Using social network analysis to evaluate changes in transdisciplinary collaboration during a Clinical and Translational Science Award

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RESULTS

• The average number of collaborators per member for both grants and publications increased over three years of the grant period.
• Collaboration for both grants and publications became more interdisciplinary (color indicates discipline).
• Greater collaboration is demonstrated by the increased number of links between members and fewer members working in isolation from 2007 and 2010 for both grants and publications.

Grant Networks

<table>
<thead>
<tr>
<th>Year</th>
<th># Members</th>
<th>Average # Collaborators</th>
<th>Inter-to-Intra-disciplinary Collaboration Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>236</td>
<td>1.92</td>
<td>0.216</td>
</tr>
<tr>
<td>2010</td>
<td>257</td>
<td>4.81</td>
<td>0.436</td>
</tr>
</tbody>
</table>

DISCUSSION

Social network analysis can provide objective indicators of collaboration necessary for demonstrating the value of a CTSA at an academic institution. In this case, an increase in total collaboration and interdisciplinary collaboration was more apparent at the grant stage than the publication stage. Given the lag time between grant submission and resulting publications, a delayed change in publication patterns is to be expected and should be more apparent at later intervals. Consistent results indicate that the ICTS aim of providing infrastructure for interdisciplinary research is being fulfilled.