Online Mapping and GIS

ADVANCES IN TECHNOLOGY AND CHALLENGES OF PUTTING THE POWER OF GIS INTO THE HANDS OF NON-GEOGRAPHERS

Association of American Geographers Annual Meeting
April 11th 2014

Panelists: Paul Doherty, Sterling Quinn, Jennifer Rankin, Sean Finnegan
Online Mapping and GIS

- “Neogeography”, ”Neo Geography”, ”Web-based Geographic Information Technologies”, or “Online Mapping and GIS”

- Cartographic Issues

- Technology – Greatly Advanced, but is it still an issue?
Online Mapping and GIS Tools

- HealthMap
- ArcGIS Online
- MapQuest
- Google
- Yahoo! Maps
- Community Commons
- LawAtlas
- GeoCommons
- TRF Policy Map
Introductions

- Paul Doherty, PhD
- Sterling Quinn, PhD Candidate
- Jennifer Rankin, PhD, MHA, MPH
- Sean Finneghan, MS
Online Mapping and GIS
Teaching Collaborators the Basics of Cartography and GIS

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Sean C. Finnegan
Current, Ideal Process

- Work with collaborator on concept
- Look at data; educate collaborator about what is possible

- Convene an advisory group of potential users
- Design tool
- Usability testing
- Refine tool
- Develop user support materials
- Go live
- User engagement/support
Collaborator:
- I have data and funding to build a mapping tool.

Us:
- Great, what do you want to use it for?

Collaborator:
- To improve the quality of health and healthcare delivery, and cut costs for Medicare and Medicaid.

Us:
- Ok. Well, let’s look at the data.
1st: Finding a Use Case  Develop a “Purpose”:

- To be a catalyst and stimulate informed conversation and choices about health and healthcare for the communities in North Carolina.

- To provide a platform for Community Care of North Carolina’s Networks, public health organizations, practices and physicians to assist in the improvement of health care delivery, outcomes and costs.
Assess what Data are Available

- US Census Bureau 2010
  - American Community Survey 2007-2011
- Robert Wood Johnson Foundation
  - Roadmap Indicators
- Healthy People 2020
- Health North Carolina 2020
- Centers for Disease Control
  - Behavioral Risk Factor Surveillance System
Key Available Data

- State Medicaid and Medicare Data
  - From all network enrolled practices
  - Aggregated to the County, Hospital Referral Regions, and practice level
  - Key Performance and Quality Indicators
  - Cost and Utilization Data
Geographic Variation in Medicaid Costs
Average Monthly Medicaid Costs by County
## Data Tables

### Average Monthly Medicaid Costs by County

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Chart
Average Monthly Medicaid Costs by County
Percent Obesity and Preponderance of Fast Food Restaurants
Percent Obesity and Preponderance of Fast Food Restaurants – Comparison
Practice-Level Variation in Breast Cancer Screening Rates

Cancer Screening by County: Breast (Female): CY09-CY11 Rate for Ages 50-69
Cancer Screening by Practice: Breast (Female): CY09-CY11 Rate for Ages 50-69
Initial User Testing

- After loading the data into the mapping tools, let everyone use the data and see what happens.
More on Data Classification Issues
Successes

- Users need guidance on operating these complex mapping tools and an understanding of how to interpret the data.
- Create an Advisory Board, or Users Group
- Train the Trainers
- Create Training and User Support Materials
- Training Through Webinars and Online Materials
Opportunities for Geographers

- Support in the Development
- Support in the Training
- Helping users at all levels understand how to appropriately display and interpret Maps.
Thank you!

North Carolina Health Information Portal
nc-hip.nc3n.org

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