County Health Rankings

Mobilizing Action Toward Community Health

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UNIVERSITY OF WISCONSIN
Population Health Institute
Translating Research into Policy and Practice

Rankings are everywhere

Why Rank?

- Allows comparison of one or more attributes for a select group of entities—hospitals, counties, law schools, etc.
- Rankings reduce data to a form that consumers and policy-makers can easily use
- Rankings draw attention and can be used to
  - help target interventions and funding
  - help select high-performers (schools, hospitals, clinics, healthy places to live)
  - reward high-ranking entities and penalize low-ranking ones

County Health Rankings

Mobilizing Action Toward Community Health

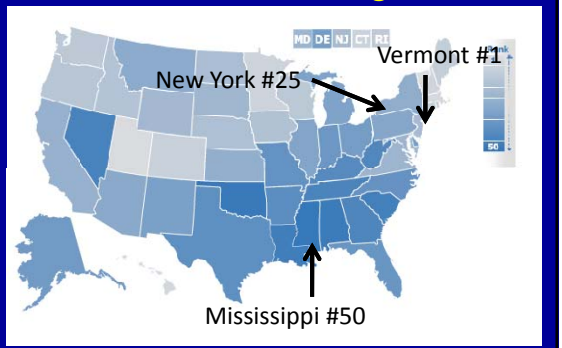
- Where we live matters to our health.
- One of the greatest disparities in this country is that some places are healthy, but others are not.
- There is relatively little discussion about these disparities by the public or policy makers.

America's Health Rankings

- Ranks the overall health of all 50 states, from healthiest to least healthy.
- First published in 1990 and annually thereafter.
- Uses a model that summarizes the overall health of each state.

www.americashealthrankings.org

America's Health Ranking – 2009



Response to America's Health Rankings

- Interest in the media and among policy makers for the past 20 years
- Provides model to summarize the health of an entire state
- But just as "all politics is local" so is public health
- We decided to adapt this model for Wisconsin

Wisconsin County Health Rankings

- Published annually since 2003
- Ranks health in all 72 counties

The MATCH Project and the County Health Rankings

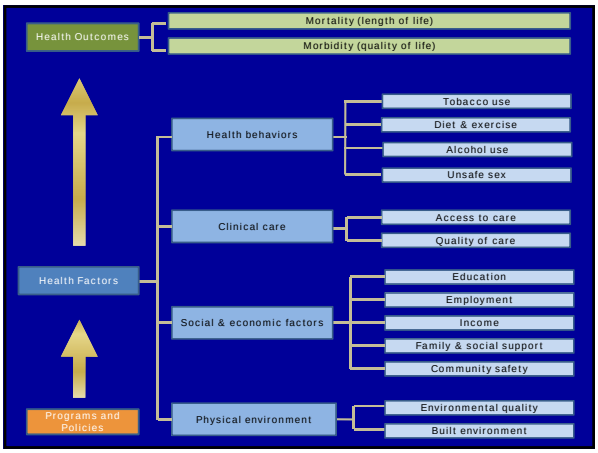
- The Wisconsin MATCH Team
  - Including Pat Remington, Jessica Athens, Julie Willems Van Dijk, Dave Kindig
- Robert Wood Johnson Foundation
  - Including Brenda Henry, Michelle Larkin, Jim Marks, Joe Marx, Pamela Russo
- Our Partners
  - Including CDC, NCHS, ASTHO, NACCHO, NNPHI, Dartmouth Institute, 11-member Metrics Advisory Group

What is unique about the *County Health Rankings?*

- Provides a measure of the overall health of each county in the United States
- Each county:
  - gets a snapshot of their overall health and the factors that influence their health
  - is able to see how its health compares to that of other counties so they can see where they are doing well and where they could improve

METHODS

1. Identify model
2. Collect data
3. Create summary measures
   - Standardize measures
   - Assign weights
4. Rank summary measures & communicate results



Collect the Data

- Available
  - Free or low cost
  - Publicly accessible
  - All or most counties
- Timely—preferably updated annually
- Consistently collected over time
- Valid and reliable
- Reflect an important—and modifiable—aspect of population health

