RURAL LTC IN THE US: POLICIES TO "RE-BALANCE" WITHOUT THE BALANCE

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PROFOUND TRANSFORMATION OF US LONG TERM CARE MARKETS:

- Skilled Nursing Facilities (Nursing Homes) closing
- Emergence of Home and Community Based Services (HCBS):
  - Assisted Living Facilities (ALF)
  - Adult Day Care (ADC)
  - Home Health Agencies (HHA)
  - Chore Services (CS)
- Federal policies encourage "re-balance" of funding away from NHs and toward support of HCBS
- BUT: NO CLEAR PICTURE OF WHERE HCBS ARE AVAILABLE, OR WHETHER HCBS ARE REPLACING CLOSED NHs

OUR PREVIOUS WORK:

- "Geographic Concentration and Correlates of NH Closures: 1999-2008" (Feng et al 2011)
- "Transitions in Long Term Care Markets" (Fennell et al 2012)
- MAJOR FINDINGS:
  - Nursing home closures more likely in zipcode areas with high proportions of nonwhites, high poverty level.
  - No clear pattern in NH closure & location of HCBS.
  - ALFS and ADCs more likely in urban areas; very few in rural areas.

RESEARCH OBJECTIVES:

- 1) To describe the current distributions of HCBS, focusing on:
    - ALFs and ADCs (community-based providers)
    - Using local community markets **where NHs have closed**

- 2) To examine differences between urban and rural areas in access to HCBS

- 3) To develop and estimate **three multiple logistic regression models:**
    - What predicts access to Assisted Living Facilities?
    - What predicts access to Adult Day Care Services?
    - What predicts access to either vs. none?

STUDY DESIGN: PART 1
Descriptive Analysis

- No Standardized National Database on HCBS
- Built the data state by state:
  - Websites/phone calls to state departments of health
  - Licensed or certified providers:
    - Assisted Living Facilities
    - Adult Day Care Services
 - Facility names, addresses, services, date of licensure

Map of Nursing Home Closures

Figure 1: Nursing Home Closures: 2006-2011
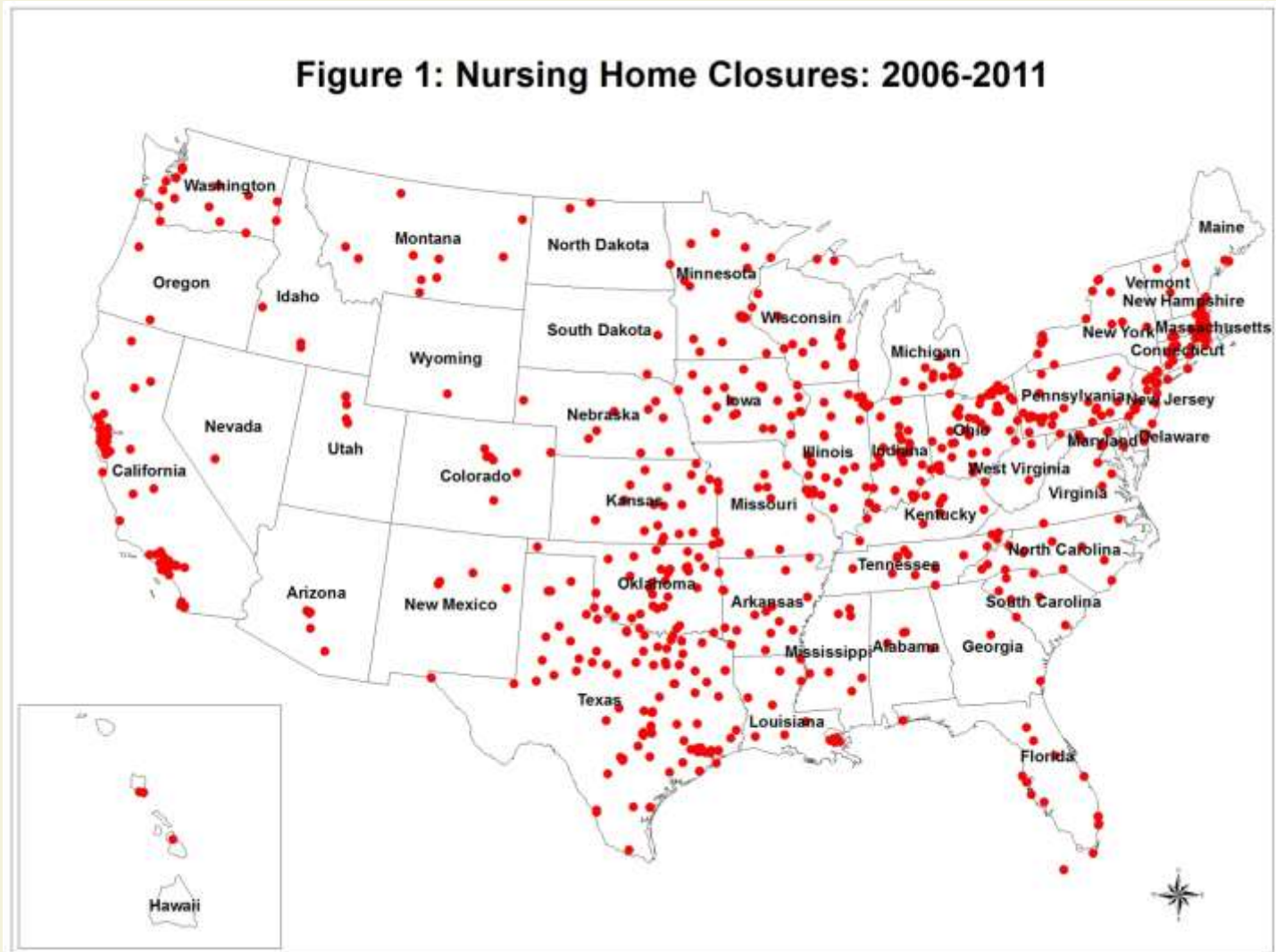
Creating the Unit of Analysis:
# Local Radii Where NHs Have Closed:

