Data Analysis Strategies to Improve Effectiveness & Efficiency

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Rachel J. Perry, Research & Data Analyst
The Legal Aid Society of Cleveland
rperry@lasclev.org
Project Purpose

○ What’s the push:
  ● Increasing poverty + decreasing resources

○ Where are we now:
  ● Some data-driven decisions; many anecdote-driven decisions
  ● Cleveland: data analysis professional, urban, Pika
  ● Montana: tech-savvy, rural, LegalServer

○ Project goal:
  ● Develop data analysis strategies using new data and new technologies that will increase client service effectiveness and organizational efficiencies.
Project Components: Data

- Internal data
  - Mine case management systems
  - Outcomes and surveys
  - Untapped resource
  - Identify improvements

- External data
  - Direct: U.S. Census, county dept. of children & family services, court data, school data, auditor, etc.
  - Compiled: University or community research centers, statewide data collaboratives, etc.

Social Science Advisors: Cleveland State University, Case Western Reserve University, Center for Community Solutions
Compiled External Data-Example

- Food Stamps by Census Tract in Cuyahoga County, October 2011

Source: Cuyahoga County Employment and Family Services compiled by NEO CANDO system, Center on Urban Poverty and Community Development, MSASS, Case Western Reserve University (http://neocando.case.edu).
Project Components: Analysis

Data questions/hypotheses
- Based on data & advisor input
- Ex: Mediation v. Litigation
- Ex: Legal education strategies for specific communities

Analysis methods
- Statistical: trend, correlation, regression
  - Ex: Link neighborhood conditions to legal problems
  - Ex: Impact of socioeconomic factors on outcomes
- Spatial/Geographic: mapping, hot spot analysis
  - Ex: Geographic distribution of clients superimposed with community characteristics to identify service gaps
  - Ex: Identify emerging client needs based on demand for service
Project Components: Technology

- **Requirements:**
  - Robust analysis
  - Cost effective
  - Not overly complex
  - Produce useful, user friendly reports

- **Options**
  - Statistical analysis software: SPSS/SAS, Excel
  - Mapping & geocoding software: ArcGIS, free downloadable
  - Automatic data extraction software: webscraping
  - Website plug-ins: tickers, dashboards
  - CMS improvements
  - Graphic report improvements: Adobe Creative Suite

**Advisors:**
Technology-social scientists; Reports-legal aid attorneys & organizations
**Analysis/ Technology Example**

Are Clusters Significantly Different in terms of:

<table>
<thead>
<tr>
<th>Begin Year</th>
<th>Location</th>
<th>Population</th>
<th>Education</th>
<th>Housing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Non-White</td>
<td>High-School</td>
<td>Assoc Degree</td>
</tr>
<tr>
<td>1997</td>
<td>Cleveland and E. Cleveland</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>1997</td>
<td>Cleveland</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1999</td>
<td>Cleveland</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2005</td>
<td>Eastern Suburbs</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2007</td>
<td>Inner Ring Suburb</td>
<td>+</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Dr. Brian A. Miklebank, Associate Professor of Urban Studies, Maxine Goodman Levin College of Urban Affairs, Cleveland State University, “Spatial Analysis of Mortgage Fraud Cuyahoga County, OH: 1997-2009,” 42nd Conference of the Urban Affairs Association, Pittsburgh, PA, April 18-21 2012.
Project Challenges

- Finding time to conduct project work
- Data quality
- Making analysis results accessible and useful for attorneys
- Producing guidelines that can be implemented by other legal aids, whether or not they have a data staff person
- Long-term viability
Project Resources

- Social scientists
  - Allowing them to use data for academic research

- Student interns
  - From Urban Affairs program, with statistical and geographic analysis skills and interests

- Legal aid attorneys
  - Data/tech-savvy legal aid organizations
  - Former and current TIG recipients
  - Cleveland & Montana attorneys with vast client experience

- Cleveland/Montana
  - Partnership between different types of program
  - Commitment to data analysis as a powerful tool for improving client service effectiveness and efficiency
Contact Information

Rachel J. Perry
Research & Data Analyst
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rperry@lasclev.org
216-861-5221

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