A multi-state comparison of public health preparedness assessment using a common standardized tool

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Outline

- Discuss difficulty in identifying preparedness standards and indicators
- Describe one project that compared different states' preparedness assessments
- How to address P.H. preparedness in an environment full of competing needs and diversity

The need to measure public health preparedness

- Accountability
  - >$7 billions have been sent to states in 5 years by feds, need to show results
- Program planning and management
  - Officials need to know where the gaps are to make sound plans and decide budget allocations

The challenges to measure preparedness

NO STANDARDS!

- There is no consensus on what constitutes “ideal preparedness”
  - ***“How prepared should we be”?***

NO MEASURABLE INDICATORS!

- Project objectives set up that are not easily measurable
- No universally accepted standardized ***assessment tools***

The PHPPO Capacity Inventory assessment instrument

- Developed by the CDC in 2002
- "Rapid" self-assessment of 6 preparedness focus areas
  - Over 70 questions, 700 specific items
- Widely disseminated:
  - used by 22 states, > 800 local health departments

Study Questions

1) *How comparable are assessments done by states independently with no prior shared methodology?*
2) *How helpful is a scoring system?*
3) *How important is the effect on the comparison of the scoring system adopted?*

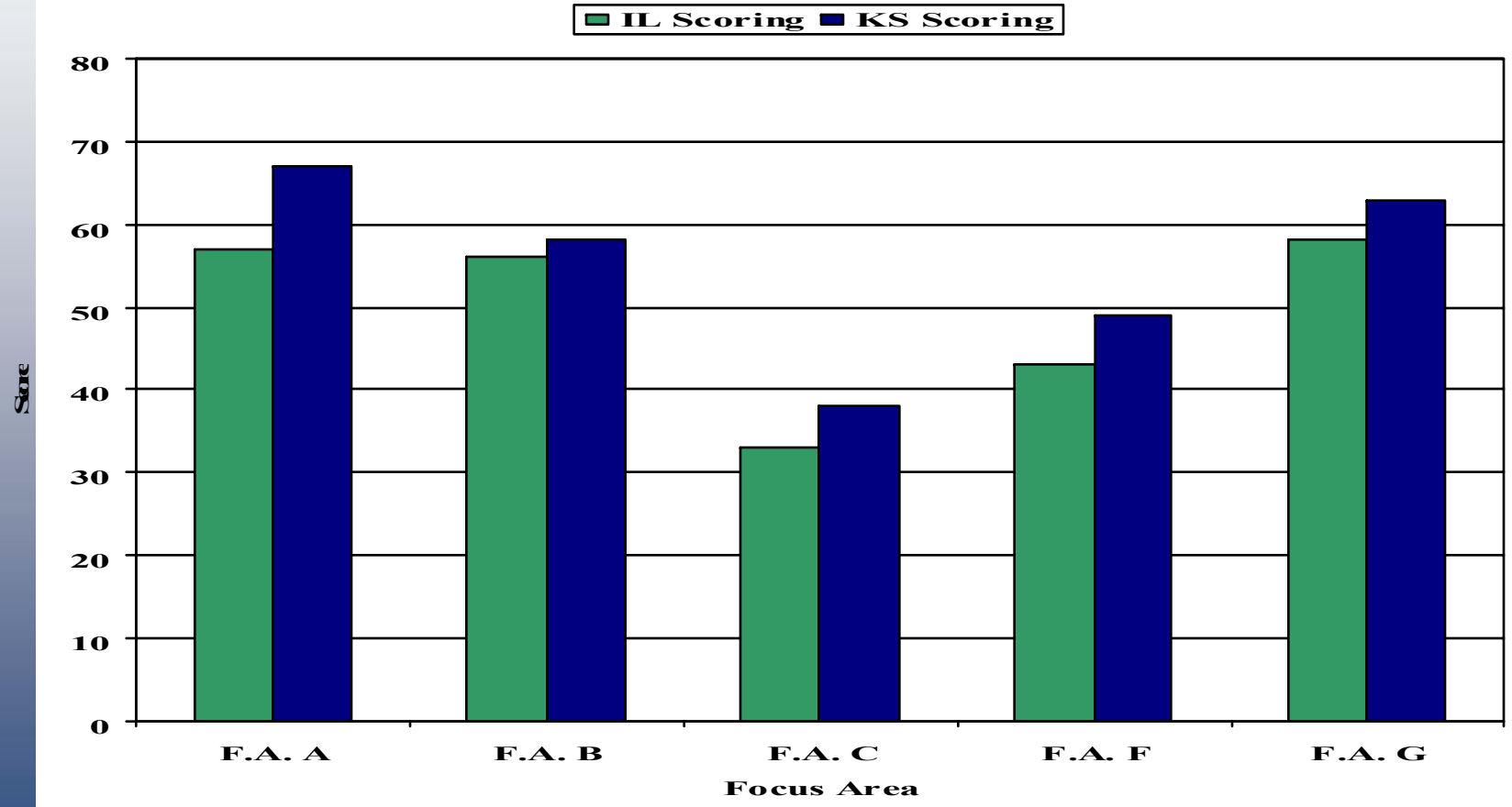
Methods

- Three states (IL, KS, MI) performed local assessments using Capacity Inventory before this project started (2003-2004)
- Local assessments analyzed using two algorithms
  - Preparedness indexes from both algorithms compared

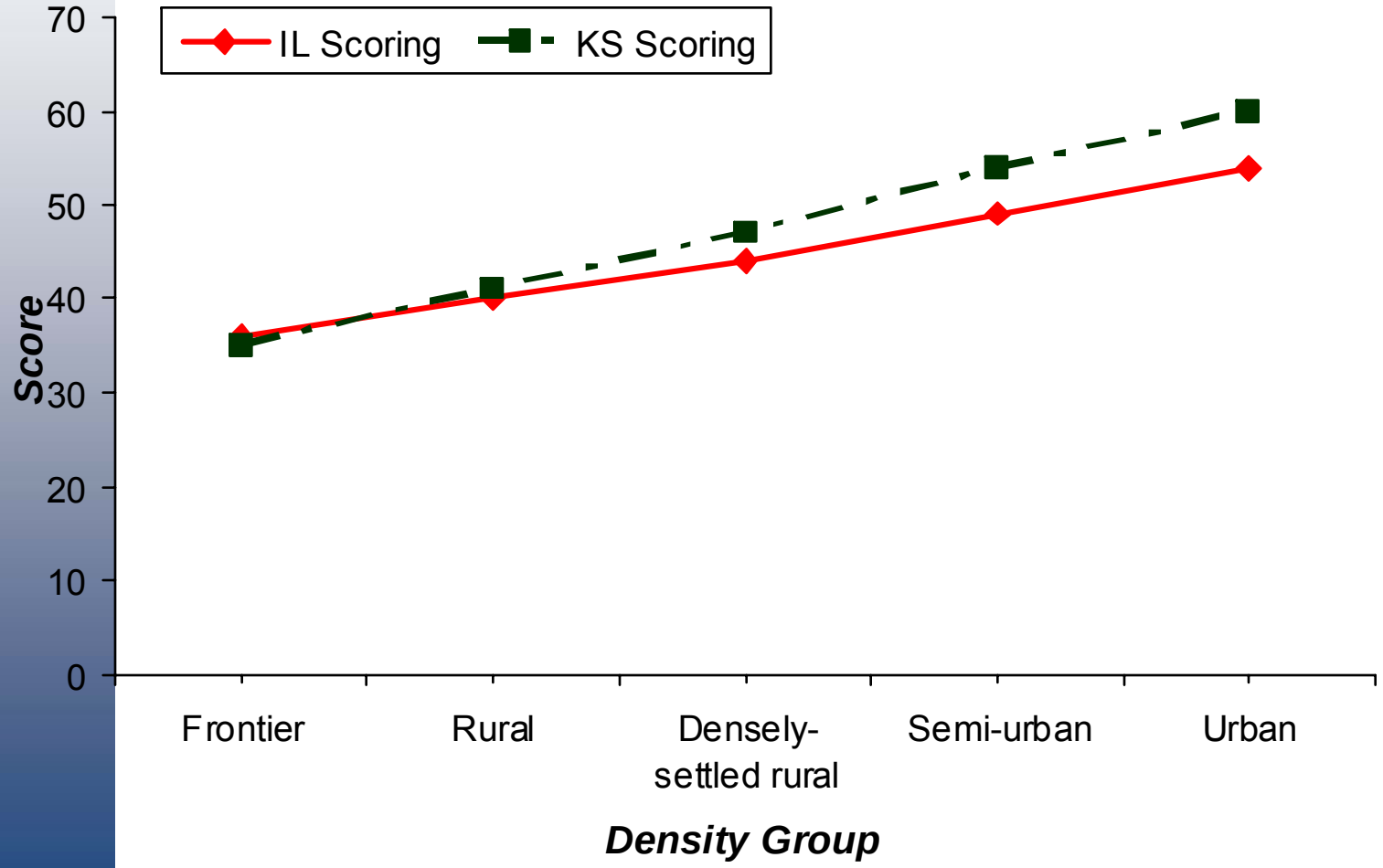
Preparedness Indexes by focus area and state using the Illinois and the Kansas scoring systems

