Whites: OR=1.17, 95% CI=1.02–1.34). Furthermore, in univariate regression analysis, only the iC3b/C3 ratio in AA associated with clinically meaningful changes in disease activity.
Conclusions iC3/C3 ratios better correlated with active disease in AA compared to Whites. Furthermore, iC3b/C3 ratios correlated with clinically meaningful changes in disease activity only in AA.

Short oral presentation session 4: SLE epidemiology and public health 1

LSO-019 EFFECT OF AIR POLLUTANT EXPOSURE ON DISEASE ACTIVITY OF SYSTEMIC LUPUS ERYTHEMATOUS: A PROSPECTIVE LONGITUDINAL STUDY FROM KOREA

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Background Exposure to air pollutants is associated with an increased risk of pulmonary and cardiovascular disease and death. Because few studies have investigated the effects of air pollution on systemic lupus erythematosus (SLE), we investigated the association between exposure to air pollutants, including particulate matter (PM), and disease activity over 1 year in a prospective, longitudinal cohort of Korean patients with SLE.
Methods The study enrolled 386 patients from three metropolitan regions in Korea. The daily average PM10, PM2.5, NO2, CO, SO2, and O3 concentrations were measured using portable air quality monitors and data from the National Ambient Air Monitoring System. Disease activity was evaluated using the SLE Disease Activity Index 2000 (SLEDAI-2K) and Physician Global Assessment (PGA), every 3 months for 1 year. Lupus flares, a damage index, and 36-Item Short Form Health Survey (SF-36) scores were also assessed. A generalized estimating equation was used to evaluate the impact of air pollutants on clinical outcomes, including disease activity.
Results Changes in PM10 and PM2.5 were significantly associated with changes in SLEDAI-2K scores of > 8 over 1 year in SLE patients (β = 0.097, 95% confidence interval [CI]: 0.048–0.146, $p < 0.001$; β = 0.100, 95% CI: 0.054–0.146, $p < 0.001$, respectively). Changes in PM10 and PM2.5 were also significantly associated with the development of lupus flares (β = 1.603, 95% CI: 1.067–2.408, $p = 0.023$; β = 1.777, 95% CI: 1.048–3.011, $p = 0.033$, respectively). However, there were no significant associations between the changes in NO2, CO, SO2, and O3 and lupus activity.
Conclusions In this study, PM10 and PM2.5 exposure increased disease activity and the risk of lupus flares in SLE patients living in metropolitan regions.

LSO-020 INTERVENTION TO IMPROVE MEDICATION ADHERENCE AMONG PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS

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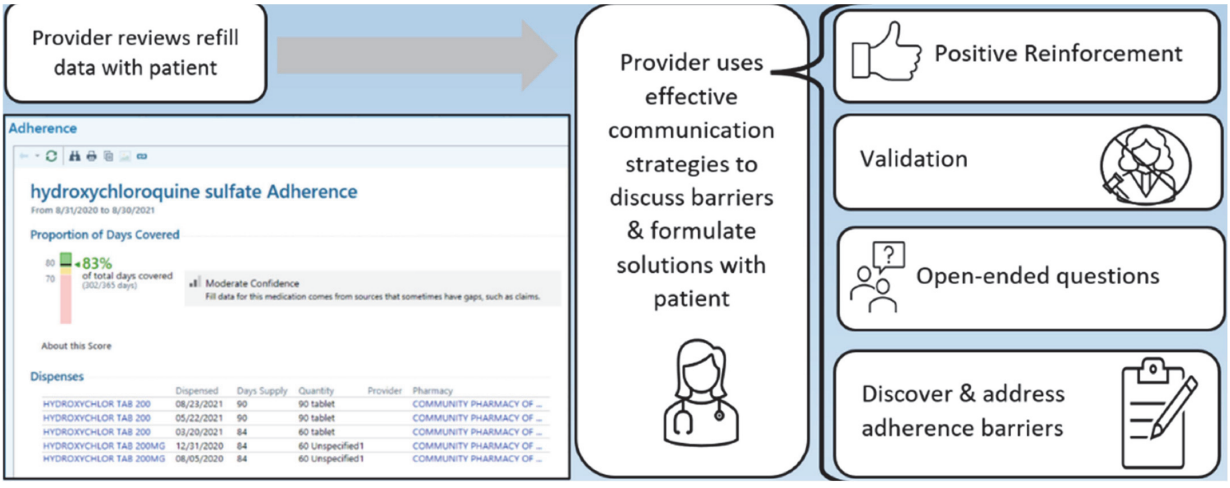
Background To optimize medication adherence and outcomes of patients with systemic lupus erythematosus (SLE), we developed an adherence intervention that encourages providers to review real-time pharmacy refill data and use effective communication techniques with patients to collaboratively overcome adherence barriers (figure 1). Prior pilot testing demonstrated intervention feasibility, acceptability, and preliminary effect on adherence. Here we examined areas for improvement to inform future implementation.
Methods We audio recorded clinic encounters between clinicians and patients seen at an academic lupus clinic and included patients with 90-day medication possession ratio (MPR) <80% for SLE-specific medications. We coded which intervention components clinicians performed, quality of patient-provider communication, and time spent discussing adherence. We assessed change in 90-day MPR after the



Abstract LSO-020 Figure 1 Adherence intervention workflow with screenshot of pharmacy refill