- Merge data on ALF, ADC, to data on NH closures 2006-2011, and operating NHs, and to census data on demographics by zipcode

- Create proxy neighborhood units based on 5-mile radii around NH closures using ArcGIS; N= 736 radii (corresponding to 736 NH closures between 2006-2011)

- Describe distributions of ALF, ADC, operating NHs within urban and rural radii, and demographic characteristics of the radii

Example Rural Area: Tucumcari, New Mexico
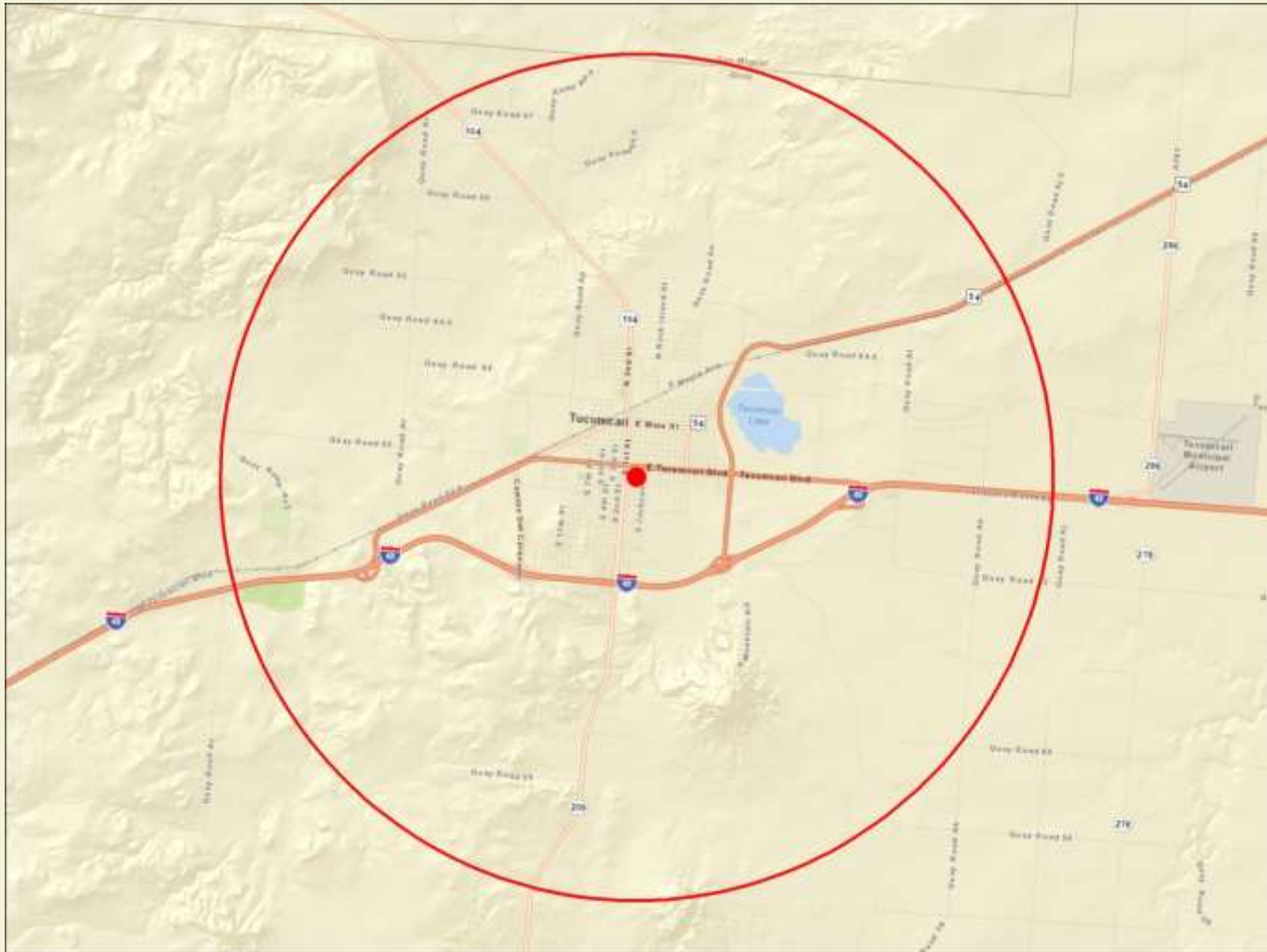
Example Urban Area: Indianapolis, Indiana
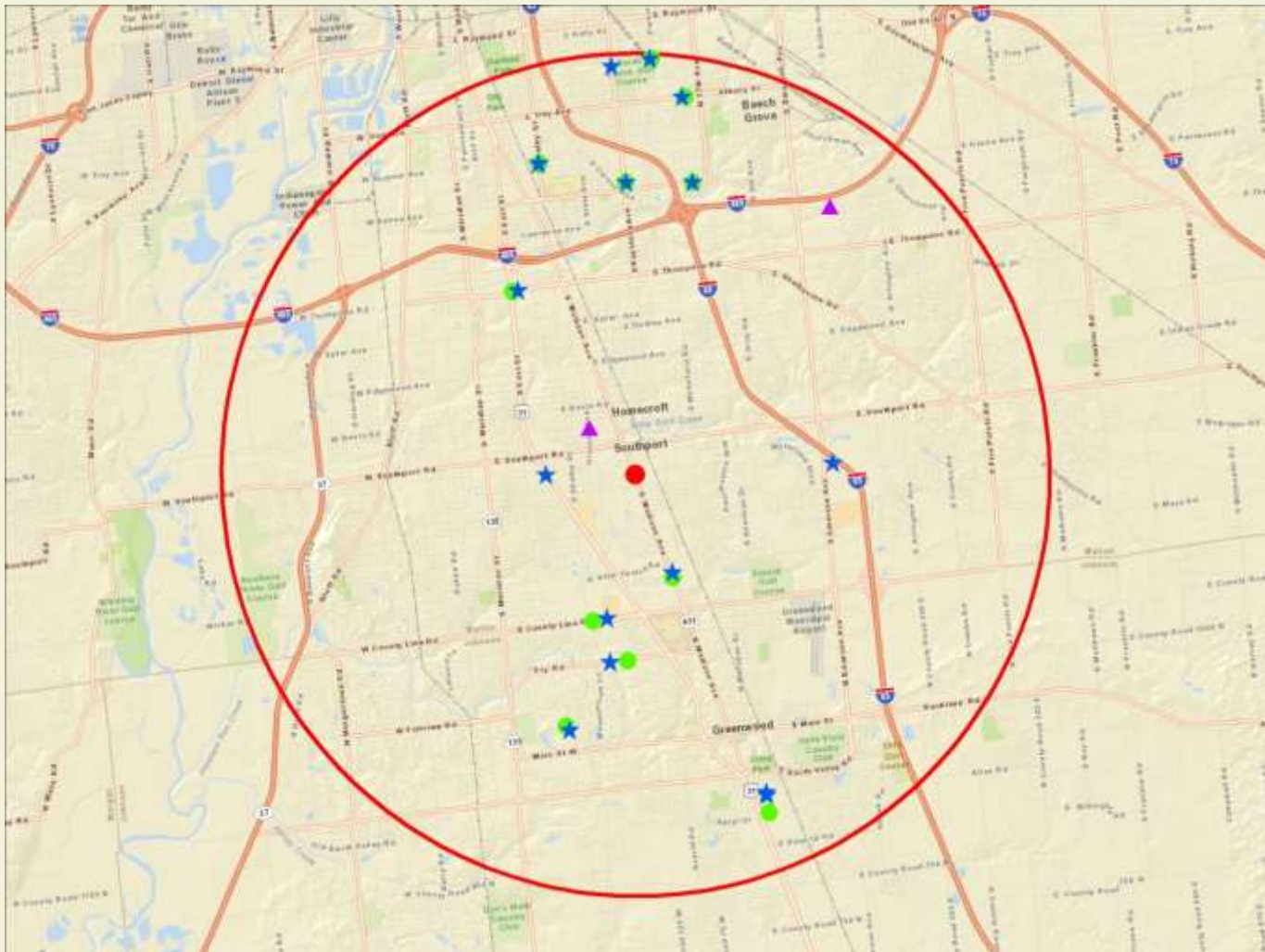
RESULTS: PART 1 DESCRIPTIVE

