

Prevalence of Comorbidities and Hospitalization in the 65 and Over SLE Patient Population: a Comparative Analysis of the FORWARD Lupus Registry and Medicare Data in the US (2017-2021)

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OBJECTIVES

Systemic Lupus Erythematosus (SLE) is a complex autoimmune disease with multisystemic manifestations.¹ This study aimed to **compare demographics, comorbidities, and hospitalization records of participants in the FORWARD Lupus Registry (FLR) participants ≥age 65 and Medicare recipients to those of US Medicare enrollees with SLE.**



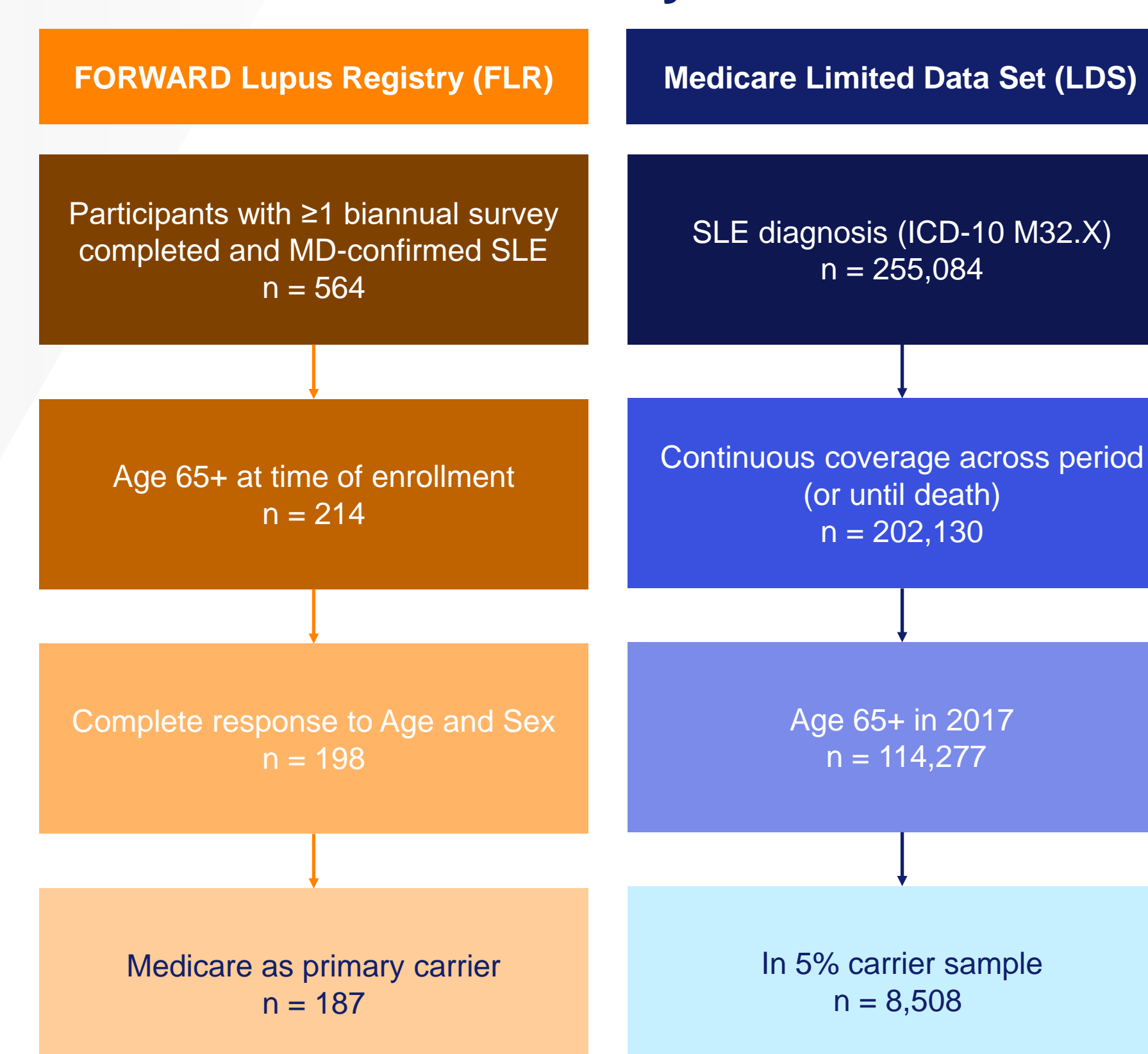
METHODOLOGY

The FLR is a US online longitudinal patient-reported registry. Analyses used **FLR biannual surveys** from participants age ≥65 years with a physician-confirmed SLE diagnosis over the 5-year period 2017-2021. Participants with missing data for age or sex, or who did not have Medicare insurance were excluded (n=27).

Medicare Limited Data Set (LDS) inpatient, outpatient, and carrier claims (2017-2021) were used to identify enrollees with a SLE diagnosis (ICD-10-CM M32.XX). Patients had to be ≥65 years in 2017, alive with continuous Part A/B coverage over the 5-year study period and included in the 5% carrier sample.²

Descriptive statistics and five-year prevalence rates for comorbidities and hospitalizations in both cohorts were analyzed. The eight comorbidities which are part of Rheumatic Disease Comorbidity Index were chosen to analyze.³ FLR cohort results were compared to lupus patients (via ICD 10 codes) from the Medicare Limited Data Set (LDS) inpatient, outpatient, and carrier Part A/B claims over the same period.

