Developing Medicaid-Based Rational Service Areas in New York State

Presented by: Robert Martiniano. M.P.A., M.P.H., Senior Program Manager
Center for Health Workforce Studies
School of Public Health | University at Albany, SUNY

April 30, 2015

11th Annual Health Workforce Research Conference

Alexandria, Virginia

CHWS
Center *for* Health Workforce Studies

Acknowledgements

- New York State Department of Health for their funding and support of this project.

- Center for Health Workforce Studies Staff
  - Rakkoo Chung
  - Stuart Daman

CHWS
Center *for* Health Workforce Studies

Purpose of the Project

- Conduct a primary care needs assessment as part of HRSA shortage area designation requirements
- Use commuting patterns of Medicaid patients to build RSAs
  - Medicaid patients often travel further than those on Medicare or commercially insured
- Link need indicators to the RSAs to identify the RSAs with the most pressing needs

CHWS
Center *for* Health Workforce Studies

Method for Developing the RSAs

- Created matrix of patient and provider zip codes using New York State Medicaid data
  - Included
    - Outpatient settings
    - Evaluation and management codes
      - 99201 – 99205
      - 99211 – 99215
      - 99381 – 99387
      - 99391 – 99397
    - Professional claims for providers
    - Institutional claims for FQHCs and hospital outpatient
- Analyzed commuting patterns using UCINET

CHWS
Center for Health Workforce Studies

New York State Regions

CHWS
Center for Health Workforce Studies

Understanding Patient Commuting Patterns

Singles, without any incoming or outgoing flow

Structural hole, may connect separate RSAs
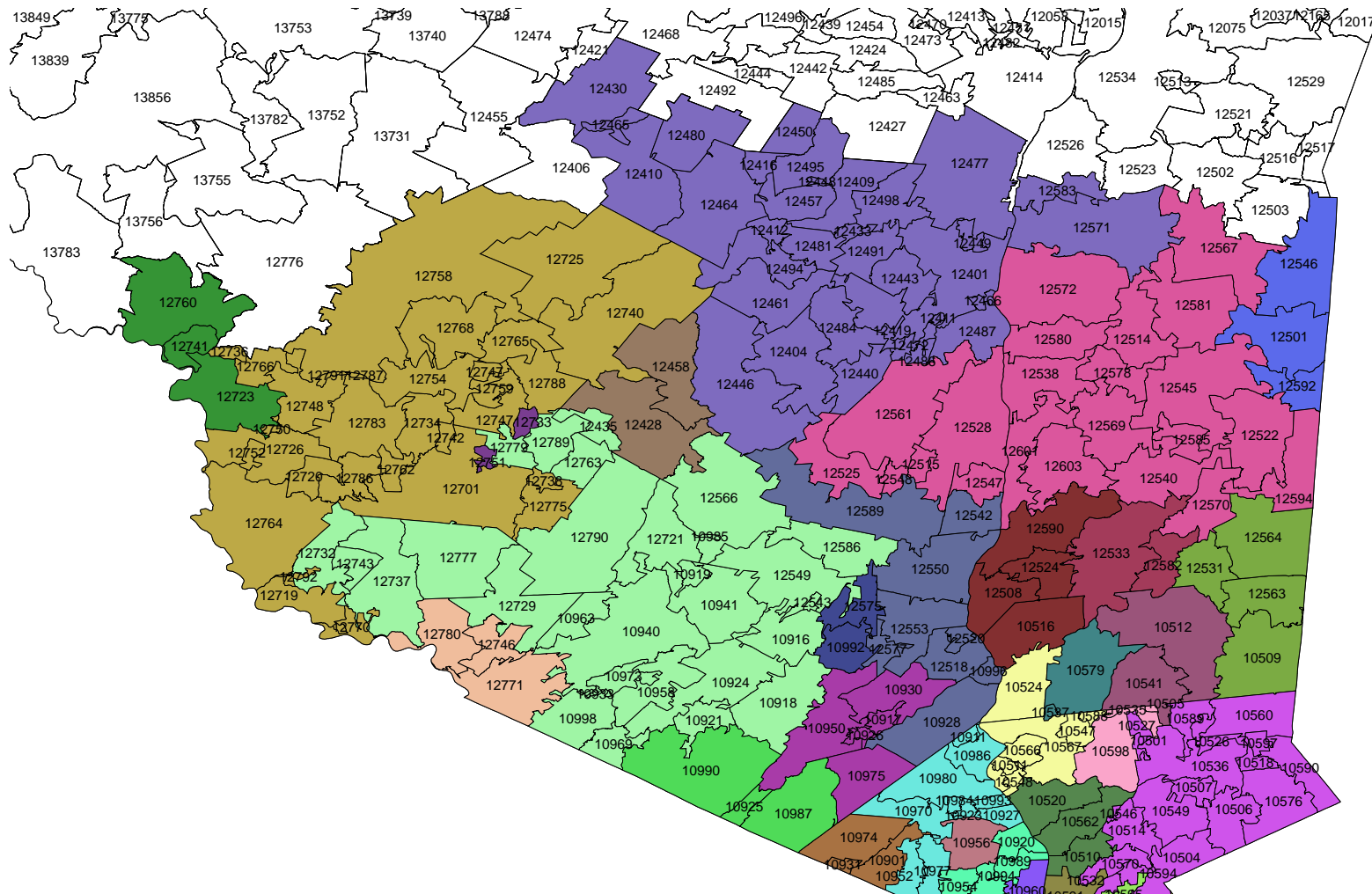
This RSA is way too big!