Data Sources
Behavioral Risk Factor Surveillance System
Census County and Zip Code Business Patterns
CDC-Environmental Protection Agency Collaboration
Dartmouth Atlas Project, Medicare Claims Data
Decennial Census and American Community Survey, CPS
FBI, Uniform Crime Reporting
HRSA, Area Resource File
National Center for Education Statistics
National Center for Hepatitis, HIV, STD, and TB, CDC
Vital Statistics, National Center for Health Statistics, CDC
Small Area Income and Poverty Estimates
US Bureau of Labor Statistics

Standardize Each Measure

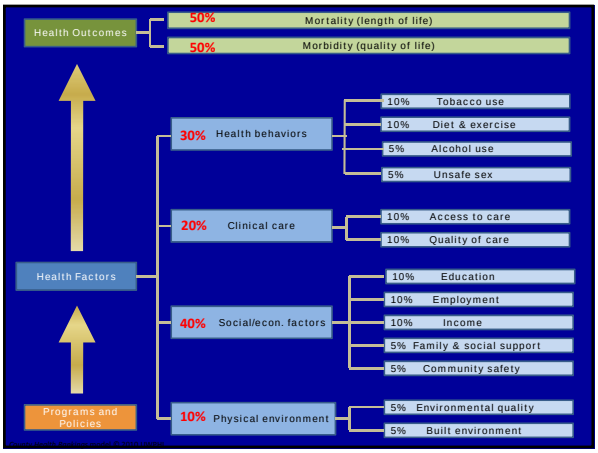
- Calculate z-scores:

$$\frac{\text{Measure} - \text{Mean of counties in state}}{\text{Standard deviation}}$$

- Truncate z-scores > |3.0| for counties with populations < 20,000

Assign weights to create summary measures

- Weights can be determined using multiple strategies
  - Historical perspective
  - Review of the literature
  - Weighting schemes used by other rankings
  - Analytic approach
  - Pragmatic approach
- The *County Health Rankings* considered all of the above to generate a weighting scheme



www.countyhealthrankings.org

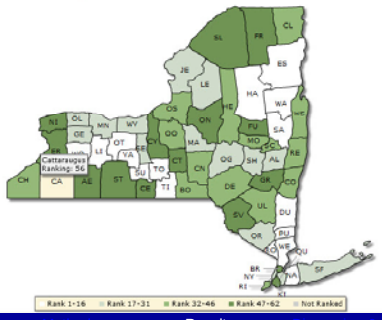
Rank	Health Outcomes	Rank	Health Factors
1	Putnam	1	Nassau
2	Saratoga	2	Westchester
3	Tompkins	3	Tompkins
4	Livingston	4	Rockland
5	Ontario	5	Saratoga
58	Kings	58	Sullivan
59	Greene	59	St. Lawrence
60	Chemung	60	Oswego
61	Sullivan	61	Jefferson
62	Bronx	62	Bronx

Background Methods Results Discussion & Conclusions

New York

2010 Health Outcomes Map

Health Outcomes are the primary ranking used to rank the overall health of counties. The county ranked number 1 is considered the healthiest county in the state.



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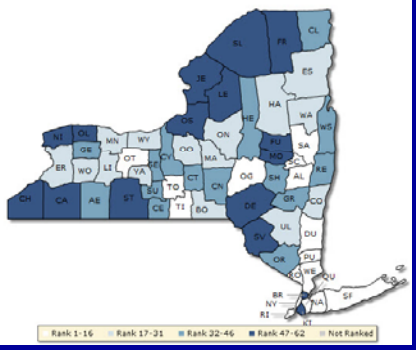
Health Factors Map



