INTRODUCTION

- Indirect costs experienced by SLE patients reflect lost productivity in work force and non-work force activities and can be expressed as:
  1. Self-reported costs: patient self-reports of lost productivity
  2. Calculated costs: the difference between productivity of an age-and-sex matched general population and self-reported productivity

STUDY AIMS

- Compare self-reported indirect costs to calculated costs based on an age-and-sex matched general population
- Assess indirect costs across organ damage states in a Canadian SLE cohort

METHODS

- Patients fulfilling the ACR or Systemic Lupus International Collaborating Clinics (SLICC) Classification Criteria for SLE from 6 Canadian centres were enrolled from 2013 to 2017
- Participants completed a validated questionnaire on lost productivity (child care, housework, shopping, odd jobs, volunteering, employment, absenteeism, presenteeism)
- Lost productivity was calculated as:
  1. Self-reported costs: the difference between the time patients reported they would be engaged in work force and non-work force activities if not ill versus the time they reported working &
  2. Calculated costs: the difference between the time worked by an age-and-sex matched general population (Statistics Canada) in work force and non-work force activities versus the time patients reported working
- Annual indirect costs associated with damage (SLICC/ACR Damage Index (SDI)) were obtained from multiple regressions adjusting for age, race/ethnicity, and disease duration

RESULTS

Table 1. Baseline demographic and clinical manifestations of patients

<table>
<thead>
<tr>
<th>SDI State</th>
<th>No. of Patients</th>
<th>Disease Duration (mean + SD)</th>
<th>Age at Diagnosis, years (mean + SD)</th>
<th>Sex (Female %)</th>
<th>Ethnicity (Caucasian %)</th>
<th>Employment (%)</th>
<th>SLEDAI-2K (mean + SD)</th>
<th>Hours Self-reported</th>
<th>Hours Calculated</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1368</td>
<td>16.8 (11.6)</td>
<td>33.0 (13.5)</td>
<td>90.4</td>
<td>70.9</td>
<td>48.6</td>
<td>2.15 (1.07)</td>
<td>1000</td>
<td>1200</td>
</tr>
<tr>
<td>1</td>
<td>6009</td>
<td>6009 (11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
<td>6009 (204, 11814)</td>
</tr>
<tr>
<td>2</td>
<td>8881</td>
<td>8881 (14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
<td>8881 (2928, 14835)</td>
</tr>
<tr>
<td>3</td>
<td>10402</td>
<td>10402 (17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
<td>10402 (2844, 17059)</td>
</tr>
<tr>
<td>4</td>
<td>10912</td>
<td>10912 (25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
<td>10912 (385, 25539)</td>
</tr>
<tr>
<td>&gt;5</td>
<td>19899</td>
<td>19899 (24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
<td>19899 (7563, 24415)</td>
</tr>
</tbody>
</table>

Figure 1. Annual indirect self-reported cost components

Figure 2. Self-reported versus calculated annual hours of unpaid labour, stratified by SDI

Figure 3. Self-reported versus calculated annual hours of paid labour, stratified by SDI

CONCLUSIONS

- Indirect costs are greater when calculated using an age-and-sex matched population versus patient self-reports
- Patients’ expectations of their productivity appear to plateau with higher SDI states and lost productivity is a major issue regardless of the extent of disease damage
- Although at SDI=0, mean indirect costs did not differ between methods, for SDI = 1 through SDI ≥ 5, calculated indirect costs were greater and the difference between methods increased significantly between lower and higher SDIs
- Future economic studies should not only rely on self-reports of lost productivity, but should also incorporate a comparison of the patient productivity with actual productivity of an age-and-sex matched general population to fully capture indirect costs of SLE
- Limitations of this study include a limited number of patients with high SDI, and the study was based within tertiary academic centres and may not be representative of the entire SLE population