BACKGROUND/OBJECTIVES

- Infections have been recognized as a major cause of morbidity and mortality in SLE and RA
  - Inflammatory nature of the disease process
  - Immunosuppressive treatments
- Purpose of study to use National Inpatient Sample Healthcare Cost and Utilization Project (NIS-HCUP) to compare inpatient mortality trend in patients with SLE or RA and selected bacterial infections

METHODS

- NIS-HCUP
  - Combined data collection from states, hospital associations, private data organizations
  - Largest collection of multi-year hospital care data
  - Estimates and projects nationwide data using 20% of discharges from hospitals
- Hospitalizations within NIS-HCUP identified with ICD 9 codes:
  - Septicemia, Urologic Infection, Pneumonia, Ventilator Associated Pneumonia, Pulmonary Tuberculosis, Cellulitis, CNS infections, MRSA, Osteomyelitis, Sepsis, Bacteremia, RA, SLE
- Further admissions identified if they had indication of infection and SLE/RA or both
- Mortality analyzed in age adjusted manner from 2002-2014
- Rao-Scott Chi Square test used to compare within groups
- Crude incidence calculated based on total number of hospitalizations
- SAS v9.4 and Joinpoint Trend Analysis v4.5 software packages used
- p < 0.05 used to determine statistical significance
- All analyses accounted for NIS sampling design

RESULTS

- 320,022,452 hospitalizations identified
- 1,660,059 with selected infections + SLE/RA/both
- Figure 1 (left) shows Joinpoint Analysis of mortality trends; Table 1 (below) shows this information with observed-modeled rates
- Infections + SLE shows decrease -5.1% Annual Percent Change (APC, p < 0.001) from 2002-2014
- Infections + RA shows increase +2.8% APC (p = 0.007) from 2004-2014
- Overall incidence of hospitalizations due to selected infections in those with SLE/RA ~ no more than 5.1/1000 hospitalizations

CONCLUSIONS

- SLE: Septicemia (22.76%) and Ventilator Assoc. Pneumonia (17.95%) had highest in-hospital mortality (Table 3)
- RA: Septicemia (26.42%) and pulmonary tuberculosis (22.69%) had highest in-hospital mortality
- Table 4 (left) shows demographic data

- SLE shows overall decline in mortality in those admitted with selected bacterial infections
  - Closer monitoring of lupus patients
- RA shows overall increase in mortality from 2004-2014 in those admitted with selected bacterial infection
  - Increase in biologic therapy?
- Future studies:
  - Impact of opportunistic infections
  - Incidence trend given use of immunologics/biologics