice Research Datalink Aurum were analysed from 01/04/17 to 01/10/2021 to describe episodes of care for patients with musculoskeletal (MSK) conditions, in a primary care setting, for pre-COVID-19 (01/04/2017–31/03/2020), early-COVID-19 (01/04/2020–31/07/2021), and late-COVID-19 pandemic (01/08/2020–31/10/2021) periods. Prevalent and incident MSK consultations were determined. Referrals were matched to these consultations. Trends in referrals to MSK services and further incident diagnoses of iRMDs were described using Joinpoint regression and comparisons made between time-periods. Negative binomial regression was used to compare incident rates between time-periods: first MSK consultation to RA/JIA/RMD diagnosis, first MSK consultation to first referral, first referral to RA/JIA/RMD diagnosis. The number of consultations between first MSK consultation and referral/diagnosis were described. Results were adjusted for age and sex and further stratified by geographical region and deprivation.

Results: The incidence of RA and JIA reduced by -13.3% (from 32.0 to 17.2 per 100,000) and -17.4% (from 1.8 to 0.97 per 1,000,000) per month respectively between January 2020 and April 2020, and then increased by 19% (from 27.2 to 25.2 per 100,000) and 3.7% (from 0.97 to 1.3 per 1,000,000) per month respectively between April 2020 and October 2021. The incidence of all diagnosed iRMDs was stable until October 2021. Referral incidence decreased between February 2020 and May 2020 by -16.8% (from 4.8 to 2.4 per 100) per month in patients presenting with a MSK condition. After May 2020, referrals increased significantly (16.8% per month from 2.4 to 4.5 per 100) to July 2020. Time from first MSK consultation to RA diagnosis, and referral to RA diagnosis increased in the early-pandemic period (rate ratio (RR) 1.11, 95% confidence interval (CI) 1.07-1.15; RR 1.23, 95%CI 1.17-1.30) and remained consistently higher in the late-pandemic (RR 1.13, 95% CI 1.11-1.16; RR 1.27, 95% CI 1.23-1.32) periods respectively, compared to the pre-COVID-19 period.

Conclusion: Patients with underlying RA/JIA that developed during the pandemic may have been delayed in the process of being referred and/or diagnosed. Primary care clinicians should remain alert to this possibility and consider the use of fast-track referral pathways where indicated. It is apparent that patients developing incident episodes of inflammatory arthropathies may display a prodrome of other MSK symptoms and conditions, which alone may not warrant referral but in combination require further investigation. Commissioners should be alert to these findings to allow for the appropriate planning and commissioning of services.

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POS1001-HPR

**CORRELATION OF ABNORMAL DIET AND ABNORMAL LIFESTYLE WITH INFLAMMATORY MARKERS AND RAPID 3 SCORE IN AUTOIMMUNE RHEUMATIC DISEASE-RELATED ARTHRITIS (RA, SPA AND PSA) AFTER TREATMENT**

Keywords: Inflammatory arthritis, lifestyles, Diet and nutrition

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Background: It is considered that unhealthy diet and unhealthy lifestyle has a possible role in inflammation of patients with Rheumatoid arthritis (RA), Spondyloarthritis (SpA) and Psoriatic arthritis (PsA).

Objective: To find out the role of unhealthy diet and unhealthy lifestyle in the regulation of inflammation after treatment in our patients with autoimmune arthritides such as RA, SPA, PSA.

Methods: A retrospective analysis was carried out using a questionnaire on diet and lifestyle for our defined study population. Our source data was analyzed for inflammatory markers such as CRP, ESR and RAPID 3 scores post-treatment for the patients who filled the questionnaires. Total of 56 patients and/or caregivers who visited our clinic. After obtaining informed consent, data was gathered through interview method and was further correlated with ESR, CRP and RAPID 3 scores post treatment. Based on consensus, unhealthy diet was defined as consuming red meat anytime, having more than two teaspoons of sugar per day, smoking any amount or in any frequency, and daily alcohol consumption beyond the usual acceptable standard daily limits. Unhealthy lifestyle was defined as spending more than 6 hours per day sitting without any break and never engaging in any physical exercise.

Data from the Clinical Practice Research Datalink Aurum were analysed using Joinpoint regression and comparisons made between time-periods. Negative binomial regression was used to compare incident rates between time-periods: first MSK consultation to RA/JIA/RMD diagnosis, first MSK consultation to first referral, first referral to RA/JIA/RMD diagnosis. The number of consultations between first MSK consultation and referral/diagnosis were described. Results were adjusted for age and sex and further stratified by geographical region and deprivation.

Results: Average age of our study group of 56 patients was 48 years, 64% were female, 50% were homemakers, mean duration of treatment was 51 months, predominance of RA (42%), PsA patients (25%), SPA (31%) and a few overlaps. Mean weight was 67.6kg and mean height was 158.76cms. 77% were on combination of CS DMARDs + TS DMARDs. 46% reported they consumed red meat any time, 68% consumed sugar more than 2 teaspoons per day, 9% were smokers while 21 % consumed alcohol daily above the usual defined daily limits. 34% of study population were sedentary, 17% sitting for long hours without break, while 38% with minimal or no exercise. We observed no statistically significant (p=0.5798) correlation between unhealthy diet and RAPID 3 scores post treatment. Similarly, there was no statistically significant correlation between unhealthy diet and ESR (P=0.09) and CRP (p=0.7). There was again no statistically significant correlation between unhealthy lifestyle and CRP (p=0.539), ESR (p=0.164) and RAPID 3 scores (p=0.7) post treatment. However when we analyzed the unhealthy lifestyle parameter sitting for more than 6 hours without break separately we found the correlation of sitting for more than 6 hours without break and RAPID 3 scores to be statistically significant in our study population (p=0.04).

Conclusion: In our study group with limited number of patients we found no statistically significant correlation of unhealthy diet or unhealthy lifestyle in regulation of inflammation post treatment in patients with inflammatory arthropides (RA, SpA and PsA).

Disclosure of Interests: None Declared.

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POS1001-HPR

**THE IMPACT OF FRAILTY ON FEAR OF FALLING, QUADRICEPS MUSCLE STRENGTH AND FUNCTIONAL PERFORMANCE IN OLDER ADULTS WITH TOTAL KNEE ARTHROPLASTY DUE TO KNEE OSTEOARTHRITIS**

Keywords: Osteoarthritis, Outcome measures

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Figure 1.