- Nursing Home Closures: 58% free-standing; 66% in urban areas
- 27% of closure radii had no ALFs; 59% had no ADCs
- Strong association between urban/rural location and availability of HCBS:
  - 84% of rural radii have no ADC
  - 58% of rural radii have no ALFs
  - 30% of rural radii have no ADC, ALF, or operating NH (chi-square significant at .001)
  - 27% of rural radii have no operating NHs
- Poverty rates not associated with availability of either ALFs or ADCs
- Percent minority population positively associated with ALFs/ADCs, but relationship probably spurious due to overwhelming association with urban/rural location

- Results are robust for radii defined as either 5-mile or 10-mile radii

STUDY DESIGN: PART 2
Multiple Logistic Regression Models

- In areas that have lost nursing homes, what predicts access to ALFs, ADCs, or neither one?

- Independent variables:
  - Year of NH closure
  - Whether multiple closures occurred in radii
  - Whether NH was hospital-based or freestanding
  - Number of operating NHs in radii
  - Urban/rural location
  - Demographics (% nonwhite, % below poverty, % over 65)
  - State Medicaid spending for HCBS

RESULTS PART 2: LOGISTIC REGRESSION MODELS (odds ratios & significance)

Logistic Models Predicting Access to ADC and/or ALF Services (N=727 radii)

	Has only ADC	Has only ALF	Either ADC or ALF
year of closure	N.S.	N.S.	N.S.
hospital-based NH closure	1.62 **	2.18 ***	2.95 ***
# of other NH closures	N.S.	N.S.	N.S.
# of operating NHs	1.09 ***	1.38 ***	2.04 ***
urban location	2.39 ***	2.93 ***	2.31 **
% nonwhite	1.02 ***	N.S.	1.02 *
% below poverty	0.93 ***	0.94 **	0.90 ***
% over age 65	0.95 *	N.S.	N.S.
% Medicaid $ used for HCBS	N.S.	0.98 *	N.S.
Pseudo R2	0.20	0.36	0.48

Note: * $p <= .05$; ** $p <= .01$; *** $p <= .001$

SUMMARY OF LOGISTIC REGRESSION RESULTS:

WHAT MATTERS IN PREDICTING HCBS ACCESS?

- If closed NH was hospital-based, odds of both types of HCBS are higher;
- If other NHs operate in the area, odds of HCBS are higher
- IF IT'S AN URBAN AREA, ODDS OF HCBS MUCH HIGHER
- Demographics NOT consistently related
- So far, State funds on HCBS not consistently related

POLICY IMPLICATIONS:

- Market characteristics (supply side) are more important than population characteristics;

- Higher LTC supply encourages HCBS co-location?

- Urban location matters: rural areas DO NOT HAVE ACCESS to ALFs, ADCs

- ….efforts to "rebalance" are only increasing options in urban areas

BOTTOM LINE:

- NO BALANCE

- AREAS THAT "HAVE," GET MORE.

Questions?