

Food Insecurity Among Older Adults: GIS in Action

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**2020 AACN Research Leadership Network Conference
January 30, 2020**



Some history....

- A major problem for older adults in Brooklyn
- Request to University from NYS Department of Agriculture & Markets
- Interprofessional project led by College of Nursing
- Includes teaching, learning, service & research components

Project Objectives:

- 🌐 Build sustainable assessment /screening
- 🌐 Enhance assessment and referral practices
- 🌐 Provide education/service learning opportunities for students
- 🌐 Public & professional education
- 🌐 Identify resources to address food insecurity among older adults

APPROACH

- ✓ Literature review for best screening, referral & interventions
- ✓ Formed academic community partnership
- ✓ Created community relevant screening tool
- ✓ Health fairs & community education/surveys
- ✓ Identify community resources / asset mapping

Preliminary Findings

- 🌐 Food insecurity is issue for older adults surveyed
- 🌐 Majority of respondents had two or more health problems
- 🌐 Demand for information in community, with elected officials & with providers is great

Asset Mapping Using GIS

Asset Mapping

- **Asset:** resource that has value
- **Asset Mapping:** “The general process of identifying & providing information about the strengths & resources of a community on a map”. (Source: A Community Research Lab Toolkit, 2012)
- **Gathering & organizing data** about resources & location in a community (Gwede et al., 2010)
- **Steps include:** identifying & listing of resources, tool for data collection, categorizing/cataloging them, address validation, geocoding addresses, visualizing resources on a map
- **GIS is a key tool** to display resources on a map & for spatial analysis to give valuable information to leadership & policy maker (Brissette et al., 2019)

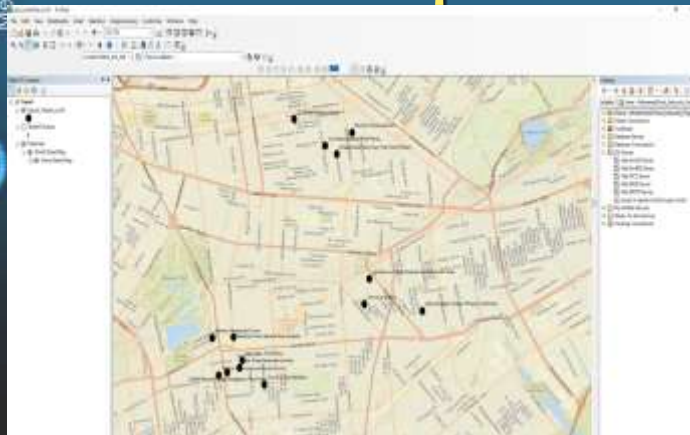
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Asset Mapping Applications

- Health promotion research- community based approach
- Community assessment and outreach research
- Resource allocation and identifying gaps
- Community health/population health research
- Nursing: finding possible nursing collaboration

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Geocoding Using ArcMap



Geocoding Addresses

ID	Address	Lat	Long
1	1000 Broadway, New York, NY 10018	40.7506	-87.6244
2	1000 Broadway, New York, NY 10018	40.7506	-87.6244
3	1000 Broadway, New York, NY 10018	40.7506	-87.6244
4	1000 Broadway, New York, NY 10018	40.7506	-87.6244
5	1000 Broadway, New York, NY 10018	40.7506	-87.6244
6	1000 Broadway, New York, NY 10018	40.7506	-87.6244
7	1000 Broadway, New York, NY 10018	40.7506	-87.6244
8	1000 Broadway, New York, NY 10018	40.7506	-87.6244
9	1000 Broadway, New York, NY 10018	40.7506	-87.6244
10	1000 Broadway, New York, NY 10018	40.7506	-87.6244
11	1000 Broadway, New York, NY 10018	40.7506	-87.6244
12	1000 Broadway, New York, NY 10018	40.7506	-87.6244
13	1000 Broadway, New York, NY 10018	40.7506	-87.6244
14	1000 Broadway, New York, NY 10018	40.7506	-87.6244



GIS TOOLS

- ArcGIS by ESRI (license required - desktop and server versions available)
- Google Maps
- Online geocoding: Census Geocoder (<https://geocoding.geo.census.gov>)
- OpenStreetMap (free)
- QGIS (free)
- Microsoft Bing Maps
- And more....

GOOD TEXT FOR HANDS ON GIS TRAINING

Kristen S. Kurland & Wilpen L. Gorr

GIS Tutorial for Health, 5th Edition
(ISBN: 9781589483736)

ESRI Press

REFERENCES

- Whiting, L., Kendall, S. & Wills, W. (2012). An asset-based approach: An alternative health promotion strategy? *Community Practitioner*, 85, (1), 25-28.
- Gwede, C. K., Ward, B. G., Luque, J. S., Vadaparampil, S. T., Rivers, D., Martinez-Tyson, D., ... Meade, C. D. (2010). Application of geographic information systems and asset mapping to facilitate identification of colorectal cancer screening resources. *Online Journal of Public Health Informatics*, 2(1), 2893. doi:10.5210/ojphi.v2i1.2893
- Brissette, I., Casper, M., Huston, S. L., Jordan, M., Karns, B., Kippes, C., ... Vaughan, A. S. (2019). Application of geographic information systems to address chronic disease priorities: experiences in state and local health departments. *Preventing Chronic Disease*, 16, E65. doi:10.5888/pcd16.180674

WHAT'S NEXT?

- Complete & test asset maps as resource
- Implement assessment & referrals in primary care
- Plan, implement & evaluate a funded survey & targeted intervention

THANK YOU!!