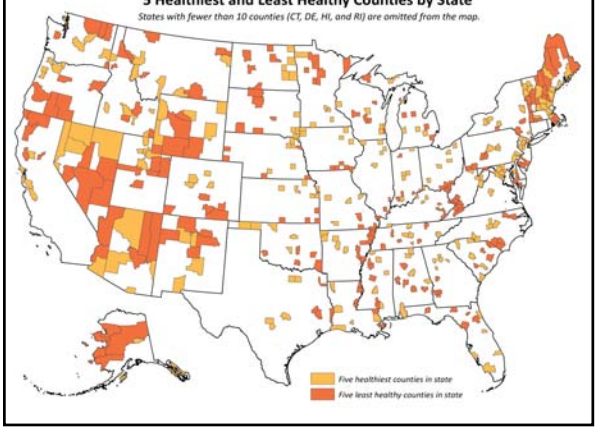
Background Methods Results Discussion & Conclusions

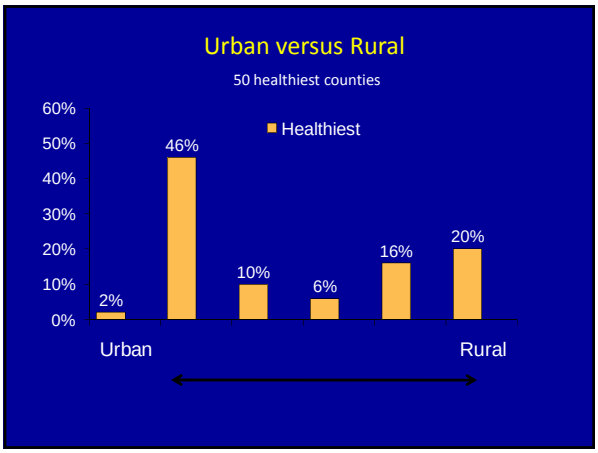
Snapshot 2010: Albany

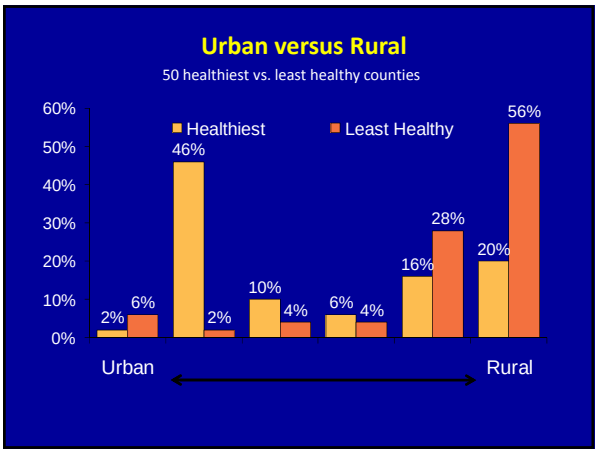
	Albany County	Error Margin	Target Value*	New York	Rank (of 62)
Health Outcomes					27
Mortality					36
Premature death	6,453	6,122-6,785	5,034	6,099	
Morbidity					18
Health Factors					12
Health Behaviors					22
Adult smoking	22%	19-25%	15%	20%	
Clinical Care					4
Uninsured adults	14%	12-16%	12%	15%	
Social & Economic Factors					16
High school graduation	74%		84%	67%	
College degrees	36%	35-38%	36%	31%	
Unemployment	5%	5-5%	5%	5%	
Physical Environment					57
Air pollution-particulate matter days	4		0	2	
Air pollution-ozone days	6		1	5	
Access to healthy foods	26%		71%	43%	
Liquor store density	1.8			1.2	

5 Healthiest and Least Healthy Counties by State

States with fewer than 10 counties (CT, DE, HI, and RI) are omitted from the map.







Health Outcome Disparities

	Least Healthy	Healthiest	Ratio
Premature death rate	12,368	4,904	2.5
Self-reported health (fair or poor)	20%	9.5%	2.1

*Median of 50 healthiest vs. least healthy counties

Background Methods Results Discussion & Conclusions

Health Factor Disparities

*Median of 50 healthiest vs. least healthy counties

	Least Healthy	Healthiest	Ratio
Adult smoking	26%	16%	1.6
Preventable hospital stays	95	61	1.6
Children in poverty	30%	9%	3.5
Access to healthy foods	33%	47%	0.7

Background Methods Results Discussion & Conclusions

Are Rankings Helpful?