Thickness = % of plurality to the total patients

Plurality goes to the other zip code

Plurality goes to itself

CHWS
Center for Health Workforce Studies

Initial RSAs Don't Follow HPSA Rules

CHWS
Center for Health Workforce Studies
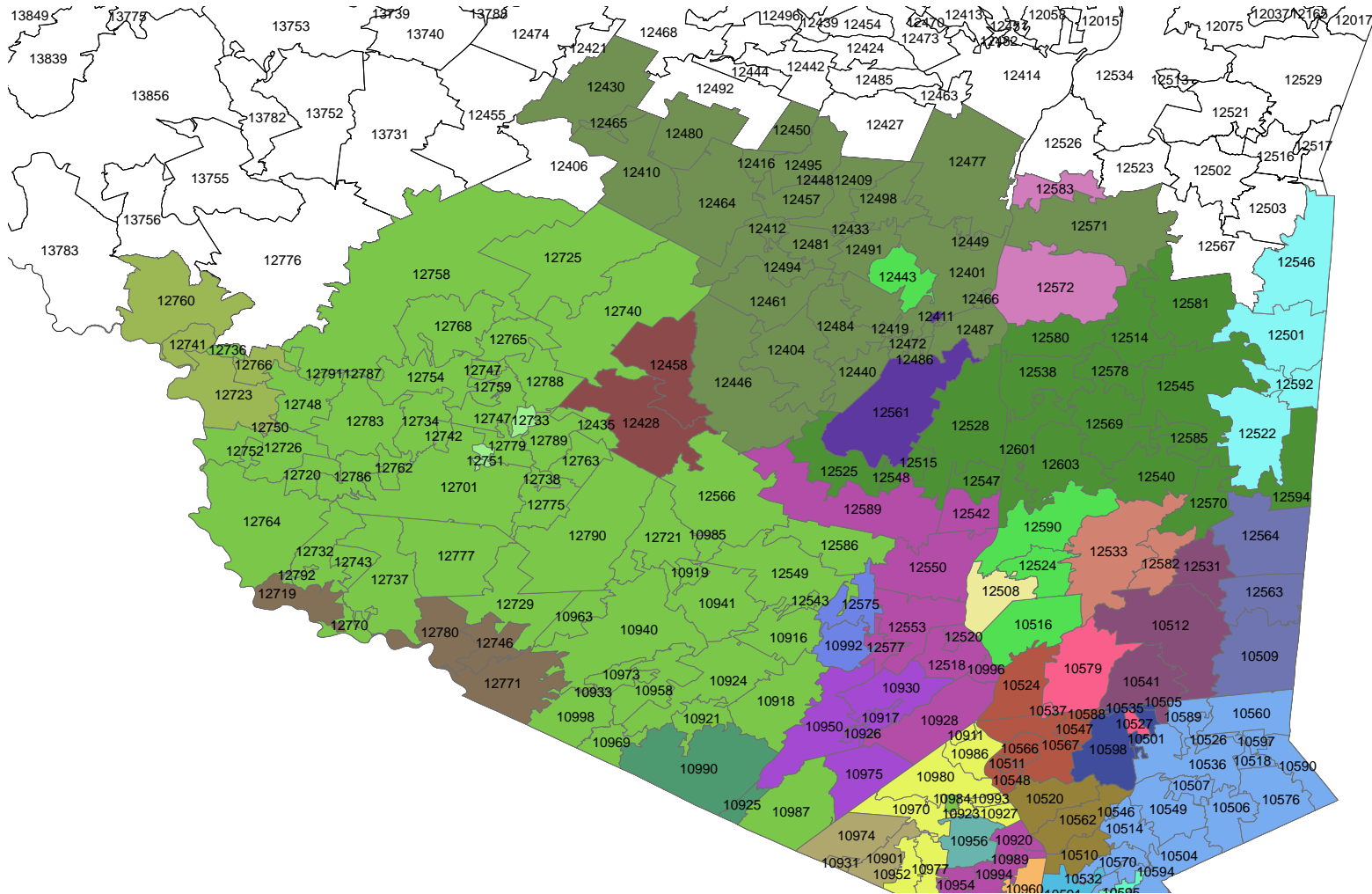
Revised RSAs (Generally) Compliant with HPSA Rules