	State					
	1		*2*		*3*	
Focus Area	IL Scoring	KS Scoring	IL Scoring	KS Scoring	IL Scoring	KS Scoring
A	57	67	50	65	51	60
B	56	58	49	48	57	59
C	33	38	14	21	16	25
F	43	49	33	33	33	46
G	58	63	41	43	41	55

Preparedness Indexes by Focus Area – State 1



Average local preparedness indexes by population density group, three states combined.



The Answers

1) How comparable are assessments done by states independently with no prior shared methodology?

A. Despite differences in methods, data had acceptable level of consistency and reliability

The Answers

2) How helpful is a scoring system?

A. Using scoring systems allowed comparisons across jurisdictions and analysis of pooled data

➔ *Could help identify reasonable benchmarks, performance indicators*

➔ *Could help identify trends not recognizable in one jurisdiction*

The Answers

3) How important is the effect on the comparison of the scoring system chosen?

A. Despite their different approaches, the two scoring systems produced very similar trends

- ***➔ Using the best available tools available NOW could be more helpful than developing the perfect tools for use LATER***

Why is it not so easy?

Barriers

- Lack of benchmarks and evidence
  - BT and P.H. preparedness are new concepts
  - The best outcome in P.H. is when nothing happens…
- Fragmentation of the system
  - Federal, state, local government
  - NOT a hierarchy
  - 2005: 500 discrete activities to account for in KS

How would it help?

Capacity assessment in LHDs in KS - Key Findings

1) Capacity improved on average 27%
2) Substantial room for improvement remained
   - Average capacity score after 1 project year = 43 on a scale of 100
3) Wide variability in preparedness by counties, regions, and critical capacity areas
   - Highest-to-lowest-score ratio = 4:1
   - Preparedness levels tend to be lower in rural than urban areas

Report: Counties make strides in preparing for bioterrorism

By **Scott Rothschild**, Journal-World
FRIDAY, JULY 23, 2004

TOPEKA — State officials Friday released a report that says county health departments are making significant improvement in preparing for potential bioterrorism attacks.

But good luck trying to find out how an individual county health department is doing.

INTERNET ENHANCED

Bioterrorism and Emergency Preparedness of Local Health Departments in Kansas: 2003. Full report. (.pdf)

Executive Summary. (.pdf)

The $165,000, 122-page report doesn't identify the performance of specific counties, and state officials refused to disclose that information.

Information on which counties are doing a good job and which ones aren't could help terrorists, said Richard Morrissey, acting director of health for the Kansas Department of Health and Environment.

"We're trying to avoid a ranking," he said.

Local health departments have received $11.4 million over the past two years to improve their levels of preparedness, officials said.

The new study covers the first year of increased bioterrorism funding -- $5.3 million -- from August 2002 to August 2003. During that period, local health departments statewide improved preparedness levels by 27.7 percent, the study said.

"The findings are very positive," Morrissey said.

Health officials say the bioterrorism funds have also helped counties respond to other public health emergencies, such as natural disasters.

But the report also indicated there was a wide disparity in preparedness levels with rural areas lagging behind the rest of the state. The report is based on surveys completed by local health departments.

Why is it important?

A resource dilemma

- We must decide the risk that we are willing to take
  - Without clear standards and indicators we do not know:
    - Our final destination (could be traveling for ever!)
    - If we are on the right path
- "Bioterrorism preparedness programs have been a disaster for public health" because of their unnecessary, harmful consequences.[1]

1) Cohen HW, Gould RM, Sidel VW. Am J Public Health. 2004

What do people die from?

- 50 % = behavioral choices (e.g., smoking, life style)[1]

Root cause	Approximate # (%) Deaths
Smoking, obesity, or physical inactivity	800,000 (30%)
Alcohol consumption	85,000 (4%)
Infections (excl. HIV)	75,000 (3%)
P.H. Emergencies (2001-2005)	5,000 (<1%)

- P.H. Preparedness yearly budget = $1.3 bill. (6% to 8% of total federal-state P.H. budget) [2]

1) McGinnis JM, Foege WH., JAMA, 1993 and Mokdad AH, Marks JS, Stroup DF, Gerberding JL. JAMA. 2004
2) Lipsman, J. Disaster Preparedness: Ending the Exceptionalism. www.medscape.com. Posted 10/03/2006

Do you agree with this statement?