Background Methods Results Discussion & Conclusions

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Geographic Distribution of Media
(Broadcast & Print Media, 2 weeks after release)

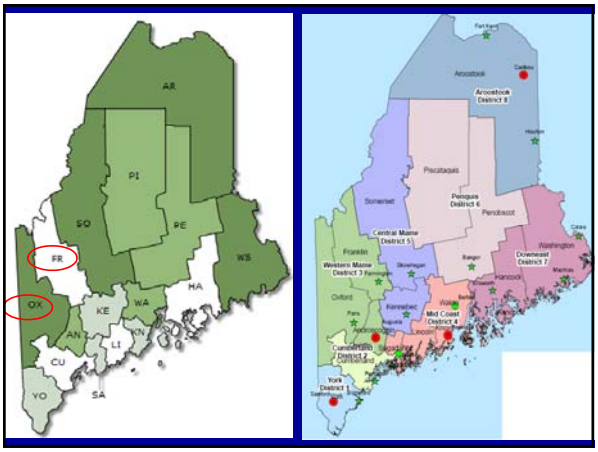
Impact Analysis (March, 2010). *County Health Rankings* Community Impact Report

But Rankings Are Also Controversial

- Unintended negative reactions in least healthy counties
- Complacency in the healthiest counties
- Differences in ranks may not be statistically significant
- Ranks are only one factor to consider when setting priorities
- The "action" that is needed in an unhealthy county may be complex and expensive

Is "County" the Right Unit of Analysis?

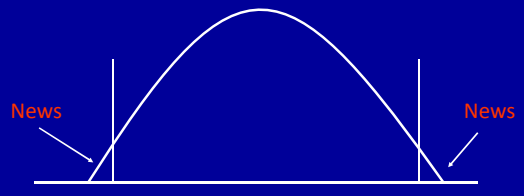
- Problems
  - No county government structure in some states
  - Counties can vary greatly in area, population size and demographics
- Possible solutions
  - Drill down, e.g., cities, population subgroups
  - Roll up e.g., public health regions



Why Rank Within vs. Across States?

- Focus *within* states aligns more closely with how public health programs and policies are developed
- Ranking *within* states will allow state customization in future years
- Although state customization will not be consistent with national benchmarks
- Tells a different story …

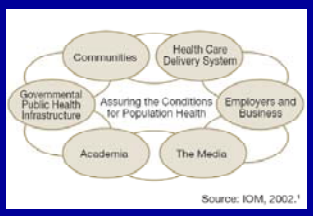
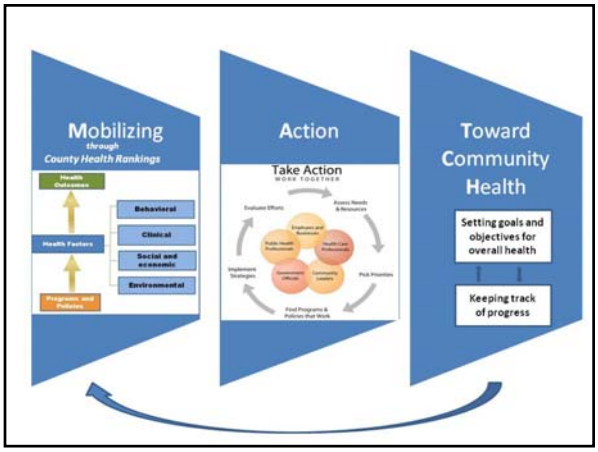
What Makes "News?"



Victor Cohn, News and Numbers

What Happens to Rankings Over Time?

- Should we keep the model stable or improve it as additional data become available?
  - If model stable and everyone improves, rankings stay the same
  - If model improved, rankings will change
- Ideally, if health improves everywhere, rankings would become random.

Our Conclusions

- The Rankings focus the discussion on the multiple determinants of the health of populations
- Hopefully they also draw in partners beyond governmental public health
- And …