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Purpose

- To spatialize student Omaha System documentation of community assessments using a geographic information system
Background

- A community-level modifier in the Omaha System Problem Classification Scheme allows for documentation of community-level assessments, interventions and outcomes.
- Data visualization through geographic information systems (GIS) is a promising method to add value to student community assessments.

What is GIS?

- Geographic information systems (GIS) are computer-based systems for the integration and analysis of spatial data (Comley & McLafferty, 2012).

Methods: Prototype mapping tool

- ESRI ArcGIS Explorer Online
  - http://www.esri.com/software/arcgis/explorer-online
- System for collaborative mapping and analysis
  - Cloud-based service
  - Easy way to add, store, and visualize data
  - Built around open sharing/collaboration “Web 2.0 model”
  - User has control of security and data ownership
  - Personal and subscription versions exist
Methods

- A faculty-created interactive layer enables students to enter community assessment data using Omaha System problems, signs/symptoms, and strengths.
- Desktop and mobile versions are available.
- Students will experience data visualization of their assessment data on the map and can pursue analyses using other layers such as population data.

Results: Neighborhood/Workplace Safety Problem and Strengths

<table>
<thead>
<tr>
<th>Early versions of map</th>
<th>Improved symbology</th>
</tr>
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<tbody>
<tr>
<td><img src="image1.png" alt="Early versions of map" /></td>
<td><img src="image2.png" alt="Improved symbology" /></td>
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</tbody>
</table>

Final map

![Final map](image3.png)
Conclusion

- New hypotheses can be generated through the use of spatial data accessible through GIS.
- Students can contribute new assessment data to existing geo-spatial and population data in order to do more comprehensive community assessment and analysis.
- This type of undergraduate GIS activity can be the gateway to future public health nursing local/global knowledge development through Geographic Information Science.

Questions?

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