"Everyone, no matter where they live, should reasonably expect the local health department to meet certain standards"

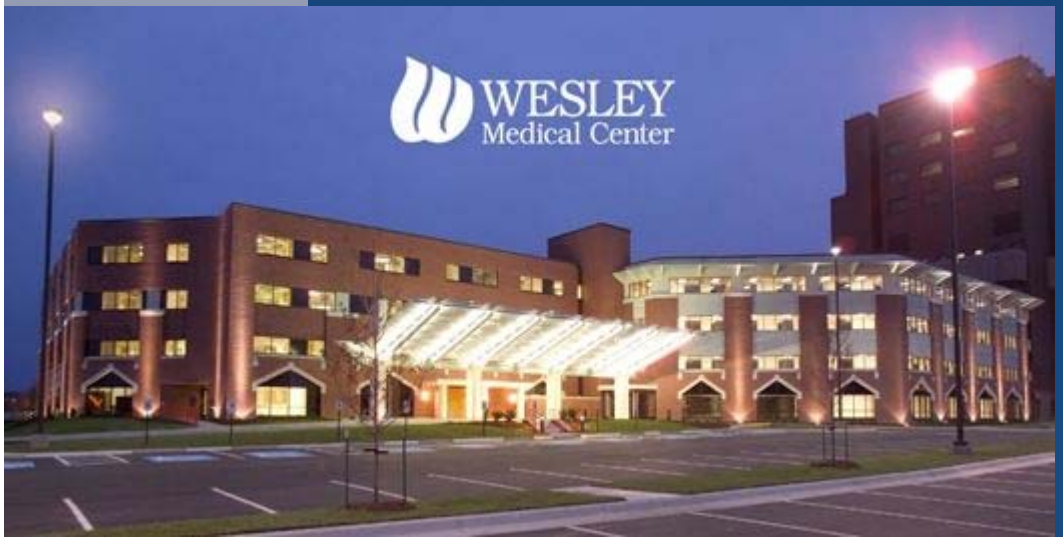
National Association of City and Counties Health Officials

Same Standards for this…

- Ness County:
  - Pop. 3,454
  - Two Hospitals
  - Grisell Memorial:
    - 12 beds
    - 0.25 Physicians

….and for this?

- Sedgwick County:
  - Pop. 452,869
  - 7 hospitals
  - Wesley Medical Center:
    - 500 beds
    - 700 physicians
    - 3,000 employees



Next Steps – Develop a policy for standardized performance assessment

1. Reach consensus on national performance standards (***goals***) for preparedness
   - NACCHO Operational Definition of LHD
   - Accreditation movement
   - CDC's target capability list (37 areas!)
2. Select **few** national performance ***indicators*** to monitor progress:
   - Can be quantified (i.e., measured and counted)
   - Linked to the goals
   - Understandable to policy makers and the public
   - Allow monitoring of trends
   - Allow comparisons
   - Can be monitored without excessive burden
     - Use available data and information systems, when possible
3. Develop standardized assessment ***tools***:
   - Maintain link with past efforts, PHPPO Capacity Inventory
   - Use scoring system

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Extra Slides

The two algorithms

1. CDC/IL scoring system
   - Produced by CDC, used (modified) in IL
   - Assigns point and weighted value to each question based on relative importance
2. KS scoring system
   - Developed and used in KS
   - Used pre-determined criteria to classify each question as *"successful/not successful"*

- *Each system produces **preparedness indexes***

Ranking of Focus Area scores by state using the Illinois and the Kansas scoring systems

State						
	1		2		3	
RANK	IL Scoring	KS Scoring	IL Scoring	KS Scoring	IL Scoring	KS Scoring
1)	G	A	A	A	B	A
2)	A	G	B	B	A	B
3)	B	B	G	G	G	G
4)	F	F	F	F	F	F
5)	C	C	C	C	C	C

What do we want to measure?

- Capacity
  - Resources, equipment, staffing, etc.
- Capability
  - Ability to perform certain tasks – “know-how”
- Performance
  - Quality and quantity of services provided
- Outcomes
  - Did it make a difference?
  - And what are “outcomes” for P.H. preparedness, anyway...?