> **Figure 1: Flow Chart of the Patients Included in the Study**



CONCLUSION

- > Demographics were similar between FLR Medicare eligible patients and Medicare patients with SLE. Some differences in prevalence of comorbidities may be due to how the data were collected, reported, or differences in the underlying demographic or disease characteristics of the cohorts. Both cohorts can offer insights into the health and healthcare utilization of people with SLE.
- > Utilizing common data models across the registry will facilitate easier comparison and linkage with different data sources.



REFERENCES

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3. England, B. R., Sayles, H., Mikuls, T. R., Johnson, D. S., & Michaud, K. (2015). Validation of the Rheumatic Disease Comorbidity Index. Arthritis Care & Research, 67(6), 865–872. <https://doi.org/10.1002/acr.22456>



RESULTS

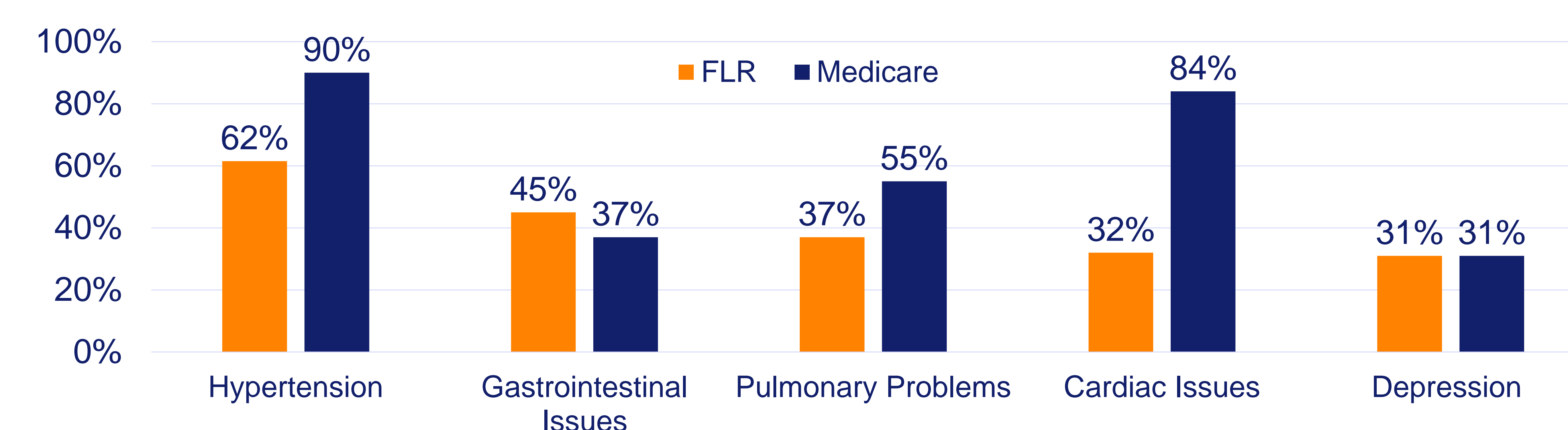
187 and 8,508 SLE patients from FLR and Medicare were identified, respectively. In both groups, the mean age was 73 years, and a higher proportion of women in FLR. Within the study period (2017-2021), the FLR participants completed an average of 6.4 (SD:3.43) biannual surveys (median 7 [IQR 3-10], maximum 10).

> **Table 1: Demographics**

| Variable, mean (SD) or % | FLR (n=187) | Medicare (n=8,508) |
|--------------------------|-----------------|--------------------|
| Age (SD) | 73 years (5.53) | 73 years (6.49) |
| Female (%) | 181 (97%) | 7,101 (83%) |
| Race breakdown (%) | | |
| White | 150 (80.2%) | 7,029 (82.6%) |
| Black | 14 (7.5%) | 930 (10.9%) |
| Hispanic | 3 (1.6%) | 133 (1.6%) |
| Other or Unknown | 20 (10.7%) | 416 (4.9%) |

Five-year prevalence rates for the top five comorbidities of SLE in the FLR and Medicare groups, respectively, were hypertension (FLR: 62%, Medicare:90%), gastrointestinal issues (45%, 37%), pulmonary problems (37%, 55%), cardiac issues (32%, 84%), and depression (31%, 31%).

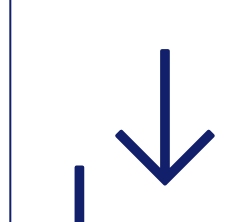
> **Figure 2: Prevalence of Comorbidities**



42% of FLR SLE patients were hospitalized for any reason during the study period (average hospital length of stay(LOS) was 4.9 days) compared to 37% (6.2 days LOS) in patients in the Medicare cohort. Top three reasons for hospitalization in the FLR cohort were Arthritis/Musculoskeletal issues, Pneumonia, and Central Nervous System/Psychiatric conditions. In the Medicare cohort, top 3 reasons were Sepsis, Acute Kidney Failure, and Hypertensive Heart and Chronic Kidney Disease.

> **Table 2: All-cause Hospitalization (non-ER) over the 5-year Study Period**

| | FLR (n=187) | Medicare (n=8,508) |
|--|------------------|--------------------|
| Patients with at least one hospitalization (%) | 79 (42%) | 3,149 (37%) |
| Mean length of stay (SD) | 4.9 days (10.53) | 6.2 days (7.3) |



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