

(PDC) during this period. We identified individual-level variables from Medicaid, zip code, county and state-level sociodemographic variables from the American Community Survey, and health resource data from Area Health Resources Files. We used 4-level hierarchical multivariable logistic regression models to examine odds (OR (95% Credible Interval)) of adherence (PDC \geq 80%) vs nonadherence.

Results Among 10,268 HCQ initiators with SLE, 15% were adherent (PDC \geq 80%). After adjusting for individual-level demographic and SLE-related characteristics, we observed lower odds of adherence in zip codes with higher percentages of black individuals (highest tertile OR 0.81 (0.69–0.96) vs lowest) (table 1). This association persisted after controlling for zip code educational attainment, percent below federal poverty level (FPL), urbanicity and healthcare resources. We did not find statistically significant associations with zip code-level percent Hispanic, percent White, education or percent below FPL. Odds of adherence were higher in counties with the highest concentration of hospitals vs the fewest (OR 1.30 (1.07–1.58)); no statistically significant associations were found with other health resource characteristics.

Conclusions Among Medicaid beneficiaries with SLE, we observed significant effects of racial composition and hospital concentration on HCQ adherence. Further studies with smaller geographic units and data on spatial relationships are needed to investigate the potential role of residential racial segregation on adherence. Interventions that acknowledge and address contextual factors should be considered to reduce high rates of nonadherence in vulnerable populations.

CS-12 OUTCOMES OF LUPUS NEPHRITIS IN VULNERABLE POPULATIONS

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Background Lupus nephritis is a known predictor of mortality; we examined the risks of end-stage renal disease (ESRD) and death among lupus nephritis patients, and included the impact

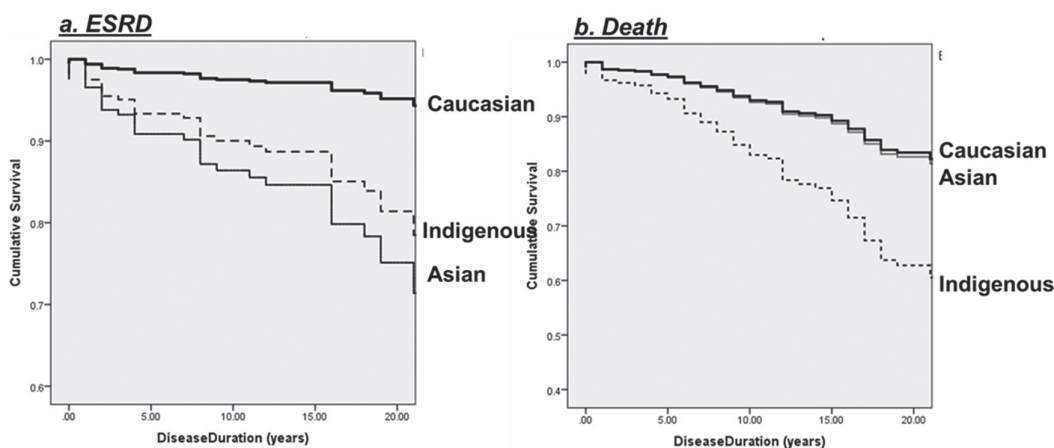
of ethnicity, low income (LowInc), lack of education (LowEduc), and living $>$ 500 km from rheumatology care (Remote).

Methods Patients from a single academic center were followed from 1990–2016 using a custom database. Records of all SLE patients were abstracted. Variables included birthdate, diagnosis date, ethnicity, ACR classification criteria (ACRc), SLICC Damage Index (SDI) including ESRD, treatment and date of death. Ethnicity was categorized into North American Indigenous (IND), Asian (ASN), Caucasian (CAU), and Other. In patients who had developed nephritis, Kaplan Meier and Cox proportional hazard models were used to compare ESRD and survival between vulnerable groups.

Results Nine hundred forty-four SLE patients were identified: 240 (25%) IND, 576(60%) CAU, 104(11%) ASN and 24 (2.5%) Other. ‘Other’ patients were excluded from further analysis. Mean disease duration was 14 years, 89% female. Nephritis developed in 39% of CAU (n=224), 57% of IND (n=136; OR 2.1; 95% CI 1.5 to 2.8), and 75% of ASN (n=76; OR 4.7; 95% CI 2.9 to 7.6), $p<0.001$. Twenty percent of patients had not completed high school, 20% were LowInc, and 11% were Remote; LowInc, LowEduc, and Remote did not increase the odds of nephritis. Among nephritis patients, ESRD developed in 11% and 17% died. Risk of ESRD was increased in IND (HR 4.2; 95% CI 2.0 to 8.6) and ASN (HR 5.8; 95% CI 2.6 to 12.6) compared to CAU (figure 1a). Risk of death was increased in IND (HR 2.6; 95% CI 1.6 to 4.2), but not in ASN (HR 1.1; 95% CI 0.5 to 2.4) compared to CAU (figure 1b). In separate cox proportional hazards models, after adjustment for age, gender, SDI, ACRc, and age at diagnosis, risk of ESRD was increased in NAI (HR 2.8; 95% CI 1.0 to 8.1) and ASN (HR 4.0; 95% CI 1.6 to 10.3) compared to CAU. LowInc, LowEduc, and Remote did not increase risk of ESRD. Only LowEduc (HR 2.1; 95% CI 1.1 to 3.9) increased the adjusted risk of death; ethnicity, LowInc and Remote were not significant.

Conclusions Compared to CAU, IND and ASN not only have a higher risk of nephritis, but among those with nephritis, risk of ESRD is 3–4 fold higher in IND and ASN. Lack of education, rather than ethnicity, was the major risk factor for death. Reasons for these differences may include renal pathology, care pathways, comorbid conditions and additional socioeconomic factors and need to be further explored.

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Abstract CS-12 Figure 1 Risk of end stage renal disease and death by ethnicity