CHWS
Center for Health Workforce Studies

RSA Results

Region (1)	Total Medicaid Patients	Localization (2)	# zip codes	# RSAs	Mean zip/RSA	Total Population	Mean pop/RSA
Capital District	236,357	64.34%	262	16	16.4	1,085,965	67,873
Central NY	217,954	66.31%	145	13	11.2	814,919	62,686
Finger Lakes	346,671	53.85%	193	21	9.2	1,219,131	58,054
Hudson Valley	516,318	61.38%	326	39	8.4	2,301,120	59,003
Long Island	453,580	41.03%	207	48	4.3	2,871,770	59,829
Mohawk Valley	134,275	68.16%	165	13	12.7	506,780	38,983
New York City	3,703,310	32.26%	311	67	4.6	8,270,869	123,446
North Country	98,083	82.29%	182	15	12.1	428,539	28,569
Southern Tier	184,796	68.08%	158	18	8.8	640,599	35,589
Western NY	440,247	42.67%	209	27	7.7	1,396,367	51,717
Statewide	6,331,591	42.12%	2,158	277	7.8	19,536,059	70,527

(1) RSAs rather than zip codes were linked to regions. Consequently, zip codes and their corresponding information in some cases are identified in a neighboring region.
(2) Localization refers to the percent of patients who find primary care services within the same RSA

CHWS
Center for Health Workforce Studies

Identifying Need Indicators

- Demographic
  - Percent population enrolled in Medicaid
  - Percent population below 200% of the federal poverty level
  - Percent ages 65 and older
  - Percent racial or ethnic minorities
  - Percent single female parent households
- Health care indicators
  - Avoidable hospitalizations rate
  - Avoidable ED visits rate
  - Population-to-primary care physician ratio
  - Overall mortality rate
  - Percent low birthweight births

CHWS
Center for Health Workforce Studies

Needs Assessment Results

- Fourth quartile indicates the highest need
- RSAs in both rural and urban areas show need

Region	# RSAs	Quartiles				
		First	Second	Third	Fourth	
					Number	Percent
Capital District	16	6	2	7	1	6.3%
Central NY	13	5	4	3	1	7.7%
Finger Lakes	21	5	7	5	4	19.1%
Hudson Valley	39	20	13	3	3	7.7%
Long Island	48	22	14	8	4	8.3%
Mohawk Valley	13	1	4	5	3	23.1%
New York City	67	10	12	11	34	50.8%
North Country	15	1	4	4	6	40.0%
Southern Tier	18	1	4	7	6	33.3%
Western NY	27	3	6	4	14	51.9%

CHWS
Center for Health Workforce Studies

RSA Development Problems and Pitfalls

- Non-contiguous zip codes creating RSAs
- RSA donut holes
- Multiple county RSAs
- Identifying billing location instead of service location
- Medicaid patients go on and come off of Medicaid rolls
- Assessed patients not visits

CHWS
Center for Health Workforce Studies

Data and Ranking Problems and Pitfalls

DATA

- How are data collected?
  - Level of geography
    - ZCTAs/zip codes versus county
  - Population versus survey data
  - Matching to RSAs
    - ZCTAs versus zip codes
- Were the correct data elements identified?

RANKING

- Sensitivity of ranking mechanism
  - How big of difference between categories
  - Weighted versus non-weighted
- Does it identify real need?

CHWS
Center *for* Health Workforce Studies

Conclusions

- Fewer Medicaid RSAs than PCSAs

  o Medicaid patients do travel further for care

- Rural RSAs tend to include more zip codes and have more of their patients staying in their "home" RSA for services

- Community characteristics as important as health care outcomes and provider availability in identifying need

- Worst of the worst spread around the state, but many in New York City

  o Need identified in both rural and urban areas

- Need to be concerned how to make the data and the RSAs useful to policy makers and researchers